Sri Lanka Medical Association

128th Anniversary International Medical Congress

“Connect, Communicate, Collaborate for Improved Health and Healthcare”

Inauguration on 5th July 2015
Cinnamon Grand, Colombo

Main Congress from 6th – 8th July 2015
Galadari Hotel, Colombo
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THE SRI LANKA MEDICAL ASSOCIATION (1887 - 2015)

The historic Wijerama House

The Sri Lanka Medical Association (SLMA) is the oldest national organisation of medical professionals in Asia and Australasia. It brings together medical practitioners of all grades, from all branches of medicine in Sri Lanka.

The SLMA started life as the "Ceylon Branch of the British Medical Association" on 17th December 1887 with 65 members on its roll, and Dr. P D Anthoniz as its first President. However, the moving force behind its inception was Dr. W R Kynsey (later Sir William Kynsey), who persuaded 15 doctors to meet on 26th February 1887, at the Colonial Medical Library on Maradana Road, Colombo and resolve to form that Association. He had declined to be the first President as he was going abroad on furlough. The change of name to "Ceylon Medical Association" came in 1951, and in 1972 when Sri Lanka became a Republic, the name changed again to the "Sri Lanka Medical Association".

The SLMA office is at "Wijerama House", named after Dr. E M Wijerama, who formally gifted the house he lived in, at McCarthy Road (now Wijerama Mawatha) to the Association in 1964. Although his offer was made in writing in October 1957, resolution of the many issues that arose took 7 years!

The Ceylon Medical Journal was first published in August 1887, and fittingly, the first article in the first issue was authored by Dr. W R Kynsey. The name changed to Journal of the Ceylon Branch of the British Medical Association in 1904, but changed to its pristine appellation in 1952, and
continues to be published as the Ceylon Medical Journal (CMJ). At its 127th year, it is the oldest surviving English medical journal in Asia and Australasia, and the leading scientific journal in Sri Lanka. The CMJ is indexed in BIOSIS, CAB International, EMBASE and the *Index Medicus*. CMJ’s editorial policies and quality are of international standards, and it is listed by the International Committee of Medical Journal Editors as conforming to their editorial guidelines.

The historic Sri Lanka Medical Library, which is over 169 years old, is also accommodated in Wijerama House. The Sri Lanka Clinical Trials Registry, started as recently as 2006, has achieved recognition from the World Health Organisation by being selected as a WHO Primary Clinical Trials Registry.

The Anniversary International Medical Congress is the most important activity of the SLMA’s calendar. It has been held uninterrupted every year since it was started in 1937 to mark the 50th anniversary of the association.

The SLMA today is a vibrant organization. It is run by the President and the Council. There are many committees dealing with its day to day affairs. These include the Finance, Management and Housing Committee; Corporate Planning Committee; Ethics Review Committee; Ethics Committee; Honours Committee; Research Promotion Committee; the Sri Lanka Clinical Trials Registry Management Committee; and the Ceylon Medical Journal Editorial Board. The SLMA also has Expert Committees which deals with various subject areas. They include Expert Committees on Communicable Diseases; Disabilities; Ergonomics; Health Equity; Health Management; Herbal Medicine; Medicinal Drugs; Non Communicable Diseases; Prevention of Road Traffic Accidents; Snake Bite; Tobacco, Alcohol and Illicit drugs; and Women’s Health.
# COUNCIL OF THE SRI LANKA MEDICAL ASSOCIATION 2015

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<td>President</td>
<td>Professor Jennifer Perera</td>
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<td>President Elect</td>
<td>Dr. Iyanthi Abeyewickreme</td>
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<td>Immediate Past President</td>
<td>Dr. Palitha Abeykoon</td>
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<td>Honorary Secretary</td>
<td>Dr. Ranil Jayawardena</td>
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<td>Vice Presidents</td>
<td>Dr. Padma S Gunaratne</td>
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<td>Dr. Navoda Atapattu</td>
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<td>Honorary Assistant Secretaries</td>
<td>Dr. A A H Priyani</td>
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<td>Dr. Shamini Prathapan</td>
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<td>Professor Sharmini Gunawardena</td>
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<td>Dr. Samanthi de Silva</td>
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<td>Dr. Asiri Rodrigo</td>
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<td>Dr. Kalyani Guruge</td>
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<td>Past Presidents’ Representative</td>
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<td>Dr. M S G De Silva</td>
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<td>Professor Vajira HW Dissanayake</td>
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<td>Dr. Gamin Walgampaya</td>
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<td>Social Secretaries</td>
<td>Dr. Lasantha Malavige</td>
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<td>Dr. Preethi Wijegoonewardene</td>
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<td>Co-Editors (CMJ)</td>
<td>Dr. Anuruddha Abeygunasekera</td>
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<td>Professor Varuni de Silva</td>
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COUNCIL OF THE SRI LANKA MEDICAL ASSOCIATION 2015
Seated Left - Right: Dr. Pramilla Senanayake, Dr. Kalyani Guruge (Public Relations Officer), Dr. Dennis J Aloysius, Dr. Lucian Jayasuriya, Prof. Vajira HW Dissanayake, Dr. Palitha Abeykoon (Immediate Past President), Prof. Jennifer Perera (President, SLMA), Dr. Iyanthi Abeyewickreme (President Elect), Dr. Navoda Atapattu (Vice President), Dr. Padma S. Gunaratne (Vice President), Dr. B J C Perera, Dr. Ranil Jayawardena (Honorary Secretary)

Standing Left – Right (Middle Row): Prof. Varuni de Silva (Co-Editor CMJ), Dr. Samanthi De Silva (Honorary Treasurer), Dr. Sudarshi Seneviratne (Honorary Assistant Secretary), Dr. Shamini Prathapan (Honorary Assistant Secretary), Dr. Pradeepa Jayawardane, Dr. M. Sarath Gamini de Silva, Dr. A. A. H. Priyani (Honorary Assistant Secretary), Prof. Sharmini Gunawardena (Honorary Assistant Secretary), Prof. Deepika Fernando, Dr. Indika Karunathilake, Dr. Sumithra Tissera

Standing Left – Right (Last Row): Dr. Christo Fernando, Dr. Neelamani R. Hewageegana, Dr. Sahan I. T. Guruge, Dr. Amaya Ellawala, Dr. Chiranthi Liyanage, Dr. Priyanga Ranasinghe, Dr. Deepal Wijesooriya, Prof. Saroj Jayasinghe, Dr. Lasantha Malavige (Social Secretary), Dr. Ruvaiz Haniffa

Absent: Dr. Anuruddha Abeygunasekera (Co-Editor CMJ), Dr. Preethi Wijegoonewardene (Social Secretary), Dr. Gamini N. B. Walgampaya, Dr. Asiri Rodrigo (Honorary Assistant Treasurer), Dr. J. B. Peiris (Past President Representative), Dr. S. B. Agampodi, Prof. S. D. Dharmaratne, Dr. T. R. Fernando, Dr. Kapila Jayaratne, Dr. Shyamalee Samaranayaka, Dr. Sunil Seneviratne Epa
CONGRESS ORGANIZING COMMITTEE 2015

Seated Left - Right: Dr. A.A.H. Priyani (Honorary Assistant Secretary), Dr. Sudarshi Seneviratne (Honorary Assistant Secretary), Dr. Lasantha Malavige (Social Secretary), Dr. Navoda Atapattu (Vice President), Dr. Kalyani Guruge (Public Relation Officer), Dr. Iyanthi Abeyewickreme (President Elect), Prof. Jennifer Perera (President, SLMA), Dr. Padma S. Gunaratne (Vice President), Dr. Samanthi de Silva (Honorary Treasurer), Dr. Ranil Jayawardena (Honorary Secretary), Dr. Sumithra Tissera, Dr. Shamini Prathapan (Honorary Assistant Secretary)

Standing Left – Right: Dr. Thusha Nawasiwatte, Dr. Chirantha K. Liyanage, Dr. Priyanga Ranasinghe, Dr. Yasitha Weerasinghe, Dr. Jeyanthakumar Rasarathnam, Dr. Kelani Ruwan Perera, Dr. Dharshana Illeperuma, Dr. Amaya Ellawala, Dr. Sahan IT Guruge

Absent: Dr. Hasini Banneheke, Dr. Ashwini de Abrew, Dr. Christo Fernando, Dr. Preethi Wijegunawardene

ORATIONS COMMITTEE

Prof. Jennifer Perera, Dr. Palitha Abeykoon, Dr. Iyanthi Abeyewickreme, Dr. Anuruddha Abeygunasekara, Dr. Ranil Jayawardena

ABSTRACT REVIEW COMMITTEE

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PAST PRESIDENTS OF THE SRI LANKA MEDICAL ASSOCIATION

1887/88 & 89/90  Dr P D Anthonisz  1942/43  Dr S F Chellappah
1890/91  Sir William Kynsey  1943/44  Dr May Ratnayake
1891/92  Dr James Loos  1944/45  Dr R L Spittel
1892/93  Dr J L Vanderstraaten  1945/46  Dr V P de Zoysa
1893/94 & 94/95  Sir William Kynsey  1946/47  Dr G S Sinnatamby
1895/96  Dr J D Macdonald  1947/48  Dr E M Wijerama
1896/97 & 97/98  Sir William Kynsey  1948/49  Dr Cyril F Fernando
1898/99 & 99/00  Sir Allan Perry  1949/50  Prof C C de Silva
1900/01, 01/02 & 02/03  Dr W G VanDort  1950/51  Prof Milroy Paul
1903/04  Dr T F Garvin  1951/52  Prof M V P Peiris
1904/05  Hon W G Rock wood  1952/53  Dr A S Rajasingham/
1905/06  Sir Marcus Fernandez  1953/54  Prof P B Fernando
1906/07  Dr C T Griffin  1955/55  Dr L O Abeyratne
1907/08  Dr A J Chalmers  1956/56  Dr Gerald H Cooray
1908/09  Dr M Sinnetamby  1956/57  Dr M C M Kaleel
1909/10  Dr H G Thomas  1957/58  Prof. O E R Abhayaratna
1910/11  Sir Aldo Castellani  1958/59  Dr Richard Caldera
1911/12  Sir Allan Perry  1959/60  Prof V Sivalingam
1912/13  Dr S C Paul  1960/61  Dr W A Karunaratna
1913/14  Dr G J Rutherford  1961/62  Dr P R Thiagarajah
1914/15  Sir Marcus Fernandez  1962/63  Dr A D P A Wijegonawardena
1915/16  Dr Frank Grenier  1963/64  Dr R Handy
1916/17  Dr M Sinnetamby  1965/65  Dr Stanley de Silva
1917/18  Dr E V Ratnam  1966/66  Dr R L Brohier
1918/19  Dr R L Brohier  1966/67  Dr F de S Goonawarden
1919/20  Dr Lucian de Zilwa  1967/68  Dr L D Parsons
1920/21  Dr L D Parsons  1968/69  Dr W D L Fernando
1921/22  Dr S D Boylan Smith  1969/70  Dr E H Miranda
1922/23  Dr E Garvin Mack  1970/71  Dr D David
1923/24  Dr I David  1971/72  Dr Andreas Nell
1924/25  Dr P J Chissell  1972/73  Dr H M Peiris
1925/26  Dr P J Chissell  1973/74  Dr H M Peiris
1926/27  Dr H M Peiris  1974/75  Dr R J G Bridger
1927/28  Dr H M Peiris  1975/76  Dr S A Cabraal
1928/29  Dr Vanlangenberg  1976/77  Dr P Sivasubramaniam
1929/30  Dr S Mutthia  1976/77  Prof. Daphne Attygale
1930/31  Dr S T Gunasekera  1977/78  Prof. Daphne Attygale
1931/32  Sir Frank Gunasekera  1978/79  Dr H B Perera
1932/33  Prof W A E Karunaratne  1979/80  Dr S E Wijetilake
1933/34  Dr H O Gunewardena  1980/81  Dr A V Perera
1934/35  Dr S L Navaratnam  1981/82  Dr A V Perera
1935/36  Dr E C Alles  1982/83  Dr A V Perera
1936/37  Prof John R Blaze  1983/84  Dr C G Uragoda
1937/38  Sir Nicholas Attygalle  1984/85  Dr Lakshman Ranasinghe
1938/39  Dr J H F Jayasuriya  1986  Dr S J Stephen
1939/40  Dr G A W Wickramasuriya  1987  Dr G W Karunaratne
1940/41  Dr S V Gabriel  1988  Dr Nihal Perera
1941/42  Dr Gunaratnam Cooke  1989  Prof Priyani Soysa
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<td>Prof W A S de Silva</td>
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<td>Dr Sunil Seneviratne Epa</td>
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<td>Prof Colvin Goonaratna</td>
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<td>Prof Narada Warnasuriya</td>
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<td>1998</td>
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<td>Prof Sanath P Lamabadusuriya</td>
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<td>Prof Nimal Senanayake</td>
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<td>Dr Kumar Weerasekera</td>
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<td>2002</td>
<td>Dr Preethi Wijegoonewardene</td>
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MESSAGE FROM HIS EXCELLENCY THE PRESIDENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

Message from His Excellency the President of Sri Lanka.

I am pleased to send this message of felicitation to the Sri Lanka Medical Association (SLMA) commemorating its 128th Anniversary.

Over the years, the SLMA has served the nation as the apex organization of medical doctors, uplifting and maintaining the standards of the profession. I commend the interest SLMA has shown in matters of national importance related to health and for their advocacy in advancement of health and health services in the country.

The 128th Anniversary of the International Medical Congress of the SLMA with the theme “Connect, communicate, collaborate for improved health and healthcare” is indicative of Sri Lanka’s recent multi-sectoral collaborated efforts towards development. This Congress will see the participation of medical and allied health professionals, academics, researchers and policy makers from many different spheres of medicine. I trust their deliberations and sharing of experiences will bring about innovative ideas that would enrich our healthcare services for the betterment of the entire nation.

I cordially welcome all foreign participants to Sri Lanka and wish all delegates fruitful deliberations and a successful congress.

I wish the SLMA and its 128th Anniversary celebrations every success.

Maithripala Sirisena,
President of the Democratic Socialist Republic of Sri Lanka.
MESSAGE FROM THE HONOURABLE MINISTER OF HEALTH AND INDIGENOUS MEDICINE

I congratulate the Sri Lanka Medical Association (SLMA) for organizing the 128th Anniversary International Medical Congress, celebrating the inimitable services it has rendered to our country for over a century.

I am well aware of the immense contributions the SLMA has made to further professional development and to improve the standards of health services in Sri Lanka. It has always been an opinion leader in health advocacy to the Ministry of Health as well as the general public of this country.

The 128th Anniversary International Medical Congress which is to be held from 5th – 8th July 2015 marks yet another milestone event of this vibrant Association. The theme for this year “Connect, communicate, collaborate for improved health and healthcare” is most pertinent in the current milieu of branching and micro-specialization of the field of medicine and related fields.

Sri Lanka’s health achievements can be augmented many fold through a multi-sectorial approach that brings together government and corporate sector resources from medical and non-medical fields. I commend and thank the SLMA for taking the initiative to set Sri Lanka in this direction.

As the Minister of Health, I look forward to strengthening the collaboration with the SLMA and hope that it will continue to serve our nation with the same tenacity that has been evident throughout the years.

I wish the 128th Anniversary International Medical Congress of the Sri Lanka Medical Association all success.

Dr Rajitha Senaratne
Minister of Health and Indigenous Medicine
MESSAGE FROM THE PRESIDENT OF THE SLMA

It is with the greatest pleasure, that I warmly welcome you all to the 128th Anniversary International Medical Congress of the Sri Lanka Medical Association (SLMA). I am pleased to extend a very warm welcome to our Chief Guest Professor Mohan de Silva, the Chairman of the University Grants Commission and the Senior Professor and Chair of Surgery at the University of Sri Jayewardenepura. Your presence at the inauguration ceremony is a great source of encouragement and inspiration to all of us. We are delighted to have Dr. Jacob Kumaresan, the newly appointed WHO Representative for Sri Lanka, as our Guest of Honour today. We hope that you would continue to extend to us both technical support and sponsorship for our activities.

SLMA is the apex medical association in Sri Lanka, bringing together doctors of all grades from junior interns to the senior practitioners irrespective of grade or specialty. The aim of the SLMA is to contribute towards achieving better health status of the nation. This is achieved through continuous collaboration with a multitude of stakeholders to ensure delivery of preventive and curative care of the highest quality. Numerous expert committees, which form the backbone of the SLMA, offer and advocate evidence based opinions related to healthcare by engaging in dialogue with relevant stakeholders. As the 118th President of the SLMA, I firmly believe that together we can reach greater heights in health and healthcare.

The theme selected for this year is “Connect, Communicate, Collaborate for Improved Health and Healthcare”. The programme of the medical congress epitomizes the theme by incorporating all specialties including allied health sciences and humanities. The diverse programme was made possible through collaborative efforts between the SLMA and numerous colleges and associations, WHO and Ministry of Health and many other organizations. The scientific sessions will be held from 5th to 8th July 2015 and will be accompanied by several pre-congress and post-congress sessions. The congress will be preceded by the highly popular SLMA Run and Walk for promoting a healthy lifestyle. The Doctors Concert and Banquet will add flavor to the congress through enhanced social interaction.

As the President my heartfelt gratitude goes out to our distinguished panel of local and foreign speakers for accepting our invitation to contribute their expertise to this knowledge sharing exercise. I take this opportunity to pay tribute to the past presidents, secretaries, and council members, SLMA members, pre-intern demonstrators and staff of the SLMA for working tirelessly to make this event a reality. A special word of thanks goes to our sponsors for their magnanimous support in hosting this annual congress.

I am certain that these sessions will be a tremendous opportunity for all delegates to interact and develop productive links for future collaboration. I sincerely hope that the 128th SLMA Congress would be a memorable and enjoyable one for all, both academically and socially.

Professor Jennifer Perera
It is my pleasure and privilege to welcome you to the 128th Anniversary International Medical Congress of the Sri Lanka Medical Association. The SLMA is the apex academic medical association in Sri Lanka. It brings together doctors from different specialties and all grades under one roof. This annual event makes one of the much-awaited highlights of the calendar of the SLMA. In addition to the main academic program, this year’s congress consists of eight pre-congress and two post-congress workshops, breakfast meetings and lunchtime debates. There will be over 100 local and foreign resource persons who will contribute towards maintaining the highest scientific standards.

An event of this magnitude and standard is a collective effort of many individuals and organizations. A unique vision and guidance by our President Prof. Jennifer Perera, untiring efforts by our Vice President and Chair of the scientific committee Dr. Padma Gunarathne who was ably assisted by Dr. Amaya Ellawala and Dr. Darshana Eleperuma deserve special mention. It would not have been possible to organize this event without the support of Dr. Navoda Attrapattu, Dr. Kalyani Guruge and Dr. Chiranthi Liyange. I also thank the Assistant Secretaries, the members of the Council, the membership of SLMA and the staff of SLMA, headed by Mr. Rajasingham, for their support in making this event a success.

Finally, I would like to thank all our speakers, authors of the scientific papers, chairpersons, judges and all our sponsors for their valuable support.

I wish all participants an academically stimulating and socially enjoyable conference.

Dr. Ranil Jayawardena

Hon. Secretary, Sri Lanka Medical Association
MESSAGE FROM THE CHIEF GUEST

As the apex professional medical organization with a proud history catering for a diverse membership with different experiences and expertise, I am delighted to see SLMA responding to the challenge of delivery of quality healthcare information to fill the gap between the best practices and what practitioners actually do. The diversity and depth of the topics covered in your programme is the best evidence for your response.

I am sure, the deliberations at the sessions would pave way to promote policies and best practices to create safe high quality care in both preventive and curative medicine.

I wish the organizing committee all the best for what should be an excellent two days of instructive and informative exchanges and congratulate them for their outstanding effort.

Prof. Mohan de Silva

Chairperson, University Grants Commission
MESSAGE FROM THE GUEST OF HONOUR

I have great pleasure in sending this message to the 128th Anniversary Scientific Sessions of the Sri Lanka Medical Association.

The Sri Lanka Medical Association the oldest professional medical association in Asia and Australasia, with a proud history dating from 1887 brings together medical practitioners of all grades and all branches of medicine.

The theme for this year’s sessions “Connect, communicate, collaborate for improved health and healthcare” is very timely and appropriate. In this age of enhanced connectivity, effective communications can lead to many positive outcomes such as improved information flow, more effective interventions, improved safety, enhanced employee morale, increased patient and family satisfaction, and decreased lengths of stay. Effective communication among staff encourages effective teamwork and promotes continuity and clarity within the patient care team. At its best, good communication encourages collaboration, fosters teamwork, and helps prevent errors.

I am sure the multitude of activities including a Health Run & Walk, Pre-Congress Workshops, Scientific Orations, Free Paper Sessions, Poster Presentations, Symposia and Guest Lectures will enrich the 128th Anniversary Sessions.

I wish all success for the sessions.

Dr Jacob Kumaresan  
WHO Representative to Sri Lanka
# 128th Anniversary International Medical Congress, Sri Lanka Medical Association

## Programme at a Glance

| Sunday 28th June 2015 | 6.00am | 128th SLMA Anniversary run and walk BMICH |

### Pre-Congress Workshops (3rd July to 5th July 2015)

**Friday 3rd July 2015**

<table>
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<tr>
<th>Workshop</th>
<th>Time</th>
<th>Topic</th>
<th>Venue</th>
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<tr>
<td>Workshop 1</td>
<td>9.00am – 3.00pm</td>
<td>Workplace based research and writing</td>
<td>Lionel Memorial Auditorium, SLMA</td>
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<td>Workshop 2</td>
<td>9.00am – 1.00pm</td>
<td>Perspectives of Values in Medicine (Interactive Symposium)</td>
<td>Clinical Medicine Academic and Research Centre (ClinMARC), NHSL</td>
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</table>

**Saturday 4th July 2015**

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Time</th>
<th>Topic</th>
<th>Venue</th>
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<tbody>
<tr>
<td>Workshop 3</td>
<td>9.00am – 4.00pm</td>
<td>Complementary and alternative medicine: could we integrate for better care</td>
<td>Lionel Memorial Auditorium, SLMA</td>
</tr>
<tr>
<td>Workshop 4</td>
<td>9.00am – 4.15pm</td>
<td>Patient safety: collaborative multi-sector workshop based on cases</td>
<td>Clinical Medicine Academic and Research Centre (ClinMARC), NHSL</td>
</tr>
<tr>
<td>Workshop 5</td>
<td>9.00am – 3.45pm</td>
<td>Managing non cancer pains: key for better clinical practice</td>
<td>Block C Ground Floor, New Auditorium, Faculty of Medicine, Colombo</td>
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**Sunday 5th July 2015**

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<tbody>
<tr>
<td>Workshop 6</td>
<td>9.00am – 3.30pm</td>
<td>Past, present &amp; future challenges of health and nutrition of estate/plantation community</td>
<td>Lionel Memorial Auditorium, SLMA</td>
</tr>
<tr>
<td>Workshop 7</td>
<td>9.00am – 4.30pm</td>
<td>Approach to sleep symptoms: sleepy or sleepless</td>
<td>Block C Ground Floor, New Auditorium, Faculty of Medicine, Colombo</td>
</tr>
<tr>
<td>Workshop 8</td>
<td>9.00am – 4.00pm</td>
<td>Allergy- the unmet need</td>
<td>Clinical Medicine Academic and Research Centre (ClinMARC), NHSL</td>
</tr>
</tbody>
</table>

### Sunday 5th July 2015 6.00pm – 9.30pm

**INAUGURATION**

Oak Room, Cinnamon Grand, Colombo

SLMA Oration: “Friendly fire – neurons under attack! Studies from Sri Lanka”

Dr. Thashi Chang
### Monday 6th July 2015

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8.00am – 8.30am</td>
<td>Registration</td>
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</tbody>
</table>
| 8.30am – 9.15am  | Keynote Address: Connect, communicate and collaborate for improved health and healthcare: strategies and challenges  
**Prof. Lalitha Mendis** |
| 9.15am – 9.45am  | Plenary 1: The transformative impact of biologics on clinical medicine  
**Dr. Siraj Misbah** |
| 9.45am – 10.30am | Professor N.D.W. Lionel Memorial Oration: A lifetime of research in pulmonology  
**Dr. B.J.C. Perera** |
| 10.30am -11.00am| Tea and poster viewing                                                                       |
|                 | **Hall A**                                                                                   |
|                 | **Hall B**                                                                                   |
|                 | **Hall C**                                                                                   |
| **INFECTIONS**   | **PREVENTIVE MEDICINE**                                                                      |
| **BEHAVIOUR AND HEALTH** |                                                                                           |
| 11.00am -11.30am| Guest Lecture 1: Battle for dominance: Can the Trilogy of Antibiotic Stewardship, PK/PD strategies and new drugs win the Power of the Ring - Antimicrobial Resistance?  
**Dr. Terrence Rohan Chinniah** |
|                 | Guest Lecture 2: Improving glycaemic control using insulin pump therapy  
**Prof. Devaka Fernando** |
|                 | Guest Lecture 3: Why is it important to focus on schools as a health promotion setting?  
**Dr. Nicholas Townsend** |
| 11.30am -1.00pm | Symposium 1: Pneumococcal diseases: how can we win the battle?  |
|                 | Symposium 2: One Health Concept in preventing communicable diseases  |
|                 | Symposium 3: Awkward Problems and Plausible Solutions - Managing Medically Unexplained Symptoms  |
| 1.00pm - 2.00pm | Lunch and poster viewing                                                                     |
| 2.00pm - 3.30pm | Free paper session 1                                                                         |
|                 | Free paper session 2                                                                         |
|                 | Free paper session 3                                                                         |
| 3.30pm - 5.00pm | Symposium 4: Hepatitis and HIV: Implications for care                                          |
|                 | Symposium 5: NCD control in Sri Lanka                                                         |
|                 | Symposium 6: Essentials in Clinical Sexual Medicine                                             |
| 5.00pm - 5.30pm | Tea                                                                                          |
| 7.00 pm onwards | Doctors’ Concert                                                                              |
## Tuesday 7th July 2015

### 7.30am – 8.30am
- **Breakfast Meeting:** Modifying behaviour for health
  - *Prof. Diyanath Samarasingha & Dr. Mahesh Rajasriya*

### 8.30am – 9.00am
- **Plenary 2:** West Nile Virus: a mosquito borne disease. Is Sri Lanka susceptible to an outbreak?
  - *Prof. Ng Mah Lee, Mary*

### Hall A
- **9.00am – 10.30am**
  - **Symposium 7**
    - Stroke: Optimizing care; an overview
- **10.30am – 11.00am**
  - **Guest Lecture 4**
    - End of life care
    - *Prof. Sally Mc.Carthy*

### Hall B
- **9.00am – 10.30am**
  - **Symposium 8**
    - Addressing Challenges of Child Sexual Abuse through an Integrated Service Approach
- **10.30am – 11.00am**
  - **Guest Lecture 5**
    - Advances in interventional Paediatric Cardiology
    - *Dr. Shehan Perera*

### Hall C
- **9.00am – 10.30am**
  - **Symposium 9**
    - Multi-sectoral approaches to promote nutrition
- **10.30am – 11.00am**
  - **Tea and poster viewing**

### 11.00am – 11.30am
- **Guest Lecture 6**
  - Health equity, social determinants and health policy
  - *Prof. Sharon Friel*

### 11.30am – 1.00pm
- **Symposium 10**
  - Glomerulonephritis
- **Symposium 11**
  - Facing transition in chronic illness
- **Symposium 12**
  - Clinical Teaching

### 1.00pm – 2.00pm
- **Lunch, poster viewing and debate**
  - "Decriminalizing commercial sex will reduce Sexually Transmitted Infections"
- **2.00pm – 3.30pm**
  - **Symposium 13**
    - Emergency Medicine
  - **Symposium 14**
    - Foetal and early neonatal care in high risk pregnancies
  - **Symposium 15**
    - Emerging use of mobile technology in health

### 3.30pm – 5.00pm
- **Tea**

### 5.00pm onwards
- **Dr. S C Paul Oration:** Analysis of anaesthetic adaptations and observations in Thoracoscopic and Laparoscopic surgeries
  - *Dr. Vasanti Pinto*
### Wednesday 8th July 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7.30am – 8.30am</td>
<td><strong>Breakfast Meeting:</strong> Building the next generation of health professional leaders (by a team of young health professionals)</td>
</tr>
</tbody>
</table>
| 8.30am – 9.00am | **Plenary 3:** Pathophysiology, diagnosis and treatment of gastro-esophageal reflux  
*Prof. John O. Clarke* |
| 9.00am – 9.45am | **Dr. S. Ramachanchran Memorial Oration:** Epidemiology of migration and mental health in Sri Lanka: local insight for a global impact  
*Dr. Chesmal Siriwardhana* |
| 9.45am – 10.15am | **Hall A**  
**Guest Lecture 7:** The diabetic foot: a surgical perspective  
*Dr. Ajit Kumar Varma*  
**Guest Lecture 8:** The story a seizure behaviour tell us  
*Dr. Manjari Tripathi*  
**Guest Lecture 9:** History, healthcare and challenges of health of estate workers in Sri Lanka  
*Dr. Nithershini Periyasamy* |
| 10.15am – 10.45am | **Tea and poster viewing**                                                                   |
| 10.45am – 12.15pm | **Hall B**  
**Symposium 16:** Safe homes and safe roads: preventing child injuries in Sri Lanka  
**Symposium 17:** Cosmetic surgery and cosmetic dermatology  
**Symposium 18:** Hot Topics in Sports Medicine |
| 12.15pm – 1.15pm | **Lunch, poster viewing and debate**  
*Professional fees of the private consultations of the professionals should be peer reviewed and not administrator reviewed* |
| 1.15pm – 2.45pm | **Hall A**  
**Free paper session 7**  
**Free paper session 8**  
**Free paper session 9** |
| 2.45pm – 4.15pm | **Hall B**  
**Symposium 19:** Case scenario based symposium on the management of the threatened diabetic foot  
**Symposium 20:** Personalized Medicine in Oncology  
**Symposium 21:** Illness and health among doctors: do carpenters have good furniture? |
| 4.15pm – 4.30pm | **Tea** |
| 7.30pm onwards | **Banquet (Water’s Edge Hotel, Battaramulla)**                                                |

### Post-Congress Workshops

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Location</th>
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<tbody>
<tr>
<td>Thursday 9th July 2015</td>
<td>9.00am – 11.30am</td>
<td><strong>Peer Assisted Learning</strong></td>
<td>Board Room, Faculty of Medicine, Colombo</td>
</tr>
<tr>
<td>Sunday 12th July 2015</td>
<td>9.00am – 1.00pm</td>
<td><strong>Managing the Obese Patient - Combining Treatment Modalities</strong></td>
<td>Lionel Memorial Auditorium, SLMA</td>
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</table>
PROGRAMME IN DETAIL

Sunday, 28th June 2015

HEALTH RUN & WALK

*Walk for Health, Health is Wealth*

- 6.00 am - 6.30 am  Warm up session
- 6.30 am - 7.15 am  Run
- 7.15 am - 8.30 am  Walk
- 8.30 am onwards  Health Check

- Free participation
- Free medical check-up including blood tests
- Free sports physiotherapy
- Free T-shirts and gift packs
## Pre-congress Workshop 1
### Workplace based Research and Writing
Lionel Memorial Auditorium, Sri Lanka Medical Association  
**9.00 am – 3.00 pm**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8.30 – 9.00am</td>
<td>Registration</td>
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</table>
| 9.00 – 9.20am | Introduction to workplace based research; role of Society for Health Research and Innovation (SHRI) in workplace based research | Dr. Anuruddha Padeniya  
*Consultant Paediatric Neurologist, Lady Ridgeway Hospital*  
*President, Government Medical Officers Association*  
Dr. Sunil de Alwis |
| 9.20 – 10.00am | A case study presentation on workplace based research | Dr. Rashan Haniffa  
*Consultant Physician, University of Oxford*  
*Project Coordinator – National Intensive Care Surveillance* |
| 10.00 – 10.30am | Situation analysis on current research trends in Sri Lanka | Dr. Dineshan Ranasinghe  
*Medical Officer- Base Hospital, Panadura* |
| 10.30 – 11.00am | Tea                     |                                     |
| 11.00 – 11.30am | The way forward in workplace based research and resources available | Dr. Sumal Nandasena  
*Consultant Community Physician* |
| 11.30am – 12.00pm | Discussion               |                                     |
| 12.00 – 1.00pm | Lunch                    |                                     |
| 1.00 – 2.00pm | How to write an article to a medical journal | Prof. Varuni de Silva  
*Professor in Psychiatry, Faculty of Medicine, University of Colombo & Editor, Ceylon Medical Journal*  
Dr. Anuruddha M. Abeygunasekera |
| 2.00 – 3.00pm | What editors are interested in seeing in publications | Dr. Anuruddha M Abeygunasekera  
*Consultant Urological Surgeon, Colombo South Teaching Hospital & Editor, Ceylon Medical Journal* |
| 3.00 – 3.05pm | Vote of thanks           |                                     |
## Pre-congress Workshop 2
**Perspectives of Values in Medicine**
**SLMA - Interactive symposium**
Clinical Medicine Academic and Research Center (ClinMARC),
National Hospital of Sri Lanka
9.00am – 1.00pm

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<tr>
<td>8.30 – 9.00am</td>
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<tr>
<td></td>
<td>Chairpersons: Prof. Antoinette Perera</td>
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<tr>
<td></td>
<td>Dr. Iyanthi Abeywickrema</td>
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<tr>
<td>9.00 - 9.15am</td>
<td><strong>Introduction</strong></td>
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<tr>
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<td>Dr. Eugene Corea</td>
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<td><em>Chairperson, Ethics Committee, SLMA</em></td>
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<tr>
<td>9.15 – 9.45am</td>
<td><strong>Public Expectation in values in medicine</strong></td>
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<td>Dr. Nalin Jayasuriya</td>
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<td><em>Chairman McQuire Rens Group</em></td>
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<tr>
<td>9.45 – 10.15am</td>
<td><strong>Socio-cultural aspects in values in medicine</strong></td>
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<td>Prof. Kalinga Tudor Silva</td>
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<tr>
<td></td>
<td><em>Professor Emeritus in Sociology, University of Peradeniya, Sri Lanka</em></td>
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<tr>
<td>10.15 – 10.45am</td>
<td><strong>Influence of the humanities in values in medicine</strong></td>
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<td>Dr. Godwin Constantine</td>
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<td><em>Department of Clinical Medicine, Faculty of Medicine, Colombo</em></td>
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<tr>
<td>10.45-11.15am</td>
<td><strong>Tea</strong></td>
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<tr>
<td>11.15 - 11.45am</td>
<td><strong>Socio-biological perspectives in values in medicine</strong></td>
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<td>Prof. Carlo Fonseka</td>
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<td><em>President, Sri Lanka Medical Council</em></td>
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<tr>
<td>11.45 – 12.15pm</td>
<td><strong>Values in medical practice</strong></td>
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<td></td>
<td>Dr. Eugene Corea</td>
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<td><em>Chairperson, Ethics Committee, SLMA</em></td>
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<tr>
<td>12.15 – 12.45pm</td>
<td><strong>Discussion</strong></td>
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### Saturday 4th July 2015

**Pre-congress Workshop - 3**  
**Complementary and alternative medicine: could we integrate for better care**  
Lionel Memorial Auditorium, SLMA  
9.00am – 4.00pm

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8.30–9.00am</td>
<td>Registration</td>
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</tbody>
</table>
| 9.00–9.15am     | **Introduction to Complementary and Alternative Medicine (CAM)**  
**Dr. Senaka Pilapitiya**  
*Center for Education & Research in Complementary and Alternative Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*
| 9.15–9.45am     | **Systems medicine: does it integrate modern & traditional systems of medicine?**  
**Prof. Saroj Jayasinghe**  
*Professor, Department of Clinical Medicine, Faculty of Medicine, Colombo*
| 9.45–10.30am    | **Integrative Gynecological Cancer Treatment- Is there a role?**  
**Dr. Vijaendreh Subramaniam**  
*Consultant Obstetrician and Gynaecologist, Mahkota Hospital, Malaysia*
| 10.30–11.00am   | **Tea**                            |
| 11.00–11.30am   | **A surgeons experience in an Integrated approach for managing Fistula-in-ano**  
**Dr. Sujeewa Thalgaspitiya**  
*Senior Lecturer, Department of Surgery, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*
| 11.30–12.00am   | **New WHO Traditional Medicine (TRM) strategy 2014-2023 and integration of TRM into healthcare systems**  
**Dr. Kim Sungchol**  
*Regional advisor, Traditional Medicine, HDS, WHO SEARO, New Delhi*
| 12.00 – 12.30pm | **Need for understanding & appreciating CAM fundamentals for effective integration**  
**Dr. Senaka Pilapitiya** |
| 12.30 – 12.40pm | **Discussion**                     |
| 12.00 – 1.00pm  | **Lunch**                          |
| 1.40 – 2.10pm   | **Challenges in CAM Clinical Research**  
**Prof. Sisira Siribaddana**  
*Professor of Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*
| 2.10–2.40 pm    | **Issues and paradigms in traditional medicine research**  
**Dr. Kamal Perera**  
*Senior Lecturer, Institute of Indigenous Medicine, University of Colombo*
| 3.10–3.30 pm    | **Overcoming challenges in CAM research and opportunities for generating evidence in the Sri Lankan context**  
**Dr. Suneth Agampodi**  
*Senior Lecturer, Department of Community Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*
| 3.10–3.30 pm    | **Overcoming challenges in CAM research-A case study**  
**Dr. Wathsala Wijesinghe**  
*Senior Research Officer, Bandaranaike Memorial Ayurveda Research Institute*
| 3.30–3.50 pm    | **An integrated community based geriatric care programme- A case study**  
**Dr. Amali Perera**  
*Community Medical Officer, Ayurveda health promotion service, Anuradhapura*
| 3.50-4.00 pm    | **Discussion and close**            |
Pre-congress Workshop - 4
Patient safety: collaborative multi-sector workshop based on cases
Clinical Medicine Academic and Research Centre (ClinMARC), NHSL
9.00am – 4.15pm

8.30 – 9.00am Registration
8.30 – 8.35am Address by President - SLMA
Prof. Jennifer Perera
8.35 – 8.40am Address by Deputy Director General (Medical Services) 1
Dr. Lakshmi C Somatunga
8.40 – 8.45am Address by Director General of Health Services
Dr. P.G. Mahipala

Patient Safety Experience: International perspective
Chairperson: Dr. Reggie Perera
8.45 – 9.15am Current Healthcare Quality and Safety Programme in Sri Lanka
Dr. S. Sridharan
Director Healthcare Quality and Safety
9.15 – 10.00am Patient Safety programme in NHS
Prof. Devaka Fernando
Consultant Endocrinologist, Sherwood Forest Hospitals, UK
10.00 – 10.45am Patient Safety Programme in Malaysia Health System: Barriers and Challenges
Dr. Nor’Aishahbt Abu Bakar
Director, Head of Patient Safety Unit & Secretariat Patient Safety, Malaysia
10.45 – 11.00am Panel Discussion
11.00 – 1.15am Tea
Patient Safety: From Clinical Perspective
Chairperson: Dr. Ranjan Dias
11.15 – 12.15pm High Reliable Organization and Patient Safety
Dr. Prabhu Vinayagam
Managing Director – JCI, Asia Pacific Region, Singapore
12.15 – 1.00pm Patient Safety during Cardiac Surgery: Practical Experience
Dr. Prashant Vaijyanath
Director of Cardiovascular and Thoracic Surgery
Kovai Medical Center and Hospital Coimbatore, Tamil Nadu, South India
1.00 – 1.15pm Panel Discussion
1.15 – 2.00pm Lunch
Patient Safety: Other issues
Chairperson: Prof. Jennifer Perera
2.00 – 3.00pm Infection Control & Patient Safety
Dr. Mahen Kothalawela
Consultant Microbiologist, Teaching Hospital Kandy
3.00 – 3.45pm Importance of Communication in Patient Safety
Dr. Neelamani S R Hewageegana
Deputy Director General of Health Services (DDG) Planning,
Ministry of Health, Sri Lanka
3.45 – 4.00pm Panel Discussion
## Saturday 4th July 2015

**Pre-congress Workshop 5**

**Managing Non cancer pains: key for better clinical practice**
Block C Ground floor, New Auditorium, Faculty of Medicine, Colombo
9.00am – 3.45pm

<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tr>
<td>8.30 – 9.00am</td>
<td>Registration</td>
<td>Chairperson: Dr. R. Jayamaha</td>
</tr>
</tbody>
</table>
| 9.00 – 9.25am | Introduction                                                            | **Dr. R. Jayamaha**
**Consultant Physician, Provincial Hospital, Badulla, Sri Lanka** |
| 9.30 – 9.55am | Pharmacology of Pain management                                        | **Dr. Nirmala Wijekoon**
**Senior Lecturer in Pharmacology, Faculty of Medicine, University of Kelniya** |
| 10.00–10.25am | Management of Common Nociceptive Pain                                   | **Dr. I. Athukorala**
**Specialist Rheumatologist and Senior Lecturer, Faculty of Medicine, Colombo, Sri Lanka** |
| 10.25 – 0.45am| Tea                                                                     |                                                                                             |
| 10.45– 1.10am | Management of Common Neuropathic Pain                                   | **Dr. T. Chang**
**Specialist Neurologist & Senior Lecturer, Faculty of Medicine, Colombo, Sri Lanka** |
| 11.15 -11.40am | Orthopedic Management of non-cancer pain                               | **Dr. Y. Jayasinghe**
**Consultant Orthopedic Surgeon, Provincial General Hospital, Badulla, Sri Lanka** |
| 11.45am – 2.10pm | Common, safe and rewarding Interventions for pain in Non-cancer patients | **Prof. Magdi Ramzi Iskander**
**Professor of Anaesthesia and Pain Relief, National Cancer Institute, Cairo University** |
| 12.15 - 12.45pm | Physiotherapy for common non-cancer pain                               | **Miss. Nadeesha Kalyani**
**Lecturer, Allied Health Sciences Unit, Faculty of Medicine, Colombo, Sri Lanka** |
| 12.45 – 1.45pm | Lunch                                                                   |                                                                                             |
| 1.45 – 2.10pm | Neurosurgical Management of non-cancer pain                            | **Dr. N. Kumarasinghe**
**Consultant Neurosurgeon, Teaching Hospital, Kandy, Sri Lanka** |
| 2.15 – 2.40pm | Panel Discussion                                                        |                                                                                             |
| 2.45- 3.10pm | World Institute of Pain and its Contribution towards standardization of care | **Prof. Magdi Ramzi Iskander** |
| 3.15 – 3.40pm | Floor plan for Comprehensive Pain Care in Sri Lanka                    | **Dr. C. Arambepola**
**Consultant Community Physician and Senior Lecturer, Department of Community Medicine, Faculty of Medicine, University of Colombo, Sri Lanka** |
| 3.40 – 3.45pm | Vote of thanks                                                         | **Dr. R. Jayamaha**                                                                         |

## Sunday 5th July 2015
Pre-congress Workshop 6
“Past, Present and Future Challenges of Health and Nutrition of Estate/Plantation Community”
Lionel Memorial Auditorium, SLMA
9.00am – 4.00pm

8.30 – 9.00am Registration

9.00 – 9.15 am Welcome speech and introduction to the workshop
Dr. Piyal Ratnayaka
*Director, Estate and Urban Health Unit, Ministry of Health, Sri Lanka*

9.15 – 9.30am Introduction to the Health of Estate/Plantation worker in Sri Lanka
Dr. Nithershini Periyasamy
*Consultant Community Physician, Estate & Urban Health Unit, Ministry of Health, Sri Lanka*

9.30 – 9.45am Guest speech
Hon. Minister P. Digambaram
*Ministry of Plantation Infrastructure Development, Sri Lanka*

9.45 – 10.30am 30-year changes of major public health problems in Chinese children aged 7-18 years
Professor Haijun Wang
*Associate Director, Institute of Child & Adolescent Health, Peking University, China*

10.30 – 11.00am Tea

11.00 – 11.30am World Bank presentations on Estate Nutritional survey
Dr. Upul Senerath
*Senior Lecturer, Department of Community Medicine, Faculty of Medicine, Colombo*

11.30am – 12 noon World Bank presentations on Estate Nutritional survey
Dr. Kumari Vinodhani Navaratne
*Senior Health Specialist, World Bank, Sri Lanka*

12.00 – 12.30 pm World Bank presentations on Estate Nutritional survey
Dr. Nithershini Periyasamy

12.30 – 1.00 pm Intestinal Helminthic infection in the past, present and future in the estate community
Dr. Devika Iddawala and Dr. S. Wickramasingha
*Senior Lecturers, Department of Parasitology, Faculty of Medicine, Peradeniya*

1.00 – 2.00pm Lunch

2.00 – 2.30 pm Challenges of Cancer control among the Estate community
Dr. N. Jeyakumaran
*Clinical Oncologist, National Cancer Institute of Sri Lanka, Maharagama*

2.30 – 2.45pm Health service delivery challenges in the estates at district level
Dr. Nimal Gamagedara
*Consultant Community Physician, PDHS Office, Badulla*

2.45 – 4.00pm Panel discussion

4.00pm Vote of Thanks

Sunday 5th July 2015
**Pre-congress Workshop 7**  
**Approach to Sleep Symptoms: Sleepy or Sleepless**  
Block C Ground floor, New Auditorium, Faculty of Medicine, Colombo  
9.00am-4.30pm

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8.30 – 9.00am</td>
<td>Registration</td>
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</table>
| 9.00 – 9.25am | **Sleep related breathing disorders: an overview**                        | Dr. Thushara Galabada  
*Consultant Respiratory Physician, DGH Hambanthota, Sri Lanka* |
| 9.3 – 9.55am  | **Clinical assessment of patients with sleep related breathing disorders** | Dr. S. Rishikesavan  
*Acting Consultant Respiratory Physician, TH Batticaloa, Sri Lanka* |
| 10.00 – 10.25am | **Introduction to polysomnography and selected cases**                       | Prof. Manjari Tripathi  
*Professor Neurology, NIH Fellow (UCLA), Department of Neurology, Neuroscience Centre, All India Institute of Medical Sciences, New Delhi* |
| 10.25 – 10.45am | Tea                   |                                                                              |
| 10.45 – 11.10am | **Cardiovascular and metabolic consequences of OSA**                        | Dr. Amitha Fernando  
*Consultant Respiratory Physician, CCC, National Hospital of Sri Lanka* |
| 11.15 – 11.40am | **Respiratory physicians approach to managing OSA**                          | Dr. B. V. Murali Mohan  
*Senior Consultant Pulmonologist and Director, Dept. Internal Medicine/Pulmonology, Narayana Hrudayalaya, Bangalore, India* |
| 11.45am – 12.10pm | **ENT Surgeons’ role in management of sleep disordered breathing – an update** | Dr. Daminda Dumingoarachchi  
*Consultant ENT Surgeon, Teaching Hospital, Anuradhapura, Sri Lanka* |
| 12.15 – 12.40pm | **Multiple sleep latency tests**                                             | Prof. Manjari Tripathi |
| 12.45 – 1.45pm  | Lunch                  |                                                                              |
| 1.45 – 2.10pm   | **Parasomnias and sleep related movement disorders**                        | Prof. Manjari Tripathi |
| 2.15 – 2.40pm   | **Approach to patient with Insomnia and sleep hygiene and behavioral management** | Dr. Asiri Rodrigo  
*Consultant Psychiatrist, Senior Lecturer, Faculty of Medicine, Kelaniya, Sri Lanka* |
| 2.45 – 3.30pm   | **Case based discussion on sleep related disorders**                        |                                                                              |
| 3.30 – 4.15pm   | **Hands on experience on sleep related breathing disorder technologies** (CPAP) | Dr. B.V. Murali Mohan |
| 4.15 – 4.20pm   | Vote of thanks                                                        |                                                                              |

*Sunday 5th July 2015*
### Pre-congress workshop 8

**Allergy - the unmet need**

Conducted in collaboration with the Ceylon College of Physicians and Allergy and Immunology Society of Sri Lanka

Clinical Medicine Academic and Research Centre (ClinMARC), NHSL

9.00 am - 4.15 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8.30 – 9.00am</td>
<td>Registration</td>
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<tr>
<td>9.00 – 9.05am</td>
<td>Lighting the oil lamp</td>
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<tr>
<td>9.05 – 9.15am</td>
<td><strong>Address by Allergy and Immunology Society, Sri Lanka</strong></td>
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<tr>
<td></td>
<td>Dr. Rajiva de Silva</td>
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<td></td>
<td><em>Consultant Immunologist, Medical Research Institute</em></td>
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<td></td>
<td>Session 1 Chairpersons: Dr. B.J.C Perera</td>
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<td>Dr. Ganga Siramanne</td>
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<tr>
<td>9.15 – 9.40am</td>
<td><strong>ISAAC study in Sri Lanka; Prevalence of Allergic diseases in Sri Lanka</strong></td>
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<tr>
<td></td>
<td>Dr. Keerthi Gunasekara</td>
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<td></td>
<td><em>Consultant Respiratory Physician, Chest Clinic, Colombo</em></td>
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<tr>
<td>9.45 – 10.10am</td>
<td><strong>Chronic urticaria and angioedema</strong></td>
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<td></td>
<td>Dr. Leong Khai Pang</td>
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<tr>
<td></td>
<td><em>Senior Consultant Clinical Immunologist, Tan Tock Seng Hospital, Singapore</em></td>
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<tr>
<td>10.15 – 10.40am</td>
<td><strong>Food allergies</strong></td>
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<td></td>
<td>Dr. Neelika Malavige</td>
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<tr>
<td></td>
<td><em>Senior Lecturer and Immunologist, Faculty of Medical Sciences, University of Sri Jayewardene pura</em></td>
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<tr>
<td>10.40 – 11.00am</td>
<td>Tea</td>
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<td>Session 2 Chairpersons: Dr. Nirmala Wijekoon</td>
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<td></td>
<td>Dr. Neelika Malavige</td>
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<tr>
<td>11.00 – 11.25am</td>
<td><strong>Insect venom allergy</strong></td>
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<td></td>
<td>Dr. Rajiva de Silva</td>
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<td></td>
<td><em>Consultant Immunologist, Medical Research Institute, Colombo</em></td>
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<tr>
<td>11.30 – 1.55am</td>
<td><strong>Immunotherapy for insect venom anaphylaxis</strong></td>
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<td>Dr. Leong Khai Pang</td>
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<tr>
<td>12.00 – 12.25pm</td>
<td><strong>Drug allergy</strong></td>
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<td>Dr. Siraj Misbah</td>
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<tr>
<td></td>
<td><em>Consultant Immunologist, Oxford Radcliffe NHS Trust, UK</em></td>
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<tr>
<td>12.30 – 1.30pm</td>
<td>Lunch</td>
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<tr>
<td>1.30 – 1.55pm</td>
<td><strong>Perioperative anaphylaxis</strong></td>
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<td>Dr. Siraj Misbah</td>
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<tr>
<td>2.00 – 4.00pm</td>
<td><strong>Interactive Teaching Session: ANAPHYLAXIS</strong> (by Ceylon College of Physicians)**</td>
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<td>Dr. Nirmala Wijekoon</td>
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<td></td>
<td><em>Consultant Physician, Senior Lecturer in Pharmacology, University of Kelaniya</em></td>
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<td>Dr. Chandimani Undugodage</td>
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<td></td>
<td><em>Consultant Respiratory Physician &amp; Senior Lecturer in Physiology, Faculty of Medical Sciences, University of Sri Jayewardene pura</em></td>
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**Sunday 5th July 2015**
# Inauguration of the 128th Anniversary International Medical Congress 2015 and the SLMA Oration 2015

**5.45 pm onwards**

**Oak Room, Cinnamon Grand Hotel, Colombo**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>5.45 pm</td>
<td>Guests take their seats</td>
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<tr>
<td>6.00 pm</td>
<td>Arrival of the Chief Guest</td>
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<tr>
<td>6.05 pm</td>
<td>Introduction of Council Members to the Chief Guest</td>
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<tr>
<td>6.15 pm</td>
<td>Ceremonial Procession</td>
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<tr>
<td>6.20 pm</td>
<td>National Anthem</td>
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<tr>
<td>6.25 pm</td>
<td>Lighting of the Oil Lamp</td>
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<tr>
<td>6.30 pm</td>
<td>Welcome Address</td>
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<tr>
<td></td>
<td>Prof. Jennifer Perera                                                             President, SLMA</td>
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<tr>
<td>6.40 pm</td>
<td>Address by the Guest of Honour</td>
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<td>Dr. Jacob Kumaresan                                                                WHO Representative of Sri Lanka</td>
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<tr>
<td>6.50 pm</td>
<td>Address by the Chief Guest</td>
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<tr>
<td></td>
<td>Prof Mohan de Silva                                                                Chairman, University Grants Commission</td>
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<tr>
<td>7.00 pm</td>
<td>Vote of Thanks</td>
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<tr>
<td></td>
<td>Dr. Ranil Jayawardena                                                              Honorary Secretary, SLMA</td>
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<tr>
<td>7.10 pm</td>
<td>The SLMA Oration 2015</td>
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<td></td>
<td>“Friendly fire – neurons under attack! Studies from Sri Lanka”</td>
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<td></td>
<td>Dr Thashi Chang, MBBS (Col), MD, MRCP (UK), FRCP (Lon), FCCP, Dphil (Oxon),</td>
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<tr>
<td></td>
<td>Senior Lecturer and Specialist Neurologist, Department of Clinical Medicine, Faculty of Medicine, University of Colombo</td>
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<tr>
<td>7.55 pm</td>
<td>Cultural Show</td>
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<tr>
<td>8.10 pm</td>
<td>The Procession leaves the hall</td>
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<tr>
<td>8.15 pm</td>
<td>Reception</td>
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## Monday 6th July 2015
### DAY 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>8.00–8.30 am</td>
<td>Registration</td>
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<tr>
<td>8.30–9.15 am</td>
<td><strong>Key note address</strong>&lt;br&gt;Chairperson: Prof Jennifer Perera&lt;br&gt;&lt;br&gt;Connect, Communicate, Collaborate for improved Health and Healthcare: Strategies and challenges&lt;br&gt;Prof Lalitha Mendis&lt;br&gt;Emeritus Professor of Microbiology, Competent Authority, University of Colombo</td>
</tr>
<tr>
<td>9.15–9.45 am</td>
<td><strong>Plenary 1</strong>&lt;br&gt;Chairpersons: Prof Saroj Jayasinhga &amp; Dr. Neelika Malavige&lt;br&gt;&lt;br&gt;The transformative impact of biologics on clinical medicine&lt;br&gt;Dr. Siraj Misbah&lt;br&gt;Consultant Clinical Immunologist, Head/Department of Clinical Immunology, Oxford NHS trust, Oxford</td>
</tr>
<tr>
<td>9.45–10.30 am</td>
<td><strong>Professor N D W Lionel Memorial Oration</strong>&lt;br&gt;A lifetime of research in pulmonology&lt;br&gt;Dr B J C Perera,&lt;br&gt;MBBS, DCH(Cey), DCH(Eng), MD(Paed), FRCP (Edin), FRCP (Lond), FRCPCH (UK), FSLCPaed, FCCP, FCGP (SL)&lt;br&gt;Consultant Paediatrician, Former President, Sri Lanka Medical Association</td>
</tr>
<tr>
<td>10.30–11.00 am</td>
<td>Tea and poster viewing</td>
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<tr>
<td><strong>PARALLEL SESSIONS DAY 1</strong></td>
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<tr>
<td><strong>HALL A</strong></td>
<td><strong>SESSION THEME: INFECTIONS</strong></td>
</tr>
<tr>
<td>11.00–11.30 am</td>
<td><strong>Guest Lecture 1</strong>&lt;br&gt;Chairpersons: Prof. Jennifer Perera &amp; Dr. S.B. Agampodi&lt;br&gt;&lt;br&gt;Battle for dominance: Can the Trilogy of Antibiotic Stewardship, PK/PD strategies and new drugs win the Power of the Ring - Antimicrobial Resistance?&lt;br&gt;Dr Rohan Chinniah&lt;br&gt;Consultant Clinical Microbiologist and Infection Control, Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, Ministry of Health, Bandar Seri Begawan&lt;br&gt;Brunei Darussalam</td>
</tr>
<tr>
<td>11.30 – 1.00 pm</td>
<td><strong>Symposium 1 Pneumococcal diseases - How can we win the battle?”</strong>&lt;br&gt;Chairpersons: Prof. S.P. Lamabadusuriya &amp; Dr. Priyani Amarathunga&lt;br&gt;&lt;br&gt;Pneumococcal diseases- morbidity, mortality and fatal entities&lt;br&gt;Prof. S.P. Lamabadusuriya&lt;br&gt;Consultant Paediatrician and Emeritus Professor of Paediatrics, Faculty of Medicine, University of Colombo</td>
</tr>
</tbody>
</table>
### How best can we deal with diagnosis and management of drug resistance?
**Dr. Shirani Chandrasiri**  
*Consultant Clinical Microbiologist, Colombo South Teaching Hospital*

### Pneumococcal vaccines; bridging the age gap and broadening the scope
**Dr. Kanthi Nanayakkara**  
*Consultant Virologist/ Vaccinologist, MRI*

<table>
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<tr>
<th>1.00 – 2.00pm</th>
<th>Lunch</th>
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| **Free paper session 1: Infections**  
*Chairpersons: Prof. Senaka Rajapaksa & Dr. Kushlani Jayatileke*  

OP 001  
Efficacy, safety and cost-effectiveness of thermotherapy, a novel mode of treatment for *L. donovani*-induced cutaneous leishmaniasis: A randomized controlled clinical trial  

OP 002  
HCV and HBV infection among a cohort of Sri Lankan thalassaemic patients  
*Perera PS, Niriella MA, Peries MAC, Nelumdeniya UB, Dissanayake DMR, de Silva DSI, de Silva HJ, Premawardhena AP*

OP 003  
Comparison of molecular methods, Microscopic Agglutination Tests (MAT) and ELISA based methods in diagnosing leptospirosis in high endemic setting, during a post flood outbreak  
*Agampodi SB, Dahanayaka NJ, Anne MS, Vinetz JM*

OP 004  
Serum ionized calcium and third space fluid accumulation (TSFA) in dengue: is hypocalcaemia an early indicator of TSFA?  
*Dahanayaka NJ, Agampodi SB, Kodithuwakku U, Vithanage MVDSP, Rajapakse RMSR, Siribaddana SH*

OP 005  
Comparison of seroconversion rates to the Japanese encephalitis live and killed vaccines in children  

OP 006  
Comparison of patterns of liver involvement in DF and DHF  
*Fernando S, Wijewickrama A, Gomes L, Punchihewa CT, Madusanka SDP, Dissanayake H, Jeewandara C, Peiris H, Ogg GS, Malavige GN*

OP 007  
Clinical and Laboratory associations of Severity in a Sri Lankan cohort of patients with serologically confirmed Leptospirosis - A Prospective Study  
*Rajapakse S, Weeratunga PN, Rodrigo C, Sriharan S, Nilofaa MIR, Fernando N, de Silva HJ, Karunanyake L, Premawansa S, Handunnetti S*

OP 008  
A diagnostic model for Leptospirosis for use in resource limited settings  
*Rajapakse S, Weeratunga PN, Rodrigo C, Sriharan S, Nilofaa MIR, Fernando N, de Silva HJ, Karunanyake L, Premawansa S, Handunnetti S*

OP 009  
Clinco-epidemiological characteristics, treatment and outcomes of
patients with confirmed leptospirosis in a Sri Lankan healthcare setting
Rajapakse S, Weeratunga PN, Rodrigo C, Sriharan S, Niloofa MJR, Fernando N, de Silva HJ, Karunanyake L, Premawansa S, Handunnetti S

3.30 – 5.00pm  Symposium 4
Hepatitis and HIV: Implications for Care
Chairpersons: Dr. Iyanthi Abeyawickrama & Prof. Arjuna de Silva

Late diagnosis and adverse outcomes related to hepatitis and HIV in South East Asia
Dr. Nicole Seguy
Technical Officer HIV, WHO India

Newer treatment options for hepatitis: better impact on life. Are we achieving this?
Dr. Madunil Niriella
Senior Lecturer, Department of Medicine, University of Kelaniya and Consultant Gastroenterologist

Issues in managing patients with co-infection in Sri Lanka
Dr. Lilani Rajapaksa
Senior Consultant Venereologist, NSACP

What can the laboratory offer for the management of co-infection?
Dr. Geethani Galagoda
Consultant Microbiologist, MRI

5.00 – 5.30pm  Tea

PARALLEL SESSIONS DAY 1

HALL B  SESSION THEME: PREVENTIVE MEDICINE

11.00-11.30am  Guest Lecture 2
Chairpersons: Dr. Sarath Gamini de Silva & Dr. Pradeepa Jayawardana

Improving glycaemic control using Insulin pump therapy
Prof. Devaka Fernando
Consultant in Endocrinology and Diabetes, Sherwood Forest Hospitals, NHS Foundation Trust, UK

11.30-1.00pm  Symposium 2
One health concept: Way forward in controlling antimicrobial resistance
Chairpersons: Prof. Jennifer Perera & Dr. Hasini Bannhekke

Antibiotic usage in animal husbandry in industry sector
Dr. H.P. Premasiri
General Manager, Pussella farm
Former technical Manager of Gold Coin Feed Mills Lanka Ltd
Former senior poultry adviser for Afghanistan-The Food and Agriculture Organization of the United Nations (FAO)
Past President of Sri Lanka Veterinary Association

Guidelines and recommendations for use of antibiotics in animal husbandry (especially in fisheries including shrimp farming)
Mrs. Sharmila Corea
Scientist, The National Aquatic Resources Research and Development Agency (NARA)

The extent of antibacterial usage in Veterinary practice and its role in acquiring resistance
Prof. Preeni Abeynayake
Professor of Veterinary Pharmacology, Faculty of Veterinary Medicine and Animal Sciences, University of Peradeniya

Causes, magnitude, impact of antibiotic resistance in Sri Lanka
Dr. Kushlani Jayatilleka,
Consultant Clinical microbiologist, Sri Jayewardenepura General Hospital,
A member of Antimicrobial Resistance Surveillance Project (ARSP) of Sri Lanka College of Microbiologists

Controlling antimicrobial resistance- Way forward
Dr. Janakan Navaratnasingam
National Professional officer- WHO

Panel discussion

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<td>1.00 – 2.00pm</td>
<td>Lunch</td>
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<tr>
<td>2.00 – 3.30pm</td>
<td>Free paper session 2: Community Medicine</td>
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<td>Chairpersons: Prof. Upul Senarath &amp; Prof. Nalika Gunawardene</td>
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- **OP 010** Improving parent adolescent communication on selected sexual and reproductive health problems among adolescents in a rural village in Anuradhapura district
  Rishani WT, Chandrarathe MANK, Fernando WMS

- **OP 011** Occupational injuries in carpenters in the Moratuwa Medical Officer of Health area
  Fonseka HNA, Arnold SM

- **OP 012** Effectiveness of community empowerment strategies to improve the hygienic standards of food trading establishments
  Alagiyawanna MAAP, Malalosekara MW, Bandara DRW, Wickramasinghe WADSC, Alagiyawanna AMATR, Pathirana ACA

- **OP 013** Birth and emergency preparedness, associated factors, maternal and neonatal outcome among postnatal mothers at Base Hospital, Balangoda
  Perera WND, Goonewardena CSE

- **OP 014** Effectiveness of an educational and technical skill development intervention on improving menstrual hygiene management among grade ten school girls in the district of Kalutara, Sri Lanka
  Fernando WMPA, Jayawardana P

- **OP 015** Knowledge, attitudes and practices on responsible dog ownership and
their associated factors among persons aged 20-59 years in MOH area, Maharagama
De Silva LSD, Kumarapeli V

OP 016 Decisional needs of the parents with regard to aTd and rubella containing vaccines in Kalutara District, Sri Lanka
Liyanage P, Goonewardena CSE, Palihawadena P

OP 017 Evaluation of dengue virus serotypes over the last ten years in Sri Lanka
Tissera HA, Weeraman J, Amarasinghe A, Gunathilaka HMM, Prasanga PTS, Botheju WCD, Samarasena GDTN, Muthukuda TC, Hettiarachchi BHCT, Abeysiri NKPM, De Silva YTM, Madusanka ADR, Palihawadana P

OP 018 Prevalence and risk factors for work related wrist and hand disorders among software engineers of selected companies within the Colombo Municipal Council area.
Priyadarshani KGC, Gunawardena S

3.30 – 5.00 pm Symposium 5
NCD Control in Sri Lanka
Chairpersons: Dr. Ruwan Ekanayaka & Prof. Chandrika Wijeratne

Challenges ahead – in achieving global NCD targets
Dr. Palitha Karunapema
Consultant Community Physician, Deputy Director Rehabilitation and Rheumatology Hospital, Ministry of Health, Sri Lanka

Challenges faced in achieving optimum care for risk factor control in the curative sector
Dr. Ruwan Ekanayaka
Former Consultant Cardiologist, National Hospital of Sri Lanka

Health sector response in controlling NCDs: strategies and challenges
Dr. Palitha Mahipala
Director General of Health Services, Ministry of Health, Sri Lanka

5.00 – 5.30pm Tea

PARALLEL SESSIONS DAY 1
<table>
<thead>
<tr>
<th>Time</th>
<th>Session / Paper</th>
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| 11.00–11.30am | **Guest Lecture 3**  
*Chairpersons: Dr. Sudarshi Senevirathne & Dr. N.R. Hewageegana*  
**Why is it important to focus on schools as a health promotion setting?**  
Dr. Nicholas Townsend  
*Cardiovascular Disease Epidemiology Research Programme, University of Oxford* |
| 11.30 – 1.00pm | **Symposium 3**  
*Awkward Problems and Plausible Solutions - Managing Medically Unexplained Symptoms*  
*Chairpersons: Dr. Preethi Wijegoonewardene & Dr. Asiri Rodrigo*  
**And then there were none - The enigma called functional problems**  
Dr. Harshini Rajapakse  
*Senior Lecturer, Department of Psychiatry, Faculty of Medicine, University of Ruhuna*  
**What and how to communicate – understanding and explaining functional disorders**  
Prof. Pali Hungin  
*Dean of Clinical Medicine, School of Medicine, Pharmacy and Health, University of Durham, UK*  
**Management: Explaining the unexplained**  
Prof. Diyanath Samarasinghe  
*Associate Professor in Psychiatry, Faculty of Medicine, University of Colombo* |
| 1.00 – 2.00pm | **Lunch**                                                                                           |
| 2.00 – 3.30pm | **Free paper sessions 3: Psychiatry & Rehabilitation**  
*Chairpersons: Dr. Sudarshi Senaviratne & Dr. Mahesh Rajasuriya*  
**OP 019**  
Satisfaction on care among patients with spinal cord injury in Sri Lanka: A mixed method approach  
*Induli KMI, De Silva Weliange AASH, De Zoysa P*  
**OP 020**  
Comparison of play based with non-play based physiotherapy exercise program for children with cerebral palsy at Lady Ridgeway Hospital  
*Thelambugedara PTCC, Wickramasinghe VP*  
**OP 021**  
Outcome of acute mania: a cohort study  
*Dayabandara LRM, Rajapaksa S, Herath A, Wanniarachchi N, De Silva V, Hanwella R*  
**OP 022**  
Participation in outdoor sports activities, its associated factors and perceived benefits and barriers among lower limb amputees at Rana Viru Sewana, Rehabilitation Institute, Ragama, Sri Lanka  
*Harshanie RPS, Jayawardene DMS*  
**OP 023**  
Group-based Cognitive Behaviour Therapy for the Reduction of Test Anxiety in Year-Five-Scholarship Students in the Western Province  
*De Silva LD, De Zoysa P, Wickrema T* |
OP 024  Patient satisfaction with physiotherapy for stroke rehabilitation, among patients attending department of physiotherapy, Institute of Neurology, National Hospital of Sri Lanka
Amugoda P, Wanigasinghe J

OP 025  Risk factors and musculoskeletal disabilities associated with cervical spondylosis patients who are attending the physiotherapy clinic Of Base Hospital, Horana.
Wasundara PR, Pathirana SL, Senarath U

OP 026  Bullying in schools among early adolescents in Galenbindunuwewa Educational Zone: prevalence, types, common responses and effectiveness of a health promotion intervention
Jayasinghe VPKK, Perera KMN, Guruge GND

OP 027  Association between pain and disability in patients with chronic mechanical low back pain
Perera GLRS, Wijayaratne LS, Senorath U, Dissanayake PH, Karunanayake AL, Dissanayake VHW

3.30 – 5.00 pm  
Symposium 6
Essentials in Clinical Sexual Medicine
Chairpersons: Dr. Neelamani Hewageegana & Dr. Sumithra Tissera

Late Onset Hypogonadism - Facts & Myths
Dr. Lasantha Malavige
Specialist in Sexual Medicine, Asiri Surgical Hospital

Advances in Erectile Dysfunction Management
Dr. David Edwards
President, British Society of Sexual Medicine

Who needs sex therapy?
Prof. Diyanath Samarasinghe
Associate Professor in Psychiatry, Faculty of Medicine, University of Colombo

5.00 – 5.30pm  
Tea

7.00 pm onwards  
Doctors’ Concert
### POSTER PRESENTATIONS

**DAY 1**

#### Poster Session 1

| PP001 | Knowledge, exposure and responses to passive smoking among adolescents in Thamankaduwa educational zone  
*Perera EM, Gunawardena N* |
| PP002 | An interventional study on knowledge, perception and behaviour on the management of fever by primary health care practitioners  
*Chandimalee TGD, Jayamanne BDW, Liyanage G, Samarage D, Hewage RT* |
| PP003 | Attitudes on postgraduate training among post-intern medical officers  
*Padeniya A, Welappuli NT, Widanapathirana ND, Sooriyarachchi MBUD, Senanayake WASN* |
| PP004 | A scoping review of intimate partner violence services in Sri Lanka: opportunities and challenges  
*Jayasuriya V, Guruge S, Gunawardena N, Selvadurai M* |
| PP005 | Ethnicity and neighbourhood deprivation determines the response rate in sexual dysfunction surveys  
*Malavige LS, Wijesekara P, Seneviratne Epa D, Ranasinghe P, Levy JC* |
| PP006 | CNS gliomas - correlation between MRI findings and histopathology  
*Pallewatte AS, Samarakoon RT* |
| PP007 | Characterization of imported Malaria, the largest threat to sustained Malaria elimination from Sri Lanka  
*Dharmawardena P, Premaratne RG, Gunasekera WMKT de AW, Hewawitarane M, Mendis K, Fernando SD* |
| PP008 | Physical fitness factors of school badminton players in Kandy District  
*Cinthuja P, Jayakody JAOA, Perera MPM, Weerarathna WVDN, Indeewari DKDC Nirosha SE, Kaethieswaran T, Adikari, SB* |
| PP009 | Factors influencing the enrolment of doctors in postgraduate courses in Sri Lanka  
*Muwanwella RMSP, Mendis HKNLP, Madushan KNCG, Mupa MMNN, Marasinghe SHK, Mufaris MMM, Chandratilake MN* |
| PP010 | The association between meditation and some characteristics of mental status among medical students  
*Silva JP, Gunathunga MW* |
| PP011 | Anemia in a sample of adults aged 20 to 85 years from selected divisional secretariat divisions, Batticaloa District  
*Arulanandem K, Kisokanth G, Sundaresan KT, Joseph J, Thayaparan M, Herath HMTP* |
| PP012 | Level of happiness and factors associated with happiness among Applied Sciences Faculty university students at the University of Sri Jayewardenepura, Sri Lanka  
*Kossinna TKMS, Samankumara AMKCI, Kodikara SP, Chandraratne N* |
PP013  Prevalence of hypertension and selected risk factors in adults in a rural area in Sri Lanka
Liyanage NR, Arnold SM

PP014  Initial experience in implementation of a cancer gene panel test to determine the aetiology of breast cancer in Sri Lanka
Sirisena UND, Abeysekara AAGS, Dissanayake VHW

PP015  Medical undergraduates’ views regarding audio visual presentations (AVP) as a learning tool in Anatomy
Pathirana TG, Rathnayake RMASB, Kumara JMD, Higgo E, Heenatigala C, Gallage CV, Dissanayake MHP, Edirisinghe EAST, Yasawardene SG, Dissanayake PH

PP016  Views of medical students regarding cadaver dissections before starting dissections
Rajapaksa P, Pathirana TG, Rathnayake RMASB, Kumara JMD, Higgo E, Heenatigala C, Pereara KASA, Gallage CV, DissanayakeMHP, Edirisinghe EAST, Yasawardene SG, Dissanayake PH

PP017  Preliminary study of the variability in the geometric acetabular angles in plane anterior-posterior pelvic radiograph in a Sri Lankan population
Rathnayake RMASB, Pathirana TG, Kumara JMD, Higgo E, Heenatigala C, Pereara KASA, Gallage CV, Dissanayake MHP, Edirisinghe EAST, Yasawardene SG, Dissanayake PH

PP018  Socio-demographic characteristics and initial assessment of elderly patients admitted to the National Hospital of Sri Lanka
Dalpatadu KPC, Jayasinghe S, Wickramasinghe DSA

Poster Session 2

PP019  A rare case of Juvenile Hyaline Fibromatosis
Rathnaweera WS, Nandasena MS, Galkatiya KB

PP020  Improving practices of parents and caregivers to reduce unintentional home injuries of children below 5 years in Wannamaduwa village in Thirappane MOH area
Ihalahewage IDN, Fernando WMS, De Silva Weliange AASH

PP021  Protein energy malnutrition in patients with chronic kidney disease in Sri Lanka
Dassanayake RT, Gunarathne RMCL, Gunasekara VCDG, De Silva ST

PP022  Biopsy proven childhood glomerulonephritis from a single nephrology unit in Sri Lanka
Pratheep N, Thillainathan S, Liyanage GGP, Gunasekara V

PP023  Intra-cluster correlations and design effect of Diabetes Mellitus and its selected risk factors
De Silva AP, Ferrando P, Haniffa R, Jayasinghe KSA, Rajapakse LC

PP024  The influence of a family history of hypertension on disease prevalence and associated metabolic risk factors among Sri Lankan adults
Ranasinghe P, Cooray DN, Jayawardena R, Katulanda P

PP026  Effects of white coconut oil, virgin coconut oil and grated coconut on blood glucose
and serum lipids in Wistar rats  
Samaranayake HAE, Chakrewarthy S, Karunakaran R, Wickremasinghe AR

PP027  
Preliminary cadaveric study of branching pattern of the coeliac trunk and arterial diameters of its main branches in a selected Sri Lankan population  
Edirisinghe EAST, De Fonseka HFDG, DissanayakeMHP, Yasawardene SG

PP029  
Insecticide susceptibility of wild caught adult sandflies from Hambantota District  
Senanayake SASC, Karunaweera ND

PP030  
Bio-effectiveness of commonly used insecticides in mosquito coils against wild caught Culex tritaeniorhynchus in Sri Lanka  
Senanayake SASC, Silva TJ

PP031  
Dengue NS1 antigen vs. Dengue virus nucleic acid: is the former a better marker in the latter stages of severe Dengue?  
Sirisena PDNN, Noordeen F, Fernando LK

PP032  
TNFα and IL-2 levels in Dengue patients - changes with clinical profiles  
Senaratne UTN, Noordeen F, Carr J

PP033  
Keys to continuous improvement programme in government hospitals of Sri Lanka  
Somatunga LC, Sridharan S, Refai C, Kumari MK, Haniffa R, Malavige KK, Gamini LPS

PP034  
Efficiency and suitability of Percutaneous Transvenous Mitral Commissurotomy (PTMC) in Sri Lanka  
Hewarathna UI, Karunaratne RMSP, Kogulan T, Kodithuwakku NW, Bandara HGWAPL, Mayurathan G1, Arulnithy K, Ambagaspitiya AWDT

PP035  
Cancer audit of a single urology unit at Colombo South Teaching Hospital, Sri Lanka – 2012  

PP036  
Solitary caecal diverticulum mimicking appendicitis without the appendix  
Wijeratne BPN, Rajapaksha DC

Poster session 3

PP037  
Association between maternal body mass index during the first trimester, mode of delivery and birth weight in primi mothers at the De Soysa Maternity Hospital, Colombo  
Wijenayaka WAHK, Wickramasinghe AR, Wijayabandara MDMS, Tillekeratne LSC, Goonerathne LV

PP038  
Knowledge and practice of antimicrobial drug usage among intern medical officers (IMO) in three major teaching hospitals in Colombo District  
Kuruwitaarachchi DKT, Kumari IDDA, Kumari WMO, Chandraratne N

PP039  
Implementation of multi sectorial nutrition action plan at grass-root level in a District  
Alagiyawanna MAAP, Pathirana ACA, Liyanage IK, Wickramasinghe WKKA

PP040  
Level of satisfaction in pain management during and after episiotomy of mothers
undergoing vaginal deliveries in Castle Street Hospital for Women (CSHW)

**PP041** Leading factors affecting International Normalized Ratio (INR) instability and complications in post-valve replacement readmissions at Teaching Hospital Kandy, Sri Lanka

*Lansakara MN, Jazeel MN, Rathnasena IGPD, Gnanakanthan K, Dharmaratne SD*

**PP043** The level of satisfaction on intranatal care received during hospital stay among mothers at Castle Street Hospital for Women

*Hewage SA, Rowel DDS*

**PP044** Intestinal parasitic infections and body mass index among children living in the tea plantation sector in Kandy, Sri Lanka

*Galgamuwa GLS, Iddawela WMDR, Dharmarathne SD*

**PP045** Genotyping of HBV from a selected sample of individuals who were referred by the surgical unit, Teaching Hospital, Peradeniya

*Jayasuriya DGD, Noordeen F*

**PP046** Urine micro albumin/creatinine ratio in wistar rats given unboiled and boiled water collected from dug wells in high disease prevalent areas for CKDU in North Central Province (NCP) and water from low disease prevalent Huruluwewa area in NCP

*Thammitiyagodage MG, Gunatillake MM, Karunakan R, Kumara WGSS, Galhena BP, Thabrew MI*

**PP047** Development and validation of model for estimation of body mass index using waist and hip circumference

*Sigera PC, De Silva AP, Ferrando P, Haniffa R*

**PP049** An audit on adherence to standard practice of active management of third stage of labour

*Abeywardena WDAJ, Gunawardena K*

**PP050** Development of modified mismatch PCR-RFLP to screen mutations in codon 12 and 13 of K-ras gene of colorectal (CRC) patients in Sri Lanka

*Dhilhani MFF, De Zoysa MIM, Chandrasekharam NV, Gunawardene YINS, Lokuhetti MDS, Dassanayake RS*

**PP051** Spermatogenic effect of the *Cardiospermum halicacabum*

*Fernando WWSWC, Senanayeke SMSNM, Mathota C*

**PP052** Prevalence and predictors of *Chlamydia trachomatis* infection among pregnant women in Kandy District

*Weerakoon AP, Bandara KMGK, Fernando N, Jayawardana N, Ellepola ANB, Bandara GRJ*

**PP053** A filter for removal of As +++ ion from drinking water with sorbent green tea and banana peels/rice paddy husk dust and coconut shell burnt carbon layers

*Fernando WWSWC, Senanayeke SMSNM, Abesirigunawardana D, Gamage ST, Subasinghe P*
PP054 Laparoscopy versus open appendicectomy: a comparison of outcome
Wijerathne BPN, Rajapakse DC, Chulasiri MPU

2. Dr. Ranjith Ellawala - Mee amba Wanaye

3. Dr. Joe Perera / Dr. Suran Kuruppu. - Anurapura Pollonnaruwa / Atha vereyen osawa

4. Dr. Harshini Rajapakse / Chamath Fernando - Mere dolna sun.


6. UCFOM Students feat Nipun, Sachith, Chanaka, Prasan, Rumesh & Lasitha. - Muppet Show.

7. Dr. Sunil S. Epa - Nidanena Rathriyak.

8. Southern Symphonia - From Kaffringha Baila to Calypso


10. Sanuthi, Senara, Dewmi & Oneli - To the tune of Boney M.

11. Dr. Thushini Gunewardene - A place in my Heart.

12. Devishka, Buvaneshka & Thivanka - Oriental drum display.

13. Mirash Nazeem - I’m a believer / Let me be there.

14. Dr. Yamuna & Minara Balasuriya - Feel the light.

15. Dr. B J C Perera - Besame Mucho.

16. Dr. Thushini, Dr. Suran, Dr. Farazad, Ray & Dr. Christo. - Oh darling.

17. Dr. Isha, Dr. Farazad, Dr. Sasini, Savini, Ray, Yasas & Dr. Christo - Super Trouper, Something stupid, Crocodile Rock & Happy.

18. SLMA Council - Lo ada ninde , Whispering Hope.
**SLMA 128th Anniversary International Medical Congress, 2015**

**TUESDAY 7th July 2015**

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<th>Time</th>
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<td>8.00–8.30 am</td>
<td>Registration</td>
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<td>Breakfast meeting</td>
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<td></td>
<td>Chairpersons: Dr. J. B. Peiris &amp; Prof. Jennifer Perera</td>
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<td>Modifying behavior for health</td>
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<td>Prof. Diyanath Samarasingha &amp; Dr. Mahesh Rajasuriya</td>
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<td>8.30–9.00am</td>
<td>Plenary 2</td>
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<td>Chairpersons: Dr. G. Wickramasingha &amp; Dr. Ruvaiz Haniffa</td>
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<td>Westnile virus: A mosquito borne disease, is Sri Lanka susceptible to an outbreak?</td>
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<td>Prof. Ng Mah Lee, Mary</td>
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<td>Department of Microbiology, YLL SOM, National University of Singapore</td>
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**PARALLEL SESSIONS DAY 2**

**HALL A**

**SESSION THEME: CLINICAL MEDICINE**

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<th>Time</th>
<th>Symposium</th>
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<tr>
<td>9.00 -10.30am</td>
<td>Stroke: Optimizing care: an overview</td>
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<td>Chairpersons: Dr. Padma Gunaratne &amp; Dr. Arjuna Fernando</td>
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</tbody>
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**Could stroke be prevented? Up-to-date evidence**
Dr. Jeyaraj Durai Pandian
Department of Neurology, Deputy Director (Research and Development), Christian Medical College, India

**Stroke - First 24 hours: a window of opportunity**
Dr. Senaka Bandusena
Consultant Neurologist, National Hospital of Sri Lanka

**Rehabilitation of stroke in resource constraint settings**
Dr. Jeyaraj Durai Pandian
Department of Neurology, Deputy Director (Research and Development), Christian Medical College, India

<table>
<thead>
<tr>
<th>Time</th>
<th>Tea and poster viewing</th>
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<tbody>
<tr>
<td>10.30–11.00am</td>
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<tr>
<td>11.00-11.30am</td>
<td>Guest Lecture 4</td>
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<td>Chairpersons: Dr. Lucian Jayasooriya &amp; Prof Varuni De Silva</td>
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**End of life care**
Prof. Sally McCarthy
Clinical Director, Emergency Care institute, Conjoint Associate Professor, UNSW, Australia

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>11.30am-1.00 pm</td>
<td>Glomerulonephritis</td>
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<td>Chairpersons: Dr. Latiff Nazaar &amp; Dr. Prasad Katulanda</td>
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**Infection related Glomerulonephritis**
Dr. Michelle Estrella
Assistant Professor of Medicine, School of Medicine, Johns Hopkins University
Management of IgA Nephropathy
Dr. A.W.M. Wazeel
Consultant Nephrologist, General Hospital Kandy

Update on Crescentic Glomerulonephritis
Dr. Anura Hewageegana
Consultant Nephrologist, National Institute of Nephrology Dialysis and Transplantation

1.00 – 2.00pm
Lunch, poster viewing and debate

“Decriminalizing commercial sex will reduce Sexually Transmitted Infections”
Chairpersons: Dr. Iyanthi Abeyawickrama & Dr. Dayanath Ranatunga, (Country Manager, UNAIDS)

2.00 – 3.30pm
Free paper session 4: Non-communicable diseases
Chairpersons: Prof Chandrika Wijeratne & Dr. Lakshmi Somathunga

OP 028 Description of practices related to insulin injection therapy and sharp disposal among patients attending the Diabetic Clinic, Colombo North Teaching Hospital
Atukorala KR, Sumanasekera RDN, Wickramasinghe KH, Wickramasinghe SI

OP 029 Delayed Thrombolysis in ST Elevation Myocardial Infarction (STEMI) patients: An audit of Door to Needle Time (DNT) in a regional centre in Australia
Boteju WIK, Haladyn K, Buchcholz S

OP 030 Effectiveness of a lifestyle modification programme in reducing cardiometabolic risk markers in urban sri lankan women with prediabetes
Waidyatilaka PHIU, de Silva A, Lanerolle P, Wickramasinghe R, Atukorala S

OP 031 Psychological insulin resistance among patients with Type 2 Diabetes Mellitus: a cross sectional survey
Thillainathan S, Pratheep N, Marasinghe IUK, Karunayokiny K, Gunasinghe KP, Priyangika DKD, Premawansa G

OP 032 The immediate outcome of intravenous enoxaparin followed by subcutaneous enoxaparin versus only subcutaneous enoxaparin as adjunctive therapy for fibrinolysis in st-elevated myocardial infarction in patients admitted to emergency treatment unit at Teaching Hospital Batticaloa
Arulnithy K, Hewarathna UI, Narayanapillai S, Santhavani TS, Sivapramyan A, Ladahumanan D

OP 033 Is there a significant, seasonal variation when patients in the CKDU endemic regions present for the first time with symptoms and renal dysfunction?
Badurdeen MZ, Nanayakkara N, Wazil AWM, Ratnatunga N, Abeysekara DTJ, Kumarasiri PVR, Alahakoon AMNA

OP 034 Prevalence and risk factors for metabolic syndrome among aging adults
Markers of metabolic syndrome among 14 year old adolescents in the Ragama Medical Officer of Health area
Jayasinghe VC, Kasturiratne A, De Silva ST Niriella MA, Kottahachchi DC, Rajindrajith S, Pathmeswaran A, de Silva HJ

3.30 – 5.00pm
Symposium 13
Emergency Medicine
Chairpersons: Dr. Sarath Gamini de Silva & Dr. Namal Wijesingha

How EM integrates into the healthcare system in Sri Lanka
Dr. Sally McCarthy
Clinical Director, Emergency Care Institute, Conjoint Associate Professor UNSW, Australia

Sepsis and severe sepsis management in ED-a tool kit for Emergency Department
Dr. Nalin Kithulwaththa
Consultant Paediatric Intensivist, Lady Ridgway Hospital

Non Invasive Ventilation in low resource ED-a Sri Lankan experience
Dr. Krishantha Jayasekara
Consultant Physician, Emergency & Trauma Centre, Teaching Hospital, Karapitiya

5.00 – 5.30pm
Tea

PARALLEL SESSIONS DAY 2

HALL B

SESSION THEME: FOETAL, NEONATAL AND PAEDIATRIC MEDICINE

9.00-10.30am
Symposium 8
Addressing Challenges of Child Sexual Abuse through an Integrated Service Approach
Chairpersons: Dr. Hiranthi Wijemanne & Prof. Nalika Gunawardene

Effects of sexual abuse on the child victim: evidence from international research
Prof. Rita Shackel
Associate Professor, Sydney Law school, University of Sydney, Australia

Sri Lankan experience in the multi-sectoral management of child sexual abuse
Prof. Asvini D. Fernando
Associate Professor in Paediatrics, Faculty of Medicine, University of Kelaniya, Sri Lanka

Child sexual abuse and the crisis of awareness
Mr. Sajeewa Samaranayake
Deputy Chairman, National Child Protection Authority, Sri Lanka

Discussion
### 10.30–11.00am

**Tea and poster viewing**

### 11.00- 11.30am

**Guest Lecture 5**  
*Chairpersons: Dr. B.J.C. Perera & Dr. Navoda Atapattu*

**Advances in Interventional Paediatric Cardiology**  
Dr. Shehan Perera  
*Paediatric Cardiothoracic Surgeon, Lady Ridgeway Hospital, Colombo*

### 11.30am- 1.00pm

**Symposium 11**  
**Facing transition in chronic illness**  
*Chairpersons: Prof. Sujeewa Amarasena & Dr. Kalyani Guruge*

**What's happening to me?**  
Dr. Navoda Atapattu  
*Consultant Paediatric Endocrinologist, Lady Ridgeway Hospital, Colombo*

**Unheard perspectives**  
Dr. Sudarshi Seneviratne  
*Senior Lecturer and Honorary Child & Adolescent Psychiatrist, Lady Ridgeway Hospital Colombo*

**How prepared are we?**  
Dr. Chaminda Garusinghe  
*Consultant Paediatrician*

**Building the bridges**  
Dr. Ruwanthi Perera  
*Senior Lecturer, Department of Paediatrics, Faculty of Medical Sciences, University of Sri Jayewardenepura*

Panel discussion

### 1.00 – 2.00pm

**Lunch, poster viewing and debate**

"Decriminalizing commercial sex will reduce Sexually Transmitted Infections"  
*Chairpersons: Dr. Iyanthi Abeyawickrama & Dr. Dayanath Ranatunga, (Country Manager, UNAIDS)*

### 2.00 – 3.30pm

**Free paper session 5: Paediatrics**  
*Chairpersons: Prof Harendra de Silva & Dr Preethi Wijegunawardene*

**OP 036**  
Ultrasonographic parameters of the liver, spleen and kidneys among a cohort of school children in the Gampaha District  
*Warnakulasuriya DTD, Peries PPUC, Rathnasekara YAC, Jayawardena KATM, Upasena AP*

**OP 037**  
Knowledge, attitudes and factors associated with evidence based newborn care practices at home among postnatal mothers at a tertiary care hospital  
*Hewage SA, Rowel DDS*

**OP 038**  
Metabolic derangements among obese children in a semi urban area of
Factors associated with obesity related metabolic derangements in Sri Lankan children
Ginige L, Samaranayake D, Gunatillaka MM, Wickramasinghe VP

Efficiency of a paediatric patient management system- a single centre pilot study
Sathiadas MG

Randomised, single blind clinical trial on intramuscular long acting ACTH versus oral prednisolone for long term control of epileptic spasms
Wanigasinghe J, Arambepola C, SiriRanganathan S, Sumanasena S, Mohumdirum E, Attanapola G

Study on Immunity against Hepatitis B in children after vaccination during infancy
Perera KPJ, Hapugoda M, Fernando KMD, Dimal DA

Long term outcome of balloon pulmonary valvoplasty in children: a single center study over 10 years
Mahanama MHTLN, Ho A, Gnanapragasam J

Oral Montelukast versus inhaled steroids for mild persistent asthma among 1 to 5 year old children
Jayawardena PP, Imalke KACP, Galappaththi J

Symposium 14
Foetal and early neonatal care in high risk pregnancies
Chairpersons: Dr. Tiran Dias & Prof Asvini Fernando

Antenatal Fetal Monitoring
Dr. Tiran Dias
Senior Lecturer in Obstetrics and Gynecology, Faculty of Medicine, Kelaniya

Intra-partum fetal monitoring
Dr. Austin Ugwumadu
Consultant Obstetrician & Gynecologist, St George’s Hospital, London

Early neonatal care for compromised baby
Dr. Nishani Lucas
Senior Lecturer, Department of Paediatrics, Faculty of Medicine, Colombo

Tea
HALL C

SESSION THEME: SYSTEM DEVELOPMENT

9.00 -10.30am Symposium 9
Multi-sectoral approaches to promote nutrition
Chairpersons: Dr Palitha Abeykoon and Dr. Nicholas Townsend

9.00 – 9.45 am Welcome and overview of the symposium

Part I
Overview of the project: Integrating Nutrition Promotion And Rural Development (INPARD)
Mr. Seenithamby Manoharan,
Senior Rural Development Specialist, World Bank, Sri Lanka

Global perspectives and non-health interventions to promote nutrition
Prof. Sharon Friel
Professor in Health Equity, Australian National University, Australia

Evaluation methods and baseline survey findings
Dr. Prasad Katulanda
Senior Lecturer, Department of Clinical Medicine, Faculty of Medicine, Colombo

Nutrition Friendly School Initiative (NFSI) criteria and a new tool to identify multi-sectoral interventions to promote nutrition in schools.
Ms. Julianne Williams
Researcher, University of Oxford

9.45 – 10.30 am Part II
Forum with multi-sectoral experts with questions and answers
What can we learn from INPARD and future opportunities to strengthen nutrition promotion policies?

Director General of Health Services or his representative

Director General of Agriculture

Divisional Secretary from Moneragala District

Curriculum development lead resource person (INPARD curriculum for nutrition promotion)
Dr. Indika Karunathilake
Senior Lecturer, Medical Education Development and Research Center, Faculty of Medicine, Colombo

10.30 am Conclusion of the symposium with remarks and summary from co-chairs

10.30–11.00am Tea and poster viewing

11.00–11.30 am Guest lecture 6
Health equity, social determinants and health policy
Chairpersons: Prof. S.D. Dharamaratne & Dr. N Hewageegana

Professor Sharon Friel
Professor in Health Equity, Australian National University, Australia

11.30am–1.00 pm Symposium 12
Clinical Teaching
Chairpersons: Prof. Saroj Jayasingha & Dr. Indika Karunathilake
Clinical Teaching
Prof. Hiroshi Nishigori
Associate Professor, Center for Medical Education, Kyoto University, Japan

Providing effective feedback during clinical teaching
Dr. Diantha Soemantri
Department of Medical Education, Faculty of Medicine, University of Indonesia

Clinical teaching in Unconventional Settings
Prof. Aloka Pathirana
Department of Surgery, Faculty of Medical Sciences, University of Sri Jayewardenepura

Discussion

1.00 – 2.00pm
Lunch, poster viewing and debate

“Decriminalizing commercial sex will reduce Sexually Transmitted Infections”
Chairpersons: Dr. Iyanthi Abeyawickrama & Dr. Dayanath Ranatunga, (Country Manager, UNAIDS)

2.00 – 3.30pm
Free paper sessions 6: Genetics, Medical Education & Administration
Chairpersons: Dr. Gominda Ponnamperuma & Dr. Lucian Jayasuriya

OP 045  Lapses in professionalism of Sri Lankan doctors and their impact on patient outcomes
Chadratilake MN, Ho M, Rees C, Monrouxe L

OP 046  Fatigue related risk and sleepiness at work of intern house officers of a teaching hospital in Sri Lanka
Marasinghe MGCP, Abeyaratne D, Gunatilake SB

OP 047  GH1 gene alterations in a cohort of growth hormone deficient children in Sri Lanka
Sundralingam T, Tennekoon KH, De silva KSH, De Silva S, Hewage AS

OP 048  Factors influencing the academic performance of undergraduate students of the Allied Health Sciences Unit, Faculty Of Medicine, during the first academic year
Rathnawake LNS, Atapattu PM

OP 049  Correlation between Minimum Inhibitory Concentration (MIC) Of Isoniazid (INAH) And The Katg Gene Mutations Of Mycobacterium Tuberculosis (MTb) Isolates
Karunaratne E, Perera J, Wijesundera S, Vidanagama D, Adikaram C, Gamage S

OP 050  Introducing the concepts of health technology assessment to Sri Lanka: A cost utility evaluation of Beclomethasone metered dose inhaler in the long term management of Bronchial Asthma in Sri Lanka
Perera SK, Karnon J
OP 051  Insulin family polymorphisms in pregnancies complicated by small for gestational age infants
        *Andraweera PH, Gatford KL, Dekker GA, Leemaqz S, Russell D, Thompson SD, McCowan L, Roberts CT*

OP 052  Clinical and molecular heterogeneity among beta thalassaemia intermedia in Sri Lanka

OP 053  Proposed Outcome Based Model for Curriculum Revision: Faculty of Medicine, University of Colombo
        *Karunathilaka IM, Ponnamperuma GG, Olupeliyawa A, Senanayake IH, Perera MNSK*

3.30 – 5.00 pm  **Symposium 15**
Emerging use of mobile technology in health
Chairpersons: Dr. Deepal Wijesooriya & Dr. Achal Jayathilake

Using mobile technology for health
Dr Naresh Yallapragada
*Head, Healthcare IT at Continental Hospitals, Hyderabad, India*

*mHealth: The global picture*
Dr. Roshan Hewapathirana
*Research Fellow, Department of Informatics, Faculty of Mathematics and Natural Sciences, University of Oslo, Norway*

*mHealth Applications in the Ministry of Health : Today and Tomorrow.*
Dr. Chaminda Weerabaddana
*Medical Officer - Health Informatics, Office of Deputy Director General (Dental Services), Ministry of Health*

5.00 – 5.30pm  Tea

**HALL A**

5.30pm onwards  **S C Paul Oration**
Analysis of anaesthetic adaptations and observations in Thoracoscopic and Laparoscopic surgeries

*Dr Vasanthi Pinto*
*MD, FCARCSI, FRCA*
*Head of the Department & Senior Lecturer in Anaesthesiology*
*Faculty of Medicine, University of Peradeniya, Sri Lanka*

**POSTER PRESENTATIONS**

Poster session 4
Effect of foot posture and anthropometric measurements on patients with chronic plantar heel pain (CPHP)
Dilhani WC, Wasalathanthri S

Is CKDU in Sri Lanka a sequel of interstitial nephritis?
Badurdeen MZ, Nanayakkara N, Wazil AWM, Ratnatunga N, Abeysekara DTJ, Rajakrishna P, Thinnarachchi J, Kumarasiri PVR, Welagedera DMSDKD, Rajapaksha RMNN, De Alwis AP

Video gaming and its effects among the Sri Lankan youth
Silva SN, Perera MPH

Musculoskeletal and general first aid knowledge and practices among traditional fishermen in the Eastern Province of Sri Lanka
Silva SMM, Karunaratne A, Niyaz FN, Croos AP

Voluntary reporting of adverse events in an internationally accredited private hospital in Sri Lanka
De Silva S, De Silva P, De Souza D

The relationship between sleep pattern and academic performance among university students
Naotunna ES, de Abrew WK

Methicillin Resistant Staphylococcus aureus contamination of phlebotomy tourniquets and faucets
Abeywickrama T, Amarasinghe K, Wijerathne S, Dharmaratne C, Fernando D, Gunasekera KM, Senaratna BCV

In vitro antimicrobial activity of leaf extracts of Mangifera zeylanica
Dhanarisi HKJ, Jayatilake JAMS, Adikaram NKB

Preliminary osteometric study of orbital anthropometry in a Sri Lankan population
Higgoda E, Rathnayake RMASB, Pathirana TG, Kumara JMD, Heenatigala C, Gallage CV, Dissanayake MHP, Edirisinglehe EAST, Yasawardeneg SG, Dissanayake PH

Diffuse and nodular type hepatocellular carcinoma – a comparative study
Wickramaththne SDJ, Jayarathe VS, Sirwardana RC, Liyanage CAH, Niriella MA, Dissanayake AS, Gunathilake MB, De Silva AP, De Silva HJ

Birth preparedness, complication readiness and associated factors among pregnant women attending antenatal clinics at Medical Officer of Health (MOH) area Padukka
Rodrigo UCH, Kumarapeli V

Prevalence and associated factors for neck pain and low back pain among secondary school teachers in Ratnapura educational division
Kumari WAD, Somararayake DBDL

Fluid management in patients with Dengue Haemorrhagic Fever
Seneviratne HMTW, Mendis D, Somaratne KMK, Kumara GDI, Ravirajah K

Knowledge, attitudes, practice and prevalence of family planning and the associated factors among married male navy personnel’s in Southern Naval Base ‘Dakshina’,
Galle
Gunatilake AWPI, De Silva C

PP069 Epidemiology of Melioidosis in Sri Lanka in 2014

PP070 Laboratory diagnosis of Cutaneous Leishmaniasis: are second line investigations really necessary?
Kotalawala HS, Kariyawasam KKGDL, Deepachandi MAB, Weerasinghe S, Siriwardana HVYD, Karunaweera ND

PP071 King coconut water, tender coconut water, Gatorade and ORS: which rehydrates athletes best?
Athauda LK, Kasturiratne A, De Silva AP, Wickremasinghe AR

PP072 Oral health literacy status of the pregnant mothers in a selected MOH area in Colombo District
Hettiarachchi RM, Kanthi RDFC

Poster session 5

PP073 Motivating factors for voluntary blood donation during post conflict era in Southern Province, Sri Lanka
Karunanyake A

PP074 Predictors of recurrence free survival in females with breast cancer
Peiris HH, Mudduwa LKB, Thalagala NI, Jayatilake KAPW, Ekanayake U, Horadugoda J

PP075 The effect of non-anatomic prognostic factors on the breast cancer-specific survival of patients with no metastases at presentation
Peiris HH, Mudduwa LKB, Thalagala NI, Jayatilake KAPW, Ekanayake U, Horadugoda J

PP076 Factors associated with non-fatal myocardial infarction among patients admitted to the National Hospital of Sri Lanka
Sonnadara TT

PP077 Effects of aerobic exercise on perceived stress level and response to stress in first year students of university of Colombo: a randomized controlled study
Nimesha H, Galappatthy P

PP078 Is the length of hospital stay in the private sector longer if the patient has insurance?
Abeysuriya V, Chandrasena LG, Kasturiratne A, Wickremasinghe AR

PP079 Blood donors; a model of episodic bleeder
Karunanyake A

PP080 Nutritional status, anemia and renal functions among school children in North Central Province
Agampodi SB, Agampodi TC, Naotunna CR, Dayaratna M, Maheshi H, Rathnayaka MD, Amarasingha G
PP081  Awareness and practices regarding stretching and strengthening exercises among school rugby players in the Colombo District
  Perera HUD, Thoradeniya T, Waidyatilaka PHIU

PP082  Consecutive 161 patients with history of road traffic accidents (RTA) admitted to Surgical Unit B were analysed at General Hospital, Polonnaruwa during two months period
  Weerawardena WAK, Jeewani KGM, Kodikara AS, Dharmasena NPHN, Dhanuksha DC, Sooriyagoda TD

PP083  Comparison of abdominal muscle strength between university students who have active life style and university students who have sedentary lifestyle
  Sonnadara UI, Haniffa R

PP084  The relationship between the physical activities and mental happiness of a group of selected students in the University of Colombo
  Ranasooriya HS, Gunathunga MW

PP085  A case report of adenovirus pneumonia in young adults
  Perera HKK, Chu DK, Dassanayake M, Premarathe AG, Marasighe IUK, Jayamaha CJ, Premawanse G, Abeywickrame A, Wadanambi R, Chan KH, Peiris JSM

PP086  Quality of the specimens received at a histopathology laboratory of a medical faculty in Sri Lanka
  Weerasinghe TMB, Weddagala WMSR, Weerasekara WMMOR, Wasala WMAD, Weerasinghe MPAM, Mahendra BAGG, Pathmeswaran A

PP087  Investigating the relationship between body mass index and hand grip strength in students of Allied Health Sciences Unit, Faculty of Medicine, University of Colombo
  Mapatuna MAI, Perera N

PP088  Knowledge, attitudes, practices and information sources regarding antenatal exercises among pregnant women attending De Soysa Maternity Hospital Colombo
  Wijesiriwardana AWBWS, Gunawardana NS

PP089  Hump-Nosed-Viper bites in Deniyaya, Sri Lanka: a clinico-epidemiological study
  Witharana EWRA, Gnanathasan A, Dassanayake AS

PP090  Audit on hand hygiene compliance at the Surgical Intensive Care Unit (SICU), National Hospital of Sri Lanka
  Nakkawita WMID, Patabendige G

PP091  Incidence of ventilator associated pneumonia in two intensive care units at National Hospital of Sri Lanka
  Nakkawita WMID, Patabendige G

PP092  Prevalence of alcohol consumption and associated socio demographic factors among female estate labourers in Medical Officer of Health area, Kothmale
  Rambukwella HWSR, Dassanayake DS
<table>
<thead>
<tr>
<th>Poster session 6</th>
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</table>
| PP093 | Impact of a ward-based clinical pharmacist on improving medication knowledge and adherence in patients with chronic non-communicable diseases  
*Shanika LGT, Wijekoon N, Jayamanne S, Coombes J, Coombes I, Perera D, Pathiraja V, Dawson A, De Silva HA* |
| PP094 | Knowledge, attitude and practice on hospital acquired infections among ward nursing officers in District General Hospital Matara  
*Sudusinghe PWM, Wickramasinghe SC* |
| PP095 | Impact of a ward-based clinical pharmacy service in reducing drug-related hospital re-admissions in patients with chronic non-communicable diseases: evidence from a controlled trial in Sri Lanka  
*Shanika LGT, Wijekoon N, Jayamanne S, Coombes J, Mamunuwa N, Dawson A, De Silva HA* |
| PP096 | Quality of service provision of hypertensive patients at medical clinics in secondary care hospitals in the Western Province  
*Wijemanne WMUS, Wickramasinghe SC* |
| PP097 | Focus of an undergraduate professionalism curriculum; perceptions of Sri Lankan medical students  
*Chandratilake M, Samararatne R, Ranathunga DC* |
| PP098 | Therapeutic decision making using total cardiovascular risk scoring tools in Diabetes; comparison of two different approaches  
*Weerarathna TP, Dulanjalee RABT, Jayawardhana MR, Edirisinha UP, Rathnayaka M* |
| PP099 | Enterococcus faecalis bacteremia and endocarditis associated with pre symptomatic rectal adenocarcinoma: could there be a possible mechanism?  
*Karunaratne SP, Hewarathna U, Kodithuwakku NW, Tennakoon R, Jayewickreme SR, Mayurathan G, Dolapihilla SN, Kularatne AI, Attanayake PM, Jayawardena RT* |
| PP100 | Chromosomal abnormalities in a cohort of infertile men in Colombo  
*Wijerathne HGPK, Malalasekera AP, Sirisena UND, Kumaraguru K, Jayasekara RW, Dissanayake VHW* |
| PP101 | Living conditions in boarding houses among female industrial workers in Katunayake free trade zone, Sri Lanka  
*Silva MDC, Lankatilake KN* |
| PP102 | Availability, price and affordability of selected medicines for treatment of NCDs in Sri Lanka  
*Fernandopulle BMR, Samarasinghe SVAC, Abeyawardena C, Wickramasinghe R* |
| PP103 | Dealing with psychological distress an exploratory study among medical undergraduates in Rajarata  
*Thenuwara PK, Pinnagoda US, Agampodi TC, Wickramasinghe A, Agampodi SB, Siribaddana S* |
PP104 Female sex and perceived learning difficulties are associated with depression among medical students
Thenuwara PK, Pinnagoda US, Agampodi TC, Wickramasinghe A, Agampodi SB, Siribaddana S

PP105 Prevalence of metabolic syndrome in kidney transplant recipients
Wijewickrama ES, Gallage U, Vignesvarajah G, Wickramarachchi A

PP106 Importance of communicating medication changes to patients at discharge - a prospective case study
Pathiraja VM, Jayamanne SF, Lynch CB, Coombes J, Perera DMP, Mamunuwa AMVGN, Shanika LGT, Mohamed F, Dawson AH

PP107 A case series of duplication errors due to brand name confusion - experience from a Sri Lankan teaching hospital
Mamunuwa AMVGN, Jayamanne SF, Coombes J, Lynch CB, Perera DMP, Pathiraja VM, Shanika LGT, Mohamed F, Dawson AH

PP108 Prevalence of migraine among medical students of the Faculty of Medicine, University of Kelaniya
Gunawardane WDMA, Amarathunga AAC, Hakmana KR, Warnakulasuriya DTD, Selliah S

PP109 A serological study on Cutaneous Leishmaniasis in Sri Lanka reveals antigen heterogeneity
Deepachandi MAB, Kariyawasam KKDUL, Weerasinghe S, Ali N, Soysa SSSBDP, Karunaweera ND, Siriwardana HVYD
### WEDNESDAY 8th July 2015

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<tr>
<td>7.30–8.30 am</td>
<td>Registration</td>
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<tr>
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<td>Breakfast meeting</td>
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<td>Chairpersons: Prof Jennifer Perera &amp; Dr. Lasantha Malavige</td>
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<td>Building the next generation of Health professional leaders</td>
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<td>(With a group of young health professionals)</td>
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**8.30 -9.00am**  
**Plenary 3**  
Chairpersons: Prof. Saroj Jayasingha & Dr. Dennis Aloysius

**Pathophysiology, diagnosis and treatment of gastroesophageal reflux**  
Prof. John O. Clarke  
*Clinical Director, Johns Hopkins Bayview Gastroenterology/Hepatology*  
*Clinical Director, Johns Hopkins Center for Neurogastroenterology*  
*Associate Professor of Medicine, Division of Gastroenterology & Hepatology, Johns Hopkins University*

**9.00 – 9.45am**  
**Dr. S. Ramachandran Memorial Oration**  
**Epidemiology of migration and mental health in Sri Lanka: local insight for a global impact**  
Dr. Chesmal Siriwardhana  
*MD, MSc., PhD,*  
*Senior Lecturer in Public Health, Anglia Ruskin University, UK*

### PARALLEL SESSIONS DAY 3

**HALL A**  
**SESSION THEME: SURGERY**

**9.45 -10.15am**  
**Guest lecture 7**  
Chairpersons: Prof. Joachim Perera & Prof. Mandika Wijerathne

**The diabetic foot: a surgical perspective**  
Dr. Ajit Kumar Varma  
*Senior Consultant, Department of Diabetic lower limb and foot and ankle surgery*  
*Aster Medcity, Kochi, Kerala, India*

**10.15-10.45am**  
**Tea and poster viewing**

**10.45 am - 12.15 pm**

**Symposium 16**  
**Safe homes and safe roads: preventing child injuries in Sri Lanka**  
Chairpersons: Dr. Malik Fernando & Ms. Caroline Bakker

**Overview of Childhood Injuries in Sri Lanka**  
Dr. Kapila Jayaratne  
*Chairperson, Expert Committee on Ergonomics, SLMA*

**Options for Child Injury Prevention**  
Mr. Eric Chalmers  
*Chief Executive, KidSafe ACT, Child Accident Prevention Foundation of Australia*
Safety in adolescence
Dr. Manjula Danansuriya
Consultant Community Physician, Expert Committee on Ergonomics, SLMA

Care for the Injured Child
Dr. Sanjaya Abeygunasekara
Consultant Surgeon, Lady Ridgeway Hospital, Colombo

SLMA Contribution in Child Injury Prevention
Dr. Sameera Senanayake
Convener, Expert Committee on Ergonomics, SLMA

Discussion / Questions

12.15-1.15pm  Lunch, poster viewing and debate

“Professional fees of the private consultations of the professionals should
be peer reviewed and not administrator reviewed”
Chairpersons: Dr. Padma Gunarathne & Prof Lal Chandrasena

1.15-2.45pm  Free paper session 7: Surgical specialties
Chairpersons: Prof Ishan de Soyza & Dr Ranjan Dias

OP 054  The pattern of KRAS mutations in Sri Lankan patients with colorectal
cancer
Sirisena UND, Mandawala DEN, Herath HMP, Dissanayake VHW

OP 055  A descriptive study on occupational hand injury in DGH Negombo
Kanchana WPL, Prashanth S, Sajeewani RAN, Ziyard MRM

OP 056  A randomized control study of audio versus visual distraction to reduce
patient discomfort during colonoscopy
De Silva AP, Nandamuni Y, Rajapakse NN, Nanayakkara S, Perera KR,
Kodisinghe SK, Subasinghe SKC, Niriella MA, Dissanayake AS, Pathmeswaran A, De Silva HJ

OP 057  Factors affecting the clinical outcome of Transarterial chemo treatment
for hepatocellular carcinoma in Sri Lankan patients
Jayatunge DSP, Siritwardana HDRC, Niriella MA, Dissanayake AS, Liyanage CAH,
Gunetilleke MB, Upasena A, Sirigampola C, De Silva AP, De Silva HJ

OP 058  Analysis of consecutive patients with diabetic foot ulcers admitted to
surgical unit B, General Hospital, Polonnaruwa (GHP) for 5 months
period
Weerawardena WAK, Dharmasena NPHN, Lakmini TKD, Rishanath Y, Jeewani
KGM, Kodikara AS, Dhanuksha DC

OP 059  Impact of pelvic floor exercises on quality of life in women suffering
from stress incontinence after child birth
Fernando WJGSNT, Jayawardane DBIA
OP 060 Obstetric anal sphincter injuries - Risk factors and prediction
Wickramasinghe DP, Perera CS, Senaratne S, Senanayake HM, Samarasekera DN

OP 061 Risk factors for post operative complications, prolonged ICU and hospital stay in patients with colorectal surgery
Gunetileke MB, Jayatunge DSP, Munasinghe AHE, Jayarathne KDVS, Liyanage CAH, Siriwardana HDRC, Kumarage SK, Deen KI

2.45 – 4.15pm  Symposium 19
Case scenario based symposium on the management of the threatened diabetic foot
Chairpersons: Prof. Mandika Wijerathne & Dr. Anuruddha Abeyagunasekara

How do I assess this foot?
Dr. Nalaka Gunawansa
Consultant Vascular Surgeon

How do I dress this wound?
Dr. Ranjuka Ubayasiri
Consultant Vascular Surgeon

Dr. Rezni Cassim
Consultant Vascular Surgeon

Prof. Ajit Varma
Senior Consultant, Department of Diabetic lower limb and foot and ankle surgery, Aster Medcity, Kochi, Kerala, India

How do I treat infection?
Dr. Ranjuka Ubayasiri
Consultant Vascular Surgeon

How do I off load this ulcerated diabetic foot?
Prof. Ajith Kumar Varma
Senior Consultant, Department of Diabetic lower limb and foot and ankle surgery, Aster Medcity, Kochi, Kerala, India

How do I manage ischaemia?
Dr. Rezni Cassim
Consultant Vascular Surgeon

Summary
Prof. Mandika Wijerathne
Consultant Surgeon and Professor, Department of Surgery, Faculty of Medicine, University of Colombo

4.15pm  Tea
### PARALLEL SESSIONS DAY 3

#### HALL B

##### SESSION THEME: CUSTOMIZED CARE IN NEUROLOGY, DERMATOLOGY AND ONCOLOGY

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<td>9.45-10.15am</td>
<td>Guest lecture 8</td>
<td>Dr. J.B. Peiris &amp; Dr. Padma Gunaratne</td>
<td>Prof. Manjari Tripathi, Professor Neurology, NIH Fellow (UCLA), Department of Neurology, Neurosciences Centre, All India Institute of Medical Sciences, New Delhi, India</td>
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<tr>
<td>10.15-10.45am</td>
<td>Tea and poster viewing</td>
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| 10.45am-12.15pm| Symposium 17                                                                 | Dr. Thushan Benragama & Dr. Sudarshi Seneviratne | Beauty is skin deep  
Dr. Niranjan Ariyasingha  
Consultant Dermatologist, Base Hospital, Wathupitiwala  
Defeat ageing with aesthetic medicine  
Dr. Nayani Madarasingha  
Consultant Dermatologist, Teaching Hospital, Anuradhapura  
Surgical aspects of aesthetic dermatology  
Dr. Thushan Beneragama  
Consultant Plastic Surgeon, National Hospital of Sri Lanka |
| 12.15 – 1.15pm| Lunch, poster viewing and debate                                               |                                        | “Professional fees of the private consultations of the professionals should be peer reviewed and not administrator reviewed”  
Chairpersons: Dr. Padma Gunaratne & Prof Lal Chandrasena |
| 1.15-2.45pm  | Free paper session 8: Medicine                                                | Dr. Padma Gunaratne & Dr Preethi Wijegunawardene | OP 062  
A retrospective study on management practices of Primary Health Care practitioners in the management of febrile illness in children  
Chandimalee TGD, Jayamanne BDW, Liyanage G, Samarage D, Hewage RT OP 063  
Challenges to malaria surveillance following elimination of indigenous transmission: findings from a hospital based study in rural Sri Lanka  
Fernando SD, Ainan S, Premaratne RG, Rodrigo C, Sriharan S, Senanayake MDNC, Rajapakse S OP 064  
Ocular complications of leprosy - a continuing problem  
Dissanayake MM, Jayasekara MMRW, Jayasekara NM, Kahawita I OP 065  
Outcome of transcatheter closure of ostium secundum atrial septal defect using atrial septal occluder device  
Kodithuwakku NW, Hewarathna UI, Karunarathne RMSP, Kogulan T, Bandara HGWAPL, Mayurathan G, Ambagaspitiya AWDT |
OP 066  Green-pit-viper bites in Deniyaya, Sri Lanka: Clinical and epidemiological features from a prospective observational study
      *Witharana EWRA*, Gnanathasan A, Dissanayake AS

OP 067  Spirometry reference norms for 13-14 year old Sri Lankan children
      *Gunasekera KD*, Amarasinghe WADL, Fernando EAC, Warnakulasuriya DTD, Undugodage UCM, Wickramasinghe AR

OP 068  Usefulness of cattle blood as an enrichment substance in blood supplemented culture media, in the clinical microbiology laboratory
      *Sooriyar UV*, Jayatilleke J

OP 069  The Effects on Children after Loss of a Parent, due to Chronic Kidney Disease of Uncertain Etiology (CKDu) in a Rural Village in Eastern Province, Sri Lanka
      *Jinadasa WMLD*

2.45 –04.15pm  **Symposium 20**
   Personalized Medicine in Oncology
   *Chairpersons: Dr. Mahendra Perera & Dr. Christo Fernando*

   **Introduction To Personalized Medicine In Oncology**
   Dr. MahendraPerera
   *President, Sri Lanka College of Oncologists*

   **Tree Revolutions In Cancer Therapy**
   Dr. Tan Wu Meng,
   *Consultant, Medical Oncology, Parkway Cancer Centre, Parkway Group Of Hospitals – Singapore*

   **Practical Implementation Of Personalized Cancer Therapy**
   Dr SachiniRasnayake
   *Consultant Oncologist, Provincial General Hospital, Badulla*

4.15pm  Tea

**PARALLEL SESSIONS DAY 3**

**HALL C**

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<td>9.45 -10.15am</td>
<td>Guest lecture 9</td>
<td>Dr. Shamini Prathapan &amp; Dr. Palitha Abeykoon</td>
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   **History, Health care and Challenges of Health of Estate Workers in Sri Lanka**
   Dr. NithershiniPeriyasamy
   *Consultant Community Physician, Directorate of Estate and Urban Health Unit, Ministry of Health*

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<tr>
<td>10.15–10.45 am</td>
<td>Tea and Poster Viewing</td>
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<tr>
<td>10.45 am – 12.15 pm</td>
<td>Symposium 18</td>
<td>Dr Upali Bangala &amp; Dr. B.J.C. Perera</td>
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</table>
Introduction to Sports Medicine and Injury Prevention  
Dr. Asela Ratnayake  
Sports Medicine Unit, Peradeniya Teaching Hospital

Planning an exercise schedule scientifically  
Dr. Harindu Wijesinghe  
Consultant Rheumatologist and Specialist in Sports Medicine, Nawaloka Hospital

Anti doping legislation in Sri Lanka  
Prof. Arjuna de Silva  
Head, Department of Medicine, Faculty of Medicine, University of Kelaniya

Drug Doping Testing and Prescribing in Sports Medicine  
Dr. Kithsiri Perera  
Sports Medicine Unit, Colombo South Teaching Hospital

12.15 - 1.15pm  
Lunch, poster viewing and debate  
“Professional fees of the private consultations of the professionals should be peer reviewed and not administrator reviewed”  
Chairpersons: Dr. Padma Gunarathne & Prof. Lal Chandrasena

2.00 – 3.30pm  
Free paper sessions 9: Community Medicine  
Chairpersons: Dr. Shamini Prathapan & Dr. Wasantha Gunatunga

OP 070  
An investigation of food borne outbreak among army soldiers in four military establishments in North Central province  
Kothalawala M, Subasinghe SMA, Hewavitharana SP, Kannangara KMM, Pathirage MVSC

OP 071  
Prevalence of NCD risk factors and job satisfaction among public health workers in Central Province, Sri Lanka  
Senavirathne CP, Katulanda P, Dhanapala N

OP 072  
Factors associated with commercially available soft drink consumption in adolescents in Colombo Educational Division  
Herath HMPS, Hettiarachchi HACL, Hettiarachchi BHT, Senonayaka MP

OP 073  
Quality of Time Mothers Spend with their Pre-school Children and Associated Factors in Wennappuwa MOH area  
Fernando ID, Fernando KKM, Fernando MHI, Fernando MRS, Fernando MYD, Wangmo T, Perera KMN, Wickremasinghe AR

OP 074  
Appropriateness of medication used among the elderly in the community setting to improve medication safety  
Premadasa SPK, Siripala UGS, Samaranayake NR, Wanigatunge CA

OP 075  
Prevalence of coronary heart disease (CHD) and selected risk factors of CHD among people aged 30-64 years in the District of Gampaha  
Livanopathiratne A, Seneviratne R de A

OP 076  
Perceived access and health system responsiveness related to
ambulatory health services for coronary heart disease (CHD) and selected risk factors of CHD, among people aged 30-64 years in the District of Gampaha

Livangapathirana A, Seneviratne R de A

OP 077 A descriptive study on postural abnormalities among school boys between 15-17 years in the Colombo District, Sri Lanka

Rajkaran M, Olupeliyawa A

OP 078 Health burden of natural disasters in Sri Lanka

Yesmin MDF, Dharmaratne SD, Kudagammana T

2.45 – 4.15pm Symposium 21
Illness and health among doctors: do carpenters have good furniture?
Chairpersons: Dr. Palitha Mahipala & Prof. Saroj Jayasingha

Introduction

Doctors' Health: Is It Important?
Prof. Saroj Jayasinghe
Consultant Physician and Professor in Department of Clinical Medicine, Faculty of Medicine, University of Colombo

The Precursors Study: The John Hopkins longitudinal study on health and illness of doctors
Prof. Padmini D Ranasinghe
Director, Hospitalist Education Programs, Assistant Professor of Medicine, JohnsHopkins Hospital, USA

Preventive health and Simple Health Tips for a Busy Doctor
Dr. Prasad Katulanda
Consultant Endocrinologist and Senior Lecturer, Department of Clinical Medicine, Faculty of Medicine, University of Colombo

4.15pm Tea

7.30pm onwards SLMA Banquet

Venue: Waters Edge, Battaramulla

POSTER PRESENTATIONS DAY 3
Poster session 7

PP110 Developing and validating a tool to assess empowerment for tobacco control
Perera KMN, Guruge GND, Jayawardana PL

PP111 Compliance of selected drug dossiers submitted for registration, as per the drug regulatory authority requirements and the WHO recommendations
Thambawita D, Mannapperuma U, Galappatthy P, Dissanayeke S, Benaragama BVSH, Jayakody RL

PP112 Trend of smoking and tobacco use in Sri Lanka 1960 – 2010: is it affected by cigarette pricing?
Athauda LK, Wickremasinghe AR

PP113 Prevalence and risk factors for non-alcoholic fatty liver disease among an urban aging adult Sri Lankan population – Ragama health study 7-year follow up

PP114 Effects of storage in parameters of Full Blood Count (FBC)
Jayaweera. JMS, Lokumarakkala DD, Madhubhashini MPGD, Ranasinghe WATP, Gunawardena D

PP115 Developing a multidisciplinary integrated curriculum for nutrition promotion and rural development in Sri Lanka

PP116 Goniometer assessment on knee osteoarthritis among patients seeking ayurveda medicine in Jaffna District
Sanmugarajah V, Thabrew I, Sivapalan S

PP117 Can body mass index at booking visit and weight gain during mid-trimester predict Gestational Diabetes Mellitus?
Herath HMM, Weerarathna TP

PP118 Prevalence of non-alcoholic fatty liver disease and its' risk factors in an urban adolescent cohort in Sri Lanka

PP119 Impact of paediatric bronchial asthma on parental mental health
Balasooriya A, Liyanage G, Marasinghe RB, Samarasinghe TM

PP120 Knowledge and attitudes of Tamils with Diabetes Mellitus in a selected center, Batticaloa District
Kisokanth G, Prathapan S, Indrakumar J, Joseph J

PP121 Unit cost analysis in neonatal intensive care units in two types of hospitals: study of Castle Street Hospital for Women and District General Hospital, Chilaw.
Loganathan NC
Knowledge, attitude and practices related to Diabetes among diabetic patients attending the medical clinic of District Hospital Ja-ela
Nandasoma AW, Silva L, Rathsekara N, De Silva G, Silva SR

Prevalence, risk factors, preventive strategies and consequences of work-related musculoskeletal disorders among Sri Lankan physiotherapists in selected teaching hospitals in the Colombo District
Kumara MP, Ponnamperuma G

Outcome of early coronary intervention for acute ST elevation myocardial infarction in a tertiary care cardiac centre in Sri Lanka

Knowledge, attitudes and practices of medical officers of two selected teaching hospitals of Colombo District of Sri Lanka in application of non communicable disease prevention activities in ward settings
Wellappuli NT, Gunawardena NS

Occurrence and associated factors of hypertension among a cohort of bus drivers in Colombo: a pilot study
Jayarajah U, Jayakody JAA, Jayaneth MBJN, Wijeratne S

Improving the patient safety – “learning through case studies”
Samarakoon MASC, Panapitiya L, Samarage SM

Unconditional probability of death between ages 30 and 70 years and age standardized mortality rates due to major NCDs in Sri Lanka
Karunapema RPP, Hensman D, Ediriweera D, Karunapema RPDD

Incidence, risk factors and outcome of acute lower limb cellulitis in patients admitted to a tertiary care hospital
Nakkawita WMID, Chandrasiri NS, Rajanthis R, Sutharson A, Feroza MB

Characteristics of patients admitted following deliberate self harm to tertiary care institutes in District of Galle
Chandrasiri A, Gunethunga W, Rajapaksha H, Jayasekara P

Genetic eye disorders present in a pediatric eye unit in Sri Lanka
Weerapperuma KND, Dissanayke MM, Irugalbandara D, Dissanayake VHW

Core prescribing indicators and most commonly prescribed medicines in Colombo group of hospital wards in major specialties

Two presentations of a rare genetic disorder: Waardenburg Syndrome
Weerapperuma KND, Dissanayke MM, Wewalwala D, Dissanayake VHW
Developing an electronic curriculum map for the Faculty of Medicine, University of Colombo
Karunathilake IM, Shakoor MZ

Manometry and ultrasound changes in primigravida after vaginal delivery
Wickramasinghe DP, Perera CS, Senaratne S, Senanayake HM, Samarasekera DN

Vitamin supplementation among Sri Lankan adults: prevalence, patterns and correlates
Wathurapatha WS, Ranasinghe P, Eleperuma DD, Jayawardena R

Validation of the Sinhalese version of a medication adherence scale (MAS) to determine medication adherence in patients with Bipolar Affective Disorder
Mannapperuma U, Galappatthy P, de Silva V, Hanwella R, Jayakody RL

Usage of portable electronic devices (PEDs) to access medical information by medical students of Faculty of Medicine, University Of Colombo, Sri Lanka

Development of robust caco-2 cell model for drug transport studies
Senarathna SMDKG, Crowe A

Histopathological spectrum in acute and chronic Cutaneous Leishmaniasis in Sri Lanka
Manamperi NH, Fernando C, Pathirana KPN, Karunaweera ND, Abeywickreme W, de Silva MVC

Sero epidemiology of varicella; situation in Sri Lanka
Munasingha HM, Malavige GN, Amarasinghe A

Waist-hip ratio and body mass index and their correlation with macro and microvascular complications of type 2 diabetes patients- a retrospective study
Pathiratne PASR, Samarasinghe R, Sellahewa KH

A preliminary study to evaluate the role of rotational thromboelastometry as an early predictor and indicator of progression to critical phase in Dengue Haemorrhagic Fever
Gooneratne L, Wimalachandra M, Perera T, Karunanayake P, Kumarasiri T, Devasurendra L, Wickramasinghe YW

Socio-economic and life-style characteristics of elders in rural communities in Anuradhapura District of Sri Lanka – compatibility with active ageing concept
Bhagya BLGU, Guruge D, Senarathne L, Hewageegana NR

Association between body mass index and knee osteoarthritis among patients seeking ayurveda medicine in Jaffna District
Sanmugarajah V, Thabrew I, Sivapalan S

Poster session 9
| PP146 | Prevalence of parent initiated medication in children- a systematic review  
Prasadi GAM, Dharmaratne SD, Senarathna L, Dawson A |
| PP147 | Portable electronic devices (PEDs) to access medical information: perception of medical undergraduates  
| PP148 | The effectiveness of a patient educational leaflet for patients with mechanical low back pain at rheumatology clinics at the National Hospital of Sri Lanka  
Amarasinghe MADMS, Weeraratne CL, Wetthasinghe A |
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Hapangama A, de Silva T, Kuruppuarachchi KALA, Wickramasinghe R, Williams SS, Ravindran A |
| PP150 | Three-wheeler drivers in Wattala urban council: does earning power depend on involvement with the commercial sex trade?  
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| PP151 | The hazard of death decreases after surgical treatment for colon cancer but not after surgical treatment for rectal cancer  
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| PP152 | Acute re-hospitalisation during the first three months of in-patient rehabilitation for traumatic brain injury  
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| PP153 | Level of development of moral reasoning among medical students of Faculty of Medicine, Colombo, and the effect of teaching of ethics on moral development  
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| PP154 | Association between anthropometric characteristics and performance among professional rowers in the Sri Lankan Army  
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| PP155 | Prevalence of diabetes mellitus and its influence on treatment outcomes of the tuberculosis patients in Anuradhapura District of Sri Lanka  
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| PP156 | Knowledge, practices and perceptions related to salt use among 18 to 70-year old adults in Gampaha District of Sri Lanka  
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| PP157 | The physical examination and laboratory investigation data analysis of health screening packages carried out among the executive staff in leading companies in a private teaching hospital, Colombo, Sri Lanka: a retrospective study |
**Pathiratne PASR, Sellahewa K**

**PP158** Queuing theory and the management of waiting time in an outpatient department: a case study at National Hospital of Sri Lanka

**Samarakoon MASC, Jagoda Al, Jasinghe A**

**PP159** Prevalence and factors associated with needle stick injuries among nursing officers in District General Hospitals in Sri Lanka

**Priyangani YMM, Dharmaratne**

**PP160** Evaluation of services rendered to patients undergoing cataract surgeries in Wijaya Kumaratunga Memorial Hospital

**Dharmagunawardene PVDS, Tissera WAA, Perera NAN, Hewagama AM, Jayalath PS, Induruwage RD, Wilfred MYK**

**PP161** Attitudes of medical officers and nursing officers towards information technology in selected renal care units in Sri Lanka

**Dharmagunawardene PVDS, Karunarathne PGPS, Abeywardene KDST, Herath HMNJ, Wedamulla A, James CC**

**PP162** The influence of Artemisone exposure in CACO-2 cell monolayers on P-GP mediated transport and expression: a comparison with Artesunate

**Senarathna SMDKG, Page-Sharp Madhu, Crowe A**

**PP163** The risk factors for Gestational Diabetes Mellitus in pregnant women attending antenatal clinics in De Soysa Hospital for Women (DMH)

**Jayawardena BAAJ, Jayatissa HE, Jayathilaka DS, de Silva VA**

**PP164** Incidence of lightning injuries, knowledge, attitudes and practices on prevention of lightning related adverse effects and associated factors among residents in Kiriella Medical Officer of Health Area

**Kalubowila KC**

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**POST CONGRESS WORKSHOPS**

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66
Thursday 9th July 2015

Post-congress Workshop 1
Peer Assisted learning
Board Room, Faculty of Medicine, Colombo
8.30 – 11.00 am

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8.00 – 8.30am</td>
<td>Registration</td>
</tr>
<tr>
<td></td>
<td>Chairpersons Dr. Madawa Chandrathilake</td>
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<tr>
<td></td>
<td>Dr. Gominda Ponnamperuma</td>
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<tr>
<td>8.30–9.00 am</td>
<td><strong>Introduction</strong></td>
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<tr>
<td></td>
<td>Prof. Joachim Perera</td>
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<tr>
<td></td>
<td><em>Associate Professor, Department of Human Biology, International Medical University, Kuala Lumpur, Malaysia</em></td>
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<tr>
<td>9.00 – 10.30 am</td>
<td><strong>Group activity: Identifying the different PAL activities in the host institution</strong></td>
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<tr>
<td></td>
<td>Dr. Diantha Soemanthri</td>
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<tr>
<td></td>
<td><em>Department of Medical Education, Faculty of Medicine, University of Indonesia</em></td>
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<tr>
<td></td>
<td><strong>Group activity: Identifying the possible areas where PAL can be introduced to undergraduate education</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Diantha Soemanthri</td>
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<td></td>
<td>Dr. Kosala Marambe</td>
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<tr>
<td></td>
<td><em>Senior Lecturer, Medical Education Unit, Faculty of Medicine, University of Peradeniya</em></td>
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<tr>
<td></td>
<td><strong>Group activity: Strategies to initiate, implement and monitor PAL</strong></td>
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<tr>
<td></td>
<td>Prof. Joachim Perera</td>
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<td></td>
<td>Dr. Kosala Marambe</td>
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<tr>
<td>10.30 – 10.50 am</td>
<td><strong>Measures to overcome challenges</strong></td>
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<td></td>
<td>Prof. Joachim Perera</td>
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<tr>
<td>10.50 – 11.00 am</td>
<td><strong>Closing remarks</strong></td>
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<td></td>
<td>Prof. Joachim Perera</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>8.00 – 8.30am</td>
<td>Registration</td>
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<tr>
<td>9:00 - 9:30 am</td>
<td><strong>Magnitude of the problem and overview of the management</strong>&lt;br&gt;Dr. Prasad Katulanda&lt;br&gt;<em>Consultant Endocrinologist/Diabetologist, National Hospital of Sri Lanka and Senior Lecturer, Department of Clinical Medicine, Faculty of Medicine, University of Colombo</em></td>
</tr>
<tr>
<td>9:30 – 10:00 am</td>
<td><strong>Childhood obesity</strong>&lt;br&gt;Prof. Pujitha Wickramasinghe&lt;br&gt;<em>Consultant Paediatrician, Department of Paediatrics, Faculty of Medicine, University of Colombo</em></td>
</tr>
<tr>
<td>10:00 – 10:30 am</td>
<td><strong>Body composition assessment</strong>&lt;br&gt;Dr. Pulani Lanerolle&lt;br&gt;<em>Senior Lecturer, Department of Biochemistry, Faculty of Medicine, University of Colombo</em></td>
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<tr>
<td>10:30-11:00 am</td>
<td><strong>Tea</strong></td>
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<tr>
<td>11:00 – 11:30 am</td>
<td><strong>Lifestyle modification</strong>&lt;br&gt;Dr. SudheeraKalupahana&lt;br&gt;<em>Consultant Nutritionist, Faculty of Medicine, University of Peradeniya</em></td>
</tr>
<tr>
<td>11:30 am – 12:00 pm</td>
<td><strong>Surgical Management</strong>&lt;br&gt;Prof. Ishan de Zoysa&lt;br&gt;<em>Consultant Surgeon, Department of Surgery, Faculty of Medicine, University of Colombo</em></td>
</tr>
<tr>
<td>12:30 – 1:00 pm</td>
<td><strong>Cognitive Behavior Therapy</strong>&lt;br&gt;Dr. Asiri Rodrigo&lt;br&gt;<em>Consultant Psychiatrist, Senior Lecturer, Faculty of Medicine, University of Kelaniya</em></td>
</tr>
</tbody>
</table>

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SLMA 128<sup>th</sup> Anniversary International Medical Congress, 2015
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Dr. A.W.M. Wazeel  
Consultant Nephrologist, General Hospital Kandy
SLMA Oration

Friendly fire – neurons under attack! Studies from Sri Lanka

Dr Tashi Chang, MBBS, MD, MRCP (UK), FRCP (Lon), FCCP, Dphil (Oxon)
Senior Lecturer and Specialist Neurologist,
Department of Clinical Medicine, Faculty of Medicine,
University of Colombo, Sri Lanka

Professor N D W Lionel Oration

A lifetime of research in pulmonology

Dr B J C Perera, MBBS, DCH(Cey), DCH(Eng), MD(Paed), FRCP (Edin), FRCP (Lond), FRCPCH (UK), FSLCPaed, FCCP, FCGP (SL)
Consultant Paediatrician, Former President, Sri Lanka Medical Association

S C Paul Oration

Analysis of anaesthetic adaptations and observations in Thoracoscopic and Laparoscopic surgeries

Dr Vasanthi Pinto, MD, FCARCSI, FRCA
Head of the Department & Senior Lecturer in Anaesthesiology
Faculty of Medicine, University of Peradeniya, Sri Lanka

Dr S Ramachandran Oration

Epidemiology of migration and mental health in Sri Lanka: local insight for a global impact

Dr Chesmal Siriwardena, MD, MSc, PhD
Senior Lecturer in Public Health, Anglia Ruskin University, UK
The following prizes will be awarded for the oral presentations and posters. The awards will be presented at the Foundation Sessions of the SLMA.

- E M Wijerama Prize
- S E Seneviratna Prize
- H K T Fernando Prize
- Sir Nicholas Attygalle Prize
- Wilson Peiris Prize
- Daphne Attygalle Prize for the best paper in Cancer
- Sir Frank Gunasekera Prize for the best paper in Community Medicine & Tuberculosis
- Kumaradasa Rajasuriya Prize for the best paper in Tropical Medicine
- Special prize in Cardiology
- S Ramachandran Prize for the best paper in Nephrology
- SLMA prize for the best poster
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Should we shift the emphasis from technology to humaneness?

Prof. Lalitha Mendis

What gives patient satisfaction about the health care they receive besides the competence of the physician and his team?

Studies have revealed that the elements of satisfaction include: being treated with dignity; being permitted to tell their story; the feeling that sufficient time was given; satisfaction with the team that is brought in for their treatment; and being referred to other experts when necessary. It has been shown that the root cause of most malpractice claims was the breakdown in communication between physician and patient. This style of communication that satisfies requires much more than verbal skills. It is the ability to recognize others feelings and thoughts, and the ability to empathize. These are communication skills that enables the physician to connect. Strategies towards developing such communication skills should include the training and exposure to these concepts of all categories of healthcare workers in the health system.

The transformative impact of biologics in clinical medicine

Siraj A Misbah

Kohler and Milstein’s understated vision of hybridoma technology for producing monoclonal antibodies (Nature 1975), possibly being valuable for medical use has been realised with revolutionary success across clinical medicine. The identification of therapeutic targets and the development of biologics, including monoclonal antibodies, soluble receptors, antibody-drug conjugates and chimeric antigen receptors has transformed the practice of many specialties - rheumatology, gastroenterology, neurology, haematology and oncology. While targeted treatment does not pre-dispose patients to the range of adverse effects associated with immunosuppressive therapy, it has provided insights into predictable adverse effects associated with immunological intervention. Managing these risks and dealing with major questions regarding pharmaco-economics and cost-effectiveness are important challenges to healthcare systems striving to ensure that these ground-breaking treatments are available to all patients. In reflecting on the impact of immune-mediated therapeutics across medicine in the 21st century, Almroth Wright’s statement that the physician of the future will be an immunisator certainly rings true.

West Nile Virus: a mosquito borne disease. Is Sri Lanka susceptible to an outbreak?
West Nile virus transmitted by mosquitos....

ABSTRACT
West Nile virus: A mosquito borne disease, Is Sri Lanka susceptible to an outbreak

Anthony Jin Shun CHUA and Mah Lee NG

1 Flavivirology Laboratory, Department of Microbiology, National University Health System, National University of Singapore, Singapore, 2 Center for Dengue Research, Faculty of Medicine, University of Sri Jayewardenepura, Sri Lanka, 3 Department of Microbiology, School of Biomedical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia.

West Nile virus transmitted by mosquitoes usually result in an acute disease but can progress to encephalitis in the elderly or immuno-suppressed patients. It is not always easy to differentiate West Nile virus encephalitis from the other viral encephalitis. Causative pathogens which can cause encephalitis will be discussed in this presentation. Unlike herpesvirus encephalitis, there is no treatment for West Nile virus encephalitis therefore appropriate early supportive care is essential for such patients. Since most tropical countries have the mosquito vector for West Nile virus transmission, it is not surprising to see specific outbreaks of such infections. Due to the lack of constant vigilance low background infections can continue undetected until a big outbreak occurs. Frequent outbreaks are now reported in India. Sri Lanka being in close proximity with India and lies on the pathway of migratory birds is vulnerable West Nile virus infections.

PLENARY 3

The pathophysiology, diagnosis & treatment of gastroesophageal reflux

Prof. John O. Clarke

Symptoms related to gastroesophageal reflux disease are common and may result in significant health consequences, including Barrett’s esophagus and esophageal adenocarcinoma. This talk will review the epidemiology of gastroesophageal reflux disease, major mechanisms by which abnormal reflux can occur, the diagnostic tests available to identify and quantify reflux, and the treatment options available. Novel diagnostic modalities including wireless pH testing and combined pH/impedance will be reviewed, including benefits and limitations. Discussion of treatment modalities will focus on antacids, histamine receptor blockers, proton pump inhibitors, alternative and complementary therapies, endoscopic options and surgical options, both traditional and novel.

GUEST LECTURE 1

Battle for Dominance: Can the Trilogy of Antibiotic Stewardship, PK/PD strategies and New drugs win the Power of the Ring - Antimicrobial Resistance?

Dr. Rohan Chinniah

Rising tide of antimicrobial resistance among Gram-positive and Gram-negative pathogens has become a major clinical challenge in the treatment of infectious diseases. Development of new agents is one part of the needed response; yet global drug pipeline is thin due to difficulty of discovery of new safe agents to counter the rapid progression of emerging resistance and due to the difficulty in the economics of antibiotics. Hence proper use of existing antimicrobials is essential. The primary goal of an antimicrobial stewardship program is to improve clinical outcomes while minimizing unintended consequences and collateral damage of antimicrobial use, namely emergence of antimicrobial resistance. Scientific and practical strategies of pharmacokinetics, pharmacodynamics, and dosing of available anti-microbial agents will further optimize clinical
outcomes. These along with modification of behavior in prescription and robust infection control practices will help to overcome antimicrobial resistance in both clinical and public health settings.

**GUEST LECTURE 4**

**End of Life Care**

*Prof. Sally McCarthy*

The patterns of life, disease, dying, and death have changed dramatically in recent years across the world. Increasing numbers of patients present for emergency care and are admitted to acute hospitals at the end of life and may experience a dying process that does not always constitute “a good death”. This presentation will discuss the impact of these changes and identify areas for improvement in care at the end of life.

**GUEST LECTURE 5**

**Advances in interventional Paediatric Cardiology**

*Dr Shehan Perera*

In the past 2 to 3 decades the field of paediatric and congenital interventional cardiology has developed at a rapid pace and has witnessed a dramatic increase in the number and type of procedures performed.

Technological innovations have greatly advanced treatment of cardiovascular disease in children with congenital heart disease (CHD). Advances made in the design of hardware such as smaller introducers and sheaths, low-profile balloons and novel lesion specific devices have made interventional therapy become an acceptable alternative treatment for many CHD, including closure of atrial defects (ASDs), muscular ventricular septal defects (VSDs), patent ductus arteriosus (PDA), dilation of stenotic valves (aortic and pulmonary), and dilation of stenotic vessels (branch pulmonary arteries and coarctation of the aorta). The era of percutaneous valve implantation has revolutionised the history of percutaneous interventions and over the next few years we are likely to witness the development of miniaturized valve delivery systems to enable implantation in smaller children.

Where percutaneous approach is difficult or the patient still requires surgical repair of other associated cardiac anomalies, a hybrid approach can be used with its obvious advantages to the patient. Foetal cardiac interventions are being attempted in order to alter the history of severe obstructive lesions. Biodegradable stents and devices are being developed and may find an application in this setting. Percutaneous intervention in paediatric cardiac disease had developed rapidly over the past 3 decades and has revolutionised the treatment of congenital heart disease.

**GUEST LECTURE 6**

**Health equity, social determinants and health policy**

*Prof. Sharon Friel*
The evidence on the social determinants of health and health equity is clear and compelling. Peoples’ wellbeing, poor health and early death is affected by the conditions in which we are born, grow, live, work, and age. However the translation of this evidence into equity-focused multi-sectoral policy development and implementation has been slow. Arguably, this is because a social determinants of health equity focus raises many political and policy challenges. In this paper I discuss the policy process, seeking to address issues of agenda setting; a systems approach to complex policy development; understanding the barriers and opportunities for policy implementation that is equity focused, and evaluation in terms of health equity impacts and outcomes.

**The diabetic foot, a surgical perspective**

*Dr Ajit Kumar Varma*

Today in India there are over 45 million diabetic patients and an estimated 70,000 amputations occurring per year due to diabetes related foot problems. In the diabetic patients, deformities of the toes and feet occur. This causes areas of raised plantar pressures causing ulcers formation. These act as portals for the entry for bacteria leading to serious infections, which in the immuno-compromised diabetic patient can result in amputations or even death.

One of the most dreaded complications of diabetes is foot ulcer and gangrene. It is estimated that 15% of all diabetic patients get foot ulcers. 1% requires higher-level amputation. 60% of indoor admissions of diabetic patients are for foot ulcers and foot infections. 50% of non-traumatic amputations are due to diabetic foot gangrene. 85% of these amputations are due to untreated and/or inadequately treated diabetic foot ulcers. It is therefore estimated that as the prevalence of the diabetes increases large no of patients in the comparatively younger age group (35 to 45) are likely to suffer from diabetic foot ulcers and many of these patients will require higher-level amputations. This will result in loss of employment and psychological trauma for these patients. Also available data shows that unilateral higher amputation usually causes severe morbidity and leads to cardiac and renal de-compensation. The rate of contra-lateral foot ulceration after unilateral amputation is high. I.D.F Statistics state that the rate of major amputations for diabetic foot problems in developing countries is 45%.

When walking even with the best of prosthesis, mortality at 5 years after unilateral Below Knee amputation is 50%, and there is a 50% mortality after Above Knee amputation in 3 years. This is so as you all know that diabetes is a disease of the blood vessels. It thus affects all organs. By the time the blood supply to the foot has been compromised due to peripheral obstructive vascular disease, the heart is also involved. Even with the best of prosthesis the cardiac strain is increased to over 15%, leading to cardiac failure over a period of time, which is the reason of the high mortality rates on using a Below Knee or Above Knee prosthesis.

Added to this fact is the damage to all soft tissues of the diabetic patients’ body by changes of ‘Non Enzymatic Glycation’. In the foot it leads to loss of elasticity of the foot muscles, tendons, ligaments, splinting of joints, limited joint mobility, and various foot and toe abnormalities, increased plantar pressures, increased propensity for callosities, ulcerations and limb and life threatening infections. Non enzymatic glycation also affects the structure and functions of the White Blood Cells, leading to suppression of cell mediated immunity.
Majority of the diabetic foot ulcer patients suffer repeated infections and require hospitalization. As per a study conducted in our center in 2005, on an average, while a diabetic patient without foot sepsis spends approximately INR 1000/- per month for treatment and regular follow up, a single admission with foot sepsis complicated by co-morbidities like peripheral vascular disease costs, including direct and indirect costs, almost 1.5 lakhs INR.

In India, there are very few organized diabetic foot-screening programs. Podiatric services are available only in major centers in India and a multi-disciplinary team approach is mostly lacking. Proper diabetic orthotics are not easily available. Socio-economic factors like barefoot walking, inappropriate footwear usage, lack of awareness of the seriousness of diabetic foot problems amongst doctors and patients and hence late reference to specialty centers, is a matter of concern. 70% of the population in India lives in the rural area and 40% stay in one-room tenements. Inadequate sanitation, improper foot offloading due to lack of facilities and awareness are common. In India, very few patients are insured, and the vast majority of patients with diabetic foot problems have to pay for the cost of medical care. Hence the cost of treatment and consumables used assumes much greater significance in such circumstances.

Majority of the diabetic foot ulcers and infections observed in India are neuropathic-infective as compared to developed countries. This is significant from the therapeutic and preventive perspective. These types of the ulcers are easy to manage with cost-effective proper preventive strategies. When an insensate foot is subjected to even minor trauma or to increased pressure, an ulcer can develop. Ulcers are prone to develop on areas underlying the metatarsal heads, and other undue bony prominances because of the maldistribution of pressure, especially with a Charcot foot and other foot deformities.

The department of Podiatric surgery, provides comprehensive care in all aspects of diabetic lower limb surgical problems. This integrated team approach, so important in the proper management of the diabetic lower limb problems, is available in only few centres worldwide. Our evaluation and management techniques are of world standards. We have a footwear factory, with trained staff making diabetic footwear, providing high quality preventive, post-operative and rehabilitative footwear.

The cases we manage include large numbers of extensive lower-limb necrotizing fasciitis, various types of foot infections and Charcot’s cases some with marked destruction of the foot and ankle bones, and many others with grossly deformed toes and foot.

The concept of surgical correction for the diabetic foot and ankle deformity has recently evolved as a means to correct foot deformities secondary to long standing diabetes. This re-shaping of a deformed foot or toes by surgical correction is presently being done in a large way in a few countries only like in U.S, U.K, Russia, Germany, Spain, and Australia. These surgeries help to prevent the formation of callus and ulcers of the foot and thus, these surgeries can prevent amputations in diabetics. We are the only major center in India where these reconstructive surgeries are being performed routinely in high-risk Diabetic foot patients. By employing these novel surgical techniques a large number of amputations are being prevented.

To avoid the serious complications of pin-tract infections, wire breakage and others associated with the application of external fixators in Diabetic patients, we have devised an entirely new and novel technique of foot and ankle stabilization for the reconstruction of destroyed Charcot foot and ankle, called ‘The Amrita Sling Technique’. This has been published in ‘The Journal of Diabetic Foot Complications’, from the United States, in February 2009. In the past seven years we have successfully operated on a large number of cases of destroyed rare hind-foot Charcot cases, using
this technique, with excellent results. We are also replacing foot and ankle bones destroyed due to osteomyelitis or Charcot’s osteoarthropathy, by using prosthesis made of ‘polymethyl methacrylate’.

By comprehensive management, we have been able to maintain a limb salvage rate of 91.5%, in diabetic foot and ankle diseases, comparable to the best centers in the world.

**GUEST LECTURE 8**

**The story seizure behaviour tells us**  
*Prof Manjari Tripathy*

Seemingly normal actions could occur during seizures these behaviors could be mistaken by a bystander as being abnormal behaviors. The type of behaviors and symptoms and clinical features make up what is known as seizure semiology. These are mentioned in quick revision forms in these tables and will be illustrated my talk in the videos.

**GUEST LECTURE 9**

**History, Health Care and Challenges of Health of Estate workers in Sri Lanka**  
*Dr. Nithershini Periyasamy*

Estate community was brought for cheap labour from South India 200 years back. Health care provision to the estate sector has three stages of history. Although estate community contribute immensely for the country’s economy, they live in poverty; in remote locations with inaccessible terrain under poor living and sanitary conditions. Health of the estate population is not under the national health system, as it is looked after by their own plantation companies through PHDT.

All the reports and surveys shows the health indicators in the estate sector is far below than the national figures. Being identified as vulnerable population, Ministry of Health has a separate directorate for Estate Health, but due to complexity and multiple stakeholder ownerships in the estates, a definite responsibility with authority is not seen. In addition, continuous move by the Ministry of Health to integrate the estate health into the national health system is facing future challenges for equitable health service.

Need a clear and strong policy plan, political commitment, increase financial allocation, and human resource capacity with abolishment of the Estate Medical Assistance practice. Development of National Policy, and strategic plan for Estate Health would uplift this vulnerable population to healthy population.

**DAY 2 – BREAKFAST MEETING**

**Modifying behavior for health**  
*Diyanath Samrasinghe and Dr. Mahesh Rajasuriya*

Modifying health related behaviour of individuals, families, communities and entire nations is one of the tasks that doctors must perform. People in the corporate world appear more successful at this
than us. A close look will show us that the corporate world has made enormous strides in this regard, thanks to the quick and accurate feedback they have in the form of sales data. Therefore doctors may benefit by learning the 'tricks' of the corporate world. In the case of trades which are harmful to health, we have to learn how to beat them at their own game.
**Symposium 1 (Hall A, Day 1)**

**Pneumococcal Diseases, Morbidity, Mortality and Fatal Entities**  
*Prof S.P. Lamabadusuriya*

*S. pneumoniae* is the leading cause of vaccine preventable deaths globally followed by measles and rotavirus. Although more than 90 different serotypes of *S. pneumoniae* have been identified, 10 serotypes account for 60% of invasive disease worldwide. Serotype prevalence differs by age group and geographical area. Invasive diseases caused by this organism are, pneumonia, bacteraemia/sepsis and meningitis. Mucosal diseases are pneumonia, acute otitis media, sinusitis and conjunctivitis. Case fatality rates for sepsis in children vary from 10% to 50%, whilst mortality from meningitis is 10% in developed countries and 50% in developing countries. Globally there are 150 million episodes of pneumonia in children less than 5 years, in developing countries. It is a common bacterial complication of measles and influenza. *S. pneumoniae* accounts for more than 50% of pneumonia in an influenza epidemic. WHO estimates that pneumococcal disease caused approximately 1.6 million deaths, globally. Of these 700,000 – 1 million deaths were in children under 5 years of age. Antibiotic resistant strains have increased significantly over the last 30 years and the prevalence of these strains continue to increase worldwide, including Sri Lanka.

**How best can we deal with diagnosis and management of drug resistance in *S. pneumoniae*?**  
*Dr. Shirani Chandrasiri*

*S. pneumoniae* is a fastidious gram positive coccus which can give rise to a spectrum of clinical presentations in all age groups. Penicillin was the drug of choice. So far, resistance to all classes of antibiotics which are effective for *S. pneumoniae* is reported from various geographical locations. In Sri Lanka, due to relative difficulties in isolation, data on invasive pneumococcal isolates are limited to single centers. In ANSОРP data 85.8% of isolates are penicillin resistant. In SAPNA data penicillin resistance was reported as 91.3%. This is the only study with serotypes and of the 23 isolates, 5 isolates belong to serotype 19F.

Of Colombo South data, 2008 CLSI change in penicillin cut offs are used. Here there is 100% resistance in meningeal isolates and 100% sensitivity in non-meningeal isolates. Resistance is a complex issue as *S. pneumoniae* is an organism with healthy carriage in the population. This has to be dealt with systematic surveillance, enforcing antibiotic policy and use of conjugate vaccines.

**Pneumococcal vaccines: Bridging the age gap and broadening the scope**  
*Dr. Kanthi Nanayakkara*

*Streptococcus pneumoniae* is carried in the human nasopharynx and over 90 serotypes have been identified. It has the potential of causing non-invasive and invasive pneumococcal disease, especially in high risk individuals including the very young and the elderly. Individuals of all ages who have predisposing factors with or without immunocompromising conditions are also at risk.

The goal of vaccination is to prevent invasive pneumococcal disease. Vaccines are produced using the capsular polysaccharides, the most important virulence factor of pneumococci.

Two types of vaccines are available.
- Pneumococcal polysaccharide vaccines (PPV) - less immunogenic under the age of two years, due to T cell independent antibody response.
Pneumococcal conjugate vaccines (PCV) - better immunogenic due to T cell activation and memory cell response.

PCV are now recommended to be used in older age groups. Vaccination with PCV and PPV in series has increased the scope of vaccine efficacy for high risk patients. A one time single booster dose of PPV is recommended for them, five years after primary immunization.

Symposium 2 (Hall B, Day 1)

Antibiotic Usage in Animal Husbandry in Industrial Sector
Dr. Horana Pathirage Premasiri

The contribution of Agriculture and Live Stock components is twelve percent (Annual Report, Central Bank 2012) to the total national GDP of Sri Lanka. As poultry subsector has been achieved an enormous growth (Six percent - annual growth) and chicken became the cheapest and most consumed meat item, the application of antibiotics and antimicrobials is higher due to large volume of production compared to other livestock subsectors in Sri Lanka. The usage of antibiotics in Animal Husbandry is governed and controlled by Veterinary Drug Control Authority established under Animal Disease Act – 1992, and Feed Advisory Committee established under Animal Feed Act – No.151986.

**Purpose of using antibiotics in Animal Husbandry:** Therapeutic Use: High dose for disease treatment (D/W, In - feed, S/C, I/M).

1. Preventive Use: Treatment with intermediate dose of antibiotics prior or during critical transitions in production cycle (D/W, In – Feed, S/C).
   - Eg. Chemical and Ionophore coccidiostats (Antimicrobials) are used extensively to control coccidiosis.
2. As growth promoters: Low dose continuously administered in feed.

Comparatively, large categories of antibiotics are given either to animals or to people. Very few antibiotics are used in both people and animals.

**Antimicrobial /Antibiotic Resistance:** To develop resistance for antibiotics, microorganisms must first receive the exposure. General public has alarmed by the emergence and spread of antibiotic resistant bacteria and it is a worldwide problem.

**Steps taken to minimize usage of antibiotics and to improve Public Health:** Only four approved antibiotics which are not used in human medicine are allowed to use as growth promoters in Animal Husbandry in Sri Lanka (Eg. Viginiamycin, Avilamycin, Flavomycin and Zinc Bacitracin). Adaptation of effective biosecurity measures on livestock farms, Vaccination, using the concept of competitive exclusion of pathogens by using probiotics and using of prebiotics, receptor analogues, immunomodulators etc. contribute to success of such strategies. Application of bacteriophage, phytogenic active substances are under research. Adaptation of withdrawal feed (Free from antibiotics and antimicrobials) to offer to food animals at the end of the production cycle. Sending samples of end products (eggs, meat etc.) To the laboratory to ascertain whether there are any antibiotic residues and other deleterious elements to the human health. Scientific disposal of farm waste by reducing B.O.D (Biological Oxygen Demand) and C.O.D (Chemical Oxygen Demand) levels is also very important.
Use of antibiotics in Aquaculture  
**Mrs. Sharmila Corea**

Several species of aquatic animals and plants are cultured under aquaculture practices. Ornamental fish culture and shrimp culture are the main commodities cultured for the export market, while food fish culture and mollusk culture are also practiced at a lesser extent. In addition sea weed and aquarium plants are cultured for export and local use.

The aquatic animal health sector is mostly important for ornamental fish and shrimp. Since the ornamental fish are exported alive, their health is very important to the buyers. Therefore many antibiotics are used for prophylactic treatment as well as treatment of bacterial diseases and secondary infections. The most commonly used antibiotics are Oxytetracycline, Erythromycin, Amoxil, Chlorumphenicol, and Kanamycin sulphate. In the shrimp sector antibiotics are mainly used in the hatcheries which produce the post larvae. The health of the post larvae has a direct impact on the production from grow out. Therefore Oxytetracycline and erythromycin are used extensively for prop lactic treatment and treatment of fibrosis. Antibiotics are rarely used in grow out farms due to export regulations.

Studies carried out on antibiotic resistance has showed upto 80% resistance to some of the above mentioned drugs by *Vibrio* species and *Aeromonas*. The effluents from farms are directly discharged to the environment without any treatment and therefore most of these drugs are thus released to the environment, even though there are several regulations against it.

The Extent of Antibacterial Usage in Veterinary Practice and its Role in Acquiring Resistance  
**Prof. Preeni Abeynayake**

The Veterinary Practices are responsible for health care of a diverse range of animal species under numerous settings. These include animals which serve the purposes such as companionship, recreation, food and maintain biological diversity in the environment. But the financial investments for species specific pharmaceutical products cannot be justified since the demand for Products are not so high. Hence only limited number of species specific Pharmaceutical Products are available.

In Sri Lanka the manufacture, imports, exports, sale and use of all Veterinary Pharmaceuticals are controlled by the Animal Disease Act No. 59 of 1992 and its Regulations. The sections 17 and 32 have provision to appoint Veterinary Drug Control Authority (VDCA) chaired by the Director General of the Department of Animal Production and Health. The local manufacture of Veterinary Pharmaceuticals are few hence free sales are dependent on imports. The registration documents for free sales are well evaluated and challenged for efficacy, safety and quality.

Having considered the problem of acquiring resistance to antibacterial agents several gazette notifications have been published in order to comply with current global public health needs. Accordingly, therapeutic antibacterial products have been restricted to treatment of animal diseases but not for prevention or as growth promotion. In complying with EU Directives uses of Group A banned antibacterial agents including chloramphenicol and nitrofurans had been prohibited to use in farm animals.

However, there is a global practice and provision to use non-therapeutic antibacterial agents in feed for growth promotion and prophylaxis of farm animals. The Animal Feed Act No. 15 of 1986 and its
Regulations restrict uses of antibacterial agents to non-therapeutic groups that have no common mode of action with therapeutic antibacterial agents. At the field level all possible efforts have taken to enforce the implementation of The Animal Feed Act.

Based on the above background very firm policies should be taken to implement available Regulations. Well coordinated Antibacterial Resistance Monitoring Programmes between different Ministries should be formulated along with trace back procedures to assist incentivizing changes towards a National Solution with regard to acquiring antibacterial resistance.

**Causes, magnitude, impact of antibiotic resistance in Sri Lanka**

*Dr Kushlani Jayatilleke*

Organism resistant to an antibiotic means one that is not inhibited or killed by an antibacterial agent at concentrations of the drug achievable in the body after normal dosage. Some species are innately resistant (inborn resistant) to some families of antibiotics and others acquire resistance. Antibiotic resistance can develop by several mechanisms such as production of enzymes which can inactivate the antibiotic (e.g., β-lactamases) or by modifying the target of the antibiotic (e.g., MRSA) or by producing permeability barriers and efflux pumps.

In a multi-centre laboratory study of Gram negative bacterial blood stream infections in Sri Lanka; (Ceylon Medical Journal; Vol. 58, No. 2, June 2013) Extended Spectrum Beta Lactamase producing *Escherichia coli* and *Klebsiella pneumonias* accounted for 23.15% of total Gram negative bacterial isolates in blood cultures. In the same study Acinetobacter baumannii *calcoaceticus*, showed only 60% and 55.6% sensitivity to meropenem and imipenem. The highest sensitivity of this organism was to amikacin (69.5%). Sensitivity of *Pseudomonas aeruginosa* to imipenem and meropenem were 69.2% and 72.7%.

According to a study done in food animals and on community acquired isolates of humans, multiple antibiotic resistant *E.coli*, *Enterococcus* spp. and *Salmonella* sp. are commonly present among broiler chicken in the Colombo district and vancomycin non-susceptible enterococci were also isolated from broiler chicken and cattle but not from humans. The 3rd generation cephalosporin non-susceptibility among *E. coli* isolates from humans was 20.4%. In certain intensive care units in Sri Lanka outbreaks occur with multi-drug resistance Acinetobacter species for which none of the antibiotics available in Sri Lanka at present are effective leading to very high mortality rates.

Thus comprehensive and coordinated response is needed to combat antibiotic resistance in Sri Lanka.

**Controlling Antimicrobial Resistance - The Way Forward**

*Dr N Janakan*

Advent of antimicrobials in the early 20th century went on to revolutionize the healthcare and has become the bedrock of many of the greatest medical achievements. Unfortunately, antimicrobial resistance (AMR) has increasingly become a problem in recent years, mainly because the pace at which we are discovering novel antibiotics has slowed drastically, while use of antimicrobials, especially irrational use, is rising.
There could be profound health and economic consequences for the world, if AMR is not tackled. The damaging effects of AMR are already manifesting as antimicrobial-resistant infections spiraling out of control.

Many issues relating to AMR are complex and inter-related. We need to adopt a coherent, comprehensive and integrated approach that spans from advocacy, awareness and education to regulation of antimicrobials use across humans, animals and the environment. At the recent World Health Assembly, WHO has endorsed a Global Action Plan with a broad set of strategies to tackle AMR.

### Symposium 3 (Hall C, Day 1)

**Awkward Problems and Plausible Solutions - Managing Medically Unexplained Symptoms (Synopsis)**

Professionalism implies an engagement with the patient and his or her problem. Yet, clinicians frequently make a tactical withdrawal from this engagement because of a lack of understanding of the patient’s problems, essentially because these problems do not conform to their own models of understanding and are outside the paradigms of their training. Functional problems, in some contexts labelled medically unexplained symptoms (MUS), comprise a huge proportion of overall clinical workload. In most specialities they constitute the majority of consultations as is clear from any clinic in gastroenterology, rheumatology, cardiology or neurology where functional abdominal symptoms (e.g. irritable bowel syndrome), fibromyalgia, non-cardiac chest pain and unexplained pain challenge the doctor. The symptoms and syndromes are frequently interconnected, with somatic hypersensitivity as a common link. They have been described as persistent body symptoms for which an adequate examination and investigations does not reveal an explanatory structural or other specific pathology. In primary care they constitute 20-50% of consultations and up to 40% of hospital referrals with an overall cost of several billions to the NHS. Doctors are not keen on these disorders. We prefer to see people with more definitively defined lesions and we have a tendency to retreat from sufferers with functional problems. Worse still, our training and subsequent specialisation leads to a reductionist approach, causing sufferers to have investigations and invasive procedures, including operations, which are medically unnecessary and harmful. Thus the reverse paradigm applies – the uncertainty causes over-investigation and unnecessary intervention allied to a lack of willingness to face the problem directly.

In part this is due to the lack of explanatory models (EMs) for conducting a meaningful dialogue with the patient. Treating a person and managing a problem of which you do not have an understanding is a barrier and a recipe for harm. This has led to dissonance between patients and doctors. Bridging this gap through innovative educational models and training strategies needs to be a high priority. How else can we claim that the patient is central?

**Managing medically unexplained ailments**

*Diyanath Samarasinghe*

If MUA were a single disease, it would be the commonest of the conditions seen in general practice and most specialist practices. Not managing it properly is negligence. It is sad for patients that proper management is decided on the basis of consensus among doctors, not treatment outcome. (Aspects of this are expanded in the post of April 4, 2015 at http://diyanathsamaramsinghe.com.) In management, the main ingredient of successful treatment is in explaining the unexplained aetiology.
A greater part of causation is hopeless suffering or boredom. Too often, the only permissible manner in which to express such discomfort is in the form of physical complaints. Next in the line of causes is probably personality predisposition to medical consultations. Among several other underlying causes, the next most common is likely the effect of our profession: generating patients among the healthy public. We in the medical profession may well be responsible for a fair proportion of MUA, through the encouragement of worry about health. When the cause is laid bare, its resolution is not too difficult. Our job is to help patients explore these extraneous matters within the agenda of normal medical consultations and to foster insight. Most of the work thereafter is in the hands of the patient. Minimizing the tendency for our profession to generate MUA is of course our responsibility.

Symposium 4 (Hall A, Day 1)

Hepatitis and HIV: implications for care
Dr Nicole Seguy

In Asia the estimated annual deaths from viral hepatitis is more than three times higher than that from HIV. Viral hepatitis B or C co-infection is high among people living with HIV. People who inject drugs are particularly vulnerable to HCV. The World Health Organization has issued a Framework for Action to prevent and control viral hepatitis and developed simplified hepatitis B and C screening and treatment guidelines using a public health approach. Recent medicines developments provide the opportunity for accelerated access to HBV treatment and HCV cure. Tenofovir is active both on HIV and hepatitis B and available in HIV programs. The new direct acting antivirals (DAA) have been added to the WHO Model List of Essential Medicines in 2015. DAAs are being produced by generic companies and it is estimated that their cost could decrease up to < 200 USD per 12 week treatment course when demand increases. Implementation science research is needed to explore service delivery models for hepatitis treatment starting with patients co-infected with HIV.

Newer treatment options for hepatitis: better impact on life. Are we achieving this?
Dr Madunil Niriella

Hepatitis C virus (HCV) infection differs from other chronic viral infections, notably HIV infection, in that it can be cured by treatment. Several medicines are available to treat persons infected with HCV, and cure rates have steadily improved with the introduction of newer medicines. The field of HCV therapeutics is evolving rapidly, and a number of compounds are in various stages of development. These new compounds can cure more than 90% of persons with HCV infection and are effective against genotypes that were previously difficult to treat. Antiviral agents active against HBV are available, and have been shown to suppress HBV replication, prevent progression to cirrhosis, and reduce the risk of HCC and liver-related deaths. However, currently available treatments fail to eradicate the virus in most of those treated, necessitating potentially lifelong treatment. They are intended for use across age groups and adult populations. In this presentation, I will discuss the current recommendations for management of chronic HCV and HBV and discuss the applicability of these recommendations to a middle income country such as Sri Lanka.

Issues in managing patients with HIV and Hepatitis B co-infection in Sri Lanka
Lilani Rajapaksa

Viral hepatitis is an important cause of morbidity and mortality among people living with HIV. Chronic hepatitis B virus infection affects 5-20% of the 33 million people living with HIV worldwide.
Hepatitis B co-infected patients may progress to end-stage liver disease more rapidly and they have higher rates of hepatocellular carcinoma. Hepatitis C infection affects 5-15% of people living with HIV. The co-infection is greatest in low and middle income countries, particularly in South East Asia and Sub Saharan Africa. A comprehensive approach is needed in management of people living with HIV (PLHIV) with Hepatitis. In Sri Lanka PLHIV are routinely screened for hepatitis B and C. Vaccination for hepatitis B is available. PLHIV with hepatitis C or B are referred to the hepatologist and managed with appropriate drugs including ARV.

**What can the laboratory offer for the diagnosis of hepatitis B and C?**

*Dr. Geethani Galagoda*

Hepatitis B and C are parenterally transmitted viral diseases which cause chronic infection, cirrhosis and primary hepatocellular carcinoma. Hepatitis B is diagnosed by the presence of HBsAg in the blood. HB core IgM and total antibody, HB e antigen and antibody give information on acute or chronic infection, occurrence of relapses and presence of active replication. These are performed by ELISA. Viral DNA is detected by PCR, (conventional and real time). Quantification of DNA by real time PCR is useful for the management of the patient –ie. response to treatment and resistance to antivirals. Genotyping of hepatitis B virus is by real time PCR assay or sequencing. Screening for hepatitis C antibody is by ELISA and needs confirmation by PCR. Genotyping and RNA quantification by real time PCR and sequencing is necessary for the management.

**Symposium 5 (Hall B, Day 1)**

**NCD control in Sri Lanka, Challenges ahead – in achieving global NCD targets**

*Dr. Palith Karunapema*

Untimely death of a relative or a friend may have affected all of us. It is a tragedy we want to avoid. Around 70% of premature deaths in the World is due to 4 major non-communicable diseases. Globally 36 million die due to four major NCDs every year. In Sri Lanka, 250 people die every day due to same four diseases. In 2011 The United Nations assembly adopted a resolution to mainstream the NCDs in global health agenda. In line with these developments, WHO has set an unprecedented target to reduce premature deaths due to NCDS by achieving 2% reduction of death rate over next 10 years. Couple with this impressive target, WHO in collaboration with stakeholders established a framework for NCD prevention and control activities and monitoring which includes 9 voluntary NCD targets with 25 indicators, to be monitored at global, regional and national level.

**Need for optimum NCD risk factor control in a resource constrained setting**

*Dr. Ruvan Ekanayake*

The prevalence of ischaemic heart disease is higher in lower socioeconomic groups. Although mortality is falling the morbidity from ischaemic heart disease appears to be rising. The aetiology for ischaemic heart disease is multifactorial. Age, gender, ethnicity and family history are four non modifiable risk factors whereas smoking, hyperlipidaemia, diabetes mellitus, hypertension, obesity, social deprivation, poor nutrition, lack of exercise and alcoholism are ten modifiable risk factors.
Targets have been set for the modifiable risk factors by clinical trial data. A LDL level of 50-70 mg% appears ideal. For HDL, the level suggested is 55-60 mg%. In the case of diabetes mellitus a HbA1c level below 5.5 (but without hypoglycaemia) gives best reduction of ischaemic heart disease. Hypertensive treatment targets should be less than 120 mmHg for systolic BP and 75 mmHg for diastolic BP. Physical exercise should be at an intensity of 5-6 mets with a weekly energy expenditure of more than 3500 Kcal to keep BMI less than 22 kg/m².

To achieve these targets by lifestyle modification alone would be impossible in the general population. Judicious use of cheap agents such as thiazides, metformin, enalapril and atorvastatin would be essential. Investing in a multifactorial prevention programme would yield best results in preventing atherosclerotic diseases but the recommended modifications would have beneficial effects across the entire spectrum of NCD.

**Symposium 6 (Hall C, Day 1)**

**Advances in erectile dysfunction management**

*David Edwards*

Erectile Dysfunction (ED) is of paramount importance to mankind as it is a marker for other co-morbidities such as cardio-vascular disease, diabetes, depression and lower urinary tract symptoms. On average men and their clinician have 3 ½ years to modify their lifestyle and optimise medication regimens before they develop other conditions. Since the launch of Viagra in 1998 other treatment options have become available. Whilst some patients may not want treatment nevertheless it is important that they are medically assessed. To date only about 1/3 of patients with ED have been managed and investigated. The presentation today will look at newer therapy alternatives. It is hoped that these will be highlighted by the media and thereby encourage more men (and women to enthuse their partner) to come forward both to be medically assessed and offered other treatments if sildenafil has failed to favourably help their erectile problems.

**Who needs sex therapy?**

*Diyanath Samarasinghe*

Those in need of therapy are those who choose to consult us for it. The therapy that some of them need may not be the ready-made parcel of measures that we have, for their particular ailment. A good part of sex therapy is selecting out those who we know are likely to benefit from the treatment we expect to provide. Among those to be excluded are people who have already failed to improve, with another practitioner, with exactly the same treatment as that which we intend to deliver. And for those we select to treat, we need to keep improving our therapeutic skill. We should not be allowed to get away with poor performance in sex therapy any more than in surgery.

Not everyone who can benefit from sex therapy comes for help. How may we extend help to them, without ‘creating patients’? One remedy is to ensure that we don’t let it be understood that we can cure things that we in fact cannot. And finally we must consider the business of improving everybody’s sex life, whether we have some problem or none. This is part of human flourishing, and sex therapists too should play their public health part in it.
Could stroke be prevented? Up to date evidence
Dr. Jeyaraj Durai Pandian

More than 80% of stroke risk factors are modifiable and preventable. Hypertension, diabetes, smoking, excessive alcohol, dyslipidemia, obesity, physical inactivity etc are preventable. Hypertension is the single most risk factor for ischemic and haemorrhagic strokes. In developed countries there has been a 12% decrease in stroke incidence due to better control of vascular risk factors like hypertension, smoking etc. Primary prevention of stroke can be undertaken as a mass approach, high risk approach and individual approach. There are many tools available for risk stratification e.x. WHO PEN approach, stroke riskometer etc. In the mass approach reduction in salt, tobacco ban through legislation and advocating healthy lifestyles are cost -effective. Screening for risk factors plays a key role in implementing preventive strategies in the high risk and individual approach. Secondary prevention of stroke begins in the stroke unit care. Early incorporation of stroke prevention when the patients are managed in the stroke unit reduces the risk of stroke recurrence. One of the major problems in low and middle income countries is the availability and affordability of these drugs such as antiplatelets, antihypertensives, lipid lowering agents, monitoring of oral anticoagulants etc. Another important aspect of secondary prevention is the compliance with medications by the patients.

Stroke - First 24 hours: a window of opportunity
Dr. Senaka Bandusena

A major paradigm shift occurred in the care of stroke over the last 3 decades. From a nihilistic belief that nothing can be done to prevent cerebral damage in the immediate aftermath of a stroke, we now know that there is ongoing time dependent cerebral damage in the early hours which is amenable to therapies.

In ischaemic stroke there is a penumbra where cells are dysfunctional, but alive. These cells may eventually die unless perfusion is re-established. In intracerebral haemorrhage (ICH) we know that clots can expand with time. As these two mechanisms leading to further cerebral damage are time dependent, there is a window of opportunity to intervene in order to minimize damage. Thrombolysis and thrombectomy are means by which the penumbra can be salvaged and blood pressure control may help in reducing expansion of an intracerebral bleed.

This talk will focus on therapies, challenges and the present status of acute stroke care in Sri Lanka.

Successful stroke rehabilitation in resource constraint settings
Dr. Jeyaraj Durai Pandian

Stroke is one of the leading causes of disabilities in the world. In low and middle income countries (LMICs) stroke affects a person at a younger age as compared to high income countries. A significant proportion of stroke patients are left with mild/moderate or severe disability. Stroke rehabilitation involves a multidisciplinary team of physiotherapists, occupational therapists and speech therapists.
In a typical rehabilitation program patients are assessed while they are in the stroke unit and based on their neurological deficits outpatient, in-hospital or community rehabilitation is planned. However in LMICs there is shortage of personnel in neurorehabilitation. Unlike high income countries patients in LMICs are discharged to their homes. The relatives become caregivers for the delivery of care at home. The best model of stroke rehabilitation in LMICs is still not known. An ideal option is to harness the family unit structure and the home care. Currently in India our center is coordinating a large scale Stroke rehabilitation trial called ATTEND. We are testing the hypothesis that caregiver trained home based rehabilitation is better than the routine stroke rehabilitation in India. In addition, to start a small stroke rehabilitation unit in LMICs is not expensive. Most of the essential infrastructures can be made locally at a low cost. Use of mobile technology to educate the patients on rehabilitation techniques and self-management DVDs are some of the newer methods which can adapted to LMICs.

Symposium 8 (Hall B, Day 2)

Addressing Challenges of Child Sexual Abuse through an Integrated Service Approach
Prof. Rita Shackel

Understanding the impacts of child sexual abuse on survivors is important in development and implementation of interventions for child sexual abuse. More quality research than ever before is emerging from around the globe on the sequelae of child sexual abuse on its survivors, families and the community. This paper will review recent findings in this field with particular attention on possible gender differences and implications for developing effective and integrated intervention strategies in responding to child sexual abuse and meeting the complex needs of survivors of such abuse.

Sri Lankan experience in the multi-sectoral management of child sexual abuse
Prof. Asvini D Fernando

The adverse effects of child sexual abuse have serious consequences which impacts well into adult life. Data reveals an increase in the number of reported cases in Sri Lanka. This may be a true increase. However, increased awareness may also be contributing.

In the management of victims ad hoc regimens were followed and often all sectors were not brought into play. Uniformity of management throughout the country was an urgent need. The Sri Lanka College of Paediatricians in 2012, invited all sectors involved to a series of discussions. This culminated in the document titled ‘National Guideline for the Management of Child Abuse and Neglect. A Multi-sectoral Approach.’ Objectives of multi-sectoral management are to: to prevent re-victimization and stigmatization. Ensure safety of child and family and continuation education. Ensure psycho-social rehabilitation & re-integration and legal justice with minimal delay. The presentation will discuss the multi-sectoral management strategies in Sri Lanka.

Child sexual abuse and the crisis of awareness
Mr. Sajeewa Samaranayake
In Sri Lanka we find a ready conflation of the distinct (though related) concepts of child sexual abuse and criminality. There is a strong focus on “what is sexual abuse” as opposed to the needs and contexts that lead to this phenomenon. The conclusion of criminality has all but precluded societal efforts to uncover the root causes. A common theoretical framework for understanding child sexual abuse is absent. Elsewhere, research on child development has established a strong connection between the quality of parent-child relationships and the different psycho-social pathways taken by young children. Here, we cannot make sense of data without relevant theories. Nor can we understand the expressed wishes of children fully without some idea about their psychosocial makeup. Consequently the theoretical basis for early intervention and family support by way of prevention has become weak.

### Symposium 9 (Hall C, Day 2)

**Multi-sectoral approaches to promote nutrition**  
*(Synopsis)*

**Purpose:** This session considers the linking of rural development, agriculture and education with nutrition promotion in low and middle income countries. It will describe the development of a multi-sectoral intervention; evaluation methods; identify nutritional barriers and present survey findings on nutrition behaviour and promotion using the Integrating Nutrition Promotion and Rural Development Project. The symposium will include presentations from INPARD investigators and a forum with the participation of multi-sectoral experts.

**Rationale:** There are a number of rural development projects currently underway in Sri Lanka. While these projects have many positive impacts, they may lead to changes in diet and nutritional status. In the midst of rapid development and urbanization, Sri Lanka currently faces a double burden of under- and over-nutrition. Governmental and international organizations have highlighted the need to bring health and non-health agencies together to address this, but there is a lack of research on the feasibility of aligning the aims of nutrition promotion with those of rural development.

**Objectives:** This symposium brings together individuals from academia, Sri Lankan government and the World Bank to provide an overview of multi-sectoral nutrition promotion. It focuses on the INPARD project, in which researchers, health practitioners and governmental agencies are currently working to investigate whether rural development programmes can be utilized to promote nutrition within rural Sri Lanka and to identify if this approach improves nutrition outcomes. The objectives of the session are to provide an overview of the development of INPARD and perceptions on multi-sectoral collaboration by individuals involved in it. It will present qualitative findings on the nutritional challenges faced in the region and early findings from surveys of the nutritional behaviour of secondary school students and nutrition promotion in schools. Symposium will also present the global perspectives and similar initiatives. While this research is based in Sri Lanka, the findings have implications in many contexts, particularly for researchers and policy makers concerned with multi-sectoral nutrition promotion.

**Summary:** The session consists of four presentations: 1) An introduction to INPARD and description of the process of identifying and recruiting key stakeholders at a local, national and international level, along with the feasibility of linking nutrition promotion and rural development. 2) Global perspectives and initiatives for nutrition promotion 3) Evaluation methods and key findings from INPARD baseline survey. 4) Use of Nutrition Friendly School Initiative (NFSI) criteria and a new tool to identify multi-sectoral interventions to promote nutrition in schools.
Infection Related Glomerulonephritis

Dr. Michelle Estrella

In this session, the epidemiology of infection related glomerulonephritis will be presented, including global differences in the incidence and prevalence of this disease. Common infectious culprits, both bacterial and viral in nature, will be reviewed along with their corresponding underlying pathogenic mechanisms of glomerulonephritis. In addition, the common and unique aspects of clinical presentations across various etiologies of infection related glomerulonephritis will be presented. In addition, the evidence for potential therapeutic options along with international guidelines for the management of infection related glomerulonephritis will be discussed.

Symposium 11 (Hall B, Day 2)

Facing transition in chronic illness
(Synopsis)

WHO defines adolescence as the period in human growth and development that occurs after childhood and before adulthood, between the ages of 10 and 19 years. The adolescent population amounts to 19.7% of the total population in Sri Lanka. During this transition phase they undergo a multitude of physical and psychological changes which is a challenge in itself even for a healthy teen. Certain chronic disorders which manifest in this period may further complicate the situation. The care of such patients and diseases need the support of a team of care givers who has expertise in various disciplines of medicine. Here we discuss a 13 year old girl who was diagnosed with Type 1 Diabetes Mellitus at the age of eight years. The stress caused by her diagnosis and its treatment, which included an initial fear of taking Insulin coupled with a certain degree of bullying she faced at school had an adverse impact on her psychological development. Her father leaving the family was an added strain which manifested with the mother of the child becoming overprotective. Coping with family disputes together with a condition which needed continuous care and treatment was not easy for both the child and her mother. During childhood and adolescence, there is a gradual shift from diabetes care supervised by parents and other adults to self-care management. Simultaneously the primary medical care takers also change from Paediatricians to Adult Physicians, as well as their familiar clinic and ward set ups. For youth with type 1 diabetes, this transition is made more difficult because it is accompanied by changes in their health needs and health care delivery systems. This transition has resulted in deterioration in glycaemic control, psychological issues while trying to adapt to an independent adulthood lifestyle and lost to follow up in some who will later present with florid complications in type 1 diabetes. The chronic disorder, treatment requirements, hospitalization, and surgery (when necessary) all intensify concerns about physical appearance, interfere with the process of gaining independence, and disrupt changing relationships with parents and friends. Also, adolescent developmental issues complicate a teen's transition towards taking responsibility for managing his or her illness and learning to comply with the recommended
treatment. Therefore, care of adolescents has to be multidisciplinary and tailor made. The transitions of care takers should be a gradual process as well. Current suggestion of increasing the age care limit of Paediatricians from 12 to 16 years will undoubtedly minimise these problems which arise during the adolescent period.

**Symposium 12 (Hall C, Day 2)**

**Clinical Teaching**  
*Prof. Hiroshi Nishigori*

A common teaching method adopted by many medical schools to teach the physical examination to their medical students is to begin by teaching them some 140 or so physical exam manoeuvres. Although students can master each examination manoeuvre through this learning process, it is not uncommon for them to have difficulty associating the manoeuvres with the meaning of specific clinical findings while sorting out a differential diagnosis. We developed a model teaching session for a Hypothesis-Driven Physical Examination (HDPE), in which the technical and cognitive aspects of physical examination are better integrated. In the symposium, we will introduce its basic concept and show the video explaining the structure of the model teaching session.

**Providing effective feedback during Clinical Teaching**  
*Dr. Diantha Soemantri*

Learning in the clinical setting poses its own challenges. While ample opportunities to be exposed to real clinical cases are available, those experiences are not automatically translated into meaningful learning experiences. Studies have shown that effective learning requires reflection on learning and external feedback (Abbott, 1994; Barnett, 1990; Biggs & Tang, 2007; Watkins et al, 2002), especially in the clinical setting where the environment can become quite unpredictable. Studies, however, have proven that there are still significant problems in feedback provision. Medical students perceived they have only little amount of feedback, despite the perceived efforts of the clinical teachers in delivering feedback. This presentation will explore some of the findings related to the process of providing and responding to feedback in the Mini-Clinical Evaluation Exercise (Mini-CEX) context. One of them is the emphasis on feedback as a two-way communication process. How feedback correlates with medical students’ reflection on the learning will also be discussed, since proper responses to feedback require some degree of reflection.

**Clinical teaching in non-conventional settings**  
*Prof. Aloka Pathirana*

Aspects of clinical teaching is traditionally taught in wards and clinics. The community too is an important setting for clinical teaching. Interaction between the student, tutor and the patient should occur in a suitable environment for the teaching to be effective. Most components of clinical teaching which includes, clinical skills, procedural skills, interpretation of investigations, professionalism etc. can be effectively taught in the above mentioned traditional settings. Undergraduates are expected to attend theatres, endoscopy units etc. which are dedicated specialized treatment units. The emphasis in these units is not undergraduate teaching but optimal patient care with a view to favourable treatment outcomes. Multiple professional groups interact in these environments. They are not geared for didactic teaching and formal teaching time is usually
not allocated. Students are expected to learn mostly by observation and sometimes get an opportunity to be directly involved in patient care.

To a novice student these environments could be threatening and intimidating initially. Unless teaching-learning activities are properly planned and executed students could find that the time spent in these units are not beneficial. Both the tutors and the students need to prepare for optimum learning outcome. The clinicians need to be aware of the opportunities that are available. The students too should prepare and show an interest to be involved. Active rather than passive observation should be encouraged and could be achieved by providing students with specific “tasks” to be performed. Much could be learnt on interaction between different professionals, team work, following of protocols etc. Inter-professional education which is known to foster harmony between different professions can be best practiced in these settings.

Curricula in most medical schools do not provide much attention to teaching-learning activities in these non-conventional settings. If properly planned there is much to gain for students from the experiences in these settings, which cannot be obtained from most traditional settings.

**Symposium 13 (Hall A, Day 2)**

**How Emergency medicine integrates into the healthcare system in Sri Lanka**
*Prof. Sally McCarthy*

In countries where Emergency Medicine (EM) has been well established as a medical specialty for decades, the value of EM specialty training and an emergency care system staffed by EM specialists may seem self-evident to all stakeholders within the health-care system; however, in countries where EM is still not yet well established or recognized as a medical specialty, this is often not the case. This presentation will outline the benefits and components of establishing an EM specialty training program and system.

**Sepsis and severe sepsis management in ED**
*Dr Nalin Kitulwatte*

Sepsis and severe sepsis are time critical conditions. They respond well to early treatment and rapid escalation of therapy. However, sepsis is poorly recognized and treated. Despite the recommendations of international guidelines, only 32% of patients receive antibiotics within the first hour. The Emergency Department (ED) has a key role to play in rapid identification of the sepsis, diagnosis of severe sepsis or septic shock and initial resuscitation. Important decisions must be made about the appropriate destination for ongoing care and for referral to other specialties and services. For this to occur smoothly EDs must have clinical tools in place for early recognition, urgent interventions and timely escalation of therapy in patients with suspected sepsis. The Sepsis Six is one such initial resuscitation bundle designed to offer basic intervention within the first hour.

**Role of non-invasive ventilation in Acute Respiratory Failure in a low resource ED –Sri Lankan experience**
*Dr. Krishantha Jayasekera*
Non invasive ventilation (NIV) is provision of ventilator support through a mask without intubation. NIV was initially provided in ICUs but over the last 3 decades it has become the core treatment in management of acute respiratory failure (ARF) in the Emergency Departments (ED). Evidence suggests that it reduces the incidence of intubation, length of hospital/ICU stay, morbidity and mortality in ARF.

Sri Lanka Victoria Emergency Trauma Centre was commissioned in March 2012 and is the first functional ED in Sri Lanka. It admits 70-90 critically ill patients daily and nearly 40% are with acute respiratory distress. We prospectively analyzed patients with ARF presenting to ED for a period of 6 months from October 2014 to March 2015. Out of 180 who received NIV majority had acute exacerbation of COPD and cardiogenic pulmonary oedema. 81% patients showed remarkable clinical recovery and only 5% needed intubation and ICU care. NIV services in ED would save more lives and resources specially when there is limited access to ICU/HDU.

**Symposium 14 (Hall B, Day 2)**

**Antenatal foetal monitoring**

*Dr. Tiran Dias*

The aim of fetal wellbeing assessment during pregnancy is to prevent perinatal mortality and perinatal morbidity especially due to neurological handicap. Adverse perinatal outcomes are rare and unexpected among low risk pregnancies. Therefore, fetal assessment needs to be individualized according to the risk factors. A woman has had complications in a previous pregnancy or has a pre-existing medical condition such as diabetes mellitus, hypertensive disorders, heart disease is at a higher risk of fetal compromise during pregnancy. Furthermore, fetal growth restriction, Rh isoimmunized pregnancy, pregnancy that goes beyond 42 weeks and multiple pregnancy are also at high risk. Antenatal protocols should be formulated to identify fetal growth restriction (FGR) in high risk patients such as previous FGR, high uterine artery Dopplers etc and should be offered serial growth scans. In case of diagnosed FGR after 35 weeks strict monitoring should be offered. Early delivery should be considered if umbilical artery Dopplers are abnormal or if middle cerebral artery Doppler less than 5th centile.

**Intrapartum fetal monitoring**

*Dr. Austin Ugwumadu*

Intrapartum fetal heart rate (FHR) monitoring using the CTG is widely used across the world particularly in the industrialised economies. However, it’s interpretation is governed by a set of fairly rigid regulatory and international guidelines based on specific FHR features and description of morphologic appearances of FHR abnormalities. This approach imposes no demand on the clinician to seek and understand how the fetes adjust and compensate for intrapartum oxygen deprivation, and recognition of those patterns to suggest failure of compensation. This presentation poses the question ‘what is the clinician looking for’, and attempts to answer it by reviewing fetal cardiovascular and metabolic adjustments to labour.

**Early neonatal care for compromised baby**

*Dr. Nishani Lucas*
A compromised baby is a baby who is unable to function optimally due to underlying disease or a harmful environment. This includes babies who are hypoxic, septic, preterm, growth restricted as well as those with congenital anomalies. Co-ordination between the neonatal and the obstetric teams is essential when planning for a compromised baby. In-utero transfer is always preferable to ex-utero transfer as the latter is an independent factor causing adverse outcomes.

Good quality neonatal resuscitation at the time of delivery as well as measures to avoid hypothermia are independent factors which affects the outcome. Stabilisation with regard to respiratory and cardiovascular support as well as ensuring safe intravenous access is essential prior to ex-utero transfer in order to achieve better outcomes. Non-invasive ventilation, parenteral nutrition and enteral feeding with breast milk immediately after birth along with minimal handling, minimally invasive procedures, strict rational antibiotic policy and developmental care including the involvement of parents in the care plan will help to ensure better neurodevelopmental outcomes.

**Symposium 15 (Hall C, Day 2)**

**Emerging use of mobile technology in health**

*Dr. Roshan Hewapathirana*

mHealth is the use of mobile telecommunications and wireless multimedia to integrate and develop health care delivery systems. mHealth is unique in that it is both a technology and a means by which other technologies can be distributed or supported. In contrast to the Internet digital divide, mobile phone usage appears greater among those populations most in need of health interventions. Smartphones and other mobile computing devices are becoming increasingly ubiquitous with the potential to improve health by reaching individuals who were previously unreachable. Given the high penetration and level of computing capacity available in even basic cell phones, it is possible that these technologies can make a significant difference to public health and health care delivery. 83% of WHO member states have reported using mHealth services. However, effective implementation is a key focus in current mHealth discourse as simple phone dissemination to patients and/or health care personnel alone will not improve health outcomes.

**mHealth Application in the Ministry of Health**

*Dr. Chaminda Weerabaddana*

Sri Lankan provides free universal health coverage to its citizens. State health sector caters to nearly 90% of all inward encounters and 50% of outpatient encounters. Sri Lanka is having 5 mobile operators with over 98% Percentage of total population covered by a mobile network signal. With 107 Mobile Subscription per 100 people. Sri Lanka has a good potential of using mHealth solutions to improve the health of its citizens. The type of mHealth services that can be delivered varies with the type of handset used. Basic phones can handle voice and SMS services. Smartphones can also facilitate web browsing, Apps and location based services. Voice Telephone services are currently used for delivering health advice and OPD appointment scheduling. A SMS based authentication system and an automated reminder generation has been implemented to assist health administration. A health data API is being developed to aid App development for smartphones in the health domain.
Overview of Childhood Injuries in Sri Lanka
Dr. Kapila Jayaratne

In Sri Lanka, each year hundreds of children die from injuries that have been ranked among first five leading causes of death among this age group. Although these tragic deaths often leaves families broken apart and changes the lives of those left behind, are only part of the picture. Significant proportion of annual childhood morbidity can be attributed to injuries. These children may face disability and chronic pain that limit their ability to perform age-appropriate everyday activities over their lifetime. A majority of injury-related deaths and disabilities are preventable. They can be prevented through effective strategies. The challenge is to apply research into practice and utilize available resources and systems together to prevent these unnecessary tragedies to children, families, and communities. Although there are multiple opportunities to prevent childhood injuries within the health system, they are not focused or adequately utilized. Considering the different causality and complexity in circumstances of injuries and in a context of a need for going beyond the health system frame work, the involvement of other stakeholders are crucial in formulating preventive strategies. This symposium focuses on the importance and strategies to work towards universal coverage for prevention of childhood injuries with effective strategies.

Options for child injury prevention – an international perspective
Eric Chalmers

This presentation will briefly describe a successful integrated injury prevention model currently in place in the Australian Capital Territory (ACT), Australia. Eric will relate this to international support for the development of local initiatives and provide practical insights into feedback that international experience provides for the development of sustainable and successful injury prevention programs within countries.

The ACT includes the national capital, Canberra and the Kidsafe Program illustrates a good model for the development of effective injury prevention structures. Over the last ten years, an integrated injury prevention program covering all major injury causes has been developed in Canberra. Based on the key injury of road trauma and an extensive support service, the program has seen a reduction in misuse of child car restraints (the key indicator of road trauma for children in Australia) of over 60%, with similar reductions in injury statistics. This program has drawn on a variety of structures and programs from around the world and illustrates a number of key attributes that successful injury prevention programs are likely to have. It also indicates some important ideas for how Sir Lanka might use these international experiences to develop effective programs here, keeping in mind that any program must relate to the society, culture and environment within which it is located.

Preventing Injury among adolescents
Dr. Manjula Nishanthi Danansuriya

“Adolescence” refers to the period of life between 10 and 19 years of age. The estimated number of adolescents in Sri Lanka is 3.8 million adolescents comprising one fifth of the population. Nearly 70% of our adolescents attend school. Adolescence is a time of transition, exploration, and experimentation. Associated risk behaviors account for present morbidity and mortality pattern as
well as future adult lifestyle. The context of adolescence is rapidly changing with new insights into effects of puberty and brain development.

Injury is a major source of morbidity and mortality among adolescents. Prevention of injuries is often hampered by shortages of data, research, and conceptualization of the problem. Injuries due to accidents and violence can be considered as leading causes of death among young people. Suicides, other self-inflicted injuries and accidents also significantly contribute to the morbidity, disability and mortality. Various data sources have highlighted the gravity of the problem including the UNICEF national survey on emerging issues among adolescents (2004) and National Youth Health Survey (2013/14). The latter revealed that 6.2% complained of injuries during the preceding 12 months needing medical attention. Of them nearly 40% had road traffic accidents, 25% had accidents / falls while 12% had sport related injuries.

Evidence based interventions including law enforcement, public awareness and behavior modification can be considered as feasible in preventing accidents among adolescents Sri Lanka. However, the spectrum of prevention should be carefully tailor made to meet the needs of native adolescents to achieve the expected outcomes.

**Care for the injured child**

*Dr. Sanjaya Abeygunasekera*

Trauma has replaced infectious diseases as the leading cause of death in children. Approximately a half of these deaths takes place before admission to a health care institution and only injury prevention strategies will reduce these deaths. The rest of the deaths take place in hospitals. Prompt and efficient resuscitation together with skilful definitive care will go a long way in reducing morbidity and mortality in this group. Widespread use of structured programmes like the Advanced Paediatric Life Support das made a demonstrable effect on the outcome.

Initial care of any seriously injured child include maintaining a patent Airway while protecting cervical spine, ensuring adequate Breathing, maintaining adequate circulation while controlling haemorrhage, neurological assessment while preventing secondary brain injury and a thorough secondary survey to detect any associated injuries. Once the patient is stable he can be referred to the appropriate specialist for the final definitive care. This kind of strategy will minimise both mortality and long term morbidity in these children.

**SLMA Contributon in Child Injury Prevention**

*Dr. Sameera Senanayake*

A health-led concerted effort is essential considering the significance and applicability of child injury prevention in Sri Lankan contexts. The Expert Committee on Ergonomics of Sri Lanka Medical Association (SLMA –ECE) has been able to initiate series of activities in this regard.

The child helmets available in Sri Lanka are not being manufactured according to the safety standards. SLMA-ECE along with Sri Lanka Standards Institution (SLSI), initiated developing standards in 2014. SLMA – ECE could negotiate with SafeKids Worldwide to help us with resource materials in prevention of child injuries in Sri Lanka. Paper articles, television, radio talk shows and media briefings were carried out in several occasions to highlight the importance of preventing child injuries. With the assistance of UNICEF, SLMA-ECE developed a child injury prevention poster suited to the local cultural context in all 3 main languages.
The SLMA – ECE, being a newly established professional group, was able to contribute to the national effort of creating a healthier nation by organizing various child injury prevention activities.

Defeat aging with aesthetic medicine
Dr. Nayani Madarasinghe

Skin changes are the most visible signs of aging. As one age the skin becomes more dehydrated and atrophic with reduced elasticity leading to wrinkles and folds. There are two types of aging. Intrinsic or chronological aging which is genetically determined and extrinsic aging which is mostly due to photo damage. Aesthetic medicine is a new branch of medicine, focused on satisfying the aesthetic desires and goals of patients. It adheres to scientific based procedures which are elective and are performed on patients in good health. Various rejuvenation procedures as chemical peels, microneedling, microdermabrasion, laser, neurotoxins and dermal fillers are used to delay the aging process and to maintain a more youthful, glowing skin.

Surgical aspects of Aesthetic Dermatology
Dr Thushan Beneragama

Globalization of beauty care has increased the demand for cosmetic enhancement and rejuvenation throughout the world. Facial skin shows signs of aging with development of wrinkles and sagging skin due to loss of facial fat and supporting tissues. People demand quick, safe and effective solutions to reverse this aging process. Combined surgical, minimally invasive and nonsurgical procedures help to correct the evidence of the aging process. Forehead, midface, lower face, periorbital area, nose and neck can be rejuvenated as separate procedures or in combination. Facial volume replacement can be done with structural fat grafting, facial fillers and facial implants. Wrinkles can be corrected surgically and with Botulinum toxin depending on the area. As surgical procedures produce predictable and long lasting results with minimal scarring, it has now emerged as a popular choice for cosmetic procedures.

Introduction to Sports Medicine & Prevention of Injuries
Dr. Asela J.B.Ratnayake

Sports Medicine is concerned with the care and the potential performance of the athletes, and to serve the community with the view of improving physical condition and health. Participation of sports or physical activity involves risk of acute and overuses injuries. Almost any structure of the body can be injured and disability may vary with the degree of severity of the injury and the related
Sports. Analysis and proper understanding of the risk factors and injury mechanism proves minimizing the sport injuries. There are internal and external risk factors which contribute to the occurrence of such incidents, but rational multidisciplinary approach with the concept of Sports Medicine in combination with related areas such as Sports Biomechanics, Sports Physiotherapy, Sports Physiology, Training, Sports Nutrition, Coaching, Sports Massage and technology are mainstay in prevention of Injuries. Scientifically designed Pre Participation Medical Examination and proper periodization programme for athletic preparation contribute to the early detection of potential injuries.

**Planning an exercise schedule scientifically**  
*Dr. Harindu Wijesinghe*

Prior to planning an exercise schedule the first thing is to look at ones goal. The surprising thing is if your goal is to simply improve your health and lower your risk of heart disease then you don't have to exercise very hard. In July 2011, American College of Sports Medicine (ACSM) published their latest position stand on exercise prescriptions for healthy adults. The ACSM recommends that most adults should engage in: Moderate-intensity cardiorespiratory training (walking, jogging, swimming, cycling) for at least 30 min/day on 5 or more days per week (however you can do a lesser number of days with longer durations), or vigorous-intensity cardiorespiratory training for at least 20 min/day on 3 or more days per week. In addition to the above, ACSM recommends: Strength exercise 2-3 days per week, and neuromotor exercise 2-3 days per week, and flexibility exercise at least 2 days per week.

**Doping in sports and prescribing in sports persons**  
*Dr. Kithsiri Perera*

To become a sports celebrity and to sustain it is a great challenge at every level of competitions. Athletes try every possible means to enhance their performances to get variety of social gains. Performance enhancement can be done without doping such as better knowledge of training techniques, biomechanics, nutrition, and exercise physiology and sports psychology. Doping is not only the use of banned substances or method to gain competitive advantage by athlete but tampering testing procedure, possession trafficking administering or attempting to do so as well as failure to inform whereabouts and missing a test. Athlete and entourage can be penalized under the new act of convention against doping in sport in Sri Lanka. Substances and methods may prohibit in all times or in competition in particular sports according to world anti-doping code international standards. If an athlete happened to be prescribed a banned drug it has to be informed to national anti-doping agency submitting a therapeutic use exception (TUE) form.

**Symposium 20 (Hall B, Day 3)**

**Personalized Medicine in Oncology**  
*Dr. Mahendra Perera*
Personalized medicine is often described as the right treatment for the right person at the right time. This emerging science has the potential to truly customize healthcare to the patient, enabling providers to match drugs to patients based on their genetic profiles, to identify which health conditions an individual is susceptible to, and to determine how a given patient will respond to a particular therapy. As a result, personalized medicine can eliminate unnecessary treatments, minimize the potential for adverse events and would improve patient outcomes. Personalized medicine consists of products and services that directly or indirectly leverage of science of genomics and proteomics and that capitalize on the trends toward wellness and consumerism in order to facilitate a tailored approach. This encompasses everything from High-Tech diagnostics to therapeutics and to technologies that enable the storage, analysis, and linking of patient and scientific data that are clinically actionable. Cancer is a complex heterogeneous family of diseases, characterized by the deregulation of the normal control pathways for cellular growth and/or apoptosis. Traditional research programs have focused on identifying and quantifying environmental and inherited factors associated with cancers found in particular tissues. Despite many advances, these approaches have historically been limited in scope due to technological limitations or excessive cost. With next generation genomic platforms, scientists are now able to cost-effectively assay individual cancer genomes and characterize them in terms of the global genetic, epigenetic, and transcriptional changes. In depth characterization of these events and the relationships between them will lead to better understanding of the mechanisms of carcinogenesis, metastasis and therapeutic response.

**Three Revolutions in Cancer Therapy**

*Dr Tan Wu Meng*

The evolution of cancer therapy can be described as a history of three revolutions. Cytotoxic drugs transformed the treatment of haematological malignancies, although the results were not equally dramatic across all solid tumour histologies. The genomic era allowed molecular characterization of cancers and the development of targeted therapies. We now stand on the cusp of a third revolution involving immunotherapy to harness the adaptive immune system to fight cancer. Underpinning these innovations are the numerous advances in organ support which have given new hope in clinical situations previously thought unsalvageable.

**Practical Implementation of Personalized cancer Therapy**

*Dr. Sachini Rasnay*

Personalized medicine; the development of drugs that are targeted to a specific mutation represents an important scientific development in most of the malignancies. In current Oncology practice personalized cancer care involves massive improvement in diagnostic, prognostic and therapeutic aspects which have proven benefits in survival outcome. Cure rates in cancer are improving steadily but slowly. Early diagnosis and removal of the primary tumor remains the cornerstone of cures. The efficacy of systemic treatment in advanced disease is modest, despite the discovery of many new molecular targets and the development of new targeted therapy. There is a need for both more effective drugs and for a better understanding of how to use them to improve treatment outcome. Management of certain malignancies like malignant melanoma, breast carcinoma, non small cell lung cancer, basal cell carcinoma and colorectal carcinoma and certain other malignancies have shown significant survival outcome with personalized targeted therapy, but unfortunately they are more expensive. However in future through advances in genetic techniques, it will become possible to identify those people who are more likely to develop cancers and therefore also to personalize their lifestyle according to their genetic features.
Illness and health among doctors: do carpenters have good furniture? (Synopsis)

The Symposium will address discuss specific health risks faced by doctors, and address the importance of doctors' illness on patient care and the health system. Practical ways to improve our own health despite the busy schedules will be presented to the audience. A highlight of the Symposium will be a review from an alumnus from the Faculty of Medicine, University of Colombo on the Johns Hopkins longitudinal study on Physician Health (Precursors) and general review on medical student and physician health. The potential role for the SLMA to foster and promote health cost-benefit of thermotherapy were assessed for the first time, for L. donovani CL.

Method: Laboratory-confirmed CL patients with single lesions were randomly assigned to (i) test group (n=98; received a single session of radio-frequency induced heat therapy (RFHT) at 50ºC for 30 seconds) and (ii) control group (n=115; received weekly IL-SSG until cure or 10 doses). Patients were followed-up fortnightly for 12 weeks to assess clinical response and adverse events. Cost of treatment was assessed using scenario building technique.

Results: Cure rates by 8, 10 and 12 weeks in the thermotherapy group were 50%, 58.5% and 70.5% as opposed to 33.3%, 52.3% and 70.5% in IL-SSG group. Cure rate by thermotherapy was significantly higher (p=0.04) at 8 weeks, while comparable thereafter. Response to thermotherapy at 8 weeks was significantly higher in females [OR 1.93 (95% CI 0.997-3.738)], papular lesions [OR 2.73(95%CI 1.29-5.77)] and in lesions <2cm [OR 1.95 (95% CI 0.98-3.87)] compared with IL SSG (p=0.05, p=0.009 and p=0.05 ). No major adverse events were recorded. It was 8.8 times cheaper to use thermotherapy (Rs 164.00/patient) than IL SSG (Rs1453.00/patient).
Conclusion: A single application of thermotherapy was safe, cost-effective and convenient as compared to multiple doses of IL SSG in treatment of *L. donovani* CL.

**OP002**

**HCV and HBV infection among a cohort of Sri Lankan thalassaemic patients**

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**Introduction and objectives:** Previous studies suggest that prevalence of hepatitis C (HCV) and hepatitis B (HBV) virus infections is low in Sri Lanka. Patients with severe thalassaemia are at risk of developing blood borne infections like HBV and HCV. While HBV can be prevented by vaccination, safe blood donor screening practices is the best preventive strategy for HCV. Nationwide HCV blood donor screening was commenced in Sri Lanka in 2009. We studied the prevalence of HBV and HCV infections among a Sri Lankan cohort of thalassaemic patients.

**Method:** All consenting patients with transfusion dependent thalassaemia in Anuradhapura, Ragama, Badulla, Chilaw centers were screened for HBV and HCV by HBsAg and Anti-HCV antibodies respectively. Those positive during screening for HBV and HCV were confirmed by HBV-DNA and HCV-RNA PCR respectively.

**Results:** A total of 513 patients were tested (Anuradhapura-210, Ragama-184, Badulla-70, Chilaw-49). There were no cases of HBV infection. Anti-HCV antibodies were positive in 97(45.2%), 14(7.6%), 5(7.1%), 0 in the four centres respectively. HCV was confirmed in 32 (15.2%), 4 (2.2%), 1 (1.4%), 0 patients in the four centres. 2/4 patients from Ragama and the patient from Badulla had blood transfusions from Anuradhapura prior to changing care to present centre. HCV positive patients age ranged from 5-21 years (mean 12.5). Total transfusions ranged from 49-312.

**Conclusion:** This is the first report of high HCV prevalence in a specific group to be reported from Sri Lanka. The high prevalence from a single centre (Anuradhapura) is alarming and reasons for this needs urgent investigation.

**OP003**

**Comparison of molecular methods, Microscopic Agglutination Tests (MAT) and ELISA based methods in diagnosing leptospirosis in a high endemic setting, during a post flood outbreak.**

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**Introduction and objectives:** Leptospirosis diagnosis is a clinical dilemma for treating physicians due to its ubiquitous presentation. Laboratory diagnosis is not optimal in most settings. We compared three different methods of laboratory diagnosis in order to determine the best clinical applications.

**Method:** For this analysis we selected 40 probable cases of leptospirosis admitted to the Teaching Hospital, Anuradhapura from whom we had properly obtained, well-characterized sera during acute (within first 10 days and samples taken on admission to the ward) and convalescent (at least 14 days after the first sample) phase. Sera were tested using an in-house ELISA (IgM and IgG) test, quantitative PCR and microscopic agglutination test with a broad panel of serovars representing 17 serogroups.

**Results:** Number of positives for MAT, IgM Elisa, IgG ELISA, qPCR and STNPCR were 5, 12,
12, 10 and 8 respectively. Of the acute samples tested, 5 samples had a MAT titre >1/400. However, among patients presented within the first week of fever, only a single case (3.8%) had a diagnostic MAT titre of 1/400. This case was positive in the ELISA test. IgM and IgG Bfr ELISA tests produced 12 and 9 positive results in acute (within first week) samples. Assuming that the MAT and qPCR positive cases are the “confirmed cases”, the sensitivity of IgM and IgG Elisa was 68.4% (13/19) and 63.2% (12/19). However, these two tests were positive for additional 7 and 9 sera samples respectively.

Conclusion: ELISA would be a cheaper point of care diagnostic method but qPCR produces valid diagnosis within the first week of illness. MAT is imperfect test even with properly collected paired samples.

OP004
Serum ionized calcium and third space fluid accumulation (TSFA) in Dengue: is hypocalcaemia an early indicator of TSFA?

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Introduction and objectives: Serum total and ionized calcium levels are significantly low in patients with dengue haemorrhagic fever than uncomplicated dengue fever (DF). This study was carried out to assess the association between serum ionized calcium level and TSFA.

Method: A cross sectional study was carried out at the University Medical Unit, Teaching Hospital Anuradhapura from January to May 2014. All suspected patients of DF were recruited to the study. Clinical parameters were documented throughout the hospital stay. Serial ultrasound scans were done to assess for TSFA and serum ionized calcium levels were measured daily till recovery.

Results: Of 33 confirmed cases of Dengue, five patients had ultrasound evidence of TSFA. Fourteen patients (42%) developed hypocalcaemia during hospital stay. Distribution of serum ionized calcium revealed an increasing trend over the duration of fever with lower values in the initial days. All five patients who developed TSFA had hypocalcaemia either prior to detection of TSFA (n=2) or at the time of first detection (on admission, n=3). Mean serum ionized calcium among patient with TSFA was 0.98 (SD 0.1) mmol/l compared to 1.12 (SD .14) mmol/l among confirmed cases of dengue without TSFA (p=0.035).

Conclusion: Serum ionized calcium is associated with severity of dengue according to fluid leakage. Mean serum ionized calcium level was significantly lower and hypocalcaemia is more prevalent among patients who developed TSFA. Hypocalcaemia seems to be an early feature of TSFA.

OP005
Comparison of seroconversion rates to the Japanese Encephalitis live and killed vaccines in children


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3MRC Human Immunology Unit, Weatherall Institute of Molecular Medicine, Oxford, UK

Introduction and objectives: Until year 2009, the Japanese encephalitis (JE) killed vaccine was used in the National Immunization program, which was then substituted with the JE live vaccine. Therefore, we proceeded to compare the seroconversion rates of these vaccines in a large cohort of children.
Method: 608 children, aged 5-16, registered at the Family Practice Centre of the University of Sri Jayawardenapura, were recruited following informed written consent from parents. JE Detect IgG ELISA (Inbios) was used for the detection of IgG antibodies in serum to determine the JE antibody status. Calculation of the JE was done according to the manufacturers’ instructions and accordingly an ISR (immune status ratio) of > 5 was considered positive; an ISR of 2-5 equivocal and an ISR of < 2 negative. 51 (9%) children had only partially completed the killed vaccine schedule and therefore, were excluded from the analysis.

Results: 565 (92.9%) children were vaccinated against JE. 311 (55%) children had been given the live vaccine and 204 (36%) the killed vaccine. We found that children who had received the killed JE were significantly more likely (p<0.001) to have seroconverted when compared to the live JE vaccine. 73 (35.8%) of those who received the killed vaccine had seroconverted to JE and 55 (26.9%) had an equivocal response, whereas only 52 (16.7%) of those who received the live vaccine seroconverted and only 58 (18.6%) had an equivocal response.

Conclusion: Children are significantly more likely to seroconvert with the killed JE vaccine.

OP006 Comparison of patterns of liver involvement in DF and DHF

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Introduction and objectives: Liver involvement commonly occurs in dengue infections, which may lead to acute liver failure. However, as the factors leading to liver injury are not clear, we initially set out to determine the natural history of liver involvement in acute dengue infection.

Method: 31 adult patients with confirmed acute dengue infection were recruited during day 3 -5 of the illness and all liver function tests, dengue NS1 antigen levels and the extent of fluid leakage was measured daily until discharge from hospital. 16 out of these patients had DF and 15 had DHF.

Results: Serum AST levels, AST/ALT ratio, indirect bilirubin and GGT levels were significantly higher in patients with DHF than DF throughout the course of the illness, whereas alkaline phosphatase and direct bilirubin levels were similar. AST, AST/ALT ratio and GGT levels rose until day 7 of illness in patients with DHF and decreased from day 7 onwards. As expected, the serum albumin levels were lower in DHF than in DF and became normal during day 6-7 of illness. Although dengue NS1 antigen levels were significantly associated with the lymphopenia and thrombocytopenia, it did not show any association with liver enzymes. The changes liver enzymes did not correlate with the extent of fluid leakage.

Conclusion: Acute liver injury, tends to worsen till day 7 and gradually improves thereafter. Since it does not appear to be associated with the degree of fluid leakage or the degree of NS1 antigenaemia, other mechanisms should be explored.

OP007 Clinical and laboratory associations of severity in a Sri Lankan cohort of patients with serologically confirmed Leptospirosis – a prospective study

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Introduction and objectives: Leptospirosis is a zoonotic infection of significant morbidity and mortality. This study elucidates the markers of severity in a cohort of Sri Lankan patients with serologically confirmed leptospirosis.

Method: Prospectively recruited patients presenting to three healthcare institutions in the Western province of Sri Lanka with serological confirmation of leptospirosis with the microscopic agglutination test were included. Data regarding the socio-demographic profile, clinical presentation, complications and biochemical parameters were recorded. Univariate associations and subsequent multivariate logistic regression models were constructed with severity as the dependent variable.

Results: A total of 232 patients were included. Majority were male (86.6%). Severe disease was noted in 68.5%. Significant clinical associations of severe disease included fever > 38.8°C on presentation (p=0.008), age>40 yrs; (p = 0.033), muscle tenderness (p=0.04) and tachycardia on admission (p=0.05). Laboratory associations of severe disease were highest white cell count > 12,350/mm³ (p<0.001) and < 7900/mm³ (p = 0.009), highest neutrophil percentage > 84% (p < 0.001). Hemoglobin > 11.2g/dL (p<0.001) and < 10.2 (p<0.001), packed cell volume > 33.8% (p <0.001) and <29.8% (p <0.001), lowest platelet count <63,500/mm³ (p = 0.01), highest ALT > 70 IU/L (p = 0.02) and hyponatremia with sodium <131mEq/L (p=0.004) On multivariate analysis, PCV < 29.8 (P = 0.011; adjusted OR =3.750; CI = 1.394 – 10.423), ALT >70 P =0.044 adjusted OR =2.639; CI =1.028-6.774 and hyponatremia< 131 (p=0.019 adjusted OR=6.413; CI=1.353 – 30.388) were found to be independent associations of severe disease.

Conclusion: Severity associations were demonstrated with both clinical and laboratory parameters.

Introduction and objectives: Leptospirosis is a zoonotic infection with significant morbidity and mortality. In this prospective study, we attempted to develop a model for diagnosis of leptospirosis.

Method: Data was extracted from a prospective multicentre study. All patients with a suspected diagnosis of leptospirosis based on the WHO surveillance criteria were recruited. A derivation cohort and a validation cohort were selected. Positive MAT was used as the gold standard and significant associations in the derivation cohort were selected for construction of a multivariate regression model. Adjusted odds ratios were extracted for significant variables. ROC curves were generated.

Results: A total of 592 patients were included with 450 (180 confirmed leptospirosis) in the derivation cohort and 142 (52 confirmed leptospirosis) in the validation cohort. The variables in the final model were: history of exposure to possible source of leptospirosis (OR=2.878;95% CI=1.527–5.425;p=0.001), serum creatinine>150μmol/L (OR =2.742; 95% CI=1.474–5.101; p =0.001), neutrophil differential percentage (on day 3 of illness) > 82.8% of total WBC count (OR 2.063; 95% CI = 1.109 – 3.837; p =0.022), serum bilirubin > 27
U/L (OR = 1.767; 95%CI 0.968 – 3.226; p=0.050) and platelet count (on day 3 of illness)< 85,000/mm³ (OR=2.350; 95%CI=1.281 – 4.313; p=0.006). The Nagelkerke R² was 0.654. ROC analysis demonstrated a diagnostic model score >14 to have a sensitivity of 80% and a specificity of 60% in the diagnosis of leptospirosis against MAT as the gold standard.

Conclusion: This proposed diagnostic model for diagnosis of leptospirosis is of potential value to clinicians treating acute febrile illness in areas with limited diagnostic facilities.

OP009
Clinico-epidemiological characteristics, treatment and outcomes of patients with confirmed Leptospirosis in a Sri Lankan healthcare setting

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Introduction and objectives: Leptospirosis is a zoonotic infection caused by spirochaetes of the genus Leptospira, with humans being affected as incidental hosts. Leptospirosis is endemic in Sri Lanka. There is paucity of prospective data on the clinico-epidemiological characteristics, treatment profiles and outcomes of patients with leptospirosis in Sri Lanka.

Method: This was a prospective cross sectional study of patients, over 12 years of age, with a diagnosis of leptospirosis based on the WHO surveillance criteria with subsequent laboratory confirmation, presenting to three hospitals in the Western province of Sri Lanka.

Results: Of a total of 178 patients, males (84.3%) between the ages of 40-49 years were more likely to be affected. 51.7% were direct admissions and 47.8% were transfers. Exposure to water potentially contaminated with rat urine was seen in the majority (71.9%). A significant proportion of patients developed acute kidney injury (66.9%). Penicillin was the most commonly used antibiotic for treatment (47.2%), however more than one antibiotic was used in 43.3%. The use of chemoprophylaxis by the patients was low (1.1%). Hemodialysis was needed for 36.5%. Recovery was seen in 71.3%, 2.8% died, 10.1% were transferred out and 15.8% were lost to follow-up. On discharge, 70.6% had been treated for severe leptospirosis. Mean length of hospital stay was 7.5 days (±5.1).

Conclusion: The incidence of severe leptospirosis with organ dysfunction is higher in patients presenting to hospitals in the Western province. Males aged 40-49 are most commonly affected. More than two thirds of the patients developed acute kidney injury. Chemoprophylaxis rates were low.

Free Paper Session 2 – Community Medicine

OP010
Improving parent adolescent communication on selected sexual and reproductive health problems among adolescents in a rural village in Anuradhapura district

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Introduction and objectives: Adolescent sexual and reproductive health (ASRH) is an integral part of wellbeing. Although adolescents are reported to have adverse risk behaviours and a poor knowledge on sexual and reproductive health problems, health services to meet their sexual health needs are still not adequate throughout the world including Sri Lanka. Parents have been identified as to play a key role in shaping ASRH behaviors. Objective of the current study was to evaluate the effectiveness of a health promotion intervention to improve parent adolescent communication on selected ASRH problems.

Method: A quasi experimental study was conducted among mothers who had at least one adolescent aged between 10 to 16 years in a rural village of Anuradhapura district. Whole study population was taken as the study sample, and comprised 35 mothers for each intervention and control groups. Interviewer administered questionnaire was directed to measure the level of parent adolescent communication and 8 key informant interviews were carried out with selected mothers to identify the determinants for parental communication. The intervention comprised focused group discussions, games, dramas involving the parents to address the identified determinants. A scoring system was developed to assess the effectiveness of the intervention.

Results: A significant improvement was seen in all domains assessed: knowledge ($p<0.0001$), attitudes ($p<0.0001$).

Conclusions: Health promotion approach could be considered as an effective way of improving parent adolescent communication on ASRH problems.

Occupational injuries in carpenters in the Moratuwa Medical Officer of Health area

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Introduction and objectives: Work related injuries among carpenters in Sri Lanka are largely neglected. Epidemiology of injuries among carpenters is required to plan timely interventions and reduce the burden of injuries. To determine the incidence of occupational injuries and associated factors among carpenters in the Moratuwa Medical Officer of Health area.

Method: A community based retrospective descriptive study was conducted to determine the incidence of occupational injuries during a three months period immediately prior to the survey. Sample size was 352. Twenty one Grama Niladhari divisions were selected randomly. The clusters were selected using probability proportional to population size method. From each selected workshop, one carpenter was selected randomly. Interviewer administered questionnaire was used as the study instrument. Associations were tested using chi square test and probability of less than 0.05 was selected as the significant level. Results were expressed as Odds Ratio (OR) and 95% Confidence Interval (CI) using bivariate analysis.

Results: Response rate was 90.06 % ($n=317$). Cumulative incidence of occupational injuries for a period of three months was 255.5 per 1000 carpenters (95% CI: 209.8-305.7). Carpenters who do not check machines (OR 2.85; 95% CI: 1.105-7.22, $P=0.032$), use personal protective equipments (OR 2.14; 1.087-4.21, $P=0.025$), work without rest (OR 2.3: 95%CI: 1.08-4.94, $P=0.034$) and work with vibrating equipments continuously (OR 1.9: 95%CI: 1.11-3.37, $P=0.024$) were significantly associated with occurrence of occupational injuries.

Conclusions: Incidence of occupational injuries observed is considerably high. Being
mainly a small scale/cottage industry intervention methods should be developed to execute at the community level.

**OP012**

**Effectiveness of community empowerment strategies to improve the hygienic standards of food trading establishments**

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**Introduction and objectives:** Inspection of food trading establishments (FTEs) by the Public Health Inspectors (PHIs) is one of the main preventive health programmes in Sri Lanka. Even though it’s a national programme its effectiveness is limited due to low community awareness and support. To assess effectiveness of community empowerment strategies to improve the hygienic standards of FTEs.

**Method:** A quasi-experimental study with a control group was conducted in Bulathsinghala and Ehaliyagoda MOH areas in 2012. Grading Form for Food Handling Establishments (H800) was used as the evaluation tool. Health, education, local authority, food traders and community groups had active participation. Pre and post evaluations were conducted at the beginning and at one year following intervention. Interventions designed in partnership with local authority were to display hygienic standards of FTEs, community empowerment to interpret and understand rating of FTEs via health education tools such as posters, billboards and public addressing systems.

**Results:** Standard FTEs grading in H800 was used. There were 133 FTE for the intervention and 140 for the control. Pre-interventional ratings of control (72.1%) and intervention (73.7%) areas consisted mainly of C and D categories. Significant increase (p<0.001) in A and B categories was observed in the intervention area (51.1%) compared to the control area (26.4%). Hygienic standards were significantly increased (p <0.05) in the intervention area (A and B = 51.1%) compared to its pre-interventional standards (A and B = 26.3%).

**Conclusions:** Significant results can be achieved to improve FTE ratings by inter-sectoral collaboration and community empowerment.

**OP013**

**Birth and emergency preparedness, associated factors, maternal and neonatal outcome among postnatal mothers at Base Hospital, Balangoda**

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**Introduction and objectives:** Birth and emergency preparedness is a cost effective and evidence based intervention, recommended by current WHO maternal care model and used in maternal care package in Sri Lanka. Assessing the progression of this component is a timely concern. Objective of the study was to describe the birth and emergency preparedness, associated factors and its association with maternal and neonatal outcome among postnatal mothers at Base Hospital, Balangoda.

**Method:** A descriptive cross sectional study was conducted among 427 postnatal mothers and all the mothers in the unit were recruited until the sample size was achieved. Data was collected using an interviewer administered questionnaire.

**Results:** Response rate was 93.9% (n=401). Post-partum complications were experienced by 6.2% mothers. 99.5% were live births. 4.8% of babies were resuscitated at birth. Majority of the mothers (59.4%, n=238) were
well prepared for birth and emergencies. Ethnicity and religion (p<0.001), married mothers (p=0.005), higher educational qualifications (p<0.01), adequate social support (p<0.001), domiciliary care by Public Health Midwife (p=0.039) and participation at antenatal classes (p=0.015) were significantly associated with well preparedness. Less well prepared mothers were more likely to experience post-partum complications (p=0.014). Babies of well-prepared mothers were more likely to have a favourable apgar score at ten minutes and did not resuscitation at birth (p<0.05).

Conclusions: Overall preparedness for birth and emergencies was satisfactory among study participants. There were several modifiable associated factors, which needs due attention. The association between well preparedness and the better maternal and neonatal outcome suggests the need for further improvement in this intervention.

OP014
Effectiveness of an educational and technical skill development intervention on improving menstrual hygiene management among grade ten school girls in the district of Kalutara, Sri Lanka

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Introduction and objectives: To determine effectiveness of an educational and technical skill development intervention, to improve knowledge, attitudes and practices towards menstruation and menstrual hygiene (MH) among adolescent school girls in Kalutara district, Sri Lanka.

Method: Quasi experimental study was conducted with non-randomly selected Intervention (IG) and Control (CG) groups. Six schools in each arm were selected purposively based on presence of supportive environments. Computed sample size was 300 from twenty clusters (classes). Each cluster comprised 15 purposively selected students.

Those in IG were trained on four modules regarding knowledge and one on preparation of detachable sanitary towel holder (DSTH) by 20 trained teachers. A ‘hand book’ on MH and preparation of DSTH was also given. Effectiveness was assessed five months later, by administering a self administered questionnaire at pre and post intervention stages. Chi square test/ Mann Whitney’s U test for independent and Mc Nemar’s test/Wilcoxon Signed Rank test for within group comparisons were used.

Results: When comparing IG and CG at post intervention, significant improvement in knowledge on all four sub components, overall knowledge (P<0.001), overall attitudes (P<0.001), 10 among 16 variables on practices (P<0.05) and all eight under activities affected during menstruation (P<0.0001) were observed. When comparing IG between pre and post intervention stages significant (P<0.001) improvement in all above and 11 among 16 variables on practices (P<0.05) were observed. Ninety three percent (n=275) of IG students had prepared DSTH.

Conclusion: Intervention to promote MH was proven effective with a significant positive impact on knowledge, attitudes, practices and activities affected during menstruation.

OP015
Knowledge, attitudes and practices on responsible dog ownership and their associated factors among persons aged 20-59 years in MOH area, Maharagama

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Introduction & objectives: In Sri Lanka, the main transmitter of human Rabies is the dog. One of the main strategies of preventing human Rabies is promotion of responsible dog ownership (RDO). Study aimed to describe knowledge, attitudes and practices
on RDO and associated factors among persons aged 20-59 years in MOH area Maharagama.

Method: A community based cross sectional study was carried out among a sample of 340 participants, aged 20-59 years in MOH area Maharagama, who were selected using probability proportionate to population size cluster sampling. Data were collected using a pre-tested interviewer administered questionnaire on knowledge, attitudes and practices on RDO.

Results: Response rate was 94.7%(n=322), 51.0%(n=165) were females; 74.2%(n=239) married; median income was Rs.38,000.00 (IQR Rs.38,000.00); 64.6%(n=208) employed; 6.2%(n=20) education O/L or above; and 11.5% (n=37) were dog owners. Overall knowledge on RDO was good 69.3% (n=223): rabies vaccination (99.1%, n=319) and RDO (77.3%, n=249). Overall attitudes were favourable in 73.3% (n=236): vaccination of dogs against Rabies (95.3%, n=307). Among dog owners: 94.6% (n=35) had immunized dogs against Rabies, and 32.4% (n=12) had adopted breeding control. The following significant associations were found: good knowledge with younger age (p=0.02), higher level of education (p<0.001), higher family income (p<0.001), being employed (p<0.001), owning a dog (p<0.001); Favourable attitudes with younger age (p<0.001), being unmarried (p=0.01), higher level of education (p=0.02); putting up a collar with higher level of education (p=0.01); dog’s breeding control with being unmarried (p=0.02).

Conclusion: There are gaps in knowledge, attitudes and practices with regard to RDO and targeted health education should be done to promote RDO.

OP016 Decisional needs of the parents with regard to aTD and rubella containing vaccines in Kalutara district, Sri Lanka

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Introduction and objectives: Decisional needs of the people with regard to vaccination cannot be assessed by the level of coverage of the vaccine.

Method: Decisional needs and information needs of the parents was carried out using an interviewer administered questionnaire developed according to the Ottawa Decision Support Framework, Focus Group Discussions and Decision Conflict Scale.

Results: The response rate for these questions was 800 (100%) and total of 416 (52%) mothers, 320 (40%) fathers and 64(8%) guardians were interviewed. Parents/guardians perceive many benefits of the vaccination. The parents/guardians seek information about the pathogenesis of the diseases, immunization programme, and safety of the vaccines and the competency of the public health staff to handle the emergencies. Most parents take decisions collectively and parents trust public health staff as reliable sources of information and prefer leaflets as educational tools. During any crisis such as adverse event these parents/guardians would seek information and usually develop decisional conflict due to lack of reliable information. There was a negative correlation between score of the knowledge on rubella and rubella containing vaccines and the score of the decisional conflict regard to rubella containing vaccines and it was significant (P ≤0.01).

Conclusion: Parents can develop decisional conflict during crisis due to lack of reliable information.

OP017 Evaluation of Dengue virus serotypes over the last ten years in Sri Lanka

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Introduction and objectives: Dengue is a single stranded RNA virus of the *flaviviridae* family. During last two decades, Dengue Haemorrhagic Fever (DHF) epidemics have led to considerable mortality in Sri Lanka. There are four Dengue virus serotypes (DENV-1, DENV-2, DENV-3, DENV-4). According to past studies, epidemics of DHF in 1989 and 2002-4 were associated with the emergence of new serotype DENV-3. Before 2009, this serotype had accounted for the majority of DHF cases. In 2009 a new serotype of dengue virus (DENV-1) was identified in Sri Lanka and it correlates with the outbreak of DHF at that time. Since then, the predominant serotype has been DENV-1. The objective of this study is to evaluate the current prevalence of different Dengue serotypes in Sri Lanka and to identify a change of serotypical pattern.

Method: Blood samples from a total number of 2823 patients suspecting Dengue fever in six sentinel sites in the Colombo district were tested for PCR. 698 confirmed Dengue cases were further evaluated for the serotype.

Results: In 2013, out of 304 PCR confirmed patients, 246(80.9%) were DENV-1 and 48(15.8%) DENV-4. Up to September of 2014, 341(86.8%) DENV-1 and 47(11.9%) DENV-4 were found from a total of 394 patients.

Conclusion: According to this study DENV-1 is still the predominant serotype whereas DENV-4 also contributes to a minority of DHF cases. Therefore it is important that the prevalence of each serotype in the country is regularly evaluated so as to predict future epidemics.

Prevalence and risk factors for work related wrist and hand disorders among software engineers of selected companies within the Colombo municipal council area

Introduction and objectives: The vast increase in usage of computers is bound to produce various work related musculoskeletal disorders among computer users, with wrists and hands being the most vulnerable. This study was conducted to determine the prevalence and factors associated with self-reported wrist and hand disorders among software engineers of selected companies within the Colombo Municipal Council (CMC) area.

Method: A cross-sectional study was conducted on software engineers aged between 20-50 years working in selected Information Technology (IT) institutes and software companies located within the CMC area. A random sampling method was used to select the subjects and a self-administered questionnaire was provided to assess any work related wrist and hand disorders and associated risk factors among those who were enrolled for the study.

Results: Among the participants, 27% had a high percentage of symptoms of work related wrist and hand disorders, with symptoms of carpal tunnel syndrome being the most prevalent. The number of years of computer usage (p=0.002), the time of usage of the computer per day (p=0.017) and wrist and hand posture during the work period (p=0.032) were found to be associated with symptoms of wrist and hand disorders.

Conclusion: A high percentage of selected software engineers displayed symptoms of wrist and hand disorders due to work related usage of the computer.
OP019
Satisfaction on care among patients with spinal cord injury in Sri Lanka: a mixed method approach

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Introduction and objectives: Spinal cord injury (SCI) rehabilitation has a fundamental importance in improving quality of life. This study was carried out with the objective of assessing SCI patients’ satisfaction on care provided by physiotherapists and patients’ family members and to obtain care providers perception towards caring.

Method: A mix method study was carried out at the Ragama Rehabilitation Hospital. The quantitative assessment was a cross sectional study, among 60 SCI patients receiving physiotherapy, using an interviewer administered questionnaire to collect information on patients’ satisfaction on physiotherapists’ care and family members’ care. Total satisfaction score was calculated with the maximum score being 65 for each group. Qualitative assessment consisted of focus group discussions conducted separately with physiotherapists and family members.

Results: More than 75% of the patients were working, aged, low income, males. Majority was highly satisfied with physiotherapists’ and family members’ care with total mean scores of 55 and 61 respectively. However, the patients were comparatively less satisfied with the “amount of time spent”, “explanation of treatment” and “willingness to listen” by physiotherapists. “Listening” and “answering them” were the lesser satisfied aspects of family members care. Qualitative inquiry showed lack of equipment and lack of physiotherapy staff as the barriers for physiotherapists, whilst financial issues and privacy issues were those for family members.

Importance of good communication, keeping realistic hopes, proper counseling, and proper socialization with good economic guidance were recognized as suggestions for better care provision.

Conclusion: Addressing the needs of the SCI patients as well as care providers are necessary to optimize SCI rehabilitation.

OP020
Comparison of play based with non-play based physiotherapy exercise program for children with cerebral palsy at Lady Ridgeway Hospital

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Introduction and objectives: Physiotherapy plays an important role in rehabilitation of children with Cerebral Palsy. Both effectiveness and compliance of an exercise program is important for the outcome. Although many exercise programs are shown to be effective all may not have the same degree of compliance. The aim of this study is to compare the compliance between play based and non-play based physiotherapy intervention for children with Cerebral Palsy.

Method: One hundred and twenty eight, 6-12 year old children with Cerebral Palsy were recruited. An Interviewer administrated questionnaire was used to assess socio demographic data and compliance. The data was analyzed using the SPSS, version 17.

Results: There is a significant different in children’s reaction to play and non-play based exercises in favor of play base exercise with regards to; happiness (p<0.001), tiredness (p=0.001), pain (p<0.001), crying (p<0.001), stopping/interruption (p<0.001), starting and continuing (0.013) and avoiding (p=0.038). There is no significant different in
reminding (p=0.183) and completing (p=0.707) the exercises in the program. Children involved with play based exercise showed significantly higher compliance to the program (p<0.001). According to the questionnaire a low score indicates high compliance. Total score in intervention group is 20 and 26 in control group.

Conclusion: Compared with non-play based exercise program, play based exercise program showed a higher degree of compliance among children with cerebral palsy. Therefore play based exercise programs are recommended in treating children with cerebral palsy.

OP021
Outcome of acute mania: a cohort study

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Introduction and objectives: There is limited evidence regarding response to treatment during acute manic episodes. Randomized trials assess efficacy of individual medications but data on response to treatment in naturalistic settings are limited. The objective was to assess the time to response (50% reduction in Young Mania Rating Scale (YMRS) score) in patients with acute mania.

Method: A cohort of 148 patients with acute mania, aged 18-65 years were recruited. Response to treatment was assessed using YMRS, Clinical Global Impression (CGI) scale and Hamilton Depression Rating Scale (HDRS) at baseline, days 4, 8, 12 and 15. Response was defined as 50% reduction in YMRS score. Kaplan Meier survival curves compared response to different medications.

Results: Eighty five (57.4%) were males. Mean age was 41.1 years. Majority (70.3%) were treated with a combination of antipsychotic and mood stabilizer. Olanzapine (40.5%) and haloperidol (26.4%) were the preferred antipsychotics and lithium (43.9%) and valproate (33%) were the preferred mood stabilizers. Benzodiazepines were prescribed in 72.9%. Kaplan Meier life tables showed cumulative proportion who had not achieved response at day 4-0.87, day 8-0.62, day 12-0.44 and day 15-0.35. The Mantel Cox Log Rank test shows that the response rate for different antipsychotics (p=0.75) and mood stabilizers (p=0.236) was not statistically significant.

Conclusion: Although acute manic episodes are described as lasting 6 months majority of patients respond to treatment within 2 weeks. There is no significant difference in response to different antipsychotics and mood stabilizers.

OP22
Participation in outdoor sports activities, its associated factors and perceived benefits and barriers among lower limb amputees at “Rana Viru Sewana”, rehabilitation institute, Ragama, Sri Lanka

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Introduction and objectives: Lower limb amputation is removal of a part or all parts of the lower extremity. Lower limb amputees have poor functional outcomes compared to non-amputees. War injuries were most common in Sri Lanka in the past decades. Therefore, the number of amputees increased. This study aims therefore to describe the participation in outdoor sports activities, its associated factors, perceived benefits and barriers among lower limb amputees at Rana Viru Sewana, Ragama.

Method: A descriptive cross sectional study was conducted among 120 amputees. Non-probability sampling method was used. A structured pretested interviewer
administered questionnaire was used to collect the data from the male unilateral lower limb amputees between 18-60 years.

Results: A majority of the study population (65.8%, n=79) participated in outdoor sports. Duration after amputation, level of amputation, other diseases than amputation (p= 0.000), use of supportive equipment (p=0.000), whether rehabilitation was done or not (p=0.035) and previous involvement of sports (p=0.000) were significantly associated with outdoor sports participation among amputees. Physical and mental well-being, reduction of tension and entertainment were reported benefits while the major barrier was it being a difficult work to engage in.

Conclusion: Majority of the lower limb amputees participated in outdoor sports. The study identified factors that could be modified through interventions to improve participation. Physical and mental well-being, reduction of tension and entertainment were reported benefits while the major barrier was it being a difficult work to engage in.

OP023
Group-based cognitive behaviour therapy for the reduction of test anxiety in year-five-scholarship students in the Western Province

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Introduction and objectives: The year-five-scholarship examination is the first of many high-stake examinations most Sri Lankan students face. Preliminary research shows these students experience a wide array of negative psycho-social effects. Group-based Cognitive Behavior Therapy (GCBT) has demonstrated favorable results in test anxiety reduction amongst children in Western nations. However, empirically validated therapies for test anxiety reduction in Sri Lanka are limited. This study aims to ascertain the effectiveness of a GCBT intervention adapted for Sri Lanka in reducing test anxiety levels in year five scholarship students

Method: This study was conducted as a RCT. Sixty-four year-five-scholarship student were chosen randomly from two government schools in the Western province, from Kalutara and Battaramulla. Control and treatment groups consisted of 32 participants each with equal numbers from each gender. An 8-week GCBT intervention was provided for the treatment group. The Westside Test Anxiety Questionnaire was used to measure test anxiety levels.

Results: Out of the sample, 4.6% (n=3) showed extremely high levels of test anxiety, 40.6% (n=25) showed moderately high levels, 34% (n=21) showed high levels and 20.8% (n=13) had normal to low range. A factorial ANOVA showed significantly lower test anxiety levels (p<0.05) in the treatment group compared to the control group at post intervention.

Conclusion: The effectiveness of GCBT in the reduction of test anxiety within this study cohort was shown. This justifies further research on the feasibility of GCBT in test anxiety reduction. Provisions can be made by the relevant authorities to provide training for teachers/counselors to implement the present intervention in schools.

OP024
Patient satisfaction with physiotherapy for stroke rehabilitation, among patients attending department of physiotherapy, institute of neurology, National Hospital of Sri Lanka

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Introduction and objectives: Patient satisfaction with stroke service is an important patient focused indicator of quality
of patient care. This study was aimed to investigate the patient satisfaction with physiotherapy treatments, satisfaction with their activities and participation and to determine the current level of physical disabilities in patients with stroke.

**Method:** A convenient sample of hundred stroke patients was included in this cross sectional study. This study was carried out in the department of physiotherapy, Institute of Neurology, NHSL. Data were collected by using three self-administrated questionnaires, previously validated for assessment of patient satisfaction. MedRisk instrument was used for evaluating patient satisfaction. SATIS-STROKE questionnaire was used for evaluating satisfaction with activities and participation. Level of disability was measured using Barthel index.

**Results:** Participants age ranged from 18 to 65 years. Patients were generally satisfied with the physiotherapy service and they rated their level of satisfaction as high according to MedRisk instrument. “Giving detailed instruction regarding home exercise programme” was identified as the critical dimension of patient satisfaction (r=0.817). Majority of patients were satisfied with their activities and participation. (mean value of SATIS-STROKE score=76.97±19.29). According to STROKE score, less satisfactory items were predominantly related to mobility and participation. Majority of patient were in functionally independent level (mean Barthel index=76.96 ±19.44). Patients’ current level of disability was significantly associated with patient satisfaction (p<0.05).

**Conclusion:** Most of the stroke patients were highly satisfied with the physiotherapy treatments they received and satisfied with their activities and participation in day to day activities.

**OP025**
Risk factors and musculoskeletal disabilities associated with cervical spondylosis patients

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**Introduction and objectives:** Cervical spondylosis is a degenerative condition involving the bones and joints of the neck. Objectives of the present study were to determine musculoskeletal disabilities and associated risk factors of cervical spondylosis.

**Method:** First encountered 50 individuals with cervical spondylosis, who met the inclusion criteria, were recruited from Department of Physical Medicine, Base Hospital, Horana. Age and sex matched 50 individuals were recruited from a Buddhist Temple and from a Community Hall as controls. Risk factors were determined using a pre-tested questionnaire. Musculoskeletal disabilities were assessed using Standard Nordic Questionnaire with slight modifications to allow scoring pain and disability. Both questionnaires were interviewer-administered. Risk factors were assessed by comparing proportions using Chi-square test. Musculoskeletal disabilities, as represented by pain and disability score, were compared using independent sample t-test.

**Results:** Working posture (p<0.01), computer usage (p<0.05), reading posture (p<0.05), repetitive neck movements (p<0.05), history of whiplash (p<0.01), history of neck injury (p<0.05), sports participation (p<0.05), presence of other joint diseases (p<0.01), and family history of cervical spondylosis (p<0.001) were shown to be risk factors for cervical spondylosis. Prevalence of pain and disability in shoulder, elbow, wrist, hip and ankle was significantly higher in cervical spondylosis patients compared to controls (p<0.001 for each).

**Conclusion:** Working posture, repetitive neck movement, history of neck injury, presence of other joint disease, and family history of
cervical spondylosis are risk factors for cervical spondylosis. Pain and disability in shoulder, elbow, wrist, hip and ankle is higher in cervical spondylosis patients.

OP026
Bullying in schools among early adolescents in Galenbindunuwewa educational zone: prevalence, types, common responses and effectiveness of a health promotion intervention

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Introduction and objectives: Bullying is a prevalent behavior of violence and a leading health issue among school going adolescents. Aims were to describe prevalence, types, common responses and factors associated with bullying among early adolescents in Galenbindunuwewa Educational Zone and to evaluate a health promotion intervention to reduce bullying among early adolescents in a school in the same zone.

Method: The study had two components. A cross sectional study and a participatory action research. The former was conducted in three schools randomly selected from the Galenbindunuwewa Educational Zone. A multi-stage sampling method recruited 372 participants to obtain data using a self-administered questionnaire. In the second component, all students in grades seven to nine of a randomly selected school participated in an intervention modeled on a health promotion approach. Determinants identified and addressed were poor understanding of bullying, school culture, media promotion of violence and attitudes towards bullying and violence. Evaluation employed participatory methods, and a mixed-method approach was used in collecting data. Quantitative data were analyzed using SPSS. Qualitative data were analyzed manually using thematic analysis.

Results: The prevalence of bullying was 57.6% (verbal bullying), 31.1% (physical bullying) and 30.8% (social bullying). The most common responses reported when being bullied were tolerating (67.2%) and walking away (66.4%). Attitudes towards bullying showed significant positive changes after the intervention. Post intervention level of all types of bullying reduced significantly among participants with significant changes in the addressed determinants.

Conclusion: Bullying is a prevalent issue in the Galenbindunuwewa Educational Zone. The piloted health promotion intervention proved effective in addressing this problem.

OP027
Association between pain and disability in patients with chronic mechanical low back pain

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Introduction and objectives: Low back pain is the leading cause of years lived with disability in developed countries as well as in South Asian countries. The aim of this study is to evaluate the association between the intensity of pain and disability in patients with chronic mechanical low back pain (CMLBP) who attended the rheumatology clinic, National Hospital of Sri Lanka (NHSL).

Method: This is a descriptive study on 675 patients with CMLBP who attended the rheumatology clinic, NHSL, from May 2012 to May 2014, recruited according to inclusion and exclusion criteria. Intensity of pain was measured using the 101-point numerical pain rating scale (NRS) and the disability was measured using the modified Oswestry Disability Index (MODI). A multiple linear
regression model adjusted for age, gender, level of education, duration and frequency of pain and duration of treatment was used to assess the association between the intensity of pain and disability.

Results: Majority (482, 71.4%) were females. Mean age was 49.19 ± 11.75 years. Mean score for NRS was 46.79 ± 20.38 and for MODI was 31.77 ± 14.16, while 84.3% had daily pain. Intensity of pain was positively associated with the disability (p<0.01) and the standardized regression coefficient was +0.627 after adjusting for confounders. Frequency of pain, female gender and aging were positively associated with disability (p<0.05) while level of education, and durations of pain and treatment did not reach significant level.

Conclusion: Intensity of pain explains 63% of the disability associated with CMLBP. Frequency of pain, female gender and age were also associated with disability.

Free Paper Session 4 – Non-communicable diseases

OP028
Description of practices related to insulin injection therapy and sharp disposal among patients attending the diabetic clinic, Colombo North Teaching Hospital

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Introduction and objectives: Diabetic patients on insulin therapy are compelled to use sharps such as insulin needles and lancets on a regular basis. As a result thousands of used sharps and bloodstained materials are generated daily by them. While there is a huge concern over sharps disposal practices in healthcare settings, the sharps disposal practices of diabetic patients living at home has been poorly documented.

Method: Randomly selected sample of 158 diabetic patients were obtained from the diabetic clinic, Colombo North Teaching Hospital. Data collected using an interviewer administered questionnaire and clinic records.

Results: Sample population was aged between 21-90 years. Mean age 60. Majority had used insulin for more than 1 year 131/158 (83%). Very few 5/158 (3%) used the insulin pen while majority used syringes to inject insulin. Only 10(6%) regularly checked blood sugar using needles/lancets. Majority, 132/158 (84%) injected insulin more than twice per day and ≥50% used the same needle more than 6 times, for more than 3 days. Majority, 150/153 (98%) of the syringe users recapped the needle. A significant number 73/158 (46%) also involved others when injecting and disposing needles. Used needles/pens were disposed in to a common household garbage bin, sharps container, toilet pit, garbage dump and indiscriminately by 66 (42%), 9 (6%), 8 (5%), 14 (8%), 11 (7%) respectively. Many respondents had received no information on how to dispose of their sharps. Those who recalled receiving information were more likely to dispose their sharps safely.

Conclusion: Insulin-dependent diabetic patients are not educated on safe sharps disposal methods, leading to unsafe disposal of needles. Appropriate education on the correct disposal of sharps should be an integral part of their diabetic counseling.

OP029
Delayed thrombolysis in ST elevation myocardial infarction (STEMI) patients: an audit of door to needle time (DNT) in a regional centre in Australia

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Introduction and objectives: Delaying fibrinolytic therapy in STEMI by one hour increases the
hazard ratio of death by 20%, and minimising the time delay improves morbidity and mortality.  

To determine the current DNT and possible delaying factors during the administration of fibrinolytics for acute STEMI in Emergency Department (ED) of Mackay Base Hospital (MBH), Australia.

Method: A retrospective chart audit was conducted on patients presented to ED with acute STEMI for a period of two years. Data collected on patient demographics, mode of presentation, clinical symptomatology and the DNT was calculated. Identified delaying factors were compared among the two groups of patients who had DNT less than 30 minutes (DNT < 30) and DNT more than 30 minutes (DNT > 30).

Results: Out of the 55 patients, mean DNT achieved was 46 (12 – 491) minutes and the mean door to ECG time was 6 (1-30) minutes. 12 (21.8%) patients were in recommended DNT < 30 group and 43 patients (78.2%) were in DNT > 30 group. The former group had significantly higher thrombolysis events done by the ED consultant (33.33%) compared to DNT > 30 group (6.98%) (P=0.03) and the prevalence of getting cardiology opinion was 33.33% and 69.7% (P=0.04) respectively among two groups.

For 24 (55.8%) patients in DNT > 30 group did not have an accepted reason for the delay.

Conclusion: 78.2% of patients were not thrombolysed within recommended DNT less than 30 minutes. DNT was improved when thrombolysed by an ED consultant before referring to cardiology unit.

Introduction and objectives: Prediabetes increases cardiometabolic risk. Our aim was to develop and assess the effectiveness of a lifestyle modification programme in reducing cardiometabolic risk markers in newly diagnosed prediabetic urban Sri Lankan women.

Method: Women (n=1500) from Colombo Municipal Council area were screened and 130 newly diagnosed prediabetics recruited randomly to intervention and control groups. Participant involvement ensured development of a culturally relevant, four month intervention programme. Control group received initial advice and print material only. Intervention was developed with a goal based strategy of 5% weight loss and 150 minutes of physical activity (PA) per week using a predominantly group based approach with individual sessions. FPG, HbA1c, serum lipids and hs-CRP were measured.

Results: The final sample was 101 women (intervention n=51, control n=50) with no significant difference in baseline parameters between groups or responders and non-responders. Following intervention, 52.9% achieved the weight loss goal compared to the control group (2%) and 37.3% became normoglycaemic, compared to none among controls. In the intervention group, when compared to baseline, there was a significant (p<0.05) reduction in HbA1c (0.2±0.24%), FPG (20.6±11.6 mg/dl), total cholesterol (14.4±26.5 mg/dl) and triglycerides (13.2±30.7 mg/dl) and a significant (p<0.05) increase in HDL-cholesterol (3.2±5.9 mg/dl) post intervention with no significant change in hs-CRP. All differences were significant against the control group.

Conclusions: A culturally sensitive intervention programme achieved improvement in markers of glycaemia, lipid
profile and weight reduction with reversal of prediabetes in a majority.

**OP031**
Psychological insulin resistance among patients with type 2 Diabetes Mellitus: a cross sectional survey.

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Introduction and objectives: Psychological insulin resistance can result in delays in treatment initiation. The aim of our study is to find the prevalence of psychological insulin resistance among patients at a tertiary hospital in Sri Lanka.

Method: A prospective cross sectional survey was conducted at General Medical clinic, Colombo North Teaching Hospital in September 2014, using a pre-tested, interviewer-administered 25 question survey adapted from Insulin Treatment Appraisal Scale (ITAS) among a consequent sample of 358 patients.

Results: Mean age was 60.1 years (SD=12.21). Of the total, 65.1% (233) were male. 272 patients were on oral hypoglycaemic drugs (OHDs) (76%) while 86 were on insulin therapy (24%). Majority (52.2%) of patients considered commencement of insulin therapy as a personal failure while 1.4% opposed it (P=0.0001). Gender had a significant impact on the fear for needle with females having a higher negative score (3.39) compared to males (3.18) (P=0.040). Overall negative appraisal for insulin was similar in both genders. 49.1% feared that once insulin is started it is needed permanently while 0.8% opposed it. Statistically significant difference was not found between the total mean score for negative items between patients on OHDs (3.19) and patients on insulin (3.10) (P=0.133). Perception of social stigmata and perception of injection conveyed higher negative appraisal. 31.3% preferred to delay insulin till it is absolutely necessary while 7.8% opposed it (p=0.001). Educational level and duration of diabetes did not have significant influence on insulin perception.

Conclusion: Health care workers need to probe into the perceptions that worry the patients and focus on groups with more negative appraisal towards insulin.

**OP032**
The immediate outcome of intravenous Enoxaparin followed by subcutaneous Enoxaparin versus only subcutaneous Enoxaparin as adjunctive therapy for fibrinolysis in ST-elevated myocardial infarction in patients admitted to emergency treatment unit at teaching hospital Batticaloa

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Introduction and objectives: The pharmacological management of ST elevated myocardial infarction (STEMI) is by thrombolytic treatment with concurrent anticoagulation therapy. There are no studies done to compare the outcomes of intravenous enoxaparin followed by subcutaneous enoxaparin (new protocol) versus only subcutaneous enoxaparin (old protocol) after initial streptokinase therapy. To describe the demographic factors and associated risk factors in patient who were treated under above protocols and to compare the immediate outcomes and mortality of new protocol versus old protocol.

Method: All the patients who were admitted to ETU/CCU with STEMI to Teaching Hospital, Batticaloa from 2011 - 2013 were reviewed retrospectively. The demographic data, risk factors, treatment and clinical outcome were analyzed.
Result: Among 238 patients, 193 (81%) were male. Age ranged from 25-85 years (mean 56.43±12.05). Out of all, 139(58.4%) were treated according to the old protocol and 99(41.6%) according to the new protocol. Diabetes mellitus (33.2%), hypertension (35.3%), dyslipideamia (41.1%) and smoking (25.2%) were identified as risk factors. There was no significant difference in demographic data and risk factors between two groups. Time from the onset of symptoms to ETU admission was 4.8±4.0 hours and door to needle time was 20±50.93 minutes. The percentage of ST elevation reduction was significantly different (p = 0.010) between new (55±34.8) and old (42±42) protocol. Post treatment EF (p = 0.343) was not significantly different. The mortality rate was 8.6% with old and 4.0% with new protocol.

Conclusion: New protocol has significantly higher percentage of ST elevation reduction and low mortality. However, post treatment EF was not significantly different

OP033
Is there a significant, seasonal variation when patients in the CKDU endemic regions present for the first time with symptoms and renal dysfunction?
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Introduction and objectives: Physicians have observed a seasonal variation when patients from CKDu endemic regions present with acute ill-health for the first time with renal dysfunction. We have previously reported an interstitial nephritis in these patients along with evidence of past injury. Objective was to investigate a statistical significance in the seasonal variation observed.

Method: Symptomatic patients aged >20 years with two elevated serum creatinine reports, presenting first time from the CKDu endemic regions were included. The agricultural season of presentation as Yala, Maha and inter-monsoon was recorded. Biochemical profile was done. Normal sized kidneys were biopsied. Pathology other than interstitial nephritis was excluded after biopsy. The salient six renal lesions were scored 0, 1, 2, if up to 30%, 30-60%, and >60% of the renal area was affected, respectively; and scored 3, if there was no lesion. The disease Activity Index (AI) and Chronicity Index (CI) were scored with a maximum of 6 and 12 scores, respectively.

Results: 15(25.4%), 10(16.9%) and 34(57.6%) patients were presented in 1st inter-monsoon, ‘Maha’ and ‘Yala’ seasons, respectively. Yala presentation was statistically significant (P = 0.001). There was no statistically significant difference found in proteinuria, leucocyteuria, total leucocyte counts and the activity and chronicity histological scores in the different seasons. 36.6% of patients presenting in the Yala season had microscopic hematuria (P = 0.034).

Conclusion: There appears to be a seasonal variation in the occurrence of acute symptoms and renal dysfunction in patients presenting first time from CKDu endemic regions. The significant hematuria found in the dry humid Yala season merits further investigation.

OP034
Prevalence and risk factors for metabolic syndrome among aging adults in an urban Sri Lankan population
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Introduction and objectives: Physicians have observed a seasonal variation when patients from CKDu endemic regions present with acute ill-health for the first time with renal dysfunction. We have previously reported an interstitial nephritis in these patients along with evidence of past injury. Objective was to investigate a statistical significance in the seasonal variation observed.
Introduction and objectives: Metabolic syndrome (MetS) is assumed to be of high prevalence in the Asian region. However, its community prevalence and risk factors in South Asia is poorly studied. We determined the prevalence and risk factors for MetS among adults in an urban Sri Lankan population.

Method: The study population consisted of 42–71 year old adults, selected by stratified random sampling from the Ragama Medical Officer of Health area. MetS was defined by the International Diabetic Federation criteria with ethnic specific cutoffs. Anthropometric measurements, blood pressure (BP) and body fat distribution estimates were made. Glycosylated hemoglobin, fasting serum lipids, serum alanine aminotransferase (ALT) and serum creatinine (Scr) with estimated glomerular filtration rate (eGFR) were determined. CKD was defined as GFR<60ml/min/1.72m² (KDIGO/KDOQI classification). USS abdomen was performed to detect fatty liver and non-alcoholic fatty liver disease (NAFLD) was diagnosed on safe alcohol consumption (< 14 units/week for men, < 7 units/week for females) and absence of hepatitis B and C markers.

Results: 2155 (1244 [57.7%] women, mean age 59.2 years [SD, 7.7]) participated. 1014 (47.1%) [mean age 59.2 years (SD, 7.7), 256 (28.1%) men; 758 (60.9%) women] had MetS. On multivariate analysis female gender, abnormal total body fat and abnormal visceral fat level (>10%) and presence of NAFLD were independently associated with MetS. Age 65 or more, raised ALT and CKD were not associated with MetS.

Conclusion: The prevalence of MetS among adults in this aging urban Sri Lankan community was high and is independently associated with female gender, abnormal body fat distribution and presence NAFLD.

Markers of metabolic syndrome among 14 year old adolescents in the Ragama Medical Officer of Health area

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Introduction and objectives: Metabolic syndrome (MetS) is strongly associated with cardiovascular disease and diabetes. Local data on MetS do not cover the adolescent population. Our study describes clinical and biochemical markers of metabolic syndrome among adolescents in the Ragama Medical Officer of Health area.

Method: Fourteen year old adolescents resident in the Ragama Medical Officer of Health area were invited to the study through the public health network. Socio-demographic and anthropometric data of adolescents who presented were collected by trained data collectors. Relevant bio-chemical assays were conducted in the fasting state. Prevalence of identified markers of the MetS was determined.

Results: 508 adolescents participated [263 (51.8%) girls]. The median age at menarche among the girls was 12 years. 46 (18.8%) boys and 55 (20.9%) girls had a BMI greater than age-sex equivalent of 23 kgm⁻² in adults. 39 (15.9%) boys and 95 (36.1%) girls had a waist circumference above the MetS cut-off for age and sex. 17 (6.9) boys and 16 (6.1%) girls had elevated blood pressure. One girl was positive for three of the five diagnostic criteria of MetS giving a prevalence of 2 per 1000. Only 190 (77.6%) boys and 159 (60.5%) girls were free of all five markers of MetS.
Conclusion: Our findings show that markers of MetS are prevalent in this urban adolescent population. These data provide a basis for planning interventions at community and school level.

Free Paper Session 5 – Paediatrics

OP036
Ultrasonographic parameters of the liver, spleen and kidneys among a cohort of school children in the Gampaha district

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Introduction and objectives: Liver, spleen and kidney dimensions on ultrasonography vary with age, weight and ethnicity. Reference standards for these parameters in normal Sri Lankan children are not available. Our objective was to establish normative data for the longitudinal length of the liver, spleen and kidneys in healthy children living in the Gampaha District.

Method: A total of 357 children between the ages of 5 to 12 years were selected from two randomly selected schools in the Gampaha District. A questionnaire was administered to the parents after obtaining informed written consent. Participants were screened for risk factors for organomegaly and were examined by a medical officer. Ultrasonographic assessment was done using a high resolution real-time scanner with a 3.5MHz convex transducer by a trained medical officer. Children with abnormalities in the ultrasonographic appearance of organs were excluded.

Results: The study comprised 332 children (176 girls, 53%). There was no difference in organ dimensions between the two genders (\(p > 0.05\)). Body weight showed the best correlation with liver, spleen and kidney dimensions. Age significantly correlated with the longitudinal length of the liver and height significantly correlated with spleen length. Percentile graphs for the longitudinal length of the liver, spleen, right and left kidneys were developed in relation to body weight.

Conclusion: Body weight showed the best correlation with organ dimensions. We hope that the development of normal ultrasonographic values in healthy Sri Lankan children will assist in the interpretation of sonographic examinations in daily clinical practice.

OP037
Knowledge, attitudes and factors associated with evidence based newborn care practices at home among postnatal mothers at a tertiary care hospital.

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Introduction and objectives: Sri Lanka has successfully reduced neonatal mortality over the years, but further reduction is stagnant and newborn morbidity is on the rise. Most of these undesired health outcomes could be prevented by adhering to simple, yet evidence based interventions. Maternal knowledge is of great importance in implementing these interventions. This cross-sectional study describes maternal knowledge, attitudes and factors associated with evidence based interventions on newborn care at home among postnatal mothers at a tertiary care hospital.

Method: Total of 422 eligible postnatal mothers, selected by a non-probability consecutive sampling method, were assessed using a questionnaire at an exit interview. Associated factors were tested for statistical significance using Chi Square test. A \(p\) value less than 0.05 was considered as statistically significant.
Results: Overall knowledge mean score was 72.7%, but score was low in basic emergency care, demand feeding and some basic hygienic practices. Favourable attitudes were seen in 90.7% (n=383). Knowledge was associated with having more than one child, ($p<0.001$), being educated above Ordinary Level ($p<0.001$), having extended family support ($p<0.001$) and attending antenatal parent-craft classes ($p=0.002$). Parity more than one ($p<0.031$) and attending antenatal parent-craft classes ($p=0.004$) were predictors of favorable attitudes as well.

Conclusions: Most mothers possess good overall knowledge and healthy attitudes. Primiparous, less educated mothers from nuclear families should be given preference to improve knowledge. Participation to parent-craft classes should be encouraged. Further studies are needed to evaluate effects of poor knowledge and attitudes on health outcomes of newborns.

OP038

Metabolic derangements among obese children in a semi urban area of Sri Lanka.

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Introduction and objectives: Obesity related metabolic derangements are commonly seen among South Asian populations even from a younger age. The aim of this study is to identify the prevalence of cardiovascular risk among 8-16 year old obese children in a semi urban area of Sri Lanka.

Method: Obese school children from Gampaha district were recruited. After a 12 hour overnight fast, blood was drawn for fasting blood glucose (FBS) and lipid profile. 2 hour OGTT was done. Height, weight, waist circumference (WC) and blood pressure was measured.

Metabolic abnormalities were defined as; impaired fasting glucose (IFG) 100-125mg/dl, IGT 140-200mg/dl, diabetes mellitus FBS $>$125mg/dl or 2h-RBS $>$200mg/dl, triglyceride (TG) $>$150 mg/dl, HDL $<$40 mg/dl WC and BP $>$+2SD of British Standards. Modified IDF definition was used to diagnose metabolic syndrome (MetS).

Results: 319 children were studied (boys 163). 95% of the study population had increased WC. 95(18%) had abnormal glucose homeostasis, 120(38%) had elevated TG and 26(8%) had low HDL levels. 41(13%) had elevated BP. $\geq$ Metabolic abnormalities associated abnormalities were seen in 179(56%). 53(16.6%) had MetS. 12.8% of children <10 years and 17.8% $\geq$10 years had MetS. 196(61.6%) had elevated cholesterol levels. 6(2%) children with Diabetes mellitus. 17 had IFG, 27 had IGT (140 - 200mg/dl) and 8 had both IFG and IGT (16.3% prediabetic state).

Conclusion: Obesity related metabolic abnormalities are seen from a younger age in obese children. Prevalence of prediabetes is high prompting urgency in managing childhood obesity.

OP039

Factors associated with obesity related metabolic derangements in Sri Lankan children

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Introduction and objectives: Childhood obesity is on the rise and most of the pathological changes related to obesity start in early childhood. This study aimed to identify early predictors of childhood obesity-related metabolic risk that are associated with metabolic abnormalities in their parents.

Method: Descriptive cross-sectional study involving obese and non-obese children and their parents was conducted at Lady Ridgeway Hospital for Children. Weight, height, waist circumference (WC) and blood pressure were measured. Fasting blood was collected for FBS, lipid profile. Metabolic syndrome (MetS) was diagnosed according to modified IDF criteria.

Results: 225 children were studied of which 170 were obese/overweight. Parental obesity and MetS were not associated with childhood obesity. Elevated TG in mother had a 4-fold risk (OR=4.2, CI 1.6-11.2, p=0.005) which increased to 10-fold when both parents were affected (OR=10.9, CI 2.9-45.1, p=0.001). Low HDL in mother had 3-fold risk (OR=3.4, CI 1.5-7.6, p=0.003), which elevated further when both parents had low HDL (OR=3.8, CI 1.7-8.7, p=0.001). High BP in father had 5-fold risk (OR=5.6, CI 1.1-28.0, p=0.022) and high WC in mother had 3-fold risk (OR=3.2, CI 1.2-8.6, p=0.033) of the corresponding metabolic abnormality in child. ≥2 Metabolic components in children were associated with the following risks; childhood obesity (OR=36.0), overweight (OR=17.8), decreased HDL in mother (OR=3.1), increased TG in mother (OR=4.4) and paternal hypertension (OR=3.0).

Conclusion: Many predictors of childhood obesity related metabolic abnormalities can be identified from the parents and prevention strategies should be initiated at the time of treating these parents.

Efficiency of a paediatric patient management system - a single centre pilot study

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Introduction and objectives: Patient Management Systems (PMS) was developed and implemented at Professorial Paediatric unit to improve the quality of documentation, minimise errors and maintain a detailed patient database for an instant retrieval. Features of the system include, a secure system with password protection, a complete paediatric patient history, management, discharge summary and a powerful report generation tool. The technologies used are JAVA J2EE and SQL database. The objective was to analyse the quality of record keeping, patient safety and to assess the timing to generate reports between a paper based system and a computer based system.

Method: A retrospective study was done from November 2014 to February 2015. Data was collected from patient Bed Head Tickets (BHT), the PMS and was analysed using SPSSversion22. Scoring system containing aspects of information gathering and legibility was used to assess record keeping. Drug errors and timing of generating reports from both systems were analysed.

Results: A total of 265 randomly selected BHTs and 450 data entries in the system were analysed. Mean total record keeping score for paper based was 67.7/100 and computer based was 89.8/100. Significant difference was seen in initial clerking (p value<0.001)

Conclusion: Quality of record keeping, patient management, minimising drug errors and generating reports were better with the PMS.

OP041
Randomised, single blind clinical trial on intramuscular long acting ACTH versus oral prednisolone for long term control of epileptic spasms
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**Introduction and objectives:** West syndrome is a devastating epileptic encephalopathy. Hormonal therapy is currently established as its first line therapy. However, which form of hormonal therapy i.e. intramuscular long acting tetracosactrine (ACTH) or oral prednisolone is more efficacious for long term spasm control (the better therapeutic) outcome, is yet described in world literature.

**Method:** A prospective randomized, single blind clinical trial was conducted at Lady Ridgeway Hospital. Ninety seven newly diagnosed, previously untreated children with West Syndrome were randomized to receive oral prednisolone or ACTH for 14 days according to the United Kingdom Infantile Spasm Study protocol. Spasm control was evaluated at different time points (3, 6 and 12 months). Spasm control was defined as absence of spasms for during the week prior to evaluation.

**Results:** Forty eight infants on prednisolone and 49 on ACTH completed the trial. Spasm cessation by 14\textsuperscript{th} day occurred in 58.6% with prednisolone in comparison to 36.7% with ACTH (p=0.02). The number of children completing follow up at 6 and 12 months were 29 and 29 for prednisolone and 23 and 25 for ACTH. Absence of spasms at 3\textsuperscript{rd}-month follow up was 66.7% with prednisolone and 38.8% with ACTH (P=0.006). Absence of spasms at 6 months with prednisolone was 60.4% compared to 46.9% with ACTH (p=0.18). Absence of spasms at 12 months was 60.4% for prednisolone and 51% for ACTH (p=0.35).

**Conclusion:** Although the early spasm control was significantly better with treatment with oral prednisolone, long-term spasm control was not different whether initially treated with oral prednisolone or intramuscular ACTH.

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**Introduction and objectives:** Hepatitis B vaccine is given in Sri Lanka to all infants at 2, 4, 6 months. As a low prevalent country the risk of acquiring Hepatitis B is more likely during adolescence and later. It is important to know whether immunity produced by vaccination during infancy last up to this stage, or a booster dose is needed to augment the immune response.

**Method:** With informed written consent and assent from children, 150 ten year old school children with evidence of Hepatitis B vaccination during infancy, were tested for Hepatitis B antibody status using ELISA. Children who had an antibody titre less 10mIU/mL were offered a free booster dose. Antibody levels were retested one month after the booster.

**Results:** 128 (67%) had an antibody titre above 10m IU/mL. All children with a titre <10mIU/ml, accepted the booster dose. All children who received the booster had an antibody response above 10mIU/l, while (72%) had a titre >100mIU/l.

**Conclusion:** Vaccination against Hepatitis B during infancy appear to produce protective level of antibodies at ten years of age. Even the children with antibody titres below protective level produced a sharp rise in titres with a booster dose. As this response could be expected with a natural infection, booster dose to augment the immune response produced by vaccination during infancy is not needed.
Long term outcome of balloon pulmonary valvoplasty in children: a single centre study over 10 years

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Introduction and objectives: Percutaneous Balloon pulmonary valvuloplasty (PBPV) is a safe and effective treatment for valvular pulmonary stenosis in children. However there is limited published data regarding long term outcomes and risk factors for re-intervention. Objectives of this study were to evaluate the long term results of PBPV and identify factors associated with re-intervention.

Method: Ninety-nine children, under 16 years undergoing PBPV between January 2003 and December 2012 in a single center, were evaluated retrospectively by notes and electronic data bases review.

Results: Mean duration of follow up was 4.5 years (0.1-11.2 years) and the mean age at intervention was 1.9 (0-15.8) years. Post PBPV, mean peak echo gradient dropped from 73 to 39 mmHg alongside a fall in invasive peak to peak gradient from 46 to 23 mmHg. The mean RV pressure dropped from 68 to 45 mmHg. Overall immediate success rate was 82.8%. Overall re-intervention free rate at one year was 84.9% and 74.8% at last follow up. Seventeen patients underwent re-ballooning and eight patients required surgical intervention. All the patients were asymptomatic at last censor date. Re-intervention was significantly associated with age at first intervention (p=0.007), severity of stenosis (echo gradient p=0.04, invasive gradient P=0.003), valve morphology (p=0.0001), and pre-balloon RV to systemic blood pressure ratio (p=0.02).

Conclusion: PBPV is an effective and safe treatment for congenital pulmonary valvular stenosis. PBPV together with radio frequency ablation is an effective palliation as well as long term treatment in patients with pulmonary valve atresia.

OP044 Oral montelukast versus inhaled steroids for mild persistent asthma among 1 to 5 year old children

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Introduction and objectives: Asthma is a common childhood disease. Inhaled corticosteroids (ICS) were the standard prophylactic treatment. Montelukast (MLK) leucotriene antagonist was considered as adjunct therapy. The objective is to compare the efficacy of MLK as monotherapy verses ICS for mild persistent asthma in 1-5 years.

Method: Patients with mild persistent asthma attending the asthma clinic, Faculty of Medicine, Karapitiya were randomized into two groups (n=80), and treated with ICS or MLK. They were monitored for 100 days. Parents maintained a symptom diary. Improvement was considered with respect to cough, wheeze, nasal congestion and physical activities giving scores from 0-3 for each symptom each day (maximum score for 100 days was 300). Increasing of score indicates the better outcome.

Results: There were no statistical significant differences in socio demographic data between two groups. There were five dropouts from each group and five and four treatment failures in ICS and MLK groups respectively. The mean cough score in ICS group (30) was 278.23 and in MLK group (31) was 278.74 with no statistical significant difference (P=0.938). The mean wheeze scores were 293.63 and 287.26 in ICS and MLK group respectively with no significant difference (P=0.17). Compared to mean nasal congestion score in ICS group (251.3), MLK group (281.4) had a statistically significant difference (P<0.05). With regard to physical
activity the mean scores were 289.6 and 292.2 in ICS and MLK group respectively with no significant difference (P=0.53).

Conclusion: Montelukast is equally effective as inhaled corticosteroids in prevention of mild persistent asthma among 1-5 years with additional significant benefit in controlling rhinitis symptoms.

Free Paper Session 6 - Genetics, Medical Education and Administration

OP045
Lapses in professionalism in Sri Lankan doctors and their impact on patient outcomes

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Introduction and objectives: Today, the provision of optimal patient care and patient safety are the primary goals of healthcare delivery. Professionalism of doctors has an impact on achieving this goal.

Method: This study was conducted as the Sri Lankan component of a collaborative qualitative research project with Taiwan on professionalism dilemmas faced by medical students. 64 Sri Lankan medical students described stories (narratives) of lapses in professionalism observed by them in clinical settings, at Focus Group Discussions (FGDs). The FGDs were audio-recorded and the transcripts were thematically analysed to explore the nature of lapses in professionalism and resulting patient outcomes.

Results: The students’ narratives comprised lapses in communication, respect towards patients, accountability, integrity and probity, interprofessional relationships, compassion and care, acting within limitations, commitment to duty, managing conflicts of interests and ethical conduct in doctors in different grades. Such lapses have seemingly caused a variety of adverse patient outcomes: psychological distress, suboptimal treatment and even suicides and unwanted deaths. In almost all instances incidents were not reported, discussed or reflected upon to prevent future occurrences. Medical students appeared to suffer from high levels of moral distress due to observing such incidents but tended not to express their concerns due to their lowly status within the hierarchy.

Conclusion: Lapses in professionalism in doctors appear to threaten patient safety and the provision of optimal patient care in Sri Lanka. The situation is unlikely to improve unless the hierarchical working culture changes to help students and doctors challenge such lapses.

OP046
Fatigue related risk and sleepiness at work of intern house officers in a teaching hospital in Sri Lanka

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Introduction and objectives: Intern house officers are expected to work long duration shifts with frequent on-calls. Prolonged duty hours and lack of adequate sleep increase medical errors. The United Kingdom, the United States and Australia have imposed guidelines to restrict the duty hours of intern house officers. No such restriction exists in Sri Lanka and, surprisingly, there is no official off day after night on-calls. The objectives of this study were to evaluate fatigue related risk and sleepiness at work of intern house officers.
Method: 31 intern house officers of the Colombo South Teaching Hospital were recruited. Duty rosters were analyzed for the length of shifts and on-calls. A self-administered questionnaire was administered to record work pattern, sleepiness and medical errors. They were categorized into three fatigue based risk groups according to the Australian Medical Council (AMA) code of practice. Epworth Sleepiness Scale was used to assess daytime sleepiness.

Results: Of all, 61% were females (average age 27.5 years). All interns worked more than 70 hours a week. Based on AMC code of practice fatigue risk score, 93.5% fell into the high risk group. 64.5% had day time sleepiness and 32.3% experienced fatigue related errors. 48.3% did three or more night on-call per week and 83.9% thought a day off after night on-call was necessary.

Conclusion: Most intern house officers are at high risk for fatigue related errors and the majority is sleepy at work. A day off after the night on-call could be beneficial.

Op047
GH1 gene alterations in a cohort of growth hormone deficient children in Sri Lanka
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Introduction and objectives: Growth hormone (GH) deficiency leads to short stature. Genetic alteration in GH1 gene coding for GH have not been characterized in Sri Lankan patients.

Method: Blood samples were collected from 36 children who were biochemically confirmed to have GH deficiency and responding to GH treatment. Genomic DNA was extracted and GH1 gene was PCR amplified into three overlapping fragments. Purified PCR products were sequenced. Sequencing results were analyzed bioinformatically.

Results: We observed several nucleotide variants. These were one novel variant in intron 4 (1242 C>A); reported variants rs6171, rs695, rs6175, rs9282699, rs6172, rs140576665, CS030386, CM012951, rs41295043, rs2665802, rs41295245 and COSM212250. Exon 2 mutation (COSM212250) is a missense mutation that changes the amino acid Alanine to Threonine. In silico analysis using PROVEAN, SIFT and Polyphen-2 predicted this to be deleterious. Intron 2, CS030386 is a splice acceptor variant reported to be pathogenic. CM012951 is a missense mutation reported to cause GHD. Affected patients were heterozygous for these two variants. Of the other variants observed, rs6171 was present in six, rs2665802 was present in sixteen and intron 4 novel mutation was present in two. Other variants were present in one patient each. Out of eight controls screened rs2665802 was present in three and rs41295245 in one.

Conclusion: In a group of 36 children with clinically and biochemically confirmed GHD, 3 were found to have pathogenic / possibly pathogenic mutations in the GH1 gene. Several other variants of no / unknown clinical significance were also observed in this cohort.

Op048
Factors influencing the academic performance of undergraduate students of Allied Health Sciences Unit, Faculty of Medicine, during the first academic year
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Introduction and objectives: The study was designed to investigate the factors influencing the academic performance of undergraduate students at Allied Health Sciences Unit of Faculty of Medicine, University of Colombo.
during the first academic year. Aims of the study are to identify the association of students' factors, social and family factors and learning environment factors with academic performance of students during the first year.

**Method:** The cross sectional study was conducted among all undergraduate students in Allied Health Sciences Unit. Sample of 112 students were selected using convenience sampling method. Students' factors, social and family factors and learning environment factors were evaluated by using a self-administered questionnaire. Chi square test was used to compare academic performance and above factors. Data were analyzed using SPSS 17.0 version.

**Results:** There was a significant association of gender (p= 0.001), English language proficiency (p=0.004), parents' educational level (Exat sig p=0.001, p=0.03) and annual family income (p=0.002) with academic performance. There was no significant association of academic performance with extracurricular activities (p=0.503) or learning environment facilities which were lecture hall, teaching learning, library book collection, library hours, library staff, number of computer, accessibility of internet, printing photocopy, canteen, rest room, toilet, recreational and sport facilities (p > 0.001).

**Conclusion:** Students' factors and parents' educational level significantly influence the academic performance. University factors had not significantly influenced the academic performance. English language skills and providing financial assistance may positively affect academic performance.

**OP049**
**Correlation between minimum inhibitory concentration (MIC) of Isoniazid (INAH) and the KATG gene mutations of Mycobacterium tuberculosis (MTb) isolates**

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**Introduction and objectives:** Resistance to INAH of MTb isolates is mainly mediated by mutations in katG gene. In this study we looked at the MICs of INAH with katG gene mutations to correlate the level of resistance using ten INAH resistant MTb isolates.

**Method:** MIC levels for each isolate were determined at concentrations ranging from 0.2 to 40 µg/ml using INAH incorporated 7H10 agar plates. MIC levels were categorized as low (0.2 µg/ml -1 µg/ml), moderate (5µg/ml) and high level of resistance (>10 µg/ml). Genomic DNA was extracted by Phenol Chloroform method. Two overlapping regions which cover the full katG gene were amplified by Polymerase Chain Reaction with specific primers. DNA sequences of amplified products were analyzed using BioEdit7.2.5 software and NCBI sequence alignment tools.

**Results:** High level of INAH resistance was observed in three isolates (30%) all of which had a single point mutation at codon 315 [AGC (Ser) to ACC (Thr) / AAC(Asn)]. Six (60%) isolates which had low/ moderate resistance showed codon 315 mutation associated with codon 463 [CGG (Arg) to CTG (Leu)] polymorphism. One isolate did not reveal any mutation in the katG gene although it had low resistance to INAH.

**Conclusion:** In total, nine isolates (90%) showed a mutation at codon 315 which is known to be associated with INAH resistance. The results indicate that the presence of Arg463Leu polymorphism with the Ser315Thr/ Ser315Asn mutation may reduce the level of resistance to INAH. However, to confirm these findings it is important to analyze a larger sample of INAH resistant isolates.

**OP050**
Introducing the concepts of health technology assessment to Sri Lanka: a cost utility evaluation of Beclomethasone metered dose inhaler in the long term management of Bronchial Asthma in Sri Lanka

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Introduction and objectives: The availability of inhaled corticosteroids to treat asthma, remain low in developing countries despite being the gold standard preventer therapy. The objective of this study was to perform a cost utility evaluation of beclomethasone metered dose inhaler (MDI) in the long term management of adult patients with uncontrolled asthma, in Sri Lanka.

Method: A decision analytic model was developed, based on the data from existing literature. Probability distributions were generated around the input parameters to assist the synthesis of an aggregate measure of cost effectiveness, while representing uncertainty around the mean incremental cost effectiveness ratio (ICER). A probabilistic model calibration process was used to validate the estimates to the specific study setting.

Results: The mean ICER was USD (LKR) 123.02 (16019.66) per quality adjusted life year (QALY). The results were robust to the choice of forced expiratory volume 1(FEV1) distribution, cost parameters and the choice of the discount factor. Sensitivity of the mean ICER was mainly around the utility values used and the decision to discount QALYs.

Conclusion: The use of beclomethasone MDI in the long term treatment of bronchial asthma was found to be cost effective even if weighed against the lowest explicitly defined values for the cost effectiveness threshold in developing countries. The model also depicts how probabilistic model calibration methods could be used to address the deficit of clinical data in developing countries to build health economic models, providing health policy makers new evidence required to justify allocating additional funds to the most cost effective treatment modalities.

OP051
Insulin family polymorphisms in pregnancies complicated by small for gestational age infants

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Introduction and objectives: Being born small for gestational age (SGA) increases the risk for adverse perinatal outcomes and later life vascular and metabolic disorders. The insulin family plays a vital role in intrauterine growth. We investigated the association of functional polymorphisms in insulin (INS), insulin receptor (INSR) and insulin receptor substrate 2 (IRS2) with small for gestational age (SGA) pregnancies, uterine and umbilical artery Doppler and plasma insulin level.

Method: We conducted a nested case-control study of 1401 nulliparous Caucasian women, their partners and babies (216 SGA and 1185 uncomplicated). SGA was defined as a birth weight less than the 10th customized birth weight percentile adjusted for maternal height, weight, parity, ethnicity, gestational age at delivery and infant sex. Uterine and umbilical artery Doppler was performed at 20 ± 1 week gestation. The polymorphisms in the parent infant trios were genotyped using Sequenom MassARRAY. Plasma insulin was measured by double antibody RIA in 188 healthy non-pregnant adults to assess correlations between polymorphisms and circulating insulin.

Results: Paternal [OR(95%CI)=2.2(1.3-3.9), p=0.005] and infant [OR(95%CI)=3.3(1.7-6.2), p=0.0001] INSR rs2059806 AA genotype was associated with SGA. Infant INSR rs2059806 A allele was associated with abnormal umbilical artery Doppler [OR(95%CI)=1.3(1.0–1.7, p=0.04]. INSR rs2059806 AA homozygous individuals had lower plasma insulin compared to heterozygotes (p=0.03) and GG homozygotes (p=0.03).

Conclusion: The INSR rs2059806 polymorphism previously associated with adult vascular and metabolic diseases is also associated with SGA pregnancies. This polymorphism may associate with the risk of vascular and metabolic disorders across the life course.

OP052
Clinical and molecular heterogeneity among Beta Thalassaemia Intermedia in Sri Lanka

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Introduction and objectives: Patients with beta thalassaemia intermedia (TI) unrelated to haemoglobin E/beta thalassaemia account for an important minority in thalassaemia clinics in Sri Lanka. We investigated the genotypic/phenotypic diversity of this small group of patients.

Method: Fifty TI patients identified from five thalassaemia centers were clinically assessed and divided into seven severity groups based on agreed criteria. Genetic analysis was done by PCR based techniques.

Results: There were 26 mild, 12 moderate and 12 in the severe groups. Ages ranged from 5-65 years. Mean haemoglobin of the whole group was 7.8g/dl. Age at presentation ranged from 3 months - 57 years (mean 16.8yrs) and varied according to severity; 17.8 years in mild to 4.8 years in severe group. 86% were on intermittent transfusions whilst 14% were never transfused. Mean total transfusion load in the three groups ranged from 6, 28 to 89. Majority (60%) had splenomegaly and 12% were splenectomised. The median spleen size of each severity group was 0, 4.5 and 7.5 cm respectively. Thalassaemic facial features were not demonstrable in the majority (86%). Genetic analysis identified the commonest mechanism for TI to be coexistence of a single beta mutation with excess alpha genes (56%). None of these patients had severe phenotype. Coexistence of two beta mutations with alpha thalassaemia invariably gave rise to severe phenotype. Other mechanisms gave rise to varying disease severity.

Conclusion: This study highlights the remarkable phenotypic variations in beta TI in Sri Lanka and identifies some genetic mechanisms which can explain this variation.

OP053
Proposed outcome based model for curriculum revision: Faculty of Medicine, University of Colombo

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Introduction and objectives: In 1995, Faculty of Medicine, University of Colombo implemented an integrated, student centered curriculum with a mission, to be achieved through a set of objectives and competencies. This “new” curriculum was reviewed several
times, both by internal as well as external reviewers. During recent reviews, it was identified that an outcome based framework is more appropriate in aligning contents of the curriculum with the expected outcomes. Objective of this study is to develop a conceptual outcome-based framework for the medical curriculum of the Faculty of Medicine, Colombo.

**Method:** After reviewing the curriculum through several meetings with stakeholders, the objectives and competencies were combined and a new set of outcomes was developed. These outcomes were circulated among staff members and their feedback was obtained. With the feedback, these outcomes were finalized through a series of meetings with academic staff.

**Results:** Using the new set of outcomes an innovative outcome-based framework founded on scientific basis of knowledge was designed. This framework consist of three circles inner, middle and outer representing core tasks of a doctor (clinical skills, patient management, health promotion and disease prevention, medico-legal skills), how doctor approaches the core tasks (communication and interpersonal skills, teamwork and leadership, ethics and professionalism) and the personal attributes of a doctor (lifelong learning, planning critical thinking and analysis) respectively.

**Conclusion:** The proposed outcome-based framework is an innovative approach to revise and improve educational curricula. It is a useful tool to align curriculum contents with the expected outcomes with appropriate teaching, learning and assessment methods.

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**Free Paper Session 7 – Surgical specialties**

**OP054**

**The pattern of KRAS mutations in Sri Lankan patients with colorectal cancer**

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**Introduction and objectives:** Epidermal growth factor receptor (EGFR) is overexpressed in ~80% of colorectal cancer (CRC) patients. With the emergence of EGFR inhibitors, the treatment of metastatic CRC has now become individualised. However, KRAS gene, a member of the EGFR signaling cascade, can acquire activating mutations in ~35%-45% of CRC cases, rendering EGFR inhibitors ineffective. The underlying KRAS mutations are varied and regional differences have been reported. This study aims to describe the pattern of KRAS mutations among Sri Lankan patients with CRC.

**Method:** The KRAS mutations detected in CRC patients referred for genetic tests to the Asiri Centre for Genomic and Regenerative Medicine, Colombo from January 2007 to December 2014, which have been maintained in an anonymized database were retrospectively analysed using standard descriptive statistics.

**Results:** The colorectal tissue samples of 108 patients were tested. Of these, 25 (23.1%) tested positive for KRAS mutations. Among the positive cases, there were 14 (56%) males and 11 (44%) females. Their age distribution ranged from 29 to 85 years with a mean age of 60.9 ±14.2 years. The commonest KRAS mutation identified was p.Gly13Asp (40%), followed by p.Gly12Val (24%). Other mutations included p.Gly12Cys (12%), p.Gly12Ser (12%), p.Gly12Asp (8%), and p.Gly12Arg (4%).

**Conclusion:** Previous studies have reported that the commonest KRAS mutation types are p.Gly12Asp, p.Gly12Val and p.Gly13Asp. Our findings are similar except for the relatively lower frequency of the p.Gly12Asp mutation observed in this cohort. This may be a reflection of the regional variation in the pattern of KRAS mutations in CRC patients.
OP055
A descriptive study on occupational hand injury in DGH Negombo

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Introduction and objectives: The hand is an intricate tool, essential for our daily functioning. Occupational mishaps contribute to a significant proportion of hand injuries. We hoped to study the aetiology, pattern of injury and outcome of occupational hand injury.

Method: A prospective study was carried out in a surgical unit in DGH Negombo during the period of September – December 2014.

Results: Seventy five patients with occupational hand injuries were included in the study. 85% were males with a mean age of 24.2 years. The dominant hand was involved in 90.6%. The patients were mostly employed in garment factories, firecracker factories and carpentry. Fingertip injuries (24%), nail bed injuries (37%), fractures (46%), tendon/nerve injuries (60%), amputations (28%) were the commonly encountered hand injuries. A significant proportion of patients had a history of a previous occupational injury (37%), had not received any form of job-related training (77%) and were in the 1st year of occupation (82.6%). Sixty of injuries were managed with simple refashioning. The remainder required more complex surgery–nail bed repairs, grafts, local flaps, nerve/tendon repairs and K wire fixation. Five patients were transferred for specialized plastic surgical opinion. 58% of patients sustained a permanent loss of function. Wound infection and hand stiffness were the commonest post-operative complications encountered. Mean duration required to return to occupation was 10.3 days (5–78).

Conclusions: Occupational hand trauma is a major economic burden. Absence of occupational safety protocols, inadequate vocational training and limited experience contribute towards occupational injury. Results of the study could guide towards developing work-place related safety protocols to minimise occupational hand injury.

OP056
A randomized control study of audio versus visual distraction to reduce patient discomfort during colonoscopy

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Introduction and objectives: Colonoscopy can cause discomfort and anxiety in patients. Heavy sedation as premedication can lead to complications in elderly and those with co-morbidities. This has led to possible use of audio-visual distraction during the procedure. We compared effects of audio versus visual distraction in reducing discomfort during colonoscopy.

Method: 131 consecutive patients who underwent colonoscopy were randomized into three groups: allowed to listen to music of their choice during colonoscopy (AD), allowed to watch a film of their choice (VD) and neither as control (C). Patient controlled sedation (PCS) was administered to all three groups; 25 mg pethidine in 5 mg aliquots and 2.5 mg midazolam in 0.5 mg aliquots. All patients were assessed for pain, number of ‘top-ups’ of sedation, total dose of pethidine and midazolam and patient cooperation and willingness for a repeat procedure.

Results: There were 131 patients (AD=43; VD=44; C=44). The AD group had significantly less pain and discomfort (p=0.033) compared to VD and Cgroups. There was no significant difference in number of ‘top-ups’ of sedation, total doses of pethidine and midazolam and patient cooperation and willingness for a repeat procedure.

Conclusions:
(p=0.002) was evident in AD group compared with VD and C groups. There was no difference between the AD and VD groups in willingness to undergo a repeat procedure.

Conclusion: Listening to music of your choice during colonoscopy seems to reduce pain and discomfort and increase the patients’ cooperation. This may be a useful and simple tool in screening colonoscopy.

OP057
Factors affecting the clinical outcome of transarterial chemo treatment for hepatocellular carcinoma in Sri Lankan patients

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Introduction and objectives: Transarterial-chemo-embolization (TACE) is used for palliation of unresectable hepatocellular carcinoma (HCC). We studied the tolerability of TACE in a cohort of patients with NASH and alcoholic cirrhosis related HCC.

Method: Of 290 patients with HCC (July 2011 - December 2014), 84 underwent TACE. They were monitored for post-TACE complications: postembolization fever (PEF), nausea and vomiting (NV), abdominal pain, infection, acute hepatic decompensation (AHD) and acute kidney injury (AKI).

Results: 84 patients [90.5% males, 89.2% cirrhotics, 89.2% nodular HCC, median age 63(34-84) years] underwent 111 TACE sessions. All were Child class A [69.4% sessions (n=77)] or B; ascites and portal vein invasion was present in 18 (16.2%) and 15 (13.6%), respectively.
42 (38.2%) TACE procedures resulted in complications [PEF 28 (25.2 %), NV 4 (3.6%), abdominal pain 9 (8.1%), infection 7 (6.3%), AHD 13 (11.7%), AKI 3 (2.7%)]. There were no immediate post-TACE deaths. On univariate analysis elevated serum bilirubin (p=0.046) and low serum albumin (p=0.035) predicted PEF while low serum albumin (p=0.021) and low platelet counts (p=0.041) predicted AHD.

In the multivariate model, factors with p<0.200 on univariate analysis and factors derived from the previous literature were considered covariates. Female gender (p=0.029, OR=1.412), ascites (p=0.030, OR = 1.212), elevated serum bilirubin (p=0.007, OR= 4.357) and large tumour size (p=0.036, OR=3.603) were independent risk factors for PEF. Tumour diameter >5cm (p=0.049, OR=2.410) and elevated serum bilirubin (p=0.036, OR=1.517) predicted AHD.

Conclusion: In NASH and alcoholic cirrhosis related HCC patients pre-procedure serum bilirubin, ascites, tumour size and female gender predicted PEF post-TACE. Tumours>5cm with elevated bilirubin predicted AHD post-TACE.

OP058
Analysis of consecutive patients with diabetic foot ulcers admitted to Surgical Unit B, General Hospital, Polonnaruwa (GHP) for 5 months period

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Introduction and objectives: Diabetic foot ulcers cause high morbidity and mortality. Analysis of diabetic foot ulcer severity, diabetic control, neuropathy, foot deformity, cigarette smoking, foot blood circulation is helpful to launch an ulcer preventive program.

Method: This is a prospective cross section study from 01/08/2014 -31/12/2014. We analysed age, sex, blood sugar level, foot neuropathy, retinopathy, nephropathy, smoking habit, ulcer site and severity, foot deformity, past history of ulcer/amputations, leg arterial pulse, and treatment given. We used tuning fork, Semmes Weinstein mono-
Results: There were 42 patients. Male:female 20:22. Age range of males 46-87 years (mean 63) and of females 20-76 years (mean 53). Duration of diabetes was 1-47 years with one new case (mean 11 years). Glycaemic control was poor in 34/41(83%) on admission. 15/35(43%) gave smoking history. Site of ulcers were in toes 18/42(43%), in heel 11/42(26%), in fore foot 10/42(24%). Ulcers were Wagner class 1 in 20/39(51%) and class 2-3 in 17/39(44%). 18/42(43%) had foot deformity/callosity. Foot pulse was weak in 10/39(26%). Past history of ulcer seen in 11/40(28%), amputation 13/40(32%). NDS was 1-3 in 7(17%), 4-6 in 18(45%), 7-10 in 15(38%).

Conclusion: Females presented at early age. On admission glycaemic control was poor in 83%. 43% have prior foot deformity/callosity which were not treated. According to NDS 83% were with neuropathy score 4-10 which is very advanced disease. Early NDS assessment in all diabetic patients can predict the ulcer risk group. This group can be selected as target population for strict ulcer preventive program.

OP059
Impact of pelvic floor exercises on quality of life in women suffering from stress incontinence after childbirth

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Introduction and objectives: Stress Urinary incontinence (SUI) is involuntary leakage on effort exertion, sneezing or coughing that is a social or hygienic problem and which is objectively demonstrable. SUI following delivery is a common problem, which adversely affects quality of life (QoL) post-partum. The full impact is masked by underreporting due to stigma. The objective was to determine the prevalence and the impact on QoL in women suffering SUI after delivery and the effectiveness of pelvic floor exercises for improving QoL.

Method: Descriptive cross sectional study followed by an experimental study. Prevalence survey recruited 207 women at 07-16 weeks post-delivery from community post-partum clinics. Women reporting SUI were randomized to an interventional group, which followed pelvic floor exercises programme for six weeks and a control group. Both groups were advised on behavior changes. Both groups were assessed for QoL using validated incontinence quality of life (I-QOL) questionnaire at recruitment and completion.

Results: 14% women were suffering from SUI in study population. Before intervention there was no difference between I-QOL score in both groups. (P>0.05) After intervention I-QOL score of both groups improved. (P<0.001) There was significant improvement of I-QOL score in interventional group compared to the control group. (P<0.001)

Conclusion: SUI is a common post-partum problem in urban Sri Lankan women. These women can be effectively helped to improve their QoL with simple interventions. Pelvic floor exercises are more effective for improving QOL compared to behavior advice only.

OP060
Obstetric anal sphincter injuries – risk factors and prediction

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Introduction and objectives: Obstetric anal sphincter injury (OASI) are most frequent in Primigravida but OASI in Sri Lankan primigravida has not been investigated previously.
Method: 101 Consecutive primigravida in their last trimester were recruited and followed up 6 weeks after delivery. They were assessed with Anorectal Manometry (3D-ARM) and Endo-anal ultrasound (3D-EAUS) in both occasions. Delivery details and other clinical parameters were also recorded.

Results: 73 (75.3%) had vaginal delivery without instrumentation while 3 (3.1%) each delivered using forceps or vacuum. 12 (12.4%) had emergency caesarean sections and 6 (6.2%) had elective caesarean sections. None had clinically identified anal sphincter injuries. EAUS identified internal anal sphincter (IAS) defects in 3 (5.1%) and external anal sphincter defects (EAS) defects in 28 (47.5%). Both resting (RP) and Squeeze (SP) pressures had decreased following childbirth following vaginal delivery. Multivariate analysis identified antepartum RP and postpartum EAS defects to be associated with RP reduction and antepartum SP and postpartum EAS defects to be associated with SP reduction. Episiotomy was protective while delivering after 40 weeks of gestation and delivering baby with a longer length increased the risk of SP reduction. EAS defects were commoner in mothers who had labour augmented with oxytocin and those who delivered a baby with a larger head circumference. Labour induction and delivering a longer baby were protective for EAS defects.

Conclusion: Several risk and protective factors for structural and functional damage of sphincters were identified. These findings will help in formulating policy to minimize future obstetric anal sphincter injuries.

OP061
Risk factors for post operative complications, prolong ICU and hospital stay in patients with colorectal surgery

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Introduction and objectives: Identifying predictors for development of post-operative complications and prolong hospital stay will improve outcome of colorectal surgery.

Method: Colorectal surgeries from May 2012 - February 2015 at NCTH were assessed for post-operative complications, prolong ICU and hospital stay

Results: Out of 101 patients [43.6 % males, median age 52, 54.3% ASA class II/III ] 19 patients suffered complications ( 11 Sepsis , 10 respiratory complications and 4 ACS ). Prolong hospital in 33 and prolong ICU stay in 14 were noted. On univariate analysis higher intra-operative fluid usage (IOFU), usage of blood products (UBP), increase blood loss and reduce usage of epidurals (RUE) predicted respiratory complications. Females, higher IOFU for sepsis and higher IOFU, UBP for ACS were predictors. Higher IOFU , higher ASA class, females , longer duration of anaesthesia ( LDOA ) for prolong ICU stay and UBP , LDOA , higher IOFU for prolong hospital stay were predictors. In multivariate model a higher IOFU, RUE for cardiorespiratory complications and low albumin & haemoglobin, female gender for sepsis were independent predictors. For prolonged ICU/hospital stay higher IOFU (> 20 ml/kg), LDOA (> 240 min), higher ASA class were independent predictors. Patient without intra-operative vasopressors had a higher IOFU and no significance in development of complications.

Conclusion: Patients without intra-operative vasopressor had higher IOFU. IOFU >20ml/kg is a major contributor for post-operative cardio-respiratory complications, prolong ICU and hospital stay.

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OP062
A retrospective study on management practices of primary health care practitioners in the management of febrile illness in children

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Introduction and objectives: A febrile child is a common presentation to general Practice. Since dengue haemorrhagic fever is endemic outpatient management of these patients is crucial. To evaluate the management practices of GPs of the patients admitted to the hospital without an identifiable focus (viral fever and dengue fever) and to describe the common misconceptions and controversial practices especially NSAID’s use to control temperature, among GPs.

Method: Retrospective analysis of secondary data from the records (BHTs) of the patients admitted to University Professorial Unit, CSTH with discharge diagnosis with Viral Fever, Dengue Fever and Dengue Haemorrhagic Fever presented without an identifiable focus were analysed from 1st April to 16th June 2012. Data were collected to a pre-piloted questionnaire.

Results: Total of 429 records were analysed. 224(52.2%) received a diagnosis of viral fever and 205(47.8%) dengue fever. A GP has seen 69.7% of patients prior to the admission. A NSAID has been prescribed to 68.7% of the patients. Antibiotics have prescribed for 43.8%, 47.8 % had Dengue out of which 25.8% has end up with DHF. Mefenamic Acid was the commonest NSAID (69.7%) used. Two percent of patients who received NSAIDs had haemorrhagic manifestations during the critical phase.

Conclusion: This study showed that NSAID use in febrile illness is a common practice among GPs irrespective of the working diagnosis. This was a preliminary study which was directed to an interventional study highlighting the importance of avoidance of NSAIDs in febrile illness in children.

OP063
Challenges to Malaria surveillance following elimination of indigenous transmission: findings from a hospital based study in rural Sri Lanka

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Introduction and objectives: Sri Lanka eliminated local transmission of malaria in November 2012. Assessing physician preparedness for early case detection is important, in order to prevent re-establishment of local transmission.

Method: Adherence to malaria screening guidelines in patients admitted with fever to 12 hospitals in the Anuradhapura District, a previously malaria endemic district, was evaluated using a cross sectional survey. Knowledge and attitudes among doctors on current malaria surveillance guidelines and treatment recommendations was assessed.

Results: Of 403 fever patients, 150 warranted screening for malaria under the criteria defined by the Anti Malaria Campaign and the study. 93 patients had fever for over seven days. 114 patients were investigated for malaria by blood smear and/or RDT, 13% by doctors (including 3 persons with fever for over 7 days), 15% by laboratory staff and 72% by the research team. Majority of doctors were not familiar with the current treatment guidelines for malaria.

Conclusion: Mandatory continuous medical education programmes need to be continued to ensure that malaria remains in the differential diagnosis of a fever patient, especially in patients with fever for over 7
days. It is essential to publicize the availability of free-of-charge malaria diagnostic facilities and to ensure that proper notification procedures are followed when a malaria patient is diagnosed.

**OP064**

Ocular complications of leprosy – a continuing problem

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**Introduction and objectives:** Leprosy, once considered an eliminated disease in Sri Lanka, is still a health concern mainly due to its complications. Ocular complications cause a significant proportion of morbidity. Ocular complications occur not only among patients who are untreated but also among treated leprosy patients who have completed the course of treatment long years before. Our study analyzes the ocular complications of leprosy in patients attending a tertiary care hospital in Sri Lanka.

**Method:** This is a descriptive cross sectional study involving an interviewer administered questionnaire and a detailed ophthalmological examination, carried out at a tertiary care hospital in Sri Lanka. The data was analyzed using SPSS v 20. Ethics clearance was obtained from the ERC, Faculty of Medicine, Colombo.

**Results:** Mean age of participants was 45.34±16.35 years (mean ±SD) (n=29, males=20; females=9). Average duration of disease was 10.34 months and duration of treatment was 8.000±4.275 months (mean ±SD). Majority (79.3%) were treated for multi bacillary type 20.7% were treated for pauci bacillary type. Reduced corneal sensation was found in both eyes in 20.7% of the patients. Scleral pigmentation was present in both eyes in 6.9%. Lid involvement was present in one eye and both eyes in 10.3% and 3.4% respectively.

**Conclusion:** Ocular complications of leprosy were seen in patients at diagnosis, during and following treatment. Though occurrence is rare, data showed that ocular complications still affect a significant proportion of patients. Awareness among patients and treating physicians is necessary for early diagnosis, treatment and prevention of this condition.

**OP065**

Outcome of transcatheter closure of ostium secundum atrial septal defect using an atrial septal occluder device

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**Introduction and objectives:** Transcatheter closure of ostium secundum atrial septal defects (ASD) by an atrial septal occluder (ASO) device is a minimally invasive and effective alternative to surgical repair. The objective of this study was to record the demographic data and evaluate the outcome of transcatheter closure of ostium secundum atrial septal defects.

**Method:** All patients who underwent transcatheter closure of ostium secundum atrial septal defect by an atrial septal occluder device from March 2009 to August 2014 were retrospectively reviewed. Age, gender, ASD size (measured by transesophageal echocardiography), ASO device size, right ventricular pressure, outcome and complications were retrospectively analyzed.

**Results:** Among 128 patients 88 (69%) were females and 40 (31%) were males. Age ranged from 13 to 56 years with a mean age of 31±9 years. The mean ASD diameter measured by transesophageal echocardiography was 17.8±5.1 mm. Average size of ASO device diameter was 22.6±5.5 mm ranging from 12mm to 34mm. The mean right ventricular pressure before device closure was 37.75 ±10.33 mmHg. The final success rate of the procedure was 91.4% (117/128). Failure of
device closure was not associated with size of atrial septal defect. ASD size was not significantly associated with age or sex. No major complication (thromboembolic events, obstruction of intracardiac structures, cardiac perforation, device embolization and endocarditis) or deaths were occurred during the procedure or follow-up.

Conclusion: Transcatheter closure of ostium secundum ASD with the ASO device is a safe and effective method.

OP066
“Green-pit-viper bites” in Deniyaya, Sri Lanka: clinical and epidemiological features from a prospective observational study

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Introduction and objectives: Green-pit-viper (Trimeresurus trigonocephalus) is endemic to Sri Lanka and bites are reported from tropical rain forest and plantation areas. Scant data exists on epidemiology and clinical features. The objective was to address this knowledge gap.

Method: A prospective observational study was conducted in Base-Hospital Deniyaya from 2013 to 2015. Green-pit-viper as the offending snake was identified when the victims brought live or dead specimens. Where the specimen was not available, green-pit-viper was identified by the victim pointing to preserved specimens and photographs of different poisonous and non-poisonous similar appearing snakes. Species identification of dead specimens was done by a herpetologist. Clinical details were recorded during the hospital stay.

Results: Eighteen green-pit-viper bite patients (17-68 years) were admitted. Six dead specimens were brought and species identification was performed by the herpetologist. Four live green-pit-vipers were identified and released. Eight were identified by patients from pictures/specimens. All were daytime bites despite green-pit-viper being a nocturnally active snake. Hands (44%), feet, (39%), legs (11%) and shoulder (5%) were sites of bites. Twelve (67%) were bitten in tea-plantations. All reported pain at bite-site. Ten (55%) had extensive limb swelling. Seven (39%) had local swelling. Two (11%) developed haemorrhagic-blisters. Three (17%) had regional lymphadenopathy. One developed prolonged WBCT. No nephrotoxicity or neurotoxicity was noted.

Conclusion: Green-pit-viper bites caused substantial morbidity. Risk factors included day-time outdoor activities and occupation. Pain, extensive limb swelling, bite-site swelling, haemorrhagic blisters, regional lymphadenopathy and coagulopathy were prominent clinical features. Nephrotoxicity and neurotoxicity were notably absent.

OP067
Spirometry reference norms for 13-14 year old Sri Lankan children

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Introduction and objectives: Reference norms have only been reported for Peak Expiratory Flow Rate (PEFR) in Sri Lankan children. The aim of this study was to construct prediction equations for spirometry in Sri Lankan children aged 13-14 years.

Method: Spirometry was performed in 2078 Sri Lankan healthy children (1023 boys (49.2%) and 1055 (50.8%) girls) of 13-14 years of age according to American Thoracic Society
guidelines. Forced Vital Capacity (FVC), Forced Expiratory Volume in the first second (FEV\textsubscript{1}), PEFR and Forced Mid-Expiratory Flow Rates (FEF25-75%) were measured. Correlation coefficients were established between each parameter and standing height, weight, and age. The functions were regressed over all possible combinations of variables separately for boys and girls.

**Results:** There were significant correlations between spirometry parameters and height and weight in both genders. There were significant correlations between age and PEFR, FEF25 and FEF50 in males and age and FEV\textsubscript{1}, PEF and FEF25-75% in females. The prediction equations in males for FVC: 0.047 height + 0.0007 age – 4.66; for FEV\textsubscript{1}: 0.041 height + 0.016 age – 4.22; for PEFR: 0.074 height + 0.123 age – 7.59 and FEF25-75%: 0.042 height + 0.066 age – 4.36. The equations in females for FVC: 0.028 height + 0.031 age – 2.36; for FEV\textsubscript{1}: 0.027 height + 0.047 age – 2.57; for PEFR: 0.038 height + 0.159 age – 2.93 and FEF25-75%: 0.029 height + 0.136 age – 3.18.

**Conclusion:** Height, weight and age influence ventilatory parameters and could be used to formulate prediction equations for spirometry in Sri Lankan children.

**OP068**

**Usefulness of cattle blood as an enrichment substance in blood supplemented culture media, in the clinical microbiology laboratory**

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**Introduction and objectives:** Sheep blood is considered as one of the best enrichment agents used in preparation of blood agar. We use expired banked human blood in Sri Lanka. This study was carried out to determine the ability of cattle blood as an enrichment substance in blood supplemented media in microbiology.

**Method:** 303 clinical samples were processed during the study period on cattle, human, and sheep blood containing medium. Isolation rates, colony appearance, pattern of haemolysis, relevant identification tests, and antimicrobial susceptibility were compared qualitatively with the pattern on sheep blood.

**Results:** Human, cattle, and sheep chocolate agar could isolate \textit{Haemophilus} species 100%, 75%, and 50% respectively. Other organisms grew on all the media. Colony sizes on human blood agar were obviously smaller. Gram negative bacteria had the same colony size and morphology in all media with the exception of \textit{Haemophilus}, where the colony size was largest in human chocolate agar. Zones of haemolysis of Streptococcal species were smaller on human blood agar but almost equal on cattle and sheep blood agar. CAMP test showed positive and negative results similarly with cattle and sheep blood agar but not with human blood agar. Optochin and bacitracin sensitivity and ABST results were similar on all three media.

**Conclusion:** Cattle blood agar has all qualities of sheep blood agar. Human blood supplemented chocolate agar is better for isolation of \textit{Haemophilus} species from clinical specimens. ABST done according to CLSI method also gives similar zone diameters with all 3 types of media.

**OP069**

The effects on children after loss of a parent due to Chronic Kidney Disease of Uncertain Aetiology (CKDU) in a rural village in Eastern Province, Sri Lanka

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**Introduction and objectives:** CKDU is a major health problem in Sri Lanka where young agricultural workers die, leaving their children vulnerable to undesirable effects. Area under study is a rural community; which is disadvantaged by poverty, low level of education, unemployment and effects of civil war. The purpose of this study is to determine psychological, economic, educational and social effects in children after death of a
parent, and to explore possible measures to help.

Method: Main mode of data collection in this multi-case study was in depth semi-structured interviews with an interview guide. Data were collected from ten school children (8-16 years) who had lost a parent due to CKDu within the past 1 month to 7 years. In addition the surviving parent and a class teacher for each child, an administrator, and five school officials from each school and a representative from the community were interviewed to triangulate the data.

Results: Both the demise of the parent and resulting severe economic constrains have shown to cause diverse emotional, behavioural, educational and social undesirable effects in these children, which were never explored before. The financial instability was identified as the commonest risk factor while social support was identified as the key moderating factor in this sample. School was identified as an important contributing social component.

Conclusion: Developing a sustainable program was recommended to a) enable financial sustainability of surviving parents, b) facilitate education, c) improve resources in schools and d) educate on preventive measures to minimize undesirable effects of parental bereavement and CKDu. The report was discussed with the participants and verified for accuracy and acceptance.

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Introduction and objectives: A cohort of soldiers from military establishments at Minneriya, Katukeliyawa, Hingurakgoda, and Giritale, of Army's Eastern Command suddenly fell ill with Acute Gastroenteritis. Magnitude of the issue revealed a possible multi-site outbreak. The first case was reported on 27th March 2012 and the outbreak lasted five days resulting in 276 cases of 2205 exposed with 80 hospitalisations. Local Health authorities alerted us to initiate an investigation to identify aetiological agent/s and incriminated food items.

Method: Data from admitted patients (cases) (n=80) and inmates with no evidence of illness (controls) (n=43) were extracted using the standard food-born outbreak investigation form. Data analysis performed using free Soft-ware package Epi info7.1. In addition, 60 stools samples obtained from patients were microbiologically analysed at DGH Polonnaruwa to identify possible pathogens.

Results: Common attack rate for the outbreak had been 125.1 per 1000. Mean duration of symptoms were 61.7±22.6 hours with diarrhoea been the predominant symptom present in all cases. Fever and abdominal pain were present in 75% and 60% patients respectively. The epidemic curve demonstrated a typical point source outbreak with peak activity on third day of exposure. The outbreak was found to be epidemiologically linked to consumption of yoghurt. Consumption of eggs, meats or salads was not associated with the outbreak. Salmonella enterica sero type Weltevreden was isolated from 17/60 stools samples submitted.
Conclusion: The outbreak experienced in four military establishments in North-Central due to a strain *Salmonella weltevreden* which was transmitted through a locally produced yoghurt.

**OP071**

**Prevalence of NCD risk factors and job satisfaction among public health workers in Central Province, Sri Lanka**

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**Introduction and objectives:** Public health is fundamental to 21st century healthcare and shares the same overall goals as the rest of the health care system. Even though, the public health worker’s role is quite essential to the community, attention for their health status has not been defined well.

To determine the prevalence and correlates of common NCD risk among public health workers in the Central Province, Sri Lanka.

**Method:** This cross sectional survey was conducted in three districts of the Central Province. Data was collected from public health workers (n= 336) who are employed. BMI, blood pressure and random blood sugar data was collected. General information and self-reported job satisfaction and coping strategies was collected by a self-administered questionnaire.

**Results:** Mean age of the workers was 42.5 (10.3 SD). There were 302 females (89%) in the group. Overweight (mean 26.2, SD 0.78 CI = 95%) and obesity (mean 29.6, SD 1.8 CI=95%) prevalence among PHW were 29.5% and 16.4% respectively. Among the group 26 individuals (7.7%) were hypertensive and 21 (6%) were diabetic. Out of the total, 20.2% (n=68) have severe headache, joint pains and back pains. Field work, work load, working environment, income were found to be as the common sources for stressful circumstances at work.

Conclusion: Prevalence of overweight and obesity among public health workers in the Central Province is considerable. Significant amount of public health workers are hypertensive and living with diabetes. They are having various health problems such as body pains.

**OP072**

**Factors associated with commercially available soft drink consumption in adolescents in Colombo educational division**

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**Introduction and objectives:** Adolescent soft drink consumption is associated with risk of non-communicable diseases in adulthood. This study assessed the factors associated with soft drink consumption in adolescents in Colombo educational division.

**Method:** A descriptive, analytical cross-sectional study was conducted among 200 students aged 11–15 years in Colombo educational division. Data was collected using an interviewer-administered questionnaire and anthropometric measurements. The associations were established using Chi square test.

**Results:** Male:female was 107(53.5%):93(46.5%). Soft drink consumption was more than 400ml/week in 39.5%. Most students preferred natural fruit drinks (38.5%) but consumed soft drinks at home (35.5%). The main reason for soft drink consumption was thirst (67.5%) and main factor in selecting a particular brand was taste (70.5%). 63% were unaware about health impact of soft drinks and the awareness increased with age. There was a statistically significant difference in the level of consumption in males over females (p=0.002) and the awareness of nutritional
value in selecting natural fruit drinks over others (p=0.009). There was no statistically significant association between the level of soft drink consumption and awareness on health impact (p=0.407) or obesity (p=0.078).

Conclusion: Boys consumed soft drinks more than girls. Soft drinks were mainly consumed due to thirst, brand selected due to taste and most consumption occurred at home. Awareness of nutritional values has an impact on selecting natural fruit drinks over others. Increasing nutritional awareness on soft drinks and enhancing palatability of natural nutritious drinks may promote the consumption of healthier drinks for thirst, especially in home environment, among adolescents.

OP073
Quality of time mothers spend with their pre-school children and associated factors in Wennappuwa MOH area

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Introduction and objectives: Mothers or responsive adults spending quality time with children improve children’s developmental potential. The aim of this study was to determine the quality of time mothers in Wennappuwa MOH area spend with preschoolers and associated factors.

Method: A cross-sectional analytic study was conducted among 397 mothers of preschoolers attending five preschools selected randomly from the Wennappuwa MOH area. A high-quality child care time was defined as time spent in development or achievement oriented activities. Ten criteria appropriate to the Sri Lankan context were identified to assess quality time. The time mothers spend with their children and associated factors were assessed using an activity chart and a self-administered questionnaire. Data were analysed using SPSS.

Results: All mothers were Sinhalese. The majority (n=339; 91.6%) had secondary education or higher; 22% (n=81) were employed. Forty five percent (n=166) had extended family support. Sixty five percent (n=243) of mothers spent quality time with children based on our definition. Spending quality time was significantly associated with spending 6 hours or more per day with the child (p=0.003), having a good knowledge about quality time (p=0.001), fathers’ age more than 31 years (p=0.011), and fathers’ salary higher than LKR 10,000 (p=0.02). There was no association with mothers’ age (p=0.819), educational level (p=0.051), number of children (p=0.226) and extended family support (p=0.16).

Conclusion: In Wennappuwa MOH area, most mothers spend quality time with their preschool aged children. Improving mothers’ knowledge on quality time will help to improve the situation.

OP074
Appropriateness of medication used among the elderly in the community setting to improve medication safety

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Introduction and objectives: To assess the appropriateness of medication used among the elderly in a community setting and to identify issues related to medication safety in a community setting.

Method: The study was conducted in a selected Grama Niladari division in the Colombo District. Cluster sampling was used to select households. All aged ≥60 years living...
in each household were interviewed by two pharmacists and regular medicines used by them were recorded from health records. Potentially inappropriate medications (PIMs) were detected using the ‘Screening tool of older people’s prescriptions’ (STOPP) and ‘Screening tool to alert to right treatment’ (START) criteria.

Results: Among the 246 households, data were collected only from 68 patients. The rest were excluded as some residents (N=144) were uncooperative (did not open gate or not at home), and some (N=34) did not have their health records. The most common non-communicable diseases among the interviewed patients were hypertension (61.8%) and diabetes (52.9%). There were 42 patients with at least one PIM. Of the 79 PIMs detected among the interviewed patients, 36.7% were related to STOPP, and 63.3% to START criteria. The highest number of PIMs were associated with statins (N=15) and antiplatelet drugs (N=15). Of the health records assessed, there was at least one instance of inadequate information in 24 health records.

Conclusion: PIMs were identified in the prescriptions of elderly. Although it is important to frequently assess their medications, it is a challenging task in the community due to incompleteness and unavailability of health records.

OP075
Prevalence of Coronary Heart Disease (CHD) and selected risk factors of CHD among people aged 30-64 years in the district of Gampaha

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Introduction and objectives: Coronary heart disease is the leading cause of hospital deaths since 1998, accounting for 13.1% of all deaths in government hospitals in 2008. Risk factors for CVD include hypertension, diabetes mellitus, dyslipidaemia, smoking, unhealthy diet, harmful intake of alcohol and physical inactivity. The study aimed to determine prevalence of CHD and selected risk factors among people aged 30-64 years in the District of Gampaha

Method: A community based cross sectional study was carried out among 1200 persons aged 30-64 years, recruited using probability proportionate to size cluster sampling, in the District of Gampaha. Information collected: presence/absence of already identified CHD/selected risk factors; symptoms of angina using Rose Questionnaire, quality of diet, level of physical activity, smoking and alcohol consumption. Examinations/investigations included: resting electrocardiogram, anthropometry, blood pressure; blood samples after 10-12 hours fasting for plasma glucose, lipids.

Results: Response rate was 95.3%(n=1143). The estimated prevalence of CHD based on Rose Questionnaire positive definite angina: 6.9% (95%CI 5.4%-8.4%), based on the ischaemic changes in ECG: 6.4% (95% CI4.9%-7.8%), hypertension (≥140/90mmHg) 37.5% (95%CI 34.7%-40.3%), diabetes mellitus (>125mg/dl) 17.4% (95% CI 15.2%-19.6%), dyslipidaemia (any one of high total cholesterol, HDL, LDL, triglycerides) 66.5% (95%CI 63.7%-69.7%), generalized obesity (BMI≥25.0) 44.0% (95%CI 41.1%-46.9), sub-optimal quality diet 71.9% (95%CI 69.3%-74.5%), low physical activity 21.7% (95%CI 19.3%-24.1%), high-risk drinking 11.4% (95%CI 9.66%-13.2%), smoking 14.2% (95%CI 12.2%-16.2%).

Conclusion: Estimated prevalence of CHD and selected risk factors were high; with a large proportion of previously undiagnosed disease. Findings should be utilized in planning future healthcare services of the country.
Perceived access and health system responsiveness related to ambulatory health services for Coronary Heart Disease (CHD) and selected risk factors for CHD among people aged 30-64 years in the district of Gampaha

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Introduction and objectives: Access comprises availability, accessibility, affordability, acceptability, accommodation. Responsiveness relates to a system’s ability to respond to legitimate expectations in non-health enhancing aspects of care among potential users. The study aimed to describe perceived access (PA) and health system responsiveness (HSR) related to ambulatory health services (AHS) for CHD and selected risk factors for CHD among people aged 30-64 years in the Gampaha District.

Method: PA and HSR were assessed in a community based cross sectional study among 157 people aged 30-64 years in the District of Gampaha, with a previous diagnosis of CHD, hypertension (HT), diabetes mellitus (DM) or dyslipidaemia and seeking AHS in the preceding six months. Interviewer administered ‘Access to Ambulatory Care Questionnaire’ and ‘Health System Responsiveness Assessment Questionnaire’ were used.

Results: Among respondents, 51.6% (n=81) sought AHS from the government sector. Of 5 domains of PA, availability (n=141, 90.0%) and acceptability (n=131, 83.4%) received high ratings, whilst accessibility (n=92, 58.6%), affordability (n=92, 58.6%), accommodation (n=90, 57.3%) received moderate ratings. Ratings of all domains of HSR were high: facilities at clinic (n=124, 79.0%), respectfulness while obtaining services (n=143, 91.0%), convenience in obtaining services (n=117, 74.5%), ability to select place/doctor/treatment (n=125, 79.6%), maintaining privacy (n=134, 84.7%), communication with doctor (n=132, 84.1%). Significant associations with PA were: higher level of education (p=0.01), higher satisfaction with perceived general health (p=0.03); and HSR with unemployment (p=0.01), lower level of education (p=0.02), higher family income (p=0.01), seeking care at private sector (p<0.0001).

Conclusion: Satisfaction on accessibility, affordability and accommodation domains of PA related to ambulatory care for CHD and risk factors were moderate indicating necessity for improvement.

OP077
A descriptive study on postural abnormalities among school boys between 15-17 years in the Colombo district, Sri Lanka

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Introduction and objectives: Good posture (body alignment and positioning) is critical for students’ health. Global studies indicate that the large number of students with postural abnormalities is increasing. Studies suggest several modifiable and non-modifiable risk factors for poor posture, and their musculoskeletal consequences which affect students’ health. Objectives were to describe the prevalence, factors associated with, and musculoskeletal consequences of postural abnormalities among 15-17 year old school boys in four selected schools in the Colombo District, Sri Lanka.

Method: A descriptive cross-sectional study was conducted on a sample of 248 students. Students’ posture was photographed and posture grid and BioPrint posture analysis software (Biotonix) were used to evaluate posture. Data on socio-demographic status, risk factors, and musculoskeletal consequences were obtained by a self-administrative questionnaire. Multiple Logistic Regression and Chi-square Test was used to
investigate associations between risk factors and postural abnormalities and between postural abnormalities and musculoskeletal consequences respectively.

**Results:** Most students (83.3%) had posture abnormalities. Sagittal-plane abnormalities were more prevalent than coronal-plane ones, and upper extremity abnormalities were more prevalent than lower extremity ones. Many students had modifiable risk factors i.e. physical inactivity (71.4%), excessive school bag weight (71.8%) and poor basic knowledge on posture (76.6%). Musculoskeletal consequences (pain, poor flexibility, reduced muscle strength) were infrequent. There were no significant associations between the risk factors and posture abnormalities and between musculoskeletal consequences and posture abnormalities.

**Conclusion:** There is a high prevalence of postural abnormalities in male school students and specific posture related issues need to be addressed in school health programmes.

**OP078**

**Health burden of natural disasters in Sri Lanka**

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**Introduction and objectives:** A natural disaster is a major adverse event resulting from processes of the earth. Natural disasters have catastrophic impacts, human, social, economic and environmental. Social impacts include loss of life, injury, ill health, homelessness, disruption of communities and environmental changes. Environmental effects range from the falling down of trees to the reshaping of entire landscapes. Published data on the burden of natural disasters in Sri Lanka is scarce. The aim of this study is to describe the health burden of natural disasters in Sri Lanka from 1974 to 2014.

**Method:** Data was obtained from the database of the Ministry of Disaster Management of Sri Lanka for the period 1974 to 2014 and was analyzed using the SPSS statistical software.

**Results:** During the four decades of the study period, 32,574 (57.14%) deaths and, (35.75%) injuries were caused by natural disasters in Sri Lanka, including 4,056 (7.11%) missing persons. Of the mortality and morbidity 92.05% (524, 78/57,011) was caused by the 2004 tsunami with 30,959 (95.04% = 30,959/32,574) deaths, 19,611 (96.22% = 19,611/20,381) injuries 1,908 (47.04% = 1,908/4,056) missing persons. Cyclones 6.2% and landslides 1.56% were the other common natural disasters faced by the country during this period. Coastline (99.32%) mainly affected the North western province while Cyclone (98.22%) was mainly seen in the Eastern province. (Numbers are not clear. Need to discuss with authors)

**Conclusion:** Most of the damage was from the Tsunami. Annually 814 deaths and 456 injuries occur in Sri Lanka from natural disasters. For a country of 20 million people, this is a significant human loss, which may be reduced by enhanced preventive efforts.
Poster Session 1

PP001
Knowledge, exposure and responses to passive smoking among adolescents in Thamankaduwa educational zone

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Introduction and objectives: Passive smoking adversely affects the health of those exposed to it and has no safe level of exposure. Exposure to passive smoking among adolescents is associated with early initiation to tobacco smoking. This study aimed at determining the knowledge, exposure and response to passive smoking among adolescents in a rural setting in Sri Lanka.

Method: A cross-sectional study, using a self-administered questionnaire, was carried out among grade 10 students (n=498) of 7 schools in Thamankaduwa Educational Division, selected proportionate to the size of the student population using a multi stage cluster sampling method.

Results: The study included 498 adolescents with a response rate of 99.6% (498/500). Only 69.3%, (n=345) had heard of the term passive smoking and of those who had heard of the term, 83.2%, (n=287) knew the term accurately. Only 2.4% (n=12) was categorized as having a good level of knowledge. A majority (81%, n=406) reported low exposure levels to passive smoking. On inquiring how they had reacted or will react to a situation of exposure to passive smoking, a majority (92.2%, n=459) indicated that they had/will rescind from the situation.

Conclusion: The level of knowledge on passive smoking was poor among the adolescents in the rural setting in Sri Lanka. Despite the low level of exposure, the adolescents indicated that they were/will be assertive. The study recommends that knowledge of adolescents on passive smoking be improved.

PP002
An interventional study on knowledge, perception and behaviour on the management of fever by primary health care practitioners

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Introduction and objectives: Despite evidence-based data demonstrating beneficial effects of fever, health professionals' negative attitudes towards fever and their reliance on antipyretics including NSAIDs have persisted. Moreover, use of NSAIDs and inadequate knowledge on management of febrile phase of dengue fever at primary care has resulted in high mortality. To assess the impact of an interventional programme in strengthening the knowledge on new evidence based practices of management of fever and management of febrile phase of Dengue fever (DF), among General Practitioners (GPs).

Method: A questionnaire was developed, piloted and pre-tested prior to data collection. All registered GP’s from Dehiwela and Mt. Lavinia municipal council area were invited. The self-administered questionnaire was given before and after an educational seminar.

Results: First choice of antipyretic was paracetamol (98.9%) and 28% often prescribed NSAIDs to reduce parental anxiety by bringing down fever. Tepid sponging was practiced by 92.3% to reduce temperature. After intervention overall knowledge on fever management mean scores significantly improved (from 75.1% to 84.9%, p<0.001).
significant improvement of knowledge on when to suspect dengue fever (p<0.001), differentiation of dengue haemorrhagic fever from DF (p<0.001), warning signs for early admission (p=0.012), Risk group identification (p<0.001) and timing of blood counts(p=0.018).

Conclusion: Management of fever, especially fever without an identifiable focus is an integral part in the primary care. For its consistent rational management, primary health care practitioners should have evidence based knowledge and positive attitudes. In addition, proper initial management of dengue fever is essential to reduce the mortality associated. This study recommends continuing education on above areas.

**PP003**

**Attitudes on postgraduate training among post-intern medical officers**

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**Introduction & objectives:** After completion of one year of service following medical internship, medical officers are eligible to follow postgraduate (PG) training in their preferred specialty. The objective of the study was to describe the attitudes of post-intern medical officers on future postgraduate training and associated factors.

**Method:** A descriptive cross sectional study was carried out at the post-intern appointments awarding ceremony. A pre-tested self-administered questionnaire was utilized and 740 participants responded.

**Results:** Of the respondents, 88.9%(n=638) wished to follow PG training, 79.3% (n=584) wished to remain in Sri Lanka (n=114 undecided) and 76.8%(n=552) wished to remain in the government sector (n=135 undecided). The main factors influencing choice of PG studies were personal preference (71.2%), job satisfaction (49.8%) and role-model inspirations—(46.1%). Most preferred PG specialties were; Medicine (n=136, 22.4%), Surgery (n=123, 20.3%) and Paediatrics (n=88, 14.5%). Problems identified in relation to postgraduate training included: a single Postgraduate Institute (n=508, 68.7%) inadequate postgraduate courses (n=410, 55.4%), inadequate selections examinations (n=420, 56.8%) and a low pass rate (n=537, 72.6%). Majority (80.8%, n=502) intended to commence postgraduate studies soon while 7.2% (n=45) hoped to do so after achieving a financial stability.

**Conclusion:** Majority of post-interns expect to follow postgraduate studies soon after internship. Demand for postgraduate qualifications is high and certain deficiencies are observed in the available opportunities. Clinical specialties are preferred by the most. A comprehensive orientation on the available postgraduate avenues should be given at the beginning of the medical career.

**PP004**

**A scoping review of intimate partner violence services in Sri Lanka: opportunities and challenges**

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**Introduction:** Intimate partner violence (IPV) is a significant public health issue in Sri Lanka, with one in three women at risk. The healthcare sector can play a significant role in responding to the needs of women experiencing IPV. This paper presents results of a scoping review of services for women experiencing IPV in the Sri Lankan context.

**Method:** Scoping reviews create a map of
literature on a particular topic. We used Arksey and O’Malley’s (2005) framework to identify and review 38 publications about IPV in the Sri Lankan context. We compared the results with best-practice models from other low-middle income countries.

**Results:** Services for women experiencing IPV were pioneered by faith-based organisations, women’s rights groups, and NGOs. Health sector response includes GBV Desks and one-stop crises centers (‘Mithuru Piyasa’). According to best-practice models these are level 1 (selective provider/facility-level integration) and level 2 (comprehensive provider/facility-level integration) services, respectively. They have potential to be comprehensive services providing multi-level support (i.e. level 3 integration) in collaboration with NGOs for counselling, legal aid, and short-term housing. The review highlights absence of formal evaluation of exiting services, although a few publications documented lack of collaboration, non-recognition of NGO efforts, and healthcare providers’ negative attitudes towards care-seekers.

**Conclusion:** Lack of an evidence-base to support development of locally relevant services to address IPV in the Sri Lankan context is evident from this review. Although best-practice models from other settings are useful, context specific knowledge is needed to guide future programmes and services.

**PP005**

**Ethnicity and neighbourhood deprivation determines the response rate in sexual dysfunction surveys**

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**Introduction:** Self-administered questionnaires provide a better alternative to disclose sensitive information in sexual health research. We describe the factors that determine the positive response (initial recruitment) to an initial invitation and subsequent completion of study to a postal questionnaire on sexual dysfunction.

**Method:** South Asians (SA) and Europids with and without diabetes (DM) were recruited from GP clinics in UK. Men who returned the properly filled consent form (‘recruited-group’) were sent the questionnaire and those who returned it were considered as the ‘completed-group’. Index of Multiple Deprivation Scores (IMDs) were generated using UK postcodes. We calculated the recruitment rate and completion rate of the recruited and the study-completed groups respectively.

**Results:** Total approached sample was 9,100 (DM - 2,914 [32%], SA - 4,563 [50.1%]). Recruitment rate was 8.8% and was higher in Europids and in patients with DM. Mean IMDs for the recruited group was 20.9±11.9, and it was higher among recruited SA compared to Europids (p<0.001). Mean IMDs was higher in the recruited group compared to non-recruited (p<0.01). All 4 recruited groups (SA/Europid and DM/non-DM) had lower IMDs compared to non-recruited. Completion rate was 71.5% (n=544) (SA - 62.3%, Europids - 77.4%; p<0.05).

**Conclusion:** Recruitment for postal sexual health surveys is positively influenced by presence of investigated disease, older age, being from lesser deprived areas and Europid ethnicity. Furthermore, Europids were more likely to complete survey than South Asians irrespective of disease status.

**PP006**

**CNS gliomas - correlation between MRI findings and histopathology**

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Introduction and objectives: To determine the accuracy of Magnetic Resonance Imaging (MRI) in pre-operative diagnosis and staging of CNS gliomas, compared to histopathology.

Method: A cross-sectional study was done on 90 patients who underwent excision or biopsy following MRI diagnosis of intra-axial masses at our institution from July 2012 to January 2013. The accuracy, sensitivity, specificity, positive and negative predictive value of MRI in diagnosing and staging CNS glioma was calculated in comparison to histopathology.

Results: Study included 52% males (n=28) and 48% females (n=26). Age groups were 78% (n=42) over 20 years and 37% (n=20) between 20-40 years. Gliomas constituted 60% (n=54) of intra-axial tumors diagnosed on MRI. Out of 54 patients with glioma, 85% were supratentorial and 15% were infratentorial. We observed 94.7% sensitivity, 51.5% specificity, 77% positive predictive value and 85% negative predictive value in preoperative MRI diagnosis of CNS gliomas. Preoperative MRI diagnoses were accurate, compared to histopathology, in 78% of cases. MRI sensitivity in preoperative staging was as follows, GBM-stage IV (100%), stage II (92%), anaplastic stage III (89%) and pilocytic astrocytoma (75%). Accuracy of preoperative MRI staging was 100%, 98%, 93% and 94% in stage IV, III, II and I respectively.

Conclusion: MRI is accurate in the preoperative diagnosis and staging of CNS gliomas in our institution.

PP007
Characterization of imported Malaria, the largest threat to sustained Malaria elimination from Sri Lanka

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Introduction and objectives: With no indigenous malaria cases being reported in Sri Lanka since November 2012, the country is at a critical juncture in its efforts to prevent the re-introduction of malaria.

Method: All imported malaria cases reported in 2013-14 were analysed for their epidemiological profile and associated factors. Clusters of imported malaria were further analysed to identify specific characteristics related to their presentation and diagnosis.

Results: 95 and 49 imported malaria cases were reported in 2013 and 2014 respectively. Two clusters of malaria, 23 Plasmodium vivax cases reported from Pakistani asylum seekers and 13 P. falciparum cases reported from local fishermen who returned from Sierra Leone, added to the burden of imported malaria. In addition, other clusters were reported from high-risk groups such as illegal immigrants and armed forces personnel returning from UN peacekeeping missions. 15 severe malaria cases were reported over the two year period.

Conclusion: Given the high receptivity to malaria in previously endemic areas of the country due to the abundance of the vector mosquito, imported malaria poses a significant threat for the re-introduction of malaria to Sri Lanka.

PP008
Physical fitness factors of school badminton players in Kandy district

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Introduction and objectives: The aims of the study were to measure physical fitness parameters of school badminton players in
the Kandy district and determine factors which would to improve the physical fitness.

**Method:** Height, weight, handgrip were measured and sit and reach test, shoulder flexibility test, standing long jump test, 20m sprint speed test, agility T-test and 20m multistage shuttle run test were performed on 183 school badminton players. Linear regression and correlation tests were performed using body mass index, duration of practice age category, level of performance and additional sports involvement as independent variables and physical fitness parameter as a dependent variable.

**Results:** The present study showed that the upper body power, upper body strength and endurance and speed depended on body mass index both in male and female school badminton players. Speed, agility, flexibility of shoulders, explosive power of shoulder and aerobic endurance depended on the duration of practice. Furthermore, involvement in additional sports other than badminton did not enhance the performance of badminton players. But it decreased player’s performance by decreasing agility and speed. Age had an effect on the upper body power, explosive power of lower limb, agility and speed both in males and females.

**Conclusion:** The performance of badminton players could be enhanced by maintaining a proper body mass index. Badminton specific parameter could be improved by increasing the duration of practice. Involvement in other sports does not give an added advantage to improve performance.

**PP009**

**Factors influencing the enrolment of doctors in postgraduate courses in Sri Lanka**

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Introduction and objectives: Sri Lanka produces around 550 medical postgraduates each year. This study describes the current trends and factors influencing the enrolment of doctors in postgraduate training.

**Method:** A descriptive cross sectional study was conducted among training and staff grade doctors working in teaching hospitals in Sri Lanka, using a self-administered questionnaire. The responses were analysed descriptively.

**Results:** Of the respondents 41.3% (n=302), were intern house officers. There were representative numbers of graduates from all Sri Lankan medical faculties expect Rajarata and Eastern, both genders were equally represented and 2/3rds were married. 32% were registered in a postgraduate course and 48% intended to register. The top three choices among registrants were medicine (34%), paediatrics (15%) and surgery (12%) and among intenders medicine (24.5%), surgery (15.3%) and paediatrics (11.7%). There was an equal gender distribution among both the intenders and registrants. >50% of registrants were within the first 300 in the merit list. Older the medical school higher the percentage of registrants. There was a positive correlation between extent of undergraduate career guidance and registering for postgraduate training. Reasons for not taking up postgraduate training included family issues, lack of confidence or interest in further education and a dislike for undertaking more responsibilities. 89% of registrants were satisfied with their postgraduate training.

**Conclusion:** Position in the merit list, faculty of graduation and extent of career guidance during undergraduate training appeared to be influential factors for choosing postgraduate training. PG trainees are contented with the choice they make.

**PP010**

**The association between meditation and some characteristics of mental status among medical students.**
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Introduction and objectives: With the sudden change in the environment and academic demands, stress levels among medical students can become higher than the ordinary citizens. The present survey aims to determine the association between meditation and some characteristics of mental status among medical students.

Method: A cross-sectional comparative study was conducted to describe the association between meditation and certain characteristics of mental status of medical students of Colombo, Sri Jayewardenapura and Ragama medical faculties. A group of medical students practicing meditation (number of participants 75) was compared with a similar number of sex matched group of medical students who did not practice meditation (Post test). Those willing to participate were chosen using snow ball technique. Meditators should have practiced meditation at least 15 minutes per day and at least 3 days per week for a minimum of 3 months from the date of commencement of the study. Comparison group has not practiced meditation during past 3 months. A previously validated self-administered questionnaire with a visual analogue scale was used as the study instrument.

Results: Of those 92 who felt very happy during last week, 53 (60.9%) were practicing meditation. Of those who have higher ‘loving kindnesses’ towards others 53% have meditated. Of those 32 with good anger control 27 (>84 %) have practiced meditation. Statistically significant associations for meditation were found for anger control and happiness at \( p < 0.05 \) level.

Conclusion: Meditation may contribute towards ‘happiness’, ‘anger control’ and ‘loving kindness towards others’ among medical students.

PP011

Anemia in a sample of adults aged 20 to 85 years from selected divisional secretariat divisions, Batticaloa district

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Introduction and objectives: Anaemia is a condition in which the oxygen carrying capacity is insufficient to meet the body’s physiologic needs. It was aimed to demonstrate the proportion of anaemia and its associated demographic characteristics in a sample of adults aged 20 to 85 years in selected Divisional Secretariat (DS) divisions, Batticaloa District.

Method: Demographic data and blood samples were collected from a total of 100 male and female individuals in Kathankudy, Manmunai North and Koralaiapattu DS divisions using multi-stage cluster sampling. Anemia was defined as a hemoglobin concentration <12 g/dl in women and <13 g/dl in men (WHO, 2011). Demographic characteristics of anemic and non-anemic groups were compared with in a representative sample using the chi-squared test.

Results: Anaemia was present in 45.0% with the majority being normocytic. It was 42.9% (n=12) in men and 45.8% (n=33) in women. Anemia was significantly associated with age groups and residence (\( p < 0.05 \)). There was no significant association with gender, ethnic background, education level or monthly income. The mean hemoglobin concentration was 13.4 g/dl (SD=1.93) in men and 12.3 g/dl (SD=1.18) in women. The great majority of anemias were mild with 71.1% having hemoglobin concentrations above 10.9 g/dl.
Seventy one percent (n=32) had a mean corpuscular volume between 80 and 100 fl.

**Conclusion:** A considerable proportion of the sample was found to be anemic and this was significantly associated with age group and place of residence. It is highly recommended to consider age and place of residence when implementing anemia awareness activities.

**PP012**

**Level of happiness and factors associated with happiness among Applied Sciences Faculty university students at the University of Sri Jayewardenepura, Sri Lanka**

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**Introduction and objectives:** Many countries across the globe use happiness and factors associated with happiness as a tool for policy planning and to determine the success of public interventions. Sri Lanka has not yet shown any concern about the redundant values scored for national level of happiness in world-wide surveys. This study aims to identify the current level of happiness and factors associated with happiness among Applied Sciences Faculty students aged 22-25 years at the University of Sri Jayewardenepura.

**Method:** This study, conducted as a descriptive cross-sectional study, engaged a stratified random sampling of 200 students with a proportionate number of students being drawn from each undergraduate course. Level of happiness was measured by the Oxford Happiness Questionnaire and associated factors were consolidated using the Pearson Chi-square test. A self-administered questionnaire was used to gather data. Ethics approval was obtained from the Ethics Review Committee of the Faculty of Medicine, Colombo.

**Results:** The mean level of happiness in the study population was found to be 4.3195 (SD=0.5702). 76.1% of the study population was found to have a happiness level that was considered average or above. Household income (p=0.016) and self-perceived level of stress (p=0.009) showed significant associations with a low level of happiness.

**Conclusion:** This group of undergraduates showed promising levels of happiness. This study could be considered as a stepping stone for further studies on happiness in the Sri Lankan context.

**PP013**

**Prevalence of hypertension and selected risk factors in adults in a rural area in Sri Lanka**

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**Introduction and objectives:** Hypertension is a global public health problem. Control of risk factors is one of the main preventive strategies. The objective was to determine the prevalence of hypertension and selected risk factors in adults in a rural area in Sri Lanka.

**Method:** A descriptive cross sectional study was carried out among males and females above 18 years who were permanent residents in the Beliatta Medical Officier of Health (MOH) area. Multi stage cluster sampling method was used to select 266 participants from 12 Public Health Midwives areas. Interviewer administered questionnaire was used as the study instrument.

**Results:** The prevalence of hypertension in adults in the Beliatta MOH area was 20.3% (95% CI; 13.0 -28.6). Males had a prevalence of 25.4% (95% CI: 17.3-34.2) and it was 15.4% (95% CI; 8.9-23.0) in females. Of the hypertensives 33.4% were undiagnosed. In hypertensives and normotensives risk factors of a positive family history was 51.9% and 25% respectively (p<0.0001). However smoking 14.8% and 15.1% (p=0.610), regular alcohol intake 5.5% and 7% (p=0.775), inadequate
physical activities 38.9% and 40.1% (p=0.872), BMI of over 25, 35.1% and 31.1% (p=0.569) and stress 30% and 30% (p=0.320) present in hypertensives and normotensives did not show a significant difference. This may be probably due to control of risk factors by diagnosed hypertensives.

Conclusion: The prevalence of hypertension in Beliatta Medical Officer was 20.3%. A considerable proportion of hypertensives were undiagnosed.

PP014
Initial experience in implementation of a cancer gene panel test to determine the aetiology of breast cancer in Sri Lanka

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Introduction and objectives: Traditionally, families with inherited breast cancer are tested for mutations in the BRCA1/BRCA2 genes. When mutations are unidentified in these genes, extending testing to other susceptibility genes is difficult due to non-availability of tests, and cost considerations. The ability to perform cancer gene panel tests on next generation sequencing platforms help to overcome these limitations. This report aims to describe our initial experience in implementation of a cancer gene panel test to determine the aetiology of hereditary breast cancer in Sri Lanka.

Method: We implemented a breast cancer gene panel that tests for 18 cancer predisposition genes on the Ion Torrent PGM platform. Sequencing is followed by bioinformatics analysis. Novel variants are validated by Sanger sequencing. For further confirmation, Sanger sequencing is performed on other affected/non affected family members.

Results: Seven families with inherited breast cancer were tested. Three families had confirmed mutations. Family I had breast cancer, colorectal cancer and acute lymphoblastic leukaemia due to a missense mutation in exon 6 of the TP53 gene (c.626G>A:p.Arg209Gln), confirming diagnosis of Li-Fraumeni syndrome. Family II had breast, ovarian and spinal cord cancer due to a non-frame shift deletion in exon 4 of the BARD1gene(c.1075_1095delTTGCCTGAATGTTCTTCACCA;p.Leu359_Pro365del). Family III with breast cancer had a missense mutation in exon 2 of the STK11 gene (c.297T>G;p.Ile99Met).

Conclusion: Implementation of this cancer gene panel test has enabled us to determine the aetiology of inherited breast cancer in a cost effective and timely manner in Sri Lanka.

PP015
Medical undergraduates’ views regarding audio visual presentations (AVP) as a learning tool in Anatomy

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Introduction and objectives: Different learning tools have been used in teaching anatomy. With advancing technology, computer assisted teaching/learning methods have been introduced to medical curricula. This study was carried out to determine the views of medical students regarding the use of audio visual presentations (AVPs) in teaching/learning Anatomy at the Faculty of Medical Sciences (FMS), University of Sri Jayewardenepura (USJP).

Method: Altogether 146 students of the 2012/2013 A/L intake to FMS, USJP completed a simple self-administered questionnaire regarding anatomy teaching/learning.

Results: Students considered cadaver dissections(CD) as their most favoured method of learning anatomy [80.8 % (118/146)] followed by dissection hall
teaching [77.3% (113/146)], tutorials [66.4% (97/146)], learning from AVP [50% (73/146)] and lectures [49.3%(72/146)]. The majority 44.4% (52/117) of students who did the A/L in the Sinhala medium had a better understanding of AVP while 50% (7/14) of students who did A/L in the English medium had the best understanding. 59.6% (87/146) and 90.4% (132/146) wanted AVP to be shown after the relevant lecture and during the dissections periods respectively. Most students [87.7% (128/146)] believe that learning anatomy cannot be done only by AVPs and that they can gain more [68.5% (100/146)] if they read around the AVP topic prior to the presentation. Students stated that CDs should not be replaced [93.2% (136/146)] by AVPs even though the three dimensional orientation of difficult dissection areas could be easily grasped [(91.8% (134/146)] by watching AVPs. 

Conclusion: Cadaver dissections continue as the most preferred teaching/learning method in anatomy with an increasing trend in using AVP. The majority of students think that cadaver dissections should not be replaced by computer assisted techniques.

PP016
Views of medical students regarding cadaver dissections before starting dissections

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Introduction and objectives: First year medical students are exposed to cadaver dissections (CD) as learning/teaching material and they face a variety of emotional reactions when they encounter a human cadaver for the first time. Adverse psychological effects have been reported in Western medical students (MS), with 25.2% experiencing depression and nightmares. This study was carried out to determine the views of MS regarding cadaver dissections after introduction to the dissection hall but before starting dissections proper.

Method: Altogether150 students of the 2013/2014 A/L intake to the Faculty of Medical Sciences (FMS), University of Sri Jayewardenepura (USJP) completed a simple self administered questionnaire regarding their views about CD.

Results: In spite of a gender ratio of male: female of 1:2, the majority of students considered CD as challenging [80.6% (121/150)], as a stimulating way to learn [64% (96/1500] and as more informative [80% (120/150)]. After the first exposure, the majority considered CD as not a depressing task [54.5% (82/150)] and the dissection hall as a non-frightening environment [62.2% (94/150)] and only14% (21/150) had recurrent thoughts of cadavers after leaving the dissection hall. The majority of the students noticed the strong formalin smell [92% (138/150)] at the entrance and 55.3% (83/150) experienced the formalin odour (after the first encounter) even while away from faculty. A high percentage 80% (120/150) stated that an interactive session with the academic staff before the CD would reduce the negative impacts and help them to gain more during the dissections.

Conclusion: Although the majority of medical students are initially apprehensive towards dissections they realize the value of dissections as a learning tool. The initial adverse emotional reactions to cadaver dissections are relatively less than those documented in Western studies.

PP017
Preliminary study of the variability in the geometric acetabular angles in plane anterior-posterior pelvic radiograph in a Sri Lankan population

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Introduction and objectives: The morphology of the acetabulum and its relationship to the femoral head are important contributing factors for the hip dysplasia. The diagnosis of the hip dysplasia depend mainly on the radiographic measurements. In the assessment of acetabular morphology Sharp’s angle (ShA) and Sourcil angle (SoA) are often used. Relation between the femoral head and the acetabulum is described by Centre Edge Angle (CEA). Although there are few studies done on the above subject – no data available for a Sri Lankan population. The present study was conducted to assess the variations in the geometric acetabular angles in plane anterior-posterior pelvic radiographs in a Sri Lankan population.

Method: One hundred and thirty nine (139) normal hip radiographs were analysed.

Results: Majority 43.9% (61/139) of the ShA were between 36° to 40° with a mean value of 37.5°±3.73. Percentage 43.2% (60/139) had CEA between 36° to 40° which accounts for a mean value of 38.16°±4.67. SoA had the majority [60% (60/139) varying around 0° to 5°. In all three measurements there was no significant difference between two sides of the hip. Gender difference was observed for SoA where males had 50% (16/32) between 6°-10° while females had 49.5% (53/107) between 0°-5° which is statically significant (p<0.006), whereas other two angles had no gender differences.

Conclusion: Sharp’s angle and Centre Edge Angle had mean values, which were comparable with western data.

PP018
Socio-demographic characteristics and initial assessment of elderly patients admitted to the National Hospital of Sri Lanka

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Introduction and objectives: Sri Lanka has one of the fastest ageing populations in the developing world. Systems need to respond appropriately for this patient group. Geriatric assessment differs from standard medical evaluation. Objectives were to audit initial assessment, medication use and evaluate burden of chronic diseases in an elderly population.

Method: This was a cross sectional study of patients aged > 65 years admitted to medical wards of the National Hospital of Sri Lanka (NHSL) on two random days. Approval was obtained from the Ethics Review Committees of the Faculty of Medicine Colombo and the NHSL. A questionnaire and audit form was used to gather data.

Results: Of 78 patients 52 were male and 26 female. Majority (64%) was between 65-75 yrs. Majority had multiple co-morbidities: 43% had 1-2, 39.7% had 3-4 and 10% had >5. 61.5% had non-communicable diseases and 38.4% communicable diseases. 29.4% used 1-5 pills per day, 33.3% - 6-10, and 18% > 10 pills. 41.2% had to take medications thrice daily and 52.3% twice daily. Degree of disability was stated in the notes in 12.8%. Mobility was assessed in 8.9%, activities of daily living in 7.6% and risk of falls in 3.8%. Vision, hearing, nutrition, finances and caregivers were assessed in <1%.

Conclusion: Many potential geriatric problems are not assessed in current clinical practice. Patients have an excessive pill load and chronic disease burden. Assessment can be improved by implementing a structured assessment incorporated into the admission sheet. An assessment form based on our study findings could be used as a check list for junior staff, to guide comprehensive geriatric evaluation.
PP019
A rare case of Juvenile Hyaline Fibromatosis

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Introduction: Juvenile hyaline fibromatosis is a very rare congenital disorder, which has not yet been published from Sri Lanka

Case report: A 12 years old girl, a product of a consanguineous marriage, presented with multiple recurrent soft tissue swellings on scalp and upper body since 5 years of age. Examination revealed subcutaneous lumps in scalp, left shoulder and back with several previous excision scars. There was a molluscum like papulonodular lesion in the back of the scalp and gingival hypertrophy. No bone, joint or spine deformities, abnormal pigmentation or perineal abnormality. Lump in her left shoulder was tender. She underwent excision of painful lump and the histology revealed features of juvenile hyaline fibromatosis.

Discussion: JHF is disease due to mutations in capillary morphogenesis protein-2 (CMG-2 gene; Chromosome 4q21) resulting in abnormal metabolism of collagen type IV. It occurs from early childhood to adulthood. Onset of the disease is before 5 years and characterised by presence of tumour like lesions, in the Head and neck region, gingival hyperplasia osteolytic bone lesions and varying degree of skeletal and joint abnormalities. Diagnosis is confirmed by characteristic histology of the skin lesion with benign fibroblast proliferation, chondroid cells in the dermis and subcutaneous tissue. There is no definitive cure. Supportive treatment to prevent contracture formation genetic counselling re essential

PP020
Improving practices of parents and caregivers to reduce unintentional home injuries of children below 5 years in Wannamaduwa village in Thirappane MOH area

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Introduction and objectives: Children below five are the most vulnerable to unintentional home injuries as they often live in and outside of home. Parental and environmental factors are main contributors. The objectives of this study were to assess types and extent of unintentional home injuries among children below five, identify current practices of parents and caregivers and its determinants and develop a health promotion intervention to improve practices to reduce unintentional home injuries.

Method: A quasi experimental design was conducted in 3 phases. Phase 1 consisted of a cross sectional baseline study conducted in experimental and control areas among 71 participants using a questionnaire, history record index and a practice checklist. Determinants for poor practices of preventing injuries were identified in the experimental area through interactive group discussions with selected groups. During phase 2 a health promotion intervention was administered to 36 mothers at a weighing clinic and at mothers’ groups. Interactive interventions were conducted to improve knowledge, change attitudes and improve family support and skills in identifying risks. Phase 3 comprised of an evaluation conducted in both study areas to assess the effectiveness of the interventions.

Results: Injury prevalence was 30.99%; burns (36.4%) being the most common. Most required hospitalization and occurred when an adult was present. The mean practice score of both groups showed improvement
between phase 1 and 3. However, the difference between the pre and post scores was significantly higher (p=0.001) in the intervention group, with higher percentages in improvement of knowledge and attitudes in the intervention group vs. the control.

Conclusion: The health promotion intervention was effective in improving injury prevention practices and knowledge and in changing attitudes.

PP021
Protein energy malnutrition in patients with chronic kidney disease in Sri Lanka

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Introduction and objectives: Worldwide, there is a higher prevalence of protein energy malnutrition (PEM) among patients with chronic kidney disease (CKD), compared to the general population. Biomarkers of undernutrition are associated with worse CKD outcomes and mortality. Our objectives were to determine prevalence of PEM in CKD patients and to assess the relationship between PEM and age, sex and CKD stage.

Method: Adult CKD patients attending Kidney Disease Treatment and Research Centre clinics at Teaching Hospital, Anuradhapura, from 1\(^{st}\)-31\(^{st}\) August 2014 were recruited. Patients on dialysis or after renal transplantation, were excluded. CKD was defined using KDIGO guidelines. Body Mass Index (BMI), mid arm circumference (MAC), Triceps Skin-fold thickness (TSFT), most recent eGFR and knowledge about protein intake were assessed.

Results: 670 patients were enrolled. Average age was 58.2 years (SD 10.5 years). 634/670 (94.7%) were >40 years. 487/670 (72.7%) were men. 206/670 (30.7%) were in CKD Stage 3, 256/670 (38.2%) in Stage 4 and 153/670 (22.8%) in Stage 5. 165/670 (24.6%) had a BMI<18.5kg/m\(^2\); male sex (p<0.043) was significantly associated. 637/670 (95.1%) had a low MAC; male sex (p<0.001), age >40 years (p<0.001), and CKD Stage ≥3 (p<0.001) were significantly associated. 581/670 (86.7%) had a low TSFT; male sex (p=0.049) and CKD Stage ≥3 (p<0.001) were significantly associated. 359/670 (53.6%) were voluntarily restricting protein intake. 321/670 (47.9%) thought protein harmed their kidneys.

Conclusion: A majority of CKD patients had PEM. Older men in CKD stage ≥3 were significantly more likely to have PEM. Since adequate nutrition is protective, assessment of nutrition parameters and correction of PEM whenever possible must be prioritised in CKD management.

PP022
Biopsy proven childhood glomerulonephritis from a single nephrology unit in Sri Lanka

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Introduction and objectives: An insight into the spectrum of clinically significant glomerulopathies can be obtained from the results of renal biopsy. There is no published data on childhood glomerulonephritis in Sri Lanka. Therefore this study was designed to describe the clinical indications and histological diagnosis of biopsy proven childhood glomerulonephritis from a single unit in Sri Lanka.

Method: A retrospective study was done on all renal biopsies performed in children aged 0-15 years at the Nephrology Clinic, Lady Ridgeway Hospital for Children, Colombo between 2010 and 2012.

Results: Fifty one children with adequate biopsy reports were identified. Nephrotic range of proteinuria was found in 82%.
Macroscopic and microscopic haematuria were found in 15% and 10% respectively. Hypertension was found in 48% of children while 18% had renal impairment. Most of the children who underwent renal biopsy had nephrotic syndrome (46%), of which the commonest indication for biopsy was late onset steroid dependant nephrotic syndrome (52%) while steroid resistant nephrotic syndrome was 17%. Other indications were persistent non nephrotic range of proteinuria (22%), acute renal impairment (10%), and persistent haematuria with hypertension (8%) and persistent isolated haematuria (6%). Histology reports revealed that 46% of renal biopsies were suggestive of minimal change while mesangio proliferative and membranoproliferative glomerulonephritis were 30% and 12% respectively. Focal segmental glomerulonephritis was found in 4% of children whereas diffuse proliferative glomerulonephritis was 8%.

Conclusion: This study provides data on the indications for performing renal biopsy and the spectrum of histological diagnosis in Sri Lankan children.

Intra-cluster correlations and design effect of Diabetes Mellitus and its selected risk factors

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Introduction and objectives: Cluster sampling, compared to random sampling, reduces costs in data gathering from communities that are geographically widely spread. For sample size calculation in clustered designs, the design effect is utilised to account for the clustering effect. The design effect (DE) is a function of the extent of correlation within clusters (i.e. intra-cluster correlation coefficient, ICC) and is calculated using the formula \(\text{DE} = 1 + \text{ICC} \times (n - 1)\), where \(n\) is the average size of the cluster.

However, pre-study estimates of ICC and DE are scarce for local setting. The aim of the study was to estimate ICC and DE for diabetes mellitus and its selected risk factors.

Method: A sample of 1300 selected from stratified multi stage cluster sampling using a cross-sectional survey from 65 gramasevaka divisions (GSD) of Kalutara. Twenty (35–64 years) were randomly selected from a single GSD (one from each household). The data were collected using a pre tested standard questionnaire. Fasting plasma glucose (FPG) of \(\geq 126\) was diagnostic of DM. Analysis conducted using STATA 13.

Results: ICC values for diabetes mellitus, impaired glucose tolerance, overweight, obesity, central obesity and smoking ranged from 0.08 (overweight) to 0.13 (central obesity) and their DE ranged from 3.50 (overweight) to 4.06 (diabetes mellitus) respectively. For alcohol and inadequate physical activity ICC was 0.18 and 0.29 (DE 7.01 and 8.76) respectively.

Conclusion: ICC lies around 0.1 for most of the factor. The highest ICC was observed for inadequate physical activity. The values reported here may be useful in designing future clustered studies.

The influence of a family history of hypertension on disease prevalence and associated metabolic risk factors among Sri Lankan adults

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Introduction and objectives: Hypertension is a major contributor to the global non-communicable disease burden. Family history
is an important non-modifiable risk factor for hypertension. The present study aims to describe the influence of a family history (FH) on hypertension prevalence and associated metabolic risk factors in a large cohort of South Asian adults, from a nationally representative sample from Sri Lanka.

Method: A cross-sectional survey was conducted among 5,000 Sri Lankan adults, evaluating FH at the levels of parents, grandparents, siblings and children. A binary logistic regression analysis was performed in all patients, with ‘presence of hypertension’ as the dichotomous dependent variable and family history in parents, grandparents, siblings and children as binary independent variables.

Results: The prevalence of hypertension was significantly higher in patients with a FH (29.3%) than those without (24.4%) (p<0.001). Presence of a FH significantly increased the risk of hypertension (OR: 1.29; 95% CI:1.13–1.47), obesity (OR:1.36; 95% Cl: 1.27–1.45), central obesity (OR:1.30; 95% CI 1.22–1.40) and metabolic syndrome (OR:1.19; 95% CI:1.08–1.30). Presence of a FH in parents (OR: 1.30; 95% Cl: 1.14–1.46), grandparents (OR: 1.38; 95% Cl: 1.24–1.54) and siblings (OR: 1.31; 95% Cl: 1.21–1.41) were all associated with a significantly increased risk of developing hypertension.

Conclusion: FH and hypertension had a graded association in the Sri Lankan population, as the prevalence increased with the increasing number of generations affected. FH of hypertension was also associated with the prevalence of obesity, central obesity and metabolic syndrome. Individuals with a FH of hypertension form an easily identifiable group who may benefit from targeted interventions.

PP026
Effects of white coconut oil, virgin coconut oil and grated coconut on blood glucose and serum lipids in Wistar rats

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Introduction and Objectives: This study investigated the effects of white coconut oil (WCO), virgin coconut oil (VCO) and grated coconut on blood glucose and serum lipids in Wistar rats.

Method: Four groups of male Wistar rats (1-4) were maintained on four isocaloric test diets, containing WCO, VCO, WCO + grated coconut (1:1 ratio) and VCO + grated coconut (1:1 ratio) respectively. After 36 weeks of feeding blood glucose and serum lipids were assayed. Results were analysed using SPSS version 16.0.

Results: Compared with the baseline levels, mean blood glucose levels decreased in all four groups; -13.87, -7.22, -41.88, and -41.85 mg/dl respectively. Rats fed with mixtures of oil and grated coconut (groups 3 and 4) showed a significantly higher decrease in blood sugar (p<0.05) compared with diets containing oil only (groups 1 and 2). No significant differences (p>0.05) in blood sugar levels were observed between groups fed with diets containing oil only or between groups fed with diets containing mixtures of oil+ grated coconut. Compared with baseline levels, mean differences in serum total cholesterol (TC) were 9.05, -8.08, 6.11, 1.65 mg/dl, triglycerides -31.1, -20.75, -30.5, -49.8 mg/dl and high density lipoproteins (HDL) - 1.47, 8.32, 0.816, -10.82 mg/dl in groups 1-4 respectively. Although statistically not significant, lower TC and higher HDL levels were observed in rats fed with VCO containing diet.

Conclusion: Inclusion of grated coconut in the diet results in significant hypoglycemic action. Although statistically not significant
VCO may have beneficial effects on serum lipids which warrants further investigation.

**PP027**

**Preliminary cadaveric study of branching pattern of the coeliac trunk and arterial diameters of its main branches in a selected Sri Lankan population**

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Introduction and objectives: Coeliac trunk is the first central branch from abdominal aorta giving rise to its 3 main branches; left gastric (LGA), Splenic (SA) and common hepatic (CHA) artery. Sri Lankan studies on celiac trunk anatomical variations are scarce. Morphometry of coeliac trunk and its branches are important in development of techniques for liver transplantation. To describe the morphology and morphometry of coeliac trunk and main branches in a selected Sri Lankan population

Method: Eleven formalin fixed adult cadavers were dissected and measurements were taken by using electronic digital caliper.

Results: The mean length of coeliac trunk was 2.18cm±1.00 with majority [54.5% (6/11)] originating closer to the upper border of 1st lumbar vertebral body. Percentage 72.7 (8/11) of coeliac trunks divides into normal 3 main branches while 27.3% (3/11) had additional inferior phrenic arteries. All the cadavers had LGA as the 1st branch given from the trunk and in majority [45.5% (5/11)] LGA originated within 0.5cm from the origin of the trunk. In 72.7% (8/11) the diameter of the coeliac trunk was 0.6-0.8cm±0.46 which equals to the western figures. Out of the main 3 branches, LGA had the smallest (0.48cm±0.08) diameter while SA (0.79cm±0.13) and CHA (0.77cm±0.16) had equally similar mean diameters. In Majority [36.4% (4/11)] all 3 branches were given as terminal branches 0.5 cm distal to the origin of LGA. Majority of right gastric artery [45.5% (5/11)] arises from the gastro duodenal artery while 18.5% (2/11) arises from the hepatic artery proper.

Conclusion: Branching pattern of the coeliac trunk was similar to western studies with few anatomical variations.

**PP029**

**Insecticide susceptibility of wild caught adult sandflies from Hambantota district**

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Introduction and objectives: Sandflies belong to genus Phlebotomus are known vectors of leishmaniasis and P. argentipes is implicated as the likely vector in Sri Lanka. There are occasions of use of insecticides targeted for mosquito control being utilised for control of sandflies, in spite of the absence of an organised vector control programme. This study was done to determine the susceptibility of sandflies against four commonly used insecticides: lamdacyhalothrin (0.05%) cyfluthrin (0.15%) dieldrin (0.4%) and deltamethrin (0.05%).

Method: Adult sandflies were collected from Hambantota district, a known P. argentipes-prevalent area. The non-fed female sandflies were observed for 24 hrs before using them for susceptibility test. Twenty sandflies each were exposed to the selected insecticide for one hour duration (WHO recommended method). The knockdown rates were recorded at the end of 1hr and the mortality was recorded after another 24hrs. The susceptibility was compared against the results of control paper. Tests were done in triplicate and results were pooled. The sandfly species was subsequently confirmed as P. argentipesglaucus.

Results: The sandflies exposed to control paper recorded 0% mortality. There was 100% knockdown against all insecticides. Mortality
rate of 100% was observed against lamdacyhalothrin and cyfluthrin. The mortality rate was 85% against deltamethrin and only 60% against dieldrin.

Conclusion: *P. argentipes* is susceptible to lamdacyhalothrin and cyfluthrin and could be used effectively for future control programmes. The likelihood of resistance against deltamethrin and dieldrin was observed (particularly against the latter) which requires further confirmation. The study highlights the importance of insecticide-susceptibility testing of targeted insects prior to use of these chemicals for control purposes.

**PP030**

Bio-effectiveness of commonly used insecticides in mosquito coils against wild caught *Culex tritaeniorhynchus* in Sri Lanka

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Introduction and objectives: *Culex tritaeniorhynchus* is one of the major vectors of Japanese encephalitis (JE) in Sri Lanka. Mosquito repellents in coil format are widely used to prevent the infective bites of all vector mosquitoes including JE vectors. Therefore determining bio-effectiveness of mosquito coils against vectors is important. The objective of this study was to measure the bio-effectiveness of metofluthrin 0.005%w/w and d-trans-allethrin 0.12%w/w (commonly used insecticides in mosquito coils) against wild caught female *Cx. tritaeniorhynchus*.

Method: The mosquitoes required for the study were collected from an agro-farming area in the North Western Province of Sri Lanka using cattle baited net traps. Mosquito repellent activity of two active ingredients, metofluthrin 0.005%w/w and d-trans-allethrin 0.12%w/w were tested under the physiological conditions of blood-fed and sucrose-fed. WHO recommended methodology was followed. A control coil (without an active ingredient) was tested with the same mosquito population. KT₅₀ and KT₉₅ were calculated by generalized linear method using probit link function. The results were compared with the available data on *Cx. quinquefasciatus* and *Aedes* spp.

Results: The control coil did not cause any knockdown or mortality among mosquitoes. Mean KT₅₀ against d-trans-allethrin for sucrose-fed mosquitoes was 2.7±0.2minutes and it was 3.1±0.2mins for blood-fed mosquitoes. The KT₉₅ was 4±0.4minutes and 4.8±0.3mins respectively. The mean KT₅₀ against metofluthrin for sucrose-fed mosquitoes was 3.55±0.25mins and it was 4.74±0.25mins for blood-fed mosquitoes. The KT₉₅ was 5.95±0.6mins and 6.32±0.3mins respectively.

Conclusion: Both insecticides are effective against wild caught *Cx.tritaeniorhynchus* under different physiological conditions and this is comparable with their effectiveness against the *Culex quinquefasciatus* and *Aedes* spp mosquitoes.

**PP031**

Dengue NS1 antigen vs. Dengue virus nucleic acid: is the former a better marker in the latter stages of severe Dengue?

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Introduction and objectives: Laboratory diagnosis of dengue virus (DENV) infections is done by detecting different viral and immune markers. A definitive diagnosis of dengue is useful in the timely management of DENV infected symptomatic patients. Choice of an assay to diagnose DENV infections depends on the longevity of viraemia.

Method: Blood samples were collected from 91 patients from Gampaha and Negombo
Hospitals with a clinical diagnosis of dengue fever (DF) or dengue haemorrhagic fever (DHF), categorized based on progressive accumulation of fluid in pleural or peritoneal cavities on serial ultrasound scanning. Samples were taken from patients who had fever for a minimum of 3 days to a maximum of 9 days. The sera were tested for dengue NS1 antigen using an ELISA. Reverse transcription polymerase chain reaction (RT-PCR) was performed using primers targeting the DENV capsid gene.

Results: Patients with DF had 67% PCR positivity on capsid gene and 50% positivity for NS1 on fever day 3. Patients with DHF had 100% PCR positivity and 83% NS1 positivity on fever day 4. However, in the DHF group from fever day 5, PCR sensitivity declined, but NS1 positivity remained high even in the latter stages. There was no significant difference in NS1 positivity and leucopenia in both DF and DHF patients whereas platelet counts of the DF and DHF patients showed significant drop in platelet counts (p=<0.0001).

Conclusion: NS1 is useful to detect DENV infection even in the latter stages of DHF. Further, investigations are in progress to evaluate NS1 as a marker to predict the severity of DF and DHF.

PP032  
TNFα and IL-2 levels in Dengue patients - changes with clinical profiles

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Introduction and objectives: Dengue virus (DENV) infection is endemic in tropical and subtropical regions of the world including Sri Lanka. The objective of the present study was to assess TNF-α and IL-2 responses in patients with DENV infection with varying clinical severity.

Method: A commercially available cytokine ELISA was used to detect TNF-α and IL-2 in 67 confirmed dengue patients (by RT-PCR and serology), 15 healthy controls and 6 blood culture positive typhoid patients. Clinical data was collected with a help of a CDC style questionnaire. A statistical test with P-value <0.05 was considered significant in mean comparison, or in correlation analysis.

Results: No significant elevation in TNF-α levels was noted between DF and DHF patients but a significant variation was observed in the IL-2 levels between DF and DHF. No significant rise in TNF-α and IL-2 levels was noted with an increase in HCT (>45), thrombocytopenia, leucopenia and PCR positivity. The mean TNF-α and IL-2 values of DF and DHF were higher than that of healthy controls. A positive correlation was observed between the IL-2 and SGOT/SGPT levels. A significant difference was noted in the IL-2 concentrations between DHF and typhoid patients (p=0.005). Moreover, a significant correlation was noted with the disease severity within different grades of DHF.

Conclusion: TNF-α levels did not show a significant rise with disease severity whereas IL-2 levels showed a positive correlation with different grades of DHF. Higher levels of IL-2 at the early stages of symptomatic DENV infection might be used as a prognostic marker for progression to DHF.

PP033  
Keys to continuous quality improvement programme in government hospitals of Sri Lanka

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Introduction and objectives: To identify staff perceived enablers and barriers affecting
Continuous Quality Improvement (CQI) programmes in selected government hospitals in Sri Lanka during 2014.

Method: This is a descriptive cross-sectional survey of a stratified random sample of staff (medical doctors, nurses and other allied health staff), carried out from June 2014 to December 2014, using a self-administered questionnaire in sixteen government secondary and tertiary care hospitals, where dedicated quality management units have been previously established in Sri Lanka, aimed at identifying the enhancers and inhibitors (barriers) to Continuous Quality Improvement (CQI) as perceived by staff.

Results: Out of a total of 425 staff selected, 378 participants responded. This study identified that monitoring system (mean 3.14±0.71, correlation 0.524), physical structure (mean of 3.23±0.67, correlation 0.462), top management commitment (mean of 3.51±0.77, correlation is 0.387) and training (mean of 3.15±0.73 correlation 0.443), are the most important independent variables influencing the CQI programme respectively. Teamwork has the lowest rates (mean 3.05±0.802 correlation 0.227). Type of the hospital has not influenced the implementation of CQI programme.

Conclusions: The important factors contributing to the CQI implementation are monitoring system, physical resources training and top management commitment. Monitoring system and physical structure had the highest correlation with CQI programme. All the participants had lower rate for the teamwork and felt that teamwork had little influence on CQI programme implementation in government hospitals. No inter-hospital difference was found in CQI programme implementation.

PP034
Efficiency and suitability of Percutaneous Transvenous Mitral Commissurotomy (PTMC) in Sri Lanka

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Introduction and objectives: Percutaneous transvenous mitral commissurotomy (PTMC) is a cost-effective and valid alternative to surgical therapy in selected patients with mitral stenosis. There are no published data to evaluate the efficiency and suitability and to assess the outcome of PTMC in Sri Lankan patients. Therefore this study was designed to evaluate efficacy and assess the suitability and safety of PTMC in mitral stenosis patients.

Method: All patients who underwent PTMC at the Cardiology Unit, TH Kandy, Sri Lanka from 2010 – 2013 were retrospectively reviewed. Mitral valve area, mean left atrial pressure and systolic right ventricular pressure before and after the procedure, were analyzed.

Results: Among 52 PTMC patients, 44 (85%) were female, and 8 (15%) were male. Age ranged from 18 - 69 years (mean 41.6 ±12.4). The mean mitral valve area increased from 91.47±18.88mm² to 154.00±35.72 mm² (p = 0.0001) and the mean left atrial pressure decreased from 20.51±8.51 mmHg to 14.48±8.4mmHg (p = 0.0001). The right ventricular pressure decreased from 52.79±22.148 mmHg to 40.67±18.157mmHg (p = 0.0001). Successful results were observed in 42(80.8%) patients. Post procedure, grade 2 mitral regurgitation developed in 3 patients (5.8%). Age, sex and pre procedure mitral valve area were not associated with the final outcome.

Conclusion: PTMC is a safe, effective and suitable treatment option for mitral stenosis patient.
Cancer audit of a single urology unit at Colombo South Teaching Hospital, Sri Lanka – 2012

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Introduction: Urinary tract malignancies contribute to a significant portion of the cancers in worldwide as well as in Sri Lanka. Ageing population, high detection rate and increased health awareness have contributed to this rise in some extent.

Method: Retrospective analysis of data from the cancer registry of the unit in 2012

Results: Total number of cancer patients were 143. Half them were diagnosed with prostate cancer and presented at a mean age of 71.8 years. Bladder cancers were found in 36 (25.2%) and renal cancers in 31 (22%) patients. Testicular and penile cancer were found in one patient each.

Conclusion: Prostate carcinoma is the commonest malignancy encountered in the unit. Bladder and renal cell cancer are a disease of the middle aged men. Majority of bladder cancers were transitional cell carcinomas. Of the renal cancers 70-80% were conventional renal cell carcinomas. Number of testicular tumours and penile carcinoma were low.

PP036
Solitary caecal diverticulum mimicking appendicitis without the appendix

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Introduction: Solitary caecal diverticulitis is a rare cause of right side abdominal pain and mimic appendicitis on superficial assessment. Most are diagnosed at surgical exploration for appendicitis and a few cases have been reported without the normal appendix. Emphasis is needed in thorough clinical assessment and considering the rare cause of caecal diverticulum to the appendicitis picture.

Case report: 54 year old previously healthy mother admitted with 3 weeks of right iliac fossa pain, mild fever and more recent vomiting. Clinical examination and blood investigations were appendicitis and approach through Lanz incision revealed a caecal mass. Exploration through lower mid line incision revealed a 10X3cm diverticulum at site of appendix. Right hemicolectomy and ileo-colic anastomosis was done and the patient was discharged on day 6. Histopathology confirmed a caecal diverticulum and no appendicular tissue were identified in the specimen.

Discussion: Management of caecal diverticuli is controversial as no accepted evidence from trials. Management ranges from conservative to radical colonic resection. Percutaneous drainage, surgical drainage, ostoma creation and diversion, diverticular excision, Hartmann’s procedure, ileo-caecal excision, and right hemicolecotomy are the surgical options undertaken in the reported series. Some studies have shown a failure rate of 40% with conservative measures and local resections leading to subsequent colonic resections. Caecal diverticulitis mimics appendicitis and should be considered in atypical presentations of right iliac fossa pain. Though surgical procedures are necessary at emergency situations, radiological assistance in non-emergency atypical presentations will be more helpful for a better outcome.

Poster session 3

PP037
Association between maternal body mass index during the first trimester, mode of delivery and birth weight in primi mothers at the De Soysa Maternity Hospital, Colombo.
Introduction and objectives: There is a proven association between maternal Body Mass Index (BMI) with adverse pregnancy outcomes in developed countries. Presence of such an association has not been previously studied in Sri Lanka. The objective of this study was to describe the association between maternal BMI, mode of delivery and birth weight in primi mothers attending the De Soysa Maternity Hospital (DMH), Colombo.

Methods: A descriptive cross-sectional study was conducted in July and August 2013 at the DMH. One hundred and ten singleton primi mothers, without medical or obstetric disorders were randomly selected for the study. The data were collected using an interviewer based questionnaire with information obtained from the mothers, pregnancy records and bed head tickets. Frequency percentages were calculated for the four categories of BMI according to the Asian cut-off values.

Results: Twenty one (19.1%) mothers were underweight, forty (36.4%) were of normal weight, thirty seven (33.6%) were overweight and twelve (10.9%) were obese. Compared to normal vaginal deliveries maternal obesity was associated with an increased number of alternative methods of delivery (emergency or elective caesarean section, vacuum, and forceps) \((p=0.001)\). Underweight and overweight mothers did not show a statistically significant association with the mode of delivery \((p=0.522\) and \(p=0.333\) respectively). There was no statistically significant relationship between maternal BMI and birth weight of the baby.

Conclusions: The BMI was normal in the majority of mothers studied. Alternative methods of delivery increased as the maternal BMI increased, but there was no significant association between maternal BMI and birth weight of the baby.

PP038
Knowledge and practice of antimicrobial drug usage among intern medical officers (IMO) in three major teaching hospitals in Colombo district.

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Introduction and objectives: The value of antibiotics for human health is immeasurable. However, they are also a commonly misused drug class giving rise to unnecessary side effects, wasting of resources and development of resistance. This study aimed to investigate the level of knowledge on antimicrobial drug use, prevalence of self-medication with antimicrobial drugs, pattern of use, and factors associated with self-medication among intern medical officers in three major teaching hospitals in Colombo.

Method: A descriptive cross-sectional study was carried out among a sample of 105 IMOs selected by a stratified cluster sampling method. Data were collected using a pre-tested self-administered questionnaire.

Results: The knowledge on principals of antimicrobials use among IMO was satisfactory with 96.7% having good scores. However, high level of one month prevalence (19.02%) and life time prevalence (76.19%) of self-medication was reported among IMOs with high level of irrational use of antimicrobials (65.00%). The top three symptoms that led to self-medication were fever + sore throat (45.00%), fever + cough (15.00%) and fever + runny nose (10.00%). Tendency for self-medication substantially decreased with uncommon symptoms such as dysuria (0.0%) and eye discharge (0.0%). Amoxicillin (60.0%) followed by co-amoxyclov (35.0%) and azithromycin (05.0%) were the
most commonly used class of medicines. Main source of medicines for self-medication were pharmacy and directly from the ward. Busy work schedule, high level of confidence and past experience were found as main factors for self-medication.

Conclusion: Antibiotics are used irrationally by IMOs despite their sound knowledge. Relevant authorities should take appropriate actions to minimise this situation.

PP039
Implementation of multi sectorial nutrition action plan at grass-root level in a district

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Introduction and objectives: Sri Lanka, as a developing country has impressive health indicators except for nutrition related indices. The complex multifactorial nature of nutrition improvement led to the development of a nutrition policy and a multi sectorial steering committee at national level. There is a scarcity of evidence in its practical implementation at grass-root level. This study aims at understanding the level of implementation of this policy and ability of the grass-root level field officers to work as a team to improve nutrition in the Moneragala District.

Method: A cross sectional descriptive study was conducted among 255 field officers serving in 47 Grama Niladari (GN) areas representing health, education, agriculture, economic development and public administration using a self-administered questionnaire.

Results: Most of the officers (>90%) have understood that they have a job role in nutrition promotion in their area. When undertaking nutrition promotion activities, only 5% of GN areas had meetings with all the above officers during the last 30 days while 32% of GN areas had meetings with at least 3 officers. Eight percent of the GN areas didn’t have meetings with the officers during that time. Most (62%) of the officers wanted support from other officers for nutrition promotion activities but couldn’t whereas 46% requested help from other officers but couldn’t attend the meetings due to other commitments.

Conclusion: For effective implementation of a national multi sectorial nutrition action plan, a conducive platform needs to be developed for grass-root level officers to work as a team.

PP040
Level of satisfaction in pain management during and after episiotomy of mothers undergoing vaginal deliveries in Castle Street Hospital for Women (CSHW).

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Introduction and objectives: Episiotomy is defined as an incision made through the perineum during second stage of labor to facilitate the delivery of the baby. In some settings this is done under local anesthesia. This study is aimed to assess the level of satisfaction in pain management during and after episiotomy among mothers undergoing vaginal deliveries at CSHW.

Method: A descriptive cross sectional study was carried out among 140 females who underwent vaginal deliveries in CSHW selected by multistage systematic sampling method. The association between factors and overall satisfaction in episiotomy pain management was analyzed using an interviewer administered questionnaire and data extraction sheets.

Results: Out of 137 respondents to the questionnaire, 75.2% were satisfied while other 24.8% were not satisfied. A significantly higher satisfaction was seen among mothers who underwent vaginal delivery previously (p = 0.007), those who had experienced an
episiotomy before (p = 0.009) and mothers who delivered babies less than 2.8 kg (p = 0.002). There was no association in maternal age, nationality, employment status or educational level towards the level of satisfaction. There was no significant difference in satisfactory levels between those who received analgesics and those who did not. (p = 0.697). The level of satisfaction was not associated with the reported level of pain during episiotomy (p = 0.732).

**Conclusion:** The overall pain management for mothers who undergo normal vaginal delivery in CSHW is in a satisfactory level however, the factors identified as influencing the satisfaction of mothers should be addressed to improve the quality of care.

**PP041**

**Leading factors affecting International Normalized Ratio (INR) instability and complications in post-valve replacement readmissions at Teaching Hospital Kandy, Sri Lanka**


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**Introduction and objectives:** Post valve replacement patients require lifelong anticoagulation therapy with monitoring of INR to avoid mechanical valve thrombosis and thromboembolism. Studies on INR monitoring are scarce in Sri Lanka. This study describes the factor for INR instability and complications in post-valve replacement readmissions presenting to the Cardiothoracic Unit (CTU), Teaching Hospital, Kandy (THK), Sri Lanka.

**Method:** All readmissions due to INR instability following a valve replacement to the CTU of the THK over a period of one and half years from October 2012 were included. An interviewer administered structured questionnaire was used for data collection and entered to an Excel sheet and analyzed using SPSS statistical software. Ethical clearance was obtained from the Ethical Review Committee of the THK.

**Results:** There were 43 patients with INR instability. The ages ranged between 24 years to 66 years and the mean age was 46.3 years (SD=13.4 years). 74.4% did not have a complication on admission, apart from the INR instability. The majority (67.4%) tested the INR in the private sector. All had their education level up to grade 11. 70% were not on any other drug interacting with Warfarin at the time of data collection.

**Conclusion:** Health education on the importance of INR testing among post-valve replacement has been effective as the majority presented with only INR instability. As a majority use the private sector and studying the reasons for this could be important for the future.

**PP043**

**The level of satisfaction on intranatal care received during hospital stay among mothers at Castle Street Hospital for Women**

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**Introduction and objectives:** Lack of quality care is a major cause for undesired maternal and neonatal health outcomes worldwide, more in low-middle income countries, including Sri Lanka. Use of quality assessment tools such as patient satisfaction surveys are vital in improving quality of care. This cross-sectional study assessed the level and factors associated with maternal satisfaction on intranatal care at a tertiary care hospital.

**Method:** Total of 422 eligible mothers, selected by a non-probability consecutive sampling method, were assessed using a questionnaire at an exit interview. Associated factors were tested for statistical significance using Chi Square test. A p value less than 0.05 was considered as statistically significant.
Results: Majority (89.6%; n=368) were satisfied with intranatal care. Most mothers (n=388; 91.9%) were satisfied with cleanliness of wards. Availability of beds received highest level of dissatisfaction (n=97; 23%), followed by availability of sanitary facilities (n=83; 19.7%). Most mothers (99.3%; n=419) would come back to same hospital for similar services in future. Being educated above Ordinary Level (p=0.037), parity more than one (p<0.001), not having antenatal complications (p=0.022) and having extended family support (p<0.001) were associated with being satisfied with intranatal care. Age, reception of antenatal care or mode of delivery failed to show any association.

Conclusion: Most mothers were satisfied with intranatal care they received, but further improvement can be by upgrading dimensions mothers were dissatisfied with, like bed and sanitary facility availability. Primipara, less educated mothers coming from nuclear families or suffering from pregnancy complications should be cared more to improve maternal satisfaction.

PP044
Intestinal parasitic infections and body mass index among children living in the tea plantation sector in Kandy, Sri Lanka

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Introduction and objectives: Intestinal parasitic infection (IPI) is a major public health problem in children living in developing countries. IPIs can cause considerable morbidity, influencing nutrition, physical fitness and cognitive function. Previous studies have identified that IPIs and poor nutritional status are common in tea plantation areas in Sri Lanka. This study was designed to determine the association between IPI and body mass index in children living in the tea plantation sector in Kandy.

Method: This cross-sectional study was carried out among 489 children living in a tea plantation area in Kandy from January to April 2013. Stool samples were subjected to wet preparation and formaldehyde-ether sedimentation techniques for identification of parasites. Height and weight were collected from each participant for calculating the body mass index (BMI). The data was coded and analyzed using SPSS version 17.0.

Results: The mean age of the study group was 6.2 (SD±3.4). The overall prevalence of IPIs was 53.2%. A total of 7 species were identified with Ascaris lumbricoides leading (38.3%) followed by Entamoeba coli, Enterobius vermicularis, Blastocystis hominis, Endolimax nana, Giardia lamblia and Iodamoeba butschlii. There was no statistically significant difference (p = 0.41) between the mean BMI of infected (14.1 kg/m² ± 1.4) and uninfected children (14.0 kg/m² ± 1.4).

Conclusion: IPIs were more common in this community and not a contributing factor for BMI. Future research providing more insight on the nutritional impact of IPIs is required to determine the association between IPIs and BMI in this community.

PP045
Genotyping of HBV from a selected sample of individuals who were referred by the surgical unit, Teaching Hospital, Peradeniya

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Introduction and objectives: Hepatitis B virus (HBV) infection is a health problem in South East, South Asian and African countries and infects about 2 billion people worldwide. Infections can progress from asymptomatic carrier state to chronic liver disease. There are 8 genotypes (A-H) of HBV and the response to
antiviral therapy varies with the infecting genotype. The true incidence of HBV and circulating HBV genotypes in the Sri Lankan population is not well known. Thus the current study is aimed to identify the genotypes of the HBV present in a selected group of HBV carriers in Sri Lanka.

Method: Six patients’ serum samples positive for HBsAg were used to identify the different genotypes of HBV. Part of the S gene which codes the “major” envelope protein was used as a target using primers PreS2 (5’GGGACACCATAATCTTGG), S1R (5’ TTAGGGTAAAAATGATAACCA) for the first round and primers YS1 (5’GGGACTCAAAGATGTTGTACAG) for the second round of PCR to yield a 583bp amplicon, which was sequenced by Sanger method.

Results: Of the 6 HBsAg only two samples produced positive band of 583bp, which when sequenced had >96% homology to the genotype A of HBV.

Conclusion: The study showed the presence of genotype A of HBV in a selected sample of carriers. Further research on the characterization of HBV is required to obtain a clear overview of the HBV genotype/s in the Central Province. The findings from this study may be instrumental in the treatment of chronic hepatitis B patients since response to antiviral treatment varies according to the infecting genotype of HBV in different populations.

PP046
Urine micro albumin/creatinine ratio in wistar rats given unboiled and boiled water collected from dug wells in high disease prevalent areas for CKDU in North Central Province (NCP) and water from low disease prevalent Huruluwewa area in NCP

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Introduction and objectives: Chronic Kidney Disease (CKDu) is prevalent in NCP and people consume unboiled, dug well water. Three wells were selected from NCP according to the number of CKDu patients in the locality. Huruluwewa area has a low prevalence of CKDU and was considered the control.

Method: Sixty six Wistar rats divided into six groups with equal male/female ratios. Ten rats assigned into each experimental group (1-4) whilst 16 rats to the control (5). Group 1 -3 given dug well water from New Town Medirigiriya (NTM), Bisobandaragama from Medirigiriya and Divuldamana from Dimbulagala divisions. Group 4 given boiled water from NTM. Group 5 given water from Huruluwewa. After 14 months, their spot urine samples analysed for Urine microalbumin and creatinine. Microalbumin/creatinine ratio calculated and compared with control. Fluoride, calcium, sodium, arsenic, cadmium and Fe content in water were measured.

Results: Microalbumin to creatinine ratios [U (MA)/U (Cr)] expressed as microg/mg and it was (250±179.25) NTM, (62.62±64.96) Bisobandaragama, (77.35± 38.93) Divuldamana, (103.32±125.70) Medirigiriya boiled, and (108.21±96.66) Huruluwewa. Significantly high ratios were observed in rats from NTM (p=0.028) whilst significance of boiled and unboiled NTM was (p=0.058). High Fluoride, sodium and calcium levels were detected in selected wells compared to Huruluwewa. Fe, arsenic and cadmium levels were below detectable levels.

Conclusion: Rats given unboiled water from NTM had significantly high [U (MA)/U (Cr)] ratios. Boiling of water helped to reduce this effect.
PP047  
Development and validation of model for estimation of body mass index using waist and hip circumference

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Introduction and objectives: It is difficult to measure weight to calculate body mass index (BMI) in critically ill patients in resource poor settings. We aim to develop and validate a BMI prediction model using waist circumference (WC) and/or hip circumference (HC).

Method: Two simple linear regression equations of BMI with WC and HC, and multiple linear regression with all three were fitted using a derivation sample in a healthy volunteers’ dataset (n=297). To assess the developed model residual-versus-fitted plots were used. Multicolinearity was assessed using variance inflation factor (VIF) and normality of errors by P-P plots. Regression equations were validated by adjusted $r^2$ values and shrinkage of adjusted $r^2$. Level of agreement of BMI assessed using Kappa statistic and convergent validity with systolic blood pressure.

Results: The mean (SD) BMI, WC and HC were 22.2 (3.9) kg/m$^2$, 82.8 (9.9) cm and 88.4 (7.9) cm respectively. Simple linear regression of WC and HC with BMI had coefficient of 0.362 (0.335-0.39 95%CI) and 0.45 (0.419-0.481 95%CI) respectively. The adjusted $r^2$ were 0.773 and 0.806 respectively. Multiple linear regression had 0.172 (0.129-0.214 95%CI) and 0.272 (0.221-0.324 95%CI) as coefficients for WC and HC respectively. The adjusted $r^2$ was 0.855 with VIF of 3.42. The Residual-versus-fitted plots and P-P plots were satisfactory for all three equations. The shrinkage, kappa and convergent validity for the three regressions (WC and HC, WC, HC) were 0.04, 0.72, 0.17; 0.06, 0.73, 0.17 and 0.02, 0.65, 0.09 respectively.

Conclusion: WC alone is a better predictor of BMI.

PP049  
An audit on adherence to standard practice of active management of third stage of labour

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Introduction & objectives: Active management of third stage of labour is highly recommended by WHO to prevent PPH. To assess adherence to recommendations of FIGO & ICM in managing third stage of labour.

Method: Three clinicians attached to labour ward of audit setting observed the adherence to each step of active management of third stage of labour without informing the birth attendants for one month prospectively & maintained records. Then results were analyzed and based on them a workshop and two drill sessions were organized over next three months to educate and to improve standards. Thereafter, an audit was carried out by the same clinicians after three months.

Results: In the first audit and re audit 256 & 310 deliveries were analyzed respectively. The initial audit showed adherence to correct use of uterotonic – stage, dose & mode of administration in 86.5%, 86.1% & 92.1% and in re audit this increased to 92.1%, 95.7% & 94.3% respectively. Adherence to correct method of control cord traction was 64.8 % (166/256) in the initial audit, but improved to 83.5% (259/310) which was significant (P < .001). Adherence to fundal massage immediately after delivery was 89.3% (128/256) and 94.4% (293/310) in initial and re audit (P < .01). Palpation of fundus at least two times within 30 minutes of placental delivery was 59.8% (153/256) and improved to 68 % (210/310) in the re-audit.
Conclusion: In the initial audit, lapses in adherence to standard practice was identified in several components. Continuous education has improved adherence to most component of active management of the third stage of labour. But there are some areas which need further strengthening.

PP050
Development of modified mismatch PCR-RFLP to screen mutations in codon 12 and 13 of K-ras gene of colorectal (CRC) patients in Sri Lanka

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Introduction and objectives: Mutations in K-ras codon 12, 13 of exon 2 are known to affect prognosis and impart resistance to anti EGFR monoclonal antibody therapy in CRC. Although several diagnostic tools have been developed for K-ras mutation testing, these procedures are too expensive or time consuming. Our aim was to develop an effective, reliable and inexpensive method for the detection of K-ras mutations in codons 12 and 13 of exon 2 in CRC patients in Sri Lanka, and to relate the mutational status to liver metastasis.

Method: The mismatch PCR-RFLP was developed and used to screen mutations in codon 12 and 13 for DNA isolated from paraffinized tumour tissue of 30 CRC patients followed up for 5 year after surgery to detect liver metastasis. Cross-tabulations were generated between K-ras mutations and the metastatic status. The Chi Square test was used to indicate statistical significance of the association.

Results: Analysis of banding pattern obtained from restriction digestion of PCR amplified region containing codon 12 and/or 13 of KRAS gene of 14(46.6%) CRC patients revealed the presence of mutations. Of the 30 patients, 13(43.3%) had developed liver metastases. There was a significant association between the presence of a K-ras mutation and the occurrence of liver metastasis ($X^2=4.693$, p=0.003).

Conclusion: This mismatch PCR-RFLP protocol is a suitable method to screen codon 12 and 13 mutation of K-ras gene to predict liver metastasis. Presence of these mutations is associated with the occurrence of liver metastasis during the first 5 years after surgery.

PP051
Spermatogenic effect of the Cardiospermum halicacabum.

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Introduction and objectives: Cardiospermum halicacabum originated from Tropical America. Among the Chemical constituents of the Cardiospermum found mainly are 1,4 Butandiol 2,3 Dimethoxy.,and N-(4 Oxo -4 Phenyl – 3 –Tosylbutaril Pyrrolidine. These are Phytosteroids. Therefore it was hypothesized that it increases the spermatogenesis. Among eligible couples, there is a significat rate of subfertility due to poor spermatogenesis. To establish the spermatogenic activity of Cardiospermum by quality and quantity of sperms.

Method: Cardiospermum Hot Water Extract is given to the ten randomly selected volunteers who visited the sub fertility clinic at Family Health Bureau as the sample. 30 g of Cardiospermum herb hot water extract was given for three days per week for three months. Pretest and post-test Seminal Fluid analysis was done.
Results: Mean increase in sperm count is 14.659% (SD=0.46, 99% confidence interval 15.05–14.25, and 95% CI 14.92–14.4. Motility (a+b) increased by 14.2 percent. Morphologically abnormal forms were decreased by 21.135%. SD=2.73, 99% CI 21.16–21.109, 95% CI 21.152–21.118 (a−active forms of sperms, b – sluggishly active forms).

Conclusion: It is clear that Cardiospermum halicacabum is spermatogenic and it increases the viability and motility of sperms and it increases the normal forms. Therefore this can be used to treat sub fertile men in the clinics to increase their chances of fathering a child.

PP052
Prevalence and predictors of Chlamydia trachomatis infection among pregnant women in Kandy district

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Introduction and objectives: Chlamydia trachomatis (CT) infection in pregnancy is associated with adverse pregnancy outcomes such as increase in a woman’s risk of miscarriage, pre-labour rupture of membranes, preterm labour and postpartum endometritis associated with significant neonatal morbidity. Targeted screening of pregnant women for CT infection has been shown to reduce the incidence of above complications. Aim of the study was to determine the prevalence of CT infection and the risk factors associated with CT infection among pregnant mothers in Kandy District.

Method: Ethical clearance was obtained from Faculty of Medicine, Peradeniya. Cross sectional study was carried out in ante natal clinics in Kandy district. Using stratified sampling method 210 pregnant mothers were selected from urban, rural and estate sector. Urine samples of all pregnant women were tested for CT by PCR method. Interviewer administered questionnaires were also given to all participants. Data were analysed using SPSS.

Results: Overall CT prevalence among pregnant mothers was 3.8%. Highest prevalence was seen in the estate sector (21%). Mean age of pregnant women was 28.2 (SD 5.5). Mean age at marriage was 23.4 (SD 4.3). Living in a estate (p value 0.000), Higher educated women (OR -1.062 (CI -1.018 -1.106) were significant risk factors for CT infection. Younger age group, husband staying away from home and being a housewife were associated risk factors but statistically not significant.

Conclusion: CT infection among pregnant mothers in estate sector is higher than the urban and rural areas. Targeted screening of mothers in the estate sector will reduce the CT associated risk factors.

PP053
A filter for removal of As \textsuperscript{+++} ion from drinking water with sorbent green tea and banana peels/rice paddy husk dust and coconut shell burnt carbon layers.

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Introduction and objectives: The contamination of drinking water with arsenic as a result of incorrect and unproductive use of insecticides, weedicides and other agrochemicals is a major health issue in the
North Central and Northern provinces in Sri Lanka. As a result many patients suffer from chronic renal disease in these areas. To Test the Filter Efficiency of the two innovative Bio filter layers of the filter and fitting Isotherm. The Banana peels and the Green Tea.

**Method:** Different As$^{+++}$ solutions were made in five concentration gradients. 0.01mg/L, 0.02mg/L, 0.04mg/L, 0.06mg/L, 0.1mg/L respectively., Banana peels 260g, Green tea 200g, Coconut husk dust 260g, Coconut shell burnt carbon particles 10mm * 10mm size being used, Sand particular size 0.6cm * Colorimetric test kit method was used for testing with two decimals accuracy.

**Results:** Absorption percentages for above solutions for Banana peels and Green Tea – 90.7, 71.4, 0, 10, 8.1. For Green Tea – 100, 100, 100, 96.7, 91. For Banana peels Langmuir Isotherm and Green tea innovative Isotherm are fitting.

**Conclusion:** It is shown that a significant percentage of As$^{+++}$ is adsorbed by the green tea layer and the Banana peels layer. The P values show statistical significance. This filter can be a practical solution for the health problem prevailing in the North Central and Central provinces in Sri Lanka. It is very cheap, ecofreindly, feasible and simple, involving little technical knowledge.

**PP054**
**Laparoscopy versus open appendicectomy: a comparison of outcome**

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**Introduction and objectives:** To assess the effectiveness of laparoscopic appendicectomy in complicated appendicitis.

**Method:** The study was done using the secondary data from the bed head tickets (BHT) of patients in a single surgical unit at Teaching Hospital Kurunegala who had undergone appendicectomy from 2014.04.01-2014.09.30 by the authors. Days of post-operative stay and duration of the anaesthesia in BHTs were analysed.

**Results:** Total number of appendicectomies performed was 137 (98 laparoscopy, 39 open) and data of only 117 patients were available. Of them sixty nine males and forty eight females had undergone appendectomy. All patients had been equally treated with post-operative antibiotics. Eighty one (68%) had undergone laparoscopic appendicectomy (mean age 24 years) and 36 (32%) had undergone open appendicectomy (mean age 26 years). Appendicular abscesses had been encountered among 42 (36%) patients; 26 (22%) among laparoscopic surgeries and 16 (14%) among open surgeries. Shorter post-operative stay (mean 3.35 days) was seen among laparoscopy surgeries compared to open appendicectomies (3.69 days) which was not statistically significant ($p>0.05$). One patient had stayed 5 days post operatively in laparoscopy group due to ileus. Average time of anaesthesia was higher among laparoscopy surgeries (44 min) over open appendectomy (30.67 min) which was statistically significant (t=2.7, $p=0.01$).

**Conclusion:** Laparoscopic appendicectomy is a better treatment option for appendicular abscess in terms of anaesthesia time, post-operative stay and cosmetic resuland patient satisfaction.

**Poster session 4**

**PP055**
**Effect of foot posture and anthropometric measurements on patients with chronic plantar heel pain (CPHP).**

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Introduction and objectives: To assess the effectiveness of laparoscopic appendicectomy in complicated appendicitis.
Introduction and objectives: Chronic plantar heel pain (CPHP) is a common musculoskeletal condition of the foot. Foot posture and body mass index (BMI) are linked to lower limb musculoskeletal conditions. The aim of this study was to identify the effect of foot posture, BMI and waist hip ratio (WHR) on CPHP in patients attending Rheumatology clinics in NHSL.

Method: Ninety subjects with CPHP (70 females, mean age ± SD, 45.53±12.46 years) and age and sex matched controls (70 females, mean age ± SD, 45.51±12.5 years) were studied. Baseline data were obtained by using an interviewer administered questionnaire. Foot posture was assessed by a previously validated diagnostic clinical tool, Foot Posture Index (FPI). BMI and WHR were calculated by standard methods. Analysis was done by SPSS version 17.0.

Results: In CPHP group, 66.7% subjects had unilateral pain and 60% had pain at the periphery of the heel. FPI was significantly higher in CPHP group when compared to controls (5.59±2.656 vs 4.17±2.549; p<0.05) with a significantly higher percentage of patients with CPHP (57.8% vs 27.8%; P=0.000) having pronated foot types (FPI≥6). The mean±SD BMI was significantly greater in CPHP group, compared to controls (24.27±3.137 vs 22.78±2.376; p<0.05). No statistically significant difference was seen in WHR between the two groups.

Conclusion: Pronated foot posture and increased BMI are associated with CPHP. Waist Hip ratio does not seem to play a role in CPHP. Foot posture and BMI assessments are recommended in evaluating patients with CPHP, with a view to correct these parameters when managing these patients.

PP056
Is CKDU in Sri Lanka a sequel of interstitial nephritis?

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Introduction and objectives: Physicians have observed a group of patients in CKDu endemic regions presenting with acute ill health and elevated serum creatinine. The objective is to describe the clinico-pathological profile of the above patients.

Method: Symptomatic patients aged >20 years with two elevated serum creatinine over a three months period from CKDu endemic regions were included. Clinical features, biochemical profile and histology were studied. Those with identifiable causes for the renal dysfunction were excluded. They were divided into 3 groups based on the time duration from onset of symptoms to the time of biopsy. The serial mean serum creatinine and biopsy pathology with activity and chronicity indices were analysed in the 3 groups.

Results: There were 59 patients with a mean age of 44(9) years. 57 were farmers. Male to female ratio was 55:4. The most prevalent symptoms were backache, feverish fatigue feeling, dysuria, joint pain, and dyspepsia. The mean serum creatinine at biopsy was 143.86 (47.91) µmol/L. Inflammatory markers were elevated. Proteinuria, hematuria and leucocyteruria were observed. Histology was compatible with an interstitial nephritis with a mixture of acute and chronic tubulo-interstitial lesions and glomerular scaring. Mean serum creatinine decreased in all 3 groups from onset of symptoms to point of biopsy. Histological activity reduced and chronicity increased with time in the 3 groups.

Conclusion: The symptomatic patients from CKDu endemic regions had interstitial nephritis with elevated inflammatory markers.
Histological activity reduced and chronicity increased with time. It is possible early CKDu begins as interstitial nephritis and progresses into CKDu.

PP057
Video gaming and its effects among the Sri Lankan youth

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Introduction and objectives: Playing video games is a common practice among Sri Lankan school children and youth. Negative health effects of video gaming has been identified among youth in many countries. Objectives of the study were to describe video gaming related practices among urban Sri Lankan youth, and identify motives behind video gaming and the effects of them.

Method: The data was collected using a mixed research method by using a self-administered questionnaire among 320 conveniently selected urban Sri Lankan school and university students studying in government and private institutes. 7 in depth interviews and a focused group discussion involving 10 individuals were also conducted.

Results: 156 individuals (49%) play video games more than 2 days per week and 99 of them play almost every day. 35 (11%) play video games for more than 5 hours per day. 205 (64%) play online games and 21% of them would play for more than 7 hours a week. 57 (18%) state that they socialize with friends through online gaming. 20% of the sample have spent more than Rs. 6000/= on gaming during a 6 month period. 9% have missed their meals, 34% have missed their sleep and a further 5% have conflicts with their partners because of video games. The qualitative arm reveals two main themes as reasons for gaming: gaming is used to ‘retreat from real life’ and as ‘an instant reward mechanism’.

Conclusion: Video gaming practices are common among the youth and they have a direct negative health impact on some of them.

PP058
Musculoskeletal and general first aid knowledge and practices among traditional fishermen in the Eastern Province of Sri Lanka

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Introduction and objectives: Traditional Sri Lankan fishing practices based on physical activities than equipment, put fishermen more at risk of musculoskeletal injuries. Objectives of the study were to describe the knowledge and practices of first aid for musculoskeletal injuries among traditional Sri Lankan fishermen and to assess their knowledge and practices regarding general first aid issues.

Method: A descriptive cross sectional study involving 110 conveniently selected fishermen from 3 traditional fishing villages in Trincomalee, Sri Lanka was carried out. An interviewer administered questionnaire was used to gather data on their knowledge and practices on first aid, mainly for musculoskeletal injuries, other situations, and facilities available for them.

Results: 99 fishermen had never had any first aid training. First aid kits were not available with 105 of them. 76.4% of them considered carrying instruments and drugs was unsuitable due to its load. 69.1% preferred to wait without initiating first aid till they reached shore. 66 of them allowed muscle cramps to settle on their own. 38.2% allowed muscle or joint pains to settle on their own while 10.9% used indigenous medication. 68.2% did not practice either resting or compression for strains or sprains. None used ice. 76.4% had no emergency communication system and
26.4% had no system at all to communicate. 22 did not know proper first aid for bleeding and 65 did not know for burns. 80% did not know about CPR.

**Conclusion:** The knowledge and practices of first aid for musculoskeletal injuries and for general conditions were poor among the fishermen.

**PP059**
**Voluntary reporting of adverse events in an internationally accredited private hospital in Sri Lanka**

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**Introduction and objectives:** Adverse events are unintended incidents, injuries or complications that are caused by healthcare management, rather than by patient’s underlying conditions. Identification and measurement of adverse events in a hospital is central to patient safety. In our passion of improving patient safety, with accreditation obtained from the Australian Council on Healthcare Standards [ACHS] in 2010, we launched, as the first step, the voluntary reporting of adverse events program. To examine the extent and pattern of reporting of adverse events in a voluntary incident reporting system in an internationally accredited private hospital in Sri Lanka.

**Method:** A retrospective analysis of received adverse events by the quality department over a period of 24 months from January 2013 to December 2014 in an internationally accredited private hospital in Sri Lanka.

**Results:** Majority [26%] of reporting were from obstetrics and paediatrics units. The number of adverse events reported each month varied from 10 per month to 35 per month. Non-compliance on agreed protocols and standard operating procedures was the most common underlying cause leading to adverse events [15%], followed by surgical site infections [11%], re-admissions [11%], hospital acquired infections [11%].

**Conclusion:** Healthcare providers in obstetrics and paediatrics units are keener in reporting adverse events. It could be due to leadership in the respective units embracing the culture of voluntary reporting as a tool for continuous improvement.

**PP060**
**The relationship between sleep pattern and academic performance among university students**

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**Introduction and objectives:** Sleep is a basic human need for maintaining physical and mental health. Among a wide range of factors, sleep is one factor that can influence the academic performance of the students. This study was aimed to determine the association between sleep quality, sleep wake habits and daytime sleepiness with academic performance among University students.

**Method:** The study was done in Faculty of Science, University of Colombo with 98 participants. Data was collected through self-administrated questionnaires inquiring demographic data, Grade Point Average (GPA), sleep quality, daytime sleepiness and sleep habits. Questionnaires included demographic data sheet, Pittsburgh sleep quality index (PSQI) global score, sleep diary and Epworth sleepiness scale (ESS). The association between categorical variables were determined using Chi square test.

**Results:** The final analysis included 52 females and 46 males. Good sleep quality was reported by 56.1% students. According to GPA there was good, average and poor performance in 50%, 28.6% and 21.4% respectively. The sleep quality and academic performance was significantly associated; (p<0.05, P = 0.000; $\chi^2 = 45.630$). The average nocturnal sleep duration was 7.12 ± 1.06 hrs and there was a significant association between total nocturnal sleep duration (p <
0.05, \( p = 0.000 \); \( \chi^2 = 26.527 \) and daytime sleepiness (\( p < 0.05, P = 0.000 \); \( \chi^2 = 23.313 \)) with academic performance.

**Conclusion:** There was a significant association between sleep quality, total nocturnal sleep duration and daytime sleepiness with academic performance and a negative correlation between bed time and academic performance among the study group.

**PP061**

**Methicillin Resistant *Staphylococcus aureus* contamination of phlebotomy tourniquets and faucets**

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**Introduction and objectives:** Methicillin resistant *Staphylococcus aureus* (MRSA) is transmitted through direct contact or fomites. Carriage on hospital personnel is the most important means of nosocomial spread. However, fomites are being increasingly recognized as sources of nosocomial infection. Our aim was to describe the MRSA contamination rate of phlebotomy tourniquets and faucets in a tertiary care hospital and to compare the contamination of plastic tube tourniquets with that of fabric tourniquets.

**Method:** A cross-sectional study was carried out in the general wards of a tertiary care hospital in Colombo District. Two hundred tourniquets were collected and 100 faucets were swabbed and cultured on CHROMagar\textsuperscript{TM} MRSA medium (CHROMagar Microbiology). Fifty plastic tubes and 50 fabric tourniquets were compared for contamination as an experimental study.

**Results:** MRSA grew in 26% of tourniquets. Majority were plastic tubes. MRSA contamination of tourniquets did not significantly differ by ward (\( p > 0.4 \)). MRSA was found on 26% of faucets, where contamination rate was highest in the common wards for dermatology, dental, rheumatology, and neurology (55.6%), followed by gynaecology (45.2%), cardiology (33.3%), surgery (18.8%), psychiatry (11.1%), and medicine (5.6%). There was a significant difference between the different types of wards (\( p < 0.01 \)). There was no significant difference in the colony count per surface area of the two types of tourniquets after a single use.

**Conclusion:** MRSA contamination rates of tourniquets and faucets are high. Single use of plastic tube tourniquets and daily cleaning of faucets with detergents is recommended.

**PP062**

**In vitro antimicrobial activity of leaf extracts of *Mangifera zeylanica***

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**Introduction and objectives:** With the evolution of antimicrobial resistance by microorganisms there is a necessity for novel drugs. This study aimed to investigate the antimicrobial activity of the leaf extracts of *Mangifera zeylanica*, an endemic plant in Sri Lanka.

**Method:** Leaf extracts were prepared by macerating leaves in water at room temperature (RT), water at 70°C, boiled water (100°C) and ethanol at RT. Antimicrobial effect of the plant extract at a concentration of 25mg/ml was tested against five species of bacteria; *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Streptococcus pyogenes*, *Enterococcus faecalis* and Methicillin resistant *S.aureus* (MRSA) and five species of *Candida*; *Candida albicans*, *Candida parapsilosis*, *Candida krusei*, *Candida glabrata*, *Candida tropicalis* using the agar well-
diffusion method. Minimum inhibitory concentrations (MIC) were determined using agar dilution method.

Results: In general, all four extracts inhibited all microorganisms tested, except C.albicans. Highest inhibition was detected against S.aureus followed by MRSA, E.faecalis, E.coli and P.aerugenosa. The ethanol and 70°C water extracts with higher inhibitory activity were subjected to the MIC test. For the ethanol extract, the MIC for both S. aureus and MRSA was 0.2 mg/ml. MIC for C. krusei, C. parapsilosis and C. glabrata was 0.1mg/ml. For the 70°C water extract, both S. aureus and MRSA showed a MIC of 0.4 mg/ml. MIC for E. faecalis was 1.6 mg/ml. MICs for C. parapsilosis and C. krusei were 0.1mg/ml and 0.2mg/ml respectively.

Conclusion: Leaf extracts of M. zeylanica at different conditions have antimicrobial activity on common bacterial pathogens and Non C.albicans Candida species.

PP063
Preliminary osteometric study of orbital anthropometry in a Sri Lankan population

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Introduction and objectives: Orbital anthropometries are used in certain reconstructive craniofacial abnormalities, genetic counseling and in forensic medicine. Literature has shown that there is a significance difference in orbital Morphometry worldwide. Present study carried out to assess the Sri Lankan osteometric values of the orbit as no known published studies are available. To assess the variations in the anthropometric measurements of the bony orbit in a Sri Lankan population

Method: Twenty-seven(27) bony skulls obtain from Department of Anatomy FMS-USJP were measured using manual verenier calliper by two independent individuals for various anthropometric measurements, which each measurement was measured for three times and mean value was taken.

Results: Mean orbital height (3.21±0.16cm) was lesser than the mean orbital width (3.83±0.28cm) which was compatible with Indian literature available. Mean orbital index (MOI) varied from 0.84±0.06cm with half of the sample 50% (27/54) and 27.7% (15/54) belonged to the microsome and megasome categories respectively. Both categories had equal gender distribution and were higher than in the available literature. Microsome and megasome category was commonly right [59.3% (16/27)] and left [66.7%(10/15)] orbits respectively. Bi-orbital distance and Intra-orbital distance had a mean value of 9.51±0.47cm and 2.09±0.36cm respectively with equal gender distribution. Inter fronto-malar tempomately mean distance was 10.91±0.41cm with no sex difference.

Conclusions: Orbital Morphometry is important to provide baseline data for ophthalmological and other surgeries on the face. Most of the findings in this study had similar but small variations to those of Indian(Karu et al,2012) and Caucasian(Weaver et al,2010) results. Further research work is needed to develop Sri Lankan reference values.

PP064
Diffuse and nodular type hepatocellular carcinoma – a comparative study

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Introduction and objectives: Incidence of hepatocellular carcinoma (HCC) is increasing. Diffuse HCC (dHCC) is rare and data on such tumours are limited.

Method: All consenting patients with HCC referred to Colombo North Liver Unit, Ragama (September 2011-February 2014) were included. Tumours with diffuse margins on imaging were categorized as dHCC, while tumours with clear nodular morphology were categorized as nodular HCC (nHCC). Baseline parameters, treatment options and survival were compared between the two types.

Results: 203 HCCs were included in the study [dHCC=41(20%); 87.8% males; nHCC=162(80%); 89.5% males]. The median age at presentation in the two groups was similar [dHCC 63.58(47.76-76) years, nHCC 62.13(12-88) years]. More patients with dHCC had a significant alcohol intake (68.9% vs. 41.7%, p=0.002). Background cirrhosis was present in 90.2% of dHCC compared to 79.1% in nHCC (p<0.05). Aspartate transaminase, Alanine transaminase, INR, total bilirubin, platelet count and MELD scores were similar in the two groups. Median alfa fetoprotein (AFP) was significantly higher in dHCC (136 vs 31 ng/mL, p<0.001). Similar typical enhancement pattern on dynamic imaging was noted in the two groups (80.5% dHCC, 84.4% nHCC). dHCC had high incidence of major vascular invasion (78% vs. 23.5%, p<0.001). Seventy six point nine percent of dHCC had only palliative care compared to 28.4% in nHCC (p<0.001). Median survival of dHCC was 2 months compared to 8 months in nHCC.

Conclusion: 1/5 of HCCs were of the diffuse type. Patients with dHCC had a significant alcohol intake. They had higher AFP, advanced disease at presentation with more vascular invasion and a worse prognosis than nHCC.

Birth preparedness, complication readiness and associated factors among pregnant women attending antenatal clinics at Medical Officer of Health (MOH) area Padukka

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Introduction and objectives: Obstetric emergencies need prior preparation. ‘Birth Preparedness and Complication Readiness’ (BPCR) is a concept that promotes timely maternal care. This study assessed BPCR and associated factors among pregnant women attending antenatal clinics (ANCs) in MOH area Padukka.

Method: A descriptive cross-sectional study was carried out in 2014, among a random sample of 280 third trimester pregnant women, attending ANCs in MOH area Padukka. Data were collected using a pre-tested interviewer administered questionnaire. BPCR was considered satisfactory if ≥ 6 of following 8 components were accomplished; desired place of birth, closest care facility, birth-related expenses, emergency expenses, person to accompany, arrangements to look after other children, transport for birth, transport in an obstetric emergency.

Results: Response rate was 95.9% (n=269). Median age was 29 years (IQR; 25-32). Pregnancy was planned by 84.0% (n=226), 81.0% (n=218) had registered with PHM ≤8 weeks, 58.4% (n=157) had attended ≥5 ANC, 10.8% (n= 29) had attended all ante-natal classes, 75.8% (n=204) had discussed BPCR plan with healthcare provider. Only 60.2% (n=162) had satisfactory knowledge on pregnancy, delivery and post-partum danger signs, 75.0% (n=207) had favourable attitudes towards BPCR, 68.6% (n=185) had favourable perceptions on BPCR services. Of them 86.2% (n=232) had satisfactory BPCR which was significantly associated with planned pregnancy, registration ≤8 weeks, ≥5 ANC, ≥1 antenatal classes, discussing BPCR plan with healthcare provider, knowledge on pregnancy and post-
partum danger signs, favourable attitudes and favourable perceptions (p<0.05).

Conclusion: Knowledge on danger signs and attitudes towards BPCR need improvement. Sustainable, culturally sensitive BPCR practice models are needed.

**PP066**
Prevalence and associated factors for neck pain and low back pain among secondary school teachers in Ratnapurahalmedical division

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Introduction and objectives: School teachers have consistently reported a high prevalence of musculoskeletal disorders. The aim of this study was to determine the prevalence and associated factors for neck pain (NP) and lower back pain (LBP) among secondary school teachers in Ratnapura Educational Division.

Method: A descriptive cross-sectional study was conducted among 200 teachers from 10 secondary schools selected through cluster sampling. A self-administered questionnaire assessing socio-demographics, occurrence of LBP and NP, poor work-postures and unhealthy work activities, was used for data collection.

Results: Prevalence of LBP during work-life was 39% (n=78) and 12.5% (n=25) had LBP \(\geq 30\) days during past 12 months. Prevalence of NP during work-life was 23% (n=46) and 6.5% (n=13) had NP \(\geq 30\) days during past 12 months. LBP prevalence was higher among left-handed (66.7%Vs.37.2%, p=0.043). Compared to a lower score (34%, n=42), a higher score of poor work postures (50%, n=35) was associated with LBP (p=0.034). Those with a high-score of unhealthy work activities (19.8%, n=18), experienced LBP more than those with a low-score (7.5%, n=7) (p=0.015). Higher prevalence of NP was seen among who had a high work-posture score (31.4%Vs.18.9%, p=0.048). Prevalence of NP was 19% among smokers and 4% among non-smokers (p=0.005) and 20% among school administrators compared to non-administrators (5.4%) (p=0.027).

Conclusion: Being left-hand dominant, poor work-postures and unhealthy work activities were significantly associated with LBP. Poor work-postures, having administrative job responsibilities and ever smoking were significantly associated with NP. Preventive programmes focusing on improving the work postures/activities are recommended.

**PP067**
Fluid management in patients with Dengue Haemorrhagic Fever

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Introduction and objectives: Iatrogenic fluid overload in Dengue Haemorrhagic Fever (DHF) is well recognized. To address this, restriction of total fluid volume in the critical phase (TFV) to maintenance plus 5% of the body weight (M+5%) was adopted in Sri Lanka in 2010. In this study we assessed the TFV and how it relates to fluid overload, bleeding and liver dysfunction. Further we assessed how the disease severity at presentation (DSP) i.e. the presence or the absence of Dengue Shock Syndrome, affects TFV and the above complications.

Method: A retrospective cohort study on 401 DHF patients admitted to Lady Ridgeway Hospital from March to August 2011. Associations of TFV and DSP with the complications were analysed using unconditional logistic regression and Student’s t-test as appropriate.
Results: In 2/3rd of patients, TFV exceeds M+5%. 34.4% developed fluid overload, 16.7% developed bleeding and 63.1% developed liver dysfunction. Fluid overload showed a very significant association with the TFV (OR= 5.51, CI 3.17-9.57) yet was not associated with DSP. Bleeding was associated both with TFV (OR=2.12, CI 1.12-4.02) and DSP (OR= 2.81, CI 1.56-5.08). Liver dysfunction was associated with DSP (p=0.03) yet not with TFV. Association of TFV with DSP was not significant (p= 0.28)

Conclusion: M+5% guidelines has not been implemented in the majority. The strong association it shows with the fluid overload and bleeding could have added to the morbidity and mortality. These findings could be useful in improving DHF outcomes. Further the demonstrated association of excess fluid with bleeding has not been described in previous literature.

PP068
Knowledge, attitudes, practice and prevalence of family planning and the associated factors among married male navy personnel’s in Southern Naval Base ‘Dakshina’, Galle.

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Introduction and objectives: Family planning (FP) methods used by women are influenced by their husbands. Consequences of unmet needs or improper use of family planning may affect the whole family. Objectives - Knowledge, attitudes, practice, prevalence and the associated factors of family planning among married male navy personnel’s in Southern Naval Base ‘Dakshina’, Galle.

Method: Occupational based descriptive cross sectional study was carried out in Southern Naval Base, among 424 married male naval personnel using a self-administered questionnaire in a simple random method. Fifty knowledge and 13 attitude questions were used.

Results: More than 40% of knowledge score was considered as satisfactory. Satisfactory knowledge was among 52.8%, while 85% was on condom use, followed by 57.1% on oral pills, 39.2% injectables and intra-uterine device (IUD) in 38.2%. Satisfactory knowledge on traditional methods of family planning was 82%, while it was 56.6% with emergency contraception. Favourable attitudes towards FP were observed among 61.1%. Nearly 73% had ever used a regular contraceptive method. Commonest ever used method was 34.4% condoms, followed by 31.8% oral pills and 16.7% injectables. Fifty nine per cent (n=205) (95% CI=0.44-0.53) were currently using FP methods while 52% were modern methods users. Commonest current method was condoms 16.3% (n=69) (95% CI=0.13-0.20) while the second was oral pills 11.8% (n=50) (95% CI=0.09-0.15). Strongly significant associations were seen between ever use of family planning with the knowledge ($\chi^2=21.10$, df=2, $p<0.01$) and the attitudes ($\chi^2=16.714$, df=2, $p<0.01$).

Conclusion: Better knowledge of family planning was associated with increased use. Recommendations are awareness programmes in the study setting specially on emergency contraception and female based methods.

PP069
Epidemiology of Melioidosis in Sri Lanka in 2014

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Introduction and objectives: To describe the epidemiology of melioidosis in Sri Lanka.

Method: Demographic and clinical data of culture positive patients with melioidosis in 2014 were collected.

Results: A total of 23 cases were seen. Sixteen (70%) were male. Three were children. Twenty one (91%) lived in rural areas. Fourteen were from the North Western Province (8 from the Puttalum District and 6 from the Kurunegala District). There were 4 patients from the Western Province, 2 from the Central Province and one each from Eastern, North Central and Uva Provinces. Thirteen patients presented between May and July and seven between November and January, which constitute the two monsoonal periods (87%). Five were housewives. Four were drivers. Three were school children. Three were members of the Defence forces. Two were irrigation officers. Only one was a rice farmer but a further 6 had worked in rice fields. Another 4 had a history of gardening/cultivation. Five had bathed in rivers and tanks. Three had been in conflict areas. Other possible exposures included flooding, washing sand, cleaning gardens, road repair and livestock farming. Regarding predisposing factors, 16 (70%) were diabetics, three were alcoholics and one each had chronic kidney disease, IgA nephropathy, leprosy and thalassaemia. Clinical presentations included septic shock, pneumonia, abscesses in skin and soft tissue, liver, spleen, submandibular region, brain and muscle, septic arthritis and nodular skin rash. Only two died (9%), one prior to establishing the diagnosis. One was lost to follow up and one had many relapses.

Conclusion: Melioidosis is endemic in Sri Lanka.

Laboratory diagnosis of Cutaneous Leishmaniasis: are second line investigations really necessary?

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Introduction and objectives: Leishmaniasis is an established disease in Sri Lanka. The need for laboratory confirmation of diagnosis is undeniable. Light microscopy (LM) is inexpensive and considered as the first line investigation in cutaneous leishmaniasis (CT) while second line investigations require expensive equipment and mostly limited to research laboratories.

This study examined the sensitivity of LM relative to culture/polymerase chain reaction (PCR) of CT.

Method: Clinical data were collected from 460 CT patients. Diagnoses were done by LM, in-vitro cultures or PCR. Clinical and laboratory data were compared by cross-tabulation, excluding missing values in all variables.

Results: LM detected 60% (269/460) of cases while 40% (191/460) required second line investigations. Lesions within 2-6 months duration had a higher chance to be detected by LM (60%;121/188:P=0.001) whereas 28% (10/35) were <1 month. Papules (71.1%;27/38:P=0.007), and size <4cm (59.3%;213/359:P=0.021) had a higher chance of being detected by LM alone. LM demonstrated good detection rates in all age groups (1-80yrs:P=0.618) and irrespective of the site of lesion (P=0.20) or gender. Culture detected 50% (134/269) of microscopy positive lesions and 90% (134/149) of culture-positive isolates were also detected by microscopy. A subset of samples were examined with PCR and revealed 91.6% sensitivity (P=0.031) and 45.8% positive predictive value as compared to LM.

Conclusion: Low cost light microscopy provides an acceptable level of sensitivity for diagnosis of cutaneous leishmaniasis. Other investigations are required only for very early
lesions and those that fail microscopy. This confirms the need for further efforts to enhance the technical expertise across the country, which will improve case detection rates while reducing investigation costs.

**PP071**

King coconut water, tender coconut water, Gatorade and ORS: which rehydrates athletes best?

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Introduction and objectives: A randomized, controlled, crossover trial was conducted to assess the rehydrating ability of exclusive consumption of king coconut water (KC), tender coconut water (TCW), Gatorade (G) and ORS as rehydration fluid.

Method: Purposively selected 15 (M=13, F=2) middle distance runners with a mean age of 26.46 (±3.95) years with a BMI of 18.77(±1.53) were recruited from the National pool. Each fluid was given *ad libitum* during one hour training session and two hours of recovery on four different days with a wash out period >72 hours. Total fluid consumption and urine output over three hours was assessed. Following parameters were assessed at baseline and two hours post-recovery: venous blood gas (VBG) and urine full report. A self-administered questionnaire assessed perception on each fluid. Differences between VBG findings (2 hours post recovery – baseline) were analyzed to compare different fluids using one-way ANOVA.

Results: KC was the most consumed fluid (mean 3325±769.77ml;p=0.016). Urine output was highest with Gatorade (mean365.77±246.49ml;p=0.16). There were significant differences in blood pH, haematocrit (Hct), Sodium, Potassium, Glucose, Lactate, BEecf, and urine pH, between baseline and post recovery among the four fluids. ORS at 2 hours post recovery had the largest decrease in Lactate (-0.353mmol/L) and Hct (-2.266) and highest increase in Sodium 2.46mmol/L and glucose 8.8mmol/L from baseline. Compared to other groups, the decrease in urine pH was significantly greater in Gatorade (-0.346; p<0.01).

Conclusion: Although athletes’ preference for rehydration was KC, biochemical markers indicate that ORS is the most suitable fluid for rehydration of athletes compared to the other three.

**PP072**

Oral health literacy status of the pregnant mothers in a selected MOH area in Colombo district

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Introduction and objectives: Oral Health Literacy (OHL) is essential to empower pregnant women. Present study is the first attempt to study OHL status among pregnant mothers in Sri Lanka. The objective of this study isto describe the oral health literacy status and correlates of the pregnant mothers in a selected MOH area in Colombo district.

Method: In component I of the study, Oral Health Literacy Instrument for adults (OHLI) was adopted and validated among 100 adults in Nugegoda MOH area. Component II was a cross sectional study conducted among 640 pregnant mothers in Piliyandala MOH area.

Results: Component I, construct and predictive validity were established by significant association of OHL scores with the education, oral health knowledge, OHIP-14 score (p<0.001) and oral health status (odds ratio 1.108, 95% CI 1.036 to 1.185). Cronbach’s alpha and test retest scores > 0.7 for the total OHL scores. Component II, mean total OHL score was 80.99 (SD + 9.48) and
median was 81.42 (IQR 15.06) of the study participants. Around 73% had adequate OHL status. Income, no difficulty in reading oral health education materials, education and skill of using internet were statistically significant (p< 0.001) correlates of OHL.

**Conclusion:** The adopted OHLI was valid and reliable instrument to assess oral health literacy of Sinhala adults from a MOH area in Sri Lankan setting. Majority of the participants had adequate OHL status. Multivariate correlates identified by the present study were education level, income, skill of using internet and no difficulty in reading oral health education materials.

**Poster session 5**

**PP073**

Motivating factors for voluntary blood donation during post conflict era in Southern Province, Sri Lanka

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**Introduction and objectives:** Factors prevailing in the country like human conflicts can influence voluntary blood donation. The main objective of this study was to determine the motivating factors for blood donation during post war era in Southern province, Sri Lanka.

**Method:** One year after the end of North-East conflict a self-administered, anonymous questionnaire was distributed among blood donors coming to the blood bank in the largest tertiary care center at southern province, Sri Lanka.

**Results:** This cross sectional descriptive study included 339 donors (age range = 18 - 57 years, mean age 30 years (SD 7.8). Majority of them were males (98.2%), unmarried (48.9%), (75.2%) repeat donors and had education above G.C.E (OL) (92.9%). The most frequently reported reasons for donating blood were ‘social responsibility/obligation’ (53.6%), ‘to help a person’ (24.7%) and ‘to obtain merit’ (14.4%). ‘Self motivation’ (69%) and ‘friends’ (24.7%) were stated as two main motivating factors for blood donation. Only one donor was motivated by mass media for donation. There was a statistically significant difference between new donors and repeat donors with regard to motivating factors (p<0.04). 40.1% of the repeat donors and 19.2% of the new donors stated that there was no benefit for self (p=0.001) while 99.11% the donors stated that society benefited by blood donation.

**Conclusion:** During post conflict era majority of the blood donors from southern Sri Lanka were motivated for blood donation by motivational factors related to humanity which facilitate strong personal moral norm. Understanding the reasons for low mass media contribution in motivating public for blood donation needs further evaluation.

**PP074**

Predictors of recurrence free survival in females with breast cancer

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**Introduction and objectives:** Breast cancer is a heterogeneous disease and this is reflected in its clinical behaviour. Therefore it is important to develop predictive and prognostic models to facilitate the selection of patients likely to benefit from different treatment options. The objective of this study was to determine factors affecting the recurrence free survival (RFS) of breast cancer patients.

**Method:** This retrospective study included all breast cancer patients who had sought the immunohistochemistry services of the Faculty
of Medicine, Galle from May 2006 to December 2012. Data were collected through follow up visits, clinic and laboratory records. Tumour grading and scoring for estrogen receptors (ER), progesterone receptors (PR) and Her2 were done. The primary endpoint was first-local or distant recurrence or death or the last follow up date, whichever occurred first. Kaplan-Meier and Cox-regression models were used in the analysis.

Results: Out of 923 subjects enrolled, 188 had at least one recurrence (local: 34, distant: 154) during a mean follow up period of 104 months. Five-year RFS was 74% (local: 94%, distant: 78%). RFS decreased with increasing tumour size (p=0.002), Nottingham grade (p=0.002), lymph-node stage (LNS) (p<0.001), pathological stage (p<0.001), Nottingham Prognostic Index (p=<0.001) and the presence of lympho-vascular invasion (p=0.011). ER positive (p=0.032), PR positive (p=0.008) and Her2 negative (p=0.025) tumours had an increased RFS. In the multivariate analysis, only the LNS (p<0.001), Nottingham grade (p=0.006) and PR (p=0.024) became significant.

Conclusion: LNS, Nottingham grade and expression of PR have an independent effect on the RFS of breast cancer patients.

PP075
The effect of non-anatomic prognostic factors on the breast cancer-specific survival of patients with no metastases at presentation

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Introduction and objectives: The primary role of tumour-node-metastasis (TNM) staging is to stratify breast cancer patients into groups that are prognostically and therapeutically similar. In addition to staging, there are many non-anatomic prognostic factors considered in breast cancer management.

To determine the effect of non-anatomic prognostic factors on the breast cancer-specific survival (BCSS) in patients who were at TNM stage I, II or III at presentation

Method: This retrospective study included all stage I-III breast cancer patients who had sought the immunohistochemistry services of the Faculty of Medicine, Galle from May 2006 to December 2012. Data were collected through follow up visits, clinic and laboratory records. Grading and assessment of estrogen receptor (ER), progesterone receptor (PR) and Her2 were done. Kaplan-Meier and Cox-regression models were used in the analysis.

Results: The study cohort comprised 918 subjects (Stage I- 16%, II-43%, III-41%). Five-year BCSS were; Stage I-96%, Stage II-89% and Stage III-63%. BCSS of stage I patients was affected by ER, PR and triple negative status but none were found to have an independent effect in the multivariate analysis. Only the expression of PR independently affected the BCSS of stage II patients. Nottingham grade, lympho-vascular invasion, Her2 status and triple negative status affected the BCSS of stage III patients, independently.

Conclusion: Stage I breast cancer patients have a more homogenous biological behavior. Stage II and especially the stage III are more heterogeneous as these tumours carry many non-anatomical prognostic factors independently affecting breast cancer-specific survival although they are lumped into stage II and III according to the tumour-node-metastasis staging.
Factors associated with non-fatal myocardial infarction among patients admitted to the National Hospital of Sri Lanka

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Introduction and objectives: Myocardial infarction [MI] is the leading cause of hospital mortality in Sri Lanka accounting for nearly 13% of total deaths. Most studies of myocardial infarction in Sri Lanka to date have described mortality trends and prevalence of risk factors for MI. We sought to identify associations between knowledge, attitudes and some selected factors for myocardial infarction. To determine the socio-demographic status, knowledge, attitudes and selected factors associated with myocardial infarction in Sri Lanka.

Method: Age and sex-matched case control study design was adopted for the patients admitted to the National Hospital of Sri Lanka from 17th August to 30th of November 2012. Altogether, 150 first-time acute MI patients were matched for 150 controls by age and sex and data were collected using interviewer administered questionnaire. Odds ratios and 95% CIs were calculated for risk factors for MI and logistic regression used in multivariate analysis.

Results: The risk of acute myocardial infarction increased with past medical history of having at least one of the diseases of hypertension, diabetes, stroke or hypercholesterolemia (OR: 1.12; 95% CI: 1.02-1.22; P<0.05).

Conclusion: Unsatisfactory attitudes towards modifiable risk factors are the most strongly associated modifiable factor associated with first time non-fatal MI. It is followed by abdominal obesity, current smoking, having hypertension, diabetes, stroke or hypercholesterolemia.

PP077
Effects of aerobic exercise on perceived stress level and response to stress in first year students of university of Colombo: a randomized controlled study

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Introduction and objectives: This study aimed to identify stress level in Colombo University first year students and effect of regular aerobic exercise in them.

Method: A randomized controlled prospective study was done among 1st year students. The experimental group followed 30 minute aerobic exercises 3 times a week for 2 months. Primary outcome measures were two validated scales, measuring the perceived stress level (Cohen Perceived Stress Scale-PSS10) and the emotional responses to stress (Depression-Anxiety-Stress-Scale 21-DASS21). Sample of 198 had 80% power to detect a decrease in mean PSS10 and DASS21 by 2 points, at 5% significance. Using systematic random sampling, 68 students each, from Art, Science, Law and Management Faculties were selected. For comparison, the scales were also administered to first year medical students. Data was analyzed using one way ANOVA, independent and paired t-tests in SPSS version 17.0.

Results: Altogether 263 students out of 272(96.7%) completed the study and 132/170(77.6%) medical students responded. Mean PSS10 was high (>20/40) in 240/263(91.3%) and mean DASS21 was moderate(>19/42and<25/42) in 135/263(51.3%) at baseline. In females, mean PSS10 and DASS21 were high (28.06;SD±3.93 and 23.61;SD±4.63 respectively) compared to males (26.35;SD±4.13;p<0.001 and 21.31;SD±4.26;p<0.001). After exercise period, mean PSS10 and DASS21 reduced significantly in exercise group (26.30;SD±4.37 and 20.45;SD±4.14 respectively) compared to control group (27.43;SD±3.59;p<0.001 and 22.83;SD±4.46;p<0.001 respectively). PSS10 and DASS21 were not significantly different between different faculties at baseline
(including medical students) and after exercise period.

Conclusion: Perceived stress level and emotional response to stress was high in Colombo University first year students with higher levels in female students. Regular aerobic exercise reduced stress in them.

PP078
Is the length of hospital stay in the private sector longer if the patient has insurance?

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Introduction and objectives: Hospital length of stay (LOS) describes the duration of a single episode of hospitalization. The aim of this study was to determine the association between hospital LOS in a private hospital in Colombo and presence of insurance cover among patients admitted between 2009 and 2014.

Method: A retrospective study was conducted at a private hospital in Colombo. All admissions between 2009 and 2014 had been computerised; data pertaining to length of stay, age, sex and availability of insurance cover were extracted for all patients from the database.

Results: There were 188,557 admissions (98,116 men; 52%) between 2009 and 2014. The mean LOS gradually declined from age less than 10 years to 30 to 40 years and then increased with increasing age. Men had a significantly higher LOS than females (2.7 vs 2.4 days). The average length of stay significantly declined in both sexes from 2009 to 2014 [P<0.05]. 19% of hospital days were in the age group less than 20 years and 40% are in the age group 21-50 years. 61% of the patients had insurance and 17% of them were in the age group 51 to 60 years. More than 50% of the admissions among insured and non-insured were men. The LOS among the insured was significantly higher than the non-insured (2.7 vs 2.2 days) [P<0.05].

Conclusion: Higher LOS was associated with older age, male patients and availability of insurance. The most of the insured patients were in the age group of 51 to 60 years.

PP079
Blood donors; a model of episodic bleeder

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Introduction and objectives: Body can compensate blood loss up to 15% of total blood volume which is mimicked by a blood donation. It is hypothesized that cardiovascular adaptation will develop in response to repeated blood donation.

Method: Systolic blood pressure(SBP), Diastolic blood pressure (DBP), Pulse rate(PR), respiratory rate(RR) and axillary temperature (T) were measured in male blood donors during pre and post donation period.

Results: 125 repeat donors (25.46year SD 3.41) and 58 new donors (23.04 SD 3.06) were recruited between 18- 30 age. Pre-RR (19.06 Vs 21.19 p=0.04) was significantly higher in new donors than repeat donors (Independent T test). Repeat donors showed increased PR (76.95 Vs 78.69 p=0.038), RR (19.06 Vs. 20.32 P=0.005), and reduced SBP (121.68 Vs. 117.86 p=0.000) in post donation. New donors demonstrated increased PR (75.93 Vs. 79.89 p=0.003), reduced SBP (121.05 Vs. 117.56 p=0.071), T (36.66 vs. 36.56 p=0.049) in post donation (Paired T Test). Donors who had more than five donation (n=34) pre and post parameters were unremarkable.

Conclusion: Blood donors who had more than five donations can be considered as a model of episodic bleeder showing minimal physiological changes during acute blood loss.

PP080
Nutritional status, anemia and renal functions among school children in North Central Province

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Introduction and objectives: Nutritional problems during childhood and Chronic Kidney Disease of unknown origin are leading public health problems in North Central Province (NCP), Sri Lanka. Purpose of this study was to describe the nutritional states and renal function of school children in NCP.

Method: From 701 schools in NCP eligible for this assessment, 100 schools were selected using probability proportionate to size sampling. A random cluster of 50 students aging 5-10 years were selected from each school. Consent was obtained from guardians and principals. Anthropometric measurements were done using standard procedures. Venesection was done to collect 3ml of blood for investigations.

Results: Total of 4780 school children were selected. In comparison to the WHO growth reference data, mean z score for BMI among male children in this study sample was -1.365 (SD 1.54). The mean value for female children was -1.480 (SD 1.61). Percentage of obesity, overweight, thinness and severe thinness was 2.8%, 3.1%, 23.3% and 11.8%. Mean serum haemoglobin level in the study sample was 12.2 (SD .9) mg/dl. Prevalence of mild, moderate and severe anemia was 9.7%, 7.6% and 0.02%. Anemia and thinness in Anuradhapura district was 20.7% and 38.1% compared to 13.1% and 31.3% in Polonnaruwa district. Prevalence of urine albumin to creatinine ratio (UACR) >30 was 8.5% with high prevalence in Anuradhapura district.

Conclusion: This study shows that the anemia levels are lower than estimated, while acute malnutrition is still a major problem. High prevalence of UACR needs further investigations to exclude early onset renal problems in this area.

PP081
Awareness and practices regarding stretching and strengthening exercises among school rugby players in the Colombo district

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Introduction and objectives: School rugby players are vulnerable to chronic injuries as a result of not adhering to correct techniques of training. Evidence shows that awareness regarding stretching and strengthening exercises (SSE) and correct techniques of training leads to overcome these problems. Our aim was to assess the awareness and practices regarding SSE among school rugby players in the Colombo district.

Method: A cross sectional study was carried out among 120 school rugby players (age 16-19 years) in randomly selected Colombo district schools playing under Division 1 category. A self-administrated and pretested questionnaire was used to assess knowledge on SSE. Practices of selected main SSE were determined by an observational check list.

Results: In the study population 50%, 55% and 65% had good knowledge on basics, stretching and strengthening exercises respectively (score over 50% was considered as good). However, knowledge on exercise techniques was good for 31.7%. Practice of exercises was good, where the scores were 89.2% for stretching and 96.7% for strengthening exercises. A significant positive correlation (r=0.689; p<0.001) was observed between knowledge and practice of SSE. Out of main stretching exercise types static stretching (43%) and combination of dynamic and static stretching (57%) were used by participants.
Conclusion: Although the majority of school rugby players in Colombo district had good basic knowledge and practices on SSE, knowledge on correct techniques of SSE was poor. Training programmes under the supervision of qualified professionals would be beneficial to overcome this problem.

PP082
Consecutive 161 patients with history of road traffic accidents (RTA) admitted to Surgical Unit B were analysed at General Hospital, Polonnaruwa during two months period.

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Introduction and objectives: Road traffic accidents (RTA) cause significant mortality and morbidity. Analysis of causes, contributory factors of RTA and injury severity of victims are helpful to launch a preventive program.

Method: We analyzed 161 consecutive patients admitted with RTA to unit B in General Hospital Polonnaruwa (GHP). This is a prospective cross section study from 01/10/2014 -30/11/2014. We analyzed age, sex, cause and contributory factors for accident, type of vehicle, injury severity and time of accident. Detailed history taking and examination was done to collect above information.

Results: Age range 7-80 years (mean 33). Males 139(86%): females 22(14%). There were 126(80%) motor bicycle (MB), 21(13%) push bicycle, 08(06%) three wheeler and 02(01%) tractor accidents. There were 130(82%) riders/drivers, 25(16%) passengers and 04(02%) pedestrians. Causes for accidents were careless driving/riding (high speed, taking too sharp bends, riding on wrong side) on the part of the victim in 73(47%), careless driving of the other party in 44(28%), mechanical failure in 04(03%) and animals crossing road in 31(20%) cases. Contributory factors for accidents were non-availability of license for 39 of 109(36%) MB riders, alcohol influence in 48 of 137(35%) patients and overcrowding in 7(04%) cases. 37 of 127(29%) MB riders had no helmet. 116(74%) accidents occurred between 12 noon -12 midnight. 80(50%) had fractures. 95(59%) underwent surgical procedures. One death occurred.

Conclusion: Commonest vehicle involved in accidents was motor bicycle (80%). Careless riding/driving was the main cause for incident (47%). No safety equipments for 1/3, alcohol use by 1/3, no license for 1/3 are not acceptable standards. Strict enforcement of the legislations are necessary on these 3 factors as preventive measures.

PP083
Comparison of abdominal muscle strength between university students who have active lifestyle and university students who have sedentary lifestyle

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Introduction and objectives: General muscle strength of an individual is significantly related with his or her lifestyle. The study aims to find out whether there is significant deference between lifestyle of individual and abdominal muscle strength.

Method: The study is a cross sectional descriptive study. The study conducted to healthy normal 200 students of University if Colombo (n=200). Students were selected in random sampling method. Lifestyle is measured by using global physical activity questionnaire and abdominal muscle strength is measured by using ACSM abdominal muscle strength test. Relationship between abdominal muscle strength and lifestyle is evaluated by using t test. Relationships between abdominal muscle strength and anthropometric characteristics are evaluated by using Pearson correlation test.

Results: There is a strong statically significant relationship between lifestyle of an individual
and abdominal muscle strength (t=4.662, p=001). Abdominal muscle strength has significant but poor correlation with gender (p=0.019). No significant relationship was found between abdominal muscle strength and weight of the participants (r=0.26, p=0.068) or between abdominal muscle strength and height of the participants (r=0.149, p=0.301) or between BMI and abdominal muscle strength (r=2.024, p=0.866).

Conclusion: Results of the study state that abdominal muscle strength depends on lifestyle. The dependency can be observed in both male and female subjects. Abdominal muscle strength also depends on gender. Abdominal muscle strength of male participants is significantly greater than abdominal muscle strength of female students. Abdominal muscle strength does not depend on anthropometric characteristics.

PP084
The relationship between the physical activities and mental happiness of a group of selected students in the University of Colombo.

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Introduction and objectives: Happiness is among the most fundamental of all human goals. The purpose of the current study was to determine the relationship between physical activities and mental happiness among university students.

Method: Total sample of 200 final year students (100 from Science Faculty, 100 from Management Faculty-University of Colombo) were selected through random sampling. Physical activity level and happiness level were measured using Global Physical Activity Questionnaire version 2.0 (GPAQv2.0) and the Oxford Happiness Questionnaire respectively and their relationship was evaluated using Pearson correlation test.

Results: Of the sample, 54.5\%(n=109) was physically active, 96\%(n=192) was engaged in moderate intensity activities at work or at home according to the GPAQv2.0. There was a significant difference in physical activity level between males and females (p=0.036), but not between the students of the two faculties (p=0.311). About the half (51\%, n=102) of the sample was not particularly happy or unhappy. There was a significant difference in happiness levels between the students in the two faculties (p=0.002) and between males and females (p=0.002). There was a statically significant positive relationship between mental happiness and the level of physical activities (r=0.397; p=0.000). The mean happiness score of physically active students (Mean=4.32: SD± 0.61) was higher than that in physically inactive students (Mean=3.07:SD±0.46).

Conclusion: Physically active students experienced more happiness. Thus, participation in physical activities may be an important factor in increasing of happiness among students in University of Colombo.

PP085
A case report of adenovirus pneumonia in young adults

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Introduction and objectives: Adenoviruses cause a wide spectrum of clinical diseases. Outbreaks of acute respiratory tract illness (ARTI) including pneumonia have been documented in closed populations such as
military recruits and prisoners.
We report two previously healthy young Sri Lankans deported from Dammam who presented with atypical pneumonia during the period when heightened MERS CoV outbreaks were being reported in the Middle East.

Method: Full blood count, routine biochemical tests and chest radiograph were performed on both patients. Nasopharyngeal aspirate, and sputum and blood samples were collected for virological bacteriological cultures, respectively. Nucleic acid was extracted using the qiagen extraction kits and real time monoplex PCR was performed for influenza A/B and MERS CoV. The nucleic acid extracts were tested using X-Tag multiplex PCR respiratory virus panel with labeled primers and a single-step hybridization of PCR products to the fluorescent bead array according to the manufacturer’s instructions. PCR products were sequenced and phylogenetic tree was constructed.

Results: The initial chest radiograph of both patients showed bilateral interstitial infiltrates. Blood and sputum samples tested negative for bacterial pathogens. Nasopharyngeal aspirate samples tested positive for adenovirus in both patients. Sequencing and phylogenetic analysis of the hexon gene revealed adenovirus type 11a.

Conclusion: The nucleic acid detection has the advantages of high sensitivity and rapid availability of results over conventional diagnostic tests. Arrival at a definitive etiological diagnosis is important in the context of a differential diagnosis of a potentially fatal community-acquired pneumonia such as MERS. Rapid diagnosis enables implementing appropriate infection control measures, rational use of antimicrobials.

PP086
Quality of the specimens received at a histopathology laboratory of a medical faculty in Sri Lanka

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Introduction and objectives: The accuracy of the histopathology reporting depends on the completeness of the request forms and the condition of specimens. To assess the completeness of histopathology request forms and the condition of specimens received by a pathology laboratory, Medical Faculty, University of Kelaniya

Method: This cross sectional study was conducted at the pathology laboratory of a medical faculty in Sri Lanka. We included 342 consecutive specimens received from the professorial units of the teaching hospital during the study period, September to November 2014. Data were collected using a checklist consisting of 10 items for the request form, 6 for the label, 7 for the container and sample. SPSS16.2 was used to analyze the data.

Results: Only 56.1% had completed request forms. Patients’ sex and a short clinical history with a probable diagnosis were missing in 12.6% and 24.6% respectively. Labelling was incomplete in 14.6% and date of specimen collection was missing in 11.4%. Compatibility of the 6 items on the label with the request form was observed in 71.3%, and the most mismatched item was the date of specimen collection (17%). Appropriate container was used in 89.5%. Inadequate amount of fixative was found in 13.2% of specimens. Only 24% of specimens fulfilled all requirements.

Conclusion: This study demonstrates that the quality of the specimens is poor mainly due to the incomplete request forms, poor labelling and use of inappropriate containers. Redesigning the request form and introducing...
printed labels and standard set of containers may improve the quality of specimens.

**PP087**

**Investigating the relationship between body mass index and hand grip strength in students of Allied Health Sciences Unit, Faculty of Medicine, University of Colombo**

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**Introduction and objectives:** Hand grip is important for the purpose of grasping. In sports like cricket, where hand grip forms a vital part of the game, a correlation between hand grip strength and anthropometric variables like height and weight may be significant. This study aims to investigate whether any relationship exists between Body Mass Index and hand grip strength, either right or left. This would also include any correlation, if any, between height and weight and hand grip strength.

**Method:** The study was a descriptive cross sectional study and included 82 (n=82) healthy BSc. Physiotherapy students of 20-26 years of the Allied Health Sciences Unit, Faculty of Medicine, University of Colombo, selected by convenient sampling. Hand grip strength was measured by the Jamar hand dynamometer, height by a stadiometer and weight by an electrical weighing scale.

**Results:** There was a statistically significant positive correlation between BMI and both right hand grip strength \((r=0.240, p=0.030, p<0.05)\) and left hand grip strength \((r=0.328, p=0.003, p<0.01)\). There was also a significant positive correlation between height and both right hand grip strength \((r=0.684, p=0.001, p<0.01)\) and left hand grip strength \((r=0.598, p=0.001, p<0.01)\), and weight and both right hand grip strength \((r=0.480, p=0.001, p<0.01)\) and left hand grip strength \((r=0.505, p=0.001, p<0.01)\).

**Conclusion:** The hand grip strength increases as the BMI, height and weight increase, independently, in the 20-26 year group of BSc Physiotherapy students. Whether findings could be used to identify and select players for sports like cricket which require a strong hand grip, needs further study.

**PP088**

**Knowledge, attitudes, practices and information sources regarding antenatal exercises among pregnant women attending De Zoysa Maternity Hospital Colombo**

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**Introduction and objectives:** Antenatal exercises provide many health benefits not only to pregnant mothers but also to their babies. Accurate and appropriate knowledge regarding antenatal exercises among pregnant mothers is vital. The aim of this study was to describe the knowledge, attitudes, practices and information sources regarding antenatal exercises among pregnant women attending De Zoysa Maternity Hospital (DMH) Colombo.

**Method:** A descriptive cross sectional study was carried out among 110 pregnant mothers with a period of Amenorrhoea of 20 weeks or more. An interviewer administered questionnaire was used for data collection. Frequency distributions were used to analyze the data using SPSS 22.0 version.

**Results:** A majority of pregnant mothers had poor knowledge \((72.7\%, n=80)\). Only 6.4% \((n=7)\) and 5.5% \((n=6)\) of participants knew the importance and the technique of pelvic floor strengthening exercises, respectively. Most had some-what favourable \((49.1\%, n=54)\) and favourable \((35.5\%, n=39)\) attitudes. A majority of 40% \((n=44)\) and 32.7% \((n=36)\) disagreed and strongly disagreed respectively with the attitudinal statement “Though the recommended exercises make labour easy, it may also harm the baby in some way”. Overall
practices were poor with a majority not performing recommended exercises (86.4%, n=95). The sources of information among majority of participants were mostly written media (49.1%, n =54) and electronic media (48.2%, n=53). Midwives (40.9%, n=45) and nurses (37.3%, n=41) had also contributed.

Conclusion: Many pregnant women attending DMH have poor knowledge and practices regarding antenatal exercises while their attitudes were mostly favourable. Measures should be taken to improve knowledge and practices of pregnant mothers regarding antenatal exercises.

PP089
Hump-Nosed-Viper bites in Deniyaya, Sri Lanka: a clinico-epidemiological study

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Introduction and objectives: Hypnale-hypnale, Hypnale-zara (endemic to Sri Lanka) and Hypnale-nepa (endemic to Sri Lanka) are the three species of hump-nosed-vipers that are implicated in human bites in Sri Lanka. The objective was to assess epidemiology and clinical features of hump-nosed-viper bites.

Method: A prospective observational study was conducted in Base Hospital Deniyaya from 2013 to 2015. Hump-nosed-viper as the offending snake was identified when the victims brought live or dead specimens. Species identification of dead specimen was by a herpetologist. Clinical details were recorded during the hospital stay.

Results: Fifty-five hump-nosed viper bite patients (19-81 years) were admitted. Thirty-three dead specimens were identified as 23 of Hypnale-zara and 10 of Hypnale-hypnale by the herpetologist. No Hypnale-nepa was identified. Twenty-two live snakes were identified as hump-nosed-vipers and released. Fifty-two (95%) were daytime bites. Hands (51%), feet (47%) and arm (2%) were sites of bites. Thirty-nine (71%) were bitten in tea-plantations. All reported pain at bite-site. Overall, forty-six (84%) had local swelling, thirteen (24%) haemorrhagic blisters, six (11%) extensive limb swelling and four (7%) regional lymphadenopathy. Four (7%) recorded prolonged whole blood clotting time. Hypnale-zara had 30% haemorrhagic blisters, 13% extensive limb swelling and 4% coagulopathy. Hypnale-hypnale had 10% each of extensive limb swelling, haemorrhagic blisters and coagulopathy. None developed elevated serum-creatinine. Neurotoxicity was not noted.

Conclusions: Hump-nosed-viper bites caused substantial morbidity. Risk factors included day-time outdoor activities and occupation. Pain, extensive limb swelling, bite-site swelling, haemorrhagic blisters, regional lymphadenopathy and coagulopathy were prominent clinical features. Nephrotoxicity and neurotoxicity were notably absent. Clinical features varied depending on the species implicated.

PP090
Audit on hand hygiene compliance at the Surgical Intensive Care Unit (SICU), National Hospital of Sri Lanka

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Introduction and objectives: Hand hygiene is the most important measure to avoid transmission of pathogenic microorganisms and prevent healthcare associated infections. Audit was done to describe the hand hygiene compliance rates of different categories of health care staff at SICU of NHSL before and after an awareness program.

Method: Audit was carried out in two stages at SICU, NHSL from 01/04/2014 to 08/05/2014
and 01/06/2014 to 03/07/2014. An awareness program was conducted after the first audit to teach on five moments and importance of hand hygiene. Standard data collection form was used to collect data. Different moments of hand hygiene were observed and recorded on the form by the auditor.

Results: Overall compliance rates were 31.94% and 46.28% in audit 1 and 2 respectively (95%CI, p<0.05). Out of hand rub users, female consultants had the highest compliance rate of 60% and 100% in both audits. Hand washing compliance was highest among female nurses (25.4%) and lowest among female doctors (1.7%). Significant improvement in hand rub use was observed from 9.43% to 65% among physiotherapists in audit 1 and 2 (95%CI, p<0.001). Compliance rate was 0% in radiographers, cardiographers and outside female doctors in both audits. Highest compliance rates of 55.55% and 68.75% were seen for the moment 2 in audit 1 and 2 respectively.

Conclusion: Statistically significant improvement in overall hand hygiene compliance rate was observed in the second audit. Further improvement can be achieved with ongoing awareness especially for categories with 0% compliance rate and conducting audits at regular intervals.

PP091
Incidence of ventilator associated pneumonia in two intensive care units at National Hospital of Sri Lanka.

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Introduction and objectives: Ventilator Associated Pneumonia (VAP) is one of the commonest health care associated infection. Identification of VAP rates and associated factors will be of great value to implement and monitor infection control activities. Objectives were to identify the VAP rates in Medical Intensive Care Unit (MICU), Accident Service Intensive Care Unit (ASICU) and Accident Service High Dependency Unit (ASHDU) of NHSL and to describe associated factors, organisms responsible and their ABST patterns

Method: Descriptive cross sectional study was carried out at the 3 ICUs from 13/06/2014 to 11/08/2014. VAP was diagnosed according to clinical and radiological criteria, CDC 2014. Interviewer administered questionnaire was used to collect data and endotracheal aspirations were collected from all VAP patients. VAP rates for each ICU were calculated for 1000 ventilator days. Associated factors for VAP were analyzed using Microsoft Excel.

Results: Overall VAP rate in 3 units were 37.57 per 1000 ventilator days with 75, 40.61 and 23.53 per 1000 ventilator days in ASICU, ASHDU and MICU respectively. Ninety five percent of VAP cases were diagnosed 5 days after intubation and 70% of all admissions were transfers from another hospital. Coliforms, Acinetobacter and Pseudomonas spps were the isolates from respiratory specimens and of them the commonest isolate was Acinetobacter spps (45%). Almost all Acinetobacter isolates were multi drug resistant and Coliforms were 100% resistant to cephalosporin of which 25% were multidrug resistant.

Conclusion: VAP rates in 3 ICUs at NHSL were very high and it is well above the NHSN bench marks.

PP092
Prevalence of alcohol consumption and associated socio demographic factors among female estate labourers in Medical Officer of Health area, Kothmale

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Introduction and objectives: Limited literature on alcohol consumption among Sri Lankan estate sector females shows higher prevalence than the rest of the country. The objective was to determine the prevalence of
alcohol consumption and associated socio demographic factors among female estate labourers in Medical officer of Health area, Kothmale.

**Method:** A community based cross sectional study was carried out in a sample of 368 adult (>18 years) female estate labourers in 2014. Sample was collected using multi stage probability proportionate random sampling technique from 15 sub divisions in five estates using pay sheet as the sampling frame. An interviewer administered questionnaire was used.

**Results:** The response rate was 95.1%. Prevalence of alcohol consumption among estate sector females (ever drinkers) was 31.25% (95% CI, 26.51% – 35.99%). Prevalence of current drinkers, former drinkers and quitters were 16.8% (95% CI, 13.0% – 20.6%), 8.4 % (95% CI, 5.6% – 11.2%) and 6.0 % (3.6% – 8.4%) respectively. Alcohol consumption was significantly positively associated with increased age (p<0.0001), low level of education (p<0.0001), Tamil ethnicity (p<0.05) and belonging to Hindu religion (p<0.0001). Consumption of more than one type of alcoholic beverage was significantly associated with increased age (p=0.014) and high family income (p =0.004). Increased frequency of alcohol consumption was significantly associated with high family income (p=0.004).

**Conclusion:** Prevalence of alcohol consumption among female estate labourers in MOH area Kothmale is 31.25% and it is higher than for the rest of the country. There is a need to strengthen existing preventive programmes and implement new preventive measures considering socio demographic characteristics in this community.

**Poster session 6**

**PP093**

Impact of a ward-based clinical pharmacist on improving medication knowledge and adherence in patients with chronic non-communicable diseases

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**Introduction and objectives:** This is the first study done in Sri Lanka to evaluate the benefit of a ward-based pharmacist on improving medication knowledge and adherence in patients with chronic non-communicable diseases.

**Method:** This is a part of a controlled trial conducted in a tertiary care hospital to evaluate ward-based clinical pharmacy service. Intervention group (IG) received a ward-based pharmacist’s service during hospitalization to optimize the patients’ drug therapy. At discharge the pharmacist counseled patients regarding all aspects (name, indication, dose, frequency, side effects, and actions for side effects, timing, monitoring and storage) of long term medications and written instructions were also provided. Control group (CG) received usual care without a ward-based pharmacist. The knowledge and adherence were assessed over the phone on the 6th day after discharge by a different pharmacist. Previously validated knowledge and adherence questionnaires were used.

**Results:** There were 334 and 311 patients in the IG and CG, respectively. The IG had a significantly higher average medication knowledge compared to the CG (IG–75.81±19.14 vs. CG–40.84±19.20; P < 0.001). Proportion of drugs with correct answers, to all 9 dimensions tested, was greater in the IG compared to the CG (P < 0.001). IG had a significantly higher medication adherence score compared to the CG (IG–92.97±15.04 vs. CG–80.42±28.29; P <0.001). A significantly large number of individuals in the IG had high adherence score on Morisky adherence scale compared to the CG (P < 0.001).
Conclusion: Discharge counseling by a ward-based pharmacist improves medication knowledge and adherence of patients on long term medications.

PP094
Knowledge, attitude and practice on hospital acquired infections among ward nursing officers in District General Hospital Matara

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Introduction and objective: Globally a large number of patients suffer with hospital acquired infections (HAIs). It increases morbidity, mortality and antimicrobial resistance. Nursing officers make close contact with patients.
To describe knowledge, attitude and practice on HAIs among ward nursing officers in District General Hospital Matara.

Method: Descriptive cross sectional study was conducted. Study population was nursing officers in general wards (362) and the whole study population was studied. Data was collected by using self administered questionnaire, observation check list to assess hand washing practice among 52 randomly selected participants, infrastructure facility and supply check list related to hand washing for 61 hand washing areas.

Results: Response rate was 74%. Majority were females (91.4%). 32.8% of the participants had never followed a training program on HAI. Knowledge score ranged from 5 to 18. The mean knowledge score was 13.3 ±2.9. There was no significant difference observed in knowledge score with sex, age, years of experience and training programs. 57.9% thought that patients themselves should get protected from HAIs while 74.6% agreed that HAIs could be transmitted by health staff. 24% of participants felt that there were many important things to be improved than control HAIs. No one performed all the steps of hand washing correctly and only 4.91% hand washing areas had proper hand washing facilities. Availability of soap at hand washing area was 81.9%.

Conclusion: Knowledge, infrastructure facilities and supplies must be improved.

PP095
Impact of a ward-based clinical pharmacy service in reducing drug-related hospital readmissions in patients with chronic non-communicable diseases: evidence from a controlled trial in Sri Lanka

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Introduction and objectives: Literature showed that pharmacists’ interventions helped to reduce drug related hospital readmissions. The objective of this study was to determine the impact of a ward-based clinical pharmacy service on drug related hospital readmissions in Sri Lanka.

Method: This was a part of a controlled trial conducted in a tertiary care hospital in Sri Lanka to evaluate the clinical pharmacy service. The intervention group (IG) received a clinical pharmacist’s service in addition to the standard care provided to control group (CG). The pharmacist performed a prospective medications review of patients with chronic non-communicable diseases during hospital stay and made recommendations to the health care team when appropriate. At discharge reconciliation of discharge prescription was done. Patients were educated about discharge medicines to improve knowledge and compliance. Both groups were followed up monthly for six months to identify drug-related hospital readmissions.

Results: Of 137 drug-related re-admissions, 93 (involving 87/356 patients) were from the CG, and 44 (involving 42/361 patients) were from
the IG (P < 0.001). Non-compliance was the main reason for re-admissions in the CG. Significantly higher incidence of non-compliance per patient were recorded in CG (CG vs. IG: 13.8% vs. 4.2%; P < 0.001). There was a significantly higher percentage of re-admissions per patient in the CG due to unintentional omission of drugs on discharge prescription (CG vs. IG: 4.5% vs. 0.3%; P < 0.001). The percentage of re-admissions per patient due to adverse drug reactions was similar in the two groups.

**Conclusion:** The ward-based clinical pharmacy service is useful in reducing drug related hospital re-admissions in patients with chronic non-communicable diseases.

**PP096**  
**Quality of service provision of hypertensive patients at medical clinics in secondary care hospitals in the Western Province**

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**Introduction and objectives:** Patients with hypertension obtain indoor care at the hospital and follow up is done at the Medical Clinics (MCs). Hypertensive patients’ assessment should also be done regularly along with a regular supply of medications. Therefore, it is imperative to provide a good quality clinical service to hypertensive patients in order to reduce the readmissions and minimize the cost borne by the state. The objective was to assess the quality of service provision to hypertensive patients in MCs in selected Base Hospitals (BHS) Homagama, Horana, and Avissawella in the Western Province (WP).

**Method:** A descriptive cross sectional study was carried out. This study had two components. Component one was a facility survey. Component two was the assessment of quality of care through patient satisfaction, waiting time and availability of supportive services using an interviewer administered questionnaire.

**Results:** In all the three hospitals 50% of anti-hypertensive were out of stock during the study period. There was no appointment system at the dispensary. Ranging from 6-10% of patients blood pressure was not checked. Fifty percent of patients’ blood investigations were done outside the hospital. Only 88.2%, 78.8%, 83.1% and 86.3% of the patients were satisfied on welcome/frontline services, facilities, care and time spent respectively.

**Conclusion:** A continuous supply of medicines to the hospitals and an appointment system at the dispensary should be initiated. The time spent should be minimized. The availability of Physician consultation at the first instance and provision of mobile clinics to solve the hospital overcrowding would enhance patient centered health care delivery.

**PP097**  
**Focus of an undergraduate professionalism curriculum; perceptions of Sri Lankan medical students**

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**Introduction and objectives:** The attempts made by medical schools for professionalism education have proven to be challenging. We explored the perceptions of medical students on teaching/learning, and assessment of professionalism in a Sri Lankan medical school. The professionalism curriculum of this medical school; runs for four years, uses interactive but classroom-based activities for teaching, and conducts written assessments and OSCE for the assessment.

**Method:** In a qualitative study, twelve focus group discussions with the participation of 64 students were conducted. The responses were thematically analysed.

**Results:** The curriculum as a whole appeared to; reward academic abilities but not the
professional soundness of students. They were critical of assessment-oriented professionalism curriculum and focusing more on what students ‘know’ than what they ‘do’. The professionalism curriculum seemed to provide them with sound theoretical knowledge. It is not appropriately supportive in dealing with professionalism dilemmas they face in clinical setting. Students liked to learn professionalism from clinicians in clinical setting rather than being taught. Despite what students learn, their moral principles appear to change over time to be compliant with the existing culture.

Students see a discrepancy between the marks students scored in existing exams and actual behaviour in the ward. They liked to be observed by superiors, patients and peers for their professional behaviour. They had reservations about nurses becoming their assessors of professionalism.

Conclusion: Students wish for a curriculum which rewards both academic abilities and professional behaviour. The professionalism curriculum should focus on learning over teaching and behaviour over knowledge. The curriculum was revised to incorporate students’ feedback.

PP098
Therapeutic decision making using total cardiovascular risk scoring tools in Diabetes; comparison of two different approaches

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Introduction and objectives: World Health organization (WHO) cardiovascular disease (CVD) risk score and Framingham risk scores (FRS) are used to estimate total cardiovascular risk (TCVDR) to guide therapeutic decisions in primary care. They include readily measurable parameters (age, gender, total cholesterol, systolic blood pressure, smoking) but exclude low density lipoproteins (LDL) and diastolic blood pressure (DBP). We estimated percentages of newly diagnosed diabetics with LDL and DBP above recommended level who qualify for therapy at different cut-points of TCVDR scores.

Method: We calculated individual TCVDR using FRS and WHO scores in 331 patients and categorized them into five CVD risk categories (1 =< 10%, 2 = 10 - 20%, 3 = 20-30%, 4 = 30 - 40%, 5 = > 40%). Percentages with LDL > 100 mg/ dL and DBP> 90 mm Hg in each risk category were estimated.

Results: 277 / 331 had LDL > 100 mg and WHO categories 1 - 5 included 90.61%, 6.13%, 1.44%, 0.72% of them and the corresponding figures with FRS were 48.01%, 38.9%, 11.55%, 1.44%, 1.04%. 43 / 331 of sample had DBP > 90 mm Hg and percentages in the corresponding WHO and FRS risk categories were 55.81%, 25.58%, 6.97%, 4.65% and 9.3%, 44.18%, 39.53%, 0, and 6.97% respectively.

Conclusion: Both TCVDR scores fail to detect majority of diabetic patients with LDL and DBP needing treatment in primary care. Using recommended >30% CVD risk cutoff in the Ministry of Health guidelines , > 95% with LDL and DBP above recommended levels were deprived of lipid lowering and antihypertensive drug therapy.

PP099
Enterococcus faecalis bacteremia and endocarditis associated with pre-symptomatic rectal adenocarcinoma: could there be a possible mechanism?

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Introduction and objectives: Intestinal commensal enterococci account for 5-17 % of all bacterial infective endocarditis cases. Their
association with colonic malignancy is far less common. This case presents an *E. faecalis* bacteremia with endocarditis, associated with opportunistic detection of a colonic adenocarcinoma that had benefited from an early surgery and resolution of endocarditis.

**Results:** A 73 years old male presented with fever and constitutional symptoms for one month. He was febrile with a pan systolic murmur at mitral area. Initial three blood cultures were all positive for *E. faecalis* which is an intestinal commensal. Echocardiogram revealed mitral regurgitation (grade III) without any vegetation. Intravenous broad spectrum antibiotics were commenced based on sensitivity. New oscillating vegetation was noted on mitral valve with persisting fever in the 4th week. Blood cultures remained sterile. We postulated a possible mechanism of colonic mucosal breach to cause initial *E. faecalis* bacteremia and had proceeded for a screening colonoscopy. A small growth at rectum was resected transanally which was an adenocarcinoma without local invasion. Resolution of fever was observed over the next 24 hours and same antibiotics were continued. Two year follow up showed no residual vegetations and had no evidence for local invasion or distant metastasis.

**Conclusion:** There is scarcity of evidence to suggest an association between *E. faecalis* endocarditis and colonic malignancy (1,2,3). In this case the concomitant invasion by the above organism at colonic tumor and vegetation specimens has not been proven microbiologically. However, it is the way forward in future studies to evaluate the above postulated mechanism of mucosal breach.

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**PP100**

**Chromosomal abnormalities in a cohort of infertile men in Colombo**

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**Introduction and objectives:** Male infertility is seen in approximately 50% of infertile couples. Prevalence of chromosomal abnormalities among infertile men is reported to be 5.8% and may be higher in oligozoospermic men. There is paucity of data regarding chromosomal abnormalities in Sri Lankan men with infertility. The objective of this study was to describe the chromosomal abnormalities seen in a cohort of men undergoing cytogenetic testing in Colombo.

**Method:** A database of the karyotype of infertile men undergoing genetic testing in our laboratory between January 2010 and December 2013 was maintained prospectively and analysed. Chromosome culture and karyotyping was performed on peripheral venous blood using standard protocols. A minimum of 20 metaphases were analysed and karyotyped. Polymerase chain reaction (PCR) for SRY gene was performed on men with a 46,XX karyotype.

**Results:** Twenty-four infertile men had undergone testing. They had either severe oligozoospermia or azoospermia. Fifteen (62.5%) had chromosomal abnormalities. They included 5 (20.8%) with 47,XXY (Klinefelter syndrome), 3 (12.5%) with 46,XX, and 8 (33.3%) with polymorphic variants involving autosomes 7 (29.1%) and the Y chromosome 1 (4.2%). PCR for SRYgene was positive in 1 man with the 46,XX karyotype.

**Conclusion:** Thirty-three per cent (33.3%) of men in this cohort had chromosomal abnormalities which would have prevented them from fathering a child. Therefore it is recommended that all men with azoospermia and severe oligozoospermia be subjected to karyotyping routinely prior to undertaking invasive investigations of the female partner to avoid unnecessary procedures.

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**PP101**
Living conditions in boarding houses among female industrial workers in Katunayake free trade zone, Sri Lanka

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Introduction and objectives: The garment industry has become Sri Lanka's major exports earning industry. Usually, industrial workers live in boarding houses. The physical environment and living conditions in boarding houses is thought to be unsatisfactory. To assess the living conditions in boarding houses after determining the socio demographic characteristics among female industrial workers.

Method: Community based, descriptive study was carried out among female industrial workers occupying 200 rooms in boarding houses in Katunayake Free Trade Zone. Data was collected using an interviewer administered questionnaire to determine demographic data, information about drinking water, sanitation, cooking and cleanliness. The data was analyzed using Statistical Package for Social Sciences (SPSS) and GIS (Geographic Information System).

Results: Participants were between 16 to 45 years of age and the majority had passed GCE O/L examination (66.9%), unmarried (57.5%) and sewing machine operators (66.3%). The main source of water for drinking and cooking was the tube well. All of them used shared sanitary facilities. For the majority (71.2%) the cooking area was not separated from living room. Seventy four habitable rooms were overcrowded and all habitable rooms were adequately ventilated as per standard guidelines.

Conclusion: Mean age of the female industrial workers was 25.43 years. Majority were sewing machine operators, unmarried, passed GCE O/L as the final examination and from rural areas. Their main source of water for drinking and cooking was the tube well. Majority of them 'always' prepare their own food but has no separate area for cooking. Majority of the habitable rooms were overcrowded but adequately ventilated.

PP102
Availability, price and affordability of selected medicines for treatment of NCDs in Sri Lanka

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Introduction and objectives: In Sri Lanka non-communicable diseases (NCDs) are the leading causes of mortality and morbidity. Therefore it is important to identify gaps in access and availability of essential medicines for NCDs. Objective was to assess availability and affordability of 35 medicines.

Method: A representative country survey of nine districts was conducted in 45 public and 45 private sector pharmacies in 2013-2014. Medicine prices were expressed as ratios relative to the international-reference-prices (IRP); median price ratio or MPR. Using the salary of the lowest-paid unskilled government worker, affordability was calculated as the number of days' wages this worker would need to purchase standard treatments for selected NCDs.

Results: Mean availability of lowest-priced generics (LPG) was 65.5% and 74.2% in the public and private sectors respectively. Highest and lowest districts for public-sector were Anuradhapura (78%) and Colombo (54.4%) respectively and for private-sector Galle (85%) and Batticaloa (59.4%) respectively.

Only private-sector had originator brands (OB) but was low (16.2%) with lowest availability in
Colombo which could be interpreted as good acceptance of generics by prescribers. Public sector procures medicines at 0.20 times the IPR. The private sector prices for LPG was 0.64 times the IPR indicating higher mark-ups. In contrast OBs are priced 4.28 times the IPR. In the private sector, affordability for LPG and OB were <0.1 to 1.5 days-wages and 0.4 to 12.6 days-wages respectively.

Conclusion: Availability of low-priced-generics was high in both sectors and generally affordable in the private sector. However there are inequalities in distribution of medicines and pricing of original brands.

PP103
Dealing with psychological distress an exploratory study among medical undergraduates in Rajarata

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Introduction and objectives: Psychological distress is a common mental health problem among university students. Purpose of this study was to determine the prevalence and coping strategies associated with psychological distress among medical undergraduates.

Method: All medical undergraduates from Faculty of Medicine, Rajarata University of Sri Lanka were invited to participate in the screening programme for psychological distress. This invitation was linked to the faculty counseling services. Validated Sinhalese and Tamil versions of the General Health Questionnaire (GHQ) -12, and a fully structured self-administered questionnaire on associated factors were used. Written informed consent was obtained from all participants.

Results: A total of 753 participants (457, 63.6% females) were studied. Distress was detected among 113 (14.9%) participants. Females had slightly higher level of distress (16.1% vs 13.1%), with a median GHQ total of two compared to one among males. Reported coping strategies among students included engaging in entertainment activities (n=486,64.3%), talking with someone about the issue (n=353,46.7%), crying (325,43.0%), sleeping (312,41.3%), thinking about it in private (n=173, 22.9%), being mindful (159, 21.0%), engaging in academic activities to forget the incident (109,14.4%), and recording the incident (59,7.8%). Engaging in entertainment activities (P=0.004), talking to someone about the problem (p=0.028), and having a close person to discuss a stressful situation (p<0.001) were inversely associated with distress. Spending time thinking about the problem in private was associated with having distress (P<0.001).

Conclusion: Psychological distress is common; and understanding of related factors is necessary in programme planning.

PP104
Female sex and perceived learning difficulties are associated with depression among medical students

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Introduction and objectives: Reports from student counseling services clearly show that mental health issues are common among university graduates. Some of these problems are detected at late stages. Purpose of this
study was to estimate the burden of common mental health issues among medical undergraduates.

**Method:** We screened all medical undergraduates registered in Faculty of Medicine, Rajarata University of Sri Lanka as a part of routine counseling programme. After explaining the study objectives and obtaining written informed consent, all students were requested to participate (volunteer) and complete a fully structured, self-administered questionnaire and the translated, validated version of “Patient Health Questionnaire”.

**Results:** The study sample included 756 students from five batches. Prevalence of major depressive symptoms and other depression disorders was 2.2% (n=17) and 11.5% (n=87) respectively. Of the 479 females studied, 80 (16.7%) reported depressive symptoms compared to 24 (8.8%) out of 274 males (Chi square 9.2, p=0.002). High prevalence of depression among females was observed in all five batches. Male/female difference of depression was more prominent after the first two years in university. Significantly a higher percentage of students with depressive symptoms thought that their English proficiency (35.6% versus 26.2%, Chi-square 3.96, p=0.047) and study skills (70.2% versus 49.7%, Chi-square 15.1, p<0.001) were inadequate; their learning expectations were not fulfilled (67.0% versus 41.4%, Chi-square 22.94, p<0.001); and expressed a dislike for medical training (44.2% versus 24.3%, Chi-square 18.1, p<0.001).

**Conclusion:** Exploring the reasons why medical students are not happy with teaching learning environment should be a part of managing depressive symptoms.

**PP105**  
Prevalence of metabolic syndrome in kidney transplant recipients

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**Introduction and objectives:** Metabolic syndrome (MS) consists of a constellation of metabolic abnormalities which confer higher risk of cardiovascular disease and graft dysfunction to the individuals affected. Kidney transplant recipients are at a higher risk of developing MS due to their immunosuppressive medications. The aim of this study was to determine the prevalence of MS among a population of renal transplant recipients and to determine the factors associated with its occurrence.

**Method:** A cross sectional study was carried out at the University Transplant Clinic of National Hospital of Sri Lanka. Kidney transplant recipients with a follow-up period of at least 6 months were included. The International Diabetic Federation criteria were used to diagnose metabolic syndrome.

**Results:** 74 patients were included in the study. 53 (71.6 %) were males. Mean age was 47.93±12.38. The median duration of follow up was 56 months. The mean eGFR was 59.87 ml/min±18.64. All were on prednisolone except for one. The majority were on prednisolone, mycophenolate mofetil and cyclosporine combination (n=34, 45.9%). 18 (24.3%) patients were found to have metabolic syndrome. Average BMI was 24.52±4.52kg/m\(^2\) and 38(51.35%) had central obesity. 25 (33.8%) were found to have diabetes mellitus (DM) of which 14(22.2%) had new onset DM following transplantation. Prevalence of hypertension was 50 (67.5%). There was a positive association between new onset DM with age (chi\(^2\)=5.638, p<0.05) and post-transplant duration (chi\(^2\)=6.189, p<0.05) but no such associations were found with MS.

**Conclusion:** Prevalence of metabolic syndrome was high in the population studied. Presence of diabetes mellitus and hypertension were the chief contributors.
Importance of communicating medication changes to patients at discharge - a prospective case study

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Introduction and objectives: Patients may inadvertently continue their previous medication regimen without understanding changes made by prescribers as part of inpatient care. Inadequate patient education at discharge can lead to readmission and increased morbidity. The objective of this study is to identify the importance of patient education with regard to changes to their medications.

Method: This study was part of a prospective study carried out in two medical wards of Ragama teaching hospital to evaluate the effect of a clinical pharmacist’s interventions on quality use of medicines. We identified cases from the control group of this study to illustrate the importance of patient education at discharge.

Results: From telephone follow-up (six days post discharge), only 89 of 337 patients in the control group reported being informed of changes to their pre-admission medications by a doctor or nurse. There were 124 cases where we have identified patients continuing at least one pre-admission medication which was stopped or changed while they were in hospital. A particular instance is a patient who continued to take sodium valproate post-discharge as per previous drug regimen after being diagnosed with valproate induced hepatitis. He was discharged on phenytoin.

Conclusion: This study highlights the importance of ensuring patient education about changes made to existing medications whilst in hospital to ensure improved outcomes and reduce the risk of adverse events. The clinical pharmacist is well placed to assist medical teams by providing patients with appropriate education about medication changes and to provide appropriate educational material.

PP107
A case series of duplication errors due to brand name confusion - experience from a Sri Lankan teaching hospital

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Introduction and objectives: Confusion with drug names has been identified as a leading cause of medication errors. The majority of these errors result from look-alike or sound-alike drugs. This case series aims to provide examples of duplication errors due to brand confusion where there are no similarities in the names.

Method: Information for this case series was extracted from a database prospectively collected from Colombo North Teaching Hospital as part of a study conducted to evaluate the impact of the addition of a clinical pharmacist to the standard inpatient care.
Results: Of 800 patients reviewed during the study period of 7 months, clinical pharmacist identified 8 cases of duplication errors due to prescribing both generic and brand names of the same drug, but with no similarities in names. Cases identified include a duplication of frusemide caused by the lack of awareness that ‘Amifru’ (a combination of frusemide and amiloride) contains frusemide. Similarly, a patient was prescribed ‘H. Pylori Kit’ plus the three individual drugs included in the ‘Kit’ prescribed using their generic names. A patient was found to be taking two different brands of carbidopa plus levodopa not knowing the two contained the same drugs.

Conclusion: Brand confusion does not necessarily arise from look-alike or sound-alike drug names. It can be due to numerous brands of generic ingredients and lack of awareness of drug names among the patients. Employing trained clinical pharmacists in the wards, educating patients on discharge drugs and appropriate labeling of medicines may prevent these errors.

PP108
Prevalence of migraine among medical students of the Faculty of Medicine, University of Kelaniya

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Introduction and objectives: Migraine is identified as a common primary headache disorder which represents a significant global health problem due to its frequency and substantial disability. Migraine among medical students seems to be higher than the population prevalence. Our objective was to determine the overall prevalence of headache and the prevalence of undiagnosed migraine among medical students in University of Kelaniya.

Method: A descriptive cross-sectional study was conducted at the Faculty of Medicine, University of Kelaniya. 422 Sri Lankan medical students from first to fifth academic years were selected. A self-administered questionnaire in English medium was used to gather data. ID MigraineTM, a widely used screening instrument for identifying migraine at primary health services, was used to identify undiagnosed migraine. The cut-off for a test diagnosis of migraine headache was at least two positive responses.

Results: 375 participated in the study, where the females were the majority (63.5%). Diagnosed migraine prevalence was 7.5%. 46 (12.26%) students having more than 2 episodes of headache in the last 3 months were positive for migraine screening. Among those diagnosed with migraine, ID Migraine screening positives were significantly higher (p=0.005). Prevalence of migraine was higher among female medical students (13.1%). The main trigger factors were irregular sleep (89.2%) and exams (62.2%). Academic performance of 43.2% was affected due to migraine headaches.

Conclusion: Prevalence of migraine among medical students of University of Kelaniya is lower than other studies, but many are undiagnosed. Migraine adversely affects on the academic performance.

PP109
A serological study on Cutaneous Leishmaniasis in Sri Lanka reveals antigen heterogeneity

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Introduction and objectives: L. donovani, a usually visceralizing parasite species results in cutaneous leishmaniasis (CL) in Sri Lanka. Primary evidence for sero-prevalence of local CL was reported previously. This project further examined sero-prevalence of local CL using two established tests.
Method: Sera from a heterogeneous group of local CL patients (40) and Indian VL patients (2) were studied. Patients were clinically evaluated and sera were tested using rK39 dipstick test (InBios:USA) and crude antigen of Indian L. donovani AG83 based dipstick test. Clinical and epidemiological data of patients were analyzed.

Results: Patients represented different regions [Western (45.0\%:n=18/40), Southern (20.0\%:n=8/40), North-Western (17.5\%:n=7/40), other provinces (17.5\%:n=7/40)], different time points within the epidemic (2009-2015) and different lesion patterns [plaques (27.5\%:n=11/40), nodules (22.5\%:n=9/40), ulcerating-nodules (20\%:n=8/40) and other (30\%:n=12/40)] which were at different durations [2 weeks-36 months:mean =4.9 months]. Majority were males (77.5\%:n=31/40:mean age=38yrs). Most (90.0\%:n=36/40) had single lesions on head and neck area (35.0\%:n=14/40), forearm (22.5\%:n=9/40), pinn (15.0\%:n=6/40) and other areas (27.5\%:n=11/40). Systemic features were minimal and non-specific. None of the local sera were positive for both tests while Indian sera were positive. Follow ups revealed persisted non sero-conversion after 3 months (n=28/40 followed up so far) while 96.4\%:n=27/28 responded to treatment.

Conclusion: This study provides prime evidence for absent or minimal serological response in local CL in different clinical profiles, in contrast to positive serology in visceralizing Indian L. donovani. Possible inter-country heterogeneity of L. donovani is suggested which can complicate the diagnosis and treatment. This also highlights the limited value in serology for detection of leishmaniasis in Sri Lanka.

Poster session 7

PP110
Developing and validating a tool to assess empowerment for tobacco control

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Introduction and objectives: Empowerment is defined as the mechanism by which individuals, organizations and communities gain mastery over their lives. Many tobacco control interventions aim to empower individuals but measuring empowerment is a challenge. Study aim was to develop a tool to assess empowerment for tobacco control at individual level in the Moneragala District.

Method: Indicators were operationalized based on Zimmerman’s psychological empowerment definition. Initial interviewer-administered tool was subjected to modified Delphi technique to determine content and consensual validity and a scoring system. Cognitive interviews were conducted to assess applicability to local context. Pre testing (n=30) and validation (n=200) were conducted in the Badulla District. Exploratory factor analysis was performed to assess construct validity. Based on communalities, Scree test and Eigenvalues derived from latter, Delphi technique was used to determine the factor structure which improved interpretability. Internal consistency and test-retest reliability were assessed using Cronbach’s alpha and Cohen’s kappa coefficient respectively.

Results: Components extracted using principle component analysis showed high communalities (0.914 to 0.996). Eigenvalue cut-off taken was 0.3 and six constructs were derived from the Scree plot converged in 14 iterations in Varimax rotation. Final tool comprised 27 items under seven factors named “Perceived awareness”; “Motivation to involve and perceived mastery”; “Awareness and mobilization of resources”; “Perceived efficacy”; “Perceived competence in society”, “Perceived competence within network” and “Community involvement” for tobacco control. Cronbach’s alpha was 0.91 demonstrating good internal consistency. Cohen’s kappa coefficient was 0.63 indicating substantial agreement.
Conclusion: Developed tool can be used in similar contexts to measure empowerment for tobacco control.

PP111
Compliance of selected drug dossiers submitted for registration, as per the drug regulatory authority requirements and the WHO recommendations
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Introduction and objectives: For registration of medicines in Sri Lanka, the dossiers submitted should contain data required by the Drug Regulatory Authority (DRA). This study aimed to determine the compliance of selected medicines registered during 2012-2014 as per DRA requirements and WHO recommendations.

Method: Registered medicine dossiers of amoxicillin, carbamazepine, valproate, lithium and solid oral dosage forms of all locally manufactured medicines were evaluated. The criteria assessed included 76 items as per DRA requirements and 100 items recommended by WHO.

Results: Altogether 113 dossiers, 79 (70%) local and 34 (30%) imported, were evaluated. They included amoxicillin 19 (17%), carbamazepine 9 (8%), valproate 18 (16%), lithium 2 (2%), paracetamol 5 (4%) and cloxacillin 5 (4%). Countries of import were India (88%), Pakistan (3%) and European countries (12%). The median number of data available were 37.5 (50.7%); range 23-66 as per DRA requirements and 25 (33.8%); range 15-38 according to WHO requirements. The median numbers of required data available in local and imported dossiers respectively were 35 (50%); and 57 (82%); as per of DRA requirements (p<0.001) and 25 (25%) and 31 (31%) according to WHO requirements (p<0.001). Bioequivalence (BE) data were available only in 2.5% and 28.2% of the local and imported drug dossiers respectively. The median time taken for registration was 12 weeks.

Conclusion: Data available at registration of medicines, supplied by both local manufactures and importers was inadequate, as dossiers had less than 50% compliance to WHO requirements. Most of the BE data submitted at registration were not satisfactory. Improvement in the DRA requirements and compliance by companies is needed to improve the quality of medicines registration in Sri Lanka.

PP112
Trend of smoking and tobacco use in Sri Lanka 1960 – 2010: is it affected by cigarette pricing?
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Introduction and objectives: The prevalence of smoking among adults in Sri Lanka in 2012 was estimated as 9.3%, with prevalences being 18.6% for males and 0.2% for females. This study aimed to describe smoking and tobacco use trends from 1960–2010 and the influence of pricing on trends.

Method: Tobacco consumption data was obtained from the Food and Agricultural Organization database, cigarette consumption from the World Bank database, population data from the UN database and cigarette pricing and current prevalence of smoking from the Alcohol and Drug Information Centre. Correlation and regression analysis were carried out.

Results: The average cigarettes sticks smoked from 1960–2004, were 289±58.66 sticks/capita/year and average tobacco use from 1960-2010 was 560.87±223.43 kg/capita/year. Between 1960–1977, the number of cigarettes smoked increased on average at a rate of 11.5 per capita/year; and
since 1978 smoking decreased by 2.33 sticks/capita/year. If only males are considered as smokers in Sri Lanka, the number of cigarettes smoked per male per year increased on average by 22.9 between 1960 and 1977; the average decrease after 1978 among males was 4.17 cigarettes per male per year. Between 2000 and 2012, the smoking prevalence is negatively correlated with the increase in cigarette pricing (r=0.469, p=0.034; R²=0.408). There was a decrease in mortality due to respiratory neoplasms beginning in 1995; this decrease corresponds to the decrease in smoking since 1978, having a lag period of about 15 years (r=0.002, p=0.021, R²=0.151).

Conclusion: Smoking and total tobacco consumption has been decreasing since 1978, similar to the trend observed globally. Tobacco pricing negatively influences smoking.

PP113
Prevalence and risk factors for non-alcoholic fatty liver disease among an urban aging adult Sri Lankan population – Ragama health study 7-year follow up

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Introduction and objectives: A previous community based study reported a prevalence of 33% for Non-alcoholic Fatty Liver Disease (NAFLD) among an urban adult Sri Lankan population. In this follow up study of the same population after 7 years, we reassessed the prevalence and risk factors for NAFLD.

Methods: The study population consisted of 42–71 year old adults, originally selected by stratified random sampling. NAFLD was diagnosed on established ultrasound criteria for fatty liver, safe alcohol consumption (< 14 units/week for men, < 7 units/week for females) and absence of hepatitis B and C markers. Anthropometric measurements, blood pressure (BP) and body fat distribution were made. HbA1c, fasting serum lipids, serum alanine aminotransferase (ALT) and serum creatinine (Scr) with estimated glomerular filtration rate (eGFR) were determined. CKD was defined as eGFR<60 ml/min/1.72 m² (KDIGO/KDOQI classification).

Results: Of the 2985 original study participants, 2155 (72.2%) (1244 [57.7%] women, mean age 59.2 years [SD, 7.7]) participated in the present study. 1322 (mean age 58.9 years (SD, 7.6), 483 (53.0%) men and 839 (67.4%) women) had NAFLD. On multivariate analysis, obesity, abnormal body fat distribution, elevated systolic BP, raised plasma triglycerides, and low HDL were independently associated with NAFLD. Raised diastolic BP, raised HbA1c, raised ALT and presence of CKD were not associated with NAFLD.

Conclusion: The prevalence of NAFLD among adults in this aging urban Sri Lankan community has increased over 7 years and is independently associated with constituent features of the metabolic syndrome.

PP114
Effects of storage in parameters of Full Blood Count (FBC)

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Introduction and objectives: FBC is a laboratory test which is routinely done. There is often a post collection interval before analysis of results where external factors such as storage temperature, and the duration of
sample storage can affect the results. This study analyses the storage effects of components of FBC at different temperatures over time.

**Method:** A cross sectional study was conducted in the laboratory of the Colombo South Teaching Hospital. K$_2$EDTA blood samples were randomly taken from 102 healthy individuals. Baseline measurements were analyzed within 30 minutes of collection through analyzer Sysmex SX 500i. Samples were divided into 3 portions; each of them was kept at 4±2°C, 23±2°C and 31±2°C up to 48 hours. All were repeatedly analyzed after 6 hours, 24 hours, and 48 hours.

**Results:** RBC, HGB, MCH and WBC were stable at 4°C, 23±2°C and 31±2°C throughout the study. MCHC, HCT, RDW-CV were stable only at 4°C. The machine refused to read the differential count of most samples after 24 hours of storage at all temperatures except 4°C. Storage caused a significant decline in platelet count and an increment in MPV at all temperatures after 6 hours (p<0.05).

**Conclusion:** It is preferable to perform the full blood count as soon as possible and indicate both time and date of the sample collection and sample analysis. +4°C is the best temperature to store the specimens if the analysis is delayed for a longer period of time.

**PP115**

**Developing a multidisciplinary integrated curriculum for nutrition promotion and rural development in Sri Lanka**

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**Introduction and objectives:** As a middle income country Sri Lanka is facing nutrition challenges of over and under nutrition. Integrating Nutrition Promotion and Rural Development (INPARD) is a World Bank funded project with the objective of implementing nutrition promotion activities. It followed a model of integrated multisectoral rural development programme to improve nutritional outcomes. Capacity building of multiple stake holders, including health and non health staff at grass root level is important for successful implementation of this programme.

**Method:** An outcome-based approach was used to develop the curriculum. A needs assessment was carried out using focus group discussions and interviews with village communities, school principals and community volunteers. Indices related to nutrition were analyzed. After triangulation of the qualitative and quantitative data from the needs assessment, core competencies and outcomes were developed. Consensus on curriculum for nutrition promotion was finalized through series of meetings with experts. Course content was developed to achieve these core competencies and outcomes.

**Results:** Five outcomes were identified in the curriculum for capacity building. They include; recognizing and critically evaluating nutrition related implications of rural development interventions, analyzing common nutrition issues and their health implications, planning and implementation of health promotional activities, working effectively in collaboration with health and other sectors and promoting community empowerment in order to improve basic nutritional needs. Content was arranged as three modules, i.e. nutrition, inter-sectoral collaboration and health promotion.
Conclusion: Outcome-based approach provides an effective way of developing an integrated multisectoral nutrition promotion.

PP116
Goniometer assessment on knee osteoarthritis among patients seeking ayurveda medicine in Jaffna district

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Introduction & objectives: Worldwide, Knee Osteoarthritis (KOA) is the most common rheumatic disease and one of the five leading causes of disability among elderly men and women. Disability and functional limitations are based on physical changes experienced due to the disease progress of KOA. The goal of the present study is to identify the relationship between range of movement (ROM) and KOA subjects in Jaffna District.

Method: Based on American College of Rheumatology classification, 837 KOA subjects were screened and 250 KOA subjects of both genders, aged ≥ 40 years were randomly selected at Out Patients Department of Ayurvedic Hospitals in Jaffna District from January 2013 to January 2014. The ROMs as flexion and extension on supine and prone position were recorded in degrees, using a goniometer. Data were analyzed by SPSS version16. This study received ethical approval from Faculty of Medicine, University of Jaffna, and registered at SLCTR (No: SLCTR/2012/009).

Results: There were 177(70.8%) female and 73 (29.2%) male with a mean age of 57.02 (SD ± 8.78) years. In this study subjects, 147 (58.8%) had unilateral KOA and 103 (41.2%) had bilateral KOA. One way ANOVA showed that the mean of the knee flexion 121.09 (SD±12.62) on supine position, flexion104.37 (SD±12.74) on prone position, extension 18.27 (SD±4.07) on supine position, and extension 14.19 (SD±2.65) on prone position. There was no significant relation between ROMs and gender (P > 0.05) of KOA subjects.

Conclusion: The findings of the present study revealed that the ROMs were not correlated with gender of KOA subjects.

PP117
Can body mass index at booking visit and weight gain during mid-trimester predict Gestational Diabetes Mellitus?

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Introduction and objects: Pre-pregnancy obesity is associated with gestational diabetes mellitus (GDM). But the Body Mass Index (BMI) at booking visit and mid-trimester weight gain can predict GDM hasn’t been investigated.

The aim was to determine whether body mass index (BMI) at 9-12 weeks of booking visit and weight gain in mid-trimester can predict glycemic abnormalities in glucose tolerance test (GTT).

Method: In this prospective study, 452 women underwent 75-gram GTT at 24-28 weeks of gestation. BMI at booking visit (9-12 weeks of gestation) and weight gain in mid-trimester were recorded. Excessive gestational weight gain (GWG) was determined using the Institute of Medicine (IOM) guidelines. Student’s t-test and multivariate logistic regression were used to find associations.

Results: Mean age and BMI were 31.3 years (SD 6.3) and 22.0 kg/m2 (SD 4.6). 38.9 % had excessive GWG in mid-trimester with no statistically significant difference across BMI categories. Excessive GWG was associated with higher risk of GDM. The odds of OGTT results above GDM threshold were 31% higher in the excessive GWG group [adjusted OR 1.3 (95% CI 1.1–1.5)]. The odds of GDM were 22 % higher among women with booking visit BMI ≥ 25 kg/m2 [OR 1.2 (95% CI 1.1–1.4)].
Conclusion: Booking visit BMI and mid trimester excessive GWG can be used to predict GDM. We recommend to calculate BMI at booking visit and look for excessive gestational weight gain in mid trimester and consider OGTT for all women with BMI ≥ 25 kg/m² or/and excessive GWG.

PP118
Prevalence of non-alcoholic fatty liver disease and its risk factors in an urban adolescent cohort in Sri Lanka

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Introduction and objectives: High prevalence of non-alcoholic fatty liver disease (NAFLD) is reported among adults in Sri Lanka. Although limited data on childhood obesity is available, community prevalence of NAFLD and its risk factors among adolescents is unknown. We investigated the prevalence and risk factors for NAFLD in an urban adolescent birth cohort in Sri Lanka.

Method: The study population consisted of 14-year-olds, belonging to the birth cohort born in 2000, residing in the Ragama Medical Officer of Health area. NAFLD was diagnosed based on established ultrasound criteria. Anthropometric measurements, blood pressure (BP) and total body fat distribution (TBF) estimates were made. Fasting blood sugar, serum insulin, fasting serum lipid and serum alanine aminotransferase (ALT) levels were measured. Independent predictors of NAFLD were determined by multivariate analysis.

Results: 508 adolescents [263 (51.8%) girls] participated in the study. 44 (8.7%) had NAFLD [22 (8.4%) girls]. 46 (18.8%) boys and 54 (20.5%) girls had a BMI above the equivalent of 23 kg/m² in adults. 44 (17.1%) boys and 77 (29.3%) girls had elevated TBF. On multivariate analysis, having an elevated BMI [OR = 10.1 (95% confidence interval: 3.9-29.2)] and elevated TBF [OR = 4.4 (95% confidence interval: 1.5-12.8)] were independently associated with NAFLD.

Conclusion: The prevalence of NAFLD among adolescents in this urban Sri Lankan community is high and is strongly associated with obesity and abnormal TBF. Our findings emphasise the need to address these risk factors through preventive programmes.

PP119
Impact of paediatric bronchial asthma on parental mental health

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Introduction and objectives: Bronchial asthma is a chronic illness imparting a heavy burden to families with affected children. In Sri Lanka prevalence rate is 15% to 20%. Studies conducted in developed countries have identified psychological impairment in parents with asthmatic children while in Sri Lanka there is a deficiency of such studies. Thus our objectives were to assess the psychological impact of asthma in children on their parents and to determine the factors affecting disease control.

Method: We conducted a case control study at Colombo South Teaching Hospital recruiting 74 parents of asthmatic children as cases and 69 parents of children with no chronic illness as controls. Validated 30 item General Health
Questionnaire (GHQ) was distributed. Data analysis was done using SPSS and p<0.05 considered the level of significance at a Confidence Interval of 95%. Odds ratios were calculated by logistic regression.

Results: A GHQ score of over 6, indicating an impaired mental health status was seen in 20.3% of cases and 13% of controls and a positive correlation between psychological status and presence of asthma was noted. Once matched for socioeconomic status, still a significant number of parents with asthmatic children had impaired mental health status (adjusted odds ratio 1.2, CI 95%). Asthma control was as follows; controlled (27%), partially controlled (58.5%) and uncontrolled (16.2%). Psychological status had a significant impact on asthma control (p=0.017).

Conclusion: Childhood asthma has an impact on parental mental health, invariably affecting asthma control. The necessity arises for modes of psychological assessments to gauge the impact in order to deliver improved care for disease control.

PP120
Knowledge and attitudes of Tamils with Diabetes Mellitus in a selected center, Batticaloa District

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Introduction and objectives: Patients’ knowledge and attitudes can positively influence behavioral change in individuals with Diabetes Mellitus (DM) which will facilitate the patients to adhere to diet, physical activities, and taking medication, which enable adequate metabolic control. The study was aimed to describe the knowledge and to explore the attitude of Tamils with DM who were attending Diabetes Education Center, Teaching Hospital, Batticaloa, Sri Lanka.

Method: This is a mixed type study (Quantitative and Qualitative) conducted from January 2012 to December 2013. This is a descriptive cross sectional study, involving a systematic sample of 384 patients, using a pre-tested interviewer administered questionnaire to describe the knowledge of Tamils with DM. Two consultant physicians and two nutritionists who treat the Tamil diabetics were recruited voluntarily to explore the attitudes of Tamils with DM. In-depth interviews were conducted.

Results: Majority (73.3%) scored less than 50% in the knowledge test which indicates they have poor knowledge. The age, education levels, monthly income, family history of DM and employment had significant association with knowledge score (P<0.05). Many patients (95.3%) reported routinely controlling their DM through modifying diet. Further, Tamil patients with DM have poor diabetic self-management practices mainly due to ignorance of dietary habits and changing of lifestyles.

Conclusion: Patients with DM had an unsatisfactory level of overall knowledge related to DM. Education programmes are needed to address critical gaps in patients’ knowledge. The better self-management of DM among Tamils would be achieved if they adhere to the acceptable practices by modifying lifestyles and changing the attitudes and practices.

PP121
Unit cost analysis in neonatal intensive care units in two types of hospitals: study of Castle Street Hospital for Women and District General Hospital, Chilaw.

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Introduction and objectives: Neonatal intensive care units (NICUs) are highly sophisticated, expensive healthcare delivery units. Costing NICUs is important in planning for new units, upgrading existing units and understanding the financial burden imposed by NICU care. The objectives were to calculate per day per neonate, treatment and total costs.

Method: This study was carried out at the NICUs of Castle Street Hospital for Women, Colombo (CSHW) and the District General Hospital, Chilaw (DGHC) as a retrospective cross sectional study from the data extracted from bed head tickets. The study period covered all admissions in 2013. The scenario building cost accounting method was adopted.

Results: Cost estimates (in Rs) calculated using the Scenario Building method are as follows. Hotel costs were relatively similar at 2,506 and 2,221 at CSHW and DGHC respectively but treatment costs varied significantly (14,839 and 4,384) resulting in sizeable differences in total cost (17,338 and 6606). Of the neonates studied, 59% and 67.5% were premature at CSHW and DGHC respectively while 60% and 72.5% were low birth weight babies.

Conclusion: No similar studies have been undertaken in Sri Lanka previously. Analyzing treatment and hotel costs sheds light on staff allocation, space and bed numbers and treatment protocols. The study is useful for future planning and budgetary allocation for NICUs.

PP122
Knowledge, attitude and practices related to Diabetes among diabetic patients attending the medical clinic of District Hospital Ja-ela

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Introduction and objectives: Diabetes mellitus (DM) is a chronic illness defined by elevated blood glucose levels brought on due to absolute or relative deficiency of insulin. It has emerged in pandemic proportions all over the world. It is important to study the level of knowledge, commonly held attitudes and practices among patients to implement strategies to prevent, minimize or delay the consequences of the disease. Assessing the knowledge, attitude, and practices related to diabetes of clinic patients

Method: A descriptive cross-sectional study. 407 diabetic patients were recruited by Systematic Random Sampling. Every 5th patient attending the medical clinic of each day according to the order of registration was selected. A self-administered questionnaire was used.

Results: Median age of study population was 61 years, females 71.4% and 90% had educated up to O/L, 77.3% were unemployed. 85.5% believed DM is dangerous, 73.5% knew DM causes hyperglycemia, 50.5% and 54.7% respectively were aware of common symptoms and complications of DM, 74.19% knew how to respond hypoglycemia. They showed a mixed level of knowledge (lifestyle modifications 49.6%, foot care (72.8%) and practices (not exercising) 51.5%, poor diet control 40.9%, toward DM. Monthly FBS checks (85.5%), but (34%) missed regular treatment.

Conclusion: Although study group showed better attitudes towards diabetes, their knowledge and practices were not satisfactory.

PP123
Prevalence, risk factors, preventive strategies and consequences of work-related musculoskeletal disorders among Sri Lankan physiotherapists in selected teaching hospitals in the Colombo district

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Introduction and objectives: Physiotherapists working in Sri Lanka are at risk of work-related musculoskeletal disorders (WRMSDs). However, prevalence rates and risk factors are not well documented. The objective of this study was to identify the prevalence, risk factors, preventive strategies and consequences of WRMSDs among Sri Lankan physiotherapists in selected teaching hospitals in the Colombo District.

Method: A self-administered questionnaire was distributed to 60 physiotherapists. The questionnaire gathered demographic data as well as information on occurrence of musculoskeletal complaints in the previous 12 months. Descriptive statistics, frequency, and Chi-square analysis were used.

Results: Of the 60 responders included in the study, the one-year prevalence of WRMSDs was 83.3%, with lower back complaints as the most common (48%). This was followed by neck (42%), ankle/foot (36%). Male physiotherapists (96.5%) were more dominant to the WRMSDs. The risk factor quoted by most of the respondents was regularly applying force with hands or arms (83.3%). Paying more attention to encourage patient responsibility for carrying out treatment (71.6%) were most quoted responses for the preventive strategies of WRMSDs. As consequences, physiotherapists had taken sick leave and changed or modified their treatments.

Conclusion: WRMSDs among physiotherapists in Sri Lanka were common, with lower back affected most. Risk factors, preventive strategies and consequences of WRMSDs among physiotherapists of Sri Lanka were identified. Further research is required to build up effective preventive or ergonomic strategies. There is a need to investigate the effect of risk factors such as physical load, psychosocial load, and general health status on prevalence of musculoskeletal disorders.

Outcome of early coronary intervention for acute ST elevation myocardial infarction in a tertiary care cardiac centre in Sri Lanka

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Introduction and objectives: To describe the outcomes of early percutaneous coronary intervention (PCI) for the treatment of acute ST elevation myocardial infarction (STEMI) in a tertiary care cardiac center in Colombo, Sri Lanka.

Method: Medical records of 139 consecutive patients presenting to Cardiology Unit of the National Hospital of Sri Lanka from March 2013 to June 2014 with acute STEMI, and treated with early PCI as a mode of reperfusion were reviewed. These patients were then followed up for 6 months to determine survival, target-vessel revascularization, in-stent thrombosis and other Major Adverse Cardiac Events (MACE).

Results: Out of 139 patients, 116 (83.5%) were male. Mean age was 52.3±SD11.1 years. Eighty-eight (63.3%) patients underwent primary PCI while 51(36.7%) underwent rescue PCI. There were a total of six deaths (4.3%). One occurred on-table while three occurred after discharge. Among the dead, two thirds (4, 66.67%) had cardiogenic shock. Mean Door-To-Balloon (DTB) time was 147 minutes for the primary PCI patients who were transferred from ETU. At 6 months, out of 74 patients who were available for follow up, 2 (1.5%) had been re-hospitalized for heart
failure but none underwent Coronary Artery Bypass Grafting (CABG).

Conclusion: In this first report from the national tertiary care cardiology referral centre, the study population is relatively younger in keeping Asian figures, has a high initial success rate (98.6%) and excellent short- and intermediate-term survival (95.7%), particularly in the subset presenting without cardiogenic shock (98.4%) despite the high DTB time. Loss to follow up at 6 months in this centre was 44.4% (59 patients).

Poster session 8

PP125

Knowledge, attitudes and practices of medical officers of two selected teaching hospitals of Colombo district of Sri Lanka in application of non communicable disease prevention activities in ward settings

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Introduction and objectives: Non-Communicable Diseases (NCD) is a dominant health problem, in Sri Lanka. The national policy recognizes building capacity of Medical Officers (MO) to address this issue. This study aimed to assess knowledge, attitudes and practices of MOs of two teaching hospitals of Colombo district in applying NCD prevention activities in wards.

Methods: A cross-sectional study among 465 MOs of two teaching hospitals was conducted using a self-administered questionnaire to assess knowledge, attitudes and practices.

Results: Only 43.7% MOs possessed a ‘good’ level of knowledge regarding NCD prevention. Only 41.4% knew three NCDs that can be screened and 18.4% knew places of screening services. Of the MOs, 68% knew three primary/primordial NCD prevention activities that can be applied in wards. A majority (76.6%) showed favourable attitudes in applying NCD prevention in wards. In assessing practices, only 43% provided lifestyle guidance to all the inpatients with NCDs and only 14.3% MOs advised family members of patients regarding their role on NCD prevention. Reported barriers to implement NCD prevention were lack of time (85.9%), training (47%) and knowledge (32%). Knowledge and practices on NCD prevention strategies that can be applied in ward settings was poor among a majority of MOs while attitudes were mostly favourable.

Conclusions: The study recommends improving knowledge, overcoming reported barriers, to promote MOs take up NCD prevention in wards.

PP126

Occurrence and associated factors of hypertension among a cohort of bus drivers in Colombo: a pilot study

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Introduction and objectives: Hypertension is a leading cause of morbidity and mortality worldwide. Hypertension is associated with sedentary behaviour and stress which are prevalent among bus drivers. This study aimed to assess the occurrence and associated factors of hypertension in a cohort of bus drivers arriving at the Colombo central bus stand.

Method: A descriptive analytical cross-sectional study was conducted among 120 male bus drivers selected by systematic sampling. Participants with possible secondary hypertension were excluded. Blood pressure and anthropometric data were measured. Relevant data including age, trip duration, smoking, alcohol and other risk factors of hypertension were collected using an interviewer administered questionnaire. The associations were established using chi square test and Spearman’s correlation.
**Results:** The mean age of the study group is 41.6±7.7 years (24-61). The occurrence of hypertension was 36.7% out of which 25% were previously diagnosed. Occurrence of hypertension was significantly associated with age ($X^2$, $p<0.001$) and longer trip duration ($X^2$, $p<0.05$). Systolic blood pressure was positively associated with BMI (body mass index) ($r=0.346$, $p<0.01$). Significant proportion of hypertensive were either overweight or obese ($X^2$, $p<0.05$). Of the study population, 55% were smokers, 55% consumed alcohol either weekly or monthly and 13% consumed daily. However there was no significant association between smoking or alcohol consumption with hypertension.

**Conclusion:** The occurrence of hypertension in our cohort was 36.7% and was significantly associated with longer trip duration, BMI and age. Majority of drivers were smokers and alcohol consumers but there was no significant association with hypertension.

**PP127**
**Improving the patient safety – “learning through case studies”**

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**Introduction and objectives:** Patient safety is a new healthcare discipline that emphasizes the reporting, analyzing and preventing medical error that often leads to adverse healthcare events. Multiple countries reported a staggering number of patients harmed and killed by medical errors. This case was studied and analyzed with the aim of detecting the error for the purpose of system improvement and to share the learnt experience with other healthcare professionals.

**Method:** Root cause analysis was done and proximate cause was identified as putting too tight plaster and several contributing factors (latent error) were identified as human resource issues, information management issues, environmental issues, leadership and cultural issues and communication issues.

**Results:** Patient is a 23-year old final year law student transferred to District General Hospital, Matara from a peripheral hospital with ulnar and radius fractures of the left arm for further management. A Plaster Of Paris (POP) was applied following manipulation under anaesthesia. Wedging was done after 2 hours for further correction of the fracture following post reduction x-rays. Next day the fingers were found to be bullish, POP was removed and referred to a higher healthcare facility for a vascular surgeon’s opinion. Three days later her left arm was amputated above the elbow joint.

**Conclusion:** Following the analysis, education and training of both health professionals and patients regarding their health issues were understood as a major fact to be corrected.

**PP128**
**Unconditional probability of death between ages 30 and 70 years and age standardized mortality rates due to major NCDs in Sri Lanka**

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**Introduction and objectives:** Monitoring of mortality (unconditional probability of death and age standardized mortality rates) due to major four non-communicable diseases (NCDs) is important to evaluate effectiveness of national NCD prevention and control programme, included in the World Health Organization NCD global monitoring framework. This study was conducted to estimate ‘unconditional probability of dying’ (UPoD) between 30 and 70 years and ‘age standardized mortality rates’ (ASMR) due to major NCDs namely; cardiovascular diseases,
cancers, chronic respiratory diseases and diabetes; during 2010 in Sri Lanka.

Method: We applied the life table method which allows calculation of the risk of death in the absence of other causes of death, to examine the UPoD between ages 30 and 70 from four major NCDs. ASMRs were obtained for major NCDs by applying age specific death rate to WHO 2000 standard world population. Mortality the data for 2010 was obtained from Registrar General Department.

Results: In Sri Lanka, the UoPD from 4 major NCDs between age 30 to age 70 was 22%. The ASMR due to major NCDs was 312 per 100,000 populations. ASMRs of major NCDs were 163, 45, 56 and 46 for cardiovascular diseases, diabetes, cancer and chronic respiratory diseases, respectively.

Conclusion: In Sri Lanka, UoPD due to NCDs is higher than most of countries in South East Asian Region. This reflects the extent of premature mortality due to NCDs in Sri Lanka.

PP129
Incidence, risk factors and outcome of acute lower limb cellulitis in patients admitted to a tertiary care hospital

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Introduction and objectives: Lower limb cellulitis is a common condition in patients seeking hospital admission. Aim was to describe the incidence, risk factors and outcome of patients with acute lower limb cellulitis.

Method: Prospective case control study was carried out at all surgical and medical wards of CSTH from 01/10/2014 to 31/12/2014. All clinically diagnosed acute lower limb cellulitis patients and an age and sex matched control group were included. Data was collected using an interviewer administrated questionnaire. Nasal swabs were collected from all patients for bacterial culture. Cellulitis patients were followed up during hospital stay and at 30 days. Data was analyzed using SPSS 20.

Results: Overall incidence of acute lower limb cellulitis was 4.65 per 1000 admissions and it was 9.5 per 1000 admissions to surgical wards. BMI >25 (p<0.001), diabetes mellitus (p<0.01), lower limb edema (p<0.001), lower limb ulcer (p<0.001), penetrating trauma (p<0.001), toe web problems (p<0.001) and past history of cellulitis (p<0.001) were statistically significant risk factors. Nasal carriage of Staphylococcus aureus was not a significant risk factor. Correct first line antibiotics and doses were started in 86.7% and 50% of patients respectively. Antibiotic regime was changed in 41.1% of patients during stay. Of cellulitis patients, 74.4% were discharged without complications and 18.9% were hospitalized for >10 days. During 30 days 21.2% of patients had recurrence and 15.6% needed readmission.

Conclusion: High incidence of cellulitis was seen in patients admitted to surgical wards. Correction of modifiable risk factors, administration of proper antibiotics in correct doses will reduce hospital stay and readmissions.

PP130
Characteristics of patients admitted following deliberate self harm to tertiary care institutes in district of Galle

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Introduction and objectives: Deliberate self harm (DSH) has emerged as an important public health issue in Sri Lanka. Nearly 40,000 people commit DSH in each year adding a
considerable burden. Knowledge on characteristics of subjects who deliberately harm themselves will help to strengthen prevention programmes. This is a part of a study which is being conducted to improve management and prevention practices. Aim of the study was to describe characteristics of patients who were admitted following deliberate self harm to tertiary care institutes in District of Galle.

**Method:** A descriptive cross sectional study was performed using an interviewer administered questionnaire in tertiary care institutes in District of Galle. A person presented with a non-fatal act of self harm undertaken with or without self destructive intent was taken as a case of DSH.

**Results:** Total sample consisted of 110 subjects. Mean age was 27.1 (SD 13.6) and 63.6% were females. Except 6 subjects, the rest were Sinhala Buddhists. Majority had only secondary education (75.5%), had a monthly family income below Rs 30,000 (66.4%), were not employed (60.0%), and were not married (50.2%). Gender was significantly associated with age as there were more females among patients who were below 25 years of age (p = 0.034).

**Conclusion:** Majority were females, from 16-25-year age group, had only secondary education, had a monthly family income below Rs 30,000, were not employed and not married. There were more females among younger patients. Preventive strategies should be focused on these high risk groups.

**PP131**

*Genetic eye disorders present in a pediatric eye unit in Sri Lanka*

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**Introduction and objectives:** Genetic eye disorders account for a considerable proportion of visual impairment in children. Limited data is available regarding genetic and heritable visual impairment in Sri Lankan children. Hence, we performed an initial study to explore the phenotypes of genetic eye disorders seen in a paediatric eye unit in Sri Lanka.

**Method:** Clinical genetic evaluation, genetic counseling and genetic risk assessment of 48 patients seen at the Paediatric Eye Unit in Lady Ridgeway Hospital, Colombo were conducted.

**Results:** 44 patients had isolated eye disorders, while the remaining 4 patients had syndromic phenotypes. Isolated eye disorders include retinoblastomas, retinitis pigmentosa (RP), Stargartd disease, and isolated Aniridia. Those with significant eye involvement as part of rare Ophthalmo-genetic syndrome include Waadernberg syndrome with heterochromiairidis, Mobius syndrome with defective abduction of eyes, and an Edward syndromic baby with a Coloboma. Nine patients had a positive family history, while 39 were simplex cases.

**Conclusion:** Phenotypic numbers and varieties of genetic eye disorders are considerable in this cohort. Some patients in Waardenburg syndrome and Moebius syndrome categories exhibited atypical clinical features remaining within the diagnostic criteria. Although autosomal dominant (Aniridia, EBMD) and autosomal recessive (Stargartd disease, RP) inheritance patterns were detected in this cohort, the majority were simplex cases. Reduced penetrance, variable expressivity, de novo mutations, (germline) mosaicism and two hit hypothesis are the possible explanations for negative family history.

**PP132**

*Core prescribing indicators and most commonly prescribed medicines in Colombo group of hospital wards in major specialties*
Introduction and objectives: This study aimed to identify core prescribing indicators according to WHO guidelines and most commonly prescribed medicines in main specialty wards in Colombo group of hospitals.

Method: A descriptive, quantitative, cross sectional study was conducted. Forty consecutive 40 prescriptions from professorial units of all specialties and two other randomly selected wards each of the four major specialties were included. Core prescribing indicators were calculated according to WHO guidelines.

Results: Altogether 637 prescriptions from medicine (n=158;24.8%), surgery (n=162;25.4%), obstetrics and gynaecology (O&G)(n=159;25.5%), paediatrics (n=118;18.5%) and psychiatry(n=40;6.3%), wards had 228 different medicines prescribed. Average 5.8(SD=4; range1-22) medicines per encounter were prescribed, with highest number (7.9) in medical wards. Average 7.8 medicines were prescribed to adults >50years compared to 5.4 for adults <50years (p<0.0001). Polypharmacy (>4 drugs) was seen in 82.1% prescriptions for >65years.

Ten most commonly prescribed medicines were paracetamol (54.3%), omeprazole (26.4%), domperidone (20.6%), metronidazole (17.6%), metoclopramide (17.1%), diclofenac sodium (16.2%), co-amoxiclav (14.8%), folic acid (14.6%) and cefuroxime (14.1%). Paracetamol was the most commonly prescribed in surgical (72.8%), O&G (44%) and paediatrics (64.4%) wards while omeprazole (50.6%) and lorazepam (52.5%) were the most commonly prescribed in medcalicine and psychiatry wards. Injections were prescribed for 55.9% and antibiotics for 42.9%. Both indicators were significantly more in surgery (73.5% and 66%) compared to other specialties(p<0.0001). Medicines were prescribed in generic name in 89.5% and 82.8% medicines were from Essential Medicines List (EML). Commonest antibiotic, antiepileptic, antidiabetic and antihypertensive prescribed were metronidazole (17.6%), valproate (3.1%), metformin (11.3%) and losartan (6.4%) respectively.

Conclusion: Paracetamol and omeprazole are the most commonly prescribed, from of 228 medicines used. On average, six medicines are prescribed, with more in the elderly. Most are prescribed using generic name and from EML. Antibiotic and injection usage was high.

PP133
Two presentations of a rare genetic disorder: Waardenburg Syndrome

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Introduction and objectives: Waardenburg syndrome (WS) is a rare genetic disorder characterized by heterochromia iridis, white forelock, distropia canthorum, sensorineural hearing impairment and congenital leukoderma. Mutated forms of PAX3 and MITF are known to be associated with WS. WS shows autosomal dominant inheritance pattern with variable expressivity. Different phenotypes of WS are associated with varying features.

Method: Clinical examination, genetic evaluation and genetic counseling of a four year old female patient and a two year old male patient with WS referred to the ophthalmogenetics clinic at the Faculty of Medicine, Colombo.
**Results:** Both the patients had complete iris heterochromia with unilateral bright blue iris. The female patient had heterochromic fundi. Low set ears, hypertelorism and areas of skin hypopigmentation were present in both the patients. Convergent strabismus, dystopicacanthorum and white forelock, malformed nasal ale, smooth philtrum, thin upper lip, long eye lashes, synophrys andpectusexcavatum deformity were present only in the female patient. Flat and wide nasal bridge with developmental delay in the areas of gross motor development and speech development were present in the male patient only. Both the patients were born to nonconsanguineous parents and their family history was negative.

**Conclusion:** Although both the patients meet the diagnostic criteria of Waardenburg syndrome, the clinical expressions of two patients are different. Although the family history is negative, each patient has a 50% possibility of passing the pathogenic mutation to the offspring. Genetic testing is recommended to explore the genetic mutation.

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**PP134**

**Developing an electronic curriculum map for the Faculty of Medicine, University of Colombo**

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**Introduction and objectives:** The key to an effective integrated curriculum is to get teachers to exchange information. This exchange of information can be achieved through curriculum mapping. A curriculum map is a diagrammatic representation of what is taught, how it is taught, when it is taught, and what is assessed. It helps both academic staff and students by displaying key elements of the curriculum, and the relationships between them. To effectively use a curriculum map, data must be accurate and updated regularly.

**Method:** The goal was to provide teachers and students the maximum details about the MBBS curriculum in the Faculty of Medicine, Colombo. To achieve this goal we designed a menu driven electronic curriculum map. The data was based on the student handbook and module books. It was developed in an interactive and user friendly manner so that even a user with minimum IT skills could obtain relevant data with a few mouse clicks.

**Results:** The electronic curriculum map was developed with many nodes as it branches out to specific areas of the curriculum. It also provided details about the mission and outcomes of the Faculty with branching out into the 10 specified outcomes. The curriculum section provides details regarding the Basic Sciences Stream, Applied Sciences Stream, Behavioral Science Stream, Community Stream and the Clinical Stream including the clinical appointments.

**Conclusion:** An effective process for planning and developing an electronic curriculum map for a medical curriculum was implemented. This can be used to analyze how well an intended curriculum aligns with essential educational outcomes.

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**PP135**

**Manometry and ultrasound changes in primigravida after vaginal delivery**

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**Introduction and objectives:** Primigravida have been identified to be at higher risk of obstetric anal sphincter injury (OASI). Anorectal Manometry (ARM) and Endo-anal ultrasound (EAUS) are the main modes of identifying OASI. OASI in Sri Lankan primigravida has not been investigated previously.
Method: 101 Consecutive primigravida in their last trimester were recruited and followed up 6 weeks after delivery. They were assessed with 3D-ARM 3D-EAUS in both occasions. Delivery details and other clinical parameters were also recorded.

Results: The resting pressure after childbirth decreased from 87.0 mmHg to 86.5 mmHg but was not significant. The maximum squeeze pressure reduced from 179.2 mmHg to 163.7 mmHg and this was statistically significant. The length of the high pressure zone reduced from 3.7cm to 3.1 cm and this reduction too was statistically significant. Of rectal sensation and compliance, only the first sensation and maximal rectal compliance showed significant differences. All sphincter components at all levels, except the Internal Anal Sphincter (IAS) at mid sphincter level at 6 o’clock position showed a reduction in thickness after childbirth. Of these reductions, all reductions of the puborectalis, External Anal Sphincter (EAS) at mid sphincter level and lower sphincter level were statistically significant. The only reduction of the IAS that was statistically significant was at the 12o’clock position. Several antenatal and intrapartum factors were significantly associated with these changes.

Conclusions: There were statistically significant changes in both 3DARM and 3DEAUS findings in primigravida after vaginal delivery. Several antenatal and intrapartum factors were significantly associated with these changes.

Introduction and objectives: Vitamin deficiencies are common and can lead to serious physical and psychological diseases. Vitamins are sometimes taken as over-the-counter medications. At present there is no data on prevalence of vitamin supplementation and factors associated with it among Sri Lankan adults. We studied the prevalence of vitamin supplementation among Sri Lankan adults and associated socio-demographic factors.

Method: A descriptive cross-sectional survey was carried out on a nationally-representative sample of adults, selected using multi-stage random cluster sampling technique. Data were collected using an interviewer-administered questionnaire.

Results: Sample size was 490, males were 34.5% and mean age was 48.2±14.6 years. Majority were from urban areas (58.6%). Prevalence of vitamin supplementation was 6.7% and vitamin B-complex (21.2%) was the most commonly used vitamin. There was no significant association with gender. Vitamin supplementation was significantly higher among urban residents (15.3%, p<0.001), whilst there was no reported vitamin supplementation from estate areas. Prevalence of vitamin supplementation was significantly higher in 60-74 years old age group (9.9%, p<0.05), whereas it was lowest (2.3%) in middle aged population (30-40 years). People educated above Grade 10 were more likely to use vitamin supplements (12.7%) and vitamin supplementation was significantly associated with increasing level of education (p<0.05). Vitamin supplementation was significantly higher among professionals (23.1%) and being employed was a significant factor associated with vitamin supplementation (p<0.01).

Conclusion: This study provides the first national level data on prevalence of vitamin supplementation among Sri Lankan adults. Vitamin supplementation was significantly associated with urban residency, older age, higher educational level and being employed.
**PP137**

Validation of the Sinhalese version of a medication adherence scale (MAS) to determine medication adherence in patients with Bipolar Affective Disorder

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**Introduction and objectives:** A main reason for poor response of patients with bipolar affective disorder (BAD) is poor adherence to therapy. This study aimed to validate the Sinhala version of a medication adherence scale (MAS) using therapeutic serum lithium concentrations as the gold standard for adherence.

**Method:** Sample size of 148 was aimed to detect targeted sensitivity of 90% and specificity 85%. Patients with BAD on stable doses of lithium were administered the Sinhala version of the MAS. Criterion validity was assessed using receiver operating characteristic (ROC) analysis. Internal consistency was assessed using Cronbach’s alpha and Spearman’s rank correlation was used to assess test–retest reliability. Concurrent validity was assessed using Spearman’s correlation coefficients between lithium concentrations and MAS scores.

**Results:** The total of 153 patients consisted of 123 patients considered adherent, with serum lithium > 0.4mEq/L, and 30 considered non-adherent with lithium < 0.4mEq/L, capable of giving sensitivity of 90% and specificity of 85%. Mean age was 45.5 (range 18-73 years) and 54.2% were male. Mean MAS score was 6.8±1.4. Cut-off value 6.875 provided the best balance between sensitivity (76.7%) and specificity (38.2%). The test–retest reliability value was 0.58 (p < 0.001). Moderate internal consistency was found (Cronbach’s alpha = 0.558). Lithium concentrations did not correlate well with the MAS scores (p = 0.103). The lowest discriminatory value came from the question on self-modification and stopping therapy while highest discriminatory value came from missing medication due to reasons other than forgetting.

**Conclusion:** The MAS used needs revision, to be considered a valid and reliable instrument for determining medication adherence to mood stabilizers in BAD patients in Sri Lanka.

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**PP138**

Usage of portable electronic devices (PEDs) to access medical information by medical students of Faculty of Medicine, University Of Colombo, Sri Lanka

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**Introduction and objectives:** Portable Electronic Devices (PEDs) are increasingly used by medical students to access medical information. We studied the usage of PEDs among medical students for obtaining medical information. We studied the usage of PEDs among medical students for obtaining medical information in Colombo Medical Faculty.

**Method:** A descriptive cross-sectional study was conducted among second to final year students in Colombo Medical Faculty using a self-administered questionnaire.

**Results:** Altogether 505 students responded including 79 (15.6%), 200 (39.6%), 96 (19%) and 130 (25.7%) from second to final year respectively. PEDs were used by 435 (87.9%) respondents from second (85.9%), third (85.6%), fourth (81.9%) and final (96.9%) years. PEDs used were smart phones (84.6%), tablets/iPads (46.3%), or both (30.8%). Most (71.2%) students have begun to use desktop computers before ordinary level, but
majority have begun to use smart phones (77.9%), laptops (72%) and tablets/iPads (69.2%) after advanced level. All students with monthly family income > Rs100,000 have PEDs compared to 70% with income ≤ Rs10,000 (p<0.05). Commonly accessed resources were Medscape (58.3%), BNF (51.8%) and National guidelines (47.1%). Commonly used E-books were BNF (55%), Bailey & Love’s (49.6%) and Kumar & Clark’s (47.7%). Students used PEDs at home/hostel (68.1%), wards (64.5%) and Faculty (62.8%) as an extra source of information (66.8%). Most access internet directly through PEDs (78.5%) or dongles (56.7%), while some access through Wi-Fi at Faculty (29.2%).

Conclusion: PED usage among medical students is high. More final years use PEDs than juniors. All students with high family income and majority with lower family income used PEDs. Educational material provided online to local medical students can be readily accessed through PEDs.

PP139
Development of robust caco-2 cell model for drug transport studies

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Introduction and objectives: Caco-2 cell model is the most widely used in-vitro cell lines for drug transport studies. A limitation of this model is its heterogenic nature. Our aim was to improve the Caco-2 cell model for determination of gastrointestinal drug permeability.

Method: Three approaches were adopted to up regulate Caco-2P-glycoprotein (P-gp) expression from P41; a) incubation of mature Caco-2 monolayer with rifampicin b) Prolonged exposure (over 48 days) of Caco-2 cells to vinblastine (generating the Caco-2 VIN line) and c) waiting for late passage numbers (over P80). Upon development of the models, P-gp expression and activity was determined using western blotting and bidirectional transport studies of rhodamine123 respectively.

Results: All 4 models exhibited P-gp mediated efflux transport for rhodamine123. Incubation with rifampicin didn’t alter the bidirectional transport compared to P44 cells. Increase in passage number altered the P-gp expression and the efflux ratio increased to 4.7 for P83 from 1.4 of P44. The highest basolateral-apical directional transport was observed for Caco-2 VIN model and the apparent permeability was 6.6×10^-6 cm/sec with an efflux ratio of 13. Western blot images confirmed the increase in P-gp expression of late passage and Caco-2 VIN compared to P44 cells. The highest P-gp expression was observed for day 24 of Caco-2 VIN and was 3 fold higher compared to day 21 of late passage Caco-2 cells.

Conclusion: Caco-2 cells are not ready for P-gp related research when first acquired. Late passage Caco-2 cell monolayers or Caco-2 VIN models are needed to determine P-gp mediated efflux transport.

PP140
Histopathological spectrum in acute and chronic Cutaneous Leishmaniasis in Sri Lanka

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Introduction and objectives: Histological spectrum in cutaneous leishmaniasis (CL) is wide and varied. The objective of this study is to describe the histological spectrum of acute and chronic CL.

Method: Skin biopsies of 35 patients with smear positive for Leishmania amastigotes
were processed routinely for histopathology, examined at a conference microscope and classified into 4 groups using modified Ridley criteria for Leishmaniasis as: I- parasitized macrophages with variable lymphocytes and plasma cells; II – parasitized macrophages with lymphocytes, plasma cells and ill formed histiocytic granulomata; III – a mixture of macrophages (with or without parasites), lymphocytes, plasma cells and epithelioid granulomata; IV – epithelioid granulomatous response with a few lymphocytes and plasma cells but no amastigotes. Lesions were categorized as acute (< 6 months) or chronic (≥ 6 months).

Results: Study group composed of all males with a mean age of 32.6 years (range 22 - 47) and lesion duration of 5.6 months (range 1-24). Twenty nine (82.9%) were also positive by histopathology. Twenty two (62.9%) were acute and 13 (37.1%) chronic. Group I, II, III and IV patterns were seen in 14 (40%), 12 (34.3%), 5 (14.3%) and 4 (11.4%) respectively and 9 (40.9%), 9 (40.9%), 2 (9.1%) and 2 (9.1%) of acute lesions and 5 (38.5%), 3 (23.1%), 3 (23.1%) and 2 (15.4%) of chronic lesions respectively.

Conclusion: Histology of CL shows marked inflammatory cell infiltrate with or without granuloma formation. Majority of patients presenting with either acute or chronic CL belong to histological groups I or II.

PP141
Sero epidemiology of varicella; situation in Sri Lanka

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Introduction and objectives: Varicella is an infectious disease in children, it can cause complications in high risk groups including pregnant women, and immune compromised patients.

This study was carried out to determine the sero-prevalence of Varicella among residents in the Colombo district.

Method: This was a community based cross sectional study, consisted of males and females of all ages residing in the Colombo district. A total 1230 study subjects selected by using multistage cluster sampling technique. Interviewer administered questionnaire was used and blood sample was collected and serological analysis performed for VZV IgG by using IgG commercial ELISA test kit.

Results: Sixty percent of study population was urban living and 70% were female. Their age distribution; <15y (22.7%), 15-45y (51.7%), > 45y (25.6%). 44.5% had history of Varicella Zoster. Only 0.6% had received the vaccination. Over all seroprevalence was 52.21%. Age specific seroprevalence <15y (15.73%), 15-45y (60.30%), 46-59y (75.98%) and 60 - >60y (76.27%). Seroprevalence among Urban population was 53% while in rural it was 55%.

Conclusion: An increasing seroprevalence with advancing age indicate an endemic nature of Varicella in Sri Lanka. Considering the clinical and socioeconomic impact of varicella to the community attention on prevention measures is a timely need.

PP142
Waist-hip ratio and body mass index and their correlation with macro and microvascular complications of type 2 diabetes patients- a retrospective study

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Introduction and objectives: To compare body mass index (BMI), and waist-hip ratio (WHR) as indices of obesity and assess the respective associations with Macro and Micro Vascular complications of type 2 diabetes mellitus in both men and women.
**Method:** A sample of randomly selected 100 diabetes clinic attendees to NFTH were analysed. A retrospective Analysis was carried out. BMI and WHR were measured and to assess the correlation between Micro and Macro vascular complications with both BMI and WHR .Data Analysis was done using Microsoft EXCEL.

**Results:** The study sample were between 30-90 years of age, The mean age range was 51-60years of age(34%) and out of all 52% were females. The prevalence of obesity amongst clinic attendees defined by BMI and WHR was 42%, 46% respectively. According to duration of the disease 16%were less than 1 year, 26% were between 2-5years, 28% were between 6-11 years and 30% had DM for more than 17years. Of all 81.82% had a HBA1C of >7%. Of all 18% had retinopathy, 26% had Nephropathy,18% had Neuropathy,2% had IHD and Stroke,4% had TIA, 8% had PVD and 40% had hypercholesterolemia and 30% had high blood pressure. There is no correlation between Diabetes Control via HbA1c with BMI and waist to hip ratio.

**Conclusion:** There is no correlation between Diabetes Control through HbA1c with BMI and waist to hip ratio. Both the BMI and WHR had a stronger association, with microvascular complications in both men and women, where there is no correlation with macrovascular complications.

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**PP143**

**A preliminary study to evaluate the role of rotational thromboelastometry as an early predictor and indicator of progression to critical phase in Dengue Haemorrhagic Fever**

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**Introduction and objectives:** Predicting who will progress from the febrile phase of a dengue infection into the critical phase is difficult. Rotational thromboelastometry (ROTEM) is a point of care test which makes a global assessment on clot formation based on the viscoelastic properties of whole blood. We hypothesize that ROTEM may have a role as a predictor and early indicator of plasma leakage in dengue haemorrhagic fever (DHF).

**Method:** The study was conducted at the University Medical Professorial Unit of the Faculty of Medicine, Colombo. ROTEM (INTEM and EXTEM) was performed on day 3 of fever in 14 patients who were confirmed to have Dengue Fever and repeated in 6 of them who progressed to the critical phase.

**Results:** The mean differences in clotting time (CT), clot formation time (CFT), A10, A20, alpha angle and maximum clot firmness (MCF), in both EXTEM and INTEM, on day 3 of fever between those who did not progress in to the critical phase and those who did, were not statistically significant (p>0.05). However, there was a significant difference in the maximum lysis (ML) time in INTEM (p=0.0033). The mean differences in CT, CFT, A10, A20, ML and MCF in both EXTEM and INTEM, during the febrile phase and the critical phase was not significant, however the mean alpha angle in EXTEM was lower during the critical phase when compared to day 3 of fever (p=0.018).

**Conclusion:** ML in INTEM and alpha angle in EXTEM showed significant differences when compared to controls. The use of ROTEM as a predictor and indicator of plasma leakage in DHF needs to be explored in a larger study.

**PP144**

**Socio-economic and life-style characteristics of elders in rural communities in Anuradhapura District of Sri Lanka – compatibility with active ageing concept**

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Introduction and objectives: Active ageing concept encourage elders to be active and involved in routine activities as they grow old. The lack of information on existing situation of elders is a limitation in promoting active ageing in Sri Lankan communities. The objective of this study is describe the socio-economic and life-style characteristics of elders in rural communities in Anuradhapura District to assess the compatibility with active aging.

Method: Study was a cross-sectional survey and carried out in four randomly selected villages in Anuradhapura district. Interviewer administered questionnaires were used to collect data from all elders who were over 60 years.

Results: Of 67 participants, the proportion of females and males were 70.6% and 29.4% respectively. More than 90% of elders were below 74 years of age. Half of the participants (45%) were widows and 41.79% of them live with children and look after grandchildren, particularly females (77.61%). Disease prevalence (non-communicable) is 40.29% in widows population and (32.83%) among others. High blood pressure was most common (44.77%) and access to clinics were high (68.65%). Although vegetable intake is high, fruit consumption is low.

Income generating opportunities are important in active aging, but larger proportion (77.61%) of respondents, particularly females, had no involvements. Farming is the common occupation (22.38%) among elders. Government subsidiaries (50%) and donations from children were the main income for the rest of the group. Sixty five percent of study population live below Anuradhapura district official poverty line – less than Rs 3713 per month.

Conclusion: Most of the existing life-style characteristics of elders in rural villages are not compatible with active ageing principles. These findings highlight the need of programs to promote active aging in rural areas and provide background information useful for planning.
Conclusion: The present study results support a positive association between BMI and KOA in both genders.

Poster session 9

PP146
Prevalence of parent initiated medication in children- a systematic review

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Introduction and objectives: Self-medication among children differs from that among adults, since it is generally parents who make decisions on the treatment of their children. Children have the same right as adults to receive safe and effective drugs. We conducted a systematic review to describe the prevalence of parent initiated medication in children.

Method: Pub Med and Emerald online data bases were scrutinized without a time limit from inception to March 2015. Keywords were “self-medication AND children” and “paediatric AND self-medication”. References from selected studies also were included.

Results: Sixty seven studies were found from the primary search and from that 35 studies were excluded based on exclusion criteria; self-medication using only traditional or herbal medicines, self-medication only for specified symptoms or illness and self-medication using only specified drug class. Finally 8 studies were selected based on study design and study objectives. The total sample size was 15,302. Prevalence of parental initiated medication in children among the selected studies ranged from 36% to 97.5%. The most commonly used medicines were analgesics, antipyretics and cough and cold medicines.

Conclusion: One study reported the most common pathology as common cold.

Conclusion: We observed that a considerable number of parents medicate their children for minor symptoms before seeking professional consultation. Especially in developing countries, the prevalence of parent initiated medication was above 50%. Hence research should be conducted to identify risks and reasons associated with self-medication. The designing and implementing of appropriate interventions to reduce risk associated with self-medication is also important.

PP147
Portable electronic devices (PEDs) to access medical information: perception of medical undergraduates

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Introduction and objectives: The availability and accessibility of portable electronic devices (PEDs) has increased with the advancement of technology. We studied attitudes and perceptions towards usage of PEDs to access medical information by Colombo medical undergraduates.

Method: A descriptive, quantitative, cross-sectional study was conducted among second to final year undergraduates of the Faculty of Medicine, Colombo using a self-administered questionnaire.

Results: Altogether 441 (males=38.3%, mean age=23.4 years) students from second (n=71), third (n=168), fourth (n=82) and final (n=120) years responded to the survey. Total of 390 (88.4%) respondents were using PEDs, mostly final year (96.7%) students which
included smart phones, tablets/iPads or both. They believed that medical applications on PEDs are necessary (85.4%) and not too expensive (41.4%). Up to 66.5% were unsure of the reliability of information and only 70.0% knew how to use medical applications optimally, while only 57.8% trusted the contents. Only 5.0% had encountered unfavourable experiences. Peers (76.1%), seniors (55.0%) and clinicians (45.1%) had supported and encouraged using PEDs. Perceived advantages of PEDs were quick access to medical information anytime (89.1%), anywhere (84.2%) and convenience in clinical settings (75.3%). Perceived disadvantages were addiction to social networks (48.1%), distraction from studies (29.5%) and wastage of time (17.3%). Only a minority perceived lack of internet connection (20.6%), unavailability of devices (11.6%), and lack of knowledge (4.1%) as barriers to access internet.

Conclusion: Most medical undergraduates use PEDs to access medical information. They have positive attitudes towards using PEDs. Educating medical students on using PEDs for academic activities and reliable sources would be useful.

PP148
The effectiveness of a patient educational leaflet for patients with mechanical low back pain at rheumatology clinics at the National Hospital of Sri Lanka

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Introduction and objectives: Mechanical low back pain is one of the commonest diseases in Sri Lanka. As patient education plays a major role in managing mechanical low back pain, it is essential to explore patient education interventions on back pain. Objectives were to assess the effectiveness of a patient educational leaflet to improve low back pain in patients attending rheumatology clinics at the National Hospital of Sri Lanka (NHSL).

Method: An interventional study was done using 80 patients with mechanical low back pain. Numerical pain scale and Modified Oswestry low back pain disability questionnaire were used to assess pain and disability respectively. Pain and disability level were measured in all participants before intervention. Educational leaflet was distributed among forty patients selected systematically into the intervention group. Control group followed usual physiotherapy treatments. Post assessment was done in both groups and independent sample t test was used for analysis.

Results: In post assessment (p= 0.000) there was a significant difference of mean pain values between interventional (3.78 ± 0.920) and control group (4.98 ± 0.733) and disability level between interventional (36.65± 7.138) and control group (54.70±5.075). Further, in post assessment, mean value of pain (p=0.000) and disability level (p=0.000) were significantly improved in participants within the interventional group who had studied up to grade 11 or above. Pain and disability level were not significantly improved in the interventional group according to the age groups or gender.

Conclusion: Patient educational leaflets were effective for patients with mechanical low back pain to reduce pain and disability level. The effectiveness was seen to be more in patients who had a higher level of formal education.

PP149
Reliability and factor analysis of the sinhalese version of the Liebowitz Social Anxiety Scale-Self Reported Version (LSAS-SR)

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Introduction and objectives: Despite being one of the most prevalent mental illnesses, lack of awareness and confusion with shyness contributes to under-diagnosis of social phobia. Our objective was to evaluate test-retest reliability, internal consistency and factor analysis of the Sinhalese version of LSAS-SR - which is widely used in the English speaking world as a screening tool for social phobia.

Method: The established process of translation by bilingual professionals/back translation to establish consistency was carried out. Face validity and cultural acceptability of the translation was established using the Delphi technique. Pilot evaluation was conducted and standard psychometric procedures were used to evaluate test-retest reliability and internal consistency. The subjects were 871 SriLankan university students.

Results: Prevalence of social phobia among study population was 9.2%. Pearson’s correlation coefficient was 0.998, 0.994 and 0.993 for fear and avoidance subscales and total score respectively (p≤0.01). Cronbach’s alpha for fear and avoidance subscales with total score for each subscale was 0.753 and 0.752 respectively. Cronbach’s alpha of total score of each subscale with total score of LSAS-SR was 0.722. Factor analysis resulted in 5 dimensions and these were: factor I – speaking in a group, factor II – activity in public, factor III – social interaction with unknown person, factor IV – attitude of disagreement/disapproval and factor V – social interaction in leisure activity.

Conclusion: The findings confirm that this Sinhalese version of LSAS-SR has similar test-retest reliability, internal consistency and factor analysis as the original instrument and can be used to screen for social phobia in Sri Lanka.

PP150
Three-wheeler drivers in Wattala urban council: does earning power depend on involvement with the commercial sex trade?

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Introduction and objectives: National STD/AIDS programme estimated 3000 persons to be living with HIV/AIDS in Sri Lanka in 2009. Three wheeler drivers have been identified to be vulnerable for contracting HIV/AIDS due to close associations with the commercial sex trade. The main objective of this study was to assess the knowledge regarding HIV among three wheeler drivers in Wattala Urban Council.

Method: A descriptive cross sectional study was conducted among 350 three-wheeler drivers using a self-administered questionnaire. A score from 0-21 was given to respondents on their knowledge of HIV/AIDS. Correlation analysis was conducted.

Results: Mean age of the study group was 33.45 ± 9.31 years. A score of 3-4 (total 21) was obtained by 48.6% of respondents. 75% of the respondents whose score was >10 were involved sexual relations or transportation of Commercial Sex Workers (CSW). 48% drivers were involved in transportation of CSWs, and 12.8% transported and provided their vehicle for CSW activities. 24% admitted to having sexual relationships with CSWs. Drivers earning Rs. 1500/- or more per day were 49.4%, out of which 51.1% of drivers were involved in the commercial sex trade. Daily income was significantly associated with involvement with commercial sex trade. (r= 0.154, p=0.004). Respondents gained knowledge on HIV/AIDS by television/radio
Awareness of HIV/AIDS of the study group was at a low level. Majority of three wheeler drivers with a higher income did so by their involvement in the commercial sex trade.

Conclusion: Overall, in patients who underwent curative resection, colon cancer had better survival indices compared with rectal cancer.

PP151
The hazard of death decreases after surgical treatment for colon cancer but not after surgical treatment for rectal cancer

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Introduction and objectives: Proportion in cancer is usually assessed by survival patterns. In this study we evaluated both survival patterns and hazard of death as indices of prognosis to compare colon and rectal cancer.

Method: Colon and rectal cancer patients who underwent surgical resection from 1996 to 2011 were studied using Kaplan-Meier survival function estimate curves and Weibull Hazard models.

Results: Of 369 patients (119 (32%) colon cancer and 250 (68%) rectal cancer), overall 5-year survival rate for colon and rectal cancer was 72% and 60% respectively (P = 0.03). For colon cancer, survival indices diminished when tumor disseminated outside the region of the colon (Stage 1V), while in rectal cancer survival indices reduced as cancer progressed from stage I to II and beyond. As expected, stage for stage survival for colon and rectal cancer were similar for stages 1 and 1V (Stage 1, 5 year survival colon vs. rectum; 77% vs. 82% and stage 1V; 25% vs. 22%). However, survival in intermediate stages (stage II and stage III) was better for colon cancer compared to rectal cancer. Stage II, 5 year survival colon vs. rectum; 81% vs. 62% and stage III; 70% vs. 55%). After curative resection, colon cancer showed a 6% decrease in hazard of death with time compared with rectal cancer which showed a 1% increase in the hazard of death with time.

Conclusion: Overall, in patients who underwent curative resection, colon cancer had better survival indices compared with rectal cancer.

PP152
Acute re-hospitalisation during the first three months of in-patient rehabilitation for traumatic brain injury

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Introduction and objectives: To identify the frequency and reasons for acute hospitalization during the first three months of in-patient brain injury rehabilitation, to identify the duration of disruption of the rehabilitation programme and to investigate the correlation between the duration of acute re-hospitalisation and Functional Independence Measure (FIM) score

Method: A retrospective study was conducted on patients admitted for in-patient rehabilitation following traumatic brain injury (TBI) to ABI Rehabilitation, Auckland, New Zealand between January 2009 and August 2013. Data were obtained from electronic patient records. Pearson correlation was performed to evaluate the relationship between the duration of acute re-hospitalisation and the FIM score.

Results: Of the 628 patients admitted for brain injury rehabilitation, 71 (11.3%) required acute hospitalizations within the first three months. The majority of acute admissions (43.8%) were due to medical reasons including urinary tract infections, respiratory tract infections and coronary artery disease. Of the acute admissions, 76.6% were within the first month of admission to the rehabilitation centre and 46.6% needed inpatient treatment in the acute care hospital for a period longer than 5 days. There was a moderately strong negative correlation between the duration of acute stay in the acute care hospital and the discharge FIM score (r = -0.412, p = 0.0005).

Conclusion: A significant number of patients admitted for in-patient rehabilitation
following traumatic brain injury require acute re-hospitalisation during the first three months. As the duration of acute re-hospitalisation has a negative impact on functional gain, preventive measures and surveillance need to be optimised.

PP153
Level of development of moral reasoning among medical students of Faculty of Medicine, Colombo, and the effect of teaching of ethics on moral development

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Introduction and objectives: Moral reasoning is ability to evaluate ambiguous situations based on one’s sense of right and wrong, and Moral Competence (MC) is the ability to base decisions on moral reasoning. Effect of medical teaching on level of moral competence is controversial, with studies showing both increases as well as decreases and plateauing of MC. Ethics teaching has shown a relationship with development of MC. Objectives of the study were to assess the level of MC in medical students of the Faculty of Medicine, Colombo, and to find out the effect of ethics teaching on MC.

Method: The study used the Moral Judgment Test © (MJT) designed to quantify the level of MC. Three batches of medical students were studied; batches selected depending on their completion of ethics teaching. MJT was administered to simple random sample of 60 each from three batches.

Results: Percentage of responses not considered for analysis due to incompleteness, for batches A, B and C were 14%, 10% and 53% respectively; with 36, 52 and 20 responses respectively being considered for analysis. The mean MC score for batches A, B, and C were; 15.4%, 20.5% and 19.1% respectively. The difference of MC between the batches was not statistically significant.

Conclusion: Most senior of the batches of students showed least level of MC, difference not being statistically significant. Students who had completed ethics learning most recently exhibited highest MC score, even though it was not statistically significant. Results of Batch C may have been affected due to high attrition from analysis.

PP154
Association between anthropometric characteristics and performance among professional rowers in the Sri Lankan Army

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Introduction and objectives: Rowing is one of the most physically demanding of any endurance type of sports. The aim of this study was to investigate the association between anthropometric characteristics and rowing specific performance in professional rowers in the Sri Lanka Army.

Method: The study was carried out in 46 (32 male and 14 female) professional rowers in the Sri Lanka Army in the age range of 20-33 years. The anthropometric profile was assessed by measuring the body weight, body height, body mass index (BMI), waist circumference, hip circumference, leg length, arm span, skin fold thickness and arm circumference. Performance was assessed by 2000m rowing ergometer time, cardiovascular endurance and the vertical jump.

Results: The mean values for rowing ergometry time for male and female were 7.07 and 8.36 minutes respectively. Rowing ergometry time negatively correlated with body height (p=0.016) lean body mass (p=0.05) and BMI in male rowers (p= 0.028), and body height (p=0.021), leg length (p=0.008) and arm span (p=0.025) in female rowers. Cardiovascular endurance negatively correlated with body weight (p=0.009), arm circumference (p=0.008) and fat percentage (p=0.004) in male rowers, and BMI of female rowers.
rowers (p= 0.029). Vertical jump positively correlated with body height (p=0.029) and leg length (p= 0.05) in male rowers only.

Conclusion: Rowers with a greater stature, leg length and arm span, and a lower BMI and fat percentage showed better performance. Therefore, we can conclude that there is a significant association between the anthropometric profile and performance in rowers of the Sri Lanka Army.

PP155
Prevalence of diabetes mellitus and its influence on treatment outcomes of the tuberculosis patients in Anuradhapura District of Sri Lanka
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Introduction and objectives: Though tuberculosis is a curable disease, globally 1.7 million die out of 10 million patients annually. In 2010, TB death rate was 10% in Anuradhapura district. Many deaths were associated with co morbidities including diabetes mellitus (DM) (60%). DM is known to increases the risk of TB, deaths, relapses and MDR-TB. Thus, early diagnosis and optimal management of DM is important to ensure satisfactory treatment outcome. Objective of the research was to study prevalence of DM and evaluate the influence of early diagnosis and proper management for the success of TB treatment.

Method: TB patients registered during the study period were screened for DM, by RBS testing on each visit for anti-tuberculosis therapy. Those who showed RBS above 140 mg/dl were further investigated, with blood tests for fasting and two hour PPBS levels and HbA1C. They were followed-up continuously and TB treatment outcome was evaluated.

Results: 136 patients-108 (79.4%) males and 28(20.6%) females were included. 105 (77.2%) were PTB positive. 24 (7.35%) patients were already diagnosed diabetics. 61 (44.85%) were having RBS above 140 mg/dl at least once. By further investigations 48 diabetics (3 type 1 DM, 22 type 2 DM and 23 IGT) were identified. A treatment success rate of 97.92% with a death rate of 2.08% was the TB treatment outcome.

Conclusion:
1. Prevalence of DM in current study population was 35.3%.
2. Having managed DM appropriately, a higher treatment success rate and lower death rate was achieved.
3. Screening TB patients for DM and proper management is preferable for a better treatment outcome.

PP156
Knowledge, practices and perceptions related to salt use among 18 to 70-year old adults in Gampaha District of Sri Lanka
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Introduction and objectives: The World Health Organization (WHO) has called upon all countries to reduce average population salt intake to less than 5 g/day. In Sri Lanka, average adult salt consumption is around 13 g/day, which is far above the WHO recommended value. The objective of this study was to describe the knowledge and practices related to salt use, among 18 to 70-year old adults in Gampaha District of Sri Lanka.

Method: A cross sectional study was conducted in Gampaha District, Western Province, Sri Lanka. Multi- stage cluster sampling method was used. Data were collected using a pre-tested self-administered
questionnaire. Ethics approval was obtained from the Ethics Review Committee of Faculty of Medicine, Ragama.

Results: The mean age of the study population (n=396) was 44.3 years and male to female ratio was almost one. The majority of the study participants (91.9%) identified high salt consumption would lead to adverse health effects. Only 22% identified the recommended maximum daily salt requirement. Many respondents (78.4%) expressed cutting down of salt as an important health priority for them. Just over half of the participants (50.4%) were carrying out some measures to reduce salt consumption. However, a larger proportion (88.2%) was of the opinion that they were using the correct amount of salt.

Conclusion: The level of knowledge about the maximum daily recommended amount of salt among the adult population in District of Gampaha is poor. However, they were willing to cut down on salt. Comprehensive health education campaign should be initiated on salt reduction.

PP157
The physical examination and laboratory investigation data analysis of health screening packages carried out among the executive staff in leading companies in a private teaching hospital, Colombo, Sri Lanka: a retrospective study

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Introduction and objectives: The study aims to analyse the prevalence of both communicable and non-communicable diseases among executive staff through routine health checkups carried out at Dr. Neville Fernando Teaching Hospital Sri Lanka.

Method: A retrospective study was conducted in leading companies in Colombo. Data from clients who were between 20-60 years of age, presenting for routine health checkups were analyzed. The physical examination of all individuals and the investigation reports (FBC, UFR, ECG, lipid profile, liver enzymes, TSH level, FBS, PPBS, serum creatinine, chest x ray, and total protein level) were analyzed using Microsoft EXCEL.

Results: The study included 189 clients with 112 (59.25%) males and 77 (40.75%) females. There were 61 (32.27%) between the age group of 20-30 years, 91 (48.14%) between 31-40, 23 (12.16%) between 41-50 and 4 (2.11%) between 51-60 years. According to the BMI, 5 (2.64%) were underweight, 141 (74.60%) of them were in normal range, 37 (19.57%) were overweight and 6 (3.17%) were obese. The minority was diagnosed to have anaemia (3.17%). Only one (0.52%) was diagnosed with polycythemia. The majority had hypercholesterolemia (55.55%), 34.39% had elevated liver enzymes. 20.63% had high FBS and PPBS values, 16.93% clients had high blood pressure. There were 5.82% with ischemic type ECG changes. There were 5 (2.64%) clients with high TSH level and one (0.52%) with low TSH level. Only 15 clients were found to be normal with physical examination and investigation findings.

Conclusion: The combination of history taking, physical examination and the laboratory investigations in routine health checkups helped to detect a significant proportion of non-communicable diseases in the studied sample. Almost 92.06% were found to have health related problems.

PP158
Queuing theory and the management of waiting time in an outpatient department: a case study at National Hospital of Sri Lanka

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Introduction and objectives: Queuing is a major challenge for health care services all over the world. Developed countries frequently apply queuing theory of mathematical modeling to overcome operational issues related to long waiting lines.
Method: Methodology used was an observational, descriptive and ex post facto case study approach. An in depth review of hospital OPD staff and patient registration records from January to June 2014 was made. Direct observations were used to record average arrival rate and length of stay at OPD.

Results: Average daily attendance was estimated using both primary and secondary data and was calculated as 677 patients per day. Busiest days were Monday and Friday. The average time for a patient to take treatment after arriving was approximately 3 hours.

Conclusion: This study establishes that queuing theory and modeling is an effective tool that can be used to make decisions on staffing needs for optimal performance with regard to queuing challenges in hospitals.
was used to collect data from 169 patients who underwent cataract surgeries in WKMH, at the time of their first post-operative clinic visit. Visual functions were assessed from “Visual Function Index-14”. “QUOTE-cataract”, questionnaire was utilized to analyse the patient satisfaction.

Results: Mean age was 66.6 (± 9.5 SD) years. Majority were females (60.4%) and 86.5% were from neighbouring districts. Nevertheless, 13.5% were from non-neighbouring districts. Most patients were referred on their own (55.6%) and 85.8% had a closer hospital where cataract surgeries are done. They mainly came to WKMH, because of more quality (64.14%) and quicker (28.97%) service. Majority (74.6%) obtained the lens on their own. The mean cost of lens was Rs. 20,805.92 (±11,587.80 SD). This was on average 1.52 (± 0.97 SD) times of their monthly income. Only 4 patients had overall poorer visual functions when compared with pre-operative vision. General satisfaction was 78.62% (± 10.45 SD) and surgery related satisfaction was 81.13% (± 9.62 SD).

Conclusion: The patients were satisfied with the available services in WKMH. Financial and geographical access were not adequate in relation to cataract surgical services.

PP161
Attitudes of medical officers and nursing officers towards information technology in selected renal care units in Sri Lanka

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Introduction and objectives: The World Health Organization has recognized health information as one of the six building blocks of a health system. The objective of the study was to assess the attitudes towards information technology (IT) of staff attached to selected renal care units in Sri Lanka.

Method: The study design was a descriptive cross-sectional study and the study settings were four renal care units (National Hospital of Sri Lanka, National Institute of Nephrology, Dialysis and Transplantation, Kandy Teaching Hospital and Anuradhapura Teaching Hospital). The study instrument was a pre-tested self-administered questionnaire. The Loyd and Gressard Computer Attitude Scale was utilized to develop the section on assessment of attitudes. The sample was all medical and nursing officers working in renal care units and data were collected from 155 participants who contested (45 medical officers and 110 nursing officers) with a response rate of 58.9%.

Results: Mean age was 34.3 (+/- 8.14 SD) years. Majority were females (84.5%). Mean experience in health service was 8.23 (+/- 8.12 SD) years. Majority (56.78%) had training on IT. The highest attitude was for usefulness of IT (31.76 +/- 4.45 SD). The lowest was for the computer anxiety (17.21 +/- 4.79 SD). Younger and less work experienced participants significantly liked IT. There were no significant correlations of attitudes with gender, occupation, education level, marital status, IT awareness, IT literacy, ownership of a computer or training on IT.

Conclusion: Study participants had positive attitudes towards usefulness of IT, liking of IT and confidence of using IT although there was a high level of anxiety. Targeted and coordinated training can improve these parameters.

PP162
The influence of Artemisone exposure in CACO-2 cell monolayers on P-GP mediated transport and expression: a comparison with Artesunate

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Introduction and objectives: The World Health Organization has recognized health information as one of the six building blocks of a health system. The objective of the study was to assess the attitudes towards information technology (IT) of staff attached to selected renal care units in Sri Lanka.
Introduction and objectives: Artemisone is a new artemisinin derivative with improved physiochemical parameters to facilitate a better drug absorption profile. This study aimed to determine the in-vitro permeability and any interactions of artemisone with P-glycoprotein (P-gp) in comparison to artesunate.

Method: Caco-2 cell lines were grown on 0.6 cm² filter inserts, and bidirectional drug transport studies were conducted between 21-24 days, when transepithelial electrical resistance is more than 300 Ω cm². Artemisone and artesunate were assayed using LC-MS-MS. Rhodamine123 quantification was carried out using fluorescence. P-gp expression regulation was determined by incubation of drugs for 96 hours. Western Blotting was done to determine P-gp expression using ß-actin as our stable benchmark.

Results: The bidirectional apparent permeability (P_app) of artemisone ranged from 37 to 60 × 10⁻⁶ cm/sec whereas P_app for artesunate was 7 to 10 × 10⁻⁶ cm/sec. Artesunate exhibited negligible efflux ratio of less than 1.5 at 50 μM. Artemisone did not exhibit P-gp mediated efflux transport at 10 and 20 μM. Both drugs didn’t inhibit the P-gp mediated efflux transport of rhodamine123 at 100 or 300 μM. However, an up-regulation of P-gp expression was observed when artemisone was co-incubated with mefloquine and amodiaquine and this was not observed for artesunate.

Conclusion: The new artemisinin derivative artemisone has a high drug permeability ensuring complete drug absorption compared to medium permeability of artesunate. Both drugs have minimal or no P-gp substrate and inhibitory properties, yet as part of combination therapy artemisone contributes to increased P-gp expression.

The risk factors for Gestational Diabetes Mellitus in pregnant women attending antenatal clinics in De Zoya Hospital for Women (DMH)

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Introduction and objectives: Gestational diabetes mellitus (GDM) is associated with pregnancy affecting 2-9% of all pregnancies. Early detection of GDM is important because of its associated maternal and fetal complications. There is little data regarding GDM in Sri Lanka. The objective of this study was to identify risk factors for GDM and describe clinical characteristics of mothers with GDM attending antenatal clinics in DMH.

Method: A retrospective case control study was carried out with 40 participants in each group. Cases were patients who were diagnosed of having GDM by standard diagnostic methods (2 hour oral glucose tolerance test OGTT of more than 200 mg/dl) and controls were pregnant mothers attending antenatal clinics in DMH. The information was obtained using an interviewer-administered questionnaire. Risk factor assessment was done by using descriptive statistics, considering a p value of ≤0.05 as being significant, and by epidemiological approach of calculating odds ratio.

Results: Mean age of case group (29.1 years) was significantly higher than the control group (25.5 years) (p<0.05). Age of more than 30 years increased the risk of GDM (odds ratio 2.71). BMI less than 23.5 was significantly higher in case group (odds ratio 3.16). The prevalence of GDM among mothers who had hypertension, positive family history of diabetes mellitus, past history of child with macrosomia, unexplained pregnancy loss and multiparity was higher, but the differences with the
control group were not statistically significant (p>0.05).

Conclusion: Main risk factors identified in the study population were increasing maternal age above 30 years and BMI greater than 23.5 kgm\(^{-2}\). Other factors also contribute, but the contribution was not statistically significant.

PP164
Incidence of lightning injuries, knowledge, attitudes and practices on prevention of lightning related adverse effects and associated factors among residents in Kiriella Medical Officer Of Health Area

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Introduction and objectives: Lightning is a natural phenomenon which can cause death, injury and damage to property. Deaths and injuries due to lightning are commonly reported in Sri Lanka.

Method: A descriptive cross-sectional study was conducted. Cluster sampling method was used to collect a sample of 510. A pre-tested interviewer-administered questionnaire and checklist were used to collect data.

Results: Reported lifetime experiences of lightning injuries were 3.6% (95% CI 2.21-5.5%). Among those, most (55.5%, n=10) were in the age group of 35-44 years, and were males (72.2%, n= 13). Farmers were the most affected (44.4%, n=8). High incidence (66.7%, n=12) of injuries was due to lightning strikes outdoors, while 56% (n=10) of victims were working in the field during lightning. A fewer of the study population (12.4%, n=62) had a 'good knowledge', but majority (87.5%, n=439) had positive attitudes related to prevention of lightning injuries. Most houses (64.9%, n= 326) had functioning earth wires and earth rods.

Conclusion: The association with reported and observed practices on the availability of functioning earth wires and earth rods was found to be statistically significant (p<0.05). Awareness activities on prevention of lightning injuries for the vulnerable communities are recommended.