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135th Anniversary Medical Congress 2022: Pre-Congress Workshops

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CONTENTS

SLMA President

Prof. Samath D. Dharmaratne
MBBS (Colombo)
MSc (Community Medicine)
MD (Community Medicine)
President
Sri Lanka Medical Association

President's Message

135th Anniversary International Medical Congress 2022 Planetary health and global health security

Dear SLMA Members,

It is with great pleasure, excitement, and a sense of expectation, that I write this message to the September Newsletter of the Sri Lanka Medical Association (SLMA). The Academic Committee has prepared a comprehensive and an attractive programme for the 135th Anniversary International Medical Congress 2022 of the SLMA. It is scheduled to be held from September 28th to October 1st at the BMICH, Colombo, Sri Lanka.

Starting with the inauguration on the 28th of September, the congress continues through September 29th, 30th and October 1st, to end with the much-awaited SLMA Doctor's Concert, Dr Christo Fernando's brainchild, starting at 7.00 pm on the 01st of October 2022. The congress consists of 6 orations, 5 plenary lectures, 14 symposia, and 4 panel discussions with the Keynote Address dealing with the theme of the congress, 'Planetary Health and Global Health Security''.

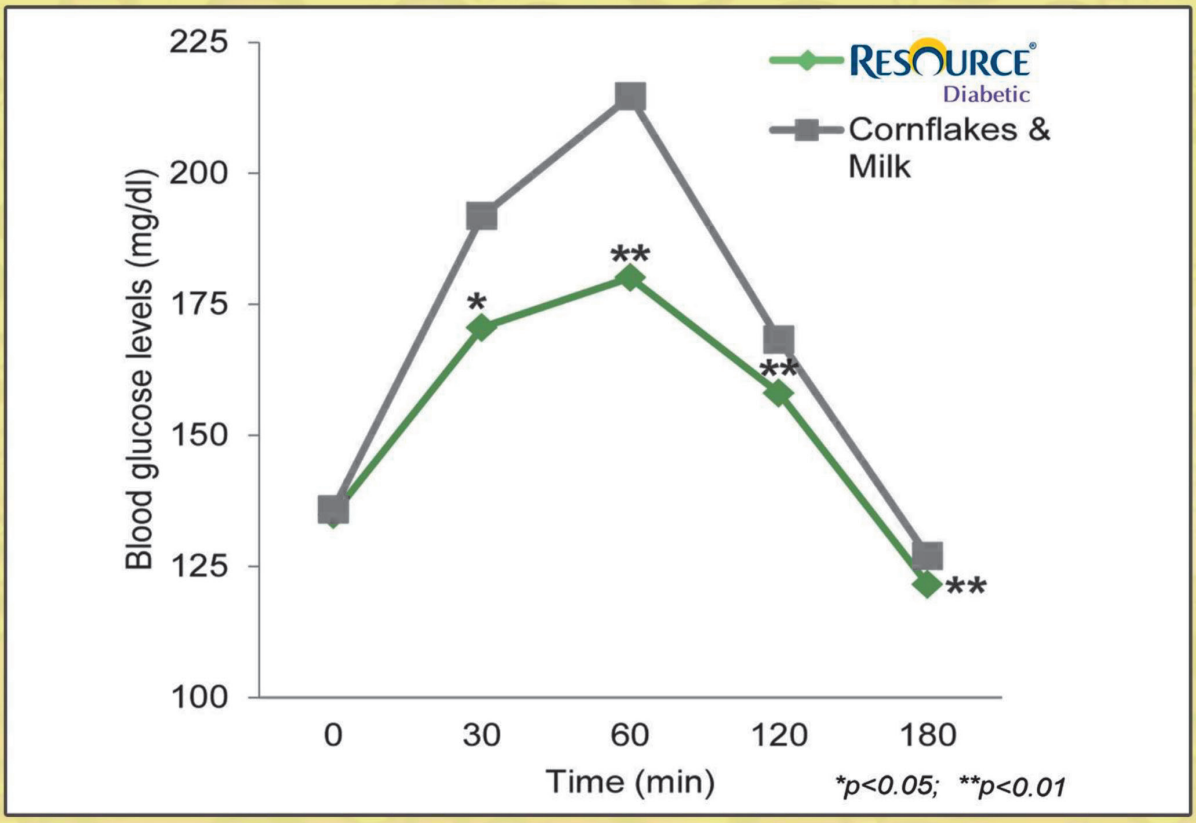
The Chief Guest Dr Alaka Singh, the Country Representative of the World Health Organization (WHO) and the Guest of Honor Dr Asela Gunawardena, the Director General of Health Services, Ministry of Health, Sri Lanka, would add strength and glamour to the congress. Nearly one-hundred free papers will be presented as oral and poster presentations, discussing new and innovative research findings.

I take this opportunity to thank all participants, resource persons, chairpersons, judges, orators, well-wishers, sponsors and especially the Academic Committee and the Office Staff of the SLMA for their continuing support, encouragement, and motivation. Special thanks are also due, for the Executive Committee of the SLMA and the Members of the Council. The advice and guidance from the Past Presidents were invaluable and is deeply appreciated.

I am delighted to invite all of you to the 135th Anniversary International Medical Congress 2022. Special thank you to Senior Professor Anuja Abaydeera, Dr Surantha Perera and Senior Professor Ishan De Zoysa, for all your tireless efforts. Indeed, without you, there would not have been a congress.

Professor Samath D. Dharmaratne
President - SLMA

Average blood glucose levels after consumption of **RESOURCE DIABETIC** vs isocaloric breakfast



Blood glucose and serum insulin levels were
significantly reduced for up to 3 hours post-meal
in T2DM patients who consumed **RESOURCE DIABETIC**
compared to cornflakes & milk*

RESOURCE DIABETIC

is clinically proven
to help manage
PPH and blood glucose levels
in individuals with
type 2 diabetes

Reference - * Gulati S et al. Diabetes Metab Syndr 2015

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Activities in Brief (16th August - 15th September)

SLMA Saturday Talks

20th August

'Management of Snake Bite' by Professor S A M Kularatne, Senior Professor of Medicine, Faculty of Medicine, University of Peradeniya.

27th August

'Communication Skills for the Long Case:

How to Impress the Examiner' by Professor Rasanayaka M Mudiyanse, Professor in Paediatrics, Faculty of Medicine, University of Peradeniya.

3rd September

'Neonatal Sepsis' by Dr Nimesha Gamhewage, Senior Lecturer in Paediatrics & Honorary Consultant Neonatologist, CSTH.

10th September

'A Patient Presenting with Fearfulness' by Dr Chathurie Suraweera, Senior Lecturer in Psychiatry, University of Colombo/ Honorary Consultant Psychiatrist, NHSL, Colombo.

17th August

A webinar was organized by the SLMA Expert Committee for Suicide Prevention on 'How to Protect Your Mental Health when the Country is in Turmoil' by Dr Lahiru Akuratiyage, Senior Lecturer in Psychiatry, Faculty of Medicine, University of Peradeniya.

22nd August

Dr Surantha Perera, Vice President, SLMA, participated on "Sharda' TV to discuss about the current economic/ political situation in the country and the Nutrition of Children.

25th & 26th August

The SLMA Expert Committee on Rehabilitation organized the second Rehabilitation Conference on 'Medical Rehabilitation'.

Programme		
Time (PM)	25th August 2022	26th August 2022
12.00 - 12.05	Welcome	
12.05 - 01.15	**Neurodevelopmental Disorders in Children**	**Spinal Cord Injuries**
	Approach to neurodevelopment disorders in children **Dr. Dilini Viplugama,** Cons. Community Paediatrician, RDHS, Gampaha Speech therapy perspective of autism spectrum disorders **Ms. Ayendri Seneviratne** Speech Therapist, Ayati National Centre for Rehabilitation of Children Rehabilitation of muscle disease in children **Dr. Jayatri Jagoda** Cons in Rheumatology & Rehabilitation, Lady Ridgeway Hospital	Importance of ASIA classification on spinal cord injuries **Dr. Noyemal Adikari** Actg. Cons. In Medical Rehabilitation, RRH Nursing care in spinal injury rehabilitation Mrs. Sugandi Fernando, Nursing Officer, RRH Physiotherapists role in spinal injury **Mrs. Samanthi Jayathilaka** Senior Physiotherapist, RRH Improving ADL and Resettlement in spinal cord injury **Ms. Chamodi Hansani,** Occupational Therapist, RRH
01.15 – 02.30	**Psychology and disability**	**Disabilities in Special senses**
	Psychological aspects in trauma and disability **Dr. Pavitra Godamunne,** Clinical Psychologist, University of Kelaniya Sports and recreation activities in the disabled **Mr. Priyantha Peiris,** National paralympics committee Management of psychiatric concerns in disability **Dr. Pushpa Ranasinghe,** Cons Psychiatrist, NIMH	Impairment of hearing and disorders of balance **Dr. Chandra Jayasuriya,** Con. ENT surgeon, NHSL Management of visual impairment **Dr. K.A.Salvin,** Con. Eye Surgeon, NEHSL Management of dysphagia **Dr. Shyamani Hettiarachchi,** Speech and language pathologist, University of Kelaniya
02.30 – 03.45	**Care in the elderly and coping up with disability**	**Rheumatology and disability – Multidisciplinary care**
	Occupational therapy management in Dementia **Ms. Nadeesha Priyangani Manatunga –** Occupational therapist, NIMH Social support for individuals with disabilities and their families **Mr. Chandana Ranaweera Arachchi,** Director, Social Services Department End of life care **Dr. Udayangani Ramadasa,** Con. Physician, University of Sabaragamuwa	MDT for rheumatoid arthritis, backache & amputee rehabilitation **Dr. Gunendrika Kasturiratne** Con. Rheumatologist, NHSL **Dr. Chamara Jayatunga,** Specialty doctor Neuro Rehabilitation Royal Bershire Hospital- UK **Dr. Naomi Senaratne-** Senior registrar in Rehabilitation Medicine Flinders Medical Hoapital, South Australia **Ms. Chathuri Pamunuwa,** Physiotherapist, NHSL **Ms. Nimali Aluthwatte** Occupational therapist, NHSL
03.45 – 04.00		Closing remarks

The topics of discussion and resource persons for the conference are given below.

Session 1: Neurodevelopmental Disorders in Children

'Approach to neurodevelopment disorders in children' by Dr Dilini Viplugama, Consultant Community Paediatrician, RDHS, Gampaha, 'Speech therapy perspective of autism spectrum disorders' by Ms Ayendri Seneviratne, Speech Therapist, Ayati National Centre for Rehabilitation of Children and 'Rehabilitation of muscle disease in children' by Dr Jayatri Jagoda, Consultant in Rheumatology & Rehabilitation, Lady Ridgeway Hospital.

Session 2: Psychology and disability

'Psychological aspects in trauma and disability' by Dr Pavitra Godamunne, Clinical Psychologist, University of Kelaniya, 'Sports and recreation activities in the disabled' by Mr Priyantha Peiris, National Paralympics committee and 'Management of psychiatric concerns in disability' Dr. Pushpa Ranasinghe, Consultant Psychiatrist, NIMH.

Session 3: Care in the elderly and coping up with disability

'Occupational therapy management in Dementia' by Ms Nadeesha Priyangani Manatunga, Occupational therapist, NIMH, 'Social support for individuals with disabilities and their families' by Mr Chandana Ranaweera Arachchi, Director, Social Services Department and 'End of life care' by Dr. Udayangani Ramadasa, Consultant Physician, University of Sabaragamuwa.

Session 4: Spinal Cord Injuries

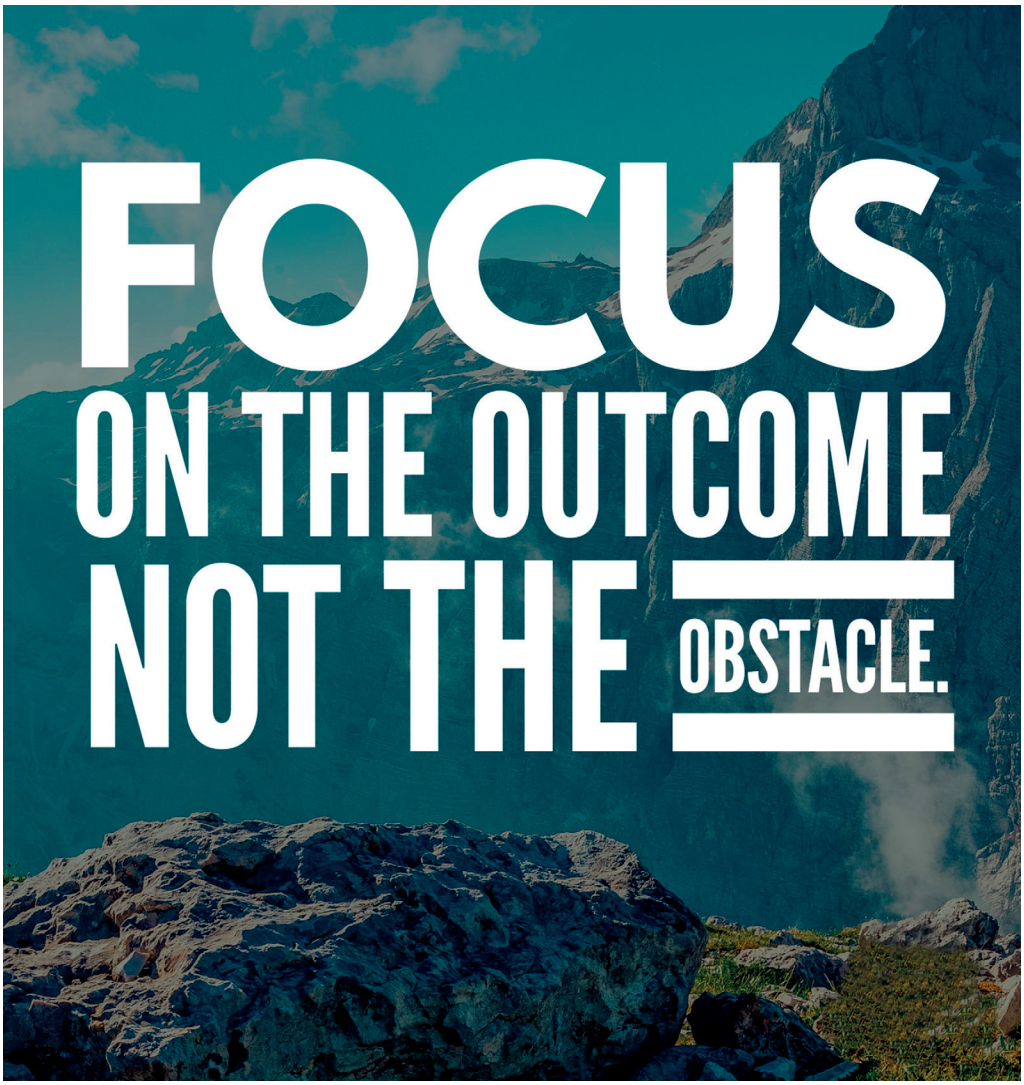
'Importance of ASIA classification on spinal cord injuries' by Dr Noyemal Adikari, Actg. Consultant in Medical Rehabilitation, Ragama Rehabilitation Hospital (RRH), 'Nursing care in spinal injury rehabilitation' Ms Sugandi Fernando, Nursing Officer, RRH, 'Physiotherapists role in spinal injury' Ms Samanthi Jayathilaka, Senior Physiotherapist, RRH and 'Improving ADL and Resettlement in spinal cord injury' by Ms Chamodi Hansani, Occupational Therapist, RRH.

Session 5: Disabilities in Special Senses

'Impairment of hearing and disorders of balance' by Dr Chandra Jayasuriya, Conultant ENT surgeon, NHSL, 'Management of visual impairment' by Dr K A Salvin, Conultant. Eye Surgeon, NEHSL and 'Management of dysphagia' Dr Shyamani Hettiarachchi, Speech and language pathologist, University of Kelaniya.

Session 6: Rheumatology and disability - Multidisciplinary care

'MDT for rheumatic arthritis, backache & amputee rehabilitation' discussion was conducted by Dr Gunendrika Kasturiratne, Consultant Rheumatologist, NHSL, Dr Chamara Jayatunga, Actg Consultant in Medical Rehabilitation, RRH, Dr Naomi Senaratne- Actg Consultant in Medical Rehabilitation, RRH, Ms Chathuri Pamunuwa, Physiotherapist, NHSL and Ms Nimali Aluthwatte Occupational therapist, NHSL.



135th Anniversary International Medical Congress - Pre Congress Workshops

Pre Congress Workshop 1 - 'Emergency and Critical Care'

Date: Saturday 3rd September 2922
Venue: Lotus Hall, BMICH
Time: 8.00 am - 12.00 noon

The Chairpersons for the workshop were Dr Ramya Amarasena, Consultant Anaesthetist, NHSL & Dr Asoka Gunaratne, Consultant Anaesthetist, CSTH.

The resource persons and topics discussed;

'Approach to a critically ill patient' by Dr Indika Lanerolle, Consultant Emergency Physician, NHSL and 'Identification of a deteriorating patient' by Dr Waruni Samaranayaka, Consultant Intensivist, CSTH.

The first case presentation and discussion was on 'Sepsis'. The Moderator for the session was Dr Lilanthi Subasinghe, Consultant Intensivist, University Hospital, KDU and the panelists were Dr Dilshan Priyankara, Consultant Intensivist, NHSL & Dr Nuwan Warnakula, Consultant Emergency Physician, CNTH.

The second case presentation and discussion was on 'Multiple Trauma'. The moderator was Dr Dilan Epasinghe, Consultant Emergency Physician, CSTH and the panelists were Dr Anushka Mudalige, Consultant Intensivist, CNTH & Dr Bandara Ekanayaka, Consultant Emergency Physician, NHSL.

The workshop ended with an interactive quiz moderated by Dr Rasanee Wanigasooriya, Consultant Intensivist, CSTH.

Pre Congress Workshop 2 - 'Acute Emergencies in Child Health'

Date: Sunday 4th September 2022
Venue: Lotus Hall, BMICH
Time: 8.30 am - 1.00 pm

The Chairpersons for the workshop were Dr R. Ajanthan, Consultant Paediatrician & Dr Sri Lal de Silva, Consultant Paediatrician.

The resource persons and topics discussed;

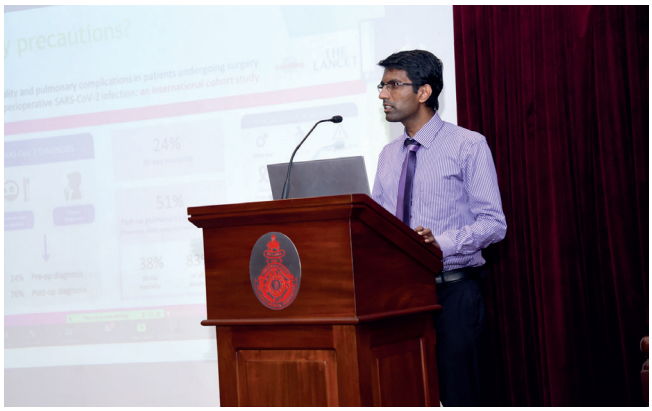
'Anaphylaxis' by Dr Kosala Karunaratne, Consultant Paediatrician, LRH, 'Status Epilepticus' by Dr Piyara Rathnayake, Paediatric Neurologist, LRH, 'Acute Asthma' by Dr Channa De Silva, Paediatric Pulmonologist,LRH, 'Acute poisoning' by Dr Udaya De Silva, Consultant Paediatrician, TH, Anuradhapura, 'Shock' by Dr Deshan Adhihetty, Paediatric Intensivist, LRH, 'Upper Airway Obstruction' by Dr Mihiri Rubasinghe, Consultant ENT Surgeon, LRH, 'Diabetic Ketoacidosis' by Dr Navoda Atapattu, Paediatric Endocrinologist, LRH and 'Dengue Haemorrhagic Fever' by Dr Nalin Kithulwatte, Paediatric Intensivist, LRH.

Pre Congress Workshop 3 - 'Updates in Clinical Immunology'

Date: Friday 9th September 2022
Venue: Lionel Memorial Auditorium, SLMA
Time: 8.30 am - 1.00 pm

The Chairpersons for the workshop were Dr Pradeep Kumarasinghe, Consultant Physician, NHSL and Dr Darrel Mathew, President, College of General Practitioners of Sri Lanka

The workshop was conducted in Collaboration with the UK Sri Lanka Immunology Foundation.



The resource persons and topics discussed;

'Liver involvement in Dengue and other infectious disorders' by Professor Anuradha Dassanayake, Professor in Gastroenterology, University of Kelaniya, 'Advances in Clinical Immunology and Immunogenetics - 2021/20' by Professor Suranjith L. Seneviratne, 'Use of Biologics in Rheumatological Disorders' by Dr Lalith S. Wijeyaratne, Consultant Rheumatologist, 'COVID-19: what has been learnt so far' by Professor Suranjith L. Seneviratne, 'Dengue/COVID-19 and the Surgical patient' by Professor Ishan De Zoysa, Professor in Surgery, University of Colombo and 'Advances in Food Allergy, Anaphylaxis and Asthma - 2021/2022' by Professor Suranjith L. Seneviratne.

All three workshops were well attended and was much appreciated by the participants and the resource persons.

Sri Lanka Medical Association
135th Anniversary International Medical Congress 2022

"Planetary Health & Global Health Security"
Main Congress Venue - BMICH, Colombo

Wednesday 28th September 2022			
Inauguration Ceremony **Chief Guest** - Dr Alaka Singh **Guest of Honour** - Dr Asela Gunawardena			
SLMA Oration **Deciphering acute kidney injury in Sri Lankan viper bites: Is thrombotic microangiopathy the key?** **Professor Eranga S. Wijewickrama**			
Day 1	**Thursday 29th September 2022**		
7.30 - 8.30 am	**Registration**		
	Hall A	Hall B	Hall C
Session 1 8.30 - 10.00 am	**Symposium 1** **Recent advances in Cardiology** **Chairpersons** - Dr Sarath Gamini De Silva and Dr Anidu Pathirana **Heart failure- from guidelines to clinical practice** Dr Naomali Amarasena **Contemporary management of dyslipidaemia in risk reduction of cardiovascular mortality** Dr M. R. Mubarak **Disappearing palpitations** Dr Suresh Kottegoda	**Symposium 2** **Current concepts in Endocrinology** **Chairpersons** - Professor Chandrika N. Wijeyaratne and Professor Sudharshani Wasalathanthri **Recent advances in diabetes** Dr Uditha Bulugahapitiya **Thyroid nodules: The basics in evaluation and management** Dr Dimuthu Muthukuda **Endocrine related hypertension in clinical practice** Dr Chandrika Subasinghe	**Poster Judging**
Session 2 10.00 - 10.45 am	**Keynote Address** **Global security through one health approach** Dr Shiyong Wang, *Senior Health Specialist at The World Bank* **Chairperson** - Professor Samath D. Dharmaratne		
10.45 - 11.15 am	**TEA**		
Session 3 11.15 am - 12.45 pm	**Symposium 3** **Reproductive Health Issues in Adolescents** **Chairpersons**- Professor Athula Kaluarachchi and Dr Ajitha Wijesundere **Adolescent menstrual disorders** Dr Probhodana Ranaweera **Dysmenorrhoea and endometriosis** Dr Chandana Jayasundara **Management of teenage pregnancy** Dr Mohamed Rishard	**Symposium 4** **Nutrition and Food Security** **Chairpersons** -Professor Sanath P. Lamabadusuriya and Professor Ranil Jayawardena **The economic meltdown and the double burden of malnutrition** Dr Angela De Silva **Food security within current scenario** Mr. Andrea Berardo **Multisectoral approach for a national food and nutrition policy** Dr Renuka Jayatissa	**Poster Judging**

Session 4 12.45 - 1.15 pm	**Plenary 1** **Prevention & Reversal of Type 2 Diabetes - A Paradigm shift in facing the pandemic** Professor Prasad Katulanda **Chairpersons**- Professor Samath D. Dharmaratne and Dr Sumithra Tissera		
1.15 - 2.15 pm	**LUNCH**		
	Hall A	Hall B	Hall C
Session 5 2.15 - 3.15 pm	**Free Paper Session 1:**	**Free Paper Session 2**	
Session 6 3.15 - 4.45 pm	**Symposium 5** **Current National Crisis: The Public health impact** **Chairpersons** - Dr Vinya Ariyaratne and Professor Hasini Banneheke **Activism in the health sector: A youth perspective** Dr Sanduni Sudarshana Perera **Clinicians' role in current crisis in health care** Dr Ananda Wijewickrama **System approach to crises** Professor Saroj Jayasinghe	**Symposium 6** **Curiosities in Lifestyle Medicine** **Chairpersons**- Dr Preethi Wijegoonewardene and Dr Ruvaiz Haniffa **Brain priming - do this and not that** Dr Thusha Nawasiwatte **Designing lives and systems for wellness** Dr Noel Somasundaram **Life style Medicine - the new specialty** Dr Nilwala Jayasinghe	**Poster Judging**
4.45 - 5.15 pm	**TEA**		
Session 7 5.15 - 6.15 pm	**Dr S. C. Paul Oration** **Using high throughput sequencing technologies to study genetic causes of ultra-rare neurological diseases** Dr Dulika Sumathipala **Chairperson** - Professor Samath D. Dharmaratne		

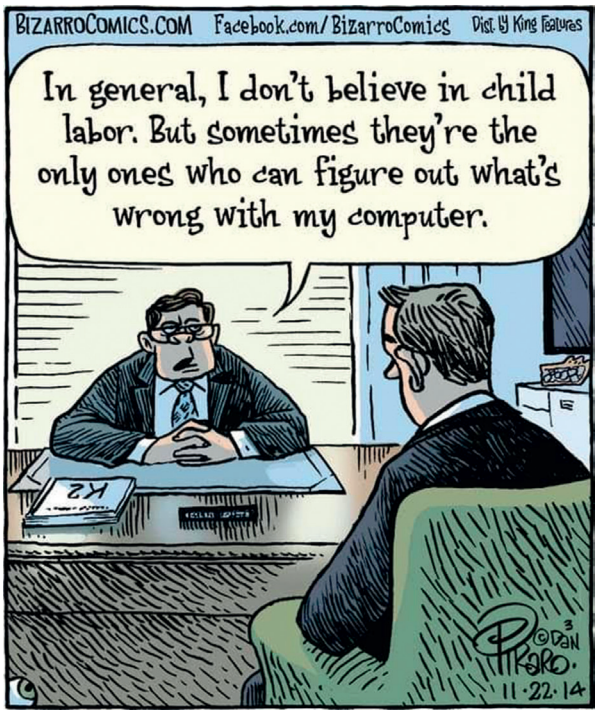
Day 2	**Friday 30th September 2022**
7.30 - 8.30 am	**Registration**
Session 8 8.30 - 9.00 am	**Plenary 2** **Insights into the Spectrum of Genetic Disorders in the Sri Lankan Population from four Decades of Research in Sri Lanka** Professor Vajira H.W. Dissanayake **Chairpersons** - Professor Samath D. Dharmaratne

Session 9 9.00 - 10.30 am	**Hall A**	**Hall B**	**Hall C**
	Symposium 7 **Burden, Management and policy on Vulnerable Neonates** **Chairpersons**- Dr B.J.C. Perera and Professor Guwani Liyanage **Gestation related mortality** Dr Saman Kumara **Challenges in managing the premature** Dr Surantha Perera **Policy reforms to optimize the survival of preterms** Dr Susie Perera	**Symposium 8** **Pulmonology for the practicing clinician** **Chairpersons**- Professor Anoja Fernando and Dr Ravini De Silva Karunathilake **Evidence-based rational use of combined inhalers in clinical practice** Dr Dushantha Madagedera **A cough that does not go away** Dr Amitha Fernando **Unexplained breathlessness** Dr Ruwanthi Jayasekera	**Symposium 9** **Strategies in screening for common malignancies** **Chairpersons**- Dr N Jeyakumar and Dr Sajith Edirisinghe **Breast Cancer** Professor Sanjeewa Seneviratne **Colon Cancer** Dr Sumudu Kumarage **Oral cancer** Professor Manjula Attygalle
10.30 -11.00 am	**TEA**		
Session 10 11.00 - 11.30 am	**Plenary 3** **Challenges ahead with Post Covid-19 Neurological Syndrome and longterm complications** Professor Tissa Wijeratne **Chairpersons** - Professor Samath D. Dharmaratne and Dr Darshana Sirisena		
Session 11 11.30am - 12.30pm	**Hall A**	**Hall B**	**Hall C**
	Free Paper Session 3:	**Free Paper Session 4:**	**Free Paper session 5:**
12.30 - 1.30 pm	**LUNCH**		
Session 12 1.30 -2.00 pm	**Plenary 4** **Lessons learnt from the pandemic for strengthening Primary Health Care** Dr Alaka Singh, *Country Representative, WHO* **Chairpersons** - Professor Samath D. Dharmaratne and Dr Surantha Perera		
Session 13 2.00 - 3.30 pm	**Hall A**	**Hall B**	**Hall C**
	Symposium 10 **Solid Organ transplantation** **Chairpersons**- Professor A. H. Sheriffdeen and Dr Rezni Cassim **Kidney transplantation - Challenges and Experiences** Dr Joel Arudchelvam **Deceased donor programme challenges** Dr Ruwan Dissanayaka **Living donor liver transplantation - challenges and future** Professor Rohan Siriwardana **Laparoscopic vs Open kidney donor** Dr Niroshan Senevirathne	**Symposium 11** **Current challenges & advances in treatment in Neurology** **Chairpersons**- Dr Darshana Sirisena and Dr Senaka Bandusena **Headache** Professor Tissa Wijeratne **Epilepsy** Dr Kishara Goonaratne **Parkinson's Disease** Dr Gamini Pathirana	**Symposium 12** **Practical approach to obesity** **Chairpersons**- Dr Anula Wijesundere and Dr Renuka Jayatissa **Medical management of obesity** Dr Manilka Sumanatilleke **Perioperative care for bariatric surgery** Dr Asoka Gunaratne **Surgery for severe obesity and Metabolic Syndrome** Professor Thejana Wijeratne

Session 14 3.30 - 4.00 pm	**Plenary 5** **Precision Medicine** Professor Suranjith L. Seneviratne **Chairpersons**- Professor Samath D. Dharmaratne and Professor Ishan De Zoysa
4.00 - 4.30 pm	**TEA**
Session 15 4.30 - 5.30 pm	**Professor N. D. W. Lionel Memorial Oration** **Fetal Haemoglobin induction as a treatment for Thalassaemia: Evidence from bench and bedside** Professor Sachith Mettananda **Chairperson** - Professor Samath D. Dharmaratne

Day 3	**Saturday 1st October 2022**		
7.00-8.00 am	**Registration**		
Session 16 8.00 - 8.45 am	**Dr S. Ramachandran Memorial Oration** **Cardiovascular risk prediction of Sri Lankans** Professor Chamila Mettananda **Chairperson** - Professor Samath D. Dharmaratne		
Session 17 8.45 - 10.15 am	**Hall A**	**Hall B**	**Hall C**
	Panel Discussion 01 **Collaborative session with UNFPA: Funding to financing and reorienting our approach to current crisis in Sri Lanka** **Chairpersons** -Dr Palitha Abeykoon and Dr Janaki Vidanapathirana **Governance of public private finance and role of lending agencies** Mr. Kunle Adeniyi *Representative for Sri Lanka (UNFPA) and Country Director for The Maldives* **Financing Health: Creation of fiscal space and direction of intervention** Dr Indrajit Coomaraswamy *Former Governor of the Central Bank of Sri Lanka* **Reorienting our approach and protecting vulnerable and marginalized population** Ms. Madusha Dissanayake *Assistant Representative (UNFPA); Director Public Affairs*	**Symposium 13** **Geriatrics: Understanding Frailty** **Chairpersons** - Dr Kalyani Guruge and Dr Iyanthi Abeyewickreme **Detection of frailty** Dr Udayangani Ramadasa **Management of frailty** Dr Dilhar N. Samaraweera **Case-based discussion on clinical presentation and management of frailty** Dr Maheshi Wijayabandara	**Symposium 14** **Economic crisis and its consequences on women's health** **Chairpersons** - Professor Jennifer Perera and Professor Sampatha Goonewardena **Challenges in health financing for women** Professor Amala De Silva **Salvaging the shattering family health during economic crisis** Dr Aruni De Silva **Women's health devoured by the tides in the economy: obstetricians' perspective** Professor Sanjeewa Padumadasa
10.15 - 10.30 am	**TEA**		

	Hall A
Session 18 10.30 - 11.45 am	**Panel Discussion 2** **Legal and Economic implications of Road Traffic Crashes** **Chairpersons** - Professor Ravindra Fernando and Dr Trina Haque **Burden of Road Traffic Crashes** Professor Samath D. Dharmaratne **Legal Implications of Road Traffic Accidents** Mr. Kalinga Indatissa, *President's Counsel, Past President, Bar Association of Sri Lanka* **Economic Impact of Road Traffic Accidents** Mr. Deshal de Mel, *Economic advisor to the Ministry of Finance*
Session 19 11.45am -1.15pm	**Panel Discussion 3** **Medical Tourism: A solution to foreign currency crises** **Chairpersons**- Professor Anuja Abaydeera and Dr Surantha Perera **Readiness of the private sector** Dr Lakith Peiris, Managing Director at Hemas Hospitals and Laboratory Chain **An opportunity not to be missed** Dr P. Nandalal Weerasinghe, *Governor of the Central Bank of Sri Lanka* **Is it a reality in the current economic crisis?** Ms. Dhammika Wijayasinghe , *Director General, Sri Lanka Tourism Development Authority*
1.15 - 2.00 pm	**LUNCH**
Session 20 2.00- 3.30 pm	**Panel Discussion 4** **Strategies for health sector recovery in the current socio-economic crisis in Sri Lanka** In collaboration with Ministry of Health, WHO, the Intercollegiate Committee and other Stake Holders **Moderators -** Professor Samath D. Dharmaratne & Dr Surantha Perera
3.30 pm	**Closing Ceremony**



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Benefits of formulated Nutrition in Managing COPD [1,2,3,4]

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High Protein 12.5g	Helps to improve respiratory symptoms, muscle strength and overall functional status
High BCAA 2.45g	Helps to stimulate muscle protein synthesis
High Fat 11g	Helps to reduce partial pressure of carbon dioxide (PaCO2), respiratory quotient (RQ) and overall lung function
Low Carbohydrate 24g	Lowers production of carbon dioxide supporting for an easier breathing
Omega 3 400mg	Helps to lower TNF and improve exercise tolerance
Vitamin D3 2.3mcg	Helps to reduce COPD exacerbation rates in most deficient patients
Glutamine 1.8g	Helps to prevent further metabolic disturbances in COPD patients
11 vitamins & 5 minerals	Helps to exert potent anti-inflammatory and antioxidant effects, reduce lipid peroxidation, which are likely to be protectve in the progression of COPD

Enriched Nutrition for Easier Breathing & Improved Pulmonary Outcomes

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KALBE

Optimizing Childhood Nutrition - Our role in challenging times

Professor Heshan Jayaweera

MBBS, DCH, MD(Paed), FRCPCH
Professor in Paediatrics and
Consultant Paediatrician
University of Peradeniya

Childhood under nutrition is a global concern. This is a major issue for most low- and middle-income countries whereas over nutrition leading to obesity is becoming a challenge in developed countries. Appropriate nutrition will ensure optimal growth in children. Growth in the first year of life is mainly dependent on nutrition and adequate nutrition during this period will lay a solid foundation for appropriate brain growth and development.

Growth monitoring is used as a proxy of assessing adequacy of nutrition. Inadequate or poor weight gain is a common concern for both parents and practitioners and describes a particular problem rather than a diagnosis. The underlying reasons for this problem could be medical, psychosocial or a combination of both. The basic underlying pathophysiological mechanism that leads to inadequate growth is always insufficient useable nutrition.

Parameters that are often used to monitor growth include weight, length (height) and Occipito Frontal Circumference (OFC). Additionally, other parameters such as weight for height (Wt/Ht), mid upper arm circumference (MUAC) and average daily weight gain are used for assessment of nutrition. The term wasting is used when a child's weight for height is less than 2SD[s] and is an indicator of acute under nutrition. Such children appear to be of thin build. Stunting is calculated by measuring the height for age and is indicative of chronic under nutrition. These children are shorter than their peers.

In the recent times there has been much dialogue regarding nutritional status of Sri Lankan children. This became a focal point of discussion with the current economic crisis that the country is faced with and different agencies/ persons have publicly quoted different figures in relation to this. Unfortunately, the number of published studies regarding childhood nutritional status in Sri Lanka over the last couple of years are few in number and they have been carried out in selected areas. The largest island-wide survey (excluding the Northern Province) done in the recent past; the Demographic and Health Survey (DHS), which was carried out in 2016 concluded that wasting, stunting and underweight had not shown a significant decline when compared to the figures of 2006. A school based cross sectional study carried out in 2017 including children from grade 1-5 in 100 rural schools in the North Central Province revealed that prevalence of severe thinness and thinness, in the population was 8.60% (SE 0.94) and 2.91% (SE 0.74) respectively. In addition to that, survey design adjusted prevalence of underweight and stunting were, 25.93% (95% CI 24.07-27.89%) and 43.92% (95% CI 40.55-47.56%) . In another study carried out in northern Sri Lanka in older children and published in 2021, wasting was seen in 30.6% of boys and 29.1% of the girls. Maternal education and family income significantly affected the prevalence of wasting, stunting while the family size was associated with wasting ($p< 0.001$)

Therefore it is reasonable to conclude that rates of malnutrition either remain the same as the above studies suggest or have gone up further during the post-pandemic period. The current crisis in Sri Lanka and the COVID-19 pandemic have created a multitude of problems in the society. This has resulted in an increased vulnerability of children to malnutrition and is likely to affect children of lower socioeconomic communities more profoundly.

The current economic crisis has resulted in an unprecedented increase in the prices of essential commodities as well as public transport. Daily paid workers who represent the lower income group are experiencing a scarcity of work due to lack of capital, raw materials etc. Thus, they have less money to buy their daily needs to feed their families. The situation is aggravated further as they have poor insight into making appropriate food choices and are poor at managing their day-to-day finances. They are also unlikely to give up social habits such as smoking and consumption of alcohol, for which much of their daily earnings are spent. Thus, with very little money in hand, the daily food intake of the low income communities is likely to have decreased greatly.

This is likely to worsen the nutritional status of children in the foreseeable future. We are likely to encounter more children presenting to our primary care settings, clinics and wards with recent onset weight loss, weight faltering, stunting and deficiency anaemias. (Iron and B12) Furthermore, the risk of infection will increase as under nutrition increases the vulnerability to infection, which in turn will further

compromise their growth, leading into a vicious cycle. It is no secret that many mothers have already left the country or are planning to leave for greener pastures to earn more revenue to feed their children. Although this may have a positive impact on a struggling economy and the nutrition of children, the negative impact includes the risk of child abuse which may take the form of physical, psychological and/or sexual abuse. In extreme circumstances there is also a fair chance that the current crisis could lead to child labour, although the legislature in the country does not permit it.

Given such a background, it is crystal clear that we in the medical profession have a moral obligation to intervene to overcome this disastrous situation. While the major stakeholders are involved in negotiations with international donor agencies, there is much that could be done at individual level to uplift the current status of nutrition. Of course, many would argue as to how we could accomplish this task with lack of supplies of vitamin supplements, thriposha and ready to use therapeutic food (RUTF), all of which are useful in managing such situations.

We need to start assessing and laying emphasis on nutritional status of all vulnerable children. Dialogue with parents to find out the details of the child's diet, limitations they currently encounter in giving the recommended food etc., (majority of parents being unable to give sufficient foods of animal origin due to affordability problems) will be useful in giving individualized advice on possible interventions/solutions to their problems. Such interventions should be science-based rather than resorting to *ad hoc* prescribing of vitamin supplements which will not supplement the macro nutrient needs.

Promoting health is a simple intervention that would allow vulnerable low-income families to make appropriate choices of food. Firstly, all practitioners must promote exclusive breast feeding until completion of six months of age and could advise on commencement of energy dense complimentary foods beyond five months of age, if the mother has to return to work before the baby is six months. The same strategy is useful if the mother is experiencing inadequate supply of breast milk beyond the age of five months.

65-70Kcal/ 100ml

Thin gruel
25-40Kcal/100ml

Thick porridge
>80Kcal/100ml

Beyond the age of six months, we need to emphasize the need for a balanced diet for the baby that includes three main meals with two snacks being provided in-between. It is important to make them aware that such food could be gathered from locally available, affordable foods depending on their income while continuing structured breast feeding. This advice has to be personalized for each family, as the circumstances of one family would be different to the other. They should be empowered to offer a variety of meals, make them energy dense, attractive and palatable to the child, rather than allowing the child to breast feed at the expense of solid food. It is important to discuss and discourage the introduction of commercially available food such as biscuits, other snacks etc, which are more expensive and which are also known to contain much salt and sugar that children eventually get addicted to.

Practitioners should develop a sound understanding of the trends in growth and be able to pick up deviations in growth, plan necessary interventions, and follow-up patients to see if the intervention has been successful. Beyond the age of one year is critical in this sense, as a fair proportion of our children falter in their weight recordings during this time. Appropriate advice on parenting, feeding on hunger cues, avoiding unnecessary snacks and ensuring a distraction free environment during feeding, are some of the interventions that would be useful, in addition to continuing a well-balanced diet.

Growing your own food and making use of home garden harvesting should be introduced and consolidated as this is quite easy to do in the villages. This does not require much space and parents should be encouraged to grow green leaves, vegetables and fruits in their gardens.

Example of an energy dense low cost meal

(Images by courtesy of Prof. Ishani Rodrigo)

Encouraging them to grow at least 3-4 pots/bags of different varieties of vegetables will enable them to offer a diverse diet to their children. Such information would be well received and practiced by parents if you explain the scientific basis/rationale of such actions. If all of us put in a genuine effort to discuss these interventions with the patients we see, and periodically follow up such patients, I am sure that we could possibly contribute to a paradigm shift of the mindset of parents.

A first contact doctor will also need to make appropriate referrals to tertiary centres regarding complicated patients whom he/she may encounter in clinics etc. who will benefit from further interventions and advanced management. In such circumstances, it is best if transport could be arranged through the hospital as those who cannot afford a square meal and are struggling for survival are unlikely to spend money out of pocket to visits another hospital for treatment. Those patients needing referrals include those with severe acute malnutrition, those with nutritional deficiencies and associated comorbid conditions, those who have not shown appropriate responses to treatment and those you feel would benefit from further evaluation as well as those who are poorly complaint for outpatient management.

Hence, at a time when the nutrition of our future generation is at stake, we as a profession should lead from the front, as we have done many a time before, think out of the box and initiate a constructive dialogue with our patients to empower them to make the right choices to overcome the current challenges we face in providing appropriate nutrition for children.

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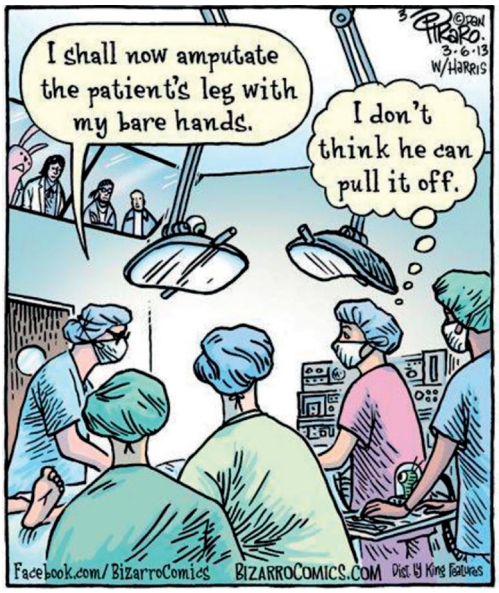

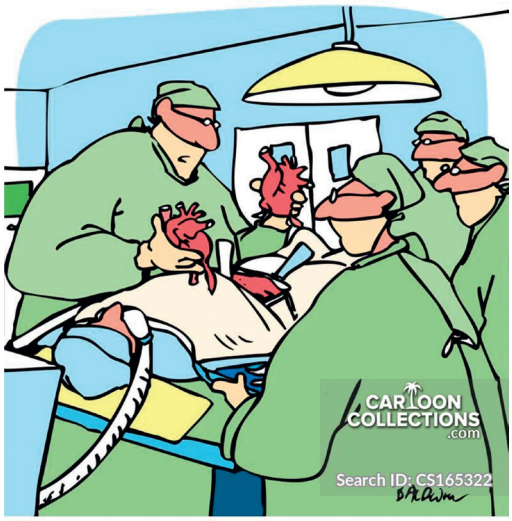

"OK, the old one's in my right hand, the donor's in my left. Right?"

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'Healthy' Vs 'Unhealthy' Foods: How to define?

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Healthy Vs Unhealthy Food

Food is a vital basic need for human existence and since ancient times human beings have struggled to fulfill needs of food and nutrition. With the economic and technological development in the world, food industry has significantly expanded. Mass media and social media are increasingly recognized for setting trends in food selection among population groups. Over the years 'food' has shifted from a mere basic need to an indicator of social landscape. This transition has both positive and negative impact on people and necessitates defining what is 'healthy' and 'unhealthy'.

The term 'unhealthy food' generally refers to foods that are high in energy density, saturated fat, trans-fats, salt, and sugar while being low in vital nutrients. These foods are thought to be largely responsible for the global epidemic of obesity.

Several approaches could be considered to identify and define 'healthy' and 'unhealthy' foods. Nutrient Profiling is such an objective method of categorizing foods that are 'more likely' to be constituents of a healthy diet as well as those that are 'less likely' to be constituents of a healthy diet. Nutrient Profiling could be used to regulate advertising and marketing of unhealthy food. Colour-coded front of pack labeling is another approach which helps consumers make informed choices at the point of purchase.

Nutrient Profiling

Nutrient profile models classify or rank foods according to their nutritional composition for reasons related to prevention of disease and promotion of health (1). The Sixty-third World Health Assembly held in 2010 endorsed a set of recommendations on marketing foods and non-alcoholic beverages to children in order to mitigate the effects of emerging epidemic of obesity and diet related NCDs, which has subsequently led to the development of Nutrient Profile Modeling (NPM) for the South East Asia region. The same model was adapted to Sri Lanka in year 2018. The model consists of 18 main food categories which align with the Codex Alimentarius and thresholds to determine food as acceptable or not for marketing to children. This has been specified for selected nutrients (total fat, saturated fat, total sugar, added sugar, sodium) and energy has been specified according to the categories of the model. Four general exclusion criteria have been stated in the model, and any food item falling under any of these exclusion criteria are not accepted for marketing for children (Box 1).

The threshold limits specified for the 18 food categories enables objective determination of 'acceptability of the food for marketing for children'(2). In Sri Lankan context there are few operational challenges in incorporating the NPM recommendations into practice.

- NPM model defines the threshold limits per 100g, irrespective of the serving size and expected consumption level.
- Implementation of the system is totally dependent on the availability of nutrition information in the food label; Inclusion of details of trans-fat level in the food label is not mandatory under the current regulations. Many food items in local markets lack food labels.
- Threshold limits for the food items are applicable for the food at the ready-to-eat stage and for the reconstituted products as per the manufacturer instructions.

Colour-coded front of pack (FOP) labeling

Food (Colour Coding for Sugar level) regulations mandating expression of sugar content was introduced in

Box 1: General exclusion criteria

- Food products that are not aligned with regulations of the Food Act, especially with regard to food additives, colours and binders.
- Food products that contain more than 1% of total energy in the form of industrially produced trans-fatty acid or 0.5 g of trans-fat per serving.
- Food products that contain more than 0.5% of total energy in the form of alcohol.
- Food products with any amount of non-sugar sweeteners (NSS).

2016. This prohibits selling, offering for sale, distributing or advertising of carbonated beverages, ready to serve beverages, other than milk-based products, fruit nectar and fruit juices, unless labeling of sugar level, relative sugar level (as per high, medium or low) and colour code is mentioned in all three languages using a font size with a minimum height of 1.5 mm (Table 1).

Table 1: Sugar content for the colour coding of liquids

Column 1 Sugar content (per 100ml of drink)	Column 2 Relative Sugar Level	Column 3 Colour Code
More than 11g	High Sugar	Red
2g to 11g	Medium Sugar	Amber
Less than 2g	Low Sugar	Green

Similar regulation mandating expression of fat, sugar and salt content in semi-solid and solid food was imposed by Food (Colour Coding for Sugar level) Regulations in 2019. It prohibits selling, offering for sale, distributing or advertising of solid or semi solid food products, unless labeling of sugar, fat and salt level and the relative level (high, medium, low) presented in a logo with the height and width of the logo being 2 cm and 1 cm respectively with the 'sugar, fat and salt' mentioned in all three languages using a font size with a minimum height of 1.5 mm (Table 2).

Table 1: Sugar, salt, fat content for the colour coding of semi-solid and solid food

Sugar content	Salt content	Fat content	Colour	Logo
More than 22g/100g	More than 1.25g/100g	More than 17.50g/100g	Red	
8 to 22g/100g	0.25 to 1.25g/100g	3 to 17.5g/100g	Amber	
Less than 8g/100g	Less than 0.25g/100g	Less than 3g/100g	Green	

Few operational challenges also prevail in implementing FOP colour coding system:

- Significant number of unpackaged food items commonly found in the local market, where FOP labeling is not applied. Existing capacity of food laboratories need to be strengthened to facilitate sample analysis at an affordable cost to food manufacturers.
- Application of FOP label colour coding by food manufacturers need to be backed up by government led laboratory surveillance systems.
- Interpretation of colour codes assigned to fat, sugar and salt collectively is a challenge encountered by the consumer. To ease this, a common interpretation rule is assigned.

Food items 'with at least one Red logo'	Food items 'without Red Logo/s but at least with one Amber logo'
	
'High risk for NCD such as heart disease, diabetes and hypertension' and therefore it is recommended to limit consumption of such food items as much as possible'	'Risk for the NCD such as heart disease, diabetes and hypertension' and therefore it is recommended to reduce the consumption of such products.'

When considering the use and acceptance of the Traffic Light system, studies indicate nearly 60% of individuals are aware of the Traffic Light Color Coding system for soft drinks without comprehending its meaning (3). Additionally a study in urban setting indicates even when consumers have a clear understanding on meaning of the colour code, it does not have a substantial impact on the consumer's choice at the point-of-purchase (4).

Ultra-processed food (UPF)

Food processing is crucial for both preserving food and supplying the population with edible, secure, and nutrient-rich foods. The importance of food processing in ensuring food safety, shelf life, prevention of food wastage is often overlooked due to concerns on adverse health consequences of processed food. NOVA food classification system, defined by Carlos A. Monteiro and his team categorize all foods and food products, according to the extent and purpose of the processing they undergo, into 4 groups (Box 2).

Box 2: NOVA Classification system

1. Unprocessed or minimally processed foods
2. Processed culinary ingredients
3. Processed foods (PF)
4. Ultra-processed foods

Ultra-processed food, due to close association with adverse health outcomes, is considered as unhealthy (5). A systematic review on UPF exposure and health outcomes has shown, that 37 out of 43 peer-reviewed studies, there were at least one statistically significant association between UPF exposure and at least one adverse health outcome (which include overweight obesity, cardio-metabolic risk, non-communicable diseases such as type 2 diabetes and cancer) while no study reported an statistically significant association between UPF exposure and beneficial health outcomes (6).

Development of an objective definition for ultra-processed food is yet a difficult task. Definition of ultra-processed food has evolved over many years (7) (8). Sri Lankan food based dietary guidelines (FBDG) has adapted a modified version of NOVA classification to define ultra-processed food. FBDG recommends limiting ultra-processed food as much as possible. Only consumers with relatively high nutrition literacy would be able to determine UPF based on this definition which would highly affect the control of UPF among population groups. Additionally considering the subjective nature of the criteria included, development of objective criteria and translation of them to an easily understandable symbolic logo would be necessary if intake of ultra processed food to be controlled.

Defining unhealthy food is a priority in the Sri Lankan context where obesity epidemic is rising in all age groups over the life course. Even with the ongoing economic crisis, importance of this task cannot be undermined as consumption of low-priced inferior commodities could threaten the consumer protection. Additionally, more supportive activities in strengthening legislative framework, enhancing laboratory surveillance and improving of public communication could be necessary to obtain a better impact.

'Unhealthy food' is an individual or composite food item or a beverage that is high in energy, sodium, sugar and or low in other beneficial nutrients such as protein, vitamins, minerals and non-nutrient compounds such as fiber. These foods/ beverages mostly have strong salty or sweet taste and rich mouth-feel. Even items considered healthy, if consumed in large quantities, can exceed the daily recommended amounts for salt, sugar and fats/ energy. What needs to be encouraged is an informed decision on how food should or should not be consumed on a frequent basis and even for the healthy foods, paying attention to the amount to be consumed.

Ultra-processed food

Ultra-processed products may contain;

- Salt, sugar and fat
- Dyes and other colouring agents and colour stabilizers
- Flavours and flavor enhancers, non-sugar sweeteners.
- Processing aids (e.g. carbonating, firming, bulking and anti-bulking, de-foaming, anti-caking and glazing agents, emulsifiers and humectants)
- Extracts from food (e.g. casein, lactose, whey and gluten)
- Derivatives from processing of food constituents (e.g. hydrogenated oils, hydrolyzed proteins, soy protein isolate, malt dextrin, invert sugar and high fructose corn syrup).

They are energy dense but with less nutrients and fiber. They contribute to overweight/ obesity, cardiovascular disease and cancer.

Source: Food Based Dietary Guidelines for Sri Lankans 2021

Conclusion

'Unhealthy food' is an individual or composite food item or a beverage that is high in energy, sodium, sugar and or low in other beneficial nutrients such as protein, vitamins, minerals and non-nutrient compounds such as fiber. These foods/ beverages mostly have strong salty or sweet taste and rich mouth-feel. Even items considered healthy, if consumed in large quantities, can exceed the daily recommended amounts for salt, sugar and fats/ energy.

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Lest we forget, dear children...

I will soon be retiring
my hair fast turning grey
My heart is heavy, dear children
for the word "Patient" is disappearing
from your vocabulary

She is not a breast lump
An 'I & D' or a 'Lap chole'
Dear young doctor, let's not forget
he or she is a patient with a story to tell.

We started her story thus
in the good olden days
Mrs. X , --- year old patient
complains of abdominal pain

She could have been my mother
grandmother, sister or a friend
Let me ask her in detail
the history of the presenting complaint
Now, dear doctor let's remember
she has a pain of her mind
Which is certainly more severe
than that of her body and its kind

Please speak to her with respect
with a kind look into her eyes
Discuss about her condition
as "that patient with bleeding haemorrhoids"

In this fast-moving society
we are losing the human touch
An active effort, we have to make
or robots will conquer us

This is a mother's advice
dear children, make no fuss
Add your skills and expert knowledge
she'll soon be smiling at us.

Dr. Dayani Mendis,
Consultant Anaesthetist

Chronic Kidney Disease of Known Aetiology - Are we missing the woods for the trees?

Prof Shamila de Silva
Professor in Medicine and Specialist Physician in Internal Medicine
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Chronic kidney disease (CKD) is defined as glomerular filtration rate of <60 mL/min/1.73m^2 lasting for 3 months or more. Over 800 million people worldwide were estimated to have some degree of CKD in 2021. The prevalence of CKD worldwide has more than doubled over the last decade and current estimated global prevalence of CKD is 13.4%. There are 4.9-7 million people worldwide in end-stage kidney disease needing renal replacement therapy. CKD is approaching epidemic proportions in many countries where population prevalence in adults aged 60 or more is over 35%. The increasing incidence and prevalence of CKD worldwide probably reflects the increasing incidence of diabetes and hypertension in ageing populations.

Worldwide, the commonest cause of CKD is diabetes, followed by hypertension. Longstanding diabetes leads to glomerular sclerosis, initially manifesting as albuminuria, which progresses over years to frank proteinuria and progressive loss of renal function. Hypertension over many years causes CKD by nephrosclerosis, which is clinically 'silent' in the early stages and manifests late when CKD is advanced. Hypertension may also be the result of chronic kidney damage due to any cause.

CKD increases morbidity and mortality in the affected by progressing to end-stage kidney disease. CKD is also an independent risk factor for ischaemic heart disease. Patients with CKD are at a higher risk of death due to heart disease than due to CKD itself. CKD is an expensive disease to manage, particularly when it reaches end stage, when dialysis and transplantation become the preferred management options. The toll of CKD in the affected, in human and socio-economic terms, is enormous in any community and almost unbearable in a struggling Third World economy such as Sri Lanka.

The CKD situation in our country is somewhat different to the rest of the world. In parts of the country, particularly in the North Central province, a chronic kidney disease of uncertain aetiology (CKDu) affects many people, particularly adult males in the farming community. The aetiology, as the name implies, is uncertain and is thought to be multi-factorial with pesticides, heavy metals, snake bite, dehydration and other environmental factors playing a role. The case definition of CKDu excludes the presence of diabetes and hypertension in the patient as causative factors of CKD.

There are conflicting reports on CKDu prevalence rates in Sri Lanka, with the World Health Organization (WHO) estimating prevalence at 15.3% among adults in the affected areas in 2012 and other studies reporting lower prevalence rates. This could partly be attributed to the differences in methods used to define CKD in the different studies of CKDu. A population-based cross-sectional study estimated the point prevalence of CKDu as 15.1-22.9% in the worst-affected districts of Anuradhapura, Polonnaruwa, and Badulla in 2013, while the point prevalence of CKDu in the less-affected Central and Southern provinces ranged from 2.3-9.5% in 2011.

Research on renal disease in Sri Lanka is almost exclusively focused on this problem of CKDu. As a result, there is little information on the incidence and prevalence of CKD in the rest of the country, although it is well known that more people are developing diabetes and hypertension in both rural and urban populations, paralleling developments in the rest of the world.

The prevalence of diabetes among Sri Lankan adults was 9.8% in 2021, as estimated by the International Diabetes Federation. The prevalence of hypertension in the adult population was estimated at 26.2% by the World Health Organization in 2014; many did not have their blood pressure under control and a substantial percentage were not aware they were hypertensive. Data on population prevalence of CKD of known aetiology in Sri Lanka is scarce. Published studies have mainly looked at hospital prevalence rates, and not at community prevalence rates of CKD. Some recent studies have estimated CKD prevalence among adults in Sri Lanka at 15%, with variable prevalence dependent on the district studied. The prevalence of diabetes in persons with CKD in the country is thought to range between 20-40% but again exact data is lacking.

In a resource poor country like Sri Lanka, from a public health perspective the way forward is by preventing CKD at an early stage, since treating end stage kidney disease with dialysis and renal

transplantation puts too much of a burden on a limited health budget. To put preventive strategies in to effect more information is needed on incidence and prevalence of CKD in areas outside the CKDu belt. High risk groups can then be identified and CKD screening methodologies using relatively cheap urine and blood tests can be implemented.

Primordial prevention of CKD starts with early detection of diabetes and hypertension in the general population. Targeted screening of at-risk persons, such as those who are obese, have a family history of non-communicable diseases, and are older in age, is desirable in a country like ours where preventive health budgets are limited. In this aspect opportunistic screening by primary care physicians assumes great importance. Once persons are detected to have diabetes or hypertension, they should be managed carefully with health education on lifestyle modification (healthy diet, regular physical activity, stopping smoking and other substance use, etc) and encouraging good adherence to treatment.

Screening regularly for CKD should become part of the management of such persons so that CKD is detected in the early stages. In the case of diabetes, current guidelines recommend screening for microalbuminuria annually. This is easily done with a spot morning sample of urine for albumin to creatinine ratio (ACR). In the case of hypertension an annual serum creatinine with estimated glomerular filtration rate (GFR) is the recommended screening method. This test is also recommended annually in those with diabetes.

Once CKD is detected the goal of therapy is to prevent progression of CKD to end stage kidney disease where renal replacement therapy becomes necessary to prolong life. To prevent deterioration of renal function the underlying disease needs to be controlled well. In the case of diabetes HbA1c should be ideally maintained <7% while hypertensive patients should control their blood pressure <140/80 mmHg (and <130/80 mmHg is there is co-existing significant proteinuria).

Oral hypoglycaemic agents and insulin can be used to attain glycaemic targets, and metformin is one of the best agents recommended. It is unfortunate that there are many myths and misconceptions among the Sri Lankan public and even some members of the medical community about the safety of metformin in persons with renal dysfunction. Metformin is not nephrotoxic. Use of metformin can lead to lactic acidosis in severe renal, hepatic, or cardiac dysfunction, but this is an extremely rare side effect of this widely used drug which has an excellent safety profile over a hundred years. Metformin is in fact the first line therapy in type 2 diabetes and is discontinued only in stage 4 CKD when the GFR falls below 30 mL/min/1.73m^2.

Similarly, many doctors tend to discontinue angiotensin converting enzyme inhibitors (ACEi) and angiotensin receptor blockers (ARBs) as soon as CKD is diagnosed, either because these drugs initially cause a small reduction in the GFR or in the mistaken belief that the drugs will invariably raise serum potassium levels in persons with CKD. In fact, both drug groups are excellent in controlling blood pressure, particularly in those with diabetic kidney disease and proteinuria. However, the two drug groups are not recommended to be used together.

Primary care doctors should be aware of when to refer persons with CKD for specialist care. Patients with pre-dialysis CKD can be looked after by Nephrologists and Specialist Physicians in Internal Medicine when GFR is between 30-60 mL/min/1.73m^2. Once the patient is in CKD stage 4 with GFR <30 mL/min/1.73m^2 Nephrologists should take over management to prepare the patient for renal replacement therapy (dialysis or transplantation). Older persons with end stage kidney disease may opt for conservative management due to medical and/or socio-economic reasons, when they will continue to be managed medically by Nephrologists.

The management of patients in end stage kidney disease is expensive in terms of economic and human resources. The way forward for Sri Lanka, a country in the grip of an economic crisis of unprecedented proportions, is emphasizing prevention at all stages of CKD. To achieve this educating the public alone on diabetes, hypertension and CKD is not enough. The undergraduate medical curriculum should place greater emphasis on CKD as a public health issue in this country, in the same way ischaemic heart disease and diabetes receive priority. There should be many opportunities for primary care doctors to learn and update their knowledge about the detection and management diabetes, hypertension and CKD.

Most importantly, there should be a paradigm shift in research priorities in CKD in the country, giving as much emphasis to research on CKD of known aetiology as currently accorded to research on CKDu. To do this an urgent shift of mindset of all relevant parties is called for. We are staring at the tip of the iceberg that is CKD of known aetiology in this country. It is time health authorities prioritized this extremely important non-communicable disease in Sri Lanka to prevent the development of yet

another avoidable public health catastrophe.

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Food for Thought

Are the following actions of mine unethical?

Will they be considered as criticizing the actions/treatment of another prescriber?

1. If I see a prescription without the name and/or qualifications of the prescriber, I inform the patient that he is probably a quack and it is dangerous to consult him. No one with a recognized qualification will give a prescription without indicating that.
2. If I see packets of medicine with no names of the drug or the prescriber, I tell the patient that it is likely to be an unregistered prescriber.
3. If there is irrational medication like two or more antihistamines, gastric acid lowering drugs, two or more unnecessary antibiotics, vitamins etc etc on the same prescription, I indicate to the patient that they are unnecessary and can increase the side effects and the cost.
4. I mention to patients that unnecessary and expensive investigations, already done by a doctor, like troponins in obviously non cardiac pains, chest x-rays for 3 day fevers with no respiratory symptoms and the like are not indicated.

I would have been happy if I could contact the doctor to convey the message but this is not a practical option. Complaining to the SLMC has often been a fruitless exercise. There is no easy way of monitoring the prescriptions. Despite repeated communications, doctors in both state and private sectors do not write proper prescriptions and continue to issue unlabeled drugs.

Although we are advised to write the generic name, I am of the opinion that this allows the pharmacist, not monitored by authorities, to dispense an expensive brand bringing him a higher profit.

In such circumstances is it unethical to convey the message to the patient? I await a response to this note of mine.

Dr. Sarath Gamini De Silva

Adenotonsillar hypertrophy in children- Know your A's and T's

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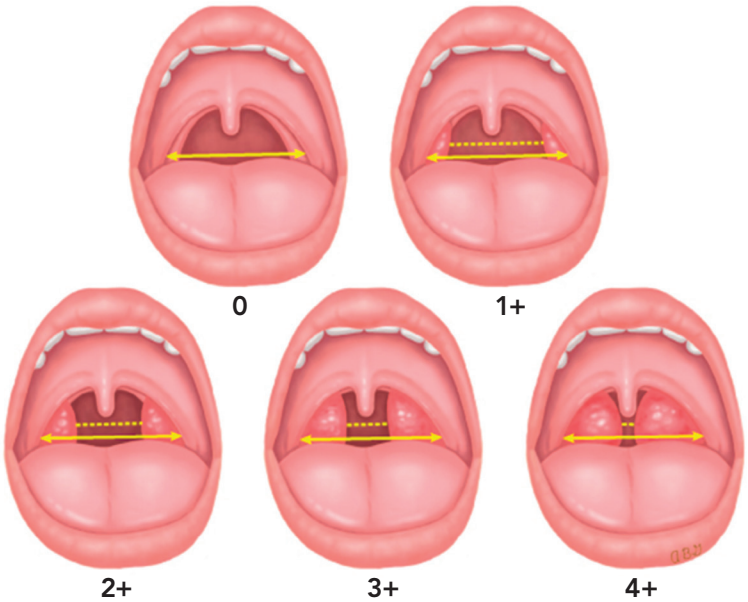
Adenotonsillar hypertrophy is the most common cause of upper airway obstruction in children. This may cause symptoms like nasal obstruction, snoring, mouth breathing, hyponasal speech and sleep disordered breathing. Obstructive sleep apnoea (OSA) is the worst form of sleep disordered breathing that could occur among these children [1]. In the long term, untreated adenotonsillar hypertrophy may cause considerable morbidity. These include unrelenting chronic sinusitis, recurrent otitis media with effusion, growth faltering, nocturnal enuresis, or even neurocognitive abnormalities such as learning and behavioural problems with a low intelligence quotient.

Anatomy of adenoids and tonsils

Both adenoids and tonsils are a part of the lymphoid tissue located around the aero digestive tract (Waldeyer's ring). They are classified as part of the mucosal-associated lymphoid tissue (MALT)[4]. In early childhood these are the first site of immunological contact for inhaled antigens. Adenoid growth continues rapidly during infancy and plateaus between ages 2-14 years[1]. Clinical symptoms are more common in the younger age group due to the relatively small volume of the nasopharynx and increased frequency of upper airway tract infections. In children they may be very prominent and sometimes causes obstructive symptoms. Adenoids are placed at the postnasal space and cannot be examined directly but the tonsils situated on either side of the oropharynx are readily visible and can be gauged according to their size using Brodsky scale.

Brodsky scale (from 0 to 4)

Scale	Description
0	Tonsils entirely within the tonsillar pillars or previously surgically removed
1+	Tonsils occupy <25% of the lateral dimensions of the oropharynx
2+	Tonsils occupy 26- 50% of the lateral dimensions of the oropharynx
3+	Tonsils occupy 51 to 75% of the lateral dimensions of the oropharynx
4+	Tonsils occupy >75% of the lateral dimensions of the oropharynx



Picture 1: Brodsky scale for tonsil size grading

Drawing based on text description in: Brodsky L. Modern assessment of tonsils and adenoids. Pediatr Clin North Am 1989; 36:1551.

Assessment of adenoidal size:

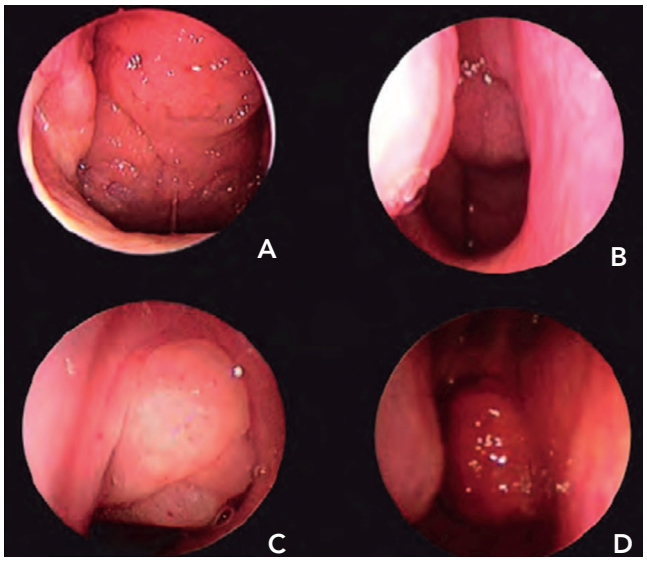
Fibro optic naso-pharyngo-laryngoscopy (FOL) or rigid nasal endoscopy (RNE)

Grade I
Adenoids filling 1/3 of vertical portion of choana

Grade II
Adenoids filling up to 2/3 of vertical portion of choana

Grade III
Adenoids filling from 2/3 to near completion of choana

Grade IV
Complete choanal obstruction



Picture 2: Adenoid size grading FOL view

Adenoid hypertrophy grading system proposed by Parikh et al. (Parikh et al., 2006): grade 1 (A), grade 2 (B), grade 3 (C) and grade 4 (D)

Aetiology of adenotonsillar hypertrophy

Hypertrophy could occur due to infectious and non-infectious aetiologies. Some of the viral causes are adeno, Coxsackie, corona, cytomegalo, Epstein-Barr, rhino and parainfluenza viruses. Aerobic bacteria include alpha, beta and gamma haemolytic streptococcal species, H. influenzae, M. catarrhalis and S. aureus. Many non- infectious causes have been implied and include gastro-oesophageal reflux, allergies, and exposure to cigarette smoking [4].

Pathological effects of adenoid hypertrophy

These effects are due to partial or complete obstruction of choanae or as a result of sepsis. Pathological manifestations include rhinitis, rhinosinusitis, otitis media and otitis media with effusion (glue ear). The benefit of adenoidectomy is not only due to the removal of the anatomical obstruction by enlarged adenoids in the nasopharynx but also due to the removal of the reservoir of bacterial load, particularly H. influenzae contributing to biofilm development. This is thought to be the main contribution to otitis media with effusion[1].

Rhinosinusitis in children occurs as the enlarged adenoids harbour pathological bacteria. Surgical removal of adenoids and tonsils in these children reduces them undergoing Functional Sinus Surgery (FESS) for chronic rhinosinusitis subsequently.

Adenotonsillar hypertrophy and paediatric sleep disordered breathing are characterized by repetitive increase in resistance and collapse of upper airway and is found in about 1-3% of children. Its prevalence is highest between 3 to 6 years of age. Persistent obstructive sleep apnoea (OSA) can affect the central nervous system and cardiovascular system. Adenotonsillar hypertrophy is the commonest cause of OSA in children [2]. They present with features of chronic airway obstruction, mostly loud snoring, irregular breathing, night-time chocking, restless sleep with frequent awakening, regular periods of cessation of breathing (apnoea) and daytime somnolence.

There is widespread recognition of the occurrence of sleep apnoea in childhood and benefits of adenotonsillar surgery in these children is well accepted. Severe sleep disordered breathing causes depressed arterial p_aO_2 and elevated p_aCO_2.This will return to normal after adenotonsillectomy. Polysomnography (PSG) or overnight sleep study is the gold standard investigation for diagnosing OSA. There is significant improvement of polysomnographic scores following surgery [2].

The respiratory improvement after adenotonsillectomy results in increase in serum insulin like growth factor1 (IGF -1) which is responsible for the growth spurt observed after surgery [1].

Unsuspected neoplasia in adenoids and tonsils in children are rare. Persistent asymptomatic atypical and asymmetrical enlargement of adenoids and tonsils in the absence of infection should be imaged and biopsied without delay. Rarely childhood lymphoma is diagnosed this way in post transplanted children as a part of post transplanted lympho-proliferative disorders [1].

Implications of Adenotonsillar hypertrophy

1. Otitis media with effusion
2. Sleep disordered breathing (Obstructive Sleep Apnoea)
3. Recurrent rhinosinusitis
4. Rarely malignancies - (Non-Hodgkin and Hodgkin lymphomas)

Assessment of adenotonsillar hypertrophy

History taking

In these children a full paediatric ENT history should include history of nasal obstruction, middle ear diseases, sleep disturbances, episodes of acute tonsillitis needing antibiotics, and general quality of life of the child during the preceding two years.

Family history of bleeding disorders need to be inquired into in preparation for and prevention of intra-operative and post-operative bleeding episodes. In children with Down syndrome. altanto-axial instability and cardiac abnormalities should be investigated [1]. In children with cleft palate or a child with a sub mucous cleft, there is a possibility of Velo-pharyngeal incompetence and nasal regurgitation if a complete adenoidectomy is performed.

Clinical assessment

Suspected children with adeno-tonsillar hypertrophy with obstructive features need to be assessed systematically. Clinical examination includes complete head and neck and ENT examination. Adenoid hypertrophy can be indirectly assessed as a bedside test by assessing the patency of the nasal airway. This is by holding a cold metal spatula at the nasal cavity opening while observing for misting. Also, an X-ray of the postnasal space will show the adenoid pads with the relative nasal airway left over by the hypertrophied adenoids. Direct examination is done by using the flexible naso-pharyngo-laryngoscope (FOL) which is passed through the nostrils to the post-nasal space.

Tonsils which are on either side of oropharynx can be assessed directly with the help of a good light and graded according to Brodsky scale as mentioned above [3]

Management of adeno-tonsillar hypertrophy

Medical management of adenoid hypertrophy is topical steroid nasal drops or sprays with concomitant oral antihistamines. After a trial of 3 months of topical steroids, the child should be assessed for any symptomatic relief and repeat the endoscopic evaluation of the adenoid pad.

When medical management fails, surgical removal by adenoidectomy and tonsillectomy is offered. Before planning surgical removal of the adenoids and tonsils, the procedure is explained to the parents and informed written consent should be obtained. This includes risk of blood loss, possibility of the need for blood transfusions and sometimes second operating theatre visit to control bleeding. Considerable post- operative pain after adenotonsillectomy is expected and regular pain relief is required for about one week. In the case of adenoidectomy, the possibility of regrowth should also be considered.

Traditionally adenoids are removed as a blind procedure by using a curette which is inserted via the mouth into postnasal space [1]. A suction diathermy can be used for removal where a mirror indirectly shows the operating field. Tonsils are removed via cold steel method using sharp instruments via the mouth. Bleeding is controlled by using ties and bipolar diathermy [2].

Adenotonsillectomy has its own serious complications like bleeding (4-5%) and post-operative respiratory compromise in younger children with OSA (27%) [3]. There are newer methods of Adenotonsillectomy such as Coblator and microdebrider assisted surgery where the risk of intra operative and post- operative bleeding are considerably less. Furthermore, the Coblator can be used for tonsillotomy, a relatively new concept where the tonsils are removed *via* the intra capsular route. This method facilitates partial removal or debulking of the tonsils to relieve obstructive symptoms [3]. These two methods have a very high unit cost and is not very economical in our local setup.

Children with obstructive sleep apnoea who are planned to undergo adenotonsillectomy should be seen by the anaesthetic team for the possibility of post- operative respiratory complications. They should be managed in intensive care settings. Children with asymmetrical tonsils or suspected adenoid enlargement in whom lympho-reticular malignancies are suspected, should be discussed with a paediatric oncologist before embarking on surgery. These children may need pre-operative radiological imaging of the head

and neck, chest, and abdominal scanning to assess lymph node involvement and the status of the liver and spleen. Once the histopathology report is available and the diagnosis is confirmed, oncological management is initiated.

As adenotonsillar hypertrophy is a common occurrence, primary care physicians should be thoroughly conversant with the management. Referral to the ENT surgeon should be done for evaluation whenever features of recurrent otitis media with effusion (glue ear), chronic rhinosinusitis or sleep disordered breathing are suspected in any child despite adequate medical treatment.

It is essential to liaise with multiple and inter-disciplinary professionals in managing children having adenotonsillar hypertrophy. Primary care physicians, community paediatricians, ENT surgeons, paediatric pulmonologists and immunologists can provide collective benefit of a more team-based approach in the management [5].

Key points

- Adeno tonsillar hypertrophy is a common occurrence among children.
- A thorough history and physical examination together with certain specific examination techniques such as flexible naso-pharyngo-laryngoscopy (FOL) can be very helpful in the assessment.
- Polysomnography is the gold standard in diagnosing Sleep Disordered Breathing such as obstructive sleep apnoea in children and scores correlate with the post-surgical outcome.
- Rarely Non-Hodgkin lymphomas can occur in tonsillar and adenoidal hypertrophy. Hodgkin lymphomas can occur in adenoids and tonsils in post organ transplanted children.

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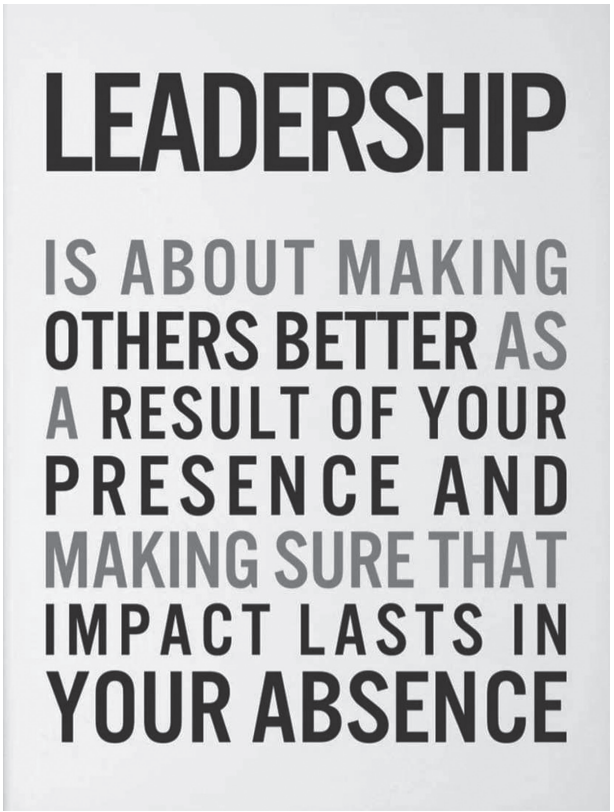

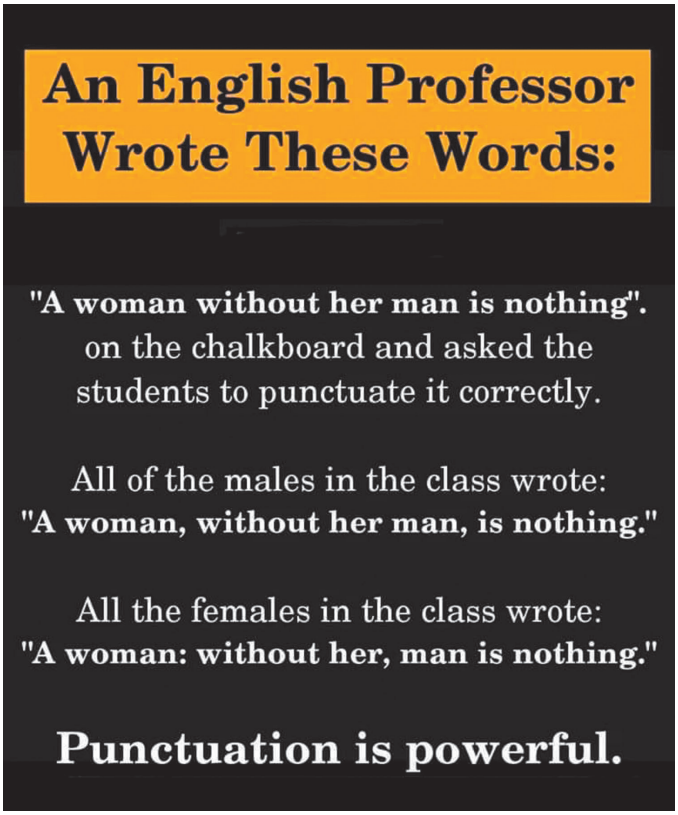

Anatomy of a disaster; Dissecting through the Sri Lankan crisis

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William Harvey, the famous English physician once said, "I profess to learn and to teach anatomy not from books but from dissections, not from the tenets of philosophers but from the fabric of nature". Well, we Sri Lankans definitely had to move beyond the pages of our best-read books to learn the lesson this time!

Sri Lanka is currently navigating through the worst economic and sociopolitical crisis in living memory. It has probably engulfed all vital sectors that thrust our nation forward, including the finance, agriculture, health, and education. The systemic nature and the magnitude of this crisis, traversing through the social fabric of every Sri Lankan, has taken many a scholar by surprise. However, as any anatomist would say, the fallacy lies in the deepest layers, and one must have to dissect through layer by layer to understand the core issue. So, what really went wrong?

Deconstructing the vulnerabilities

Rome wasn't built in a day, so was this crisis. There were root causes that made our system vulnerable to shocks and stressors. Poor governance guaranteed that the vital systems were not resilient enough to anticipate, absorb and accommodate any shocks. Failure in law and order, portrayed a picture of impunity where individual accountability was a distant dream. Rampant and systemic corruption made most of the protective or mitigatory measures to safeguard the public during a crisis redundant. Moreover, existing ethnoreligious tensions, resurfaced from time to time, rendered any collective effort towards addressing core issues irrelevant.

As a result of these root causes, dynamic pressures emerged and tested the stability of our systems. Poor income generation through traditional means of living, made the public to take risks often stretching their limits. Ailing public administration, failed to address public grievances rather following the archival rules and regulations. Unstable markets with fluctuating prices of essential commodities for daily living, meant that the population was physically and mentally unprepared to face a crisis. Further, lack of investment in education and health, made the entire social system weak from its foundation.

Ultimately, failure to address the root causes and understand the dynamics pressures led to a stage of unsafe conditions. Often fragile and susceptible to shocks, unsafe conditions like frequent power and electricity interruptions, continuous school closures, shortage of essential medications and crop failures exacerbated the vulnerabilities further. In such a state even, a tiny spark could trigger a catastrophic fire, which we witness today. This reminisces the famous 'Pressure and Release Model (PAR) ' by Wisner et al which explains the progression of vulnerabilities from root causes and dynamic pressures to unsafe conditions, coupled with the right hazard, culminating in a disaster (1).

Disasters are systemic and transboundary in nature

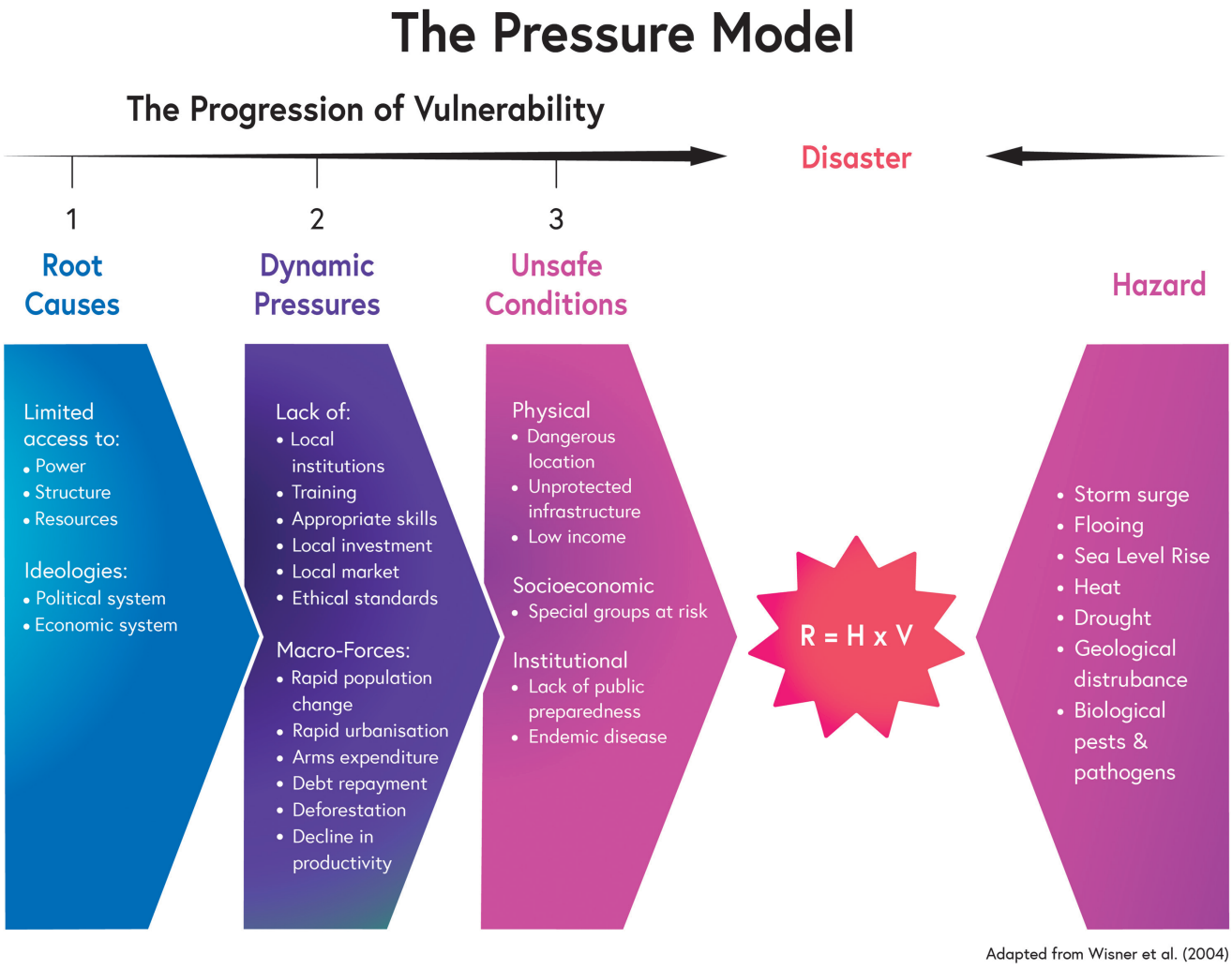
Although some schools of thought attribute origins of the current crisis to political and economic spheres, the evidence prove otherwise. So are the impacts. Negative consequences of the crisis have traversed not only individual components of a system rather the entire system. The best example is the impact of current crisis on the health system. Deficits in financial resources have given rise to severe shortages in essential drugs and equipment and temporarily interruptions in lifesaving interventions in the curative sector. Further, lack of chemicals and transport facilities for vector control activities have challenged prevention and control of infectious diseases like dengue. Additionally, logistical constraints have limited the reach of maternal and child health care programmes to the most vulnerable communities. Hence, crisis has impacted both the curative and public health sector, threatening functionality of the entire health system (2). Moreover, it has crossed known existing boundaries in the dimensions of geopolitical jurisdictions and organizational competencies (3).

Nonlinear and cascading disasters

While one can comprehend the idea of schools being closed due to an upsurge of COVID-19 cases in the country, no one expected them to be closed due to lack of

fuel for transport. That is the very nature of modern-day disasters. Shortfalls in one system could trigger a collapse often in another system (4). Similarly, consequences of short-sighted decisions to convert the entire agriculture sector to organic overnight might reflect in childhood stunting and wasting few decades into future.

Furthermore, a single event could trigger a tsunami of events. The fuel crisis paved the way for interruptions in routine work schedules in industry and service sectors, thus limiting vital generation of revenue, adding to the dire financial status of the country. Such cascading effects of disasters were often ignored during the planning of mitigatory measures to the current crisis (5).



Adapted from Wisner et al. (2004)

Understanding the multi hazard scenarios

Recent events in Sri Lanka, clearly demonstrate that the country is vulnerable to simultaneous multi hazard events. Current crisis compounded by the untoward consequences of COVID-19 pandemic is the best example for such scenarios. Furthermore, a co current outbreak of dengue sweeping across many districts, already severely affected by a food insecurity crisis and COVID-19 pandemic could easily escalate into a compound hazard event (6) . While majority of our crisis mitigation and response strategies are tailor made to address one hazard at a time, contemporary crises have revealed the need for a fresh thinking to counter multiple hazards at any given time.

A lesson for the health sector

Given the complexities associated with the current crises and changes in the disaster ecosystem, a paradigm shift in our crisis preparedness, mitigation and response is needed to avoid a future collision cause in every sector of the country. Moreover, a leadership with crisis management skills and a vision to achieve tangible outcomes is a must during a crisis period. This is more relevant for the health sector than anywhere else.

Early recognition of an emergence of a crisis is essential. Previous experiences in managing crisis or disasters and development

of an organizational culture that recognizes impending threats are of utmost importance. Although health sector is rich in experiences of managing public health crises, we are far behind in institutionalizing disaster sense in the organizational structure.

Furthermore, sense making is crucial for managing disasters related to health sector. This process involves a collective understanding of the characteristics, consequences, potential scope, and effects of an evolving threat.

Making critical decisions at the highest levels of management is also important. More often time and resources are disproportionately diverted to strategic level decision making, while key policy decisions are unattended. Such situations would be disastrous in complex emergencies such as COVID-19 pandemic and current crisis.

Moreover, orchestrating horizontal and vertical coordination is another vital aspect in a complex, nonlinear and cascading disaster situation. While safeguarding your organizational mandate and uniqueness, it is important to be open to other sectors which are willing to help. The best example would be the Civil-Military Coordination in disasters. Such efforts should not be a competition between the sectors, rather a cohesive exercise to reach the expected outcome.

Public will look into health sector guidance during complex emergencies, especially in novel biological hazards like COVID-19. Meaning making will enable the health sector managers to identify the public perspective on the crisis thus enabling them to build hope and confidence in health response during a crisis.

Risk communication that enhances the public knowledge and perception on the severity, susceptibility, perceived barriers, and enablers of the prevailing crisis situation would be cost effective for the health sector. While minimizing the disease burden, it would also rally the public for risk awareness and positive behavioural change.

Additionally, review and accountability for actions are a must. In some instances, health sector might be compelled to follow decisions beyond their control for the larger good of the society, nevertheless, reviewing every action and their potential outcomes are important. Being open about the mistakes and analyzing pitfalls would be the best for any future improvement. Accountability at all levels is also imperative which enables a constructive and transparent review of the entire mitigation and response efforts (7).

Ability to dissect through the fascia and muscles would not be good enough to groom a professional anatomist. Finding the intricate relationships of different structures and appreciating the uniqueness of each structure is equally crucial, which is no different in a complex crisis as ours. We might not see the light at the end of the tunnel in the near future, nevertheless, learning from the crisis and not repeating the same mistakes would be the key to future survival. Preparedness for a future calamity is an indispensable survival skill and endevour of national significance.

As one wise man said, "It wasn't raining, when Noah built the Ark".

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