

SLMANEWS+

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Monthly theme:
**Professional Excellence
towards Holistic Healthcare**



Celebration of World Patient Safety Day

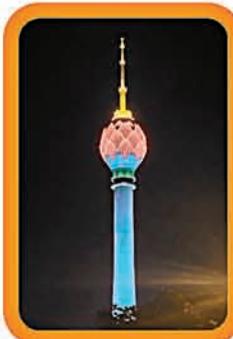
17 September 2021

The National Event was held in the auditorium of Directorate of Healthcare Quality and Safety with minimum physical participation and others joining online. Slogan for this year is:

"Act now for safe and respectful childbirth"



Health Minister, Secretary and WHO Representative, joining online....



Illuminating Lotus tower in theme color orange, as a tribute to health care workers



Launching National Action plan on Medication Safety...



Receiving awards for best practices....



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Author guidelines for articles to the SLMA NEWS+

- **Title:** Give a catchy title, not so lengthy
- **Word count:** about 2000
- **Number of references:** maximum 8 (preferably less)
- **Referencing style:** (preferably) vancouver
- **Images:** It is the responsibility of the author to get permission from the original author. Please give the reference to the original owner.
- **Sending images:** Please send as attachments. Pasting images on MSWord reduces the quality of image and affect the print quality outcome.
- **Author details:** prefix, Name, designation, current working station
- **Optional:** email and photo (if you wish to add them along with the article)

Thank you.

Professor Hasini Banneheke,
Editor-in-Chief-SLMA@2021

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Poor Write-ups Jeopardise Value of Research

Many research conferences are organized annually. When looking at the number of abstracts presented at these conferences, it is apparent that there is an increasing trend for more individuals and groups to engage in research which is definitely a positive development. It brings more ideas and innovations, leads to exploring of areas that were not under scrutiny earlier, bringing in new technology to the country, leading to updating of guidelines based on evidence, as well as bridging the gap between theory and practice, to name just a few. Most importantly this self-motivation for research should be appreciated and encouraged considering the lack of funding or a supporting system for research being in place. Among many other possible factors, the incorporation of a compulsory research component in postgraduate training and financial incentives given in the form of research allowances may have contributed to this increase.

Dissemination of findings is one of the most important steps in research. Poorly written abstract, or a journal article, can depreciate the scientific value and credibility. Nevertheless, many seem to have overlooked this aspect. My experience as the Editor of the Congress Book of the 134th Anniversary Medical Congress of the Sri Lanka Medical Association (SLMA) prompted me to highlight these in this editorial. This is a feedback given with the best of intentions, to those who are open for constructive criticism and are pleased to learn from their own mistakes. The following documentation is based on observations made during the editorial assessment of the abstracts presented at the above-mentioned SLMA Conference.

Several authors did not know how to indicate author affiliations. Some, while working at the same institution had used 1,2,3,4, to the same working place. Some had added pre-fixes such as Dr., Mrs., Mr., etc, before the name of authors and also added their designation such as the Director, Consultant, Acting Consultant, Medical Officer, etc. At the receiving end, one may perceive those as attempts at discriminatory labelling and superiors desiring to be identified separately from the subordinates or as reflections of ego or even insecurity.

The scientifically accepted method of using abbreviations was not known to many. Even the title had abbreviations without indicating what it meant. To say the least, a general lack of compliance with adherence to the given format/template/guidelines was often seen.

The use of a mixture of British and American English was also common. Scientific names were written

in a way not conforming to the accepted standards and some even had incorrect spelling. There were plenty of careless errors in using the language. Checking the abstract using an in-built spell checker or freely downloadable software to improve writing skills would have helped the authors to avoid these and to make better presentations of their work.

Evidence of lack of experience, lack of guidance, and supervision were seen in abstracts mostly written by junior medical officers, undergraduates, and allied healthcare workers. It looked bad on the well-experienced supervisors, ranging from Senior Professors, Senior Consultants to renowned researchers. It may be that the senior researcher had not taken the trouble to carefully scrutinize the abstract or the junior author who submitted the abstract had not shown it to the superiors before submitting it. Either way, it was probably the fault of the supervisor.

Poor Information and Communication Technology Skills is not a plausible excuse in this day and age when assistance on those aspects is readily available.

At the SLMA Congress, there were many excellent and well-written research presentations including well-articulated and eloquently presented orations. Yet it was noted that the ones with avoidable mistakes were plenty. A minority could have been due to a lack of experience in scientific writing but many seemed to be due to lack of compliance and/or carelessness.

Researchers and their supervisors have the utmost responsibility to ensure that these recurring mistakes are avoided. They should not ignore the negative impression created just for the sake of adding another abstract to their resumés. All organizers of academic conferences, including the SLMA, also have a major role to play in preserving the quality of research material presented by strictly scrutinizing them and rejecting the improperly presented ones and those of poor quality. Meanwhile, research institutions and academia should assist their colleagues to avoid these errors for a better output without prejudice. Regular workshops on doing research and scientific writing, with compulsory attendance, is essential to improve performance.



Editor-in-Chief
Professor Hasini Banneheke
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President's Message

Dear Colleagues,

I felt deeply honoured and greatly privileged by the interest displayed by doctors, in numbers over 1000, by joining the 134th Anniversary Virtual International Medical Congress of the Sri Lanka Medical Association, held from 21st – 24th September 2021.

I was extremely pleased by the in-person presence of our Chief Guest, Professor Shanthi Mandis, at the Inauguration. She is one of the most admired teachers and a mentor of mine from the very initial stages of my medical career. I very sincerely appreciate her decision to attend the Inauguration Ceremony in-person in Sri Lanka, during a most difficult period when the whole country was engulfed by another prominent wave of the COVID-19 Pandemic.

I am thankful to the Guest of Honour, Dr Palitha Mahipala, former Director General of Health Services and the current World Health Organisation Representative in Pakistan, for accepting our invitation and attending virtually to grace the occasion.

I whole heartedly congratulate Dr Tolusha Harischandra, the SLMA orator 2021 for her original work for the oration, "Before breath becomes air....A personal odyssey of ECMO in Sri Lanka". It certainly was a fascinating account of the progress of ECMO in the hospital where she works.

2021 has been, in a way, an extremely eventful, colourful and memorable year for all members of the SLMA, all Medical Professionals in the country, and also to the general public. That is because the major thrust of the COVID-19 Pandemic hit Sri Lanka hard only

in 2021. This Pandemic, being probably the worst ever health and economic disaster to hit us in recent times, and the SLMA being the premier professional organization for advocacy on health-related matters in Sri Lanka, the responsibilities the Council of the SLMA 2021 shouldered towards the state and to the people of the country were immense. I believe that it is not an exaggeration to say that the Council of the SLMA left no stone unturned with regard to interventions that SLMA could undertake to get things on track for the benefit of the people of our Motherland.

The SLMA in 2021 very initially tried hard to dispel the widely believed myth that the bodies of COVID-19 deaths could not be buried in Sri Lanka. Subsequently, SLMA established the SLMA Expert Committee for COVID-19 with representation from the SLMA Council, Intercollegiate Committee and all other invited experts in relevant fields and had regular meetings to discuss issues relevant to COVID-19. Based on decisions made by this committee, while providing advocacy continuously to the Government by regular communications, SLMA coordinated with all medical professional organizations in the country to lobby the Government to declare severe mobility restrictions, following which both of the last two waves were flattened, and many lives were saved.

While pressurising the Government, the SLMA continued with skills development and professional education on COVID-19 by Webinars and engaged with the general public continuously on public health education activities.

All SLMA organized webinars focusing medical and non-medical professionals were very well attended. It was quite the norm to have audiences exceeding 1000 for the Webinar series, organized for Medical Students, every Saturday evening. Furthermore, the Doc Call 247 hotline and the SLMA COVID Sahana Fund were able to provide much needed relief to the healthcare system and to the people in the community.

I am so glad that under our leadership, along with the guidance of the Council, the SLMA became a truly dedicated National Organization, known to the ordinary public in the whole of Sri Lanka. The title of the organisation has become a household phrase in the country.

Academic activities that have been conducted by SLMA from COVID to Non-COVID matters are vast.

I am delighted to report that the SLMA in 2021 stood by its declared theme "Professional Excellence Towards Holistic Healthcare", at every turn and conducted many activities in collaboration with other categories of professionals such as nurses and staff from allied health sciences, particularly via the Expert Committee of my personal interest, Medical Rehabilitation.

There were 6 Pre-Congress Workshops and the Academic Programme of the 134th Anniversary Virtual International Medical Congress was purpose-designed to cover a wide range of topics including a half a day expanse for Nurses and Allied Health Professionals. The latest innovative addition, the SLMA Quiz, organized as a Pre-Congress activity for all categories of healthcare profession-

President's Message / SLMA News-in-Brief

als including pharmacists, laboratory technicians and radiographers, further illustrated the SLMA's Commitment towards Holistic Healthcare. The Quiz created great enthusiasm among all categories of Healthcare Professionals. There were 21 teams consisting of Healthcare professionals to take part at this event and I take this opportunity to thank all of them for taking up the challenge. I am greatly pleased to congratulate the winning teams for their team spirit. I wish the SLMA quiz which promoted interaction and friendship between the healthcare professionals, to be a regular event of the calendar of activities of the SLMA.

An academic scientific conference of this nature over three days could not be organized without the commitment of all well wishers, particularly the Academic Committee of the SLMA. The Conference that was conducted virtually was filled with up-to-date scientific deliberations on a wide range of topics. I am grateful to the Academic Committee headed by Professor Sudarshanie Wasalathanthri and her deputy Dr Chaturi Suraweera and also to Dr Sumithra Tissera, the Honorary Secretary of the SLMA, for their dedi-

cation and unstinted commitment towards making all arrangements for the conference. All of us in general and myself in particular, owe them so much. I am thankful to all others including resource personnel and delegates for making the 134th Anniversary International Medical Congress a great success.

May the skills and knowledge brought on by the deliberations imparted during the conference organized by the Sri Lanka Medical Association pave the way to transform many health care professionals in Sri Lanka.



Dr. Padma Gunaratne
MBBS, MD(SL), FRCP
(Edin, Glasg, Lond), FCCP,
Hon FRACP, FAAN, FWSO
President,
Sri Lanka Medical
Association

COVID related activities during September - October 2021

By Dr. Sumithra Tissera, Hony. Secretary of the SLMA

5th September

Media Seminar - Recommendations for Priorities for Vaccination with third and booster doses - Dr. Rajiva de Silva, Consultant Virologist, MRI, Colombo & Dr. Padma Gunaratne, President, SLMA

10th September

As requested by the council during the September council meeting a letter was sent to DGHS indicating SLMA's displeasure with the irrational distribution of COVID-19 vaccines.

14th September

Media Seminar - Promoting vaccine to young adults and clearing myths - Dr. Padma Gunaratne, President, SLMA

19th September

A letter was forwarded to the Minister of Finance indicating the negative effects of the sale of alcohol during quarantine curfew and moves to sell alcohol through the internet.

This was followed by a request from the SLMA President for a meeting with the Honorable Minister.

26th September

A meeting of the Expert Committee on COVID-19 was convened. Resulting from that discussion a letter was forwarded on the 28th to the Minister of Health on 'an Exit Strategy to emerge from the current lockdown'.

29th September



Media Seminar - Exit Strategy and recommendations for the public - Dr. Upul Dissanayake, Consultant Physician, NHSL, Colombo, Dr. Padma Gunaratne - President, SLMA & Dr. Manilka Sumanathilaka, Vice President, SLMA

28th, 29th September & 1st October

Equipment worth Rs. 1,800,000.00 was given to the following Hospitals

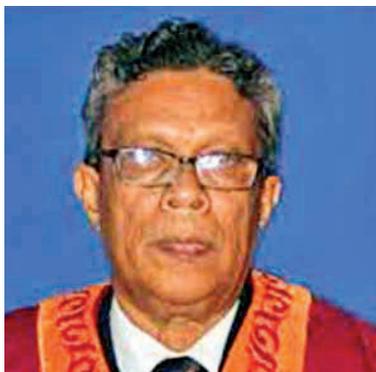
No	Name	Equipment
1	BH Homagama	High Flow nasal cannulae – small (30) Non-rebreathing Oxygen mask (325)
2	NHSL	No-rebreathing masks (200) Bacterial/Viral Filters (250) Adjustable Venturi device 60% (150)
3	TH Jaffna	Infusion Pump (1) Pulse Oximeters- Portable (30)
4	TH Karapitiya (Will be sent in October)	Vascular Hand Doppler (2) Infusion Pumps (4)

Many TV appearances and media releases on COVID-19 and other health-related issues were made in the electronic and print media.

Other Activities

4th September

The SLMA Saturday Talk on ‘Diarrhoea in an Infant’ was done by Professor Narada Warnasuriya, Senior Professor of Paediatrics, Sir John Kotelawala Defense University.



Mr. Sepala Kurupparachchi, Provincial Director of Education, Sabaragamuwa Province, spoke on ‘How to use online education effectively for children’, Eng. Tharindu Weerasinghe, Operations Manager, Austal Technology, Perth, Australia on ‘How to make screens & internet safe for children’ and Dr. Miyuru Chandradasa, Consultant Child & Adolescent Psychiatrist, Colombo North Teaching Hospital on ‘How to manage psychological aspects of screen time in Sri Lanka’.



5th September

The SLMA Young Members Forum organized a webinar on ‘Let’s Talk about Plastics’.

Mr. N.S. Gamage, Deputy Director-General, Environmental Management & Assessment Division (EMA), Central Environmental Authority (CEA) spoke on ‘Saying NO to Plastics: An Update on the latest rules & regulations’ and Dr. Sajith Edirisinghe, Lecturer/ Clinical Geneticist, University of Sri Jayewardenepura on ‘Microplastics: Unseen Dangers in a Seen Disaster’.



11th September

The SLMA Saturday Talk on ‘Getting Your Priorities Right in Diabetes Management’ was done by Professor Arjuna Medagama, Senior Professor in Diabetic Medicine, University of Peradeniya.

14th September

SLMA organized a webinar on ‘Post COVID Syndromes’.

The resource persons and topics of discussion were;

Dr. Amila Rathnapala, Consultant Chest Physician, National Hospital Kandy, on ‘Pulmonary & other complications’, Dr. Gotabhaya Ranasinghe, Consultant Cardiologist, NHSL, on ‘Cardiac Complications’ and Dr. Kishara Gunaratne, Consultant Neurologist, DGH Hambantota, on “Neurology and COVID”.

7th September

SLMA organized a webinar on ‘The Positives & Negatives of Screen Time during a Pandemic’.

15th September

The clinical meeting for the month of September was held in collaboration with the College of Ophthalmology.

A case presentation was done by Dr. K Niruthan, Registrar in Ophthalmology, National Eye Hospital, Colombo and the review lecture based on the case was by Dr. Hiranya Abeyssekara, Consultant Paediatric Ophthalmologist, LRH Colombo.

MCQ & picture quiz was conducted by Dr. Tavissha Udupihille, Consultant Paediatric Ophthalmologist, Sirimavo Bandaranayake Hospital for Children, Peradeniya & Dr. Chanika Gamage, Senior Registrar, National Eye Hospital, Colombo.

A discussion followed with the participation of all resource persons.

18th September

The SLMA Saturday Talk 'Case Based Discussion on 'Dysphagia' was done by Professor Thejana Wijeratne, Professor in Surgery, University of Sri Jayawardenepura.



20th September



SLMA Expert Committee on Communication organized a workshop on 'How to Conduct Research in Communication: A Hands-on Workshop from Proposal to Abstract'.

The resource persons were Dr. BJC Perera, Consultant Paediatrician, and Professor RM Mudiyanse, Professor in Paediatrics.

21st-24th September

The 134th Anniversary International Medical Congress was held at the Professor NDW Lionel Memorial Auditorium (A detailed account will be provided)

25th September

The SLMA Saturday Talk on 'Foetal Growth & Pregnancy' was done by



Dr. Hemantha Perera, Consultant Obstetrician & Gynaecologist.

30th September

Workshop on Capacity Building on Stroke Unit Care for Clinicians was organized by the SLMA in collaboration with the Kandy Society of Medicine at the PMCK Auditorium, National Hospital, Kandy.

The following lectures were delivered by;

The burden of Stroke in Sri Lanka and the essentials of the setting of stroke care – Dr. Senaka Bandusena, Consultant Neurologist

Principles of Stroke Recovery & Rehabilitation – Dr. Gamini Pathirana, Consultant Neurologist

Disabilities in Stroke & Rehabilitation Assessment – Dr. Gunendrika Kasthuriratne, Consultant Rheumatologist

Stroke Rehabilitation, How to do it? A Practical Approach – Dr. Harsha Gunasekara, Consultant Neurologist

Post Stroke Complications and Prognostication – Dr. Champika Gunawardena, Consultant Neurologist

Multi-Disciplinary Stroke Care – Dr. Champika Gunawardena, Consultant Neurologist

Nursing for Stroke – Ms. Sujatha Seneviratne – Senior Lecturer in Nursing & Midwifery, Ms. D.Thushari Anuruddhika, Nursing Officer

Physiotherapy for Stroke – Dr. Nadeesha Kalyani, Lecturer in Physiotherapy & Mr. BAP Lakmal, Senior Physiotherapist

Occupational Therapy for Stroke – Mr. Nandana Welage, Senior Tutor in Occupational Therapy & Mr. H.G. Tharindu Dilshan, Occupational Therapist

Speech Therapy & Swallowing Assessment for Stroke – Dr. Shyamanie Hettiarachchi, Senior Lecturer in Speech Therapy & Ms. Prabhani Dineshika, Senior Speech Therapist

Nutrition for stroke – Dr. Renuka Jayatissa, Consultant Medical Nutritionist

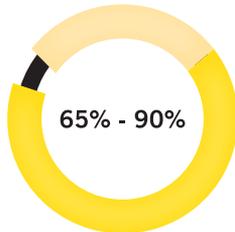
Social Services for Stroke – Mr. Chandana Ranaweera Arachchi, Director, Department of Social Services

A Guide to Stroke Rehabilitation developed by the Expert Committee on Medical Rehabilitation was given to all participants.

1st October

A Sinhala translation of a book on Communication in Healthcare was handed over to Dr. B.J.C. Perera by the Convener of the SLMA Expert Committee on Communication Dr. Amali Dalpadatu.

PREVALENCE OF MALNUTRITION IN CHRONIC LIVER DISEASE^{1,2}



65% - 90% patients with advanced cirrhosis have malnutrition.

UNIQUE * FORMULATION TO HELP IMPROVE LIVER HEALTH³

HIGH ENERGY 30-35 kcal/kgBW/day	380kcal*
HIGH PROTEIN 1.2-1.5 g/kgBW/day	12g*
HIGH BCAA 0.2 g/kgBW/day	2.66g*
MCT	14g*
FAT SOLUBLE VITAMINS	Vit A, D, E
ZINC	Contains Zinc
ESSENTIAL MICRO NUTRIENTS	Enriched with 12 vitamins and 7 minerals

* per serving content

* as per ESPEN recommendation
ESPEN : The European Society for Clinical Nutrition and Metabolism BW: Body Weight, BCAA: Branched-Chain Amino Acids, MCT Medium-Chain Triglycerides

References 1. Om Parkash, et al. Assessment of malnutrition in patients with liver cirrhosis using protein calorie malnutrition (PCM) score versus bio-electrical impedance analysis (BIA). doi.org/10.1186/s13104-018-3640-y
2. John S, et al. Malnutrition and nutrition support in patients with liver disease. doi: 10.1136/fig.2009.000414 3. Jung G, et al. Effects of Branched-Chain Amino Acid (BCAA) Supplementation on the Progression of Advanced Liver Disease. doi:10.3390/nu12051429



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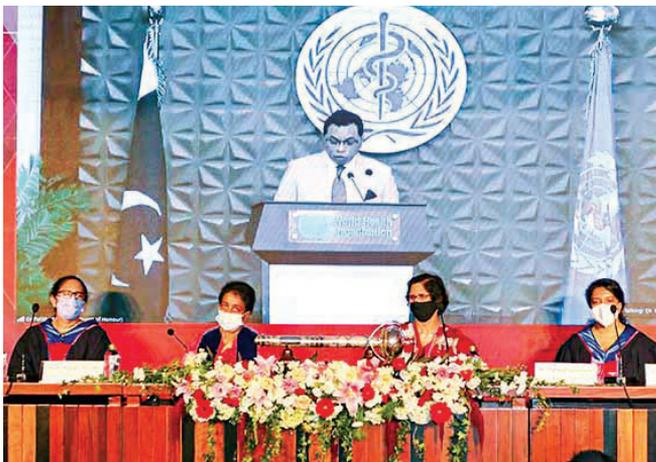
To be distributed among medical professionals only



DAY - 1



134th Anniversary International Congress



134th Anniversary International Congress

DAY - 2



DAY - 3



The COVID-19 Pandemic and Preparing for Future Pandemics

Professor Shanthi Mendis was the chief guest at the annual congress of the SLMA 2021. This is an excerpt from her speech

Professor Shanthi Mendis

MBBS., MD., FRCP., FACC

Senior Consultant - Global Health

The Geneva Learning Foundation

Former Senior Adviser, World

Health Organization

Geneva, Switzerland

Former Professor of Medicine,

University of Peradeniya, Sri

Lanka

The COVID-19 pandemic

The cumulative number of confirmed COVID-19 cases reported globally is now over 231 million, and the cumulative number of deaths is more than 4.7 million, as of the end of September 2021. In Sri Lanka, at least 521 000 people developed COVID-19 and 13000 have died.

The Sri Lanka Medical Association (SLMA), continues to play an admirable role in steering the national response to the pandemic.

The SLMA held a successful 134th Anniversary International Conference on the theme “Professional Excellence towards Holistic Healthcare” from 21st to 24th September 2021.

More than 600 members participated in the virtual conference though it was held during the second year of an ongoing pandemic when Sri Lanka was still in a state of lockdown.

This pandemic has been the worst human and economic crisis of our lifetime. The cost to the global economy is estimated at USD 16 trillion, far exceeding the cost of past epidemics and pandemics.

Cascading risks have affected

all interconnected systems upon which modern society depends: health, finance, trade, transport, energy, and telecommunications. Now the international community is discussing the importance of reforms within the global governance systems and applying a ‘systemic risk lens’ to help prevent and reduce the impact of future pandemics.

Two years ago, we were forewarned that the world is at acute risk for devastating pandemics.

The warning was issued by the Global Preparedness Monitoring Board, an independent group of policymakers and experts co-convened by the World Health Organization and the World Bank².

The International community disregarded the warning until a new coronavirus emerged in late 2019 and spread through interconnected systems, plunging the world into chaos. Due to its ability to mutate into variants, COVID-19 may become a permanent threat to global public health.

In April 2020, the Global Response to Infectious Disease Index ranked Sri Lanka’s pandemic response as the 9th best in the world. However, Sri Lanka had many cases and deaths from COVID-19, some from the delta variant.

Most of them could have been prevented if we had robust surveillance mechanisms, stronger public health systems, and a better capacity for testing.

We could have diversified the risk of vaccine procurement and avoided delays in vaccinating the vulnerable segments of the population.

We owe a deep debt of gratitude

to the health workforce, the military, the police, and many others who have done their part, to save lives, even while risking their own.

The next pandemic is on its way

Worldwide there has been an increase in emerging infectious diseases, particularly those that spread between animals and humans, known as zoonoses.

Zoonoses are frequently associated with land-use change and wildlife markets leading to increased human-animal contact, increasing opportunities for pathogens to spill over from wild animals to humans. In addition, climate change which disrupts ecosystems and the environment has worsened this rising trend of emerging infectious diseases.

Health is already being harmed by overconsumption, the destruction of the natural world, pollution of the environment, and climate change. The Earth Overshoot Day this year fell on 29th July.

In seven months, we have used up all of the Earth’s biological resources that can be regenerated in a year. In 2020, the Earth Overshoot Day fell on 22nd August due to a reduction in resource use from pandemic-induced lockdowns. Air pollution is already a major risk factor for cardiovascular diseases.

The consequences of the climate crisis and resulting pandemics fall disproportionately on developing countries that have contributed less to the problem and are least able to mitigate the harms. The world’s richest countries are home to about half of the world population, but they emit

86% of carbon dioxide emissions.

This inequality in global emissions is the reason why international treaties including the Paris Agreement on climate change is so contentious. As a result of our callous disregard for the health of the planet, virulent pathogens will emerge and we will be confronted with other pandemics during our lifetime.

Global Health Governance

In the global health environment, proclamations are often made about international solidarity, recalibrating multilateralism, and protecting the global public good. However, the inequalities in vaccine distribution during this pandemic and the lethargy in addressing the climate crisis raise questions about the real existence of these sublime ideals.

To mitigate the impact of the pandemic, the World Health Organization (WHO) is leading one of the most extensive vaccination drives in human history. In January last year, when the pandemic was declared, WHO established a global collaborative initiative COVAX, in partnership with GAVI and the Coalition for Epidemic Preparedness and Innovations (CEPI) to accelerate the development of diagnostics, treatments, and vaccines and ensure equitable access.

Vaccine development against SARS-CoV-2 has been a remarkable success story because many rich countries invested in vaccine development. However, the progress in the distribution of vaccines has been unfair.

There are only ten manufacturers that are producing the COVID-19 vaccine: Johnson and Johnson, Pfizer, Novavax, GlaxoSmithKline, AstraZeneca, Sanofi, Valneva, Curevac, Medicago, and Sinovac, with headquarters in the United States, United Kingdom, France, Germany, Japan, and China. During this pan-



Professor Shanthi Mendis

demic, vaccine manufacture was restricted to a small group of rich nations; 13 countries referred to as the “COVID-19 Vaccine Producers’ Club”.

Argentina, Australia, Brazil, Canada, China, European Union, India, Japan, Russian Federation, South Korea, Switzerland, United Kingdom, and the United States. In 2021, using Advance Purchase Agreements, five countries in the Vaccine Club, collectively ordered some 4.3 billion vaccine doses, over three times their total population. So not surprisingly, a year after the pandemic was declared, more than 130 countries had not received a single dose, while 10 countries in the global North had stockpiled vaccines and administered 75 percent of available vaccine doses.

A few months after the pandemic was declared, when international solidarity was indispensable, the United States withdrew the contribution it owed the WHO and stopped donating to the COVAX vaccine facility.

Fortunately, the new US administration has reversed this decision. Furthermore, at a time when the world needs an autonomous WHO, it is being weakened by keeping the assessed contributions from countries to 16% of the total budget.

If the global community is serious about global health security and global health governance, will Member States be reluctant to increase the annual contributions to WHO? Who will benefit from a weak WHO? Many have argued that making WHO reliant on voluntary and earmarked contributions threatens its autonomy.

Doesn't it create a situation where external donors and rich and powerful countries with strong ties to the industry could covertly dictate the organization's priorities and action agenda?

Vaccine self-sufficiency instead of dependency

Developing countries need patent wavers, infrastructure development, and funding streams, rather than vaccine donations to ensure health security³. At the World Trade Organization, a group of about 60 countries led by India and South Africa has been trying to get the patents on vaccines set aside.

The United States has been in favour, but the United Kingdom and the European Union have opposed the move.

This pandemic has demonstrated that testing and vaccinating the population quickly in a pandemic has enormous health and economic benefits.

So., if developing countries want to avoid preventable deaths in the next pandemic, they must increase local and regional vaccine manufacturing capacity and not rely on donations. COVID-19 has an estimated case fatality rate of 1.8%.⁴ If the next pandemic is caused by a more virulent pathogen, the case fatality rate would be higher, and delayed access to vaccination would translate to a higher number of deaths.

Sri Lanka must entertain a long-term plan for developing production capacity for vaccines in collaboration with international vaccine manufacturers.

It will not be easy because of the complexity of vaccine manufacture, cost of setting up manufacturing facilities, regulatory requirements, and economies of scale.

Yet, none of these should deter us. That is the only certain way to ensure timely access to vaccines. The first mRNA COVID-19 vaccine technology transfer hub is being set up in South Africa⁵. In this regard, it is encouraging to hear that the government plans to establish a vaccine manufacturing plant in Hambantota with Chinese collaboration.

Today we have some capacity for manufacturing medicines mainly because of the vision and courage of the late Professor Senaka Bible. More than three decades ago, he dared to dream of the State

Pharmaceuticals Manufacturing Corporation.

Not surprisingly, according to Wikileaks documents, at that time, a wealthy country and a powerful pharmaceutical company sabotaged his plans.

But he went ahead fearlessly, and generations have benefitted from his vision and courage. Moving forward in preparing for future pandemics, Sri Lanka needs to follow his example and take steps to protect future generations.

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The Role of Defending the Human Society from COVID-19 Pandemic

Dr. Palitha Mahipala, (former Director General of Health Services in Sri Lanka and the current World Health Organisation Representative in Pakistan) was the guest of honour at the annual congress of the SLMA 2021. This is an excerpt from his speech.

Dr. Palitha Mahipala

WHO Representative in Pakistan

Today we are meeting at a unique time in history. In the long history of the world; only a few generations have been granted the role of defending human society from the hour of maximum danger. Today medical profession, scientists, scholars, and researchers have to shoulder the responsibility of fighting the battle against the COVID-19 pandemic globally, regionally, and locally. I admire all the members of the medical profession for not shrinking from this responsibility but welcoming it. The energy, the faith, the devotion which you have brought to this endeavor has illuminated our country and our pro-



fession and the glow from that fire I am sure will truly enlighten the whole world.

I take this opportunity to pay my humble tribute to all the well-deserved health care professionals for fighting the battle strongly and steadily with selfless devotion.

Fondly do we hope, fervently do we pray that this mighty scourge of this pandemic may speedily pass away.

Madam President, as medical professionals, our journey starts with a movement of inspiration to peruse medicine. We find a mentor to show us the way. We encounter struggles and hardships before emerging stronger and more resilient; forever changed by the experience.

There are few occasions in history where we have embodied the hero's journey as we have done in the past one and half years. COVID-19 has brought immense challenges and pain for so many people from all walks of life. So many of us have fallen ill or we have watched a family member

or loved ones battle with the virus. We had to face things that we could never have imagined.

As we approach the end of 2021 the pandemic feels different now. We don't know if it is the end of the beginning or the beginning of an end. But we are a bit wiser, mature, experienced, and tougher than before.

One and half years into the fight against COVID-19, the pandemic is as dangerous as ever. We have reached high milestones like surpass 226 million cases, 4.5 million deaths and more than 100,000 cases are being reported daily. More than 5 billion vaccine doses are given across the globe, yet only 10 countries receiving 75% of the vaccine doses. Some countries are still struggling to reach 2% coverage which shows the huge inequity among rich and poor in health care delivery, which is ever-expanding during the COVID-19 pandemic.

And yet in face of this pandemic, perhaps the greatest threat to public health in our lifetimes, the medical profession has heroically answered the call.

Time and again through surges and plateaus, working under intense pressure and great professional risk, our medical profession has risen to the challenge of this phenomenon.

To fight against any emergency there are 3 things to be focused on.

1. Coordination
2. Science and epidemiology
3. Information and communication. The success of the response depends on how best we engaged in all these areas.

My sincere gratitude and admiration to the medical profession of the country in general and madam president in particular for the excellent leadership shown during the past one year in the battle against the virus. The unprecedented attention, resources, and new science have armored us in a

position to win this fight.

Madam President, we have done wonders in this century. Many scientific advances took place in the last two decades. The origin of all these technical achievements results from divine curiosity and instincts of the working researchers and the constructive fantasy of the inventors. Many such advances include the health care delivery models, medicines, and vaccines. When I consider the variety of the subject which you brought before this distinguish audience for deliberations during the congress 'professional excellence towards holistic health care' I feel indeed this is a timely topic and is very useful to the context we live today. When the reflections press upon my mind, it is impossible for me not to be a concern at my own self as we don't adequately exhibit professional excellence as expected all the time.

In the present context, health care delivery is more complex and inextricably linked with quality, equity, and safety. Health care today is nothing but, new ideas, new players, new approaches and new technology. The biggest challenge is the health care cost. Therefore reaching universal health coverage is perhaps the most challenging task, yet feasible through integrated service delivery at the point of first contact or primary health care level.

From the Alma Ata conference in 1978 to the Astana declaration in 2018 primary health care has been the center of focus to deliver patient-centered, quality, comprehensive, and integrated health care services closest to the people. The models tested in many different countries clearly show this is the way for holistic care.

Holistic health is used many times in literature with different connotations. Holism also has its origin in the Greek word holos means whole. The super specialization of scientific disciplines

medicine, in particular, has created a silos mentality leading to a myopic understanding of knowledge, and compromising our ability to deal with the most obstinate problems.

Holistic health typically considers the whole person. Body, mind, and spirit. A holistic approach to healing goes beyond just eliminating symptoms. For many living with chronic diseases as a result of demographic transition and undiagnosable symptoms, modern-day health care services have failed them and it is time that more holistic whole-body solutions become a standard part of treatment to support billions of people.

Madam President, Personnel excellence is producing your best in any given situation within or without a conducive environment.

Professional excellence in producing high-quality technical work demonstrates excellence. A profession is an occupation specially one that involves knowledge, intense training, and advanced learning.

Excellence is a journey, not a destination. Pursuit of professional excellence as such is a lifelong continuous journey. Knowledge and skills and management of conflict of interest are the most essential ingredients of professional excellence.

I am sure during the congress; there will be in-depth discussions, scientific papers, and evidence submissions on fascinating topics sharing the innovations and intellectual wisdom by our delegates. I am sure the combined intelligence of our distinguished delegates will shed the light on cutting through complexities to find formidable solutions for developing and implementing a model of care with a holistic approach.

I wish for a great deal of scientific engagement during the congress!

Reflections on the 134th Anniversary International Medical Congress of the SLMA

Professor Sudharshani

Wasalathanthri

Chairperson, Academic Committee

Dr. Chathurie Suraweera

Secretary, Academic Committee

The 134th Anniversary International Medical Congress of the SLMA was successfully concluded on 24th September 2021 after three days of new knowledge and food for thought to achieve ‘professional excellence in holistic health care’. The fully virtual congress was a great success although organised amidst a lot of uncertainties and restrictions.

The inauguration ceremony and the three orations were live-streamed from the SLMA auditorium. The rest of the congress was conducted successfully through an online platform promoting the wider participation of local and international delegates. The congress was facilitated using a mobile app that enabled users to obtain all congress-related information at their fingertips.

The events of the congress started with six extremely successful pre-congress workshops covering the areas of work-life balance, tobacco, and other substance abuse, promoting clinical research, stroke rehabilitation, and evidence-based practice in the months of June, July, and August. All pre-congress workshops were free for participants as our objective was the dissemination of knowledge to a wider audience. All pre-congresses were participated and appreciated by many.

The inauguration ceremony was held complying with all health guidelines on the 21st evening with minimum physical participation. The event was witnessed by a large number of participants online. The prestigious SLMA oration titled

‘Before breath becomes air: A personal Odyssey of ECMO in Sri Lanka’ was delivered by Dr. Tolusha Harischandra on the timely topic of ECMO use in Sri Lanka.

This was followed by an excellent academic programme spanning for three days with another two high-quality orations, one keynote speech, three plenaries, and 16 symposia covering almost all branches of medicine and allied health sciences. Professor Priyadarshani Galappaththy delivered the S C Paul oration titled ‘Acute Coronary Syndrome: revelations from the first-ever national-level clinical audit’, findings from the first-ever national-level clinical audit conducted on any topic in Sri Lanka evaluating the care of patients with the acute coronary syndrome. Dr. Pabasara Kalansuriya delivered the N D W oration titled ‘Revitalizing the drug pipeline: microbial secondary metabolites as an untapped molecular resource of new therapeutics.’

Dr. Rene Leon Solano, the Practice leader for human development for Maldives, Nepal, and Sri Lanka of the World Bank delivered the keynote speech on the very important topic ‘Investing in Human Capital; in the pandemic and post-pandemic scenarios’ stepping in at the last moment on behalf of Dr. Trina Hague. The three plenaries were by Dr. Noel Somasundaram, Senior Endocrinologist on ‘Novel concepts in the management of diabetes’, Obstetrician and Gynecologist Dr. Probhodana Ranaweera on ‘Respectful maternity care during childbirth’, and Mr. Isuru Dissanayake on ‘Digital health care in Sri Lanka’.

71 resource persons contributed to the Congress and 14 overseas speakers shared their knowledge generously with us. Important topics relevant to Sri Lanka like com-

municable diseases, old age psychiatry, essentials in childhood, and health effects of indigenous and traditional foods as well as topics of international relevance like paediatric deaths, birth defects, and future of medicine were discussed in symposia. The two symposia organized for the nursing and the members of allied health services on communication and work-balance were found extremely useful by the participants.

The congress paved the way for young researchers to present their research findings. Although there were 353 abstracts submitted, following a stringent review process, 277 were chosen for presentation at the congress, 34 as oral presentations, and 243 as posters. The posters and oral presentations were judged by imminent researchers in the field. The winners of the presentations will be announced at the Foundation sessions on 30th October 2021.

The SLMA general knowledge quiz with the participation of multidisciplinary health care workers was a new addition to the congress programme. The idea was by the President Dr. Padma Guneratne to go in line with this year’s theme, Professional excellence towards holistic healthcare. Altogether 21 teams with 3 members each in a team competed for the coveted Multidisciplinary Team Challenge trophy.

Our attempt here is to give a very brief overview of the key areas of the congress. On behalf of the Academic Committee, we like to extend our sincere appreciation to all resource persons, free paper presenters, and the participants. The delivery on an online platform vs onsite which enabled wider participation is a key feature to the success of the congress.

Latest evidence supports **PROBIOTIC** to improve **IMMUNITY** & fight against Covid-19⁽¹⁻⁵⁾

Biomedical Research and Therapy, 7(11):4086-4099
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Probiotics: Helpful for the prevention of COVID-19?

ORIGINAL RESEARCH
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Archives of Medical Research

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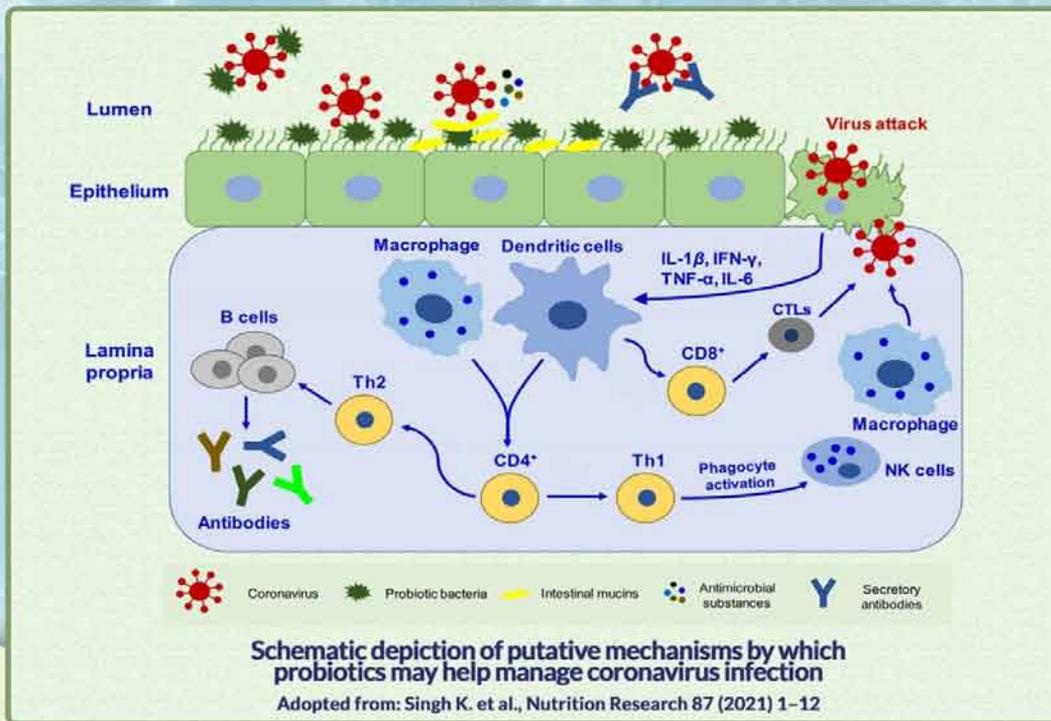
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Review

Probiotics, prebiotics, and COVID-19 infection: A review article



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Inaugural General Knowledge Quiz

One highlight of this year's congress was the inaugural SLMA general knowledge quiz 2021 for SLMA multidisciplinary challenge trophy.

As the COVID-19 pandemic has crippled the world since late 2019, SLMA, as the apex medical association of the country, the SLMA introduced the general knowledge quiz to commemorate the contribution of healthcare workers from all disciplines and categories in managing the pandemic.

The current COVID-19 surge necessitated that the face-to-face conference be converted to an entirely virtual conference. The quiz, originally planned to follow a traditional approach, was also converted to an entirely online format. Twenty-one teams from all regions of Sri Lanka and all health care staff

categories participated in the online quiz held on the 19th of September.

SLMA multidisciplinary challenge trophy for the SLMA general knowledge quiz 2021 was won by Dr. Sanjeewa Wijekoon, Dr. Harsha Gamage, and Dr. Shiran Paranavitane. The team comprising of Dr. Prasanna Dilshan, Dr. Priyantha Jayawardana, Mr. Pubudu Abeynayaka (Occupational therapist), and Mr. Asela Gunawardana (physiotherapist) were the first runners-up, and Dr. W. D. Sudasinghe, Dr. C. M. Manawadu, and Dr. N. N. D. Dharmarathne were the second runners-up. The winners received a cash price of Rs 50,000, while the second and third place winners received Rs 30,000 and Rs 20,000, respectively.

Dr. Dakshitha Wickramasinghe coordinated the quiz

on behalf of the Academic Committee. The quiz masters included Prof. Eranga Wijewickrama, Dr. Pandula Athaudarachchi, Dr. Lasith Gunawardana, Dr. Dulantha De Silva, Mr. Imran Furkan, Mr. Indika Jayasinghe, and Mr. Thushara Diyabalanage. The ESOFT metro campus, headed by Dr. Dayan Rajapakse and his team, including Ms. Amaya Herath and Mr. Shagevan Sachiththanandan, provided the IT support. Dr. Yathev Balathayalan facilitated the administrative work.

SLMA general knowledge quiz will be in the SLMA calendar as a regular event during future academic congresses to encourage unity among health care staff and to promote an interest in general knowledge.

Facets of Gender – Journey Towards Development

Dr. Nadeeka Chandraratne

Member-Expert Committee on

Women's Health-SLMA

*Department of Community
Medicine*

*Faculty of Medicine-University of
Colombo*

The Expert Committee on Women's Health of the Sri Lanka Medical Association organised a webinar on "FACETS OF GENDER – Journey Towards Development" on the 28th of July 2021. This webinar was attended by more than 120 participants, which included SLMA members as well as the general public.

The President of SLMA Dr. Padma Gunaratne chaired the session and it was moderated by Prof. Sampatha Goonewardena and Dr. Amanthi Bandusena. Dr. Janaki Vidanapathirana as the initial speaker enlightened the audience on the topic 'Reaching Equal Health: a Gender Perspective'. In her presentation, Dr. Vidanapathirana stressed how gender and equity act as the cornerstone of Universal Health Coverage and in achieving Sustainable Development Goals. Gender roles and masculine identities have led men to be more vulnerable to risk behaviours and seek access to health-

care services less. When considering the overall picture, males have high mortality while females show high morbidity. Biological sex difference, as well as gender inequality, are two of the main reasons for that. Gender inequality leads to negative outcomes, especially for females and favour of men in many societies. Females have a higher life expectancy, social isolation, and poverty leading to economic dependence at an older age.

Sri Lanka stands at the 116th position out of the 152 countries in the Global Gender Gap Index which is an indicator of gender equality in the areas of the econo-

my, education, health, and political empowerment. Gender is considered a main determinant of the health of an individual, not solely due to the differences in the bio-physical makeup, but also due to other environmental and societal factors such as inequities observed in education, employment, policies, laws, welfare systems, and roles and responsibilities. Gender roles and masculine identities have directed men to vulnerable and risk behaviours such as the use of alcohol and tobacco, while the healthcare-seeking behaviour among them remains low. Some restrictive laws such as the 365A & Vagrancy Ordinance impose a huge threat to the health of disadvantaged populations. The data in hand invite us to look at health through a gender lens. Availability of sex-disaggregated data for health conditions as well as their determinants would enable both the policymakers and the practitioners to address the “gender in health” more precisely.

“SGBV – It kills”

Prof. Anuruddhi Edirisinghe enlightened the audience on the impact of Sexual and Gender-Based Violence (SGBV) as a major determinant of health in Sri Lanka. Every year 2500 – 3000 cases of sexual violence are reported to Police in Sri Lanka during the past 5 years. This figure, which could be considered the tip of the iceberg, depicts the extent of sexual violence that girls and women have to face in their everyday life. The overall prevalence rate of intimate partner violence calculated for Sri Lanka in 2015 quoted 25-30%¹. A recent national-wide study² revealed that one in five ever-partnered women have experienced physical and/or sexual violence by an intimate partner in their lifetime. A recent, mixed method study³ looking into causes of unnatural deaths (homicides and suicides) among females in Sri

Lanka, demonstrated that 36% of the deaths were related to Intimate Partner Violence (IPV). Surprisingly, 16% of women have gone to the police station at least once to complain about IPV before being murdered or committing suicide while 3% have complained more than once. Exploring 70 cases of female homicides that occurred during 2013, it was revealed that only 4 cases (6%) had a decision by the end of 2017 while 30% of cases have reached the level of High Courts. These figures highlight the deficiencies in both our public health-supportive systems and the legal systems. The degree of physical and emotional violence that takes place in our homes, creating a violent household and thereby leading to normalisation of violence in the society too needs to be addressed. Studies on gender attitudes^{2,4} show that significant proportions of women themselves are accepting gender stereotype roles and power imbalances. Thus, working towards gender equality as a development goal is challenging highlighting the need for an integrated multi-sectoral approach.

“Women earn – Really?”

Dr. Deepika Attygalle invited the participants to look at economics through a gender lens. She described the perspectives of gender in the economic milieu both in Sri Lanka and the neighbouring countries.

South Asia has been undergoing rapid socio-economic transformation during the past few decades. Despite high economic growth observed in most countries, women had not been given adequate opportunities from labour markets. The low female labour force participation rates and greater likelihood of women being engaged in unpaid employment are well evident all over the region.

The world Bank report, poverty, and shared prosperity 2020⁵ records that since 2001 the over-

all women’s employment participation across South Asian countries has been low and broadly unchanged. The gender employment gap emerges more clearly in middle age groups; rural female employment is higher than urban; agriculture is the economic sector accounting for the greatest share of female employment although there is a slight change in some countries, and women with mid-level education tend to have lower employment rates than those with both lower and higher education.

Sri Lanka has good track records in many human development dimensions and aspects of gender equality amongst the South Asian countries. However, it is not doing well when it comes to women’s participation in economic activities when compared with the other countries of the region. Female labour force participation has not shown a significant change in recent decades and remained stagnant at a rate of around 30 to 35 percent of working-age women. This rate is much lower than one would expect given the educational attainment of the female population in Sri Lanka.

The determinants of these poor gender outcomes include household roles and responsibilities, a mismatch between skills acquired in school and those demanded in the labour market, and gender bias in labour supply as well as labour demand dynamics.

A World Bank publication on “Unlocking Women’s Potential in Sri Lanka’s Labour Force”⁶⁶, reports that female workers, tend to prefer the types of organizations and jobs that offer flexible hours, they may hold locational preferences, prioritizing work from home, or near the home, to more easily combine paid work with household work. These supply-side factors—together with social norms around gender identity, family formation, and mobili-

ty—constrain the range of employment choices and opportunities that cannot be ignored in the related policy dialogues. Recent economic policy statements have emphasized the need to create an enabling environment for women's participation in the economy to achieve the government's goal of inclusive and balanced development. Access to good child care has shown transformative potential for female labour participation and thereby increasing the human capital in any country.

In the context of post-COVID-19 recovery, renewing efforts to achieving greater female participation in the female labour force and building conditions for equity will be critical to moving towards prosperity.

“We need to value our women's labour!”

The final presentation for the day was by Dr. Sepali Kottegoda on gender and unpaid care work. The term ‘Care’ is often conflated with notions of altruism or unselfishness and self-sacrifice rooted in the family and related to a system of a gender division of labour where women are seen to play the key role as caregivers. In contrast, in mainstream economics as well

as in social perceptions of persons, ‘work’ is understood as an activity that brings in monetary income; ‘having a job’, ‘looking for or engaged in employment’.

The unpaid care work that a person engages in is “:

- Unpaid because it arises out of social (contractual) agreements – marriage, family, friendship, kinship
- Care because it comprises a group of activities that serve people in their well being
- Work because it is an activity that has costs in terms of time and energy

The Department of Census and Statistics (2019) estimates that out of a total of 7.8 million persons categorised as being ‘outside the labour force’, i.e. economically inactive, 5.7 million or 73.7% are women and 2.0 million or 26.3% are men. The economically inactive population was defined as people who neither worked nor were available/looking for work during the reference period. The people engaged in housework and the care of dependents (the elderly, the young) in their homes, ie unpaid care work is not recognised as contributing value to the econ-

omy. However, if these activities are carried out by someone hired for the purpose because there is payment involved, they will be recognised in the labour force as contributing to the economy. This necessitates the need for enumerating (calculating the monetary and economic value) of unpaid care work which would help to understand the role that women play in contributing not only to the ‘social and economic’ well-being of the family but also to the national economy. Assessing the economic contribution of women must necessarily include work that is done for monetary remuneration as well as work that is done in the ‘reproductive’ sphere without which no household functions, and no workers would be able to engage in ‘productive’ work. As well as increasing women's labour force participation in paid work, we also need to raise the rate of men's participation in unpaid care and domestic work. This requires action from governments, businesses, trade unions, and women's organizations to mobilize resources and change cultures.⁷

The event was concluded by launching the gender fact sheet which carried the snippets of the webinar.

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Reduce the Delay in diagnosing imported **Malaria**

If a malaria patient is left untreated

- Risk of complications & death of the individual increases
- Could lead to re-introduction of malaria in Sri Lanka



Malaria should be suspected in all fever patients with a travel history to a malaria endemic country!!

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- Forgotten disease
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WHO Approves the World's First Malaria Vaccine (RTS,S/AS01e): The Pinnacle of over 30 Years of Research!

Professor Hasini Banneheke
(MBBS, Pg Dip Med Micro, MD)
Department of Parasitology
Faculty of Medical Sciences,
University of Sri Jayewardenepura

“This is a historic moment. The long-awaited malaria vaccine for children is a breakthrough for science, child health, and malaria control,” said WHO Director-General Dr. Tedros Adhanom Ghebreyesus. He further stated that “Using this vaccine on top of existing tools to prevent malaria could save tens of thousands of young lives each year.”¹

Why do we need a vaccine for malaria?

Plasmodium falciparum malaria causes significant morbidity and mortality worldwide, causing death in 90% of individuals with untreated severe malaria.

Malaria remains a major cause of childhood illness and death in Sub-Saharan Africa.

There are many measures taken to curtail the disease; insecticide-treated nets (ITNs), chemoprophylaxis, and treatment. Despite all of these, there are more than 260 000 African children under the age of five who die from malaria each year.

In 2019, an estimated 409,000 malaria deaths occurred globally. Of them, approximately 94% of deaths were in sub-Saharan Africa.

WHO recommendation

On 6th October 2021, WHO recommended widespread use of the RTS,S/AS01 malaria vaccine¹. The WHO recommendation is based on results from the ongoing malaria vaccine pilot programme in Gha-

na, Kenya, and Malawi. To date, a total of 2.3 million doses have been administered to 800,000 children since 2019 (as of late September 2021).

Whom to be given?

WHO recommends that in the context of comprehensive malaria control the RTS, S/AS01 malaria vaccine should be used for the prevention of *P. falciparum* malaria in children living in regions with moderate to high transmission, as defined by the WHO.

Vaccine schedule

RTS,S/AS01 malaria vaccine should be provided in a schedule of 4 doses in children from 5 months of age for the reduction of malaria disease and burden.

What does the acronym RTS,S given for malaria vaccine stand for?

Scientific name RTS,S of the malaria vaccine represents its composition. The ‘R’ stands for the central repeat region of *Plasmodium falciparum* circumsporozoite protein (CSP); the ‘T’ for the T-cell epitopes of the CSP; and the ‘S’ for hepatitis B surface antigen (HBsAg). These are combined in a single fusion protein (‘RTS’) and co-expressed in yeast cells with free HBsAg (S). The ‘RTS’ fusion protein and free ‘S’ protein spontaneously assemble in ‘RTS,S’ particles. RTS,S also contains the AS01 adjuvant system, and thus in scientific papers it is referred to as ‘RTS,S/AS01’.

How does the vaccine work?

The RTS, S/AS01 is a monovalent, pre-erythrocytic vaccine targeting the *Plasmodium falciparum* circumsporozoite protein

(CSP), which is the major surface protein densely coating the sporozoite. The vaccine aims to block liver infection thereby preventing any blood-stage parasites and disease. It induces anti-circumsporozoite antibodies and circumsporozoite-specific CD4-positive T cells that are associated with protection from *P. falciparum* infection and episodes of clinical malaria. Anti-circumsporozoite antibodies wane over time and assessing the duration of protection following RTS, S/AS01 vaccination remains a challenge.

What is the efficacy level of the vaccine?

The vaccine demonstrated a moderate level of efficacy against clinical malaria in phase III trials. Nevertheless, the vaccine did not perform equally well in different populations, with efficacy ranging between 22 and 74.6% between sites². This variability may possibly be due to environmental, parasite, or host factors.

Some excerpts from the RTS,S/AS01 malaria vaccine phase 3 clinical trials³ are as follows:-

- The Phase 3 clinical trial demonstrated greater vaccine-induced immunogenicity in older children versus infants.
- The efficacy of RTS,S/AS01 vaccine is modest, yet still provides a significant public health benefit.
- The Phase 3 results demonstrated that among children who received 4 doses of vaccine, 1744 clinical malaria cases were prevented for every 1000 children vaccinated. This benefit increased in settings of intense malaria transmission.

- Using Phase 3 data, modeling studies conducted by four different groups under WHO supervision found that 4 doses will avert 116,480 cases of clinical malaria and 484 deaths per 100,000 children vaccinated.
- These modeling studies also determined that RTS,S/AS01 would have a marginal impact in areas where malaria prevalence is below 3%.

Malaria vaccine pilot programme

RTS, S/AS01 is the first malaria vaccine that has completed the clinical development process and received a positive scientific opinion from the European Medicines Agency (EMA), a stringent regulatory authority. In January 2016, WHO recommended the pilot introduction of the vaccine in selected areas of three African countries, namely, Ghana, Kenya, and Malawi. The pilot programme has reached more than 800,000 children since 2019 (as of late September 2021). The main objective was to learn more about the public health value of the vaccine in real-life routine immunization settings. The pilot project will continue in the 3 countries through 2023 to understand the added value of the 4th vaccine dose and to measure the long-term impact on child deaths.

Specific findings of the pilot programme include:

- Feasibility to deliver with other routine immunizations
- Strong safety profile: To date, more than 2.3 million doses of the vaccine have been administered in 3 African countries - the vaccine has a favourable safety profile.
- No negative impact on the uptake of bed nets, other childhood vaccinations, or health-seeking behaviour for febrile illness.
- High impact in real-life child-

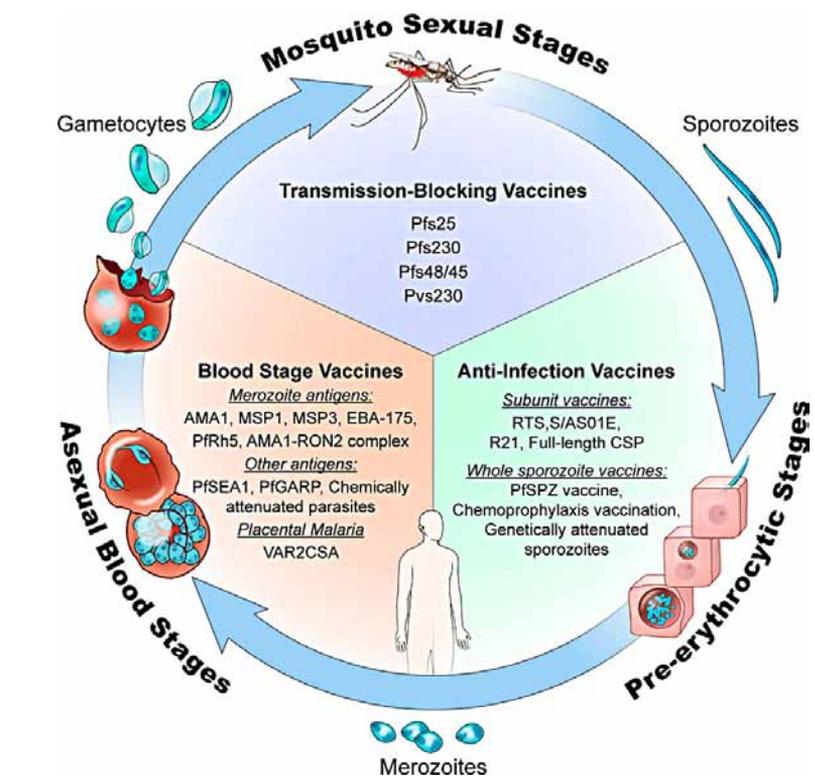


Image 1: Life cycle stages of Plasmodium and vaccine candidates that target each stage.

An illustration by Alan Hoofring, Medical Arts Design Section, NIH.

hood vaccination settings: significant reduction in deadly severe malaria (30%), even when introduced in areas where insecticide-treated nets are widely used and there is good access to diagnosis and treatment.

- Highly cost-effective

Who was behind the successful development of the malaria vaccine?

RTS, S/AS01 malaria vaccine is the result of 30 years of research and development by GlaxoSmithKline (GSK) and through a partnership with PATH (Programme for Appropriate Technology in

Health, a nonprofit organization focused on global health), with support from a network of African research centres. The Bill & Melinda Gates Foundation provided catalytic funding for late-stage development of the vaccine between 2001 and 2015.

Any other vaccines in the pipeline?

There are many vaccines in the research stage. A second malaria vaccine could be highly beneficial to malaria control, particularly to evade the drawbacks of the approved vaccine and to increase supply to meet the anticipated high demand.

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Genetic Overview of Venous Thrombosis

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Deep vein thrombosis (DVT) and its thromboembolism, is one of the preventable causes of morbidity and mortality worldwide. Even though the actual incidence is not very clear, it is found that DVT is present in about 80 out of 100,000 cases. Also, 1 out of 20 people will develop a DVT during their lifetime (Schick and Pacifico, 2020). A relatively higher DVT incidence has been seen in elders over 40 years (Schick and Pacifico, 2020), and its relatively higher among men. DVT may cause complications such as embolism, death, recurrent thrombosis, post-thrombotic syndrome, and severe bleeding due to the use of anticoagulants in treatments. Venous thrombosis also impairs the quality of life. Early detection and clinical intervention are important for managing DVT to minimize adverse consequences.

The importance of the coagulation system for the development of

thrombosis was observed in 1874 by Virchow and explained using Virchow’s triad (Figure 01). In his triad, he explained that thrombosis is either caused by changes in the composition of the blood components, changes happen in the vessel wall, or by changes happen in blood flow.

DVT is commonly seen in lower limbs (90%). It could be due to reduced venous return (during immobilized patients, pregnancy, etc), damage to the lining endothelium (after a fracture) or its dysfunction (during oxidative stress). DVT can occur in upper limbs as well (10%) . It could be due to damage to the lining endothelium (due to insertion of central venous catheters, pacemakers, or injection drugs) or results from a hypercoagulable state or subclavian vein compression at the thoracic outlet. The compression may be due to a normal or an accessory first rib or fibrous band (thoracic outlet syndrome).

In addition to anatomical risk factors, genetics also play a major role in the development of DVT.

When considering the pattern of inheritance, these thromboembolic disorders are identified and classified into 3 main groups. They

are sporadic, familial, and hereditary (Dissanayake, 2015). Out of the three, the commonest form is a sporadic occurrence which shows one family member affected with the disorder, while everyone else in the family are normal. The familial occurrence shows several members of the family, usually in the same generation, affected with a disorder with or without symptoms. Also some members share common environmental factor/s such as food habits, smoking, alcohol, sedentary lifestyle, or even environmental pollution acting on an underlying genetic tendency. The hereditary pattern shows a clear genetic contribution where many relatives in several generations of the family affected with the disorder and disorder sometimes show to run in the family according to a known pattern of inheritance (e.g. autosomal dominant or autosomal recessive) (Dissanayake, 2015).

It is important to get a clear idea about the role of genetic variations in coagulation factors. Not only the genetics on coagulation factors but the genetic alterations in anticoagulation factors such as antithrombin, protein C or protein S also play a major role in the development of venous thrombosis. A large pop-

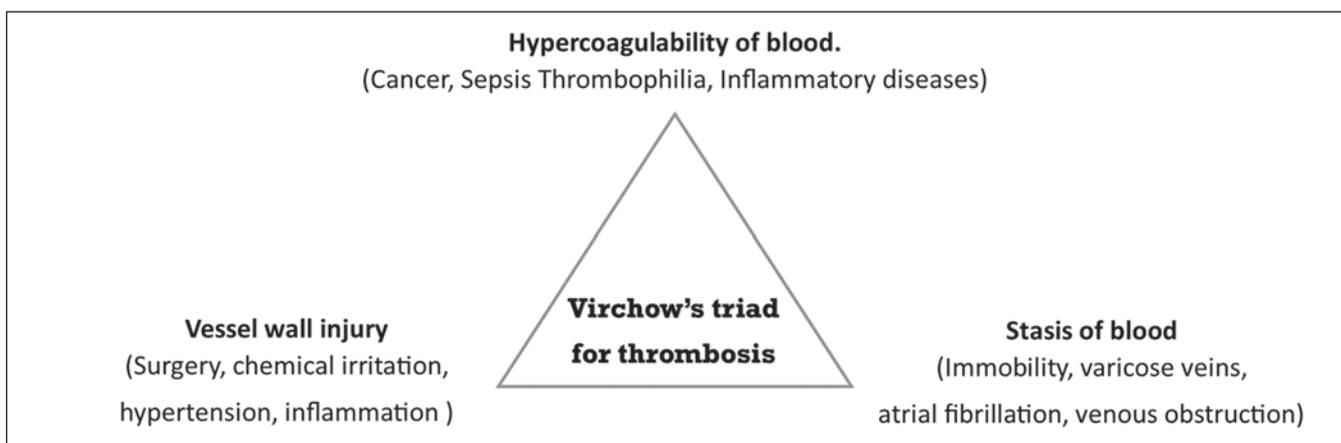


Figure 01- Virchow’s triad for thrombosis

ulation-based study on venous thrombosis and its complications has shown that more than 60% of the thrombosis is due to alteration of the genetic components (Souto et al., 2000).

Few common genetic risk factors for venous thrombosis

Thrombophilia can be divided into inherited (primary) and acquired (secondary) types. In secondary thrombophilia, abnormal clotting is related to a precise cause, such as prolonged bed rest or cancer. The inherited/primary thrombophilia is having a genetic predisposition such as a mutation in factor V Leiden, antithrombin deficiency, deficiency in protein C or S, and histidine-rich glycoprotein, etc.

Factor V Leiden thrombophilia

Out of the inherited disorders, the Factor V Leiden thrombophilia is the most common inherited form of thrombophilia (accounting for 40–50% of cases). The prevalence varies according to the country where 0.45% in Asian Americans to 15% in Greece. These patients have a higher risk of developing DVT most often in the legs. In addition to that, the DVT can also occur in other organs such as brain, eyes, liver, and kidneys. A mutation in the F5 gene (Cytogenetic location: 1q24.2 / OMIM number - 612309) lead to factor V Leiden thrombophilia. This F5 gene provides coding for coagulation factor V protein. The coagulation system is controlled by several proteins, including activated protein C (APC). APC normally inactivates coagulation factor V, which slows down the clotting process and prevents abnormal clot formation. The mutated factor V Leiden cannot be inactivated normally by APC. As a result, the clotting process remains active longer than usual. Patients with mutated one allele are having the risk of 3 to 8 in 1,000, while with both alleles

of mutation the risk rises to 80 in 1,000. This disease follows an autosomal dominant pattern of inheritance.

Prothrombin thrombophilia

Prothrombin thrombophilia is the second most common inherited form of thrombophilia after factor V Leiden thrombophilia. Around 1 in 50 people in the white population in the United States and Europe has prothrombin thrombophilia. This condition is less common (<1%) in African American, Native American, or Asian populations. Prothrombin thrombophilia is due to mutation in the F2 gene (Cytogenetic location: 11p11.2/ OMIM number - 176930). The protein produced from the F2 gene, prothrombin (also called coagulation factor II), is the precursor to a protein called thrombin that initiates a series of chemical reactions to form a blood clot. Mutation in the F2 gene results in an overactive F2 gene that causes large quantities of prothrombin which leads to more thrombin and ultimately promoting more blood clots formation. In the general population, the risk of developing an abnormal blood clot is about 1 in 1,000 people per year. Inheriting one mutated allele of the F2 gene increases that risk to 2 to 3 in 1,000. People who inherit both mutated alleles may have a risk as high as 20 in 1,000.

Antithrombin deficiency

Hereditary antithrombin deficiency is projected to take place in about 1 in 2,000 to 3,000 individuals. Of people who have experienced an abnormal blood clot, about 1 in 20 to 200 have hereditary antithrombin deficiency. Hereditary antithrombin deficiency is caused by mutations in the SERPINC1 gene (Other names for the gene - AT3, ANT3_HUMAN) (Cytogenetic location: 1q25.1/ OMIM number - 107300). This gene provides instructions for producing a

protein called antithrombin (previously known as antithrombin III). This disease follows an autosomal dominant pattern of inheritance.

Deficiency in protein C

The protein C deficiency is also characterized by recurrent venous thrombosis. But many adults with the heterozygous disease may be asymptomatic (Millar et al., 2000). Individuals with decreased amounts of protein C are named as type I deficiency and those with normal amounts but functionally defective protein C is called type II deficiency. The mild protein C deficiency (inherit one mutated allele) is seen among 1 in 500 individuals. Severe protein C deficiency (inherit both mutated alleles) is rare and occurs in an estimated 1 in 4 million newborns. The deficiency in protein C is caused by a mutation in the PROC gene (Cytogenetic location: 2q14.3/ OMIM number - 176860). Protein C deficiency is inherited in an autosomal dominant pattern.

Deficiency in protein S

Heterozygous protein S deficiency, like protein C deficiency (176860), is characterized by recurrent venous thrombosis. Deficiency in protein S can be divided into 3 types. Type I refers to a deficiency of both free and total protein S as well as decreased protein S activity. Type II shows normal plasma values but decreased protein S activity. Type III shows decreased free protein S levels and activity, but normal total protein S levels (Bertina, 1990). Nearly 40% of protein S circulates are in free active form, whereas the remaining 60% circulates as an inactive form bound to C4BPA. The Deficiency in protein S is due to a mutation in the gene encoding protein S - PROS1 (Cytogenetic location: 3q11.1/ OMIM number - 176880). Protein S deficiency follows an autosomal dominant pattern.

Histidine-rich glycoprotein deficiency

This is a rare, genetic, coagulation disorder that develops thrombosis, resulting from decreased histidine-rich glycoprotein (HRG) plasma levels. Histidine-rich glycoprotein deficiency is due to the mutation in the HRG gene. (Cytogenetic location: 3q27.3/ OMIM number - 142640).

HRG gene has a multidomain structure that allows the molecule to interact with many ligands, including heparin, phospholipids, plasminogen, fibrinogen, immunoglobulin G. Due to its capability to interact with various ligands simultaneously, it has been suggested that HRG can function as an adaptor molecule and regulate numerous important biologic processes, such as immune complex/necrotic cell/pathogen clearance, cell adhesion, angiogenesis, coagulation, and fibrinolysis. Histidine-rich glycoprotein deficiency follows an autosomal dominant pattern.

In addition to these common genes associated with blood coagulation disorders, various family studies have identified many more associated genes. Figure 02 demonstrates the possible genes that might trigger venous thrombosis found in family studies (Mannucci and Franchini, 2015, Rosendaal and Reitsma, 2009) and genome-wide association studies (Lindström et al., 2019, Klarin et al., 2019)

In Sri Lanka, there are several studies conducted regarding venous thrombosis. A study conducted by Dissanayake et al from 2001, 3 genetic mutations which were commonly studied by the international scientific communities have been investigated. They

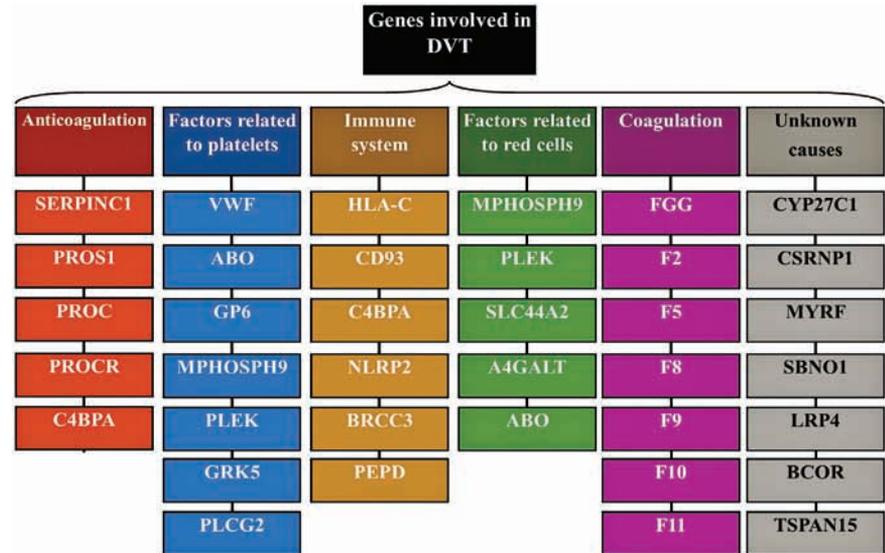


Figure 02 - The possible genes that might trigger DVT

are F5 1691G>A (Leiden) – activated Protein C Resistance, F2 20210G>A – elevated Prothrombin Levels, MTHFR 677C>T – hyperhomocysteinaemia (Dissanayake, 2015). The study has shown the prevalence of the above variants in Sri Lankan population as follows: F5 1691A - 2.3%, F2 20210A - 0%; MTHFR 677T - 10.3%. Another study conducted in Sri Lanka to assess the prevalence of the prothrombin (F2) 20210G>A mutation has shown the F2 20210G>A as 0.8 % (7/825) and all were heterozygotes for the mutation (Gunathilake et al., 2015).

Among the study population, it has been shown that 0.6 % (5/825) had only the F2 20210 G>A mutation while 0.2 % (2/825) were double heterozygotes for the FV 1,691 G>A and F2 20210 G>A mutations (Gunathilake et al., 2015). Methylene tetrahydrofolate reductase (MTHFR) – 677CNT (rs1801133), 1298ANC (rs1801131), 1317TNC, 1793GNA (rs2274976); Factor V (F5) – 1691GNA (rs6025) and 4070ANG (rs1800595); and prothrombin (F2) – 20210GNA (rs1799963) genes and their polymorphisms were in-

vestigated by another Sri Lankan study (Dissanayake et al., 2009). From that study it has shown that the prevalence for MTHFR 677T in Sinhalese – 13%, Tamils – 9% & Moors – 9%. When considering 1793A mutation the prevalence in Sinhalese – 19%, Tamils – 19%, Moors – 19% (Dissanayake et al., 2009).

Therefore identifying the genetic risk factors is important to plan out prevention programs, management, and treatment of venous thromboembolic disease. Thrombophilia screening should be according to the prevalence of the mutations. Genes with a high prevalence of prothrombotic polymorphism thrombophilia should be tested in the younger population.

This permits to identify the individual patient's risk, and chances of recurrent venous thromboembolism, plan out prophylaxis for the needy patients, determine the duration of anticoagulation therapy, and reduce the occurrence of recurrent venous thromboembolism and post-thrombotic syndrome.

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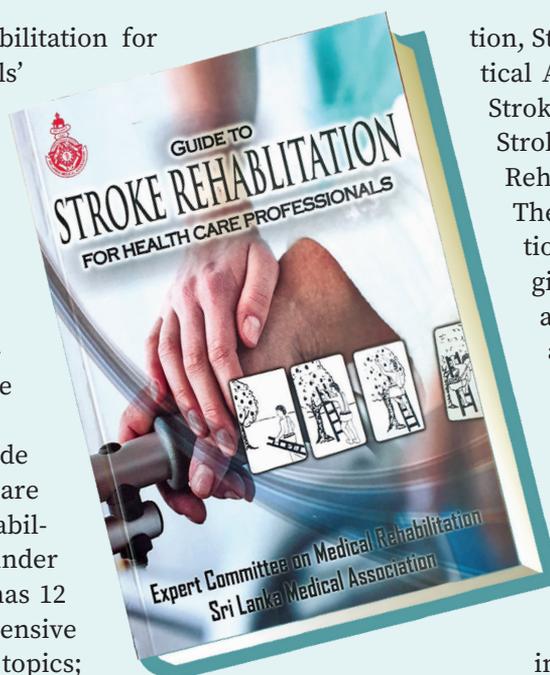
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A Book on 'Guide to Stroke Rehabilitation'

'A Guide to Stroke Rehabilitation for Health Care Professionals' was published by the Sri Lanka Medical Association Expert Committee on Medical Rehabilitation with financial assistance from the World Health Organization (WHO) for the benefit of the members of the multidisciplinary team for stroke rehabilitation.

The book provides a guide to all categories of health care professionals providing rehabilitation for stroke patients under their care. The publication has 12 Chapters giving a comprehensive background on the following topics;

The burden of Stroke & Essentials of Settings for Stroke Care in Sri Lanka, Principles of Stroke Recovery & Rehabilitation, Disabilities in Stroke & Rehabilitation Assessment, Post Stroke Complications & Prognostica-



tion, Stroke Rehabilitation: A Practical Approach, Multidisciplinary Stroke Care, Nursing Care for Stroke, Physiotherapy in Stroke Rehabilitation, Occupational Therapy for Stroke Rehabilitation, Person-centered dysphagia & communication support at the Stroke Unit, Nutritional Management in Stroke & Intervention of the Department of Social Services for Patient's Welfare Services.

Authors for these chapters are the best available for the discipline in Sri Lanka.

Apart from the writings, there are many diagrammatic elaborations for the convenience of the readers.

Interested health care professionals can obtain a copy from the SLMA office or a soft copy can be shared from the SLMA website.

The Editor's Choice

Epistemic Trespassing

Epistemy is a philosophical term meaning a principled system of understanding and scientific knowledge. Epistemic trespassing is a situation where experts in one field express opinions and pass judgment on various issues in other fields where they lack expertise. An expert is someone who has acquired specialist knowledge in a given field and also possesses skills in analyzing various issues that arise in that particular field and offers reasonable solutions to such.

They generally have accepted academic credentials and will be able to defend their propositions if challenged. The novice, for example a member of the general public, respects such “experts” and is likely to believe what they say, even when they trespass into other fields. This is where the danger lies. As these “experts” are known to the general public, people tend to believe them without considering the fact that they are speaking of matters outside their field of knowledge.

During the current COVID 19 pandemic, we have seen an epidemic of epistemic trespassing among the medical professionals. Many such instances abound even in the western world where so called experts in advisory positions close to decision makers have been blamed for hampering control efforts. In some countries punitive action has been taken against them.

All doctors practising medicine, with a basic degree like the MBBS, may be considered competent enough to express an opinion in general about day to day matters dealing with health. But when it comes to complex issues like

newly identified and yet not fully unraveled viral infections, drugs and vaccines, there are qualified virologists, epidemiologists, immunologists, pharmacologists and physicians dealing with such patients to whom such discussions in public are best left without causing ambiguity.

World over much confusion and harm has been caused to COVID control measures by such pseudo experts speaking against generally accepted public health measures and expressing doubts about the efficacy and possible side effects of vaccines. As a result the ever expanding anti-vaccine lobby is hampering the main strategy known so far for long term control of the pandemic.

At times some medical officers, purely with the strength of their positions in well known trade unions, were the chief spokesmen on various aspects of the pandemic in public media or in the various task forces. Medical laboratory technologists too were in the forefront of speaking in public on the virtues of various epidemiological measures. Imagine a situation where the funeral undertakers are given the responsibility of deciding whether a body should be buried or cremated! There are other issues at play in Sri Lanka for quite some time. A medical specialist is speaking against the use of chemical fertilizer in agriculture. How his opinion is given prominence over the almost unanimous counter arguments of the experts in agriculture is depressing. The same person has been propagating virtues of traditional varieties of rice giving unsubstantiated historical facts as evidence. There is a plethora of western qualified medical professionals promoting

native medicines. Some members of the public are ignorant enough to believe that these doctors are qualified in both systems of medicine. The fact that some of them are having business interests in such unethical promotion is complicating the matter further. The average politician and their likes freely expressing opinions on any complex subject misleading the gullible public cannot be held guilty of epistemic trespassing, as they do not possess any expertise, often not even a basic understanding, in any field.

When no regulatory mechanisms are available dealing with intellectual matters and when laws of the country are anyway breached on a daily basis, the society continues to be victimized. The concept of freedom of speech is being abused to the detriment of all. It is the bounden duty of the professional associations to ensure that their members adhere to the accepted norms of the profession. The Sri Lanka Medical Council too should have powers to take disciplinary action against offenders.

The news media should realize that it is their responsibility to select the suitably qualified people for their programmes. It may be difficult to impose these as rules because of the sheer number of professionals eagerly awaiting a chance to appear on television.

I am grateful to Prof. Janaka de Silva, Senior Professor of Medicine in the Kelaniya University, for throwing the spotlight on epistemic trespassing, a term hitherto not known to many, during his recent address to the Ceylon College of Physicians.

– Dr. Sarath Gamini De Silva

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