



# **GALLE MEDICAL ASSOCIATION**

**79<sup>th</sup> Annual Academic Sessions – 2020**

## **PROGRAMME & PROCEEDINGS**

*“Stepping into a new decade of health information  
and research; connecting with the community  
to deliver better healthcare”*



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# GALLE MEDICAL ASSOCIATION

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Prof. Sudheera Jayasinghe (Co-Editor), Dr. Ganaka Senarathne (Postgraduate Co-ordinator), Dr. Gayani Liyanage (Jt. Secretary), Dr. Krishantha Jayasekera (Vice President), Dr. Anocha Dissanayake (Immediate Past President), Dr. Kalum Deshapriya (President), Prof. Sampath Gunawardena (President Elect), Dr. Gayani PUNCHIHewa (Jt. Secretary), Prof. Mahinda Kommalage (Treasurer), Prof. Channa Yahathugoda (Social Secretary), Dr. Champa Wijesinghe (Co-Editor)

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<b>Committee Members</b>	:	<b>Dr. Aruna de Silva</b>
		<b>Dr. Binara Athukorala</b>
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		<b>Dr. Upueksha Liyanage</b>
		<b>Dr. Warsha de Zoysa</b>

# **GALLE MEDICAL ASSOCIATION**

## **79<sup>th</sup> Annual Academic Sessions - 2020**

### **Inauguration Ceremony**

### **Programme**

**Thursday, 24<sup>th</sup> September 2020**

Venue: T.W. Wickramanayake Auditorium, Faculty of Medicine, Galle

- 17.45 hrs - **TEA**
- 18.00 hrs - **Guests to be seated**
- 18.05 hrs - **Ceremonial procession**
- 18.10 hrs - **National anthem**
- 18.15 hrs - **Lighting of the traditional oil lamp**
- 18.20 hrs - **Address by the President GMA**  
*Dr. Kalum Deshapriya*  
*Consultant Rheumatologist*  
*Teaching Hospital Karapitiya*
- 18.45 hrs - **Keynote address by the Chief Guest**  
***“Overcoming challenges in harnessing health information through multi-disciplinary and inter-disciplinary research for better healthcare”***  
*Professor Ananda Jayawardane*  
*Senior Professor in Civil Engineering*  
*Former Vice Chancellor of the University of Moratuwa*  
*Past Director General of the National Science Foundation*
- 19.15 hrs - **Award ceremony**
- 19.25 hrs - **Galle Medical Association Oration – 2020**  
***“Iron deficiency anemia in pregnancy and its prevention: Paradigm changes over three decades”***  
*Professor Malik Goonewardene*  
*Emeritus Professor of Obstetrics & Gynaecology*  
*Faculty of Medicine, University of Ruhuna*
- 20.10 hrs - **Vote of thanks**  
*Dr. Gayani Liyanage*  
*Jt. Secretary - GMA*
- 20.20 hrs - **Entertainment interlude**
- 20.40 hrs - **Reception & Fellowship**

**Friday, 25<sup>th</sup> September 2020**

Venue: T. W. Wickramanayake Auditorium, Faculty of Medicine, Galle

**Session I – FREE PAPERS 1**

08.00 – 09.00 hrs

**Co-Chairpersons:** Prof. Mahinda Kommalage  
Dr. Samantha Lelwala

- 08.00 – 08.10 hrs - **01. Frequency and factors associated with Burnout Syndrome among employees of Emergency Treatment Units at three Teaching Hospitals in Sri Lanka**  
Migelheva AS, Sigera PC, Thilakasiri MCK, Senaratne G
- 08.10 – 08.20 hrs - **02. Influence of knowledge and negative attitudes towards contact investigation of the patients with pulmonary tuberculosis**  
Rathnayake RMUK, Rathnayake TL, Rathnayake RMJB
- 08.20 – 08.30 hrs - **03. The association of Body Mass Index (BMI) of school children to the nearest food-outlets and number of food outlets at one-mile distance around the schools in rural Sri Lanka**  
Senevirathna CP, Prashadika KMD, Katulanda P, De Silva P
- 08.30 – 08.40 hrs - **04. The total polyphenol content, antioxidant and phytochemical profile of edible green leaves widely consumed in Sri Lanka.**  
Rifaya RF, Sandamali JAN, Hewawasam RP
- 08.40 – 08.50 hrs - **05. Surgical treatment for valvular heart disease: A single center experience from Sri Lanka**  
Harischandra DVT, Kannangoda KANS, Samson-Himmelstjerna FV, Walter T, Dilanka GVA, Jayaweera JMRG, Firmin RK
- 08.50 – 09.00 hrs - **06. Comparison of heart rate variability between professional hockey players and untrained healthy controls**  
Perera WMK, Nanayakkara SDI, Ariyasinghe AS, Subasingha SATK, Kariyawasam AP

## **Session II – GMA Research Grant**

09.00 – 9.10 hrs

**Co-Chairpersons:** Dr. Kesharie De Silva  
Dr. Nayana Liyanarachchi

09.00 – 09.10 hrs

## **Presentation of the recipient of GMA Research Grant 2019**

**Dr. N. L. De Silva**

*Lecturer in Parasitology*

*Faculty of Medicine, University of Ruhuna, Galle*

## **Session III – PLENARY LECTURE 1**

09.10 – 09.40 hrs

**Co-Chairpersons:** Prof. K.D. Pathirana  
Dr. Ranjith Jayasinghe

## **Medical education for better healthcare in the new normal**

**Prof. Indika Karunathilake**

*Professor in Medical Education*

*University of Colombo*

## **Session IV – YOUNG SPECIALISTS' FORUM**

### **WINNER'S PRESENTATION**

09.40 – 10.00 hrs

**Co-Chairpersons:** Dr. R.W. Kodikaraarachchi  
Dr. Ganaka Senaratne



**Session V – SYMPOSIUM 1**

10.15 – 11.45 hrs

**Co-Chairpersons:** Dr. M.K. Ragunathan  
Prof. Champica Bodinayake

**“LESSONS LEARNT IN CONQUERING COVID-19  
PANDEMIC; ROLE OF 3 PILLARS”**

**Understanding the pathogenesis: Seeing some  
light at the end of the tunnel?**

**Prof. Neelika Malavige**

*Professor in Microbiology*

*University of Sri Jayawardenepura*

**Physicians’ dilemmas in delivering care for  
COVID-19 patients**

**Dr. Ananda Wijewickrama**

*Consultant Physician*

*National Institute of Infectious Disease*

**Facing the outbreak, challenges and future  
scenarios in outbreak management:  
Epidemiologists perspective**

**Dr. Deepa Gamage**

*Consultant Medical Epidemiologist*

*Epidemiology Unit, Ministry of Health*

## Session VI – PLENARY LECTURE 2

11.45 – 12.15 hrs

**Co-Chairpersons:** Dr. Kalum Deshapriya  
Dr. Arosha Dissanayake

### **An update on management of Osteoarthritis: Experience and evidence into practice**

**Dr. Lalith S Wijyaratne**

*Consultant Rheumatologist*

12.15 – 13.00 hrs -

**LUNCH**

## Session VII – FREE PAPERS 2

13.00 – 14.00 hrs

**Co-Chairpersons:** Dr. Shyaminda Kahandawa (President, Ruhunu Clinical Society)  
Dr. Eisha Waidyarthne

13.00 – 13.10 hrs - **07. Risk factors for the development of cardiac dysfunction among breast cancer patients who received anthracycline chemotherapy at Teaching Hospital Karapitiya**

Sandamali JAN, Hewawasam RP, Fernando MACSS, Jayatilaka KAPW, Madurawe RD, Sadanandan PP, Ekanayaka U, Horadugoda J

13.10 – 13.20 hrs - **08. Anti-inflammatory effects of ethanol, hexane and aqueous extracts of three Sri Lankan medicinal plants: An *in vitro* study**

Karunasinghe KGDC, Hewawasam RP

13.20 – 13.30 hrs - **09. Clinical correlates of three different metrics of glycosylated haemoglobin during two-year period in patients with type 2 diabetes**

Sevwandi RAW, Weeraratna MK, Senadheera V, Godakandaarachchi U, Weeraratna TP

- 13.30 – 13.40 hrs - **10. Development of a sandfly anti-salivary gland-SG747-IgG antibody-based urine enzyme-linked immunosorbent assay (ELISA) for cutaneous leishmaniasis risk mapping using geographic information systems (GIS) in Sri Lanka**  
De Silva NL, Tojo B, De Silva VNH, Deerasinghe ATH, Kato H, Takagi H, Weerasooriya MV, Itoh M and Yahathugoda TC
- 13.40 – 13.50 hrs - **11. Agreement between bioelectrical impedance analysis and dual energy X-ray absorptiometry for the measurement of body composition indices in obese children aged 5-15 years**  
de Silva MHAD, Hewawasam RP, Lekamwasam S,
- 13.50 – 14.00 hrs - **12. Adverse drug reactions reported during the active surveillance in Teaching Hospital, Karapitiya**  
Samarawickrama BY, Amarasinghe ATI, Jayasinghe SS, Liyanage PLGC, Mendis SA

## **Session VIII – SYMPOSIUM 2**

14.00 – 15.30 hrs

**Co-Chairpersons:** Prof. T.P. Weerathna  
Dr. Satish K Goonesinghe

## **“STEPPING INTO A NEW DECADE: THE NEED TO CHANGE”**

### **Personalised Medicines: Successes, limitations and future prospects**

**Prof. Priyadarshani Galappaththy**

*Professor of Pharmacology*

*University of Colombo*

# **Deep Medicine: The practice of Medicine in the next two decades**

**Prof. Kumara Mendis**

*Professor of Family Medicine*

*University of Kelaniya*

## **Emerging trends in future cardiac care**

**Dr. Sanjeewa Rajapakse**

*Consultant Clinical and Interventional Cardiologist*

*Colombo North Teaching Hospital*

### **Session IX – PLENARY LECTURE 3**

15.30 – 16.00 hrs

**Co-Chairpersons:** Prof. Sampath Gunawardena  
Dr. Krishantha Jayasekera

## **Healthy eating; an evidence-based approach**

**Prof. Sudheera Kalupahana**

*Professor in Human Nutrition*

*University of Peradeniya*

16.00 – 16.15 hrs - **Awards Ceremony**

16.15 – 16.25 hrs - **Concluding remarks**

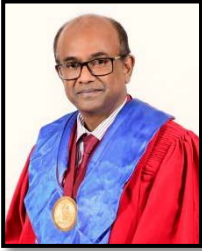
16.25 hrs - **TEA**





**PROCEEDINGS  
OF THE  
ANNUAL ACADEMIC SESSIONS  
2020**

## Message from the President



Galle Medical Association has come a long way since its inception in 1940. It has completed eight decades of academic excellence as the oldest regional medical association in Sri Lanka. It enters into a new decade with the theme for the year 2020, “Stepping into a new decade of health information and research; connecting with the community to deliver better healthcare”.

We are going through the most challenging era in the medical history with the global COVID-19 pandemic. We are proud of the success story of our country in combatting COVID-19. GMA continued to play its role during this difficult period as the leading regional medical association and contributed to the achievements that we are experiencing today. Our theme for this year is even more relevant with this unexpected and unprecedented uncertainty worldwide. “GMA connecting community programme” and “GMA research forum” were two programs initiated by us to meet the needs of medical officers with special emphasis on those who are serving in the periphery.

Executive committee of GMA took the challenging decision to conduct the Annual Academic Sessions as scheduled. We have to look for new ways to address our health issues. AAS 2020 will focus on the “lessons learnt from the pandemic” and “the need to change” in its two symposia. We are happy to see the significant increase in the research abstract submissions this year. The time has come for our researches to identify the new need when stepping to new decade and the GMA is willing to play its role in supporting them. We hope that we have been able to formulate an excellent programme in line with our theme for this year

My thanks goes to the Chief Guest, Professor Ananda Jayawardane and the executive committee and the members of the GMA and all those who contributed in many ways in conducting the AAS amongst many economic and social difficulties. I hope that our efforts will contribute to the betterment of healthcare and in conquering the new challenges emerged.

**Dr. Kalum Deshapriya**

*President*

*Galle Medical Association*

## Message from the Chief Guest



I am delighted to convey this message of good wishes for the 79<sup>th</sup> Annual Academic Sessions of the Galle Medical Association - 2020. Being the largest regional professional medical organization in Sri Lanka with an illustrious track record and achievements spanning over 80 years, I wish to congratulate the President, Dr. Kalum Deshapriya and his executive committee for organizing this flagship conference on the theme 'Stepping into a new decade of health information and research: connecting with the community to deliver better healthcare' demonstrating their enthusiasm to bring the medical practice and research to a new dimension.

With the development of Internet of Things limited only to imagination and with the increased use of Health Information Systems faced with global challenges and pandemics such as COVID-19 limiting social interactions, many opportunities are opening up to harness plethora of health information in a focused way providing health education materials and resources bridging health disparities and gaps in health care and to engage underrepresented and underserved communities in clinical research to increase research participation by this important set of stakeholders.

Despite this enormous potential for better healthcare and advancing societies with Internet literacy and smart hand held devices, there are many challenges faced by medical researchers in effectively harnessing health information and research connecting with community. It is my hope that this conference will not only disseminate research findings relevant to this emerging area but also create further opportunities to identify challenges and solutions, obtain ideas for new research directions, attract further research funding, demonstrate the untapped potential of health information research and promote inter-disciplinary and multi-disciplinary research.

With the dedicated efforts that I see in organizing this conference and with the wide array of research papers lined up for presentation, I have no doubt that this conference will be of great success. I congratulate all the presenters of the papers and wish 79<sup>th</sup> Annual Academic Sessions of Galle Medical Association a great success in every way.

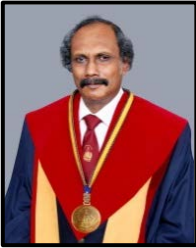
**Prof. Ananda Jayawardane**

*Senior Professor in Civil Engineering*

*University of Moratuwa*



### **Iron deficiency anemia in pregnancy and its prevention: Paradigm changes over three decades**



Anemia in pregnancy, defined as a hemoglobin concentration (Hb) < 110 g/L, is a significant public health problem globally. In 2001, its prevalence in Sri Lanka was estimated to be approximately 29%. Multiple factors lead to anemia in pregnancy but nutritional iron deficiency anemia (IDA) is the commonest. IDA is associated with increased maternal and perinatal morbidity and mortality, and long term adverse effects in the new born. Several factors affecting Hb and iron

status in pregnancy lead to difficulties in establishing a definitive diagnosis. Recent studies suggest that at least in certain areas of Sri Lanka, the prevalence of ID and IDA in pregnancy are probably lower than previously reported. Several strategies have been adopted globally, as well as in Sri Lanka, to prevent anemia in pregnancy and its adverse effects.

Several research studies on the detection and prevention of ID and IDA in pregnancy, were carried out from 1990 - 2017, at the Academic Obstetrics and Gynecology Unit (AOGU) of the Teaching Hospital Mahamodara, Galle (THMG). A synopsis of 10 publications in local and international peer reviewed indexed journals will be presented and discussed. These will include; two cross sectional analytical studies to determine the rates of ID and IDA in women presenting for antenatal care to the AOGU of THMG in 1990 and in 2015, a prospective cohort study in 1992 to evaluate the effectiveness of the antenatal oral iron supplementation program at the time, two studies which measured the agreement between hematological indices obtained by different laboratories in 2000 and in 2015, a cross sectional study in 2001 which assessed the validity of commonly used hematological indices and four randomized controlled trials, three between 1994 to 1996 and one in 2015/2016, in which different regimens of antenatal oral iron supplementation were evaluated for their effectiveness.

Nine other publications of the author, on the topic of ID and IDA in pregnancy, in peer reviewed indexed journal, and three relevant World Health Organization Guidelines, in which the author was a member of the guideline development group, will also be referred to.

The conclusions of the above publication are as follows:

Hematological indices during pregnancy need to be interpreted with caution, taking into consideration several factors. Poor compliance and unsatisfactory methods of ingestion of the antenatal oral iron supplement could be contributory factors for a significant proportion of pregnant women continuing to have ID and IDA at term. Although the agreement between hematological indices obtained from different laboratories in Galle have been shown to be unsatisfactory in the past, they currently appear to have better agreement, probably due to improvements in the techniques currently used as well the adoption of quality assurance measures. The rates of ID and IDA in pregnant women presenting for antenatal care to the AOGU of THMG have decreased from approximately 69% and 44% respectively in 1990 to approximately 37% and 17% respectively in 2015. If the prevalence of IDA in a community is < 20% and the pregnant woman is not anemic, routine, daily, antenatal oral iron and folate supplements are not needed, and weekly supplements are adequate to improve birth outcomes

**Professor Malik Goonewardene**

*Emeritus Professor of Obstetrics & Gynecology*

*University of Ruhuna*

# PLENARY LECTURE – 1

## Medical Education for Better Healthcare in the New Normal



The profound effect COVID 19 may have an everlasting impact on how future doctors are educated, therefore, a transformative juncture to learn and apply new methods and practices. Move towards a more technology-based teaching method as well as assessments and evaluation methods will also impact the ethos of the future generation of doctors and prepare them to face a world where there is a high digital literacy rate.

In this backdrop, Sri Lankan medical universities have managed to face the challenge of transitioning from conventional to a more online-based teaching programme. Many clinical departments have come up with innovative plans to avoid overcrowding during clinical teaching. The approaches include case presentations through video conferencing, video recorded practical sessions and in certain settings, 3D software. Many have found online teaching to be effective as it enables the availability of remote lecturers who otherwise travel long distances to deliver lectures. Most students and educators feel that this has improved student participation in online classes where attendance has been nearly 100%, which was rarely seen in face-to-face traditional lectures. Albeit the advantages of the new norm of medical education, there were several challenges in its implementation and deployment including constraints on the acquisition of hardware, training human resources, low computer literacy.

In the new normal, conventional ward teaching can be converted to small group clinical classes merged with online ward classes and interactive videos. This digital transition will minimize the risk of disease transmission. Since using real patients when conducting exams carries a high risk, the use of simulated patients to assess clinical skills, examination techniques, and communication skills would be an option. To reap the benefits of this transition even beyond the pandemic student-driven active learning should be encouraged. In this light, the accessibility to resources is fundamental to its success.

Medical education worldwide is changing and Sri Lanka is not an exception. Sri Lankan experience shows that the change should be based on the changing context and the needs of the community. The challenges due to COVID 19 have become a blessing in disguise for promoting the innovative use of technology in Medical Education.

**Prof. Indika Karunathilake**

*Professor in Medical Education*

*University of Colombo*

## **SYMPOSIUM 1**

**“LESSONS LEARNT IN CONQUERING COVID-19  
PANDEMIC; ROLE OF 3 PILLARS”**

## Understanding the pathogenesis: Seeing some light at the end of the tunnel?



COVID19 is characterized by a gradual onset of lower respiratory tract symptoms such as a sore throat, cough, fever and tiredness, which is self-limiting in a majority of individuals, but progresses to severe pneumonia and death in a significant proportion of individuals. Fortunately, due to the rapid response by the Sri Lankan authorities, the number of cases and mortality rates have been very low, while there has been extensive spread within well-contained clusters.

Sequencing of the Sri Lankan strains of the SARS-CoV2 have shown that similar to what was seen globally, the initial virus strain, has been replaced with the strain which has a G614 mutation in the spike protein of the virus, which is associated with higher viral loads and faster spread, but possibly reduced disease severity.

While many countries are under various degrees of lockdown there is a huge race to develop a safe and effective vaccine, and currently 21 vaccine candidates undergoing clinical trials. The main aim of vaccination is to induce long lasting protection against infection with the SARS-CoV2 by inducing a robust virus specific neutralizing antibody and T cell response. However, there have been recent concerns regarding decline of both total antibodies and neutralizing antibodies (Nabs) to SARS-CoV-2 at 8 weeks since onset of illness, especially in those with mild illness. We assessed the longitudinal changes of SARS-CoV2 NAbs in patients with varying clinical disease severity and also those with prolonged shedding. In the longitudinal analysis of NAbs, they appeared earlier and faster, at higher levels in those who had severe and moderate pneumonia, followed by those who had prolonged shedding, while they appeared later, at lower levels in those who had mild/asymptomatic disease. After the 3<sup>rd</sup> week (4<sup>th</sup> to 8<sup>th</sup> week), although all patients with severe, moderate and prolonged shedding had a positive test result, 33.3% of those with mild/asymptomatic illness were negative. Only 53.5% of individuals had Nabs >90 days since onset of illness. We have been investigating T cell responses to the SARS-CoV2 showing that some unexposed individuals have cross reactive T cell responses, which may offer some cross protection (or may result in disease pathogenesis). However, similar the findings with the antibody responses, the SARS-CoV2 specific T cell responses were of higher magnitude and frequency in those who had experienced moderate or severe illness.

In conclusion, although due to the decline in the virus specific antibody responses, there is a concern if vaccines may induce lifelong protection, the presence of memory B cells present at low frequency, with rapid proliferative capacity, are able to prevent re-infection.

**Prof. Neelika Malavige**

*Professor in Microbiology*

*University of Sri Jayawardenepura*

## Physicians' dilemmas in delivering care for COVID-19 patients



The knowledge and understanding on COVID-19 among Clinicians, Virologists and Epidemiologist are still very limited. It's very high infectivity and the relatively high morbidity and mortality rate are known, but the pathophysiology is poorly understood and therefore, clinical management has become a huge challenge and has limited to supportive treatment.

In these circumstances, clinicians across the globe have started using various empirical treatments with anti-viral drugs, anti-inflammatory drugs, vitamins etc. Large number of trials is being conducted on treatment of COVID patients, but most of these are on patients with moderate to severe cases and applicability of these findings in less severe illness is a dilemma. To make this worse, the messages getting from researches are also conflicting. Several articles from leading medical journals have been withdrawn worsening dilemma about treatment.

LMW heparin to counter pulmonary micro-vascular angiopathy, oxygen therapy and prone ventilation are probably the only widely accepted treatment methods. A recent large trial showed that dexamethasone is beneficial in severe disease. However, prevention of the progression of the mild disease to severe disease is still a dilemma.

In Sri Lanka, Hydroxy-chloroquine (HCQ) was recommended as treatment and used without any issues. However, several recent trials showed evidence against using HCQ. These results have put clinicians in dilemma on continuing use of HCQ even though these trials were done in patients with severe disease, late in the disease or in high doses.

Many unnecessary constructions had been done, equipment purchased and precautions taken in various health care settings due to COVID phobia. These may actually increase the risk of infection rather than reducing. It is important to address dilemmas on these issues. Traditional open wards with good ventilation and essential personal protective equipment for health staff have shown to be beneficial for the patients as well as the staff.

**Dr. Ananda Wijewickrama**

*Consultant Physician*

*National Institute of Infectious Disease*

## Facing the outbreak, and challenges and future scenarios in outbreak management: Epidemiologists perspective



Sri Lanka is implementing main strategies for curtailing COVID-19 outbreak through active case search, treatment, early isolation, contact tracing, quarantine of risk exposed persons and follow up to detect further cases in discontinuing linked transmission. This helps to contain transmission of COVID-19 from the index case. Adhering to relevant strategies with global outbreak from January 2020 onwards, country was able to continue COVID-19 situation at cluster stage, only with imported and import related cases limiting to few clusters.

COVID-19 is a Public Health Emergency of International Concern for which the Sri Lankan health sector actively implemented country existing “National Pandemic Influenza Preparedness Plan” in January 2020, until COVID-19 specific guidelines are developed globally and for the country. All relevant stakeholders of health and non-health are mobilized at the inception of the COVID-19 outbreak under the country readiness of responding to emergencies through developed core capacities based on the requirement of International Health Regulations.

There is a well-established public health care system in Sri Lanka for communicable disease control and prevention which is implemented mainly through the Central Epidemiology Unit, Ministry of Health. At the district level, Regional Epidemiologists are closely working with the Epidemiology Unit, and risk exposure contact tracing targeting for active case search for COVID-19 are implemented through the “Medical Officer of Health” (MOH) staff, in which grass root level public health care staff is working for the community for case detection and referrals.

To date, country has successfully showed the strength of country readiness and response capacity in curtailing the COVID-19 pandemic while high income countries even going on for out of proportions at the pandemic status. Corona virus preventive vaccine will be a hope for future but decisions on advance market commitment will be a challenge to the country considering price, quantity, efficacy, number of doses and categories to be vaccinated.

### **Dr. Deepa Gamage**

*Consultant Epidemiologist*

*Epidemiology Unit, Ministry of Health*

## PLENARY LECTURE – 2

### An update on management of Osteoarthritis: Experience and evidence into practice



Osteoarthritis (OA) is a leading cause of disability with joint pain that often disturbs the daily activities. Pain related to OA results from involvement of the non-cartilaginous structures such as subchondral bone, Synovium and periarticular structures. In OA structural changes are only weakly associated with pain. The natural history of OA is long and patients may need therapy for many years, even after arthroplasty.

Depression often accompanies knee OA, exacerbating the severity and persistence of pain, and may negatively affect the clinical outcomes associated with analgesic treatment. Peripheral and central sensitisation of pain pathways is responsible in the perpetuation of pain in OA.

The two main aims in managing OA are to improve pain and minimize the functional restriction. The components of management of OA includes – managing OA-related conditions such as depression, sleeping disturbances and social problems and addressing issues which are joint specific with nonpharmacologic, pharmacologic and surgical options. The recommended non-pharmacologic strategies include education, exercise and if appropriate weight loss.

Oral NSAIDs are the pharmaceuticals used most frequently for pain control and are routinely recommended in OA clinical practice guidelines.

Patients with OA who are refractory to nonpharmacologic and pharmacologic interventions are referred for surgical treatment (Arthroplasty).

New modes of therapy to relieve pain by inhibiting the Nerve growth factor (NGF) are being tested at present.

**Dr. Lalith S Wijyaratne**

*Consultant Rheumatologist*





## **SYMPOSIUM - 2**

**“STEPPING INTO A NEW DECADE:  
THE NEED TO CHANGE”**

## Personalised Medicines: Successes, limitations and future prospects



Medicines customized for individual patients, is referred to as personalized medicines. This process is referred to as precision medicine, where information about a person's genes, proteins, and environment is used to prevent, diagnose, and treat disease.

For personalised medicines, pharmacogenetic information is essential, where genetic makeup of an individual is used to determine the response to drugs. Now over 20% of labels for FDA-approved drugs contain pharmacogenomic information and more than 2,000 genetic tests are available through clinical laboratories worldwide. These tests aim to develop new therapies to patients with the right drug at the right dose at the right time.

Success stories include predicting efficacy of drugs by selective use of medicines in patients identified to have genetic mutations, preventing adverse drug events by genetic testing prior to prescribing and dose predictions based on identification of mutations in CYP450 genes and metabolizer states.

However there are major limitations in applying personalized medicines to everyday practice. Limited access to targeted agents and lack of benefit in outcome despite using genetic information were observed. Cost factor is a major limitation. Further advances and reduction of cost will make personalized medicines accessible to majority. Examples of success stories and limitations will be discussed during the presentation.

**Prof. Priyadarshani Galappatthy**

*Professor of Pharmacology*

*University of Colombo*

## Deep Medicine: The practice of Medicine in the next two decades



How we practice medicine now, is almost chaotic. It's a race against time in both public and private sectors. *'We generally, as doctors, don't get to really care for patients enough. And patients don't feel they are cared for.'* We hardly have medical records in ambulatory care except the A5 prescription that doubles as a record with a few numbers, words and phrases. There is hardly any continuity of care and coordination of care except among specialized colleagues. Even this is without any kind of back-referral.

Deep Medicine consists of three components: Deep Phenotyping, Deep Learning and Deep Empathy.

Deep Phenotyping is the ability to deeply define each individual (digitizing the medical essence of a human being), using all relevant data. This might include all of one's medical, social, behavioral, and family histories, as well as one's biology: anatomy, physiology, and environment. Our biology has multiple layers—our DNA genome, our RNA, proteins, metabolites, immunome, microbiome, epigenome, and more. In the biomedicine the term that is frequently used is “deep phenotyping”; “from pre-womb to tomb” or “from lust to dust.”

Second is Deep Learning, which will play a big part of medicine's future. It will not only involve pattern recognition and machine learning that doctors will use for diagnosis, or example in Dermatology, Radiology and Pathology. It will also take on efficiency in the hospital setting, using machine vision to improve patient safety and quality. Symptom Checker Chatbots are used currently to have a conversation with patients, in the NHS-UK, so that the patient can consult a doctor without delay or make an appointment.

The third, and most important, component is Deep Empathy, the connection between patients and clinicians. With 'Medicine' becoming a 'Knowledge-based Business' the time spent between doctors and patients has steadily dwindled, whether for office visits or in the hospital. Doctors are much too busy. The highest-ever proportion of doctors and nurses in the USA are experiencing burnout and depression owing to their inability to provide real care to patients, which was their basis for pursuing a medical career.

The greatest opportunity offered by Deep Medicine, is not only to reducing errors or workloads, or even curing cancer: it is the opportunity to restore the precious and time-honoured connection and trust—the human touch—between patients and doctors. Not only would we have more time to come together, enabling far deeper communication and compassion, but also, we would be able to revamp how we select and train doctors.

**Prof. Kumara Mendis**

*Professor of Family Medicine*

*University of Kelaniya*

## Emerging trends in future cardiac care



Cardiovascular medicine continues to evolve rapidly. Subspecialization is required to keep pace with evolving practice; however, a multidisciplinary approach in a framework of cost-benefit care will be equally crucial in the management of increasing numbers of complex patients. Breakthrough technological advancements, the introduction of novel devices and the continued refinement of both diagnostics and treatment have markedly improved outcomes in cardiac disease. Information technology and translational medicine may radically change clinical research and practice

It is important to consider the evolution of medicine and reflect on it in order to set the right course to achieve patient-centered goals. The next-generation physicians should avoid to practice a technocratic medicine, which is not attentive to the real patients' needs and to their complexity, and they will have to pay attention to appropriateness and sustainability. Therefore, I would like to present an overview of this evolving picture, a glimpse into the near future full of challenges and opportunities to improve patients' care.

### **Dr. Sanjeewa Rajapakse**

*Consultant Clinical and Interventional Cardiologist*

*Colombo North Teaching Hospital, Ragama*

## PLENARY LECTURE – 3

### Healthy eating; an evidence-based approach



Healthy eating helps to maintain the physical as well as the mental wellbeing of an individual. Further, evidence suggests that healthy eating and regular physical activity help to prevent early death and numerous non-communicable diseases (NCDs) such as cardiovascular disease and diabetes. Similar to other branches of medicine, clinical nutrition is also an evidence-based discipline. Hence, healthy eating practices and recommendations should be based on the

available evidence.

Since eating patterns of an individual affects the health in the long-term, most good quality evidence in nutrition is derived from large prospective cohort studies, rather than from randomized trials. These studies show that regular consumption of fruits and vegetables, whole grains and fish exert many health benefits. For example, daily intake of five servings of fruits and vegetables lowers the all-cause mortality by 35%. Conversely, there is strong evidence that unhealthy eating habits are associated with many NCDs. Regular intake of sugary drinks increases the risk of diabetes by more than 20%. Further, excessive consumption of processed and red meats increase the risk of colon cancer as well as diabetes. Finally, evidence from these large studies have helped us to dispel myths about certain foods. For example, unlike the long held belief, egg consumption is not associated with increased serum cholesterol or risk of cardiovascular disease.

In summary, evidence should be sought before making nutrition recommendations for the general public. Current evidence suggested that regular consumption of fruits, vegetables, whole grains and fish can reduce the burden of NCDs and improve the quality of life.

**Prof. Sudheera Kalupahana**

*Professor in Human Nutrition*

*University of Peradeniya*

## NOTES



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