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Editorial

Healthcare and Politics during Unprecedented National Crisis

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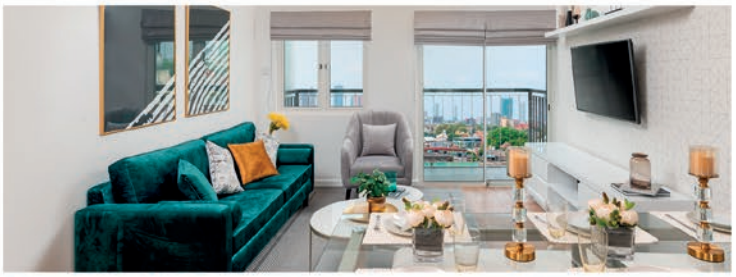

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SLMA President

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MBBS (Colombo)
MSc (Community Medicine)
MD (Community Medicine)
President
Sri Lanka Medical Association

President's Message

Healthcare System in imminent danger of collapse

Dear SLMA Members,

Sri Lanka is in a major crisis situation. President's messages in May and June newsletters, alluded to the 'crisis' affecting Sri Lanka and its effects on the health care system and its contribution to the health status of the people of Sri Lanka, especially the children.

The despicable 'crisis' is continuing with no solutions in-sight. It is affecting the day to day lives of the people. Fuel shortage continues with inevitable travel restrictions. There are less and less vehicles on the road, public transport is heavily and severely crowded, while children cannot go to school. Public servants are required to limit their attendance at work with government institutions working below their normal efficiency and effectiveness. In other words, or in a nut-shell, the 'crisis' is affecting all aspects of the lives of the people of Sri Lanka.

Shortages in the health sector, especially of medicines and certain types of equipment, continues. Donations from the Sri Lanka Medical Association (SLMA), other organizations, institutions, and individuals cannot continue indefinitely. Shortage of Dollars and Rupees is still there with no solution in sight. Food prices are 'skyrocketing' and affecting accessibility and affordability with consequent food insecurity and shortages. In supermarkets and other trading stores, there are apparent shortages of products. Shortage of milk is still there with

supermarkets limiting purchase of milk. The gas supply has not come back to normal, at least not as yet.

It seems like Sri Lanka has suddenly gone back to the past, from 2022 to about early 70's. This has affected the health care system in numerous ways. The Ministry of Health has been forced to go for different alternatives in providing health care due to lack of funds. A country that has boasted of modern, up-to-date and ever so efficient healthcare has suddenly gone back and sunk very low. Health care personnel, trained and used to providing the 'best' healthcare have now been forced to use less effective and efficient methods due to the very many shortages affecting the country. This is causing severe mental stress for the healthcare personnel with immediate and long-term consequences. Brain drain is one important immediate effect with doctors and nurses leaving Sri Lanka, to get away from this hellhole in a quest towards greener pastures.

Dear friends, when at some point in time in the future, this 'crisis' ends hopefully, we in Sri Lanka will be left with a ruined health care system that will take decades to re-build. We and our health staff have contributed immensely, since independence, to develop and build our health care system to the present level. Let us do all that is possible in a relentless march to stop this system breakdown and prevent us going back to an old by-gone healthcare system.

What can we, at the SLMA do? We need to meet, discuss, argue, and decide on a short-term and a long-term plan to 'Save the Health Care System of Sri Lanka'. That will hopefully save us, the people of Sri Lanka.

This is not the last message on the effects of the 'crises on the healthcare sector and on the health of the people of Sri Lanka. You will hear more on this in future newsletters, until the 'crisis' is resolved and we as a country come back to some degree of normalcy.

Professor Samath D. Dharmaratne
President - SLMA

Healthcare and Politics during Unprecedented National Crisis

Sri Lanka became officially bankrupt in April this year after 74 years of independence due to massive corruption and mismanagement of successive regimes of politicians and political parties. This resulted in shortages of food, fuel, and medicine among other things endangering livelihoods and lives. This led to non-violent agitation by the youth of this country and this protest movement is popularly known as 'Aragalaya' a Sinhalese word meaning struggle. A president who was elected with a decisive majority just two years ago had to flee the country and resign the presidency in the face of relentless protests. A new president was elected by the members of parliament as a replacement. Unfortunately, they elected as president a politician who had lost his parliamentary seat in the last election held less than two years ago demonstrating how out of touch the parliamentarians are with the sentiments of the people.

Within 24 hours of the election of the new President, on the 21st night 'Aragalaya' group members including lawyers and media reporters were brutally assaulted and forcibly expelled from the area opposite the Presidential secretariat. This unlawful action was taken by the authorities, after the group had given an assurance that they will vacate the area by next day, 23rd Saturday morning.

Traditionally, SLMA steered clear of expressing political opinions. However, the foremost apolitical, non-trade union, academic organisation representing all doctors in the country, the SLMA, during the unprecedented current crisis period has changed its views. During the past weeks the SLMA has issued several media statements and conducted press conferences that clearly took a new stance and made political commentaries that were aligned with the vast majority of Sri Lankan people. This is because SLMA believes that politics and economics directly affect a nation's health.

Politics can be defined as activities that relate to influencing the actions and policies of a government or obtaining and retaining the power in a government. Health is defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, by the World health Organization.

Right to health is enshrined in Article 25 of the Declaration of Human Rights as follows; Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

Rudolf Virchow the famous German Physician stated that "Medicine is a social science, and politics nothing but medicine at a larger scale". Virchow argued that social inequality was a root cause of ill-health and therefore medicine had to be a social science. Because of their intimate knowledge of the problems of society, through treating people as individual patients and populations, doctors, according to Virchow, also were better statesmen. This may be important in circumstances where the health of a nation is at risk and political action by the medical professionals may be urgently needed to prevent a health catastrophe.

There may be differences of opinion among medical professionals as to how far one should go in influencing the political process and some may propose 'a ladder of political activism' to influence the process. However, considering the current unprecedented politico-economic crisis in our country, our priority should be to at least maintain an acceptable minimal level of healthcare to all citizens with the limited resources we have. We feel that it is the utmost duty of all health professionals to develop a robust framework to provide universal healthcare access to all our citizens during these difficult times.

We personally feel that we must take whatever necessary steps that is democratic and non-violent, that is effective in political terms, to maintain an acceptable and affordable level of healthcare to all citizens.

Therefore, it will be an essential future paradigm change for the SLMA and its membership to get involved in the political process to ensure a fair and just solution to the current national crisis.

However, we do wonder what other measures must be taken, apart from writing editorials and issuing media communiques to make a lasting impact to resolve the current national crisis.

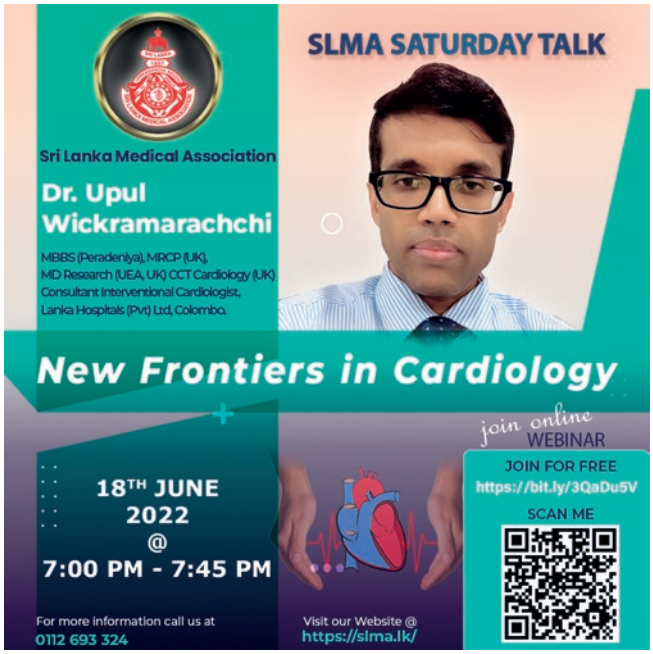
Professor Kumara Mendis &
Dr Sumithra Tissera

Joint Editors of the Newsletter

Disclaimer: This Editorial reflects the considered opinion of the Co-Editors and may not necessarily be the views of the President, Council and the General Membership of the Sri Lanka Medical Association (SLMA).

Activities in Brief (16th June - 15th July)

18th June



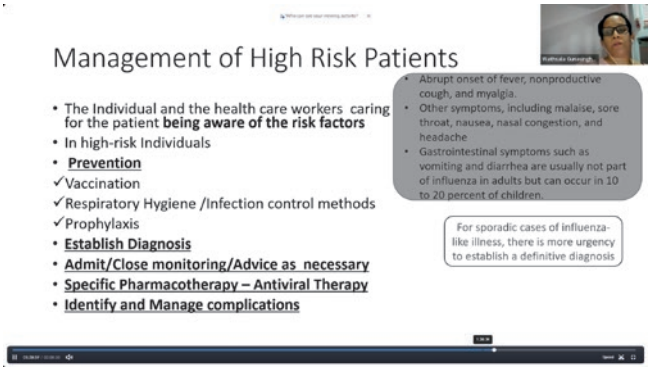
The SLMA Saturday Talk on 'New Frontiers in Cardiology' was done by Dr Upul Wickramarachchi, Consultant Interventional Cardiologist, Lanka Hospital (Pvt) Ltd.

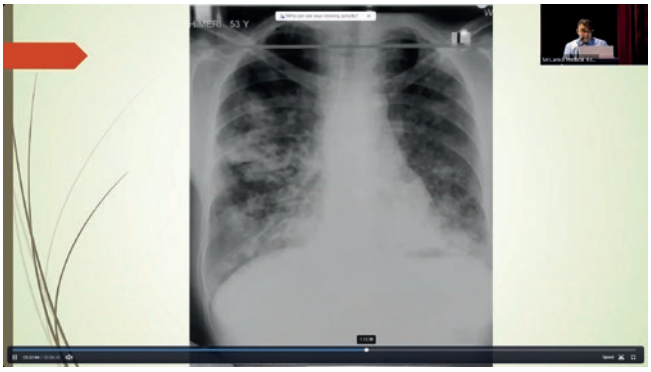
20th June

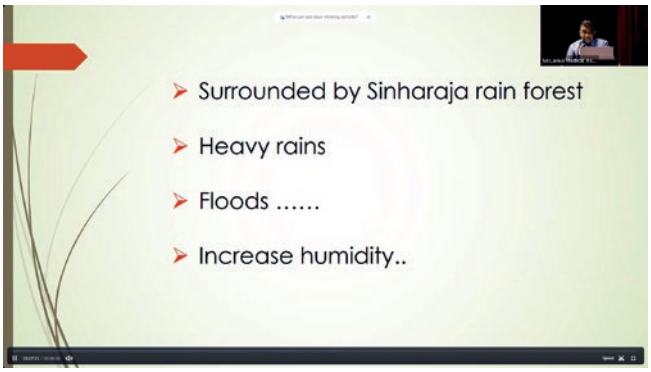
A symposium on 'Current Viral Respiratory Tract Infections in Sabaragamuwa Province' was conducted by the SLMA Expert Committee on Communicable Diseases.

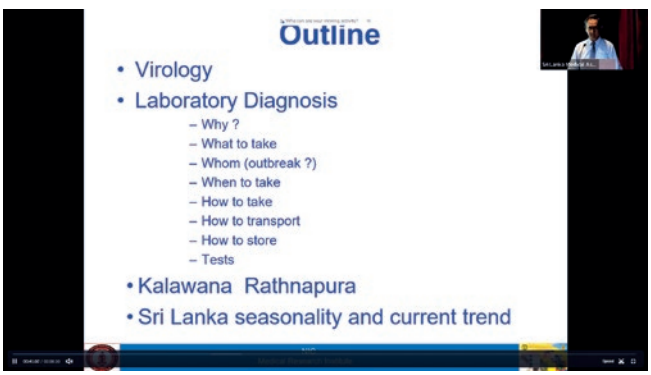
The resource persons were;

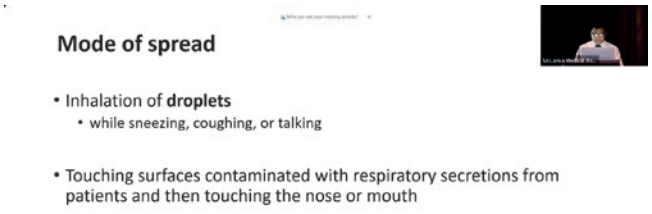
Dr Chinthana Perera - Consultant Epidemiologist, Epidemiology Unit on 'Influenza', Dr Jude Jayamaha, Consultant Medical Virologist, National Influenza Centre, MRI on 'Virological & diagnostic aspects of Influenza', Dr Ravindra Lokugamage, Consultant Physician, Base Hospital, Kalawana, on 'Challenges in the management of viral pneumonia in the current crisis' and Dr Wathsala Gunasinghe, Consultant Respiratory Physician on 'How best we can manage Viral Pneumonia outbreak still following guidelines'.

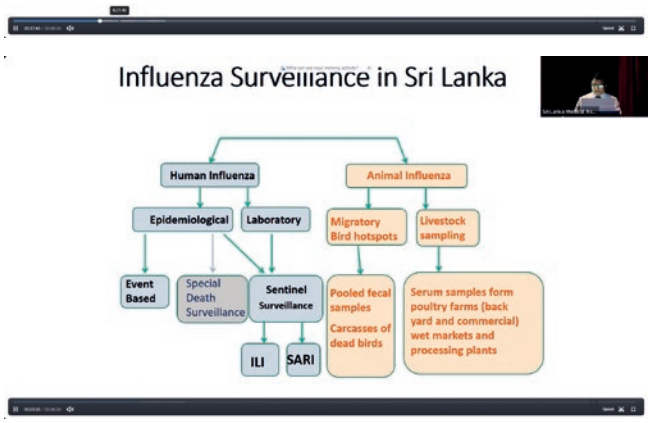












22nd June

A webinar on 'Managing Stress during difficult times' was conducted by the SLMA Expert Committee on Suicide Prevention.

The resource person was Professor Piyanjali de Zoysa, Senior Professor, Department of Psychiatry, Faculty of medicine, Colombo.

23rd June (Morning)

A media seminar was organized by the SLMA Expert Committee on Snake Bite to educate the public on prevention, importance of seeking medical care immediately at a Hospital if suspected of a snake Bite, etc.

The resource persons at the seminar were; Dr Malik Fernando, Past President SLMA/ Member SLMA Expert Committee on Snake-bite, Professor Eranga Wijewickrama, Consultant Nephrologist/ Convener SLMA Expert Committee on Snake-bite and Dr Udaya de Silva, Consultant Paedeatrician, TH Anuradhapura.

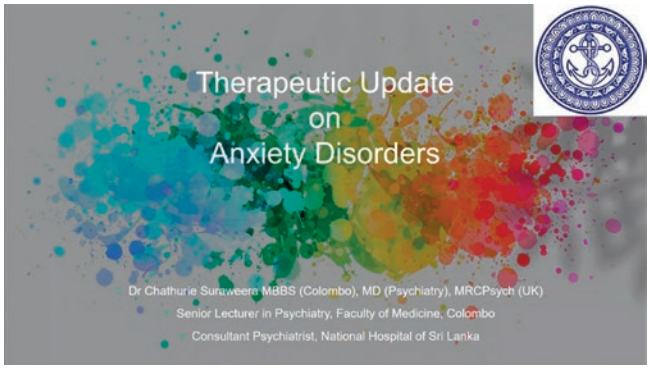
The session was moderated by, Dr Surantha Perera, Vice President, SLMA.

23rd June (Evening)

SLMA Expert Committee on Medical Rehabilitation organized a lecture on 'Attention Deficit Hyperactive Disorder (ADHD) in Adults: A Lifelong disorder' by Ms. Aifah Jamaludin, Lecturer/ Programme Coordinator, School of Occupational Health, Perdana University, Malaysia.

24th June

Therapeutic Update on 'Anxiety Disorders' by Dr Chathuri Suraweera, Consultant Psychiatrist/ Senior Lecturer in Psychiatry, Faculty of Medicine, University of Colombo was organized by the Medicinal Drugs Committee of SLMA.



24th June

A letter was written by the SLMA Expert Committee on Tobacco, Alcohol & Illicit Drugs to Mr Ranil Wickramasinghe, Prime Minster & Minister of Finance urging to go by the guidelines of World Bank and WHO when determine taxation for tobacco & alcohol. The salient points covered in the letter are given below;

- Increasing taxation of tobacco products using a technically sound formula
- Carry out an urgent review of current alcohol taxation policy
- Consider both tobacco & alcohol products as non-essential products
- Remove tobacco & alcohol products that are in the basket of products that are used to track consumer price inflation

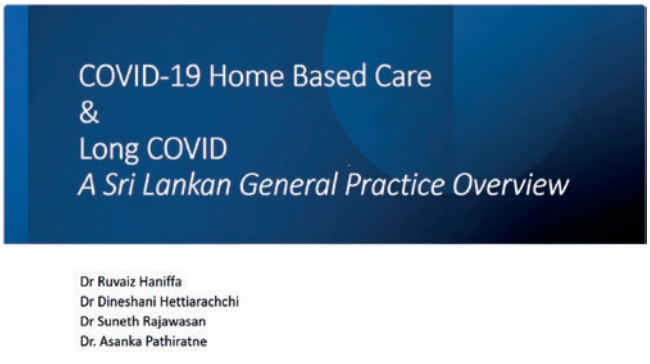
25th June

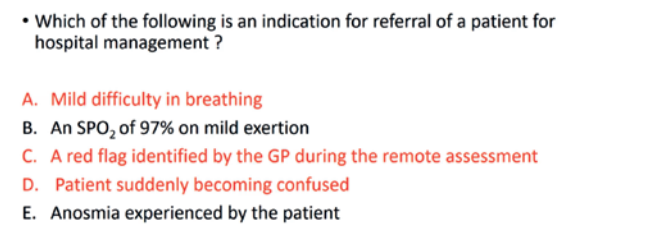
The SLMA Saturday Talk on 'Shortness of Breath in Critical care Settings' was done by Dr Dilshan Priyankara, Specialist Consultant Intensivist, NHSL, Colombo.

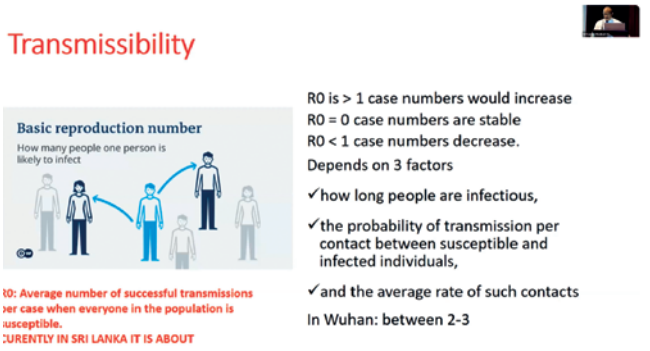
28th June (Morning)

A clinical meeting was conducted with the collaboration of the College of General Practitioners Sri Lanka on 'COVID-19 Home Based Care & Long COVID'.

The resource persons were Dr Ruvaiz Haniffa, Family Physician/ Head Department of Family Medicine, University of Colombo, Dr Dineshani Hettiarachchi, Family Physician/ Senior Lecturer, Department of Anatomy University of Colombo and Dr Suneth Rajawasan, Family Physician/ Council Member, College of General Practitioners Sri Lanka.







2nd July

The SLMA Saturday Talk on 'Approach to a Child in Shock' was conducted by Dr Nalin C Kithulwatte, Consultant Paediatric Intensivist, LRH, Colombo.

4th July

A letter was sent to Mr Manusha Nanayakkara, Minister of Labour & Foreign Employment raising SLMA concern on the negative impact on children by allowing mothers with children over 2 years being allowed to go abroad seeking employment.

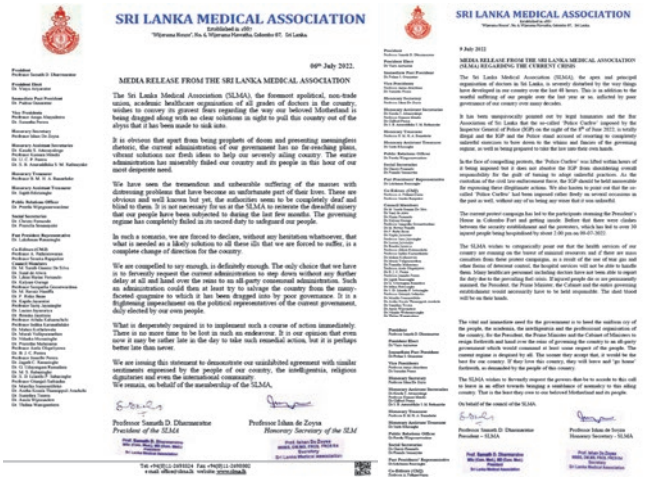
6th July

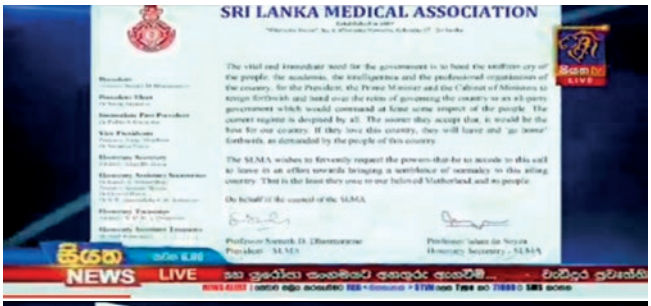
The SLMA Media committee organized a media briefing on the topic 'Looking after Mental & Physical Health during the Current Crisis'

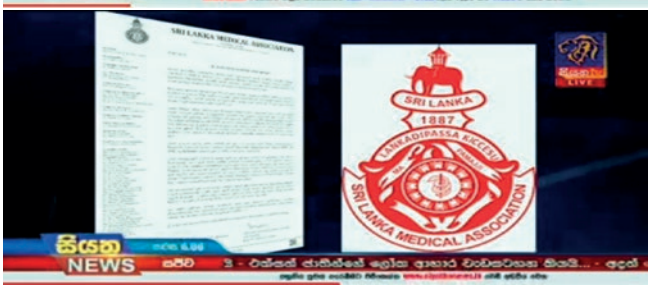
The resource persons were Professor Piyanjali de Zoysa, Professor & Clinical Psychologist, Department of Psychiatry, Faculty of Medicine, Colombo and Dr Upul Dissananyake, Consultant Physician, NHSL. The session was moderated by Dr. Surantha Perera, Vice President, SLMA.

6th & 9th July

Two media releases were issued by the SLMA highlighting the present crisis situation in the country, its consequences on the general public and urging the President, Prime Minister and the Cabinet Ministers to resign from their positions paving way for an all-party government to provide relief to the people and to find a solution to the political/ economic problems facing the country.







9th July

The SLMA Saturday Talk on 'Assessment and Initial Management of Trauma Victims' was done by Dr Amila Jayasekara, Consultant Surgeon, NHSL.

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* https://www.worldkidneyday.org/facts/take-care-of-your-kidneys/8-golden-rules/

KALBE

Back pain: Assessment and management in primary care

Dr. Chathurika Dandeniya

MBBS, MD, MRCP (UK), MRCP (Rheumatology)
Consultant in Rheumatology and Rehabilitation
Senior Lecturer in Medicine
Faculty of Medicine
University of Peradeniya

Back pain is a common symptom encountered in primary care. It is also a common cause for having to take time away from work. The majority of cases however have a benign aetiology and the prognosis is generally favourable over time.[1]

However, back pain is also one of those symptoms that tax the patient as well as the clinician and is rarely managed to the satisfaction of all parties involved. There are a few pitfalls that primary care clinicians may encounter when assessing and treating a patient with back pain.

What is the exact cause of the back pain?

For a patient, 'back' would indicate a vast anatomical area. This can be anywhere from the mid-thoracic area to the buttock creases. Therefore, a pathology in the spine should not always be assumed in a patient complaining of back pain. An important first step in approaching the patient would be to get him/her to pinpoint the location of pain.

Once the general area of pain is located, a detailed history can be taken to ascertain the cause. A guide to the clinical features of some important common causes of back pain is given in table 1. Despite exhaustive investigation, a significant number of cases remain without an identifiable cause.[1]

Assessment of pain in the lower thoracic to mid lumbar region is less complicated because the anatomy of this region is straightforward. In contrast, pain in the lower back, can have numerous structures of origin; spine, paraspinal muscles, joints and muscles of the pelvis and sometimes even the hip joints may be the culprit. In addition, non-rheumatological causes like referred pain from pelvic malignancies, can cause low back pain. Commonly missed causes for back pain in this region are piriformis syndrome and sacroiliac joint pathology.

Cause of back pain	Clinical features
Non-specific mechanical back pain (due to facet joint disease, osteoarthritis, muscle strains and sprains)	Localized pain over lumbosacral area. No nerve root compression or other neurological features. No other 'red flags' (refer Table-2)
Sciatica	Pain starting in the lower back and radiating down the posterior aspect of the leg, down to the heel. Positive straight-leg-raising test. In severe compression, clinical features of L5/S1 deficit.
Vertebral fracture	Usually, postmenopausal females or those with other risk factors for osteoporosis (eg. Long-term steroid use). May have girdle-type pain at the level of the fracture.
Piriformis syndrome	Sitting down and turning from side to side is uncomfortable. May complain of sciatica-type pain but pain starts at the buttock rather than the lower back. Tenderness on deep palpation of the buttock just lateral to the sacroiliac joint.
Spondylolisthesis	Athletes or those with a history of attempting to lift a weight with sudden severe back pain. May have nerve root compression or spinal canal stenosis depending on the level and severity.
Inflammatory arthritis (axial spondyloarthritis)	More common in males. Onset <45 years of age. Inflammatory back pain. Alternating buttock pain due to sacroiliitis may be associated.
Abdominal aortic aneurysm	Usually, middle aged or elderly males. Unable to find a position of comfort and pain not relieved by rest. May have other risk factors for atherosclerotic disease. Pulsatile abdominal mass on examination.
Cauda equina syndrome	Neurological features in both lower limbs which may be patchy. Urinary and faecal incontinence or urinary retention/constipation. Saddle anaesthesia.
Malignancy: multiple myeloma, bone secondaries	Age >60 years (younger age does not exclude this). Nocturnal pain. Unexplained weight loss. Associated loss of appetite, alteration of bowel habits, etc.
Infection	Past history of tuberculosis. Immunosuppression (due to medication, IV drug use, HIV, chronic disease like diabetes). History of fever and/or unexplained weight loss.

Table-1: Some common and/or serious causes of back pain and their clinical features[1,2,3]

Clinical tip 1: Listen to the patient

A thorough history bearing in mind the anatomy of the indicated region as described above, cannot be overemphasized. One important part of the history to ascertain right at the beginning is whether the back pain is mechanical or not.

The nature of pain in most instances is worsen with activity and settle with rest. We term this mechanical pain. In contrast, non-mechanical pains do not settle with rest.

One such non-mechanical pain is inflammatory back pain. A patient with inflammatory back pain will complain that he/she is uncomfortable on waking up from sleep or following a period of rest. It will take beyond thirty minutes for the pain and stiffness to wear off so that the patient can comfortably move about or even bend to tie the shoe laces. They may wake up from sleep during the latter part of the night (i.e., after midnight) due to pain and stiffness in the back. They also might complain of buttock pain due to inflammatory sacroiliitis, which may sometimes be short-lived and alternate with the opposite side.

If any of these features are there, the patient should be referred to a rheumatologist without delay, due to the clinical suspicion of axial spondyloarthritis, which is an inflammatory type of arthritis. Consequence of delayed treatment is irreversible deformity with fusion of vertebrae. With current advances in treatment, this condition is treatable with great improvement of the quality of life if intervened early. Given the majority of affected patients are young males, satisfactory early treatment would change the outcomes significantly.

Another important cause of non-mechanical back pain is infection or malignancy. Again, the pain will not settle with rest and they may also complain of nocturnal pain. Given the possibility of such sinister causes for back pain, it is important to pay attention to any 'red flags' in the history.

Clinical tip 2: What are the red flags?

These are symptoms that would indicate a serious underlying pathology in a patient who complains of back pain. (Table 2) If any of these features are present, it may be prudent to go for an early referral to a specialist. But this should be based on clinical judgement as well. For example, if the only red flag is the patient being over the age of 50 years, and you believe the pain is purely mechanical in nature without a serious cause on initial assessment, you may choose to treat the patient conservatively at first. However, if there is no improvement over the next 6 weeks, it is advisable to seek specialist opinion.

• Pain that is increased or unrelieved by rest
• Nocturnal pain; pain that would wake the patient up from sleep at night
• Associated new-onset faecal or urinary incontinence
• Lower limb neurological features
• Unexplained weight loss
• History of trauma
• Patients over 50 years of age
• Long term steroid use
• Possibility of immunosuppression: immunosuppressive medication, HIV infection, IV drug users
• History of tuberculosis or cancer
• Associated fever

Table 2: Red flags in a patient with low back pain[1, 2, 3]

Clinical tip 3: What essential clinical examinations should be undertaken?

As an initial step, it is important to localize the back pain. The spine should be observed for any abnormality of the curvature and this can be complemented with palpation. Abnormalities like kyphosis, scoliosis and exaggerated lumbar lordosis can be detected this way. On palpating along the spine, detection of an acutely pointing angle, termed a gibbus deformity, may be a sinister finding indicating collapse of a vertebra due to a fracture, infection or malignancy.

Another important aspect of examination is lower limb neurological examination. In primary care, a comprehensive

neurological examination may not be practically possible. Alternatively, an abbreviated examination including ankle and big toe dorsiflexion, ankle and knee reflexes, disturbed light touch perception over the medial and lateral aspects of the foot and the straight leg raising test (SLRT) can detect most of the relevant neurological signs in a patient with back pain[1]. In those with positive signs, a more detailed examination needs to be done.

One of the most important but commonly misinterpreted tests in primary care is the SLRT. To perform the SLRT, the patient should be supine without a pillow under the head. The examiner would then raise the leg of the patient by holding the posterior heel, while keeping the knee fully extended, and observe for pain in the posterior thigh and leg in an L5/S1 distribution[4]. Observation of such pain at 30 to 60 degrees of hip flexion would constitute a positive test indicating nerve root irritation[4]. If the pain arises at angles of more than 60 degrees, it is not due to sciatic nerve irritation but due to some pathology in the lower lumbar spine or the SI joints[4]. Pain at less than 30 degrees can be due to hip or SI joint pathology or even due to malingering. (Figure 1)

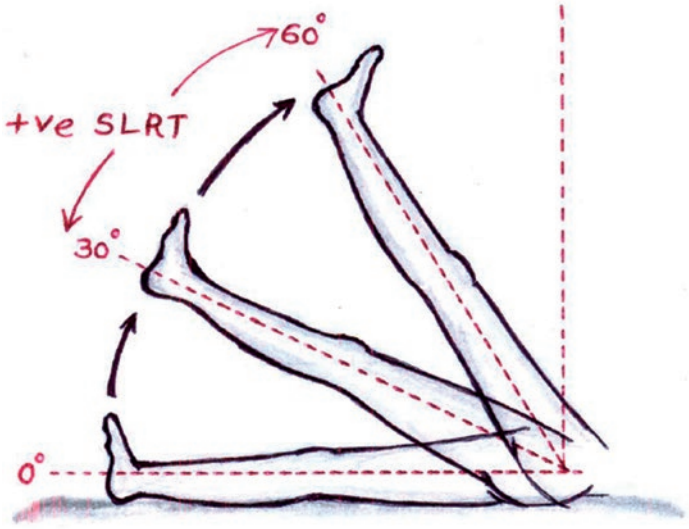

Figure 1: a positive SLRT is indicated by pain radiating from low back/buttock region along the posterior aspect of the tested leg, when the leg is between 30 and 60 degrees from horizontal.

Clinical tip 4: What initial investigations are indicated in primary care?

Not all patients with back pain need investigations. A good clinical assessment should suffice. Investigations should always be guided by the clinical picture. However, in patients over 50 years of age, even when they have mechanical back pain, a minimum of a full blood count, erythrocyte sedimentation rate (ESR) and a urine full report need to be done.

A common question is when to request an X-ray in patients with back pain? It has been shown that the vast majority of X-ray imaging requested for low back pain in primary care is not indicated and would not alter the outcome[5]. Especially in most cases of acute back pain, X-ray imaging is not warranted[1,5]. Whether to request an X-ray or not depends on the clinical picture. A practical guide is to reserve imaging for those who have 'red flags' with back pain or pain despite 6 weeks or more of conservative treatment[1,5].

One drawback of X-ray lumbar spine is the large amount of radiation used[5]. In those with neurological symptoms and signs suggestive of root compression, the value of X-ray imaging is dubious given the fact that the discs cannot be visualized[5]. Further imaging like CT or MRI in Sri Lanka, is better arranged after a specialist assessment.

Management

In the absence of a sinister pathology, most patients with acute back pain will recover with adequate analgesia and rest. In the absence of contraindications, non-steroidal anti-inflammatory medications are the most useful drugs in the management of musculoskeletal pains with paracetamol to supplement. Opiate analgesics should be kept as the last resort and used only for a shorter duration. Muscle relaxants like benzodiazepines may be useful in the acute stage[1]. Although we

see them being commonly used, steroids do not have any evidence of efficacy in acute back pain and are not recommended[1].

During the period of treatment, if there are newly developing or worsening neurological symptoms, patients should be reassessed urgently. Therefore, patients should be instructed to monitor their symptoms[1].

Input from a physiotherapist can be very valuable in the management of acute back pain, and is indispensable in chronic back pain. Early referral to a physiotherapist is encouraged[1,2]. Posture assessment, correction of occupational risk factors, muscle stretching and strengthening, are all part of a good physiotherapy programme.

If specialty opinion is required, whom should the patient be referred to?

There are many specialists who deal with back pain. Depending on the suspected cause, the patient may benefit from referral to a physician, neurosurgeon, rheumatologist, rehabilitation specialist or an orthopaedic surgeon.

Summary:

Back pain is a common complaint in primary care and is a frequent cause for time away from work. A careful history, bearing in mind the possible red flags, and a focused examination, can result in minimum investigation, targeted treatment and better patient outcomes. In cases of red flags for a serious underlying pathology or persistent pain despite 6 weeks or more of conservative therapy, referral to secondary care is recommended.

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FOR "ZOOMERS": SOME HELPFUL ADVICE

Online Zoom Meetings in Sri Lanka seem to be the order of the day during these difficult times that are beset with pandemics, economic downturns, transport difficulties, fuel shortages, food insecurity etc.

There is no doubt that these Zoom Meetings are a great way to communicate with many advantages. However, these can get a little bit disorganised at times and can get out of control with many people talking at the same time. In addition, there could be quite a bit of extraneous disturbances caused by inadvertently keeping the microphones unmuted by the participants.

The following are a few suggestions, forwarded in good faith, to make life easy for all "zoomers".

- The Zoom Meeting should start at the designated time. There is no need to wait for 'crowds to gather'.
- The Host or Co-Host should keep the participants list as a pop-up open at all times and be on the lookout for the 'raised hand'. People who raise their hands should be accommodated at the earliest convenience. Once the person has been given the chance, the raised hand should be promptly lowered. It takes just only a 'click'.
- All participants, except the Host and Co-Hosts should be requested to mute their microphones at the start of the meeting to prevent disturbing the proceedings with extraneous noises like dogs barking and domestics asking what to cook etc. Whenever the participant wishes to speak, he or she should just press the space bar and keep it pressed and the microphone will be immediately live for as long as the space bar is kept pressed down. The moment it is released, the microphone will be muted.

This is lightning quick and makes life so much easier for the participants. One does not have to go looking for the microphone icon at the bottom left corner of the screen and switch it on and off for muting.

- If a 'raised hand' is not given a chance to speak within a reasonable time period, that participant could press the space bar and request permission to speak.
- It is best if only one person speaks at any given time, to make it an orderly process. If they feel like it, people could disagree on the issues discussed, without being disagreeable, of course.
- The Host should maintain order, without following the antics of the Speaker in the House by the Diyawanna Oya,

Happy 'zooming'; hopefully we can avoid the ill effects of 'hyperzoomia'.

Dr B. J. C. Perera

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Date	Time	Theme
2nd of September 2022	8.00 am – 3.30 pm	Maternal and Child Health
3rd of September 2022	8.00 am – 12.30 pm	Emergency and Critical care
5th of September 2022	9.00 am – 4.00 pm	Minimal Access GI Surgery
	8.30 am – 12.30 pm	Lessons learnt in clinical practice in COVID 19

Main Congress – 28th September to 1st of October 2022

Day 1	**Wednesday, 28th of September 2022**		
6.30 pm Session 1	**Inauguration ceremony & SLMA Oration** *SLMA Oration* *"Deciphering acute kidney injury in Sri Lankan viper bites: Is thrombotic microangiopathy the key?"*		
Day 2	**Thursday, 29th of September 2022**		
7.30 am – 8.30 am	**Registration**		
8.30 am – 10.00 am Session 2	Parallel session	Parallel session	
	Symposium 1 *Recent advances in Cardiology*	**Symposium 2** *Current concepts in Endocrinology*	
10.00 am – 10.45 am Session 3	**Keynote Address** *"Planetary health Global Health security from pandemics"*		
10.45 am – 11.15 am	**Tea – Poster Judging**		
11.15 am – 12.45 pm Session 4	**Symposium 3** *Adolescent Obstetrics and Gynaecology*	**Symposium 4** *Nutrition and Food Security*	
12.45 pm – 1.15 pm Session 5	**Plenary 1** *"Prevention & Reversal of Type 2 Diabetes – A Paradigm shift in facing the pandemic"*		
1.15 pm – 2.15 pm	**Lunch**		
2.15 pm – 3.15 pm Session 6	Free Paper Session 1	Free Paper Session 2	Free Paper Session 3
3.15 pm – 4.45 pm Session 7	**Symposium 5** *Current National Crisis: The Public health impact*	**Symposium 6** *Curiosities in Lifestyle Medicine*	
4.45 pm – 5.15 pm	Tea – Poster Judging		
5.15 pm – 6.15 pm Session 8	**Dr. S. C. Paul Oration** *"Using high throughput sequencing technologies to study genetic causes of ultra-rare neurological diseases"*		

Day 3	Friday, 30th of September 2022		
8.00 am – 8.30 am	**Registration**		
8.30 am – 9.00 am Session 9	**Plenary 2**		
9.00 am – 10.30 am Session 10	**Symposium 7** *Medical Writing*	**Symposium 8** *Pulmonology for the practicing clinician*	**Symposium 9** *Paediatric Gastroenterology*
10.30 am – 11.00 am	**Tea – Poster Judging**		
11.00 am – 11.30 am Session 11	**Plenary 3**		
11.30 am – 12.30 pm Session 12	Free Paper Session 1	Free Paper Session 2	Free Paper Session 3
12.30 pm – 1.30 pm	**Lunch**		
1.30 pm – 2.00 pm Session 13	**Plenary 4**		
2.00 pm – 3.30 pm Session 14	**Symposium 10** *Solid Organ transplantation*	**Symposium 11** *Practical approach to obesity*	
3.30 pm – 4.00 pm Session 15	**Plenary 5** *"Personalized Medicine"*		
4.00 pm – 4.30 pm	**Tea – Poster Judging**		
4.30 pm – 5.30 pm Session 16	**Professor N. D. W. Lionel Memorial Oration** *"Fetal haemoglobin induction as a treatment for thalassaemia: evidence from bench and bedside"*		
Day 4	**Saturday, 01st of October 2022**		
8.00 am – 8.30 am	**Registration**		
8.30 am – 10.00 am Session 17	**Symposium 12** *Understanding Frailty*	**Symposium 13** *Collaborative session with UNFPA*	**Symposium 14** *Economic crisis and its consequences on women's health*
10.00 am – 10.30 am	**Tea – Poster Judging**		
10.30 am – 11.15 am Session 18	**Dr. S. Ramachandran Memorial Oration** *"Cardiovascular risk prediction of Sri Lankans"*		
11.15 am – 12.45 pm Session 19	**Symposium 15** *Legal and Economic aspects of Road Traffic Crashes*	**Symposium 16** *Screening for malignancies*	
12.45 pm – 1.45 pm	**Lunch**		
1.45 pm – 3.15 pm Session 20	**Panel Discussion** *Political and Economic Crises in Sri Lanka – Impact on Health*		
3.15 pm – 3.30 pm	Closing Ceremony		
3.30 pm – 4.00 pm	**Tea**		
7.00 pm	Doctor's Concert		

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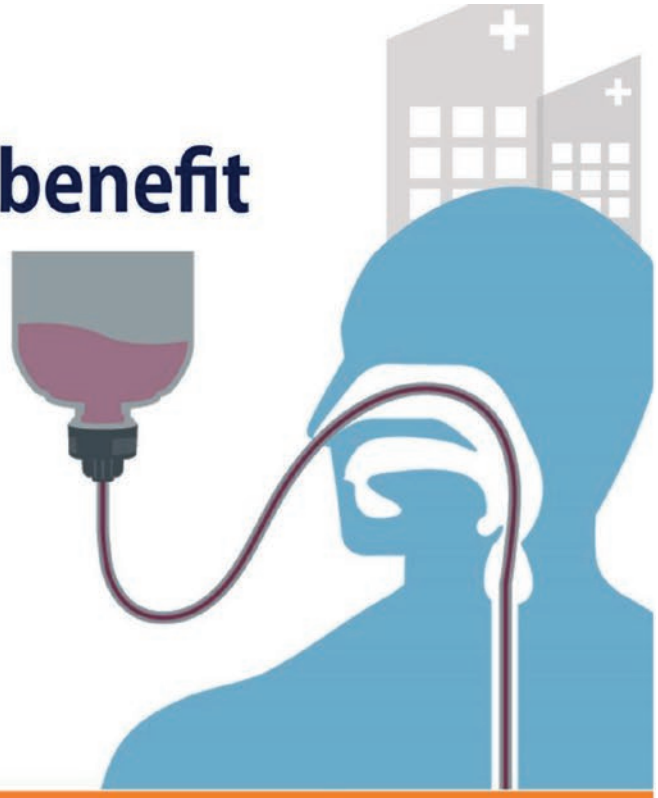

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Tips Useful In Improving the Efficacy of Physical Exercise and Prevention of Injuries during Physical Exercise and Sport

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Non communicable diseases (NCD) are considered to be a significant public health challenge since it poses a substantial burden on health and social systems throughout the world. In the Asia-Pacific region, the NCDs are expected to increase with rapid socioeconomic transitions [(1)]. In addition to a healthy diet, physical exercise plays a key role in managing and preventing non communicable diseases [(1)].

Physical Activity and Physical Exercise

Any body movement produced by skeletal muscles that require energy expenditure is considered a physical activity. In physical exercise, there are a set of regular physical activities that are carried out with a view to achieving many health benefits. Some of the health benefits are, preventing and managing non-communicable diseases such as cardiovascular diseases, cancer, diabetes, osteoarthritis and osteoporosis. Physical exercise is also known to reduce symptoms of depression and anxiety, enhance thinking, learning, judgment skills and self-esteem [(2)]. According to evidence from recent studies, regular physical exercise may have a protective effect against the adverse outcomes from COVID-19 [(3)] as well.

Physical Exercise Recommendations

The intensity of physical exercise can be categorized as mild, moderate and vigorous. Many methods such as talk test, rate perceived exertion scale, a percentage of heart rate maximum and VO_2 maximum are used to categorize physical exercise. Out of these methods, the easiest method to explain to a person is the talk test. According to the talk test, in mild intensity physical exercise, a person is able to sing even while exercising. During moderate-intensity physical exercise a person is able to speak a sentence, but will not be able to sing. In vigorous-intensity physical exercise, a person is unable even to speak a sentence. The following are World Health Organisation guidelines on physical exercise recommendations for people of various age categories [(4)].

3-4 year old - spend at least 180 minutes/day, out of which 1 hour of moderate to vigorous intensity. A variety of types are required.

5-17 years – 60 minutes/day of moderate to vigorous intensity exercise. Three days of strength training

18-64 years – 75-150 minutes of vigorous-intensity activities/week or 150-300 minutes of moderate-intensity activities/week. Strength training for 2 to 3 days/week

>65 years - 75-150 minutes of vigorous-intensity activities/week or 150-300 minutes of moderate-intensity activities/week. Strength training for 2 to 3 days/week. Need to add balance training 2-3 days/week

Globally, 1 in 4 adults do not meet the global recommended levels of physical activity [(4)].

A well-designed physical exercise programme should be able to improve aerobic endurance, anaerobic endurance, speed, strength, flexibility, proprioception, plyometrics and sports specific skills. Plyometrics and sport-specific skills are mainly useful for athletes [(5)]. Endurance training helps to improve cardiovascular and respiratory functions, burn calories, and improve neuromuscular coordination, blood sugar and lipid levels. Walking, running, cycling and swimming are good endurance exercises [(5)].

Types of Endurance training

Walking and Running

Walking and running are the two most common types of endurance exercise. Walking has two phases. They are the stance phase and the swing phase. The stance phase is divided into heel strike, flat foot, mid stance and heel raise components. The swing phase has follow-through, forward swing and heel descent. In running in addition to these two phases there is a float phase, where both feet are off the ground. Therefore, in the foot landing, the ground reaction force is greater in running compared to walking, and lower limb and back injuries are greater in running compared to walking. The two common types of runners are heel strike and forefoot strike runners. Out of the two types, the forefoot strike running is more

efficient than heel strike running since the number of components in the stance phase is significantly lower. The lower limb and back injuries are less in forefoot strike running compared to heel strike running since the forefoot is better designed to absorb the ground reaction force compared to the heel [6].

Cycling

Cycling too is a type of good endurance exercise. To reap the benefits and avoid injuries, selection of the proper type of cycle and posture suitable for cycling should be followed (6). The type of cycle depends on the terrain that is used and the purpose the cycle is used for. The terrain could be a flat terrain or a mountainous terrain. The purpose could be for a field event or a recreational type of cycling. Good positioning means having an anteriorly tilted pelvis, flat unkinked back, retracted scapulae, unlocked elbows and relaxed upper limbs (Figure 1) [6].

Swimming

Freestyle (Figure 2), backstroke (Figure 3) and butterfly (Figure 4) are popular types of swimming techniques. To improve the efficacy and prevent injuries, proper techniques should be followed. In freestyle swimming, inadequate body roll, striving for too much length in a stroke, and a line of pull-through that cross far beyond the mid line should be avoided. In backstroke swimming, inadequate body roll and pull-through while the elbow is extended need to be avoided. In butterfly stroke, entering the arms into the water too far outside the shoulder line and entering the arms into the water too close together need to be avoided [6, 7].

Benefits and Types of Strength Training

Strength training is useful in maintaining good posture and stability for prolonged periods, carrying out heavy physical activities, burning calories and improving blood sugar and blood lipid levels. Strength training physical exercises can be divided into three types. They are isotonic, isometric, and isokinetic [5]. In isotonic exercises, the joint range of movement changes significantly while the load acting on the muscle remains constant. In isometric muscle action, the load acting on the muscle is constant, but the joint range of movement changes minimally. In isokinetic exercises, the joint range of movement changes significantly at a constant velocity but the load acting on the muscle changes [5]. The Isokinetic type of exercise is conducted using special types of machines.

Strength training activities should start with low-intensity activities and gradually progress to high-intensity activities. Intensity increments should be made once a week and not more than 10% increases. Prior to changing the intensity, it is important to increase the number of repetitions. The usual recommendation for strength training is three days/week. Following these principles will help to achieve the strength training objectives while avoiding injuries to the muscular-skeletal system [5].

Flexibility Training

This type of training is carried out to improve the range of movement of joints and strength. Flexibility training is useful in preventing injuries and improving performance. Dynamic, static and facilitated stretching are carried out to improve the flexibility. Dynamic stretches are usually carried out prior to the main sporting activity and static stretches are done after the sporting activity. Facilitated stretching is done with the help of a therapist [6].

Prior to performing flexibility exercises, it is important to warm up the body for 10-15 minutes. Flexibility exercises must cover the main joints of upper limb, lower limb and trunk. During the flexibility exercises it is important to avoid sudden jerky movements, and there is a need to hold the stretch for 6-30 seconds [6].

Proprioceptive Training

Proprioceptive training is important for people of any age and is useful in preventing falls and injuries. This type of training needs to be carried out at least three days/week. Initially it must start with easy exercises and gradually progress to difficult ones. Single leg standing, uni-axial balance boards, multi-axial balance boards (Figure 5) and walking on tyres are used in proprioceptive training [6].

Plyometric Exercises and Sport-Specific Skills

Plyometric exercises (Figure 6) train the muscles and joints to perform at full speed and power. Sports Specific skills train the muscles and joints to perform the activity accurately at full speed and power (Figure 7). These types of training help to prevent injuries and improve performance. Prior to Starting plyometric and sports-specific training, it is important to have the full joint range of movements and 90% of pre-injured strength. This type of training is usually given to athletes.

Principles useful in preventing injuries and enhancing performance during Physical Exercises and Sports

Health check-up prior to embarking

on a regular physical exercise programme is useful in preventing fatalities.

Early treatment of injuries using the (POLICE regime) at the field site will reduce complications and facilitate a full recovery. POLICE regime means, **p**rotection, **o**ptimum **l**oading, **i**ce, **c**ompression and **e**levation.

Partially healed previous injuries are a common cause for re-injures. Therefore, full rehabilitation of injuries will play a significant role in preventing re-injuries.

Muscle imbalances can occur due to prolonged periods of immobilization of injured limbs. If such muscle imbalances are not corrected, athletes are more prone to injuries and they will not be able to perform at their fullest potential.

Training errors such as stretching prior to warm-up, doing too much too soon, faulty technique, changing of running surface and not using correct equipment are some important causes of injuries. Therefore, rectifying these types of training errors is vital to prevent injuries.

Athletes need to be hydrated prior to the physical activity, during the activity, and after the activity. Dehydration is considered to be a cause for poor performance and it will make the athlete more prone to heat-related injuries.

Adequate nutrition is important for good performance and preventing problems such as osteoporosis. Carbohydrates, proteins, lipids, vitamins, minerals, fibre and water are essential components. The carbohydrate and protein requirements can change according to the type of physical activity and the duration of the activity. Prolonged duration endurance sports require a good carbohydrate intake and sports such as weight lifting require an increased protein intake.

Knowing the contraindications to taking part in sports and exercise as well as taking note of warning signs during physical exercise is useful to prevent fatalities. Fever, vomiting, and diarrhoea are contraindications to taking part in sports and exercise. Symptoms such as chest pain, headache, and syncope during physical exertion are warning signs that cannot be ignored [5,6,8].

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Figures

Figure 1: Correct posture while cycling
http://ilovebicycling.com/how-to-maintain-proper-cycling-posture/

Figure 2: Free style swimming technique
https://www.azumio.com/blog/fitness/how-to-swim-freestyle

Figure 3: Back stroke swimming technique
https://www.masterclass.com/articles/backstroke-tips

Figure 4: Butterfly swimming technique
https://www.pinterest.com/pin/how-to-swim-butterfly-technique-drills-tips--675891856571988220/

Figure 5: Multi axial balance board
https://greatist.com/fitness/balance-board-exercises

Figure 6: Plyometric exercises
https://www.avera.org/balance/sports-medicine-and-performance-training/get-a-jump-on-workouts-with-plyometric-training/

Figure 7: Sports Specific skills
https://www.shape.com/fitness/workouts/agility-cone-workout-improve-speed-coordination-burn-calories

Hyperactivity: Is it ADHD?

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Hyperactivity is a common complaint among primary school children. The definition of hyperactivity often depends on the observer and his understanding and expectations about the child's behaviour. Therefore, when a child presents with hyperactivity, it is important to obtain a good history from multiple sources, including school-teachers.

Although, Attention Deficit Hyperactivity Disorder (ADHD) is a common cause of hyperactivity and inattention, all children presenting with hyperactivity do not suffer from ADHD. Other causes of hyperactivity may include:

- **Normal age-appropriate activity:** The definition of hyperactivity or inattention may depend on the expectations of the parent or the caregiver. Therefore, what a parent describes as hyperactivity may be normal age-appropriate activity.
- **Situational hyperactivity:** Children may show hyperactive behaviour only in certain situations, while displaying normal behavior at other times. This is not ADHD and mostly due to environmental factors.
- **Difficulty in understanding:** If the child does not understand or cope with what is being taught at school, he/she will find it difficult to concentrate and may appear hyperactive.
- **Child with intellectual disability:** If the child has an intellectual disability, his/her mental age will be much lower than his/her chronological age. Therefore, this child will behave according to his mental age and not his chronological age, which may make him/her appear as hyperactive and inattentive compared to same aged peers.
- **Hyperactivity due to emotional disorders:** Recent onset hyperactivity and inattention in a child who previously had no hyperactivity may suggest the possibility of an underlying emotional problem, such as stress, anxiety or depression.
- **Organic causes:** Hyperactivity may sometimes be a manifestation of side effects to medication (e.g., sodium valproate, beta agonists). Rarely hyperactivity may occur due to organic conditions of the brain (e.g., encephalitis). In such organic causes, the hyperactivity would be new/recent onset and often associated with other features suggestive of organic aetiology.

Attention Deficit Hyperactivity Disorder (ADHD)

Attention Deficit Hyperactivity Disorder affects about 6.5% of children and adolescents in Sri Lanka[1]. It is commoner in boys than in girls. The main symptoms of ADHD include:

1. Hyperactivity

These children may be restless, fidgety, running and jumping around and getting up from the seat when he or she is supposed to be seated, may engage in risk-taking behaviour and talk excessively.

2. Inattention

They will have difficulty in concentrating on a single activity for long and will prematurely breakaway from activities, leaving activities unfinished. They will change frequently from one activity to another. They are easily distracted by environmental stimuli. They may forget to convey messages given by the school and may often lose their belongings. They often make careless mistakes in their work. They may appear to be not listening when spoken to and have difficulty in carrying out instructions and are also reluctant to engage in tasks that require sustained attention such as schoolwork.

3. Impulsivity

Due to impulsivity, they will have difficulty in waiting for their turn and have difficulty in waiting in a queue. They also frequently interrupt other people's conversations, may have difficulty in controlling emotions and may be quick to lose their tempter.

Diagnostic criteria

The mere presence of hyperactivity, impulsivity and inattention alone does not justify the diagnosis of ADHD, unless the above symptoms fall in line with the following criteria and requirements[2].

- The symptoms should be present in at least two different situations, for example at home and at school.

- The hyperactivity and inattention should result in impairments in daily functioning.

This may include incomplete school-work and poor school performance; sustaining frequent injuries due to hyperactivity etc.

- The hyperactivity and inattention should manifest during early childhood, and before the age of 12 years.

Comorbidities of ADHD

Children with ADHD are at a higher risk of having disruptive behavioural disorders (i.e., conduct disorder and oppositional defiant disorder), anxiety, depression, tic disorders and learning disorders. In addition, they are often rejected by peers, which may cause low self-esteem. These children are also at a higher risk of using tobacco, alcohol and other substances.

What should be done if you suspect that a child has ADHD?

Mild forms of ADHD can be managed by behavioural therapy alone, but moderate to severe ADHD require medications. The first step in management is educating the parents that the child's hyperactivity is due to an underlying disorder and not due to mere "naughtiness". The parents should be educated that physical punishment does not help a child with hyperactivity and in fact it can be counterproductive as physical punishment may lead to the development of low self- esteem and emotional disorders.

Behavioural management

The following behavioural interventions can help a child manage his symptoms in the classroom.

- The child should be seated away from distractions. For example, they should be seated away from the windows or doors where they can be easily distracted. They should be seated away from peers who are also hyperactive. If possible, the child should be seated close to the teacher so that the teacher can give him/her extra attention.
- Written instructions should be given whenever possible. The instructions should be short, simple and clear.
- The child should be trained to highlight key words in the instructions on worksheets to help the child focus on the directions.
- They will not be able to focus on a task for the same length of time as their classmates. Therefore, breaking the task/activity into smaller segments with breaks in between is needed.
- Children with ADHD tend to get bored easily. Therefore, using audiovisual methods of teaching during the lesson helps sustain their attention.
- Children with ADHD forget to convey messages home and forget homework. Therefore, they would benefit from keeping a separate notebook to write down any homework or messages given at school. At the end of the day, the class teacher can make sure that the child has written down all important messages and homework.
- Acceptable ways of providing necessary movement without disturbing the rest of the class should be provided. For example, they can be given objects that can be manipulated quietly such as a squashy ball. The child can be given a chance to move around within the classroom by getting him involved in the distribution of books in the classroom or getting him to write on the blackboard.
- These children often make careless mistakes in their work. Therefore, they should be trained to proofread their own work before handing them in. They can be given a checklist of their common careless mistakes (e.g., punctuation errors, errors in calculations) and taught how to use this list when proofreading their work.
- Colour coding of books will help them organize their schoolbooks in an effective manner.
- The child should be taught how to prepare an uncluttered workspace to complete assignments. For example, instruct the child to clear away unnecessary books or other materials before beginning his or her seatwork.
- In order to improve attention, an alternative environment with fewer distractions can be provided for assessments and examinations.

Behavioural interventions can also be used at home to manage inattention and hyperactivity.

- Children with ADHD function better when their life is structured. Therefore, the parents should be advised to have a daily routine at home.
- The child will do better if he does his homework around the same time and place every day. A place with minimum distractions should be chosen to do schoolwork.
- The parents should be advised to make sure that the child is not hungry, tired or sleepy when he is doing schoolwork, as these may further impair attention.
- Before the child starts schoolwork, make sure that the child has all the items (e.g.

pencils, colour pencils, scissors) that are needed to complete the activities so that the child does not have to get up and go in search of these items.

- The parents can be advised to help the child make a checklist where he can mark the activities that he has already completed and the activities yet to be completed.
- Due to their short attention span, they will have difficulty in remembering long instructions. Therefore, instructions need to be broken down into small, clear and simple instructions.
- Parents should make sure that they have their child's full attention before giving any instruction. The parent should be at the child's eyelevel and should make eye contact with the child before giving any instruction. This will help children with ADHD follow instructions more easily.

Pharmacological treatment

The most commonly used medications are stimulants such as methylphenidate. However, methylphenidate has a potential risk of causing seizures and cardiac problems and should be used with caution in children with seizures or a family history of cardiac issues. Methylphenidate can also cause loss of appetite and poor weight gain. Hence, it should only be initiated by psychiatrists. For children who have contraindications for methylphenidate or those who are intolerant to Methylphenidate, second line medication such as atomoxetine and clonidine may be used.

Therefore, if a child has moderate to severe ADHD which cannot be managed by behavioural therapy alone, he or she should be referred to a psychiatrist for commencement of medication and to assess for the presence of other comorbidities.

Prognosis

In a child with ADHD, hyperactivity usually improves in adolescence especially when it is mild and not present in every situation. However, Inattention and impulsiveness often persist into adult

life. About 50% of the cases diagnosed in childhood retain the full diagnosis in adolescence[4].

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Refractory breathlessness in palliative setting: Can we offer anything more?

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What is breathlessness?

Breathlessness is a subjective experience of discomfort in breathing, commonly experienced by patients with a range of life limiting illnesses such as end stage respiratory disorders, cardiovascular diseases, malignancies, liver problems, renal illnesses and neurological disturbances with varying degrees of severity in their disease trajectory [(1)]. The American thoracic Society has stated that the breathlessness (dyspnoea) is a "subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity." It further explains that it consists of increased work of breathing, chest tightness and air hunger or unsatisfied inspiration.

Breathlessness is a multi-dimensional frightening symptom for patients and a terrifying symptom for care givers. The "Total dyspnoea" is a biophysiological model which describes patient's experience of breathlessness in the four domains of physical, social, psychological and spiritual components [(2)]. This understanding is the key to the development of individualized care plans with pharmacological, mechanical and behavioural strategies.

The physiological basis of respiratory control of breathing in normal individuals is due to various impulses coming from peripheral receptors in muscles, joints and skin of the chest wall, pulmonary stretch receptors of alveoli and receptors in airways. These signals combine with impulses that originate from chemoreceptors of the aorta and carotid bodies. All these impulses are then transmitted to the pons and medulla. However, these signals are modulated by inputs coming from the motor cortex via the limbic system, adding emotional influences to the depth and rate of respiration. Finally, the sensation of breathlessness occurs as a consequence of the mismatch between respiratory supply (respiratory drive) and demand (physiological capacity) [(3)].

Assessment of breathlessness

In a palliative care setting, symptoms are generally subjective. Different patients perceive various symptoms differently. So, a comprehensive holistic assessment is of paramount importance in managing any symptom. Detailed history followed by a thorough clinical examination with minimal investigations will usually reveal reversible causes for breathlessness such as pneumothorax, pleural effusion, infections, anaemia or pulmonary embolism.

Detailed history is helpful to identify biopsychological context which needs rating and evaluating associated factors such as anxiety, distress, fears, past experience, effect on activities of daily living and well-being or any other psychological, social and spiritual elements which aggravate or relieve breathlessness[(4)]. Randomized controlled trials have shown early intervention of a palliative approach with complex multidisciplinary pharmacological and non-pharmacological interventions to improve breathlessness and confidence in breathing in patients with advanced diseases leading to breathlessness [(5)].

Emotional and behavioural responses to breathlessness which provoke anxiety and deconditioning of patients, leading to vicious cycles, leading perhaps to further worsening of breathlessness (Fig 1).

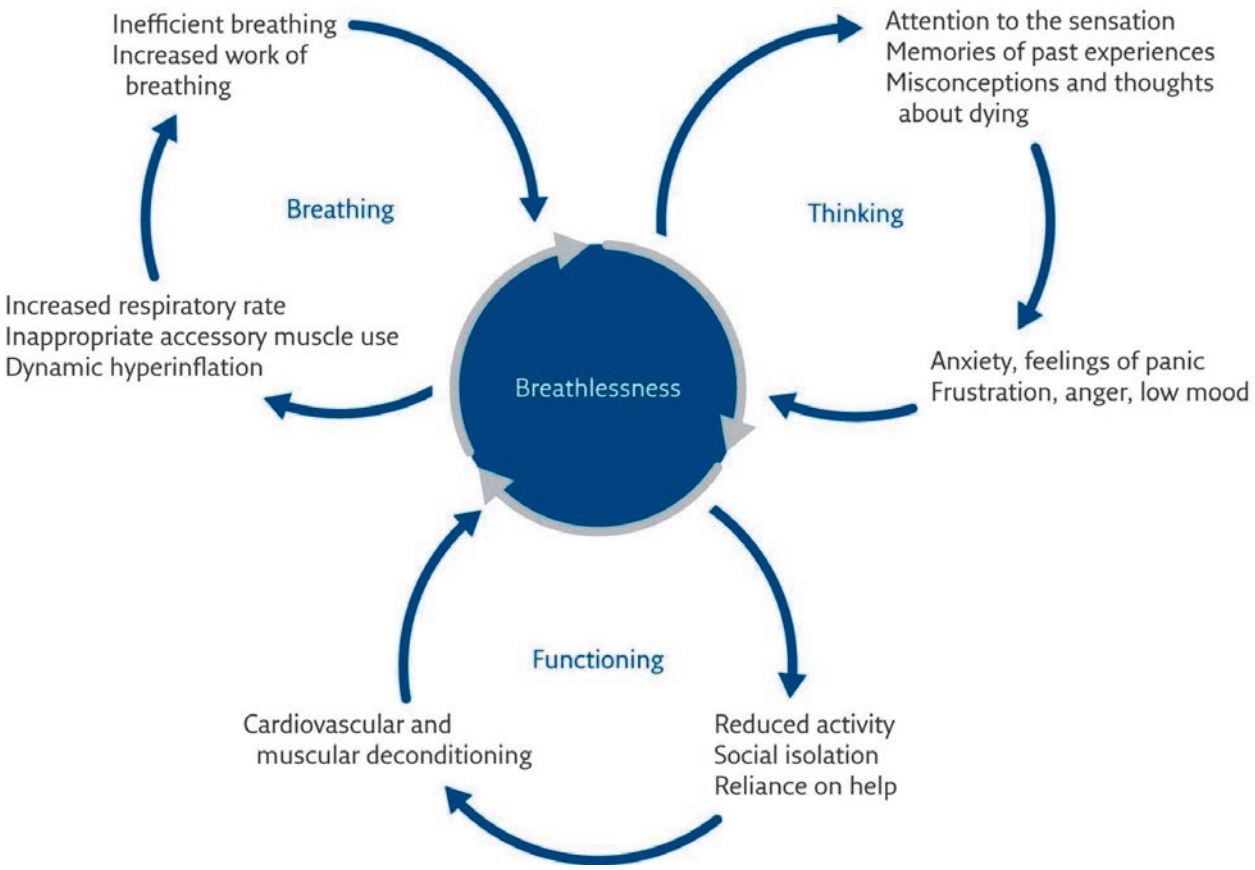

Fig 1: Cambridge BIS (CBIS) introduced, the 'Breathing, Thinking, Functioning' model (BTS) targeting different interventions assessing the vicious cycle of breathlessness [6].

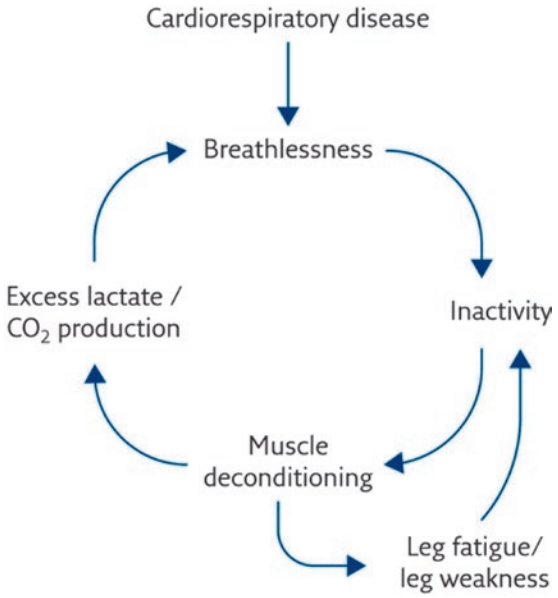

Fig 2: BTS model target interventions assessing three aspects which include inefficient breathing, feelings of anxiety and distress as well as muscle deconditioning, which are interlinked and in most patients one aspect dominates over the other two. Identification of the dominant component in each individual is a challenge and careful assessment helps in planning complex care (Table 1)

The work of breathing becomes inefficient in some stages of advanced diseases needing more use of accessory muscles and it increases the respiratory rate. Inefficient breathing worsens the patients fear of dying, and it becomes more and more with past experience of similar situations. This leads to the development of anxiety, to feel distress, and become panic-stricken. Patients with chronic breathlessness have a tendency to self-isolate and become inactive, which in turn leads to deconditioning of limbs, chest wall and accessory muscles. All these three aspects behave as vicious cycles which are interrelated to each other.

Management

Goals of care in patients with refractory breathlessness during the advanced stages of advanced diseases would depend on individual patient preferences and the stage of the underlying illness trajectory. We need to ensure that the treatment of underlying disease is optimized and address all treatable and reversible causes which may contribute to worsening breathlessness. Goals need to be reassessed frequently with the progression of the underling illness and other co-morbidities.

BTS model targets different components of the complex interventions effectively and this article explains the cultural adaptation and use of it in the management of patients in the Sri Lankan setting.

Table 1

	Breathing cycle	Functioning Cycle	Thinking Cycle
	Breathing exercises/ inspiratory muscle training breathing retraining, purse lip breathing	Individualized pulmonary rehabilitation/ Cardiac rehabilitation	Anxiety management
	Controlled breathing	Nutrition	Anxiety reducing interventions
	Paced breathing	Activity promotion	Addressing concerns and expectations
	Forward positioning	Walking aids	Hand held fan/ facial cooling
			Relaxation techniques
	Airway clearance techniques	Energy conservation	Cognitive behavioural therapy
	Hand held fan		Mindfulness
	Chest wall vibration		
	Non-invasive ventilation		

Non-pharmacological management and its outcome

Non-pharmacological measures are recommended before pharmacological management in palliation of breathlessness. These are strategies to encourage the the reversal of muscle deconditioning, reducing the work of breathing and maximizing the use of skeletal muscles. The perception of breathlessness will reduce with air movement such as by exposure to fresh air and using hand held fans.

Hand held fan

This is a very simple cheap intervention undertaken with a small portable hand-held fan. The air movement on to the face stimulates facial and nasopharyngeal receptors, which trigger stimulation of events in the brain stem respiratory centre.

The airflow should be directed to the face in the nose and mouth area. Patients themselves are advised to keep a fan close by and use it when feeling more breathless or during a panic attack.

Breathing techniques

Joint British Thoracic Society and Association of Chartered Physiotherapists in Respiratory Care, National Institute for Health and Care Excellence (NICE) has described, several breathing techniques to ease the difficulty in breathing (Table 2).

Table 2

Breathing technique	Mechanism of action
Breathing control to encourage patients to bring back their breathing to an efficient pattern.	Deters hyperventilation by encouraging appropriate tidal volume, promotes efficient use of breathing muscles, promotes even distribution of inhaled air by encouraging smooth laminar air flow.
Pursed-lip breathing during exertion	Increases expiratory airway pressure and maintaining airway patency, thus improving expiratory airflow and reducing dynamic hyperinflation.
Exhalation on effort ('blow as you go')	Focuses on out-breath and facilitates recovery breathing.
Relaxed, slow, deep breathing	Reduces respiratory rate and aids recovery, facilitates more effective ventilation, can be relaxing and calming.
Paced breathing	Maintains control and reduces dyspnea during exertion.

Positioning and energy conservation

Leaning forward and upper limb bracing in combination have benefits to improve breathlessness. Upper limb bracing is done for example, by placing hands on hips in order to fix the shoulder girdle passively to assist respiratory muscles to increase the efficacy. Forward leaning helps to improve force of respiration and ventilatory capacity by doming the diaphragm.

Energy conservation methods such as the use of walking aids and rollator frames, help in reducing breathlessness in activities of daily living. Patients need to understand the limitations and have to work on it towards realistic goals. These goals should be reassessed with the progression of the illness and after new changes have occurred.

Cognitive behavioural therapy

Breathlessness is closely associated with anxiety. To break the cycle of breathlessness, simple interventions would help a patient to overcome anxiety, while identifying its trigger by each individual patient. Further useful measures are avoiding unhelpful thoughts, mindfulness, relaxation exercises and distraction techniques.

Pulmonary rehabilitation

Pulmonary rehabilitation in advanced disease needs careful assessments and depends on the goals of care for each individual patient. This will improve the functional capacity, mobility, exercise tolerance and quality of life in carefully selected individual patients.

Pharmacological Management

Opioids (morphine)

Oral or subcutaneous morphine have the largest evidence in palliating refractory breathlessness in patients with end stage diseases with cancer and non-cancer aetiologies[7,8]. Opioids act on reducing the feeling of breathlessness and is believed to be due to both central processing modulation and peripheral opioids receptors in bronchioles and alveoli, together with a decrease in brainstem responses to hypoxia and hypercapnoea.

Therapeutic trial of morphine is to be undertaken in the following fashion:

- Immediate release oral morphine 2.5mg 4-6 hurly or as required or sustained release morphine 10mg once a day.
- Look for patient's response and adverse effects such as drowsiness, nausea or constipation.
- Increase the dose slowly in steps approximately by about 30%, if tolerated, to a maximum of 5-10mg every 4 hourly, or sustained release morphine 30mg every 12 hourly.
- If patient is unable to take orally, one would need to use the subcutaneous route.
- Patients with renal impairment and elderly should use 1-2 mg of oral morphine every 6-8 hours.
- In patients who are on regular morphine for pain; 25-50% increase of regular 4-hour dose using for control of pain.

Anxiolytics

Breathlessness is often accompanied by anxiety and panic attacks due to the feeling of suffocation and death.

Long-acting benzodiazepine is recommended for patients who have severe anxiety and

interruption of sleep at night due to panic attacks.

- Oral diazepam 2.5mg nocte
- Oral or sublingual clonazepam 0.5-1mg nocte

When there are crisis situations with panic attacks, benzodiazepines with short half-life is more preferable

- Sublingual lorazepam 0.5-2mg (if available)
- Subcutaneous midazolam 2.5-5mg
- Oral alprazolam 0.25-5mg

Frusemide

Nebulization of frusemide has shown benefit by protecting against bronchospasms

Oxygen

Oxygen may help to relive breathlessness in hypoxic patients at rest or on exertion; (PaO_2 less than 8 kPa/60mmHg (roughly the equivalent of oxygen saturation of 90%.) It is not indicated in patients who are not hypoxic and has feelings of breathlessness. It should be avoided in the non-hypoxic patient due to the physical and psychological dependence which increases the anxiety level.

It is important for all healthcare professionals who manage the breathless patient to remember that breathlessness similar to pain is a subjective symptom which can only be described by the patient. It is complex and a detailed evaluation based on the breathing, thinking and functioning cycle, will help to distinguish the most important driver of breathlessness in the individual patient and will help the clinician to tailor the treatment strategy and to successfully manage this most distressing symptom.

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IMPORTANT NOTICE

Any member of the SLMA who considers himself/herself suitable to guide the SLMA in the year 2024 as President is kindly requested to contact the SLMA Office to obtain the application for President Elect 2023.

The applications should reach the Honorary Secretary on or before 30th September 2022.

Beyond Medicine: Doctors as Entrepreneurs

Dr Ruwan Wathugala

MBBS (Colombo)
Founder / Managing Director of
Royal Cashew Group of Companies

a. Was it an original thinking or carrying on parents' business?

Doing a business was my original thought from my childhood. I always thought, I need to pay back to my motherland for the free education provided. The best way would have been bringing in foreign currency. In order to do this, I wanted to export one of the agricultural products from Sri Lanka.

Upon my own research, I found out that Sri Lanka's main exports, after textiles is tea, followed by other crown jewels being spices, coconut and cashew. I also stumbled upon a very interesting fact, that is, all but cashew had due global recognition. As I hail from Gampaha, an area where cashew processing is quite a well-known home industry, my natural inclination was towards cashew. I discovered that the industry was at a primitive stage, both in processing as well as in packaging and hence I thought cashew is a good product to start with.

Further, I wanted to be financially independent.

b. Was it a childhood ambition?

Yes. It was my childhood ambition. I started dreaming on a business as soon as I entered the medical faculty.

My dream was encouraged and supported by my dearest Amma and other loving family members from the very beginning. Actually it was my Loku Akka, who suggested the brand name," ROYAL", saying that, I could honor my Alma Mater by using it.

After contemplating over two years, I was able to develop a superior quality packaging. In order to do so, on a not so fine day, as it was raining cats and dogs, I set on searching for better packaging, in my Honda XLR 125, no 127 - 2032. I still recall that, when offered a seat, at Wonder Pack Company, I was unable to sit as I was soaking wet, from head to toe. I designed the labels on my own, using the photos taken with my Yashika 108 SLR Film Camera which was a gift from my late father and began roasting and packing in our 12ft by 15ft garage. With sample packs of four sizes of roasted cashew nuts, and submitted samples to Cargills Supermarkets.

On 21st May 1999, I received the first order from Cargills, which was the biggest achievement in my life at the time, next to the admission to the Medical School. Then, it was followed by the second order, from Sri Lankan Air Lines. My business grew gradually with the orders received from Arpico, Keells, and Bairaha Super Markets. With the growth of the business, I had to face new challenges which pushed me further towards advanced movements. Thanks to Rev. Horagolle Dhammika Thero, I could start a small processing facility, at Vijayapura, Sudarshanaramaya in Wanathawilluwa in 2002. I am ever so grateful to my uncle for arranging an industry visit and training in Tanzania, a global leader in cashew industry in 2003.

While the business was growing satisfactorily, I participated at The Malaysia Food and Beverage exhibition in Kuala Lumpur which was my first of the kind, followed by many more. It paved the path for our first international order, from SA Industries, Malaysia in 2004. Subsequently, we received a few more orders from Australia and New Zealand which we continue to supply to date.

Through our journey, we won many awards, including the Asia Star Award, Entrepreneur of the

Year Award, NCE Export Awards, and became the first ISO 22000 certified cashew processing plant in Sri Lanka.

We started the first outlet in Nugegoda, in 2007, followed by a few more premium outlets. In order to cater to the rapidly increasing demand, we imported a fully automated, cashew processing plant in 2019.

c. How do you balance the business with medical work?

After passing out from Colombo Medical Faculty, I completed my Internship at the Teaching Hospital Jaffna in 2005 followed by a RHO period at Teaching Hospital Anuradhapura. Then I got my post-intern appointment at Divisional Hospital Deegawapiya as MOIC. After completing one year there, I joined Wijaya Kumaratunga Memorial Hospital, Seeduwa in 2007 and I am attached to the same hospital to date. I do my full time duty in the hospital at PCU and NCD clinic.

Even though, I do my fulltime duty at the hospital, I manage to do my business as well from 1999. Those days, at the beginning of the business, I did all on my own. But now I have a very good professional team and a full-fledged corporate structure to take the leadership.

d. Any obstacles on the way?

There were so many obstacles; however, I took those as challenges and always searched for the answers to manage. That is what I call, "business management." At the Start, finding the time was the biggest challenge and getting used to the habit of getting up early, I could manage the "time." "The location" to do the cashew roasting and packaging was my home garage. Thereafter, it was converted into a small factory. I purchased some used machinery at a cheaper rate and did adjustments to suit my requirement.

e. Have you they given up medicine altogether? Got tired of routine private practice? If so, any regrets now.

Practicing medicine is my main duty. Business is my passion. I always enjoy the hospital practice and always do the role beyond the job. I talk to the patients and relations more. I met many important and interesting people during hospital practice, who later supported my business in many ways. Some of them even joined the company later. So many people whom I have met at business, were supported by me with my expertise. But I had to sacrifice my private practice, but no regrets there.

f. Financially are they better off?

Yes, absolutely, the most important factor in business is, once developed to a certain stage it will create a passive income. At the beginning we had to work hard and spend more time on it. But later we get more free time as well as passive income.

g. Does medical training help in managing the business in any way?

Yes, definitely. Managing a business extremely is similar to managing a patient. If we follow the same method, of identifying the problem by taking history, and then having to investigate and recognizing the problem, then we can give the immediate solution which can be in the form of an intermediate and a long-term management plan. Moreover, the courage we got by the medical practice was very useful in managing business. Taking risks and attending to emergencies and giving quick solutions, applies in business as well. The confidence built in us and patients' trust upon us too, supports us to be confident and win the trust of customers to keep what we promised. Staff management is also almost similar to that we have in hospital practice. Keeping records in hospital level and about patients too applies in same way which in turn give very good results making everything run smooth.

h. What advice to other doctors thinking of new ventures?

My advice is, professionals are welcome for the business field. If medical professionals do business the results would be absolutely brilliant, because as I explained, it is the same management system. If you do, my advice is to start as early as possible. Start in a simple way. Later it can be expanded to any extent. Medical profession needs freedom at the latter part of the life considering the big effort from the school age. So, better start very simply even during medical faculty days or soon after internship. Once you develop the style, it can be carried forward without much effort.

ELIRA

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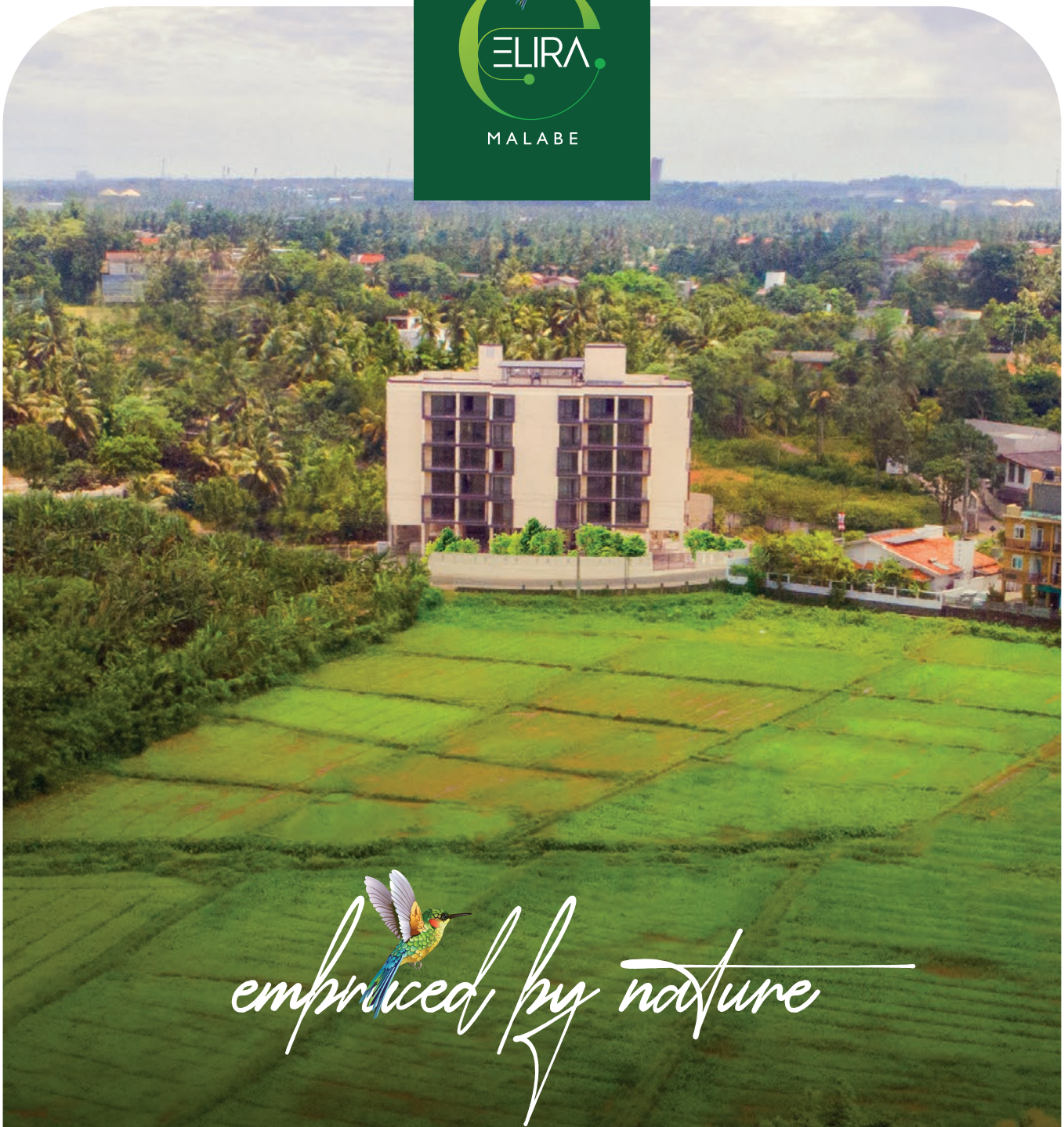

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