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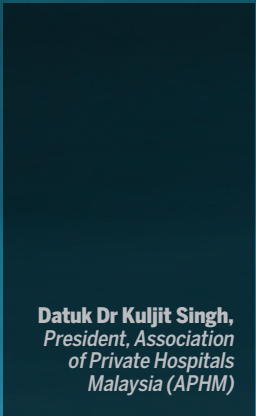
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Cautious optimism

As we look to 2022 with hope, there are
pressing issues to address. **p16-30**

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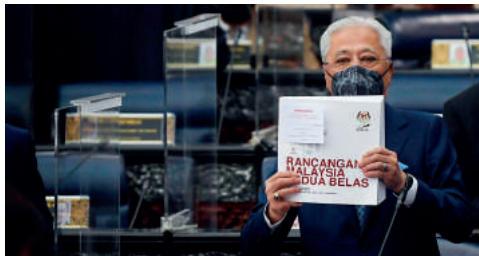


Malaysian
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Society



MALAYSIAN SEPSIS ALLIANCE
PERSATUAN SEPSIS MALAYSIA
(MySepsis)





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Greed for power

MOST of us believed that 2021 would be better than 2020. But as it turned out, the Covid-19 variants ravaged the country and other parts of the world. Even with the aggressive vaccination drive, the fear of contracting the deadly virus continues.

It is not only containing the virus that concerns most Malaysians. It's the mismanagement of the economy that is more worrying. Small businesses have closed by the thousands, and many SMEs continue to struggle to keep afloat. Many will soon go bust.

The odd thing is, while businesses and individuals suffer, our banks continue raking in billions of ringgit in profits. Most only offer distressed companies and businesspeople moratorium on their loan repayments.

There is certainly something amiss if the government doesn't step in to save small businesses. They are, after all, the backbone of the manufacturing sector. And it does not help when federal ministers foolishly call for certain businesses to be shut for no good reason.

This is the time to save the country's economy from a total collapse. The damage from Covid-19 is devastating. Inflation is rising rapidly in many countries, including Malaysia. In the US, it is at a 30-year high.

With prices soaring and incomes decreasing, Malaysians are becoming poorer. Thousands have lost their jobs, and we wonder how long their savings will sustain them.

Contributors withdrew a staggering RM101 billion from the Employees Provident Fund (EPF) during the pandemic. As a result, 6.1 million members have less than RM10,000 in their accounts, and of that number, 3.6 million have less than RM1,000.

This government should get its priorities right. The main preoccupation among politicians now seems to be winning elections, not managing the economy.

Was it necessary to have the Melaka elections? Didn't we learn from the new wave in cases caused by the Sabah elections? And couldn't we have postponed the Sarawak elections?

Switching political allegiance for power and money has been the norm among many politicians since February 2020. They are more interested in gaining political control than serving the people.

The health of the people and the economy is deteriorating. That should be of paramount importance, not the constant greed to take over the Federal and state governments. Let's hope this nonsense stops in 2022.

LKL confident of rising healthcare demand

LKL INTERNATIONAL Berhad is enthusiastic about the fiscal year ending Sept 30, 2022 (FY22), owing to strong demand for medical/healthcare beds and accessories, as well as the planned launch of its lifestyle pharmacy.

LKL also plans to build its first unique lifestyle pharmacy chain shop in the fourth quarter of this year.

Its Executive Director Lim Ming Chang said that by entering the business-to-consumer (B2C) space through its new lifestyle pharmacy chain, the company intended to serve not just healthcare providers with its medical beds and peripherals but also

the general public.

"Therefore, apart from our manufacturing and trading segments, our latest pharmacy retail chain space will allow us to capitalise on consumers' increasingly health-conscious stance amidst the pandemic," said Lim in a recent statement.

Due to expenditures for its personnel share option schemes, LKL reported a net loss of RM1.9 million in the fifth quarter (Q5) ended July 31, 2021. In the fifth quarter, the company brought in RM13.5 million in sales.

Its manufacturing unit, which



includes the provision of hospital beds and medical peripherals and accessories, generated RM8.6 million in sales representing 63.9 per cent of total revenue.

Meanwhile, earnings from the trade division, which includes medical peripherals and accessories and medical equipment, accounted for RM4.9 million, or 36.1 per cent of total revenue.

Local sales grew for RM12.5 million, or 92.8 per cent of the company's

total revenue.

In Q5 2021, exports accounted for RM970,000 or 7.2 per cent of the company's revenue, with Asia accounting for RM960,000 or 7.1 per cent, and the Middle East accounting for RM200,000 or 0.1 per cent.

The company had revenue of RM63.4 million and a net loss of RM5.7 million for the 15 months.

There are no comparison numbers in the financial report due to the change in financial year end.

Improving survival for breast cancer patients

NOVARTIS Malaysia-initiated workshop, "Staying Hopeful, Staying Strong: Surviving Advanced Breast Cancer," in conjunction with breast cancer awareness month, was designed to empower patients and caregivers.

According to Malaysia National Cancer Registry Report 2012-2016, more than 60 per cent of diagnosed breast cancer cases in Malaysia are already in the advanced stages.

Patients may feel pessimistic after receiving a diagnosis in the later stages, as it is typically considered that the chances of survival are slim. This is no longer the case, thanks to recent innovations.



Mohamed Elwakil, General Manager Malaysia & Brunei, Novartis Oncology stated that Novartis Malaysia was committed to supporting the breast cancer community on their journey.

"We want patients to know that hope is not lost and there are treatments available that have shown positive results."

With the identification of breast cancer subtypes, treatment options have expanded across our healthcare systems compared to four decades ago

where patients only had the treatment option of radiation, chemotherapy, or mastectomies.

Thus, the treatment responses and survival are coupled with less side effects and maintains good quality of life among patients.

Dr Vaishnavi Jeyasingam, Consultant Oncologist from Kuala Lumpur Hospital, shared that in the last decade, the major advancements in the field of breast cancer classification clearly proved that not all breast cancers behave the same way.

"Breast cancers are classified generally into hormone positive, HER2-positive and triple negative cancers."

By classifying a patient's background, medical problems, social and logistic needs, a good treatment and patient selection would improve long term outcomes and survival

Dr Azura Rozila Ahmad, Consultant Oncologist from Beacon Hospital in Petaling Jaya, added advancements in oncology have enabled defining breast cancer at the molecular or even gene expression level.

As the future seems promising, Dr Azura expects more effective medications being accessible, which will hopefully improve the outlook for ABC patients.

"With the availability of various therapies, selection of treatments can be customised and personalised according to the patient's unique profile."



Partnership to raise disease awareness

ASTRAZENECA, a global science-led biopharmaceutical company, launched its Young Health Programme through a partnership with Hospitals Beyond Boundaries (HBB), focusing on youth and the prevention of non-communicable diseases (NCDs).

Held in conjunction with AstraZeneca's 40th Anniversary in Malaysia, the Young Health Programme was launched on World Mental Health Day with a pilot programme on youths' mental health, targeted at the adolescent residents of PPR Seri Pantai.

HBB was chosen as a partner as it is a non-profit organisation dedicated to improving the health of vulnerable communities through sustainable healthcare efforts in non-communicable diseases.

Present at the event were Dr Sanjeev Panchal, Country President, AstraZeneca Malaysia and Dr Wan Abdul Hannan Wan Ibaddullah, Co-founder & CEO of Hospitals Beyond Boundaries. They were accompanied by Tursiah Tino, Chairman of the PPR Seri Pantai Residents Association.

The event had the support of social welfare officers from the Social Welfare Department and saw the attendance of Datuk Ramlan Askolani, the Federal Territories Minister's Special Tasks Officer. Residents attended the event in batches to avoid crowds and ensure that SOPs could be observed.

The AstraZeneca Young Health Programme is a global programme being rolled out in Malaysia to focus on adolescent mental health and well-being.

The programme aims to improve health and wellbeing among young people aged 10-24, getting them to take control of their health, especially to manage long-term conditions including mental ill-health.

Adolescent mental health was chosen as the focus topic because of the impact of the Covid-19 pandemic, which has exacerbated mental health challenges among Malaysians.

Commenting on the launch of the AstraZeneca Young Health Programme, Dr Sanjeev said: "Under our Young Health Programme, we are honoured to partner with Hospitals Beyond Boundaries. They have done remarkable work in Malaysia and around the region to uplift the health of our most disadvantaged community members, making them an ideal partner for AstraZeneca's aim to improve the health outcomes for society."

Globally, the Young Health Programme has reached more than five million youths in 30 countries across six continents since it was launched in 2010. In 2018, the Young Health Programme was recognised by Ethical Corporate when it was named Community Investment Programme of the Year in the Responsible Business Awards. — *The Health*

Duopharma distributes Sinopharm vaccines



DUOPHARMA Biotech Berhad has further strengthened Malaysia’s Covid-19 vaccination efforts by distributing the Sinopharm Covid-19 vaccine.

The company had earlier entered into an agreement to import the vaccine from Beijing, China, covering a collaboration for the Malaysian market. Duopharma (M) Sdn Bhd, a wholly owned subsidiary of Duopharma Biotech, has been authorised by Sinopharm as the product registration holder and to engage in the sales and distribution of the vaccine.

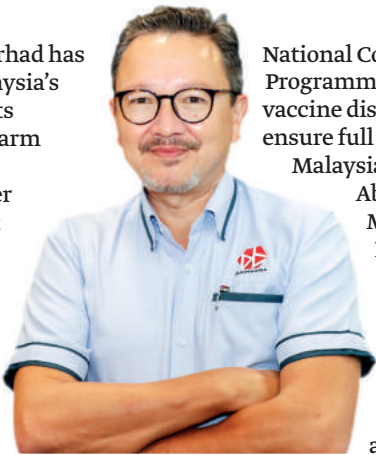
Duopharma Biotech said in a recent statement that in July 2021, the Ministry of Health’s (MoH) Drug Control Authority (DCA) had approved the conditional registration of the Sinopharm Covid-19 vaccine for use in Malaysia. The vaccine is also included in the World Health Organisation’s emergency use listing (EUL) and is approved for emergency use in over 65 countries, including various European Union countries.

Duopharma Biotech is one of Malaysia’s leading pharmaceutical companies listed on Bursa Malaysia.

In addition, Sinopharm is among six brands of Covid-19 vaccines recognised by the Kingdom of Saudi Arabia, allowing Muslims who have been administered with the vaccine to perform the haj or umrah in Mecca. The Sinopharm vaccine is currently indicated for use in individuals aged 18 to 59 years.

“We are glad that Malaysia has managed to achieve a very high level of vaccination among adults and is making good progress among adolescents. The challenge in overcoming the Covid-19 pandemic requires collaboration and coordination at all levels.

“Duopharma Biotech is committed to supporting the Government’s vaccination programme and augmenting the



National Covid-19 Immunisation Programme (NIP), by expanding vaccine distribution channels to ensure full vaccine coverage in Malaysia,” said Leonard Ariff Abdul Shatar, Group

Managing Director of Duopharma Biotech.

The first shipments of the Sinopharm vaccine arrived in Malaysia in batches in September 2021 and is now widely available at clinics and private hospitals nationwide.

With a shelf life of 24 months, it is appropriate for longer-term vaccination efforts.

Additionally, the Sinopharm vaccine is a convenient single-dose per vial of 0.5mL that helps to prevent wastage and is easy for planning vaccine administration. The vaccines cold chain storage is also straightforward, at a standard conventional storage temperature of 2°C to 8°C.

Administration of the vaccine is fully integrated into the national immunisation system, where the vaccines are tracked based on the Vaccine Management System provided by the MoH, with real-time integration of both MyVAS and the MySejahtera app.

Those receiving their first and second doses will immediately have these recorded on their MySejahtera accounts and receive their digital certificate accordingly.

For vaccination of large groups, such as the workforce in manufacturing facilities, Duopharma Biotech, via collaboration with healthcare organisers, provides private vaccination services and mobile vaccine clinics.

Healthcare providers interested in procuring the Sinopharm vaccine or corporations wishing to arrange for vaccination may contact Duopharma Biotech’s Customer Service for enquiries via email at cs@duopharmabiotech.com.

A first for Malaysian-made face mask

AS THE leading Malaysia-based surgical face mask manufacturer, EMPRO becomes the first face mask brand in Southeast Asia to ace the Viral Filtration Efficiency (VFE) test by world-renowned German experts - TÜV SÜD. Based on this, manufacturing rates are expected to increase to meet domestic and international demand.

TÜV SÜD is a symbol of trust for consumers to identify brands that professionals have thoroughly inspected to ensure international quality, safety, and sustainability standards.

The EMPRO face masks stood well against TÜV SÜD’s VFE testing and managed to achieve an average rating of 99.9 percent.

This would mean that the EMPRO face masks are exceedingly effective in

blocking out even the tiniest of particles [mean particle size (MPS) of 3.0 ± 0.3 µm] from entering or escaping from the mask, making it superior to Bacterial and Particle Filtration Efficiency (BFE & PFE) ratings.

Being one of the most highly regarded and hard-to-attain accreditations for medical devices globally, EMPRO brand owner Prof Dr Coco Alex was gratified for bringing global recognition to Malaysia as a reliable country for face mask production.

The EMPRO face masks can cater to people across the globe and stand out as one of the best face mask brands globally, not just because of its VFE rating but also because of the incorporation of patented AeroFit Technology and Airlock Seal in their masks.

Briefs

Straumann Group fully operational

THE STRAUMANN Group, a global leader in tooth replacement and orthodontic solutions, is fully operational in Malaysia.

With convincing advantages over conventional treatment, its products are designed to restore aesthetics for the long-term.

Straumann Group, will offer Neodent and Straumann implant solutions that deliver innovative systems.

By connecting its digital solutions, services, equipment with partners and third parties, the Group delivers seamless digital solutions such as scanners and workflows for dentists, optimising patient treatment outcomes.

Straumann collaborates with the world’s largest scientific network to build the country’s leading aesthetic dentistry ecosystem.

“Oral health and oral aesthetics have become increasingly more important for dental consumers. From a patient perspective, they don’t view it as an implant as much as they view it as a tooth replacement,” said Holger Haderer, Straumann Group Executive Vice President and Head Implantology Business Unit.

“In addition, product advances and progress in digital dentistry provide a predictable implant restoration with a better fit and precision than traditional workflows. Procedures are more comfortable for patients and allow for immediate treatments on the same day, which also improves convenience,” he said.



Face masks for Pejabat Kebajikan Masyarakat, P.J.

SHILLS BEAUTY, the official distributor for Yuka Zan, has continued its CSR campaign by donating 130,000 pieces of medical grade face masks worth RM91,000 to selected charitable organisations and NGOs amidst the on-going Covid-19 pandemic.

The three receiving organisations were Pejabat Kebajikan Masyarakat, Petaling Jaya (55,000 pieces), The Lost Food Project (55,000 pieces) and Home GP Asia (20,000 pieces).

Pejabat Kebajikan Masyarakat, PJ is a governmental body that looks into the welfare services in the development and well-being of the community.

The Lost Food Project (TLFP) is a nonprofit food bank committed to rescuing surplus food and essential items from landfills and redistributing them to those in need. Home GP Asia connects healthcare seekers via house calls to professional, experienced healthcare doctors, nurses, caregivers and physiotherapists.

Joyce Lee, Managing Director of Shills Beauty said: “As we move into Phase 4 and resuming some sort of normalcy, self-care in the area of hygiene safety is crucial. Best to wear a quality medical face mask at all times when going outside in addition to practicing social distancing and sanitization. Yuka Zan is a health and wellness brand which believes that beauty, health and hygiene are essential for a healthy lifestyle”.



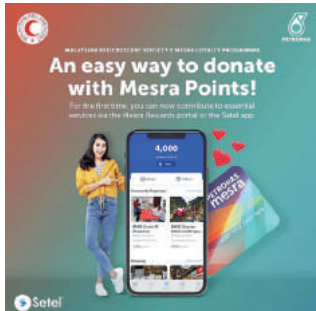
Petronas Dagangan's gives to Malaysian Red Crescent Society

PETRONAS Dagangan Berhad (PDB) has initiated a donation drive to benefit the Malaysian Red Crescent Society’s (MRCS) pandemic relief programmes aimed at assisting front-liners and communities battling Covid-19.

Mesra card members can now opt to redeem their points as donations to be contributed to any of MRCS’ programmes, including donations for Covid-19 Response Efforts, Emergency Ambulance Service, Disaster Relief and Response, and Health and Community Services. Contributions in the amount of RM10 and RM20 denominations can also be made directly via the Setel mobile application.

PDB Managing Director and Chief Executive Officer Azrul Osman Rani said: “Since the onset of the pandemic, PDB has continuously helped front-liners and the public through various community service programmes, including our Coffee Break Campaign and more recently, our Foodbank Programme.

“This new partnership with MRCS enables us to extend our contribution and reach out to more organisations and individuals. Most importantly, we can avail a platform for our customers who want to contribute through Mesra points redemption.” — **The Health**



Imports from Supermax halted in US

ONE OF THE country's largest glovemakers, Supermax Corp Berhad is the latest Malaysian company whose products have been barred from entering the United States due to forced labour claims.

Supermax and its subsidiaries; Maxter Glove Manufacturing Sdn Bhd, Maxwell Glove Manufacturing Bhd and Supermax Glove Manufacturing Sdn Bhd, have been placed under a withhold release order (WRO) by US Customs and Border Protection (CBP).

The order is based on "information that reasonably indicates their use



of forced labour and manufacturing operations", CBP said in a recent statement.

During its investigation, CBP also discovered 10 of the International Labour Organisation's indicators of forced labour. The importation of merchandise produced, wholly or in part, by convict labour, forced labour, and indentured labour, including forced

or indentured child labour is prohibited by Federal Statute 19 U.S.C.1307.

"With 10 of the 11 forced labour indicators identified during our investigation, CBP has sufficient evidence to conclude that Supermax Corp and its subsidiaries produce gloves in violation of US trade law," said CBP office of trade executive assistant commissioner AnnMarie R. Highsmith.

"Until the manufacturers can prove their manufacturing processes are free of forced labour, their goods are not welcome here."

However, in May, Supermax Corp had

said it adhered to labour laws on the treatment of migrant workers and was committed to combating forced labour, following a media report that the CBP had opened investigations into the company.

Apart from Supermax, FGV Holdings Berhad and Sime Darby Plantation Berhad are two additional large cap listed firms with a WRO against their products due to forced labour claims.

Top Glove Corp Bhd, another glovemaker, obtained a WRO in July of last year, and the year-long ban was lifted on Sept 10.

Growth spurt in kids

ACCORDING to a 2017 national survey, Malaysian teenagers are not getting sufficient growth nutrients like iron and vitamin D, and they frequently skip meals.

Puberty is one of the most significant developmental spurts in a child's life, occurring between the ages of 10 and 19.

They grow quickly into little adults, but the rapid growth phase is often accompanied by increased hunger and exhaustion as the body expends more energy to generate tissue.

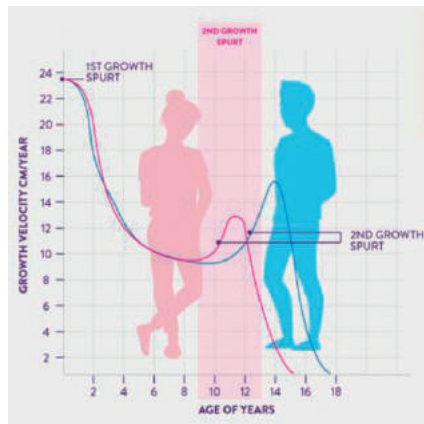
Nutrition may be a game changer for a child's growth trajectory, allowing them to reach their genetic potential, especially when they are between the ages of 10-15 and going through a growth spurt.

Obtaining the proper nutrients can fail to grow and thrive until growth eventually stops at the end of adolescence.

Abbott, a brand dedicated to creating healthy responsibilities that keep people living their best life, underlines the importance of parents recognising when their kid is going through a growth spurt and providing them with the proper nutrition to help them make the most of this exciting period.

There are six signs parents should look out for in monitoring their kid's growth spurt. Children are likely to experience a surge of hunger before and during growth spurts, which may last anywhere from 24 to 36 months.

Therefore, parents should ensure those extra calories come from complete, nutritionally packed foods rather than snacks and sweets.



According to the Journal of Clinical Research in Pediatric Endocrinology, 95 per cent of girls and around 70 per cent of boys reach maximum height velocity during puberty.

According to the University of Saskatchewan, leg length and sitting height can be used to estimate the age at which children may reach peak height velocity.

The children start to sleep more than usual. A lot of growth occurs when sleeping as human growth hormone secretes throughout the night.

The National Sleep Foundation suggests that children aged six to thirteen sleep for nine to eleven hours every night to promote healthy growth. Teens aged 14 to 17 require eight to ten hours of sleep every night.

During a growth spurt, it's natural for a child's weight to reach a peak. However, be aware of any weight issues that may occur during this phase and offer constant support.



125 YEARS Celebrate Life. Please post your questions on www.poh.gov.sg/125lifeat125. Life Talk #1 on Women's Health. Access to early screening and detection of female cancers and how our healthcare system can enable faster and wider adoption of innovative interventions.

Why cancer incidence may rise

ROCHE (Malaysia) Sdn Bhd, organised its first Life Talk Series on Oct 23, 2021 in conjunction with its 125th anniversary.

The first Life Talk session was on Women's Health and the panelists included Dr Azura Ahmad, Consultant Medical Oncologist; Prof Dr Woo Yin Ling, Consultant Obstetrician and Gynecologist; Nurul Izzah, Member of Parliament for Permatang Pauh and Choo Mei Sze, a cancer advocate & colorectal cancer survivor.

Dr Murallitharan M, Consultant Public Health Physician and Managing Director of National Cancer Society Malaysia (NCSM), moderated the session.

"The incidence of all cancers in Malaysia is expected to increase almost 80 per cent from 2020 to 2040 (from 48,639 to 86,666 new cases). Poor awareness and knowledge about the signs and symptoms of common cancers is likely to contribute to a delay in help-seeking, diagnosis and

treatment and, in turn, leads to poor survival outcomes", said Dr Muralli.

"Empowering patients to attend routine screening and to seek early treatment will increase their chance of survival and probability of cure. Many patients present late for various reasons; from fear to lack of awareness," said Prof Woo.

"With evolution of science, personalised diagnosis and treatment, doctors have more to offer compared to before. However, besides the advancement of treatment options, improving the health system, particularly health financing, should be the next revolution for patients."

Dr Azura also said advances in medical sciences had led us to better understand the changes within a patient's cancer cells that can be targeted to stop cancer growth. Over the last two decades, precision cancer therapy has revolutionised cancer diagnosis and new cancer treatments, helping doctors transform therapy for their patients.

"Continued understanding of cancer genomics has played an important role in creating more effective modern therapies, making way for personalised medicine to help patients better," Dr Azura added.

Wong Sit Yin, Healthcare Access & Corporate Affairs Director from Roche (Malaysia) Sdn Bhd said: "For 125 years we have been delivering better ways to diagnose, prevent and treat diseases to improve the lives of millions.

"Our current product pipeline is the strongest in our history, and we are opening up entirely new opportunities through digitisation and insights into healthcare data."

—The Health

Lumiere32 enters Malaysian market

THE REGION'S first fully digital B2B medical supplies distribution platform Lumiere32 has entered the Malaysian market, positioning itself for rapid growth throughout Southeast Asia.

Malaysia's medical supplies distribution industry is highly fragmented, with hospitals and clinics relying heavily on manual and labour-intensive inventory management.

Medical institutions currently are required obtain supplies from a variety of traditional

sources, including phone calls and emails, manufacturer websites, pharmacies, and e-commerce sites. This resource-heavy task along with the fast-moving e-commerce world we live in has resulted in an unnecessarily cumbersome medical supplies procurement process.

Thanks to Lumiere32, orders for highly sought-after medical and dental supplies from multiple brands can be placed on a single site, with shipping consolidated into a single package for added convenience.

This will make inventory

procurement tasks easier for hospital and clinic staff, allowing them to provide better patient care.

"We are incredibly pleased to be expanding our footprint to Malaysia. The medical supplies distribution industry is ripe in Malaysia, especially with the Covid-19 situation improving," said Dr Priti Bhole, Founder and COO of Lumiere32.

"We have seen a surge in medical suppliers seeking online platforms such as ours by more than five times, enabling them to reach out to more customers."

US\$13 bil merger timeline amended

ACCORDING TO Change Healthcare’s Nov 3 earnings statement, UnitedHealth Group and Change Healthcare have changed the timeline of their US\$13 billion merger agreement. Change and UnitedHealth agreed on Nov 1 not to complete their merger until Feb 22, 2022, unless they receive formal notice from the Department of Justice before the DOJ’s inquiry is completed. The transaction is also subject to the DOJ’s potential inability to obtain certain requested data. Change’s data analytics skills would be combined with UnitedHealth’s OptumInsight. Certain groups, like the American Hospital Association (AHA), have objected to the deal, claiming that it will decrease competition in selling healthcare information



technology services to hospitals and other healthcare providers. After receiving a letter from the AHA, the DOJ requested additional information from both Change and UnitedHealth Group. According to Change’s earnings statement, both Change and UnitedHealth Group have certified substantial compliance with the second request for information. The business stated: “The

parties have been cooperating with the DOJ and will continue to do so.” OptumInsight and Change Healthcare announced their intention to merge on Jan 5. Under the terms of the deal, UnitedHealth Group would buy all of the outstanding shares of Change Healthcare common stock for US\$25.75 in cash through a wholly owned subsidiary. Following the DOJ’s investigation of the merger, Change and UnitedHealth Group received a request for additional information and documentary evidence on March 24. On Aug 7, the firms reached a timetable agreed with the DOJ, agreeing not to complete the merger 120 days after both parties certified substantial compliance with the DOJ’s second request.

Impulse Dynamics’s first optimiser implant in China

IMPULSE Dynamics, a global medical device company dedicated to improving people’s lives with heart failure, announced on Nov 2, the first implantation of a patient in China with its innovative Optimizer system delivering CCM therapy. The successful implant technique was carried out by cardiologist Dr Hua Wei of the renowned Fuwai Hospital of the Chinese Academy of Medical Sciences. Dr Wei shared: “We are currently relying on medication only for the treatment of heart failure. If medication doesn’t work, then we don’t have a better solution. We now have a new option — CCM therapy — for these patients with narrow QRS heart failure.

For most patients with heart failure, I think the implant performed today has a significant meaning for the future.” The Optimiser, harnessing advanced engineering, delivers CCM therapy — the company’s proprietary technology — to the heart. Impulse Dynamics has pioneered CCM therapy to significantly improve heart contraction, allowing more oxygen-rich blood to be pushed throughout the body. The Optimizer delivers precisely timed electrical pulses to the heart during the absolute refractory period of the beating cycle, immediately after the heart



contracts. This breakthrough device improves the quality of life for heart failure patients no longer benefit from a medication meant to manage symptoms and slow the progression of their condition. “Following years of collaboration between accomplished Chinese clinicians and our local team to obtain market authorisation, we are happy to be offering the breakthrough technology of CCM therapy to Chinese patients and their families to restore their quality of life and help them regain hope,” said Simos Kedikoglou, CEO of Impulse Dynamics.

AI-powered glaucoma screening test delivers rapid results

A NEW rapid screening test for glaucoma could help advance early detection of the disease, a leading cause of irreversible blindness. Developed by a research team of engineers and ophthalmologists led by RMIT University in Melbourne, Australia, the test uses infra-red sensors to monitor eye movement and produce accurate results within seconds. About 80 million people worldwide have glaucoma, with more than 111 million expected to be living with the disease by 2040. The loss of sight is usually gradual and 50 per cent of people with glaucoma do not know they have it. Currently, glaucoma is diagnosed through a 30-minute eye pressure test delivered by an ophthalmologist. The new

AI-powered test takes just 10 seconds to show a risk of glaucoma, making it ideal for use in a national screening program. Lead researcher Professor Dinesh Kumar, RMIT, said early detection, diagnosis and treatment could help prevent blindness, making screening faster and more accessible were critical. “This research will allow a non-contact, easy-to-use and low-cost test that can be performed routinely at general clinics,” he said. “It could also promote a community-wide screening program, reaching people who might not otherwise seek treatment until it’s too late.” The pioneering technology differentiates between glaucoma

and healthy eyes by analysing changes in pupil size. In the study published in IEEE Access, pupils were measured 60 times per second using a low-cost commercial eye tracker. Under ambient light conditions, patients looked at a computer screen while custom software measured and analysed specific changes in their pupil size. The software then compared the results against existing samples of glaucoma and healthy eyes to determine the risk of glaucoma. Dr Quoc Cuong Ngo, RMIT, said the new tech was faster and better than any similar AI-based approach. “Our software can measure how the pupil adjusts to ambient light and capture minuscule changes in the shape and size of the pupil,” he said.

Briefs

European Wellness collaborates with Heidelberg University Germany

EUROPEAN Wellness Academy (EWA), the educational arm of European Wellness Biomedical Group (EWG), has signed an agreement to carry out joint scientific research on the efficacy of peptides, cell therapy, exosomes and cell reprogramming for rejuvenation in premature murine aging models. EWA was represented by its Group Chairman, Prof Dr Mike Chan, while Heidelberg University was represented by its Commercial Managing Director, Katrin Erk and its Head of Institute of Anatomy and Cell Biology III, Prof Dr Thomas Skutella. The cutting-edge therapeutics used for the studies include precursor (progenitor) stem cells (PSC), precursor cells (Frozen Organo Cryogenics (FOC)), Mito Organelle (MO), Nano Organo Peptides (NOP) and exosomes. Their studies include in vitro experiments concentrating on the effects of the products on the aging of somatic cells and cellular senescence, which is known to contribute to disease onset and progression. Investigated exosomes include neuronal stem cells (NSCs), mesenchymal stem cells (MSCs), cardiomyocytes, kidney progenitors and hepatocytes. EWA and Heidelberg University will also conduct in vivo experiments to demonstrate both safety and efficacy of the therapeutics, whereby the proof of effectivity will be recorded in the life span, histopathological and molecular criteria of neurodegeneration including Alzheimer/ dementia, and system degeneration disorders including those affecting the immune system, skin, cardio, lung, kidney, liver, stomach/intestine/gut, eye, and muscular dystrophy. **Adagene establishes collaboration with Nivolumab in Singapore** ADAGENE Inc (Adagene), the National University Cancer Institute, Singapore (NCIS) at the National University Hospital in Singapore, National Cancer Centre Singapore (NCCS), and the Singapore Translational Cancer Consortium (STCC), announced on Oct 28 the initiation of a Phase 1b/2 clinical trial of the anti-CD137 agonist antibody, ADG106, in combination with the anti-PD-1 antibody, Nivolumab. The trial will be led by Prof Goh Boon Cher, Senior Consultant, Department of Haematology-Oncology and Deputy Director (Research) at NCIS, Assoc Prof Daniel Tan, Head of the Division of Clinical Trials and Epidemiological Sciences and Senior Consultant, Division of Medical Oncology, NCCS. Both Prof Goh and Assoc Prof Tan lead the STCC’s Cancer Clinical Trials & Investigational Medicine Unit that brings together centres in Singapore for scaled up capacity, efficiency and expertise in conducting cancer clinical trials. Adagene is developing ADG106 for the treatment of advanced solid tumours and non-Hodgkin’s lymphoma. The phase 1b/2 trial will evaluate this novel combination in advanced non-small cell lung cancer (NSCLC) patients who have progressed on prior therapies. Professor Goh commented: “NSCLC is the most prevalent type of lung cancer, which is the leading cause of cancer-related deaths worldwide. “Despite recent progress, most patients will progress after receiving the newest generation of immunotherapy and immune checkpoint treatments. “ADG106 has been shown to enhance the activity of T-cells based on pre-clinical data, including evidence of synergistic effect with anti-PD-1 agents in a refractory NSCLC tumour model.” — The Health

Issues in halal pharmaceuticals

To ensure continuity and sustainability of the halal pharmaceutical industry, concerted efforts from all stakeholders are necessary

STATE OF *minda* healthy body is valued highly in Islam. As the saying goes, ‘A healthy mind comes from a healthy body.’

Islam advises that health maintenance is prioritised to carry out responsibilities in the best states of mind, spiritually and physically strong in carrying out the task set by Allah the Al-Mighty and cultivating the earth in goodness.

In cases where someone is being tested with an illness, Islam encourages that treatment is sought. However, the methods of applying the treatment and the materials and accessing the treatment must be halal.

In the hadith from Abu Darda’ (Allah be pleased with him), the Prophet (peace and blessing upon him) said: “Indeed, Allah has sent down both illness and its cure, and He has appointed a cure for every illness, so treat yourselves medically, but use nothing unlawful”, the book of hadith by Abu Dawud.

In this hadith, there are two explicit messages, namely:

- (i) If one is afflicted by illness, it is incumbent upon the person to find medicine to treat the diseases; and
- (ii) it is incumbent on the person to find halal medicines to cure the diseases.

Concerning the hadith, there are five essential stakeholders equally responsible for advocating, researching, funding, support and prioritising the use of halal pharmaceuticals.

THREE principles and THREE aspects

It is now established the halal status of a pharmaceutical product could confer advantages and added value that is not limited to Muslims only. There are three basic principles of halal concerning the use and production of medicine in the holy Quran, namely:

- i) avoidance of foul matters;
- ii) guarding against harm, and
- iii) maintaining health.

As the product’s halal status must consider all these principles, the halal status should be in line with many current guidelines on good practices of industries and laboratories. For this reason, halal is often being considered equal to the state of cleanliness, high-quality product, ensured level of safety, and may even be extended to cover effectiveness.

It is a regulatory requirement for all pharmaceuticals to manufacturing them in a Good Manufacturing Practice (GMP)-certified factory. The principle of “avoidance of foul matters” is of utmost importance. It is implemented by having Standard Operating Procedures (SOPs) to test the incoming raw materials quality.

The quality testing includes investigations on the identity and purity of the active pharmaceutical ingredients (API) and the additives, presence of microorganisms and presence of heavy metals typically.

Suppose water is used to make pharmaceutical products. In that case, the water quality must conform to pharmaceutical grade water, which has very rigid specifications for several parameters, including the conductivity, Total Organic Carbon (TOC), pH and microbial limit.

Quality of air throughout the manufacturing process must also comply with Clean Room grade. All these are part of



BY FARAHIDAH MOHAMED AND



MOHD AFFENDI MOHD SHAFRI

the “avoidance of foul matters” principle.

The second principle, i.e. “Guarding against harm”, is in principle part of the regulatory requirement mandating the toxicological study in animals and safety study in a human clinical trial to be conducted for any New Chemical Entity (NCE) or New Drug Abbreviation (NDA). Upon establishing a safety profile in human clinical trials, the NCE or NDA would be approved as a marketed drug or pharmaceuticals.

The third principle mentioned in the Holy Quran regarding medicine is related to the holistic purpose of treatment, i.e. “maintenance of health”. Ideally, treatment or the process to cure ailment should only be temporary. It should cover only the period of illness and be stopped once cured.

Prolonged or continuous use of drugs will incur effects that may be damaging. The westernised concept of medicine nowadays is heavily tuned on treating the symptoms instead of the underlying cause of the diseases.

One of the consequences of this concept is medicine for chronic use to maintain “symptoms under the radar” rather than to cure the disease.

Don’t neglect the three aspects

In discussing halal pharmaceuticals, three aspects should not be neglected. They are:

- i) **Ingredients:**
It is in effect similar to halal dietary law. The halal evaluation of pharmaceuticals focuses on five halal-related ingredients issues - prohibited animal parts or derivatives, the prohibition of blood, the rule on the slaughtering of permitted animals, the ban of carrion, and the

prohibition of intoxicants.

- ii) **Process:**
It refers to the manufacturing of pharmaceuticals. Halal pharmaceutical refers to any dosage forms including solid, semisolid, syrups and suspensions for any route of drug administrations (parenteral, topical, transdermal and pulmonary delivery systems) of conventional or modified release preparations that are produced from halal raw materials.

The latter involves both the API and the excipients (additives). Halal critical points demand that one be mindful during pharmaceutical preparation, processing, handling, packaging, storage and distribution. Halal pharmaceuticals shall not be “prepared, processed or manufactured using equipment contaminated with najis (filth) according to Shari’ah”.

The halal pharmaceutical products shall also be physically separated from any other products decreed as non-halal and najis by Shari’ah. The pharmaceuticals shall be packaged using halal packaging materials to ensure the highest standard of medicines is delivered to the patients. During the processing, these materials shall not be cross-contaminated with tools or carriages that have been in contact previously with non-halal materials.

- iii) **Product:**
In a National Standard MS 2424: 2019 Halal Pharmaceutical - General Guideline, (the only world halal guideline to be based on when applying halal certification for pharmaceutical, initiated by the Department of Standards Malaysia), it is stated that the “Product” must be “safe for consumption, non-poisonous, non-intoxicating or non-hazardous to health according to prescribed dosage”.

Pharmaceuticals or medicine is an item that involves formulation using an active substance known as “poison”. This poison or drug is listed either as Scheduled or Non-scheduled Poisons and are governed by the Poison Act 1952 in Malaysia, indicating their high risk of causing harm.





To qualify as halal pharmaceuticals, “the Product” containing the poison must be registered first with the Drug Control Authority [National Pharmaceutical Regulatory Agency (NPRA)]. The latter is responsible for evaluating the safety and efficacy of the poison according to the prescribed dosage.

Upon satisfactory evaluation, the NPRA will issue the registration number to “the Product”, and subsequently, halal certification can take place. It indicates that before anyone can apply for halal certification for pharmaceuticals, “the Product” must first get the clearance from the NPRA manifested by the registration number obtained from NPRA.

In other words, only registered pharmaceuticals can apply for halal certification. The halal certification process as practiced in Malaysia is illustrated in the infographic.

Halal issues in pharmaceuticals

It is stated in the Drug Registration Guidance Document (DRGD) of the NPRA that the manufacturer of drug products shall declare the source of any ingredients derived

HALAL ISSUES FOR REGISTERED PHARMACEUTICALS IN MALAYSIA			
DISEASE TYPE	DOSAGE FORMS & COUNTRY OF ORIGIN	API & USE	HALAL ISSUE
 ISCHAEMIC HEART	Transdermal (Switzerland); Tablet (India); Injection (Malaysia)	Glyceryl trinitrate to relieve angina	Excipient used in tablet; Equipment & tools in the factory
 CEREBROVASCULAR	Tablet (Malaysia & Indonesia)	Aspirin as anticoagulant/ blood thinning agent	Excipient used in tablet; Equipment & tools in the factory
 • INFLUENZA & PNEUMONIA	Topical ointment (Malaysia)	Menthol, camphor, eucalyptus oil – to relieve nasal congestion, difficulty in breathing, sore throat.	Equipment & tools in the factory
 INFLUENZA, PNEUMONIA, RUBELLA, HEPATITIS & POLIO	Injection (India, Germany, China, USA, Netherlands, Thailand, Belgium, Malaysia,	mRNA, viral vector, attenuated virus vaccines to prevent sickness and to lessen severity of symptoms	APIs and excipients used in injection; Equipment & tools in the factory

| Halal Health |

from animal origins. It is applicable for the APIs, the excipients and the ingredients used to make the API.

For example, in the case of gelatin, a commonly used excipient in pharmaceuticals as a stabiliser and capsule shell, the source of gelatin must be declared or stated on the product's immediate label and outer label.

To illustrate the diverse aspects concerning halal issues in pharmaceuticals, here are some examples:

a. Gelatine in capsule shells in soft and hard gelatin capsules.

Gelatine is the primary ingredient to confer filming property to the thin capsule shells. There are three sources of gelatin, namely bovine, porcine and goat. For gelatin derived from bovine and goat, the animals must be slaughtered in the Islamic way to conform to halal regulation.

b. Gelatine in parenteral formulation.

Gelatine is a standard pharmaceutical stabiliser in the parenteral dosage form. The source of gelatin can be derived from bovine and porcine. Such parenteral formulations include vaccines, antibiotics, anti-inflammatory and anticoagulant drugs.

c. Alcohol in orally administered medicine.

Some medicines to be consumed by oral (e.g. liquid or suspension) may contain alcohol (ethanol). There could be two functions of this ethanol in this medicine, either as co-solvent, antiseptic, or both.

Usually, ethanol is present in less than 11 per cent of cough syrup and high concentration (~20-30 per cent) in any tincture preparation. e-Fatwa JAKIM stated that ethanol could be used for medical purposes without saying the limit, as long as the ethanol origin is from the non-beverage, alcohol-making factory.

Nevertheless, there are always other medicines for the same indication that do not contain ethanol - for example, the over-the-counter (OTC) drug known as iKool®. The medication is in the form of an ointment and applied topically at the throat. It has been registered to relieve cough, and it is an excellent alternative to ethanol-containing syrups.

d. Alcohol (ethanol) in topical dosage form.

Ethanol in topical dosage form pharmaceuticals (lotion, cream, hand sanitiser) is used as antiseptic or penetration enhancers. e-Fatwa JAKIM stated that ethanol could be used for treatment. The requirement is that a non-beverage, alcohol-making company manufactures the alcohol.

e. Magnesium stearate - an excipient in tablet form.

Magnesium stearate is used as a lubricant in manufacturing solid dosage forms

(tablets, capsules) and some inhaler preparation such as Dry Powder Inhalers of many brands and technologies. It can be derived from either plant or animal origin. Whenever it originates from an animal, the animal must be halal (livestock animal) and slaughtered in the Islamic way.

There are other halal issues related to registered pharmaceuticals in Malaysia, as illustrated in the infographic.

New insights on halal pharmaceuticals

Everyone should know that 'safeguarding life' is a part of Essential (Dharuriyyat) Maqasid Al-Shariah. It is also in line with the Sustainable Development Goal (SDG) No. 3 (Good Health & Well-Being) promulgated by UNESCO.

As a healer or healthcare givers, we are responsible for safeguarding the life of patients by providing medicines that can cure the diseases or alleviate symptoms. We shall as much as possible avoid giving medications that patients have to take on a chronic basis. When a medicine must be taken on a chronic basis, the prime attribute of treatment, "curing or alleviating", is no longer applicable.

Ideally, one should also observe that justice is also being conferred while providing the treatment. Ideally, justice would be exercised if the medicament is curing rather than giving the medication on a chronic basis.

Regarding this issue, halal pharmaceuticals carry a more encompassing and holistic virtue of a pharmaceutical or medicine. It should have the element of "WISE" - wholesomeness, innovation, sustainability and synergistic, and equitable. It should be easily accessible despite geographical or economic limitations.

Halal pharmaceuticals should be "WISE" pharmaceuticals, the elements that will confer justice to oppressed patients, especially those who have to take the medicines, even though it could be certified as halal, but on a chronic basis and until death become the endpoint.

Conclusion

Halal pharmaceuticals in Malaysia are steadily progressing. To ensure the continuity and sustainability of this halal pharmaceutical industry, continuous and concerted efforts from all stakeholders are necessary.

Awareness and practice on halal pharmaceuticals shall be inculcated since primary schools with a more cohesive programme involving relevant stakeholders. The Ministry of Health (MoH) agencies such as the regulator (e.g. NPRA) and the users (hospitals) shall continue to advocate and prioritise the use of halal and control the use of non-halal pharmaceuticals in any sector.

The new concept of halal, such as having the characteristic of "WISE" medicine, must

be introduced, researched and promoted to provide a better healthcare approach to the world. — *The Health*

Farahidah Mohamed is from the Kulliyah of Pharmacy, International Islamic University Malaysia (IIUM) and Mohd Affendi Mohd Shafri from the Kulliyah of Allied Health & Sciences, IIUM.



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Quality at affordable prices

The public can now get complete and comprehensive inexpensive diagnostic testing services

BY KHIRTINI K KUMARAN

THE CLINICAL and medical diagnostic field is an ever-expanding field with an array of clinical laboratory tests for diagnosing and monitoring our state of health.

And routine tests are encouraged to keep track of the overall well-being and make informed decisions on one's health.

It is noteworthy that laboratory tests and the price charged for the tests are costly. It seems to be a deterrent for middle and low-income groups.

"However, SpyGene Laboratories Sdn Bhd (SpyGene) aims to provide complete and comprehensive diagnostic testing services for the public at affordable prices," said Chief Executive Officer Abdul Rahman Wahiduddin.

Skilled and certified staff

SpyGene is a new clinical and molecular laboratory company incorporated in June 2021 under Revongen Corporation Sdn Bhd.

Located at Enterprise 1, Technology Park Malaysia, SpyGene comprises of several divisions namely Hematology, Clinical Chemistry and Immunoassay, Microbiology, Urinology and Molecular.

It has set up fully operational laboratories equipped with state-of-the-art equipment and automated systems.

"It is not cheap to run a clinical diagnostic lab as it requires skilled and certified lab technicians and is supported by advanced automated machines and equipment.

"We are determined to offer affordable tests. We came to an arrangement with equipment manufacturers and distributors, Mindray Medical and Chemopharm Sdn Bhd, with an agreed mechanism that cuts down the operational cost.

"They will support us with automated machinery, equipment and software. These are installed in our lab and will be charged on every sample we run.

"So, it is like a subscription-based agreement. This mechanism lowers our operating cost, and thus we can lower the price for the tests we run in SpyGene.

"On top of that, as one of Revongen's subsidiaries, Revongen also ensures we have adequate support system from the group," added Abdul Rahman, who has 12 years of experience in the diagnostics laboratory field.

SpyGene began operations in October 2021 with a team of six, consisting of the Lab Manager, lab technicians and administration staff. As CEO, Abdul Rahman oversees the day-to-day operations.

"Together with me, we have visiting Consultant Pathologist, Dr Siti Roszilawati Ramli and Lab Manager, Amir Salikan as part of our management team.

An array of laboratory tests

SpyGene offers diagnostic laboratory testing services such as Rt-PCR not only for Covid-19, but for other tests as well such as dengue and infectious diseases.

"We also offer all the standard lab tests done for a routine blood screening. Blood samples are tested for blood count, metabolic, renal, thyroid, diabetes and so on.

"We can also check the level of Covid-19 antibodies present in the body with blood samples.



Abdul Rahman Wahiduddin

"If the test results show that the antibody level has gone down to a certain level, then it is best for the individual to get their booster shot.

"We also have a urinalysis, which is a general screening test used to check for early signs of disease," he said, adding the current test capacity for basic clinical routine tests is 100 a day.

SpyGene's most recent lab is the molecular diagnostic lab, used to test Covid-19 swab samples.

It comprises testing the molecular level of the Covid-19 swab sample, which means testing whether the gene has already been infected or not with the Covid-19 virus.

SpyGene gets samples via two methods. The first is through its business partners and collaborators, such as private practices, clinics, and DoctorOnCall, who send batches of samples for routine checkups, Covid-19 tests, or both.

The other is by making an online appointment directly with SpyGene



Abdul Rahman Wahiduddin

Laboratories. Individuals wishing to do a specific or routine test can come in, and the lab will draw the relevant sample.

The lab also provides mobile service for testing for a minimum group of four people.

Covid-19 PCR testing and laboratory

For the Covid-19 PCR test, the company has set up a drive-through service at the parking lot to minimise contact.

"Clients are required to drive in, lower the window and show us the payment slip. We will then perform the swab test and take the samples to the lab via the back door.

"The sample is processed and is then passed to the Covid-19 PCR test lab. Results will be out within 24 hours. We will email them to the client within 24 to 72 hours.

"Our max capacity at the moment for Covid-19 test and result analysis is 1,000 tests a day," said Abdul Rahman.

The PCR Covid-19 lab adheres strictly to the Ministry of Health's (MoH) guidelines.

MoH has made it compulsory for the Covid-19 PCR test labs to have three segregated rooms - one is for premix, another for the doffing area and the third room for result analysing machines.

Covid-19 test and result analysing are done using a combination of workforce and machines.

These safety protocols are in place for the safety of the staff and to ensure the safe handling of samples as they are highly contagious.

SpyGene is in the final stages of getting certification from the Institute of Medical Research (IMR).

"I will be sending samples of our analysis methodology and reports to IMR for evaluation. Once certified, we will offer our services and run test analysis for MoH and help clear the backlog of the Covid-19 tests," said Abdul Rahman.

Molecular diagnostics

According to the Centers for Disease Control and Prevention (CDC), molecular diagnostics testing combines laboratory testing with the precision of molecular biology. It has revolutionised how clinical and public health laboratories investigate the human, viral, and microbial genomes, their genes, and the products they encode.



Abdul Rahman Wahiduddin
Chief Executive Officer,
SpyGene Laboratories



| Innovation |



Abdul Rahman with his team.

I am a strong believer of routine blood test check-ups. With the advancement of technologies, I believe every problem has its solution. If we can promote routine blood tests and ensure it is done regularly, perhaps we may be able to save more lives and save the Government’s budget on treatment.” — Abdul Rahman

Abdul Rahman explained: “Molecular diagnostic will be vital for healthcare going forward. With molecular diagnostic, we will not just be able to test current health issues but detect markers of potential disease or health risks before they are even triggered.”

“Let me give a good example on this. Lung cancer is the third common cancer in Malaysia and estimated to comprise around 10 per cent of cancer cases.

“And mostly the cases are diagnosed at an advance stage and there is a study that shows the average survival rate is only 18 weeks.

“Imagine if we are able to diagnose and treat these cases earlier. We might be able to saves more lives and perhaps in some cases we may be able to increase their survival rate.”

While he noted Malaysia was far behind in embracing molecular diagnostics, there is a definite potential.

“Before the pandemic, many were not aware of molecular diagnostic testing. Now almost everyone knows about the PCR test for Covid-19, which uses molecular diagnostic precision testing.”

Abdul Rahman believes molecular diagnostics tests for personalised or preventative treatment can be introduced to Malaysia with solid marketing.

Expansion and plans

It is estimated in 2020, the clinical laboratory services market will be around US\$2 million and expected to reach US\$3.1 million in 2028 with a CAGR of 5.8 per cent.

“There is a big market and growth potential. It is estimated the molecular diagnostic market grows at 40 per cent annually in the Asian region,” shared Abdul Rahman.

The Malaysian clinical laboratories testing (CLT) market, he said is expected to continue growing, driven by a shift toward preventive healthcare, rising demand, population aging and growth of medical tourism.

The market for healthcare services in Malaysia is less developed, with many clinical testing services being unavailable outside of cities.

“We recognise the challenge of healthcare providers to send samples due to geographical reasons. As such, we are aiming

to have our lab in each State in Malaysia.

This is our first laboratory, and we still have more space to expand. So, we are currently setting up additional machinery and equipment to increase the clinical and Covid-19 diagnostics capacity.

“We are also in the process of setting up a tuberculosis (TB) lab as it requires a separate lab area.

“After we have settled with the lab and capacity expansion plans here and stabilised the operations, we plan to duplicate and open SpyGene labs nationwide, starting with Terengganu and Kelantan.

Reaching out to the B40 group

SpyGene wants to tackle diagnostic tests for both present and future health risks. It wants to expand and develop molecular diagnostic services to a higher level while ensuring it is affordable.

He added: “I am a strong believer of routine blood test check-ups. With the advancement of technologies, I believe every problem has its solution.

“If we can promote routine blood tests and ensure it is done regularly, perhaps we may be able to save more lives and save the Government’s budget on treatment.

“I would like to work with organisations and people’s representative to reach out to the B40 group.

“Get in touch with our business partners and we will ensure routine blood tests are affordable for you.”

He shared that he is also currently looking for ways to work with the MoH in covering the B40 communities for routine blood tests.

Apart from that, Abdul Rahman is also interested in incorporating halal toyyiban practices into the clinical and molecular diagnostic laboratory business.

“We aim to be the pioneer as a halal certified clinical diagnostic laboratory service provider, and I’m hoping to work with other partners in Southeast Asia and the Middle East for the concept and revolutionised the outlook for clinical laboratory services.

They will work with relevant experts to create a framework for this purpose, which will be the new dimension of Clinical Diagnostic Laboratory services.

— *The Health*



Law (fourth from left) with his team and business partners.

Grand opening ceremony

BY FATIHAH MANAF

SPYGENE LABORATORIES Sdn Bhd marked its official launch on Nov 6 with a grand opening ceremony. The event was attended by several guests and SpyGene’s key partners. To ensure the safety of everyone attending, guests were required to undergo a Covid-19 screening test during the registration.

SpyGene Laboratories, established in June 2021 by Revongen Corporation Sdn Bhd, began its operations in October this year. Together with its partner, DoctorOnCall, SpyGene aims to deliver laboratory services to your doorsteps. It also aims to be the first halal-certified clinical diagnostic laboratory services provider.

EL Law, CEO and Founder of Revongen Corporation, who officiated the opening said: “We had the idea of setting up this lab during the first Movement Control Order (MCO) when everybody was rushing to do PCR tests.

“At that time, a couple of people approached us, and we thought of going into mobile units (to move around). However, due to the technicalities at that time, the Ministry of Health (MoH) was also very sceptical and careful with the risks and compliances, so we put it on hold.”

Law said the name ‘Spy’ in SpyGene implies the spirit of ‘spying’ to accurately determine the causes of diseases. It seeks to help doctors provide the best solutions, treatment, and diagnoses for patients. He believed that the medical devices businesses would be the next wave after gloves.

Working together to expand

SpyGene CEO Abdul Rahman Wahiduddin emphasised the importance of diagnostic testing routines. He said routine tests would help detect chronic diseases, usually discovered at an advanced stage. He stated that SpyGene would be able to provide the public with affordable prices for the tests by working together with numerous players in the ecosystem. The affordability of the services was one of the best ways to encourage more routine tests among the public.

“One of my dreams is to revolutionise the clinical diagnostic laboratory sector, where we want to be the first halal clinical diagnostic laboratory. Malaysia has always been known to the world as a halal hub. So, if we work together on this, we will be able to expand together and may set an example for other countries,” shared Abdul Rahman.

“We hope together with Mindray, Chemopharm and SpyGene, we can contribute more to society and provide the world a top solution,” said Horace Wang, General Manager ASEAN 1 of Mindray Medical Sdn Bhd.

Mohd Hafis from Chemopharm Sdn Bhd shared that the company felt very honoured to be one of the main vendors for SpyGene. Sue Chan then added that the company was dedicated to becoming the most trusted partner in the industry and bringing its stakeholders’ performance to a higher level.

Hazwan Najib, Co-Founder and the Chief Marketing Officer of DoctorOnCall, congratulated SpyGene on its opening. He revealed that the partnership with SpyGene aimed to bring the best, convenient and safest healthcare services.

Before the opening ceremony, guests were given a brief tour of SpyGene Laboratories where they were introduced to the machines and technology used by SpyGene in its operations.



Law officiates the opening.

Safety and quality guaranteed

It is critical for medical devices to follow the guidelines put forth by various medical device authorities

IN THE medical device industry, conducting microbiology, chemical and toxicity tests are essential. Why is this so?

SIRIM explains that when it comes to medical devices, rigorous testing should be a requirement. Manufacturers will be happy to know that SIRIM's Industrial Biotechnology Research Centre (IBRC) provides three critical testing services, namely microbiology, chemistry and toxicity testing, to ensure that medical devices are safe.

Microbiology testing is critical, especially in the medical device business, where microorganisms such as bacteria can have a severe impact on goods, processes, and human health.

Chemical and toxicological tests are also crucial. The former entails testing the chemical qualities of medical equipment, while the latter involves testing for harmful chemicals in the devices.

Detailed process

"We need to be able to eradicate or at least lessen the possibility of these devices causing harm to the end-user in compliance with ISO 13485 standards," noted Mohd Mahayuddin Hussin, a Researcher at IBRC.

"It is critical for medical devices to follow the guidelines put forth by various medical device authorities. Microbes should not be present in sterile devices, for example. Patients with compromised immune systems could be harmed by even the tiniest amount of contamination," he said.

Prior to testing, the medical device's material characterisation should be completed, according to Part 1 of ISO 10993. Dr Nur Ellina Azmi, a Senior Researcher at SIRIM's IBRC who works in analytical chemistry and chemical testing, explained the process.

"We need to know the properties of the materials, so we'll conduct a chemical analysis to assess the stability and chemical features of the sample presented. This helps scientists to learn more about the compounds, such as if they are harmful and the level of safety required to perform future research."

After gathering the appropriate information, the sample will be tested for biocompatibility.

"Biocompatibility testing is an important element of toxicity testing



Chemical analysis of medical device.

and is carried out in line with the international standard ISO 10993 on Biological Evaluation of Medical Devices requirement explained Noor Rabihah Aid, a Researcher at the IBRC Toxicology Laboratory.

There are a variety of medical device related requirements that we must adhere to in order to verify that the medical devices are biocompatible and safe for human use.

SIRIM's expertise

SIRIM, as Malaysia's leading industrial research and technology organisation, can provide a wide range of testing and evaluation services, as well as other complementary services such as customised testing and evaluation, regulatory consultation and advice. It can even do research and development to help companies advance to the next stage.

The organisation has a wide range of facilities, the majority of which have been appropriately accredited with the ISO and Good Laboratory Practice (GLP) standards. The laboratories are equipped with high-tech and specialised equipment, as well as the most up-to-date procedures for evaluating and validating medical devices.

SIRIM's team of highly qualified employees is another plus point. Nur Ellina said: "In fact, we must be registered with the relevant authorities and audited by the Department of Standards Malaysia to be an approved signatory for the tests; for example, chemists must be registered with Institut Kimia Malaysia."

She pointed out they needed the necessary expertise and experience. An organisation must have adequate buildings, systems, and staff in place to

acquire accreditation.

"Because our laboratories are ISO-certified and have GLP status, your test results will be accepted internationally," Noor Rabihah remarked.

SIRIM has also made major investments in improving its capabilities. "We continue to expand as industry leaders with constant investment in our facilities, equipment, and technological capabilities," said Mohd Mahayuddin.

Boosting public awareness

SIRIM is now focusing on glove makers, with ambitions to expand its customer base soon to include dialysis centres and intravenous solution providers. In addition, it is helping to raise knowledge of the regulations and procedures that medical device manufacturers must follow.

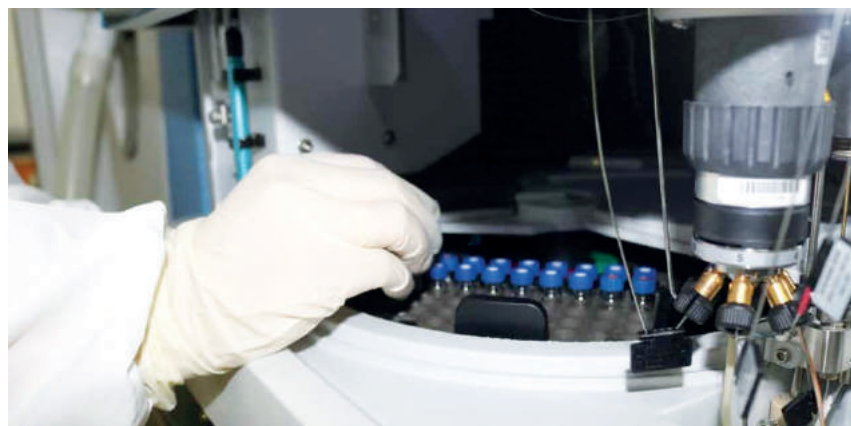
The team attends related trade shows, arranges industry engagement days where they hold training sessions to explain the many types of testing SIRIM offers, and visits potential clients to discuss collaboration opportunities.

"We also collaborate with organisations such as the Malaysian Rubber Glove Manufacturers Association (MARGMA) to host events on rubber-related medical equipment and invite their members to tour our facilities," Mohd Mahayuddin added.

As the medical device business expands, so will the demand for medical device testing, and SIRIM stands ready to assist industry companies in expanding globally. Global regulators require greater in-depth testing and evaluation of medical devices, including long-term testing, and SIRIM is constantly improving its services to guarantee industry fulfils these tough regulatory criteria.

"When compared to the US, for example, our costs are very reasonable. Our test reports are also accepted internationally, including important markets like the US and Europe. This demonstrates that our capabilities are comparable to those of our foreign counterparts," Noor Rabihah commented. — *The Health*

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| Innovation |

An award-winning invention

From concept to shelf, the rambutan rind has been developed by SIRIM into a first of its kind anti-fungal cream from natural sources



THE RAMBUTAN rind has proven its worth in the cosmeceutical industry, going from waste to an award-winning product. The innovators discuss their journey from research to commercialisation and beyond.

At the International Innovation & Technology Exhibition (ITEX) 2019, one of SIRIM's discoveries, a natural bioactive dermatocide anti-fungal cream created with rambutan rind extract, won the Gold Medal and Best Invention Award. This cream is the first of its kind to contain active components derived from natural sources.

It took a lot of hard work. After performing aqueous and solvent extractions on diverse herbal waste materials, the SIRIM team discovered numerous extracts with excellent antioxidant and antifungal characteristics. Rambutan rind was one of them.

Thavamanithevi Subramaniam, a Senior Researcher at SIRIM's Industrial Biotechnology Research Centre (IBRC), who lead the team working on this, said: "We opted for the rambutan rind because it is easily available locally. An added plus is that the extract is made from fruit scraps!" Other members of the team were Sarifah Rejab, Dr M Theanmalar, Adida Zuraida, Aidawati Shabery and Dahlia Daud.

The team chose to formulate the anti-fungal cream in-house, using SIRIM's Good Manufacturing Practice (GMP) certified facilities after receiving positive results. "All of the tests were carried out in accordance with the requirements of the Organisation for Economic Co-operation and Development (OECD) and ISO 17025," added Senior Researcher and colleague Dr Theanmalar Masilamani.

Beneficial properties

In 2017, this antifungal cream formulation based on rambutan waste bioactives was patented. The National Pharmaceutical Regulatory Agency (NPRA) has yet to register the product. On Aug 17, 2018, IBRC submitted an application for Traditional Medicine Classification for higher product benefit claim purposes.

This is SIRIM Berhad's first Research & Development (R&D) product to be successfully approved for MAL under Traditional Medicine. Because all ingredients/excipients and the active ingredient utilised in the composition of the cream must be registered with the NPRA, the Traditional Medicine registration

process took nearly two years.

With the registration number MAL 20106148TC, the product has now been registered with NPRA as a Traditional Medicine.

Meanwhile, a company called Zarra Zafeena Resources (ZZR) has begun the commercialisation process. ZZR will perform a market trial of this product under the name BioNephegen Skin and Nail Cream prior to full commercialisation.

SIRIM Tech Venture Sdn Bhd (STV) appointed ZZR to participate in the BioNephegen Skin and Nail Cream Market Trial Program. In December 2020, STV and ZZR signed a Trial & Evaluation Agreement (TEA) to gather data and information on market demand, acceptance, and practicality of the product before it is permanently licenced.

This programme is critical for determining the product's marketability and gauging full acceptability by potential customers. STV went through a rigorous screening procedure to find the right company for this programme.

ZZR was chosen due to its financial and legal position, extensive experience in selling personal care goods and strong commitment throughout the programme, among other factors.

The rambutan rind extract has proven itself to have numerous helpful effects from the start, with preliminary in-house efficacy testing yielding positive results, particularly for athlete's foot, scaly and diseased nails and insect bites.

The product's multi-spectrum efficacy against skin fungal and yeast (*Candida Albicans*) infections is a standout feature. This means that a single extract can combat a variety of dermatophytes that cause skin problems.



A secure product

"Most commercial treatments are steroid chemicals that only work on certain fungi," says Dr Theanmalar. This offers a wider range of applications, as well as synergistic benefits and is non-toxic. It is also anti-inflammatory and beneficial for itching and insect bites."

"It has also been tried for eczema and appears to perform well, reducing redness and dryness," said Adida Zuraida Mohamad, a Microbiologist at SIRIM's IBRC.

The extract is safe to use, even for youngsters, because it is generated from a natural resource. "In fact, unlike other eczema creams, parents want to use this for their young children with eczema because it doesn't irritate their loved ones' skin," she explained.

Since its introduction, the anti-fungal lotion has been well-received. "Many of our colleagues said that this product worked well for them and continued coming back for more when we were doing in-house efficacy evaluations," Thavamanithevi shared.

"Since then, the company that has adopted the product has stated that they have received return customers."

SIRIM is gearing up to further enhance the product and expand its reach, inspired by the good response and awards earned. It has already applied to the NPRA for a MAL 'Traditional Medicine' registration number, which will allow the medicine to be sold in clinics.

On par internationally

Malaysia's capabilities, according to Thavamanithevi, Dr Theanmalar and Adida, are comparable to those globally.

"When we began anti-oxidant investigations in 2006, SIRIM was the first to look into the possibilities of exploiting rambutan rind. Subsequently, countries like Australia, Canada and Vietnam started studying the usage of rambutan rind for cosmetic products," explained Thavam.

As a result, there is a lot of room for expansion in this field. "Malaysian research institutes and universities have extensive R&D capabilities.

"We have plenty of natural resources and a pool of talent with multidisciplinary expertise capable and equipped to discover and achieve excellent scientific results."

She said that besides that, proper funding to support research activities in producing potent bioactives from Malaysia's natural resources was crucial.

"Therefore, SIRIM welcomed collaboration with industries and other research institutes to explore potent bioactives from Malaysia's natural resources," explained Sarifah. — *The Health*

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THE GOVERNMENT continues to prioritise public health to build national resilience during the endemic phase of the Covid-19 pandemic.

Budget 2022 provides RM32.4 billion to the Ministry of Health (MoH) for their operating and development expenditure. The allocation for the MoH is the second largest after the Education Ministry.

However, there are concerns that there has barely been an increase in the health allocation compared to the allocation for 2021 as the increase of 1.5 per cent is arguably the lowest increment to the health budget in more than a decade. Note that Budget 2021 provided a four per cent increase versus 2020, while Budget 2022 only provides a 1.5 per cent increase over 2021.

There have been decades of under-investment in the healthcare system and an over investment to compensate for this to enable the public healthcare system to cope with amplified responsibilities without jeopardising the quality of care should have been considered. It gives the wrong impression that despite the major crisis that Malaysians endured over the past 22 months, the health needs and service delivery issues remain the same.

As we know, the war with the Covid-19 pandemic is not over yet. An additional RM4 billion is provided specifically to continue the agenda on managing Covid-19, which includes RM2 billion to fund the vaccination programme.

Another RM2 billion will be provided to enhance the capacity of public health service facilities including the purchase of medicine, consumables, personal protective equipment (PPE) and health kits. The government has not forgotten kids that have been orphaned because of the pandemic. RM25 million is being allocated as a start-up fund towards Yayasan Keluarga Malaysia which is established under the Prime Minister's office with the objective of protecting the welfare and education of those orphaned due to Covid-19.

The need to consider specialised treatments

Further, to continue the fight against Covid-19, the Government intends to procure antiviral drugs that are effective against various viruses including Covid-19. As battling Covid-19 will likely extend well into 2022 due to immunological uncertainties and virus variants, we need tools that go beyond vaccination.

Specifically, early-stage prophylactic treatments such as antiviral medications to prevent disease progression for non-severe cases should be considered. Malaysia also needs to consider specialised treatments such as monoclonal antibodies (mAbs) for those at higher risk of getting severely ill.

New treatments are being constantly developed and this allocation would not be only for antiviral medications or mAbs - it may be swapped for other emerging interventions the MoH deems promising, safe and effective.

The National Covid-19 Immunisation Programme (NIP) will be further enhanced to provide the third dose of the Covid-19 vaccine as a booster shot to all adults and continue the vaccination of children aged 12 to 17 years old. The government has signed agreements to procure 88 million doses, equivalent to 140 per cent of Malaysia's population, sufficient to provide a third dose to all residents aged 12 years old and above.

The contracts of more than 10,000 medical, dental and pharmaceutical officers have been extended by the government for a maximum of four years after their two-year

Budget 2022 and healthcare

There are concerns that there has barely been an increase in the health allocation compared to the allocation for Budget 2021

compulsory service period to ensure continuity of service and prepare them for their specialist training. In addition, the government will provide sponsorship for 94 specialist programmes with an allocation of RM100 million for the benefit of 3,000 medical and dental contract officers.

While allocating RM100 million for doctors, dentists, and pharmacists to pursue specialist training is welcome, it should be accompanied by an increase in permanent posts. This lack of long-term solutions may cause dissatisfaction among health care professionals, with the possibility of a second 'strike' by healthcare professionals looming.

Overall allocation for mental health lower

The pandemic exacerbated the problems of poverty, domestic violence and depression which are the root causes of mental health. It has been reported that the Malaysian Mental Health Association observed "more than a two-fold increase" in stress-related help requests since the start of pandemic.

Other issues such as depression, suicide, and domestic violence have also seen an increase. Budget 2022 will allocate RM70 million so that mental health issues are continuously prioritised, significantly boosting counselling and psychosocial support services; increase advocacy programmes, and empowering non-governmental organisations as drivers of mental health programmes.

Though mental health was highlighted prominently during the budget speech, the fact is that the overall allocation for this important area of healthcare of RM319.58 million is lower than the 2020 allocation of RM344 million.

The increase in mental health allocation is not proportional to the rise in mental health issues caused by Covid-19 stressors. It remains lower than upper-middle-income and high-income countries who spend 1.6 per cent and 3.8 per cent of government health expenditure on mental health respectively.

This sets a dangerous precedent and a backwards trajectory that may prevent us from building a robust public health infrastructure as imagined in the 12th Malaysia Plan and required by a larger, older and sicker population.

Budget 2022 proposes many temporary stop-gap measures that must be part of longer-term strategies. Firstly, while social provisions and cash transfer allocations for



BY HARVINDAR SINGH

older adults in Budget 2021 were necessary, there must be a change in philosophy to encourage older adults to have more active participation in their own health care.

Without active participation, even exponential increases in the social care budget for the elderly will create the reality or perception that older people are constantly dependent on support. Each month, the initiative to provide 130,000 young women from B40 families with hygiene products such as sanitary pads is remarkable. Still, there needs to be a greater focus on durable strategies for long-term sustainable health development.

Cigarette taxes should have been increased

Budget 2022 however, includes a significant increase in the allocations for public health of more than RM200 million, benefiting areas such as disease control, health education and promotion, and family health development. This is welcome news to cover non-communicable diseases (NCDs) such as cancer, kidney disease, and cardiovascular diseases.

This will bring benefits in the long run by improving the quality of patients' lives and saving lives. Public health is the most important aspect of the healthcare system and needs to be strengthened holistically as we cannot afford to look at one crisis at a time.

In so far as hospital bedding facilities are concerned, under the Rolling Plan 2 and the 12th Malaysia Plan, the construction of two hospitals, the Infectious Diseases Institute in Bandar Enstek in Negri Sembilan and the Kapar Hospital in Selangor will each boast a capacity of 300 beds respectively.

The government's decision to expand the scope of income tax exemption for clinical check-ups to cover consultation costs of registered psychiatrists, clinical psychologists and counselling services is welcome as it will encourage the affected individuals to step forward and seek help.

The announcement that the government will consider imposing excise duties on e-liquids and juices used for vape and e-cigarettes is welcome. However, the duties should extend to include those that are nicotine and non-nicotine. Not increasing the cigarette taxes was a lost opportunity for increased revenue and funds that could be used to support prevention and treatment of non-communicable diseases.

The lessons from the Covid-19 pandemic allows us to rethink the structure and components of our health care system and lay the groundwork for long-term health reform with emphasis on telemedicine, automation and digitising health care. This requires smart regulations that protect patients, help health professionals, and promote innovation.

As we enter the third year of Covid-19, Malaysia must not miss the opportunity to build a robust and resilient healthcare infrastructure. More Malaysians are poorer after Covid-19, which makes them more likely to use public healthcare facilities, making it crucial for us to over-invest in our public healthcare system. — *The Health*

Harvinder Singh is Managing Partner, Harvey & Associates and Tax Partner, SCS Global Consulting (M) Sdn Bhd

Though mental health was highlighted prominently during the budget speech, the fact is that the overall allocation for this important area of healthcare of RM319.58 million is lower than the 2020 allocation of RM344 million."



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HOPING for a better year

While 2021 has turned out to be worse than expected, there is cautious optimism that 2022 will be better

BY KHIRTINI K KUMARAN

SINCE THE detection of the first Covid-19 case in Malaysia on Jan 25, 2020, no one could have imagined that by Nov 16, 2021, it would infect 2.5 million people and claim a staggering 30,000 lives in the country.

The healthcare sector's workforce, capacity, infrastructure, and supply chain have been placed under immense strain, not to mention the social and economic impact.

The pandemic has exposed the critical gaps in the healthcare system and exacerbated preexisting gaps even before the pandemic.

Malaysia continues to forge ahead with its mass Covid-19 vaccination programme, including giving a third dose and is looking to transit to the endemic phase with the continued existence of the virus. Hopefully, Merck's availability of a new anti-viral drug by the end of the year could be a game-changer.

The Health spoke to several industry

heads for their take on varied topics on what they expect for Malaysian healthcare in 2022. Many were cautiously optimistic that while the worst might be over, we cannot deny that it would be another challenging year. Many issues need to be resolved.

The Covid-19 virus is very infectious, warned Dr Suresh Kumar, Senior Consultant, Infectious Disease Physician and Head of Medical Department at Hospital Sungai Buloh.

"While vaccination is very effective to decrease the transmission, it cannot stop transmission."

And as Covid-19 is an unknown territory, he believed the healthcare sector would be under severe stress in 2022.

Much needs to be done for the nation's healthcare sector, not just for the preparedness for current and possible future health crises, but for other health issues, such as communicable diseases (CDs) and non-communicable diseases (NCDs).

Health facilities must function efficiently

Malaysian Medical Association (MMA) President Dr Koh Kar Chai highlighted the importance of addressing the outdated healthcare infrastructures and facilities and the uneven distribution of the workforce within the healthcare services.

"Much needs to be done. But looking at these gaps, an extensive audit is required on existing health facilities throughout the country.

He emphasised that health facilities



delays may mean increased severity of illness on presentation.

Health literacy and promotion important

Parti Sosialis Malaysia (PSM) President Dr Michael Jeyakumar said 2022 would be difficult as a large backlog of non-Covid-19 medical cases must be cleared.

Sharing the same sentiment, the President of Lung Cancer Network Malaysia (LCNM), Dr Anand Sachithanandan, expects to see more late-stage cancer presentation and diagnosis cases due to the various disruptions and delays in providing cancer services.

“The MCO or lockdowns has negatively impacted cancer services and increased the backlog of cases awaiting definitive diagnosis and appropriate treatment.”

Mental health is another pressing issue that needs attention in the endemic stage. The enormous pressure that healthcare staff and frontline workers have been under for the past two years cannot be overlooked, especially given the psychological toll of the Covid-19 crisis. At the same time, there is also a rise in mental health distress among the public.

President of the Malaysian Wellness Society (MWS), Dr Rajbans Singh, said while the pandemic has brought lots of awareness on mental health and people are taking it more seriously, the stigma surrounding therapy and counselling needs to be addressed.

“We need to educate the public that going to seek therapy and counselling is as important as going to see a doctor for a physical illness.”

Prof Datuk Dr Hanafiah Harunarashid, Pro-Vice Chancellor of Universiti Kebangsaan Malaysia (KL Campus), said: “The pandemic has revealed significant problems of access to basic healthcare and health literacy, especially those who may have been left behind by popular consumer technological advancement.”

Technological and digital advancement

It is crucial to ensure digital literacy amongst all layers of society, including the ageing population, as digitalisation is becoming more prevalent, including in the healthcare sector.

Even before the disruption of Covid-19, the landscape of technological and digital advancement in healthcare was evolving.

However, the vital need to contain the

spread of the virus has resulted in the accelerated development of a range of technological breakthroughs in vaccines, diagnostics and digital health.

Duopharma Biotech Berhad Group Managing Director Leonard Ariff Abdul Shatar shared: “Technology and innovation disruption are here to stay. Duopharma Biotech identifies it as the core focus area to be relevant for now and in the future.”

He said it was vital to ensure universal vaccine access to reduce the risk of new variants arising. The need to administer ‘booster’ shots is also essential to maintain the protection of those vaccinated.

Amidst all the gloom and doom, there is still a prospect for the recovery of healthcare tourism as Malaysia enters the endemic phase.

“With sensible but measured precautions in place, hopefully, we can ‘open up’ and regain our standing as a top regional healthcare provider for both locals and tourists,” added Dr Anand.

Dr Kuljit shared the private sector was ready to accept medical tourists but cautioned about bringing in Covid-19 variants when opening the borders for medical tourists.

“We just have to be very careful and follow the SOP and the guidelines given by the government,” he said, adding that as long travellers are from countries with the same endemic level as Malaysia, then it should not be a problem. — **The Health**

must function efficiently with the safety of the patients in mind, and healthcare personnel should be allotted accordingly based on requirement and necessity.

Meanwhile, the 12th Malaysian Plan highlighted consolidating the resources and responsibilities between the public and private healthcare services.

President of the Association of Private Hospitals in Malaysia (APHM), Dr Kuljit Singh, agreed with the strategy.

“This is what we are also proposing. Whenever public hospitals cannot cope with an outbreak or any other health crisis, private hospitals are willing to help.

“However, the government must come up with a reasonable reimbursement to the private services.”

As the pandemic has also exposed the gaps and equity issues, especially in Sabah, Sarawak, and remote areas, Malaysian Pharmacists Society (MPS) President Amrahi Buang said: “The way towards a National Healthcare Financing mechanism should start soon and it should be accessible to the whole population in Malaysia.”

Malaysia is also fast approaching an ageing population, and Amrahi commented that the government should focus on health literacy and health promotion.

While we work towards revitalising the healthcare sector, addressing the neglected health services is also imperative.

Non-Covid-19 health issues and cases were put on hold for the past two years, delaying screening and treatment services. Patients who have delayed medical care will need treatment, and some of these



Not ready for endemic phase yet

Dato' Dr Suresh Kumar

Senior Consultant, Infectious Disease Physician and Head of Medical Department at Hospital Sungai Buloh.

BY FATIAH MANAF

AS OF NOV 15, Malaysia had fully vaccinated 76.1 per cent of its total population against Covid-19. More than a million booster shots have also been administered to eligible individuals by the Ministry of Health (MoH).

This situation has allowed the country to reopen its economic and social sectors after more than a year. Premises such as offices, malls, schools and theme parks have started to operate again, and Malaysians have slowly learnt to live with the virus.

Whilst everything seems to be returning to normal, the number of positive cases in the country is still relatively high. Around 5,000 to 6,000 cases are recorded every day, although the death rate has reduced to below 100 daily.

According to the worldwide trend, this number is expected to increase soon. Countries like the United States and Singapore have also experienced a surge in positive Covid-19 cases despite their high vaccination rate.

"Covid-19 virus is a very infectious virus. While vaccination is very effective to decrease transmission, it cannot stop the transmission," explained Dato' Dr Suresh Kumar, Senior Consultant, Infectious Disease Physician and Head of Medical Department at Hospital Sungai Buloh.

"The positive effects of vaccination are currently being nullified by increasing population mobility. Data suggests Malaysian population mobility has surpassed pre-pandemic levels.

"Hence we will see an increase in the number of cases. However, what we want to prevent is a surge in hospital admissions."

The reality of the situation

Mutations of the virus happen all the time. What worries the world is when the new mutated variants become resistant to the vaccines. Reducing the chances of infection is critical to prevent this situation from happening.

"Mutations continue to happen in the virus. But only if there is a mutation that renders our vaccine ineffective or a mutation that makes it spread faster than the current Delta variant, we need to worry. Such mutations seem to be rare.

"However, if there is more transmission, especially to immunocompromised hosts, the threat that such a mutation will occur is always there. If we can vaccinate the whole world as soon as possible, we can decrease this threat," he said.

Dr Suresh shared that most viral infections did not have a cure. In the case of Covid-19, he said there were two promising antiviral drugs currently being registered. However, they still need to wait and see how effective these drugs are in the real world.

"The current variant that has spread



all over is the Delta variant. Two doses of current vaccines are 70 to 90 per cent effective to prevent hospitalisation or severe disease. This 70 to 90 per cent effectiveness is not good enough to prevent another surge in severe cases."

However, he shared that studies from countries like Israel had shown that third dose vaccines decreased hospitalisation

Covid-19 virus is a very infectious virus. While vaccination is very effective to decrease transmission, it cannot stop the transmission."

rates by 90 per cent compared to just two doses, especially in the high-risk groups (above 60 years old and 40-60 years old with medical conditions).

"In Selangor, more than 90 per cent of the population are vaccinated. Between 75 and 80 per cent of those admitted with severe diseases were vaccinated. These are mainly patients above 60 years old or 40-60 years old with some medical conditions," he added.

Dr Suresh has been actively involved in the management of Covid-19 at Hospital Sungai Buloh. It includes the time when cases were at peak this year. He said the overwhelming number of patients admitted to the hospital was the main challenge in helping manage the pandemic.

"The sheer number of ill patients was the biggest challenge. We had more ill patients than our ICUs could manage. We need to prevent this problem from recurring again," he highlighted.

Pandemic to endemic

Covid-19 is also known to have a longer-lasting impact on those infected with the virus. Dr Suresh shared that many patients, especially those with severe diseases, suffered from tiredness, difficulty breathing, and depression for months after the Covid-19 infection.

Whilst there are discussions on Malaysia's transition to an endemic stage, he believes the country has not yet reached the phase.

"Endemic phase means that we have learnt to live with the virus. At this juncture, we are not there yet," said Dr Suresh.

"Hospitals still have too many ill patients with Covid-19. It has affected the non-Covid-19 medical services such as surgeries for cancers, etc. For us to reach the endemic phase, two things have to happen.



Technological advancement important

Leonard Ariff Abdul Shatar

Group Managing Director, Duopharma Biotech Berhad

C OVID-19 COSTS are likely to persist in 2022, i.e., the cost of testing for Covid-19, treating patients, and administering vaccinations.

The Group Managing Director of Duopharma Biotech, Leonard Ariff Abdul Shatar, said access to quality and affordable healthcare would be vital in 2022 due to the economic impact that Covid-19 has had on large segments of the population.

“This is especially important for non-communicable, chronic diseases such as diabetes and hypertension. As we gradually transition to the ‘endemic’ phase of the pandemic, it is also vital to ensure that vaccine access is universal to reduce the risk of new variants, said Leonard Ariff.

“The need to administer ‘booster’ shots is also essential to maintain the protection of the vaccines.”

He said some domestic regulations will need to be amended to adapt to the new way of engaging/transacting. One of them will be the Poisons Act when ordering Controlled Items that cannot be vaccines.

“Cost of implementing digitisation can be financially taxing to healthcare players and customers. With possible waning effects of the Covid-19 vaccines, there is still a cautious opening of the economy, but we have to be prepared for sudden lockdowns again.”

He said cash flow management was the key challenge for every industry during the pandemic. Sufficient cash flow is required to sustain the business. Duopharma Biotech did experience a challenging cash position. Still, the organisation quickly changed its mode to “cost-saving”, where operational expenses were reduced significantly (15 per cent) to ensure the sustainability of the business.

“Supply of raw materials and packaging materials during the period of the pandemic was one of the critical challenges that we faced. Hence, Duopharma Biotech has always evaluated this risk and holds three to six months’ worth of buffer stocks to ensure no disruption of medication supply to the



healthcare facilities.

“We have also learnt that relying on sole suppliers was a risky action. Hence Duopharma Biotech has begun to evaluate alternate suppliers for raw materials and packaging materials to ensure continuity of supply.”

He said agility was a crucial factor in ensuring the company could change direction swiftly and adapt to the new normal to ensure these changes were managed without impacting the business.

Engaging with customers, too, has evolved rapidly from traditional face-to-face meetings to visual contacts via emails, telephone and video calls, and text chats. There is an urgent need to embark on digital initiatives in the healthcare sector.

Then there is the issue of market volatility. There was a spike in specific ranges of products (i.e. immune-boosting products) but a sharp drop in others (i.e. prescription medicines). There was also

of equipment, space and staffing. It will have to manage the tail end of the Covid-19 pandemic and at the same time catch-up with the non-Covid-19 services neglected for the past 12 to 18 months.”

On Oct 31, Health Director-General Tan Sri Dr Noor Hisham Abdullah congratulated Dr Suresh and his team for the recognition at the Global Health Awards 2020.

“Heartiest congratulations to Dr Suresh Kumar and Dr Shaiful Azman Zakaria (Head of Anaesthesia & Intensive Care Department), Sungai Buloh Hospital and the whole Covid-19 team for the recognition at the Global Health Awards 2020. The nation thanks you for unwavering dedication and sacrifices,” he wrote. — **The Health**

cost escalation of critical consumables (i.e. gloves, masks, filters, single-use bags etc.) and difficulty securing these consumables.

He said the lack of support and disruption in the global value chain reduced access to expertise to troubleshoot machinery, supply of critical spare parts, raw and packaging material from overseas. There was also increased Cost of Goods Sold (COGS) due to various impacts in logistics, material scarcity, and businesses closing down.

Competition will intensify

He said the impact on its international business was due to travel restrictions and volatile freight costs.

Delay/challenges with technology transfer activity due to border closure - Highly potent Active Pharmaceutical Ingredients (HAPI) technology transfer activity was severely impacted.

“Consumers are getting more conscious of the availability of halal-certified pharmaceutical products (e.g. consumer healthcare products/halal vaccine) in the market. Halal certified pharmaceutical products are considered more hygienic and higher quality, thus giving consumers peace of mind.

“The pandemic and ‘work from home/work from anywhere’ culture that arose in response to this has also taught us the importance of embracing digital innovations in healthcare and corporate culture.”

On challenges in 2022, Leonard Ariff said disruption in the global supply chain continues due to volatility of freight availability and charges. The volatility of the market is expected to continue.

He said the competition would intensify with many niche technology companies coming to the forefront (i.e., digitalisation, diagnostics, precision medicine, gene and cell therapy, etc.). The industry is now moving towards patient-centric value creation, driving the advancement of digitally enabled, on-demand and seamlessly connected clinician-patient interactions

“Telemedicine is expected to be a focus area. However, there is a lack of local expertise and differentiation between market players. Halal pharmaceutical is still regarded as an emerging sector in most of the world, and there are various interpretations of what defines halal pharmaceutical. There are still questions about whether it is needed or not.

“As part of the Halal Pharmaceutical standard development committee under the Standards and Metrology Institute for the Islamic Countries (SMIIC) *Organisation of Islamic Cooperation* (OIC) standard, we are pleased that a SMIIC/OIC Halal Pharmaceuticals has been drafted and is under active deliberation.”

Leonard Ariff was asked about the opportunities available in Malaysia for halal vaccines and his plans to increase their halal vaccine share further.

He replied: “To be a local halal vaccine hub for the production of halal vaccines and leverage on the fact that the majority of the population were Muslims. There is also increased demand for halal vaccines.”

The importance of innovation and technology

Duopharma Biotech believes it is essential to move with the times and cater to the increasing needs of the consumers and patients who are getting more educated and demand better and more cost-effective health solutions - be it in treatment or prevention.

“With the help of technology, there will



“The first is the public has to be mindful always about the risk of getting infected and spreading it to others. Avoid crowded or poorly-ventilated areas. They should get tested if they develop any symptoms.

“The second one is the high-risk group should get their third dose of vaccine. If they do that, even if they are infected, they will not get a severe disease requiring hospitalisation,” he explained.

When asked about the prospects for Malaysian healthcare in 2022, he said: “Covid-19 is unknown territory for all of us. No one can say for sure what will happen next. Healthcare will continue to be under severe stress in 2022.

“It needs sufficient resources in terms



be more precise tools/devices to predict hence prevent an illness, as well as a more targeted treatment to patients to increase the chance of complete cure and reduce the adverse reactions to the treatment.

"As the proverb goes 'change is the only constant', innovation always leads to new ideas and changes. Innovation is the key to the future; it is important to ensure that we stay afloat and be competitive in the market."

Leonard Ariff said technological advancement in the pharmaceutical sector was a key area as the world is focusing on 'Industrial Revolution 4.0' and 'telehealth'. For instance, the use of 'My Sejahtera' application during the pandemic helped healthcare workers evaluate patients' health remotely or without visiting.

“Technology is an essential enabler in the pharmaceutical sector, with the inclination of the country as a whole towards Industrial Revolution 4.0. The pharmaceutical industry is moving towards Pharma 4.0.”

With that said, the elements of a smart factory have been identified and being rolled out in phases in Duopharma Biotech. With Pharma 4.0, the industry will see some tremendous disruption, which will steer the pharmaceutical industry towards a better growth avenue, becoming more self-sustaining and lean in operation and management.

“The company is also constantly looking at integrating innovation and new technologies not only into the manufacturing line but throughout the entire company’s ecosystem. We strongly believe that new technology, for example, digitalisation, automation and Artificial Intelligence (AI), when used correctly, are key to bringing the company to the next level.”

Going by this vision, a total investment of more than RM300 million is allocated and expected to be spent over five years. All the investments will have the elements of digitalisation, automation and AI,

As the proverb goes ‘change is the only constant’, innovation always leads to new ideas and changes. Innovation is the key to the future; it is important to ensure that we stay afloat and be competitive in the market.”

which are fundamentally essential in spurring innovation.

A clear vision

“Ultimately, the technology that we invested in shall drive towards making our product safer and higher in quality. Thus, it should be beneficial to our customers and society.”

He said technology and innovation disruptions were here to stay, and Duopharma Biotech had identified this as the core focus area relevant for now and in the future. Particularly in the pharmaceutical industry, the technology and innovation landscape has constantly evolved rapidly, and thanks to the pandemic for accelerating it further.

On Duopharma Biotech's technological capabilities, Leonard Ariff said it could develop and manufacture various dosage forms to cater to market needs.

"We have the full suite of in-house abilities from R&D to manufacturing, and cold-chain distribution can cater to such special medical needs.

“Duopharma Biotech as a company has a clear vision where we constantly strive to be better and ‘be the benchmark’ when it comes to quality, new technological capabilities and innovation. We rolled out Manufacturing Optimisation Strategy back in 2015. We looked at a comprehensive short and middle-term investment strategy, focusing on enhancing technical capabilities and

spur innovations.”

Duopharma Biotech has the first high technology biosimilar plant in Malaysia; this plant can produce pre-filled syringe products used for patients with renal issues. It also has the first oncology manufacturing plant and leads the country to manufacture oncology products. It is expanding with new molecules to ensure it can cater for affordable medications to the public.

Covid-19's impact on digital transformation

Leonard Ariff said Duopharma Biotech has always focused on digitalisation even before the pre-pandemic era, but certainly, during the pandemic, the transformation rate has spiked 10-fold.

“We recently came up with a short and long-term strategy to map the digital transformation based on the horizon scanning and other relevant indicators.

“There is an increased need to digitise and automate many processes, including manufacturing-related processes. With talks of big data, the internet of things (IoT) and data mining, the Covid-19 era has made the team work more closely in preparation for the digital transformation plan and the usage of digital avenues to increase efficiency and productivity.”

On the rising healthcare costs in the country, Leonard Ariff said Duopharma Biotech has embarked on several initiatives related to operational excellence to improve manufacturing efficiency and productivity.

The company recently initiated a new source evaluation programme to ensure sustainable and uninterrupted product supply by securing more potential inventory suppliers. It is thus able to procure the inventories with much better commercial packages.

"All in all, through these exercises, we believe that Duopharma Biotech would be able to contribute towards containing the rising cost of healthcare in the country."

KHIRTINI K KUMARAN — *The Health*

Boosting public healthcare infrastructure

Prof Datuk Dr Hanafiah Harunarashid

Pro-Vice Chancellor, Universiti Kebangsaan Malaysia (KL Campus)

THE LAST two years have tested the public healthcare system to its maximum. However, the healthcare workforce has remained steadfast in their dedication and service excellence in facing the challenges the Covid-19 pandemic brought and continue to do so.

Looking ahead into 2022, Prof Datuk Dr Hanafiah Harunarashid, Pro-Vice Chancellor of Universiti Kebangsaan Malaysia (KL Campus), said: "With a capable and enlightened leadership, the Malaysian public healthcare infrastructure should see further improvements in all areas, especially in the way analytics and data-driven decision-making is spreading across all layers of the organisation."

"I hope this momentum is maintained even after what should be a very lively general election. Regardless of the politics, we must ensure the continued investments of the appropriate magnitude and clarity of focus to survive the coming challenges."

He also noted that as the borders were slowly opening to regional markets, Malaysia provided the best value for money in high-end clinical services for healthcare travel. The private healthcare sector should see a further pick-up in demand.

Improving the healthcare system

There are always plenty of important things to be done when it comes to healthcare as a sector. Prioritisation would be a challenging endeavour.

"Perhaps a better way of looking at it is which perspective the priority should be for the next two years or so," said Dr Hanafiah.

Firstly, he noted focus must be given to the ageing consumer.

"The pandemic has revealed significant problems of access to primary healthcare and health literacy, especially those who may have been left behind by advances in popular consumer technologies."

"As digitalisation becomes more ubiquitous in every part of daily living, it is crucial that digital literacy should be ensured amongst all layers of society, including the ageing population."

"Merely assuming that these new-fangled techs are accessible for any user may prove to be disenfranchising large segments of the community."

Secondly is the health social security or lack of it, thereof.

While the public healthcare setup here is one of the best in the world, he said much is needed to ensure sustainable health financing and service accessibility guaranteed for all, especially in the light of depleting retirement reserves following the devastating effects of the pandemic on lives and livelihoods.

"Out of pocket spending for healthcare is still significant, with many public services struggling to meet increasing demand over time. As the government tries to rein in its debt, the public healthcare infrastructure should not be the victim of budget cuts and staff curtailing."



We have come a long way with the dual system as our model of healthcare for the rakyat. Much like the public sector, the private sector has much to offer, especially with a growing middle class and the ever-present threat of an ageing Malaysia."

Lastly is the local health market ecosystem. As with many other parts of the economy, the private healthcare sector, which goes beyond facilities and the support industries, was also affected by the slowdown of commercial activity and declining household incomes.

"We have come a long way with the dual system as our model of healthcare for the rakyat. Much like the public sector, the private sector has much to offer, especially with a growing middle class and the ever-present threat of an ageing Malaysia."

"Investments in public infrastructure should also come with bringing in more capital and funding opportunities for incumbent and start-ups alike."

Leading amidst the pandemic

Dr Hanafiah, who was appointed UKM Pro-Vice-Chancellor (KL Campus) earlier this March during the pandemic, acknowledged that the pandemic issue took centre stage.

He shared that the teaching hospital remained operational throughout the pandemic, with a significant workforce comprising trainees from the Ministry of Health (MoH).

"Of course, this comes at a cost,

whereby these trainees were exposed to a substantial risk of Covid-19 infection. Therefore, heightened safety procedures and related SOPs were implemented to ensure a risk-managed environment."

"I am thankful no severe complications have arisen amongst the MoH doctors attending speciality training from the start of the outbreak until now."

He disclosed that as the hospitals had to take in more and more Covid-19 patients during the pandemic's peak, many surgical procedures had to be postponed. Hence, there was less exposure for trainees.

"However, they were not left idle as many willingly served in the ICU and other places needing doctors throughout the hospital."

He also shared undergraduates from medical and other healthcare degree programs had to stay away from the premises during the outbreak's height due to safety concerns.

"Thankfully, we had the means and expertise to migrate to the virtual setting of higher education so that training could still proceed with the most minimum of interruptions."

He added the most significant task was setting up and implementing the MOHE Vaccine Outreach programme on campus and nine missions to various places in West Peninsular Malaysia.

"I am happy to report we had successfully delivered more than 45,000 doses of Covid-19 vaccines within the five months from various rural settings in Johor, Negeri Sembilan, Perak and Penang."

"We have a great team here, and I am forever impressed by their perseverance, ingenuity and dedication in running the programme."

He shared the hospital itself also catered for a drive-through vaccination



KAMPUS KUALA LUMPUR

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service and a drive-through Covid-19 screening, which is no small feat given the limited resources available to design, test, and implement all the SOPs demanded by the national Covid-19 Immunisation Task Force (CITF).

Current and future projects

According to Dr Hanafiah, the idea of a unified UKM Health Campus has been in the works since the 11th Malaysia Plan to set up a Health Technopolis (HT) in Bandar Tun Razak.

"The winds of political change swept forth, leaving this initiative in the doldrums until recently.

"There is a window of opportunity to reintroduce the HT to the current government, as part of a much longer-term plan to reinvigorate urban socioeconomic growth in the mould of Sustainable Development Goals and Smart Green Technology."

The proposal he shared had been presented to the Ministry of Higher Education and required further refinement and adjustment before official review by the Minister of Higher Education Datuk Seri Noraini Ahmad.

"The proposed change includes the redevelopment of the Jalan Raja Muda and Jalan Temerloh campuses and subsequent temporary relocation of the students currently staying there.

"Overall, the new additions will further enhance the academic medical centre concept, emphasising niche areas, ambulatory care and healthy lifestyle."

As for plans and projects, he shared that under the new UKM narrative framework, TERAS (Talent, Ethics, Revitalise, Agile and Soul), the UKM Health Campus specifically will drive the SIHAT initiative (Sustainable Inclusive Healthcare that is Affordable and Trustworthy).

"To enhance the value of service provision and patient experience, the TERAS umbrella includes initiatives for greater inclusion for persons with special needs and disability. It will be a campus-wide effort to identify, refurbish and renovate existing facilities and transit spaces to be disabled-friendly.

"Digitalisation of the work environment is also in the works, with plans to improve connectivity that would allow for an enhanced virtual learning

Long overdue is revamping the current medical records into a complete electronic solution in the form of the Total Hospital Information System (THIS). New digital work culture will need to be introduced, which hopefully would lead to big data real-world applications that ultimately would translate into benefits in research, service and policy."

experience at all levels, undergraduate and postgraduate; as well as better care and patient experience."

"Long overdue is revamping the current medical records into a complete electronic solution in the form of the Total Hospital Information System (THIS).

"New digital work culture will need to be introduced, which hopefully would lead to big data real-world applications that ultimately would translate into benefits in research, service and policy."

Dr Hanafiah stressed these improvements were for nought if the impact of meaningful change did not translate to benefits for the greater community surrounding the campus and society.

Goals in the future

He aims to bring a sense of social inclusion into daily practice, which he noted is challenging but worthwhile.

"Inclusiveness is about creating targeted support for the most vulnerable and removing barriers to access, hence costly and have a higher risk of failure.

"It is pertinent that solutions are planned to be sustainable in the long run, yet affordable and trustworthy for all."

The goal, he explained, was to create a dual ecosystem of academic healthcare services and medical innovation within the campus; the sum of all the parts in this microcosm of public higher education in healthcare- infrastructure, talent, community, knowledge bringing meaningful change in urban growth.

"For this to happen, we need to work on reintegrating the separate entities within the KL campus itself which were traditionally physically apart, also with different identities and established inner

work cultures.

"All the faculties and the two hospitals must find a way to work together closely as a single unit in a meaningful and collaborative manner.

"The first thing is to concentrate on building capacity, particularly the talent pool.

"It is in the organisation's interest to retain the best talents while continuing to attract new highly skilled and motivated personnel.

"And we need to secure the necessary funds for training to be available for all levels of the workforce.

"Infrastructure also must be improved to modern standards, made safe and secure, as well as sustainable and green."

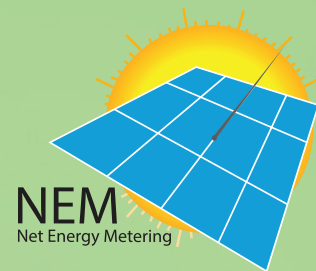
Whilst a core social institution such as the UKM KL Campus must have deep solid roots in tradition and credibility, it cannot avoid branching out and connecting with other international partners.

They will soon engage with an established institution of long tradition in the medical sciences and attract foreign faculties who are top in their game in the world of medicine to share their experience and expertise here.

"There is no turning back. The health campus's only option is to grow and compete in a far more chaotic and uncertain world than before. The pandemic is just one of many global challenges to come, with inequality widening further."

"While the UKM KL Campus may be the future heart of medical advances in Malaysia, patients shall always be the heart of what we do - a promise we maintain to the people of this great nation." KHIRTINI K KUMARAN — *The Health*

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Supporting public healthcare system

Datuk Dr Kuljit Singh

President, Association of Private Hospitals Malaysia

THE PANDEMIC has undeniably placed the nation's healthcare systems under immense pressure, and public healthcare services were stretched beyond their capacity.

When the pandemic cases were at their peak, there were not enough hospitals beds available in public hospitals. The government roped in private hospitals, but, even then, there was a shortage of other facilities.

"Some amount of concentration in terms of budgeting needs to be put into public healthcare to ensure preparedness for future health crises," stressed Dr Kuljit Singh, President of the Association of Private Hospitals Malaysia (APHM).

"There is a need to create more space in public hospitals. We are not entirely out of the pandemic. There can be another wave at any time.

"So, we need to have a budget to create space, which can be converted into ICUs, whenever there is a pandemic or when we need beds."

Expand space and services

He added some amount of budget needed to be used to expand the services in public health care. "We must make sure public healthcare is robust and beneficial for the public.

"That means the public will be able to get treatment from the general hospitals quickly. There are areas where the government can do smart partnerships with the private sector.

"If public hospitals cannot treat patients quickly for reasons such as shortage of infrastructure, manpower or services, then they can buy services from private hospitals. It's a win-win situation for all parties."

Consolidating resources and responsibilities

The 12th Malaysia Plan states resources and responsibilities will be consolidated, and healthcare services will be redesigned through collaboration between public and private sectors to manage future outbreaks and health crises better.

The private sector, said Dr Kuljit, was willing to help and support public hospitals when their capacity and resources are overwhelmed during a pandemic outbreak or a non-pandemic crisis.

However, he stressed the government must come up with a reasonable reimbursement for private services.

"You cannot expect private hospitals to treat at a meagre cost or a very high discounted rate because that will not be sustainable for the private sector.

"We will give a discount but in a sustainable manner. We run a business, it is private, and we don't get any support from anywhere.

"So, we are willing to help but at least reimburse us in a manner that we can carry on with the collaboration."

He highlighted the government could buy services from private hospitals at any time, which is much cheaper than building more hospitals and healthcare facilities, finding human resources, and purchasing equipment.



"There are 220 private hospitals in Malaysia, and some of their resources are not being fully utilised.

"At any time when public hospitals find their system is getting very tight and the capacity is full, they should not make patients wait because the waiting list is long."

He said if the government did not have the space or capacity to treat, then they should transfer the patients to the private sector, just like what they did with the Covid-19 patients and backlog cases.

Private hospital's role in Covid-19 responses

Dr Kuljit shared some of the aid and support provided by the private sector.

"We did many things. Last year, the situation was not very bad as there were few patients. All Covid-19 patients were required to receive Covid-19 treatment in government hospitals only, no matter whether they could or could not afford private healthcare services. Therefore, we did not treat Covid-19 patients in 2020.

"However, the government was worried that they might not have enough ventilators. So, we gave the government free ventilators, about 75 ventilators on loan."

From 2021 onwards, the private sector started looking after some Covid-19 patients who could afford private healthcare services.

"That eased some of the burdens of the government hospital. People who can afford it could come to private, thus making space in government hospitals for patients who can't afford private healthcare services."

Next, he said, private hospitals took over some of the non-Covid-19 cases from the public hospitals, and the government paid for the private sector's services.

"These are the collaborations we have done, and it has helped to ease the load of Covid-19 patients in public hospitals and the non-Covid-19 backlog cases.

"Lastly, we also participated in the National Covid-19 Immunisation Programme (NIP), whereby some of the vaccinations were in our private hospitals, and we also sent our staff to some of the mega vaccinations centres (PPV) to vaccinate the people."

Low profits

Healthcare is expensive, and it will keep rising, said Dr Kuljit.

"A lot of our medical products and medications are all bought from overseas. When the government purchases a CT scan or an MRI machine from Germany or the US,

and with our exchange rate, it will cost the same for both public and private sectors.

"The difference between the public and private sector is that the public does not see the cost in government hospitals because there is no price tag there, and patients are only required to pay a nominal fee.

"In private, of course, when we buy and upgrade services and equipment, it is all chargeable, and there is a price tag."

Private entities run privately, and the profits they make is very low, he explained.

"Most of them only make about six or seven per cent profit at the end of the day, and the cost to maintain and ensure the hospital is safe for patients is expensive.

"We have to embrace the fact that healthcare will become more expensive. The only way is, we need to focus and help the group of people who cannot afford healthcare."

While it may seem that digitalisation and technological advancement would make healthcare cheaper, Dr Kuljit reminded technology itself was not affordable.

"There is no mechanism to reduce the cost. Every government in the world has tried, thinking there will be a magic formula to reduce it.

"So what is more important to the people to know is to keep themselves healthy. When you keep yourself healthy by practising a good healthy lifestyle, you will have fewer chances to get sick and avoid going to hospitals."

The Covid-19 pandemic is a good example, he said.

"If you prevent yourself from getting Covid-19, you will not get infected, and you don't need to see a doctor, and you don't have to pay bills. But if you don't follow the SOP and don't get vaccinated, be ready for the bill."

Private hospitals, he explained, were based entirely on 'willing buyer willing seller'. And while it may be costly to the man in the street, patients who can afford it and want the comfort and the frills the private sector provides are willing to pay for it.

"We saw during the pandemic 80 to 90 per cent of the patients had no issue with the payment, and most of them wanted a bed in private even though they already had a bed in a government hospital."

Ready for medical tourism

He noted that Malaysia had the best healthcare system with the best prices in Southeast Asia.

"Comparatively between Thailand and Singapore, we give excellent healthcare treatment at excellent costs. And medical tourists are coming to Malaysia because of that reason.

"In 2019, we got RM1 billion revenue for the government because many medical tourists came to Malaysia as they found it very cost-effective. So if you look at it, we are not expensive."

As travel restrictions are relaxing and border and tourism are opening up, Dr Kuljit shared that the private hospitals involved in medical tourism before the pandemic are ready to accept and serve medical tourists.

He, however, noted that it must be at a slow and steady pace.

"We have to be careful and follow the SOPs and the guidelines given by the government. And I think it would not be a problem when it is between green travel bubbles, whereby the endemic level and type of virus between the countries is the same.

"We need to take small steps because we do not want a situation where we try to get a lot of medical tourists and end up bringing in Covid-19 variants. But otherwise, we are ready to start even today."

KHIRTINI K KUMARAN — *The Health*



Lung cancer care during Covid

Dr Anand Sachithanandan

President, Lung Cancer Network Malaysia

IN RECENT YEARS, Malaysia has become a leading and preferred health tourist destination in the region due to its diverse medical expertise, state-of-the-art facilities and relative affordability.

Lung Cancer Network Malaysia (LCNM) President Dr Anand Sachithanandan said healthcare, however, like all other sectors of the economy and life in general, has been severely disrupted by the Covid-19 pandemic. Driven by our world-class vaccination programme these past months, Malaysia can hopefully transition to a new normal of endemic status.

“With sensible but measured precautions in place, hopefully, we can ‘open up’ and regain our standing as a top regional healthcare provider for both locals and tourists,” said Dr Anand.

“Health literacy and awareness have improved considerably as a consequence of Covid-19. As a nation, we must leverage on this and make provision of quality healthcare services a priority.”

So how has the pandemic affected lung cancer treatment, care and management?

Dr Anand, a consultant cardiothoracic surgeon, said lung cancer remains a leading cancer. It is the commonest cause of cancer-related deaths in Malaysian men. In women, only breast cancer is more deadly.

“Outcomes or survival is poor as we are burdened with advanced-stage disease, with almost 95 per cent of cases being diagnosed in Stages 3 or 4.

“Unfortunately, the pandemic has exacerbated this. We can expect to see more cases of late-stage presentation and diagnosis due to the various disruptions and delays in the provision of cancer services.”

He added that the MCO or lockdowns, the ‘stay-at-home’ mantra, re-purposing of hospitals as Covid-19 facilities and even redeployment of hospital staff to other areas to battle Covid.

Covid-19 has negatively impacted cancer services and increased the backlog of cases awaiting definitive diagnosis and appropriate treatment.

Asked on what could be done to start mitigating the adverse effects of the pandemic on cancer treatment, care and management, Dr Anand said the progression of any cancer, especially lung cancer, from an early to late-stage was a real and serious concern.

Healthcare budget must increase

“This underscores the importance of a prompt and timely diagnosis. In general, early-stage disease is more amenable to curative therapies, more cost-effective and associated with vastly better survival.

“Our healthcare budget expenditure as a proportion of GDP is too low and must be increased significantly. Modern cancer care is highly efficacious but very costly.

“Appropriate funding must be made available and ring-fenced to finance an efficient and comprehensive cancer service, including screening of high-risk or at-risk groups.

“For lung cancer, this will be low dose CT (LDCT) screening of those with a significant smoking history and perhaps even

non-smokers who have a significant family history of the disease.”

During the pandemic’s peak in Malaysia, Dr Anand said that there was an unprecedented collaboration between the government (public) hospitals and private facilities to help decant the former at short notice.

He added we should build on such collaborations and develop a more integrated and impactful public-private partnership to provide better healthcare for all, leveraging the vast expertise, experience and first-class facilities available in the private sector.

This requires political will and dedicated funding for quality and timely cancer services and treatment.

“However, such collaboration must be fair and transparent to make it sustainable and effective.

“With an appropriate framework, waiting list initiatives can be undertaken to deal with the expected and rising backlog of screenings, surveillance scans, outstanding therapies (eg. chemoradiotherapy) and semi-urgent surgeries as required.”

He said Malaysia should become more innovative and inclusive in its clinical practice. Several tertiary private hospitals with a comprehensive one-stop service can be easily identified and designated as organ-specific cancer centres of excellence. These can function as a referral centre based on a hub and spoke model to help provide timely and high-quality service.

Multi-disciplinary aspect of oncology care

The optimal care and outcome for many cancers, especially lung cancer, often requires a multi-disciplinary approach with input from various specialists and a combination of treatments (multi-modality) to achieve a cure or good long-term disease-free survival.

It is the cornerstone of good patient-centric cancer care and takes the form of multi-disciplinary tumour board meetings. Throughout the pandemic, such meetings persisted but were conducted remotely on virtual platforms. It ensured cancer patients continued to receive appropriate quality care based on a consensus of expert opinions.

Dr Anand also spoke on the significant changes or innovations developed during the pandemic to enable continuous cancer treatment and care services.

“Covid has expedited the process of digitisation and adoption of technology. In addition to virtual MDT or tumour board meetings to discuss optimal management of complex cancer cases, telemedicine has enabled the conduct of online or virtual clinic consultations to triage, reassure and monitor our cancer patients remotely.

He said adopting innovative and impactful technology was critical to delivering a contemporary, efficient and



genuinely effective cancer service. The use of telemedicine, like virtual platforms for remote clinic consultations with patients and their families, and online multi-disciplinary tumour board meetings would ensure cancer patients continue to receive uninterrupted quality care, including expert opinions from elsewhere, if desired.

Artificial intelligence (AI) technology with deep-learning algorithms is another potential game-changer. LCNM is embarking on an exciting screening project for lung cancer out in the community using AI-driven analysis of chest X-rays.

“In my view, this ‘disruptive’ technology holds immense potential to enhance diagnostic accuracy and expedite the referral pathway so that we can swiftly get any patient with suspected lung cancer in the hands of the relevant specialist.

“With technology, we hope to reach and screen more rural populations in remote locations. Robotics is another area driving change in clinical practice. However, it is presently not so cost-effective, and long-term benefits need to be realised and firmly established before more widespread adoption.”

Important to adopt technology meaningfully

He added it was important that clinicians adopted technology meaningfully to provide impactful and cost-effective superior solutions to current treatments rather than create or follow a trend or gimmick.

Regarding lung cancer, Dr Anand said the emergence of genomics molecular profiling and scalable next-generation sequencing technology heralds the dawn of a new era of truly personalised precision medicine.

Identifying actionable driver mutations within the tumour allows use of highly-effective but expensive bespoke therapies, including immunotherapy and targeted oral therapies.

It has been challenging to manage lung cancer patients during the pandemic. Even when restrictions were lifted and with SOPs in place, the public and many patients were understandably reluctant to come to the hospital for screenings, routine check-ups or scheduled surveillance scans for fear of contracting the virus.

Close surveillance with a CT or PET scan is vital for any cancer, especially lung cancer, to monitor for recurrence after surgery and tumour progression or response to therapy.

The commonality of symptoms (eg. a cough or difficulty breathing) between Covid-19 and a possible lung cancer means many lung cancer cases might have been misdiagnosed as Covid-19, further delaying treatment.

Lung cancer patients after major surgery or those on active treatment (eg. chemotherapy or immunotherapy/targeted therapy) are particularly vulnerable to a more severe Covid-19 infection due to less pulmonary reserve or immunosuppression.

However, treatments must continue as the risk of cancer progression is real and serious and cannot be deferred till the pandemic passes.

The challenge has been to mitigate potential risks and provide treatments, including life-saving lung resection surgery, as safely as possible.

Strategies have included the use of PPE, dedicated Covid-19 operation theatres, meticulous pre-treatment PCR testing, delivery of more innovative outpatient treatments as oral therapies, and shorter in-patient therapies like hyper fractionated radiation therapy in addition to utilising technology for more remote or virtual consultations where possible. KHIRTINI K KUMARAN — *The Health*



Addressing the gaps

Dr Koh Kar Chai

President, Malaysian Medical Association

WHILE THE Covid-19 pandemic has revealed gaps in Malaysian healthcare service delivery and infrastructure, it is also noteworthy that some of these issues pre-existed even before the pandemic broke.

The gaps need to be addressed to bolster the nation's healthcare delivery system and preparedness for a future public health crisis.

Malaysian Medical Association (MMA) President Dr Koh Kar Chai believes the way forward now will be to integrate public and private health facilities to allow for seamless management and provision of health services.

Getting the right talent

"We already have overworked health workers in different areas of healthcare in both the hospitals and the primary care centres," said Dr Koh.

"Although dedicated, these workers were stretched thin on the ground, having to multitask on the frontline when hit with the unprecedented pandemic. We were just not prepared, which is akin to an unvaccinated person."

The solution, he shared, was to look into the mismatch of health personnel and allot more personnel in areas that require more workforce.

"And personnel in redundant or underutilised areas can be transferred to where they are needed."

Another issue with regards to the workforce is the challenge to retain talent in the public sector.

"The gap is always there as the government cannot match the remuneration available in the private sector."

"The government had allowed public sector doctors to have some form of private sector engagement so that they may boost their income."

"This comes in the form of limited locum practice or practice in the private wings of public or academic health institutions."

He also stressed the benefit of successful integration of public and private health facilities would be sharing the financial remuneration.

Infrastructure and facilities

According to Dr Koh, another gap that needs addressing is the outworn and defunct public health infrastructures and facilities.

"We have public health facilities built to cater to the population at that time and have been functioning for many years."

"The number of patients has increased through the years, and these facilities have been bursting at the seams."

"On top of that, these buildings are archaic already, badly in need of either extensive refurbishment or replacement," he said, adding that it is also the same with the equipment in these health centres, which may be obsolete.

"An extensive audit is needed on the



The government had allowed public sector doctors to have some form of private sector engagement so that they may boost their income. This comes in the form of limited locum practice or practice in the private wings of public or academic health institutions."

existing health facilities throughout the country, be it in the urban centres or the remote rural regions.

"All health facilities must be able to function efficiently and with the safety of the patients in mind. Hence complex infrastructure needs to be identified and dealt with."

"Protocols must be developed to weed out non-functional or outdated equipment and a proper maintenance schedule put in place to ensure the working condition of such equipment including timely updating of software."

Shortage of doctors and specialists

When asked about concerns about the persistent shortage of doctors, Dr Koh said: "Shortage of doctors will always exist if the growth of doctors is not in tandem

with population growth."

He also noted that losing doctors to foreign countries is more of a problem than shifting brains from the public to the private sectors as they are still within our healthcare system.

"With the present dichotomous system, more doctors should be retained in the public sector to manage the unequal distribution of patients between these two sectors."

He expressed the need for young doctors to be guaranteed good career prospects to remain in this country.

"Whether it is about offering them permanent positions or longer contracts, the young doctors need to feel that their service to the nation is being appreciated."

Regarding the shortage of specialists, he said: "We need to groom the young doctors to be the specialists."

"The government needs to create more opportunities for them to specialise by first allowing them a more extended contract, if not permanent posts, so that they will be able to have the training needed for them to specialise."

"Create more postgraduate programmes to allow an increase in the intake of postgraduate students."

"Having individual financial grants to assist these young doctors who wish to take up such programs will go a long way too."

Supporting frontliners

Noting the issue mentioned above on workforce, especially during the pandemic, doctors and healthcare personnel tend to experience burnouts, fatigue and mental health problems while working in a high volume and a high stress working environment.

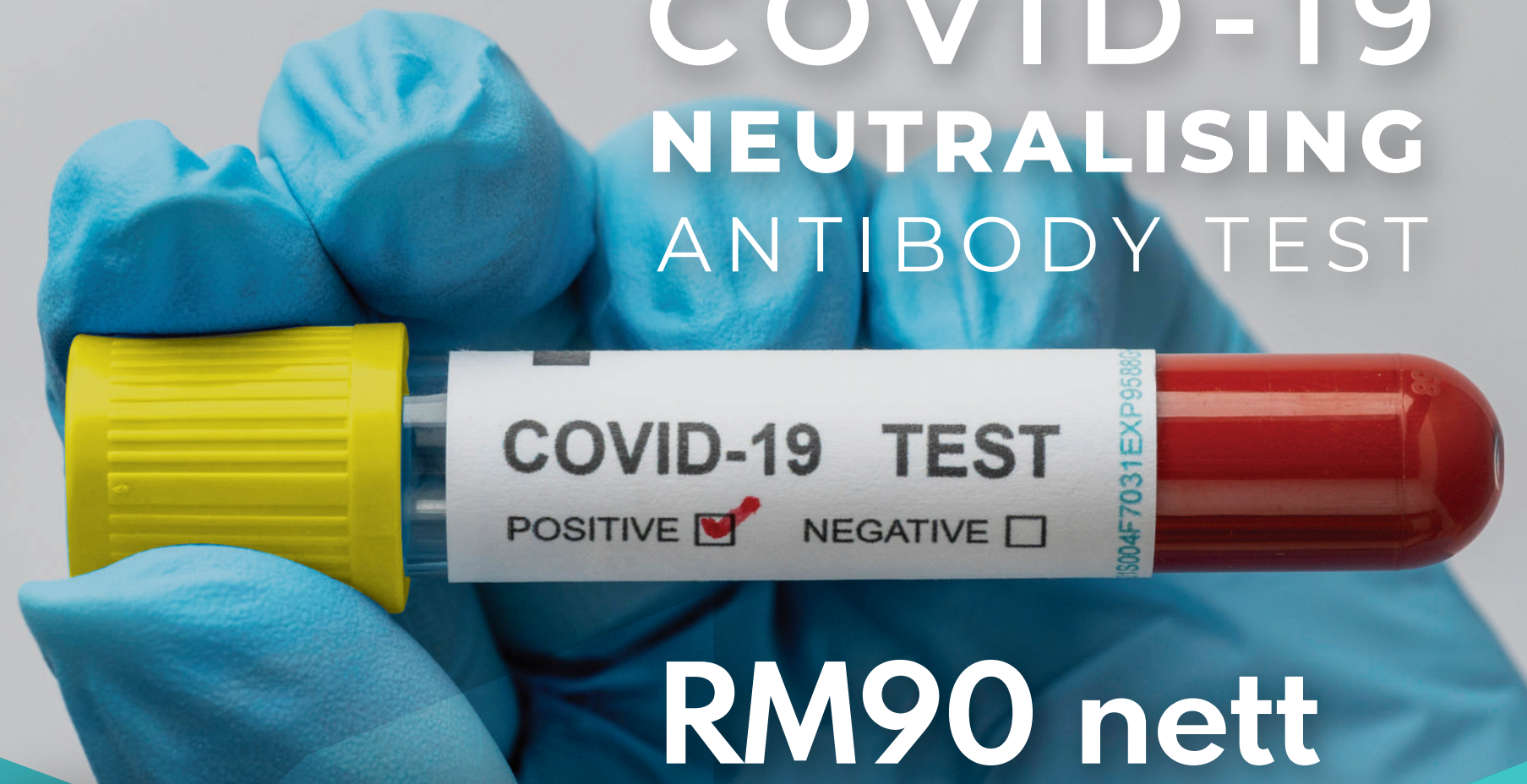
Dr Koh shared that from the onset of the pandemic, the Ministry of Health (MoH) via the State Health Departments and Mental Health PsychoSocial Support (MHPSS) Team from the Department of Psychiatry and Mental Health in all hospitals, have been offering Psychological First Aid to the frontliners.

"This is still going on. Also, frontliners suffering from various forms of stress-related disorders and mental health conditions are given the necessary psychological support and treatment."

He stressed: "The main contributing factor to the problem is the shortage in human resources. Though there is a downtrend in cases, the issue needs to be addressed in the long term." KHIRTINI K KUMARAN — *The Health*



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Unsustainable without reforms

Amrahi Buang

President, Malaysian Pharmacists Society

HEALTHCARE IN Malaysia, which follows the two-tier system comprising government-led and funded public healthcare and private healthcare sectors, has been deemed unsustainable.

The system cannot adapt to the evolving trends and gaps, especially when facing health crises such as the pandemic.

As we enter the endemic stage of the Covid-19 infection by living with the coronavirus, reforms are needed, and the whole system needs to be integrated into one.

President of Malaysian Pharmacists Society, Amrahi Buang, said: “The government has given priority to the healthcare sector, and as we advance, we expect GDP at 4.4 per cent on national healthcare expenditure.

“We hope there is a significant increase for the healthcare budget from the current two per cent.”

The MPS is the national association for pharmacists formed in 1967 to promote and maintain the honour and interests of the pharmacy profession in the country. It also aims to uphold and enhance the standard and ethics of the profession.

The MPS plays a critical role in furthering the development of pharmacy and pharmaceutical education and fostering intra-professional relationships among members.

It strives to improve the Science of

Full recognition about the roles of community pharmacists in health promotion and prevention as they are the most accessible healthcare professionals in the community. Community pharmacies are the health hub of the communities in Malaysia.”



Pharmacy for the public's general welfare by fostering the publication of scientific and professional information relating to the practice of pharmacy and aid in the development and stimulation of discovery, invention, and research.

In this way, it also assists in improving the health services in the country

Addressing the gaps

“The most important one to be addressed is the National Healthcare Financing mechanism accessible to the whole

population in Malaysia,” emphasised Amrahi.

“The way towards a National Healthcare Financing mechanism should start soon since the pandemic has exposed the gaps and equity is an issue in Sabah and Sarawak and remote areas.”

He also noted the government should focus on health literacy and health promotion as Malaysia's moves towards an ageing population by 2030.

“Full recognition about the roles of community pharmacists in health promotion and prevention as they are the most accessible healthcare professionals in the community.

“Community pharmacies are the health hub of the communities in Malaysia.”

Pharmaceutical industry challenges

While the pharmaceutical industry has responded well to the Covid-19 pandemic with new vaccines and anti-viral medicines, Amrahi noted a concern for medicines supplies since Malaysia import more than 90 per cent.

He suggested the government should support local manufacturers to produce more locally.

When asked about the challenges ahead for the pharmaceutical industry in 2022, he replied: “Besides the pandemic and other infectious diseases, the non-communicable diseases (NCD) will also be an issue. NCD management will be a challenge now and next year.

“Concurrently, there will be an increase in demand for medicines both locally and globally.”

He added that, in the endemic stage of the Covid-19 infections, there should also be a focus on mental health management.

Growth potential in the pharmaceutical industry

Despite the challenges, there is still potential and growth for the pharmaceutical industry and services.

“Digital technology is the focus now. Tele-pharmacy, e-pharmacy or e-commerce in pharmacy will grow.

“Value-added pharmacy services will be the new norms like medication adherence, home medication review, tele-pharmacy, e-pharmacy and medicines delivery services.”

He added that there is also growth in services for anti-smoking, weight management, mental health and stress management, and geriatric medicines.

Booster shots

The current Health Minister Khairy Jamaluddin announced Covid-19 vaccine booster shots would start on Oct 22, 2021, focussing on populations older than 60 years old, frontliners and vulnerable groups.

It is optional and will be given free under the National Covid-19 Immunisation Programme (NIP).

“Heterologous vaccination has also been started for Sinovac vaccinees after three months of Sinovac vaccine. They will be given the PfizerBioNTech vaccine. It is still under PICK and be given free,” explained Amrahi.

Regarding the number of booster shots required, whether single or multiple, it depends on clinical trials results and whether the current vaccines portfolio will address any new strain, said Amrahi.

“It can be three, six or more shots,” he said, adding that if required, like an annual flu shot, then cost is an issue. KHIRTINI K KUMARAN — *The Health*



counselling, which prevents people from seeking treatment.

“We need to educate the public about the importance of mental health and informing them through various means that going for therapy and counselling is as important as going to see a doctor for a physical illness. The media can play a big role in this education.”

There is also the issue of the lack of mental health professionals to accommodate the rise of mental health patients.

Currently, Malaysia only has one psychiatrist for every 100,000 people, whereas the World Health Organisation (WHO) recommends one psychiatrist for every 10,000 people.

Dr Rajbans stressed the need for sending more persons for training and said: “The MoH has realised this, and also the government needs to allocate a budget for training this personnel.”

Promoting mental wellness

According to Dr Rajbans, wellness comprises many things, focusing on the mind, body and spirit.

“It comprises of a holistic approach to health and focuses mainly on preventive health.

“It will include concepts like having a purpose in life, having goals, having a close and healthy relationship with family and friends, having faith, well-balanced nutrition, regular exercise, managing stress and good sleep habits and avoiding toxins.”

The Blue Zones, he said, have shown that following certain principles will lead to longevity and both good mental and physical health. KHIRTINI K KUMARAN — *The Health*



A difficult year ahead

Dr Michael Jeyakumar

President, Parti Sosialis Malaysia

IT WILL BE A challenging 2022 as a large backlog of non-Covid-19 cases needs to be cleared. It is because investigations and treatment were delayed due to the pandemic.

Parti Sosialis Malaysia (PSM) President Dr Michael Jeyakumar said more of the M40 group who previously turned to the private sector will now come to the government sector as they are short on funds due to the effects of the lockdowns.

“The government has difficulty increasing the health budget to the level it should because of the pressure to bring down the budget deficit as soon as possible. They are also anxious that Malaysian securities will be downgraded internationally.

Asked the three most important health issues that needed to be addressed in the Malaysian healthcare sector, he said: “We need to address the question whether the provision of a high level of healthcare is part of the social contract.

“The 12th Malaysia Plan says in 4-22 that the government will gradually get the people to bear their costs, and the government will only pay for the poor. (Read also the footnote in that page). That’s one view.

“There are others, including the argument that Malaysians are not being compensated adequately for their work (ie there is wage suppression in Malaysia). The people have a right to expect subsidised healthcare. It’s part of the social wage in the ‘social contract’.”

Temporary moratorium on private hospitals

He said the government needed to accept that new private hospitals accelerate the brain drain of specialists and experienced nursing staff. We are already relatively short of specialists in government hospitals.



If the wages of Malaysian workers were like that in the EU or the US, then getting people to contribute towards the safety net is fair. But when there is wage suppression – our median factory wage is about 1/8 to 1/6 of the German median factory wage – a further deduction of the salary of our average worker is quite unfair.”

He added that if the above was acknowledged, we could start discussing measures like a temporary moratorium on new private hospitals. However, people in government – BN, PN and PH – think it’s all right to open new private hospitals as that can bring in health tourists and investments.

Dr Jeyakumar also said the issue of funds has to be tackled. Many

commentators and health NGOs will give a wish list.

“But most programmes will cost money. The government already spends 10 per cent of the federal budget on the Health Ministry. Where will the extra funds come from?

“Where are the leakages? Can they be plugged, and how? Can specific Ministries do with less?

Leakages in procurements

He also asked if the government could introduce a wealth tax or a tax on financial transactions. He wondered if that would lead to capital flight and hurt us in the long term.

“Is ‘debt monetisation’ an option we should consider? It is a serious and complicated subject, and getting it wrong can have quite significant adverse effects on the nation. But we need to address it.”

As for the 12th Malaysia Plan, he said it was relatively superficial. It does not identify and address the issues plaguing the health system.

The Plan ends up with generalities and platitudes. It talks of increasing the doctor population ratio. There is no mention of the fact that almost 40 per cent of the doctors in government service are contract officers and there are insufficient facilities to train them properly.

“The over-production of medical graduates (and nursing graduates) due to profit-driven private colleges is not addressed. The ‘capture’ of the regulatory bodies by these private colleges is not addressed.

“For example, on Pages 4-20, it says ‘a blueprint for Health Care Reform will be introduced’. Come on. This MP12 is not a spur of the moment document. It’s been in gestation for five years. And all the Plan can say is that a ‘study will be undertaken’ to draw up the blueprint?”

On the issue of rising healthcare costs in recent years, he said this was because medical technology was increasing, and we can offer more treatment options now compared to the past.

“The development and marketing of new medicines and technologies are mainly by for-profit companies who use the patent laws to create monopoly positions and raise prices.

“There are also leakages in the procurement of goods and services by the government hospitals. There have been many instances of over-priced and poor-quality goods, delays in hospital construction, etc.”

He said healthcare should be seen as part of the social contract, and the government should provide it with low co-payments.

He said it was possible to introduce a national health insurance scheme, but some groups will contest such attempts.

“If the wages of Malaysian workers were like that in the EU or the US, then getting people to contribute towards the safety net is fair. But when there is wage suppression – our median factory wage is about 1/8 to 1/6 of the German median factory wage – a further deduction of the salary of our average worker is quite unfair.”

He said the government would have difficulty moving in this direction as it would be quite unpopular and politically costly. KHIRTINI K KUMARAN — *The Health*

| Hot Topic |

Next frontier of prostate cancer care

Johnson & Johnson is researching a new way to fight the disease—one that involves blocking cancer cells from repairing their own damaged DNA

BY HALLIE LEVINE

WHEN YOU hear the words “BRCA mutations,” you probably think of breast or ovarian cancer. But these gene variants can affect people with other types of cancer, too. And they play a very serious role in prostate cancer.

It’s something Mary Guckert, RN, MSN, Vice President and Development Leader, Prostate Cancer, at the Janssen Pharmaceutical Companies of Johnson & Johnson, understands well—on both a professional and personal level. Her research at the company is dedicated to working toward promising treatments for prostate cancer, a disease that has affected her family.

While the overall incidence of prostate cancer in the United States has gone down, the percentage of patients with very advanced, or metastatic, disease has gone up over the last decade, according to the Centers for Disease Control and Prevention. Between 2003 and 2017, the percentage of patients diagnosed with metastatic prostate cancer increased from four per cent to eight per cent.

That’s especially troubling because metastatic prostate cancer is almost universally fatal: Fewer than one-third of patients survive five years after diagnosis. Roughly one in 12 harbors at least one gene mutation, such as BRCA1 or BRCA2. These gene variants dramatically increase the risk of developing prostate cancer, especially life-threatening prostate cancer.

As part of its 10-year legacy in prostate cancer innovation, the Janssen Pharmaceutical Companies of Johnson & Johnson has made it its mission to help these patients. The company is in the midst of clinical trials to potentially bring a new form of prostate cancer treatment to patients with this common gene mutation and a panel of other gene mutations, such as FANCA, PALB2, CHEK2, BRIP1, HDAC2 and ATM, which are actively being evaluated in clinical trials.

We sat down with Mary Guckert to learn about the company’s latest research, how it may prove to be promising for metastatic prostate cancer—and the ways her personal passion for working to help eliminate cancer is fueling this critical work.

First of all, what are BRCA mutations, and how do they play a role in prostate cancer?

BRCA1 and BRCA2 are genes that produce proteins that help repair damaged DNA. They are also sometimes called tumor suppressor genes, and when they have certain variants or mutations, cancer can develop. The genes can’t repair damaged cells the way they normally would, which allows abnormal cells to replicate unchecked.

If you inherit one of the BRCA mutations, you have increased risk of several different

cancers, including, in some people, prostate cancer, and even if these mutations are not inherited, tumors can also harbor them..

A 2016 study published in the *New England Journal of Medicine*, for example, found that risk of metastatic prostate cancer was more common in patients with genetic mutations compared to noncarriers.

What is DNA Damage Repair Factor, and how can it help these patients?

DNA Damage Repair Factor is a type of targeted therapy that helps cells repair themselves from damage. One way to do that for some patients with prostate cancer with a specific mutation is through drugs known as poly (ADP-ribose) polymerase, or PARP, inhibitors.

PARP is a substance that plays a key role in the repair of DNA. When you block PARP as part of a cancer treatment, it may prevent cancer cells from repairing their damaged DNA, causing them to die. Studies show that PARP inhibitors can often be a very successful treatment for patients with advanced prostate cancer who also have a BRCA mutation in particular, since their cancer cells are especially sensitive to PARP inhibitors.

Our hope is that by having targeted treatments available early in the disease process for prostate cancer patients with these mutations, we can identify these patients at the time of their diagnosis and potentially significantly improve their outcomes.

But we may also be able to take treatment one step further. While PARP inhibitors that target cancer cells are highly effective, they aren’t enough to eradicate the cancer alone.

Prostate cancer is a very complicated disease with multiple growth drivers; the most notable and studied in recent years are androgens. Androgen hormones stimulate prostate cancer cells to grow. It appears that when androgen production is inhibited, DNA repair in cancerous cells slows down.

It makes sense to assume that targeting both pathways in cells may lead to more cancer-cell deaths than targeting either pathway alone. We are evaluating combination approaches that interrupt the androgen-making process as well as impact the tumor’s ability to repair DNA to make treatments even more effective.

We’re not advocating this combination approach for all patients with prostate cancer at this time but rather taking a personalised approach based on presence of mutation.

Why is there such an urgent need for treatments for this type of prostate cancer?

We know that patients with prostate cancer who have certain mutations face a worse prognosis, but unfortunately there are currently no PARP inhibitor combinations available to them until very late in the disease. We are evaluating the benefits and



Mary Guckert

the risks of giving these combination treatments earlier in metastatic disease progression, before patients receive treatments like chemotherapy.

Current treatment guidelines in the US recommend that all patients with metastatic prostate cancer, and some with localised prostate cancer who have identified risk factors such as a family history of the disease, receive genetic testing.

For example, a survey published earlier this year in the *Journal of the Canadian Urological Association* found that only a little over a third of oncologists recommended that their patients with newly diagnosed metastatic prostate cancer go for genetic testing. And a recent analysis of more than 5,000 US patients with metastatic prostate cancer found that only 13 per cent had documented genetic testing.

Our hope is that by having targeted treatments available early in the disease process for prostate cancer patients with these mutations, we can identify these patients at the time of their diagnosis and potentially significantly improve their outcomes by providing more personalized treatments at the right time in their treatment journey.

What motivates you to study prostate cancer in particular?

I started my career as a nurse at a major academic hospital and have taken care of many patients who are battling a cancer diagnosis. Oncology nurses focus not just on administering treatments and managing side effects but holistically, on the entire patient experience.

Guckert and her dad

I also have a personal perspective: My father was diagnosed with prostate cancer many years ago, when I was in college. We spent many years holding our breath waiting to receive his PSA blood test results, since a significant rise could mean his cancer had recurred. Fortunately, he is doing well.

Testing for the BRCA gene, in addition to other mutations potentially associated with familial cancers, is something I have undergone personally. In addition to my father, all three of my sisters have had cancer, and two of them have died. While none of us were found to have a genetic mutation of significance, like BRCA, it was

important information to gather.

However, there are people out there with certain oncological mutations that we may be able to target with treatment in the future. That’s what motivates me to get up each morning and go to work: the belief that our work will allow thousands of people to continue to lead full, productive lives. —*The Health*

This is an edited version of an article appeared recently on the website of Johnson & Johnson



BY KHIRTINI K KUMARAN

THE COUNTRY and the whole world have been battling the dual crisis of health and the economic problems due to the Covid-19 pandemic, and it has shown the importance of having a robust healthcare sector.

As such, the much-awaited 12th Malaysia Plan (12MP) gave an insight into Malaysia's direction for the next five years, not just for the economic landscape but also for the nation's healthcare system.

And after several delays, the 12MP (2021-2025) was finally tabled on Sept 27, 2021, in the Dewan Rakyat by Prime Minister Datuk Seri Ismail Sabri Yaakob.

In his speech, Ismail Sabri said: "The Government remains committed to strengthening the healthcare system to ensure the rakyat is healthy and productive."

"In this regard, the government will review the effectiveness of the existing healthcare system, and a national health policy will be formulated to increase preparedness in handling infectious diseases and any future health crisis."

Gaps in healthcare service delivery

The pandemic has put the world's healthcare delivery systems to a severe test, and the 12MP has identified significant gaps in the nation's healthcare delivery system.

Malaysia faces an increasing incidence of double burden diseases. Communicable diseases (CDs) such as dengue, tuberculosis (TB), polio and HIV are on the rise while malaria and measles have reemerged.

Apart from that, the increasing incidence of non-communicable diseases (NCDs) such as cardiovascular diseases, diabetes mellitus, cancer, mental illness and injury-related conditions continue to rise, leading to a high number of avoidable premature deaths among Malaysians.

In public hospitals and clinics, overcrowding and a long waiting time for treatment continue to affect the quality of service delivery.

The increase in the incidence of CDs and NCDs and the need to manage the Covid-19 pandemic, including the rollout of the National Covid-19 Immunisation Programme (NIP), has strained the national healthcare system.

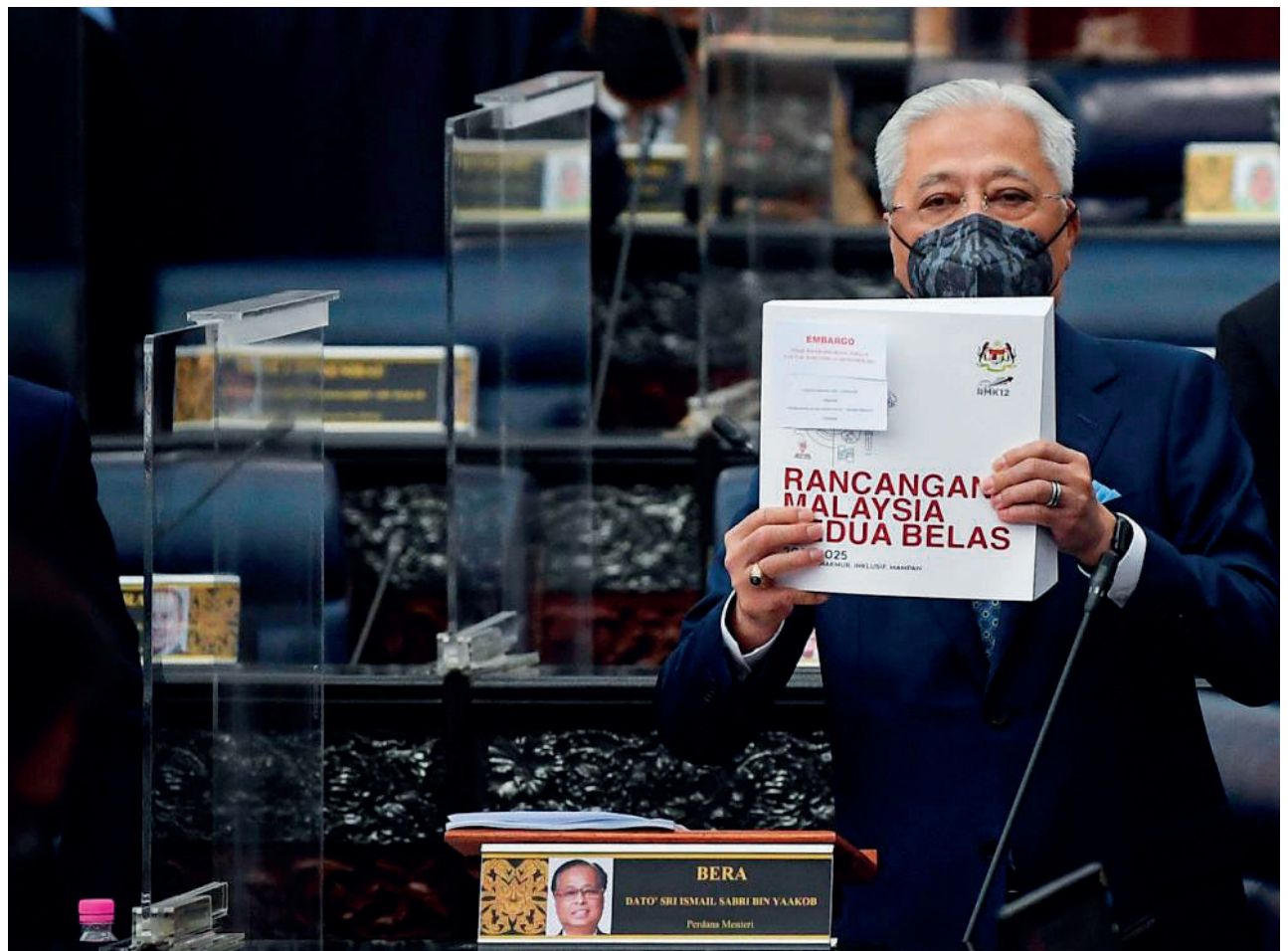
The delivery of healthcare services was also affected by inadequate facilities and a mismatch of resources across different levels of healthcare services. And during the pandemic, this situation has gotten a lot worse, especially for non-Covid cases.

As revealed by Health Minister Khairy Jamaluddin in September there were over 57,000 backlogged non-Covid procedures comprising surgical-based and medical-based cases as of Sept 1.

Furthermore, the inadequate number of health personnel, particularly specialists, disrupts services to rural and remote areas. There is also poor integration of health databases among the public healthcare institutions.

High hopes for healthcare

A blueprint for healthcare reform will be introduced as a new way forward for national healthcare system transformation



The 12MP (2021-2025) was finally tabled on Sept 27, 2021, in the Dewan Rakyat by Prime Minister Datuk Seri Ismail Sabri Yaakob.



Revitalising the healthcare system

According to the 12MP, revitalising the healthcare system is critical to ensure the people have equal access to quality healthcare services and for the nation to be well-prepared in meeting future health crises.

A blueprint for Malaysia Healthcare System Reform will be introduced as a new way forward for national healthcare system transformation. Several policies will be implemented to address particular health needs, such as oral healthcare, mental health, and vaccinations.

Efforts will be intensified to combat NCDs, focusing on cancer, cardiovascular diseases, diabetes mellitus and mental illness.

Various awareness programmes on a healthy lifestyle will be expanded to cover a wider population. The number of mobile health clinics will be increased, which will improve screening and diagnosis services for colorectal, oral, breast, and cervical cancers.

Cancer awareness programmes will also be held at more health clinics and hospitals, focusing on high-risk groups for early detection.

Meanwhile, prevention and intervention programmes will be intensified to combat CDs, especially during an outbreak or pandemic.

In addition, a more sustainable health financing model will be introduced, and healthcare services will be digitalised to accelerate delivery.

Resources and responsibilities will be consolidated and healthcare services be redesigned through collaboration between the public and private sectors.

The 12MP further states that lessons learned from the pandemic will revitalise healthcare services so that future health emergencies are better managed and prepared.

Ismail Sabri also disclosed that the National Vaccine Development Roadmap was being finalised to ensure Malaysia can produce its vaccine. The roadmap, he added, will also prepare the country to face any pandemic in the future.

To narrow the gap between urban and rural health facilities, he mentioned that the government would build and upgrade health clinics across the nation.

The strategies outlined in the 12MP hopes to improve healthcare quality at affordable prices and enhance healthcare preparedness in managing infectious diseases and health crises. — *The Health*

According to the 12MP, revitalising the healthcare system is critical to ensure the people have equal access to quality healthcare services and for the nation to be well-prepared in meeting future health crises."

| Hot Topic |



A tale of two pandemics

Another pandemic-in-the-making has been slowly manifesting silently in the shadows and may become deadlier in future years if no measures are taken

IT IS MORE than one and a half years since the first case of Covid-19 was reported. The disease has since become a global pandemic, disrupting healthcare systems, global supply chains and “normal, daily life” in every continent of the world.

Unknown to many, another pandemic-in-the-making has been slowly manifesting silently in the shadows and may become deadlier in future years to come if no measures are taken to prevent it. This refers to the silent pandemic of antimicrobial resistance (AMR).

On the surface, it may seem that the two pandemics have nothing similar - one is caused by a virus, and the other is by germs (bacteria, virus, fungus and parasites) that are no longer susceptible to medicines designed to kill them.

Fear to seek medical consultation

In fact, during the first few weeks of the Covid-19 pandemic, outpatient clinics reported a decrease in the prescription of antibiotics. This decrease was later identified to be caused by the general public’s fear of seeking medical consultation in the early weeks of the pandemic.

Nevertheless, there was then subsequently an increase in antibiotic prescription across healthcare settings. Prior to the set-up of Covid-19 diagnostics, it could be difficult to differentiate Covid-19 from community-acquired pneumonia clinically.

In addition, there might have been delays in AMR testing as staff were

pivoted to Covid-19 diagnostics, or labs experienced shortages in the global supply chain for test materials. Diagnostic uncertainty, coupled with increasing cases of secondary bacterial infection in Covid-19 hospitalisation, increased antimicrobial prescription compared to pre-Covid-19 times.

Even though a direct link between increased antimicrobial usage and an uptick in AMR germ infections have not been made, notably, sporadic outbreaks of AMR *Acinetobacter* (an environment bacteria) and *Candida* (a fungus) in Covid-19 units have been reported.

Many patients are self-medicating

Even more alarming, in countries where antibiotics are available as over-the-counter drugs, many patients self-medicate with antibiotics without consulting a healthcare professional. This was done either in the mistaken belief to prevent Covid-19 infection or seek relief for their respiratory illnesses.

While this effect is not immediately visible, these actions, if left unchecked, will lead to precarious episodes of AMR infections in the community in the long run.

Nevertheless, it is not all gloom and doom. Prior to Covid-19, AMR has been identified as an increasing public health threat.

Indeed, in May 2015 the World Health Assembly launched a global action plan to fight AMR. This coincided with an Executive Order from the Obama administration, and the formation of



SEPSIS ALERT
BY **ASSOC PROF DR TAN TOH LEONG**



AND **ASSOC PROF DR NEOH HUI-MIN**

the Review on Antimicrobial Resistance Committee in the UK, all for the same purpose. Activities for these initiatives somewhat took backstage and might seem derailed when Covid-19 struck.

However, as the saying goes, “to not let a crisis go to waste”, there are many things we can learn from Covid-19 to prevent the next pandemic. Governments are now aware that healthcare systems of their countries are of the utmost priority.

Keeping abreast with correct information

This should hopefully lead to ongoing efforts to improve healthcare, and also to view health as interconnected locally and globally. Malaysian Health Minister Khairy Jamaluddin said that “health budgets should be viewed as investments rather than expenditure”. Besides investing to improve our healthcare human resources and facilities, it is equally crucial that budgets for preventing the AMR pandemic, such as research and development for rapid diagnostics of AMR, vaccines and antimicrobial agents’ exploration, periodical germ surveillance, and public education on AMR awareness are created and approved.

And we, as the public, have our responsibility to keep abreast with correct information from validated sources to prevent the next pandemic, and as the theme for this year’s World Antimicrobial Awareness Week states, to “Spread awareness, stop (antimicrobial) resistance”.

— **The Health**

Assoc Prof Dr Tan Toh Leong is Consultant Emergency Physician, Faculty of Medicine, Universiti Kebangsaan Malaysia (UKM) and Founder and President of Malaysian Sepsis Alliance (MySepsis) while Assoc Prof Dr Neoh Hui-min is Senior Research Fellow, UKM Medical Molecular Biology Institute (UMBI), UKM and Secretary of MySepsis.

Healthier lifestyle essential

In the Covid-19 endemic stage, lifestyle changes can make us more resilient to the virus variants

IN AN endemic stage, chances are you would probably “meet” the virus sooner or later. As movement restrictions are eased, the virus will keep on being transmitted with increased human interaction.

With a largely vaccinated population, the biggest question when “living” with the virus is what level of disease severity one will reach. At this point, an individual’s sole dependence on vaccines and drugs is misplaced.

Vaccines have thus far proven effective in reducing disease severity and mortality. Still, it is also true that low-category Covid-19 can progress into severe categories through underlying health conditions such as obesity and diabetes. In fact, most deaths among those fully vaccinated people are those with chronic comorbidities.

Despite this trajectory, there is not enough emphasis on personal responsibility for individual health. It’s time to realise that most severe cases and deaths (aside from older age groups and outlier cases) are associated with underlying diseases that could have been preventable if addressed early on.

According to the World Health Organisation, some 17.9 million people die annually from cardiovascular diseases, making it the biggest contributor of non-communicable diseases (NCDs) deaths. This is followed by cancers (9.3 million), respiratory diseases (4.1 million), and diabetes (1.5 million).

As observed, genetic predispositions aside, most of these deadly NCDs are generally preventable “lifestyle diseases”. Major contributors to NCDs include smoking, alcohol intake, poor diet and lack of physical activity.

As natural selection gives rise to more resilient virus variants and strains, humans also must adapt as best as possible. Therefore, Covid-19 has taught us that our lifestyle has to change. After all, staying in shape and being prepared is not an option when “living with the enemy”.

Thus, the following essential items (but not limited to) can significantly improve your chances against Covid-19:

1. Strengthen the cardiovascular system
According to a Press release by the European Society of Cardiology (ESC), heart disease has been linked with a nearly four-times increased chance of severe Covid-19.

As reportedly mentioned by Dr Stephanie Harrison of the University of Liverpool, UK: “Many of the cardiovascular risk factors associated with more severe consequences from Covid-19 are potentially modifiable”. Therefore, it is clear that having a healthier cardiovascular system could minimise disease severity, and that this is well within our control.

Takeaway: Do regular low-impact exercise. Get the heart pumping, the lungs and muscles working and blood flowing.

2. Stop smoking and drinking
Covid-19 is primarily a respiratory illness, so it is no surprise then chronic lung diseases can increase the chances of severe Covid-19. One of the biggest risk factors for chronic lung diseases is tobacco smoking. According to the ESC, smokers have an 80 per cent higher chance of severe Covid-19 than non-smokers.



EMIR-SING

BY AMEEN KAMAL

Additionally, alcoholic intake (such as from beverages) has been linked to an increased risk of heart problems, increasing the risk of severe Covid-19.

Takeaway: Remove unnecessary substances that add to the body’s burden. Instead, get “high” on life.

3. Eat well

Several studies have indicated plant-based and pescatarian diets to be associated with reduced risk and severity of Covid-19. That said, these studies may not be proving direct causality. Health is a holistic issue and it would be reasonable to assume that most people following such dietary regimes are also the same people who lead an overall healthier lifestyle and come from a higher income group, which could provide better access to a balanced source of healthy food.

Anyway, the need for a varied and balanced diet is shown in a systematic study led by Iranian researchers that concluded that vitamin D, vitamin C, vitamin A, folate, zinc, and probiotics are the most important nutrients to be considered in Covid-19 management.

Other dietary agents the researchers considered beneficial for the immune system include vitamin E, magnesium, selenium, alpha-linolenic acid and phytochemicals. Additionally, the systematic review also found that protein-energy malnutrition (PEM) is common in severe respiratory infections.

Therefore, one needs variety in food sources to cover all these macro and micronutrients.

Also, because obesity has been found to be associated with decreased immune function, the systematic study also suggested increasing physical activity (exercise) and a “slight caloric restriction”.

Additionally, because high blood

pressure and hypertension are significant contributors to disease severity, anything that can worsen the condition such as high-salt and high-saturated fat food should be minimised.

Takeaway: A balanced diet taken in moderation is key and get that quick morning sun.

4. Rest well

A study by Kim and colleagues found longer sleep duration was associated with lower odds of Covid-19. Conversely, sleep problems and exhaustion were found to be associated with higher chances of Covid-19 and could be a risk factor healthcare workers.

Recall that high blood pressure is a significant contributor to disease severity, with the ESC reporting “more than doubled odds of dying from Covid-19”, and “more than double” the risk of severe outcomes with hypertension.

It is also widely known that sleep deprivation and stress can lead to increased blood pressure and hypertension, negatively impacting our immune system. Therefore, we have to rest well through sufficient quality sleep, affecting our mental health and body’s ability to heal. A continuous rest deficit equals diminishing returns on our body’s ability to defend itself.

Takeaway: Sleep, relax, pray, meditate. Rest the mind, body, and soul.

Time to promote self-responsibility in public health

Admittedly, we are merely re-discovering the obvious. None of these recommendations is new, nor are they rocket science. However, the apparent “obviousness” of self-care often (ironically) makes it the most overlooked aspect in disease prevention.

Moving forward, the Government and the healthcare system (both public and private players) have to start promoting and incentivising healthy lifestyles.

Although low-impact exercise, avoiding tobacco and alcohol, and having sufficient rest are generally doable for everyone, access to high-quality, nutrient-rich natural food to have a balanced diet may require a change in the economic system.

For example, currently the choice for “organic” whole foods is only accessible to higher socio-economic groups, and this cannot be the way forward for society. As we strive for universal healthcare, the same mindset of universal access to healthier versions of food is needed.

Agricultural and food production process standards have to change, and this can only be done starting with favourable policies on the matter. For example, there should be mechanisms (legal or otherwise) to ensure “organic” standards to become the “normal” non-premium standard.

Supporting policies such as a hefty sin tax should be created not only for cigarettes and alcoholic beverages, but perhaps many other disease-inducing substances to fund a special budget for lifestyle-related NCDs. Special incentives (beyond tax exemptions) should be made to incentivise healthy food, sports equipment, outdoor activities and gym membership.

In conclusion, one of the many lessons in disease prevention that we can learn from Covid-19 is the need to shift focus towards empowerment of individual health (at scale) as a crucial and indispensable component of social protection, which has the potential to exhibit community-level resilience against current and future health crises.

— The Health

Ameen Kamal is the Head of Science & Technology at EMIR Research, an independent think tank focused on strategic policy recommendations based on rigorous research.



Diabetes in pregnancy

Being diagnosed with gestational diabetes can be disturbing emotionally in pregnancy, but with early screening and detection, the condition can be well managed

RESEARCH states that gestational diabetes is high blood sugar (glucose) that develops during pregnancy and usually disappears after giving birth. Diabetes can cause problems during pregnancy for women and their developing babies.

Poor control of diabetes during pregnancy increases the chances of birth defects and other problems for the pregnancy. Proper health care before and during pregnancy can help prevent birth defects and other health problems. But the risk can be reduced if the condition is detected early and well managed.

Gestational Diabetes Mellitus (GDM) is a type of diabetes that is first seen in a pregnant woman who did not have diabetes before she was pregnant. It usually shows up in the middle of pregnancy.

It occurs because the body cannot produce enough insulin which is a hormone important in controlling blood glucose to meet its extra needs in pregnancy. This results in high blood glucose levels. GDM usually starts in the middle or towards the end of pregnancy.

During pregnancy, a women's body undergoes hormonal changes and physical changes such as weight gain. Because of these changes, the body's cells don't use insulin well, a condition called insulin resistance.

All pregnant women have some insulin resistance during late pregnancy. Most pregnant women can produce enough insulin to overcome insulin resistance, but some cannot.

These women develop GDM. As for prevention, before embarking on a pregnancy, if a woman is overweight, losing weight with regular physical activities may help prevent gestational diabetes.

Managing diabetes in pregnancy

Usually, gestational diabetes has no symptoms. If a woman does have symptoms, they may be mild, such as being thirstier than usual or urinating more often.

A woman is more likely to develop gestational diabetes if she is overweight with a BMI of 27kg/m2 or higher, previously have had gestational diabetes, has a history of giving birth to a large baby, has a first-degree family member with diabetes or with the presence of sugars in a urine test done during routine follow up.

Assessment of sugar levels in a pregnant woman with pre-existing diabetes is vital. Women already on medication would either be advised to continue current medication, or they may need to start on insulin injections. Low dose aspirin will also be given in addition to folic acid, calcium carbonate and vit D3 tablets.

Additional blood tests to look at kidney function would need to be done. An appointment for eye assessment by an ophthalmologist will be organised to look for eye-related complications secondary to pre-existing diabetes.

The woman will also be given a consult with the dietician for relevant advice in maintaining a healthy diet. Her pregnancy follow-ups would further be under

combined care with the endocrinologist.

All pregnant women with risk factors will need to be screened for GDM. Women at risk of developing GDM will be advised to screen early in pregnancy. Women aged 25 and above with no risk factors will be advised screening between 24 and 28 weeks of gestation.

Complications during pregnancy

In some women, GDM will respond to a healthy diet and exercise. The majority will need oral medication or insulin. Follow-ups with the obstetrician will be on a regular basis. The women will be advised to monitor their blood sugar levels frequently and any abnormal results will require immediate attention by the obstetrician.

Most women who develop GDM have healthy pregnancies and healthy babies, but occasionally gestational diabetes can cause serious problems, especially if it is not recognised or treated. With gestational diabetes, a woman is more likely to develop a condition called preeclampsia, which is when you develop high blood pressure and too much protein in your urine during the second half of pregnancy.



BY DR PRAKASH M CHANDRAKANTHAN

Uncontrolled sugar levels can also result in a woman having a stillbirth. In terms of delivery, gestational diabetes may also increase your chances of having a cesarean section as your baby may be large. In the long term, the chance of developing Type 2 diabetes later in life also increases.

Most of the developmental anomalies or birth defects are seen in women with pregestational diabetes in pregnancy. The anomalies include problems with the development of the heart, central nervous and skeletal system. These anomalies are usually the result of poorly controlled diabetes during preconception up to the first trimester.

The prevalence of diabetes in pregnancy in Malaysia is quite common, ranging from 18 to 24 per cent. The global rapid increase of GDM is alarming.

Diabetes can be a common endocrine disorder in pregnancy, which is detected in weeks 24 to 28. In certain occasions, the condition can develop earlier as well.

Being diagnosed with gestational diabetes can be disturbing emotionally in pregnancy. But with early screening and detection, the condition can be well managed to avoid any complications during pregnancy and delivery. The prevalence of diabetes has been associated with lifestyle changes, environment and increasing urbanisation.

Lifestyle and eating routines play an important role in keeping your blood sugar levels within a healthy range. — *The Health*

Dr Prakash M Chandrakanthan is Consultant Obstetrician & Gynaecologist at Sri Kota Specialist Medical Centre, Klang.

Gestational Diabetes Mellitus (GDM) is a type of diabetes that is first seen in a pregnant woman who did not have diabetes before she was pregnant. It usually shows up in the middle of pregnancy.”



C OVID-19 has killed more than 640,000 people in the United States as of September.

However, the losses are more than a count or a statistic; it is a rock tossed into the ocean, unleashing an infinite number of ripples. Many of us may have lost something in the last year and a half: a loved one, a relationship, a career, a habit, a way of life, and perhaps even a sense of purpose.

While we are all suffering collectively, we are not all grieving collectively. Prior to Covid-19, we may choose to alleviate our sadness through a variety of distractions: job, friends and daily responsibilities.

We had a community of human connection with which to unite and support. We are now concealed, separated and divided. How are we to survive in this period of history by delving deeply into our untapped reserves?

While grief is an unwanted guest, if we learn to accommodate it, we may also discover a new, lighter way of life. With the pandemic impacting so many people, grief and the mourning process are receiving a lot of attention these days.

What is sorrow, its symptoms and how long does it last? I will discuss what to expect from grieving in this article, as well as suggestion for navigating the process.

What is grief?

According to the National Library of Medicine, grief is “the natural process of responding to a loss.” It is not a state of being or a single occurrence; rather, it is a journey. “Loss” can refer to a variety of various things. We develop feelings for people, animals, projects and things.

Each lost connection might make us feel helpless. Nonetheless, humans possess an extraordinary ability for enduring loss, regardless of how painful it may be. Different forms of grief hit at varying periods throughout a loss.

For example, immediately following a death or the end of a relationship, you enter an intense mourning phase, yearning for the person who is no longer in your life while struggling with the accompanying emotions, which range from rage and remorse to disbelief. You gradually come to accept and adjust to the loss. Sharp feelings of grief become more distant.

Grief is the natural reaction to a loss. Grief pain enables an emotional processing of the significance of what has been lost and reintegration of the meaning created by the loved one.

What causes grief?

Grief is inextricably linked to the loss of a loved one. However, individuals lament for a variety of reasons. Any type of loss qualifies, including divorce, the death of a pet, the loss of a job, a physical injury or a broken relationship. Grief may also occur at times of change, such as moving to a new house or the first time a child leaves the nest.

There is a distinct type of grief: ambiguous loss, or loss without the certainty of death or genuine closure, which can make initiating the mourning process even more difficult. This is the type of loss that society endured during the pandemic: “We lost faith in the world, we lost the capacity to physically be with friends and we lost our routines”.

While none of these events result in death, they do result in significant loss of control over our own life. This uncertainty may be quite distressing.

Symptoms of grief

Grief may manifest itself in a variety of physical and mental symptoms. “It may

Accepting the unacceptable

Grief may manifest itself in a variety of physical and mental symptoms, so it is vital to seek help



**BY DR WAEL
MY MOHAMED**

manifest as shock, melancholy, tearfulness, depression, rage, or restlessness and difficulties concentrating, as well as alterations in one’s ideas and perceptions of the world. When you are mourning, you may find it more difficult to accomplish the routine daily chores that you are accustomed to.

Contemplations of the loss may occur frequently and suddenly, eliciting strong emotions. According to the American Academy of Family Physicians, physical symptoms of sorrow include headaches, weight fluctuations, and gastrointestinal problems.

Additionally, physical symptoms such as fatigue, chest aches, and muscular tightness may occur. The mourning process, according to experts, is divided into five stages: denial, anger, bargaining, sadness, and eventually, acceptance.

Within this concept, individuals go through stages, although not necessarily in a sequential way. While this approach is beneficial, bear in mind that there is no “right” way to grieve. Some people will grieve quietly, while others may get overwhelmed by sadness and become temporarily unable to function. The event has the potential to transform you, altering your perception of what is truly essential in life.

People sometimes refer to sadness as “broken-hearted” and it turns out that grief does really have a cardiac effect. Hormones and neurochemicals produced during the stress reaction following loss induce an increase in heart rate and blood pressure. The stress associated with the death of a family member might potentially result in a disease known as “broken-heart syndrome”.

According to the American Heart Association, this occurs when a portion of your heart momentarily expands and becomes less efficient at pumping, while the remainder of your heart operates normally or with even more powerful contractions.

Grief, too, has an effect on the brain. Immediately following a loss, the areas of the brain responsible for processing powerful emotions and memories slow down. This may explain why many mourning individuals report feeling disoriented, confused, and somewhat zombie-like, particularly early on.

For the majority of us, such bodily changes lessen over time as the intensity of our grieving diminishes, resulting in “integrated mourning”.

We do not want to believe that mourning will remain profound for the remainder of our life. Generally, it does not. It fades

into the background as it quietens, softens, and fades away. It is what is referred to as “Post-Grief.”

The phrase used to describe the time period that “begins when the most acute reactions to a loss begins to fade”. It predominately encompasses the remainder of our life.

How long does grief last?

There is no fixed timetable for grieving. Some people take a long time to recuperate, while others heal very quickly.

Sometimes, grief can be postponed. Not everyone instantly experiences grief. Many individuals experience sorrow in waves, they feel it and are unable to deal with it in the present, so it recedes into the recesses of their minds.

Months will pass, long after the shock and denial of the loss have passed and they will begin to feel sadness. Grief that is more severe and profound might endure months or even years.

There is no definitive end date for feeling grief in any manner. That is, if a loved one who is a significant part of your life dies, you will grieve them in some way for the remainder of your life. However, the mourning process will generally grow less severe.

While intense sorrow passes, an individual may continue to struggle to move on and handle work, life and daily activities. The following techniques can facilitate the process:

Seek assistance

Counselling for grief will assist you in processing your ideas and feelings. Additionally, you can seek assistance from support groups, mental health experts, religious institutions or spiritual practises.

Make contact with others

Human beings do not grieve properly when left to their own devices. Those who are grieving should seek out someone with whom to share their feelings and process their loss.

Take part in bereavement rituals and sensitise yourself

While your feelings may be strong, do not deny them or avoid thinking about your loved one or what you have lost. Recognising these emotions will assist you in processing the loss.

How to assist a bereaved loved one

The most important thing you can do is listen and provide sympathy. Communicate with the mourning individual through text, invite them on walks and ensure they have a support structure in place. Additionally, you may initiate discussion.

Offering inquiries about the dead and fostering thought and recollections are helpful. Additionally, do not be afraid to provide practical assistance, such as dropping off food, assisting with child or pet care or making important phone calls.

These simple actions may make a world of difference when someone is too angry to cook or is juggling daily obligations. Consider the individual who is mourning and adjust your reaction accordingly. — **The Health**

Dr Wael MY Mohamed is with the Department of Basic Medical Science, Kulliyyah of Medicine, International Islamic University Malaysia (IIUM).



7 series reunion and ketum

The country must be more open-minded and work on scientific data and analysis to legalise important herbal plants endemic to Malaysia

MOVING INTO the 7 series of our lives can mean many things to many people. Some see it as a period to slow down, play with the grandchildren, and prepare for the next life.

Yet, some see it as a time to work even harder to maintain their physical and mental health. There are many tips on the secrets to a fulfilling life, but there is no substitute for proper nutrition and exercise.

And yet, for the majority, it is about operations and pills, pills and more pills, convinced that it is inevitable to manage their health issues. But it could just be about treating the symptoms and not the cause.

I, for one, have always looked at people around the world who made it to beyond 70 years of age, staying active and fit and finding out what their secret is.

My grandfather, who lived till 102, attributed it to his love for gardening, rearing chickens in our backyard, and, more importantly, discovering knowledge and the secrets of the Quran. This latter habit stimulated and exploited his mental capacities and brought him spiritual fulfilment. I never saw him stressful, always calm.

He was also an artist and was good at carpentry, building chairs, tables and the chicken coop. During our school holidays, when it was the kite flying season (which is non-existent today), he would make moon kites for us to fly and show off to the neighbourhood kids.

He ate only for sustenance and never missed the fasting month. He switched from eating rice to consuming bread in the last 10 years of his life and still enjoyed his 10 sen Indian cigar (Rose brand) in the evenings.

Yet, he did not suffer any of the ailments that have plagued today's affluent society, such as diabetes, high blood pressure and heart diseases.

Staying young begins with thinking young

Last week, when my Free School classmates in our WhatsApp group decided to have a small reunion after lifting the inter-State travel restrictions, nine of us who were all fully vaccinated said yes. Four of us in Kuala Lumpur carpooled to Yan Kedah to gather for a one-night stay at the two-acre farmhouse of our classmate, Tok Mat.

Tok Mat's farmhouse, planted with fruit trees, is ideally located in a remote kampong surrounded by lush jungle and between two clear streams flowing through the left and right of the property.

The first agenda of the afternoon was a dip in the cool stream. One of us noted that we belonged to the eight per cent of people in the world who survived beyond the age of 70. What a celebration to have reached this milestone.

We noted that we had lost three dear classmates in the group and another two who lived overseas within the last two years.

We were all masked up during the drive

from Kuala Lumpur and ensured SOPs were followed. A couple of my classmates were comparing notes about their state of health.

Rahmat Amin and Dr Rashid (an IT expert) were both diabetic and had to have insulin shots daily besides consuming their cocktail of pills. They both suffer from glaucoma, with one having additional prostrate issues.

Yet, they were never out of jokes and were mentally alert, at least for women. It is ok to keep thinking like 17-year-olds, not 71. As one research pointed out, staying young begins with thinking young.

Discussions led on to the benefits of traditional herbs such as ginger, turmeric, black seeds, honey, cannabis and the latest rage being ketum.

Thailand has lifted the ban on ketum, the scientific name being Mitragyna speciose, and those in jail on ketum-related offences have also been released. Now you can purchase ketum drinks openly in Thailand as the drink is believed to help in enhancing one's health and immunity levels, critical in the fight against the Covid-19 virus.

A USM researcher, Professor Zurina Hassan was recently awarded a grant of EU60,000 (RM294,856) from the Greg Foster Research Award of the Alexander Hubolt Foundation of Germany to continue her research on the benefits of ketum and butterfly pea (or bunga telang).

Understanding the critical issues

It shows that the world recognises the medical benefits of ketum, which has been used traditionally since the 19th century by Southeast Asian communities and offers traditional solutions for the prevention, cure and sustainability of good health.

Ever wondered how farmers can stand the gruelling pace to plant paddy, tap rubber and work



DIFFERENT STROKES
BY ADI SATRIA

on farms the whole day?

I, for one, have discovered that a small dose can sustain my energy for a few hours clearing weeds and planting fruit trees at my friend's farm in Hulu Yam - an activity that has enhanced my physical and mental health during these pandemic times.

The positive news is that the MP for Muar, Syed Saddiq, is heading a bipartisan parliamentary caucus to study regulations on the use of hemp, cannabis and ketum for medical purposes.

The bipartisan group includes the Special Advisor to the Prime Minister on Law and Human Rights, Dato' Sri Azalina Othman Said and the MP for Shah Alam Khalid Samad.

During the debate on the 12 Malaysia Plan, Syed Saddiq pointed out that the current market for medical hemp and marijuana is worth about RM60 billion and is expected to grow to RM400 billion within the next four years. Malaysia must not lag as many countries like the US, Canada, Australia, Denmark, and Argentina have approved medical marijuana.

The country must be more open-minded and work on scientific data and analysis to legalise these important herbal plants which are endemic to Malaysia. These plants have been recognised as being of top quality, and they include tongkat ali, kacip fatimah, ketum and cannabis.

The problem is, we are still conservative in looking at the potential of these plants for medical and pharmaceutical purposes. Understanding the critical issues on how we manage the industry and prevent abuses with proper and fair enforcement will benefit us in the long run.

At the moment, people are obtaining supplies of ketum juice through their kampung network and other suppliers. Those using them at the correct dosage regularly swear on the benefits to their health, such as controlling diabetes, lowering blood pressure, and managing heart ailments.

These claims are supported by their visit to their doctors for medical checkups. With proper and good blood circulation, the overall health of a person is enhanced. And that can be the secret to a healthier and more sustainable life beyond

70. - The Health

ADI SATRIA, a veteran of marketing communications, continues to lead a more physical lifestyle and sees farming and sweating it out as a way to a productive life assisted by traditional herbs and proper nutrition.



A first in Cambridge's 800-year history

A MALAYSIAN has been appointed as a professor of urology at the University of Cambridge, UK, for the first time in the institution's 812-year history.

According to university records, Prof Vincent J. Gnanapragasam is the first Professor of Urology appointed by the English-speaking world's second-oldest institution.

Prof Vincent, who has been a lecturer at the institution for the past 13 years, believes he is the first because, according to his research into the University of Cambridge library records, the university has never had a Professor of Urology before.

The 52-year-old from Petaling Jaya, an honorary consultant urologist at the university's hospital, began his career in the UK in 1988, when he enrolled at Newcastle Medical School and graduated with a PhD.

Prof Vincent relocated to Cambridge in 2008 after receiving a personal award from Cancer Research UK to become a clinician-scientist there. Furthermore, he has previously specialised in prostate cancer, both in terms of research and patient management.

He shared that his path to the professorship was uncommon since the university opted to change its official academic titles from "reader" to "University Professor".

"I was promoted to Reader last year. It is an academic title that has existed in the University of Cambridge for hundreds of years.

Over time, the university chose to modify their formal academic title this year, and Reader has now deemed a Professor, thus making Prof Vincent officially named with the title in early October.

One of Prof Vincent's achievements is the invention of CamProbe. This device makes it safer to take prostate biopsies for men with suspected prostate cancer and can be done under local anaesthesia using a transperineal channel (the area under the testicles).

The invention is innovative because, in today's current prostate diagnostic, a biopsy needle must puncture the gut wall to



Skill, talent and innovation can come from anyone. Nobody should be deprived of opportunities to realise their full potential."

reach the prostate, posing a risk of bacterial infection from the colon entering the urinary system and circulation.

"Skill, talent and innovation can come from anyone. Nobody should be deprived of opportunities to realise their full potential," he said, adding that anything meaningful can be gained through challenge, competition and adversity.

According to the university's website, Prof Vincent also possesses several patents and has received numerous awards for his research, which includes the CE Alken Prize, the Urological Research Society Medal, a Hunterian Professorship, and a Vice Chancellor's Award for Research Impact from the University of Cambridge (Established Researcher).

Medical physicist first Malaysian to get global scientist nod

ASSOC PROF DR Yeong Chai Hong of Taylor's University School of Medicine was awarded the Young Scientist Award in Medical Physics 2021, making her the first recipient from Southeast Asia to receive the prestigious International Union of Pure and Applied Physics (IUPAP) honour.

The award was established and funded by the IUPAP and awarded by the International Organisation for Medical Physics (IOMP) as the IUPAP-affiliated International Commission for Medical Physics.

A monetary prize of 1,000 Euro (RM4,833), an IUPAP medal, and an IOMP certificate were included in the award. A short biography of Dr Yeong will also be included in the e-Medical Physics World newsletter.

For a safer and cost-effective percutaneous tissue biopsy procedure, Dr Yeong, an expert in nuclear medicine and interventional radiology, developed an award-winning laser-driven hot needle system with her research team.

During a needle biopsy process, her invention improves safety and reduces bleeding issues.

"To shape the future of cancer care by providing an alternative for patients, the team is working on upgrading the prototype so that it can be simultaneously used for tissue ablation - a minimally invasive cancer treatment,"

she added.

According to Dr Yeong, minimally invasive therapies such as hyperthermia therapy are recommended for unresectable tumours or patients who are not fit for surgery.

Hyperthermia therapy currently uses either radiofrequency, microwave, laser or extreme cold (cryoablation) energy to induce cells death at the targeted tissues, while minimising damage to healthy tissues.

"With this innovative development, patients no longer require open surgery, and the success rate is promising. This advancement makes cancer treatment more affordable, less invasive, and safer, thereby improving cancer patients' overall survival rates and quality of life in Malaysia," she said.

Dr Yeong's other major research project was the creation of a low-cost, low-radiation oral formulation for a whole gastrointestinal tract transit study.

In 2012, her project was awarded the Certificate of Merit from the European Society of Radiology, the world's second largest radiology society. Dr Yeong is the first and only Malaysian to earn this distinguished honour to date.

She also received the President's Award in Research and Innovation from Taylor's University

Malaysian Nadiah Wan is the youngest to make Forbes 2021 Asia's Power Businesswomen list



NADIAH WAN, CEO and Executive Director of TMC Group, is the youngest to be named to Forbes Asia's Power Businesswomen list for 2021.

The list, announced on Nov 2, 2021, and published in the November issue of Forbes Asia, honours 20 female business leaders in the Asia-Pacific region.

In 2019, Nadiah became the group CEO and Executive Director of TMC Life Sciences. She is also the CEO of Thomson Hospital Kota Damansara, where she has served since 2017.

The Malaysian introduced a Covid-19 task force at the hospital and launched a mobile app, providing remote end-to-end patient care.

"Businesswomen across the Asia Pacific region continue to

break barriers and, in many cases, expand their businesses despite the lingering pandemic," Rana Wehbe Watson, editor of the 2021 Asia's Power Businesswomen list, said.

"Forbes Asia's Power Businesswomen list this year recognises 20 outstanding leaders who managed to adapt and thrive in industries including technology, healthcare, banking and manufacturing. They are leading the way as the world struggles with the post-Covid reality."

All of the businesswomen featured this year are first-timers on the list, extending Forbes Asia's network of influential women in the region. They were chosen for their accomplishments

in leading either a large corporation or a start-up valued at more than \$100 million.

Thailand's Wallapa Traisorat, president and CEO of real estate company Asset World Corp (AWC), is one of the women on the list. In late 2019, AWC went public and raised nearly US\$1.6 billion. Amid the pandemic, AWC has signed new hotel partnerships with InterContinental and Nobu Hospitality, adding existing ties with Marriott and Hyatt.

Another notable listee is Converge ICT Solutions cofounder and president Maria Grace Y. Uy, who helped grow her company into one of the largest fixed broadband operators in the Philippines. Converge went public in late 2020 in

one of the country's largest-ever IPOs, raising US\$522 million. Its shares have since risen over 70 per cent, pushing the company's market capitalisation to US\$4.6 billion.

Also featured on the list is Keiko Erikawa, Executive Chairman of Koei Tecmo. She co-founded the company with her husband Yoichi and built it into one of Japan's largest video-game developers over four decades. The listed company now has a market capitalisation of US\$8.5 billion.

In June this year, Erikawa became an outside director and the only woman on the board of SoftBank Group. She also manages Koei Tecmo's US\$1.1 billion in assets across Japan, Hong Kong and the US.

| People |



in 2019 after completing the International Atomic Energy Agency (IAEA) Clinical Training of Medical Physicists focusing on diagnostic radiology in 2014.

Dr Yeong, who chairs the Professional Relations Committee of the Asia-Oceania Federation of Organisations for Medical Physics, is the vice president of the South-East Asia Federation of Organisations for Medical Physics and vice president of the Malaysian Association of Medical Physics.

She aspires to impact and continuity in the research industry, especially under medical physics and cancer research. She was also

recently appointed as an expert for the IAEA in the field of radiation protection.

She also sits on the Steering Committee of the National Diagnostic Reference Levels Task Group Malaysia and the Expert of the Radiation Protection Officer in Medicine Task Group.

She is also the medical physics representative in the Malaysian Qualifications Agency Technical Committee for Allied Health Professionals and the Malaysian Counterpart for the IAEA RAS6088 project (Internal Dosimetry Software for Radionuclide Therapy).

Dr Yeong is a published author of academic books, book chapters, peer-reviewed journal papers, proceedings, magazines, and newspaper and newsletter articles.

She teaches the radiology module at Taylor’s University. She is an invited lecturer for the Master of Medical Physics programmes at Universiti Malaya, and a visiting associate professor for the Master of Radiology programme at KPJ Healthcare University College.

Malaysian surgeon honoured for work on strawberry birthmarks



IN 2010, a Malaysian-born Wellington plastic surgeon was honoured by doctors for his work on strawberry birthmarks.

The Medical Association presented Prof Dr Swee Tan with its highest award at an event in Wellington recently.

Dr Tan, who was born in Senggarang, Batu Pahat, Johor, studied medicine at Melbourne University in Australia before moving to New Zealand to pursue a career as a plastic surgeon.

He has been involved with plastic surgery for 28 years of his 32-year medical career, both as a highly skilled practitioner and a world-renowned researcher.

He is the founder and executive director of Gillies McIndoe Research Institute (GMRI).

The strawberry birthmark is a bright red or purple-colored slightly raised lump that appears on the head or neck and is named after the fact that it can resemble a strawberry.

Dr Tan’s research into the origins of strawberry birthmarks, according to the association, has changed the lives of many children born with them, led to better treatment, and has exciting implications for cancer treatment.

These studies have led to a potentially effective, affordable, and accessible treatment for many types of cancers.

Then Medical Association chairman Peter Foley said Dr Tan is an inspirational plastic surgeon whose work on this type of birthmark has been recognised internationally.

“Dr Tan grew up in a family of 14 in a village in Malaysia and always dreamed of being a doctor. He could work anywhere in the world now, but is committed to New Zealand.

Dr Tan is a very humble doctor who recognises that he got opportunities that others did not and he owes it to New Zealand and he’s committed to staying and working in the New Zealand medical profession - and for that we should all be very grateful.”

LA-based M’sian brothers offer skin-friendly face masks with antimicrobial tech



Shaun (left) and Keane Veran, Co-founders of OURA.

BASED IN the US, OURA is a brand founded by two Malaysian-born brothers, Keane and Shaun Veran. OURA’s journey began with a product that resulted during Keane’s battle with cancer.

Keane was diagnosed with leukaemia at age 10. He spent his childhood undergoing cancer treatment and struggled to get a clean cap to wear after each round of chemo.

Keane realised how caps were great incubators for bacteria, which was especially dangerous for immune-compromised individuals like him at the time.

Hence, OURA’s first product was a self-cleaning hat constructed entirely of medical-grade material.

Its antimicrobial properties served as a blueprint for future useful products down the line. Antimicrobial towels, cooking aprons, and face masks were eventually added to the OURA line.

The face masks from OURA have been lab-tested to filter up to 99.9 per cent of viruses and bacteria.

According to the company, all its masks, including the Air Mask 2.0 and Active Mask, are tested by third-party laboratories with an advanced sterilisation technology that uses

molecular-level infusion.

Antimicrobial chemicals such as silver oxide and titanium dioxide are permanently embedded in each thread, which claims to kill bacteria and dormant virus particles and break down odours.

This makes the masks washable hundreds of times and still prevent bacteria growth. For an even more powerful safeguard against pathogens, the face masks can be paired with a

replaceable Honeywell N95 filter.

OURA’s face masks are tested with and without the N95 filter at an independent lab. And their findings demonstrate that without the N95 filter, the face masks achieve filtering efficiency of over 90 per cent for 0.1 m particles and over 98 per cent with the N95 filter.

The brothers intended to create a company that could aid people with its products and provide support to children with serious illnesses, similar to the kind that gave Keane hope during his treatment.

In many ways, OURA was inspired by his family, friends, and healthcare professionals, who came together to give much-needed optimism in his battle against cancer.

So, for every 1,000 items sold, OURA grants a child’s wish through Make-A-Wish and Camp Ronald McDonald for Good Times, among other charities.

—*The Health*

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Industrial APPLICATIONS



SAWN TIMBER

- The moulded and edge-glued sawn timber are used to make swiftlet house interior wood planks for bird nest to hold
- Customer claims that it is much easier to handle due to its light weight characteristic
- The products are sold to Japan and Vietnam using special permit
- Sawn timber from 3 years old trees: 14.5cm width, 2.2cm thick, 220cm length, 10 grooves of 2mm depth each side



PLYWOOD

- Plywood is made by using 2 years old and 3 years old Revotropix Paulownia tree logs
- 2 years old trees have homogenous appearance and colour
- 3 years old trees possess better hardness and claimed that can be used as veneer
- The recovery rate of the plywood is above 70%



MOULDINGS - FINGER JOINT

Small wood planks are finger-jointed and edge-glued to design as wall panel and furniture



FURNITURE/ INTERIOR DECO

Smaller size logs are cut to length and used as divider in the office area



TALL BOY WITH DOVETAIL JOINT

- Tall boy made by 2.5 years old Revotropix Paulownia wood planks can be opened both sides
- The wood is claimed strong enough to make as frame for both sides opening drawer
- Also for its capability to use dovetail joint



VENEER

Veneer peels from Revotropix Paulownia. They are lightweight and have wear-resistant and anti-cracking qualities.