College of Family Physicians Singapore

THE College Mirror

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Guest-of-Honour, Mr Chan Yeng Kit, Permanent Secretary for Health (left) and Dr Wong Tien Hua, President of CFPS (right)

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President's Welcome Address

Practising Good Family Medicine Is Good for The Environment

by Dr Wong Tien Hua, President, 29th Council, College of Family Physicians Singapore

Mr Chan Yeng Kit, Permanent Secretary for Health, past presidents, council and fellows of the College, distinguished guests, ladies and gentlemen.

Good evening and a warm welcome to all. Thank you very much for joining us tonight as we celebrate WONCA's World Family Doctor Day. We are very privileged to have with us tonight as our Guest-of-Honour Mr Chan Yeng Kit, the Permanent Secretary for Health.

It is my great pleasure to welcome you to this annual event where we celebrate our family physicians and recognise the contributions for those of us in Primary Care. The first World Family Doctor Day (WFDD) was celebrated on 19 May 2010 in Cancun, Mexico at the meeting of the World Organization of Family Doctors (or WONCA for short). (WONCA is an unusual acronym comprising the first five initials for the World Organization of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians.)

(continued next page)

FAMILY MEDICINE COMMENCEMENT CEREMONY 2024 / COLLEGE 53RD AGM

27 JULY 2024 ▪ 2PM

THE NGEE ANN KONGSI AUDITORIUM ACADEMIA (LOCATED IN SGH CAMPUS)
20 COLLEGE ROAD SINGAPORE 169856

FAMILY MEDICINE COMMENCEMENT CEREMONY
2.00 - 3.30PM ▪ AUDITORIUM

TEA RECEPTION
3.30 - 4.00PM ▪ FOYER

COLLEGE 53RD AGM
4.00 - 6.00PM ▪ AUDITORIUM

(continued from Cover Page: Practising Good Family Medicine)

In Singapore, the College of Family Physicians held our first World Family Doctor Day dinner in 2014, and it has been the main highlight event on our College calendar ever since, disrupted only by the COVID pandemic.

Our College has a long relationship with WONCA. We hosted two WONCA world conferences in Singapore in 1983 and 2007, and as you know, we will be hosting the WONCA Asia Pacific Regional Conference this August at Raffles City Convention Centre, in conjunction with the 2024 Singapore Primary Care Conference. We are extremely excited to host this event. Early bird conference registration is open until end-June and overseas visitors are signing up – we cannot wait to see all of you there.

World Family Doctor Day has become an annual celebration that recognises the central role of Family Doctors in delivering personal, comprehensive, and continuous healthcare to our patients.

"We are able to run these courses only because of the sheer dedication, commitment, and spirit of volunteerism of our trainers and tutors."

WFDD is a day to acknowledge and laud the progress made in family medicine and the exceptional contributions of primary care teams both locally and globally. In Singapore, we honour and celebrate the tireless efforts of our family doctors in improving healthcare through their contributions to teaching, research, and leadership in Primary Care.

The theme for this year is set by WONCA and they have chosen the tagline: "Healthy Planet, Healthy People". I find this focus on climate and environment to be very apt indeed. It is obvious that the health of our planet directly impacts the health of its inhabitants; global warming is accelerated by urbanisation and industrialisation, leading to air pollution, which exacerbates respiratory issues such as asthma and chronic obstructive pulmonary disease (COPD). Warmer temperatures favour Vector-borne diseases, hence the likes of malaria, dengue fever, and Zika virus are on the rise. Waterborne diseases from flooding and food-borne diseases from improper storage will also become more common.

The fact that we are all huddled in an air-conditioned hall this evening to escape the stifling heat outside, reminds us of the real effects of global warming.

We have just emerged from a global pandemic, and no doubt as a country we have done very well in curbing the effects of Covid-19, but tonight we can reflect on the toll it has exacted on our environment. As individual medical practitioners, think of all the gloves, gowns, surgical and N95 masks, hand towels, alcohol rubs, ART swabs, and test kits that we have used on a daily basis and discarded into the incinerator over the past three years. The costs to the environment have been very high indeed. Please do not get me wrong: we shouldn't feel guilty about all the consumables we used. After all, it was a pandemic and we were fighting to save lives. But perhaps it is time to think how we can actively play a role in mitigating the climate crisis.

With the theme "Healthy Planet, Healthy People", what can we as Primary care physicians do to help reduce the effects of climate change?

First, in Primary care, we are in a position to raise awareness about climate change and environmental issues with our patients, especially with regards to the impact on their health.

For example, we can educate our patients about the benefits of making environmentally-friendly food choices, staying active by walking or cycling instead of driving, and recycling medical equipment that they no longer need.

Second, we ourselves should actively promote sustainable practices in our work environment. For instance, replacing all our office lights with energy-efficient LED lighting, and replacing old equipment with energy-efficient models to reduce overall energy consumption. Medical records should go digital to reduce the need for paper usage. We can lead the way and encourage our staff to reduce medical waste and minimise single-use items.

Lastly, I believe that practising good medicine and maintaining a high standard for primary care is good for the environment.

As Family Medicine practitioners, we are used to focusing on prevention and early disease detection and we help our patients in making lifestyle changes. This has the direct impact of reducing the need for resource-intensive medical treatment later.

An experienced Family Physician is therefore able to make better use of resources, have better clinical acumen to reduce uncertainty, and make better evidence-based decisions, which result in fewer investigations and unnecessary treatment. Managing patients well in primary care means less referral to tertiary hospitals.

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Editor's Words

by Dr Lim Khong Jin Michael, Family Physician, Editor (Team B)

In this issue, we take a look at Artificial Intelligence and some of its effects on our lives and in healthcare.

In 1956, in one of the earliest uses of the term "Artificial Intelligence", researchers John McCarthy, Marvin L Minsky, Nathaniel Rochester, and Claude E Shannon organised a two-month summer workshop at Dartmouth College titled "Study of Artificial Intelligence". The proposed objective of the workshop was to consider (1) how to make machines use language, form abstractions, and concepts to solve problems previously only humans were able to solve, and (2) how these machines may improve themselves.

In "Artificial Intelligence AI in Healthcare: Hype or help for the Family Physician?", Dr Tan Kee Tung quotes the Oxford dictionary definition of Artificial Intelligence as "the theory and development of computer systems to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages". He goes on to describe some of the things he learnt from the course "AI for Healthcare" at NUS, and in answer to the question in his article title he responds, "AI, like all new technologies, offers good help, but it has its cost and risks."

In "Primer on Artificial Intelligence (AI) and Ethics Part I", Dr Michael Lim notes that the European Commission's Communication on Artificial Intelligence (European Commission, 2018) defines artificial intelligence as "systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals, noting that AI-based systems can be purely software-based, acting in the virtual world (e.g., voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g., advanced robots, autonomous cars, drones or Internet of Things applications)." Dr Lim goes on to classify the common ethical concerns of AI into the four boxes of beneficence, non-maleficence, autonomy, and justice.

In "Why Family Doctors Should Care About Artificial Intelligence (AI) – A Global Perspective", Dr Lois Hong notes the benefits as well as challenges that AI has brought about in healthcare and argues that we owe to it our patients to consider what goes into the "black box" of AI, and to speak up for the functions that should come out of that black box. Noting that AI has both the potential for good and bad in healthcare, she encourages doctors ask questions of developers, and contribute our perspectives to new products as they are developed.

On a practical note, in "Using Artificial Intelligence Technologies in Low-Resource Settings: A Toolkit for GP Educators", Dr Lois Hong describes a four-step toolkit, namely (1) define capability sets to be achieved by AI users; (2) select an AI tool and incorporate its usage into the work process; (3) identify limitations and constraints of the AI tool; and (4) measure success and identify problems with the AI usage early. Dr Hong also shares several basic AI tools that are readily available.

In "Evolution of Healthcare Communication in the Primary Care Setting", Dr Ng Li Ling points out that one of the key components of HealthierSG is the digitisation of consultation. This has enabled easier sharing of data and information across multiple platforms. Furthermore, digitalisation has the potential for AI to more effectively and efficiently process large amounts of data to improve health outcomes for our patients.

In "Navigating the Digital Frontier: A Personal Reflection on Digitalising Primary Care", Dr Eugene Chua notes that digitisation "encompasses harnessing technology to convert analogue data into digital form, facilitating the seamless storage, manipulation, and transmission of information". He cautions us, as doctors, to not lose sight of the essence of healthcare – compassion, empathy, and human connection, in our pursuit of digitalisation and the implementation of newer technologies and AI.

CM

(continued from Page 3: Practising Good Family Medicine)

To this end, the theme of planetary health supports our College ethos of providing better training for our Family Physicians and maintaining a high standard of Family Medicine practice.

The College of Family Physicians plays a major role in training. We have our academic courses, which include the Graduate Diploma of Family Medicine, the College Master of Medicine (FM) programme, and our Fellowship programme, which represents the pinnacle of training for the Family Physician.

In addition, we are currently running a series of Ethics CME programmes, which cover a wide range of ethical issues such as consent and shared decision-making in primary care, civil law, professionalism, and accountability. With this, we hope to educate our family doctors on various aspects of medical ethics, help them to fulfil their MME core points, and improve the trust that the public has for our family physicians.

Our College mission is to train our family doctors, and we have been doing so ever since we started training the first batch of GPs in 1971. Our courses have evolved over the last five decades to address the ever-changing needs and landscape of healthcare, as well as to ensure that we provide only the best education that our family doctors deserve.

We are able to run these courses only because of the sheer dedication, commitment, and spirit of volunteerism of our trainers and tutors. It is through their tireless efforts that we have been able to train so many family physicians, and tonight we honour them for their years of service to the family medicine community.

On that note, I wish you an enjoyable and wonderful evening.

CM

Charting the Way Forward for a HealthierSG

by Dr Chua Yu Cong Eugene, on behalf of the 2024 FMRC Organising Committee

In conjunction with World Family Doctor Day, observed by Family Doctors worldwide on 19 May, the College of Family Physician Singapore (CFPS) and the Chapter of Family Physicians, Academy of Medicine Singapore (AMS) orchestrated the 2024 Family Medicine Review Course (FMRC) on 18 May 2024.

This year's FMRC centred on the theme "Charting the Way Forward for a HealthierSG", focusing on HealthierSG, a strategy dedicated to reshaping healthcare towards preventive and community-based care. HealthierSG underscores the pivotal role of Primary Care in fostering a healthier Singapore through patient empowerment and early intervention.

The 2024 FMRC showcased presentations from eminent experts across diverse specialities, including Adj Asst Prof Jenson Koh, Chairman of the Chapter of Respiratory Physicians, College of Physicians Singapore; Clin Asst Prof David Teo, Senior Consultant Psychiatrist at Changi General Hospital and head of the CGH ASCAT programme; Clin Assoc Prof Jonathan Yap from the National Heart Centre Singapore; Dr Elvina Tay, Consultant in Post-Acute & Continuing Care at Jurong Community Hospital and Ng Teng Fong General Hospital; and Dr Xu Huiying, Senior Consultant in Respiratory and Critical Care Medicine at Tan Tock Seng Hospital. Tailored to equip Primary Care Physicians with essential insights and tools, the FMRC addressed pertinent topics such as lung cancer screening, mental health, coronary artery disease, post-stroke care, and chronic obstructive pulmonary disease (COPD).

Approximately 200 Primary Care Physicians participated in the 2024 FMRC held at the Centre of Healthcare Innovation. The event fostered meaningful discussions as speakers engaged attendees on critical subjects like the management of post-stroke depression, selection of investigations for coronary artery disease in a primary care context, and use of spirometry in COPD management. The FMRC received positive feedback, with over 80 percent of surveyed attendees expressing satisfaction with the course. Many acknowledged the relevance of the topics to their practice and complimented the speakers for their effective delivery with a primary care emphasis. Topics that attendees expressed interest in for future FMRCs encompassed asthma management, cognitive impairment, and paediatric developmental conditions in primary care.

The 2024 FMRC organising committee would like to extend our heartfelt appreciation to mentors from CFPS and the Chapter of Family Physicians, AMS, for their invaluable guidance, to esteemed speakers for dedicating their time and expertise to enlighten the fraternity, to the CFPS secretariat team for logistical support, to our sponsors (AstraZeneca, Pfizer, and MSD) for supporting the event, and to all fellow Primary Care Physicians for their commitment to professional development in advancing patient care excellence.

Wishing all Family Doctors a blessed World Family Doctors Day! May we continue to find joy and fulfilment in being channels of blessing to our patients.

CM

"The 2024 FMRC showcased presentations from eminent experts across diverse specialities ... to equip Primary Care Physicians with essential insights and tools ... addressed pertinent topics such as lung cancer screening, mental health, coronary artery disease, post-stroke care, and chronic obstructive pulmonary disease."

ETHICS CME WEBINAR

Professionalism, Ethics and Law (PEL) – Challenges in Primary

The College of Family Physicians Singapore would like to thank the Expert Panel for their contribution to the Mandatory Medical Ethics CME (Webinar) on "Informed Consent and the Civil Law Act", held on 25 May 2024.

Expert Panel: Dr Rob Hendy, Dr James Thorpe, Lek Siang Pheng, Dr James Cheong
Chairperson: Dr Mohamed Faruqi Uzair

FAMILY PRACTICE SKILLS COURSES

Geriatric Care 2024

The College of Family Physicians Singapore would like to thank the Expert Panel for their contribution to the Family Practice Skills Course #116 on "Geriatric Care 2024", held on 2-3 March 2024.

Expert Panel:
Mr Sivabalan Thanabal
Ms Nabilah Anwar
Dr Vanessa Mok
Dr Ng Beng Yeong
Dr Daphne Yang
Dr Li Weishan
Dr Joyce Lui Siew Kwaon

Chairperson:
Dr Rufus Daniel

Advancing HPV Prevention in Singapore: From Awareness to Action

The College of Family Physicians Singapore would like to thank the Expert Panel for their contribution to the Family Practice Skills Course #118 on "Advancing HPV Prevention in Singapore", held on 4 May 2024.

Expert Panel:
Dr Ida Ismail-Pratt
Dr See Hui Ti
Dr Tan Kok Kuan

Chairperson:
Dr Tyler Lim

Mental Health 2024

The College of Family Physicians Singapore would like to thank the Expert Panel for their contribution to the Family Practice Skills Course #117 on "Mental Health 2024", held on 23-24 March 2024.

Expert Panel:
Dr Kwek Thiam Soo
Dr Tina Tan
Dr Ong Kian Chung
Dr Alvin Lum
Dr Rajeev Ramachandran
Dr Wong Tien Hua

Chairperson:
Dr Eugene Chua

Continuous Glucose Monitoring

The College of Family Physicians Singapore would like to thank the Expert Panel for their contribution to the Family Practice Skills Course #119 on "Continuous Glucose Monitoring", held on 18 May 2024.

Expert Panel:
Dr Suresh Rama Chandran
Dr Ester Yeoh
A/Prof Gary Kilov

Chairperson:
Dr Cheng Kah Ling

Using Artificial Intelligence Technologies in Low-Resource Settings

A Toolkit for GP Educators

by Dr Hong Yinghui Lois, Family Physician, Editorial Team Member (Team B)

Scenario 1
Lalitha leads a group of 20 Year 3 medical students in a Student Interest Group who have been tasked to implement a 3-month Community Involvement Project focusing on improving the health literacy of transient migrant workers in three dormitories in the West of Singapore.

Scenario 2
Dr Adam, a Family Medicine chief resident, has been asked by his institution to organise the yearly medical mission trip to a primary care health facility in Indonesia that serves a catchment population of 127,500. The trip is five days long and he is accompanied by two family physicians, two nurses, and a dentist, Historically, the team has conducted mobile clinics and health screenings at selected schools around the health facility.

Scenario 3
Dr Boon Wei, a consultant family physician, is responsible for the design and implementation of a 9-month training programme that will help 25 family doctors from the ASEAN region gain skills in motivational interviewing. He has a small budget, enough only for a 3-day in-country workshop at the start of the programme. Aside from that, each participant receives only a small stipend to pay for internet so that they can attend weekly online training sessions. The course is held in English but for most participants, English is their third or fourth language.

From an AI Consumer, to AI Consumers

In a fascinating Cell Reports Medicine 2023 article, Dr Faye Ng and colleagues classify clinicians as "consumers", "translators", or "developers" of AI to reflect a gradient of AI-related knowledge and skills. In brief, Developers make AI tools, Translators validate them, and Consumers use them.

This article is for my fellow consumers of AI – specifically, the ones who want to leverage AI for social good (AI4SG – Google it, it's an actual movement!) or at least use AI to maximise your effectiveness in low-resource settings.

There is such a burgeoning list of AI tools out there that this article might very well be outdated by the time it goes to print. Think of it as a toolkit with different sorts of tools.

Your Rapidly Expanding AI Toolkit

Here are some tools that are readily available and don't require you to have a diploma in computer science. The examples are mostly generative AI and based on OpenAI, reflecting tools that I have tried myself (so this list is not an endorsement). Pricing/availability may have changed by the time you read this!

Name of tool	What it does	Do you have to pay for it?
ChatGPT3.5 (or Gemini)	Generates text based on text input	No
ChatGPT4	Faster response generation, more nuanced output, and can read PDF, Excel, and Word files	Yes (there's also a paid Gemini Advanced version, untested by me)
Midjourney	Create graphics based on text input	Yes
Image Creator from Microsoft Designer	Create graphics based on text input	No
DALL-E	Create graphics based on text input	DALL-E needs ChatGPT "plus" paid subscription
Sora	Creates videos based on text input	Not yet available to public
Otter.ai	Transcribes meetings and summarises them	No
DAX (Dragon Ambient eXperience Copilot solution)	Documents patient encounters at the point of care with immediate note delivery	Yes

Timorese nurse educators practising the use of ChatGPT, a generative Artificial Intelligence AI.

Robbing the Data-Rich to Give to the Resource-Limited: Use AI to Save Time and Money in Your Nonprofit Work

An AI tool is the indefatigable houseman that I never was. It never tires of repetitive tasks and never gets upset. It can summarise hundreds of pages of text, and then generate multiple choice questions and case scenarios from those pages. You can therefore reduce costs and save time in your nonprofit work by automating routine tasks. Here's a suggested workflow based on Bondi et al's 2023 work on AI for Social Good:

Step 1: Define Capability Sets. What are the capabilities you want users (students, clinicians, or beneficiaries) to gain? The project objectives and the needs of the target population (the "theory of change", for public health practitioners) will guide you.

Step 2: Select a tool and decide how to use it during the work process. For example, do you want it to identify trends from past data? Create scalable tools at low cost? Coach learners in a specified task using a chat function?

Step 3: Identify limitations and constraints to your use of AI. More on this in the next section.

Step 4: Measure success and identify problems early. How will you know if the AI tool is hallucinating (presents false information as fact)? Does the tool actually speed up your process or improve your reach? Can you get feedback from your users?

When All You Have Is AI, Everything Looks Like a Case for AI Use: When Is AI Not Helpful?

GP educators from the Singaporean context need to know the peculiarities around the use of AI in resource-limited settings. Most AIs are trained on datasets from WEIRD (Western, Educated, Industrialised, Rich, and Democratic) contexts. Hence ChatGPT regularly misdiagnoses tuberculosis as sarcoidosis, doesn't consider neglected tropical diseases, and can't speak low-resource languages to save its circuits. Admittedly, in this regard it is not worse than a foreign-trained and disoriented clinician, but it can generate erroneous data faster, more fluently, in greater volumes. In the field, we overcome this weakness by providing specific source data that might not be available online (for example, by uploading the national strategic health plan, national guidelines, or even a medical dictionary of the target language).

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AI tools are also highly operator-dependent. Using generative AI without learning prompt engineering is like trying to find your favourite radio station by randomly turning the dial. It's easy to be seduced by the apparently magical process of creating content with a few keystrokes, and far harder to sort out AI slime (poor-quality AI-generated content) from thoughtfully created context-relevant tools, especially when you are entering a foreign context.

Lastly, consider that if you expect your beneficiaries to use the AI tool (e.g., a mental health support chatbot), they may experience challenges along the learning curve (as an exasperated local trainee once asked me: "Why does this website keep asking me how many bicycles are here?!") or simply by being unable to log in due to low bandwidth. The sooner you get to Step 4, the better for your design process.

Applying the Toolkit

Let's apply the process to the first scenario.

Lalitha's Year 3 Project with Migrant Workers:

1. Capabilities: Improved health literacy of transient migrant workers. Asking stakeholders, "How does the target population define improved health literacy?" will give Lalitha information that AI will not be able to give her.

2. Tools: ChatGPT4 (to analyse trends in forums or Facebook page user-submitted questions, build a no-code chatbot for health education, or create health promotional content); DALL-E (for culturally relevant illustrations).

3. Limitations/Constraints: ChatGPT/DALL-E might not create content relevant to the specific context of dormitory-dwelling migrant workers in Singapore; it might not differentiate between various nationalities and language groups, and it is unlikely to generate fluent high-quality content in the target languages.

4. Measure success and identify problems: Whichever tool Lalitha chooses, how will she measure effectiveness? At which points will expert humans (a fluent Bengali speaker, for example, and a health promotion specialist) vet the output? Consultation with stakeholders who work in migrant health will probably yield helpful insights at this point.

For the sake of brevity, I will present some possibilities for Step 2 of the other scenarios.

Dr Adam's medical mobile clinic mission:

Dr Adam might search for relevant data such as the annual health report for the region, historical mobile clinic records from previous years, and the current national health strategy plan. After uploading these documents to ChatGPT4, he can prompt it to recommend a workflow for this year's mission. He might find that his mobile clinic presents an opportunity to advance MMR vaccination among children, or screen for and treat anaemia in women of reproductive age – two priorities that clinicians from high-income countries often underestimate. He might also realise that demand regularly exceeds supply for anti-hypertensive medications, and that there is a referral pathway to local health providers he can use for better continuity of care of newly diagnosed diabetes.

Dr Boon Wei's Motivational Interviewing (MI) training programme:

Assuming the consults are in English, Dr Boon Wei could use Otter.ai to transcribe trainees' current MI conversations with simulated or real patients. He could input the content to ChatGPT and rapidly ascertain trends that he should focus on to help his learners. He can use ChatGPT to "bridge" the English competency level of his trainees, e.g., by pasting his lecture outline and prompting, "This lecture outline on motivational interviewing uses advanced English terminology and some figures of speech that are difficult for foreign language speakers. Can you please rewrite it in IELTS 4.5 level English and give a simple explanation for figurative phrases such as 'Roll with Resistance'?" He might simply ask ChatGPT to act as an MI trainer for his learners to engage with while trying to apply the principles he has taught them. He can use ChatGPT to create simulated cases rapidly, which systematically tests learners in a range of MI skills. Lastly, he can use DALL-E to generate patient images, which will help his learners contextualise the cases.

CM

> *"Using generative AI without learning prompt engineering is like trying to find your favourite radio station by randomly turning the dial."*

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Why Family Doctors Should Care About Artificial Intelligence (AI)

A Global Perspective

by Dr Hong Yinghui Lois, Family Physician, Editorial Team Member (Team B)

For the last few years, I've adjusted to a kind of cyclical cultural whiplash in my workplace.

Most of the year, I work with Timorese health professionals as they run a primary care clinic for 400 people living with HIV or supervise nurses administering penicillin injections to prevent rheumatic fever flares. In this setting, it's not uncommon to get a call asking if we can postpone mobile clinics to the following week because "the road to the village has completely collapsed", or urging me to find a functioning spare X-ray machine soon because "287 patients needed a chest X-ray but didn't get one this month". Shelling out USD200 for wooden barriers to divert patient flow at a district hospital is a decision that causes much furrowing of brows.

Ever so often though, I get on a plane, and not five hours later step into a different universe. A single shelf of over-the-counter medications at my neighbourhood Guardian pharmacy is better stocked than many Timorese health facilities I've seen. The astonishment grows when I tap into my locum shifts and get a whole computer and an arsenal of single-use equipment all to myself. It's incredible how all the toilets flush effectively, that I can get water out of a tap whenever I want – hey, I can drink the water out of that same tap, or any tap at all! When something doesn't work (an air-conditioner, an ECG machine, a referral pathway), it gets fixed the same week.

So why am I writing about the relevance of AI for Singaporean general practitioners? What could AI possibly have to offer the inhabitants of two such different worlds?

I write this article because AI is here to stay. I'm no trailblazing innovator, merely a consumer of AI like I imagine most GPs to be. We will increasingly see AI at work in our health systems (and in a dozen other sectors, such as education, that impact on health).

On the one hand, it's exciting and alluring to consider that AI could shorten waiting time, reduce the guesswork by improving diagnostic or treatment efficacy, or summarise that 20-page discharge summary.

On the other hand, consider these quotes describing the situation during the recent launch of a new computer technology:

"I believe that when a patient comes to me – and she has just been diagnosed with breast cancer, she needs my attention. She doesn't need me to be hammering away at the keyboard ... having to tick 44 boxes."

"(This) system ... dictates the sequence of (a clinician's) activities, how to do things, and when to do them."

(Of a discharge letter addressed to a GP) "In that five pages of gibberish there are five lines the doctor probably should read but doesn't."

"Battle-hardened doctors and nurses (were) weeping openly for days."

"Indescribable, total chaos."

Some of us will recognise these quotes as referring to the infamous rollout of the Epic electronic health system in Denmark. If a relatively simple integrated platform launch can do this, imagine the havoc that a new artificial intelligence technology could cause (and the day when Information Technology Department ITD-helpdesk will call itself Sally and keep talking to you).

Let's consider some of the drawbacks of using AI in health systems.

Will AI just increase the time I spend with the computer, while not increasing the time I can spend with my patient? I have not yet met a technology that uniformly increases my patient-to-computer facetime ratio (unless you count Notepad templates).

What kind of input will the AI give to clinical practice? Everyone's seen "AI slime" (poor-quality AI-generated and translated material) clogging news feeds and misinforming family members. People are often surprised to know that AI slime is a problem in developing economies too – perhaps even more of a problem (a discussion for another day).

Will the AI system that our primary care networks adopt be a clunky, lumbering behemoth, requiring GPs to click through twenty alerts and then click away five automated warnings recommending best practice for the feisty eighty-year-old

(continued next page)

(continued from Page 11: Why Family Doctors Should Care About Artificial Intelligence)

wet-market stall owner who doesn't want to start taking statins yet?

I know that some of my educator colleagues worry that AI will blunt the clinical acuity of developing physicians. As for AI-guided diagnostics, in a system where polyclinic doctors already feel like "referrologists" sometimes, do we really need another omniscient expert playing alongside us?

Will AI technology be available to all our patients, or just the educated, health-literate, English-speaking ones with smartphones? How many AI technologies will address the pressing, urgent needs of developing health systems around the world, and how many will tailor lifestyle and entertainment choices for the richest of the rich?

Worst of all, as AI absorbs the inherent biases of our health, educational, and judicial systems, what kind of judgements will it pronounce on certain social, racial, or economic demographics among us? (These are real, not theoretical, tendencies that have affected AI accuracy in areas ranging from housing to criminal justice.)

This, then, is why GPs should care about AI. Not because we are easily excited by novelty, nor so visionary as to dream up scenarios of genomically-tailored medicine in a neighbourhood clinic nearby you. We live in the mundane reality of GST raises and CHAS eligibility and HealthierSG rollouts. This is why we owe to it our patients to consider what goes into the "black box" of AI, and to speak up for the functions that should come out of that black box. The least we can do is stay engaged with the developments and functionalities. We should be asking questions of developers, contributing our perspectives to new products as they are developed. We should certainly not be avoiding eye contact with the bots from the uncanny valley.

Some developers who speak of "AI for social good" see AI primarily as a means for expanding capability sets (the opportunities and freedoms that individuals have in order to achieve well-being). Consider this example: I, having been born in Singapore to middle-class parents in the '80s, had growing up an incredibly different range of life opportunities compared to my colleague's father, born a farmer's eldest son in a rural Timorese village in the '50s. I've never had to choose between letting my wife give birth on a mud floor alone, versus losing the year's income because it's harvest time and a 4-day journey (each way) to hospital.

Regarding the choices we make that affect our health, what options do some people lack that I take for granted? What disasters can AI avert for some folks, that I've never even considered because my socio-economic privilege has shielded me? In Singapore, getting time off as an MoHH-employed staff to attend psychotherapy sessions was challenging, but never out of my reach. The same cannot be said for all Singaporean residents, let alone people in vulnerable situations around the globe. This ought not to be so.

On either side of my 5-hour plane flight, I want AI to be a force that empowers my patients, neighbours, and friends, giving them better choices for their health.

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Dr Lois Hong maintaining a global perspective of Artificial Intelligence AI as part of a healthcare team from Maluk Timor on board a small aircraft.

Navigating the Digital Frontier

A Personal Reflection on Digitalising Primary Care

by Dr Eugene Chua, Family Physician

When pondering the digitalisation of primary care, a myriad of emotions floods the mind – fear, excitement, and perhaps even a hint of dread. Conversations with colleagues reveal a spectrum of perspectives, each coloured by individual experiences and apprehensions. As I navigate this digital frontier, I find myself neither a native nor an ignoramus in the realm of technology; rather, I stand somewhere in between, grappling with the implications of our digital evolution.

Amidst the rapid transition towards a digital society, I found myself at a crossroads. On one path lay the conviction of progress, an understanding that advancement is necessary and inevitable. Yet, on the other, a nagging sense of unease lingered, a feeling that we might be hurtling towards an uncertain destination at breakneck speed. In this tension, I sought clarity and embarked on a journey to explore the nuances of digital health.

But what does digitalising truly entail? At its core, it encompasses harnessing technology to convert analogue data into digital form, facilitating the seamless storage, manipulation, and transmission of information. From tech tools to data collection and generation, digitalisation permeates every aspect of modern existence, revolutionising industries and reshaping societal norms.

Within the realm of primary care, the landscape is both familiar and distinct. Unlike other sectors, primary care is deeply personal, rooted in the relationships between patients and healthcare providers. As we contemplate digitalisation, it is imperative to discern which areas are ripe for transformation and which should remain untouched. Telecommunication, for instance, has bridged geographical barriers, expanding our capacity to deliver care beyond traditional confines. Yet, it has also become a double-edged sword, susceptible to exploitation and commodification, veering dangerously close to prioritising profit over patient welfare.

In this pursuit, we must not lose sight of the essence of healthcare – compassion, empathy, and human connection. Digitalisation, though a powerful tool, is not an end in itself but a means to enhance the delivery of care. We must weigh the benefits against the costs, mindful of the delicate balance between innovation and integrity. In our quest for progress, let us not forsake the values that define us as family physicians.

As I reflect on my journey thus far, I am reminded that the path ahead is fraught with challenges and opportunities alike. In embracing digitalisation, let us tread carefully, guided by wisdom, humility, and a steadfast commitment to the wellbeing of those we serve. For it is not merely the destination that matters, but the manner in which we journey towards it – with compassion, integrity, and unwavering dedication to the noble cause of healing.

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Finding the role of digitalisation in primary care to enhance care and therapeutic relationships.

World Family Doctor Day Dinner 2024

11 May 2024 ParkRoyal Collection Pickering

Family Medicine Review Course 2024

18 May 2024 Ng Teng Fong Centre for Healthcare Innovation

Primer on Artificial Intelligence (AI) and Ethics

Part 1

by Dr Lim Khong Jin Michael, Family Physician, Editor (Team B)

1. The Prevalence of Artificial Intelligence (AI)

The European Commission's Communication on Artificial Intelligence (European Commission, 2018) defines artificial intelligence as "systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals, noting that AI-based systems can be purely software-based, acting in the virtual world (e.g., voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g., advanced robots, autonomous cars, drones or Internet of Things applications)."

We are living in an era of increasing prevalence of Artificial Intelligence (AI). While playing an online game on our phone with AI bots pretending to be fellow human players, we receive an Artificial Intelligence (AI) generated email prompt for us to upgrade our smartphone, making us wonder whether Natural Language Processing (NLP) AI has been eavesdropping on our conversation with friends regarding getting a new phone, informing us of the discount we are entitled to, and the phone models we can choose from. We pick up our smartphone and AI recognises our face, granting us access, deciphers our voice commands, facilitates our searches, and recommends us the phone model suitable for us, translating pages of different languages if required. When we log into our social media or emails or watch a movie online, targeted advertisements generated by AI pop out repeatedly, promoting different phone models. If we decide to go to the shopping mall to get the new phone upgrade instead of purchasing online, AI algorithms embedded in our car's and phone's GPS help us navigate to our destination, possibly self-driving for some of us in the near future. Before leaving the house, we activate our AI robot to provide surveillance, guard, and clean the house in our absence. At the phone shop, our credit card transaction is either approved or rejected by an AI algorithm regardless of whether we are served by a human or Artificial Intelligence interface.

Some medical image diagnostics utilising machine learning have surpassed human doctors' ability to detect illnesses. AI has also helped in the drug development process.

2. Strong (General) and Weak AI, Machine Learning (ML), Deep Learning (DL), Natural Language Processing (NLP), and Human Machine Interface (HMI) as examples of Artificial Intelligence AI

AI can generally be classified into two categories: the Strong or General Artificial Intelligence (GAI or AGI) that encompasses technologies enabling intelligence across domains, which therefore aims to simulate humanlike intelligence; and the weak AI, which includes machines that act intelligently usually in one or a few domains only such as Deep Blue, which is good at playing chess but is not able to drive a car or clean the floor. Most current AI systems are weak AI.

Machine learning trains by supervised learning. Supervised learning occurs upon processing paired data such as inputs of images of animals and outputs, which are names of the respective animals. After adequate data training, machine learning should be able to correctly identify an animal even if a different photo containing an image of the animal is presented. In contrast, unsupervised learning has no training data set, and the AI has to solve a particular task such as getting out of a maze by trial and error.

Deep learning (DL) is a more evolved branch of machine learning. The term "Deep Learning" generally refers to supervised machine learning systems with large (i.e., many-layered) ANNs and large training data sets.

Natural language processing (NLP) enables the comprehension and correlation of content in written or spoken language.

Human-machine interfaces (HMIs) facilitate natural information exchange between computers and humans.

3. AI and Ethics

We will next discuss AI and Ethics considering the four domains of Beneficence, Non-Maleficence, Autonomy, and Justice.

> *... defines artificial intelligence as "systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy.*

3.1. Beneficence

The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems highlights that IA technology such as machine learning, algorithms, robots, and autonomous vehicles should promote well-being and human flourishing. The main goal of artificial intelligence should be one of beneficence – to make life easier and more pleasant for human beings as individuals and improve human society as a whole.

3.2 Non-Maleficence

AI in general is supposed to observe the principle of non-maleficence in that it is to cause no harm to human beings, or at least to minimise it. We will consider a few different types of AI technologies and applications and how they have resulted in or may potentially result in maleficence.

3.2a Production Line Robot

In 2015, a worker at a Volkswagen plant in Germany was crushed to death by a robot on the production line.

3.2b Autonomous transportation

Autonomous vehicles are supposed to transport human beings from one location to another, safely for both those inside and outside the autonomous vehicles. However, there have been cases of accidents and loss of lives involving autonomous vehicles. The rider of a Tesla car on "auto-pilot" mode died while riding the car that collided with a large truck in 2016. A pedestrian was wrongly classified by an experimental self-driving car operated by Uber in 2018 because the AI wrongly classified the human being as "unknown", then as a "vehicle", finally as a "bicycle", applying the brakes too late to avoid a crash.

3.2c Surgical Robots

In 2005, a surgical robot at a hospital in Philadelphia malfunctioned during prostate surgery, injuring the patient.

3.2d Autonomous weapons

Autonomous weapons are created to bring harm to human beings, and it is an example of artificial intelligence that breaches the ethical principle of non-maleficence.

Some argue that having machines fight our wars decreases harm to human beings. However, the maleficence to human beings arises when one side utilises autonomous weapons while the other side deploys human soldiers, possibly out of necessity. It has also been pointed out that the side with autonomous weapons may decide to go to war more often as there is low cost to its own loss of human lives, if any. There is also the concern that autonomous weapons may be hacked or accessed without authority by dangerous groups such as terrorists to cause large-scale harm to human lives.

> *"The main goal of artificial intelligence should be one of beneficence – to make life easier and more pleasant for human beings."*

3.2e Medical AI in Euthanasia or Lifesaving

From the medical point of view, an example of an artificial intelligence that can potentially directly harm human lives will be one employed in the field of euthanasia (in countries that permit euthanasia) or lifesaving. Is it possible that such an AI may make a mistake or be hacked into and euthanise or abandon lifesaving measures for a human life?

3.2f Technological singularity

The statistician I.J. Good suggested in 1965 in "Speculations Concerning the First Ultraintelligent Machine" that with the successful production of an Ultraintelligent Machine that surpasses the best of human intelligence, it will be able to design machines more intelligent than itself. These designing and production cycles can go on in perpetuity resulting in an "intelligence explosion", and therefore the obsolescence of human intelligence. This of course is a speculation of what may happen if AI is allowed to flourish unregulated; far-fetched but possible.

3.3 Autonomy

In ethics, autonomy is defined as the right to self-determination. The ethical principle of autonomy was affirmed in a court decision by Justice Cardozo in 1914 with the dictum, "Every human being of adult years and sound mind has a right to determine what shall be done with his own body". An individual's ability to make an informed decision regarding his or her medical management is an important pillar of medical ethics. Informed consent, truth-telling, and confidentiality spring from the principle of autonomy.

3.3a Black box problem and AI Decision-making

Neural network-based AI technologies in Deep Learning function akin to a black box in that after learning from pairs of input-output data, it is able to generate an output when provided with an input, but it may not be able to explain why a specific output was generated.

(continued on Page 16)

(continued from Page 15: Primer on Artificial Intelligence (AI) and Ethics)

Precision medicine involves predicting the most effective treatment protocols for individual patients via Deep Learning AI, which has gone through supervised learning using massive volumes of past patients' data to uncover correlations between patient features, treatment modalities, and outcomes. The treatment of patients with severe combat wounds at the Department of Veteran Affairs, Walter Medical Center is such an example.

As pointed out by Bundy (2017) in "Review of Preparing for the Future of Artificial Intelligence", although it is hard to extract explanations from statistical machine learning programmes, doctors need to understand how medical recommendations are arrived at by AI as they are expected to take responsibility for their final decisions. Doctors cannot shrug off their professional responsibility claiming they did not understand the reasoning process behind the machine-generated diagnosis or therapy decision that was subsequently proven to be wrong for whatever reason.

3.3b AI and the Breach of Privacy and Confidentiality

Privacy, which encompasses personal autonomy and freedom of choice, is a human right. An individual's privacy might be breached during an AI's collection and analysis of data as well as in its application. Without robust regulations, social media platforms, search engines, voice assistants, image analysis software, speech and face recognition systems, and even electronic medical records may be data-mined and exploited to feed the Deep Learning AI's supervised learning process. It has also been pointed out that just as it is possible to anonymise data, it may be possible for an AI to un-anonymise data if given sufficient data.

As noted by Trausan-Matu in "Ethics in Artificial Intelligence" (2020), Natural Language Processing (NLP) technology based on Machine Language (ML) can be used for constructing profiles of any person from the texts exchanged on social networks and emails, which may be used in illicit ways by taking advantage of one's weaknesses or addictions. Personal data identified via Natural Language Processing Programmes can also be used for illicit purposes, such as bullying, phishing, or blackmail.

AI applications can track individuals across multiple devices, platforms, and settings including in their home, at work, or even during holidays overseas. Video surveillance with remote biometric identification puts individuals at risk of being monitored and possibly manipulated. Trausan-Matu (2020) pointed out that Natural Language Processing (NLP) technology can be used for constructing profiles of people from their texts exchanged on social networks and emails. This information may be used to take advantage of one's identified weaknesses or addictions, resulting in illegal activities such as bullying, phishing, or blackmail.

3.3c Machine manipulating human decisions

It is potentially possible for AI to be biased towards certain medical treatment modality in its recommendations if programmed into its algorithm by a developer with ulterior motives, whether financial or otherwise. Some of these recommended decisions may be so subtle that it may take doctors a long time to even realise. However, a good recommendation is not acceptable if there is a best recommendation that is left out due to deceptive programming. Hence, the importance of regulators and governance frameworks to check AI's development and decision-making processes on an ongoing basis even after its deployment.

3.4 Justice

Justice for an individual is generally interpreted as fair, equitable, and appropriate treatment of a person, taking into account the law and the person's rights. Distributive justice refers to the fair, equitable, inclusive, and appropriate accessibility and distribution of resources. The concept of inclusivity of AI pertains to the assurance that AI systems are created and used in a manner that is not just accessible but also comprehensible to a diverse audience.

I will proceed to highlight certain areas in which AI may result in injustice.

3.4a Selective and differentiated healthcare provision

It is not unconceivable for a profit-driven company to utilise Artificial Intelligence to select only patients who can afford to pay for closer monitoring, investigation, and clinical management. This will imply that patients may be screened by Artificial Intelligence's algorithm to determine who receives conservative, normal, or aggressive clinical management before they are even attended to by the healthcare staff.

3.4b Automation, mass unemployment, and selective improved employment terms

AI robots can take over the jobs of human beings in certain sectors of employment, resulting in mass unemployment. On the other hand, individuals who are trained in the development or use of AI may receive improved employment terms.

> *"... AI applications can track individuals across multiple devices, platforms, and settings ..."*

3.4c Machines imitating humans and deception

It is possible that we may be having a discussion with an AI conversational agent on the phone or social networks without being aware. The problem is compounded when these AI conversational agents are coupled with other AI technologies such as deep learning and emotional recognition system capable of profiling the individual it is having a conversation with. An AI system may also generate or manipulate image, audio, or video content to resemble real persons, objects, places, or other entities or events to cause deception. Even if an AI is successful in building a relationship with a human being as a result of its algorithm programming because it is without feelings and the relationship is built on deception, this can result in a devastating emotional breakdown for the deceived human being.

4. Conclusion

In "Primer on Artificial Intelligence (AI) and Ethics Part I", we have considered the prevalence of AI, the common types of AI, and some ethical concerns regarding AI. In Part II, we shall explore some measures to address these ethical concerns.

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GRADUATE DIPLOMA IN MENTAL HEALTH

Mental Health Programme for General Practitioners and Family Physicians

Mental health disorders are one of the top four leading causes of disease burden in Singapore, according to the Ministry of Health's Global Burden of Disease 2019 study findings. Doctors in primary care – General Practitioners (GPs) and Family Physicians (FPs) – therefore play a significant role in providing early and accessible mental health services to individuals in the community.

The **Graduate Diploma in Mental Health (GDMH)** is jointly offered by IMH and the Division of Graduate Medical Studies, National University of Singapore. The programme, into its 14th year and conducted by mental health specialists, aims to enhance the knowledge and skills of GPs and FPs to assess, identify, and manage less severe psychiatric conditions.

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- Applying assessment methodology to different mental health disorders; and
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Artificial Intelligence in Healthcare

Hype or help for the Family Physician?

by Dr Tan Kee Tung, Family Physician, Editorial Team Member (Team B)

Artificial intelligence (AI) is the catchphrase in town. We have some experiences of AI use in our busy family physician life: in Google translate when we use it in overseas travel, in our online shopping recommendations, when we use Google Assistant or Apple SIRI. Many of us have tried the Chat GPT from open AI when it was first introduced in 2022, perhaps in our research paper writing (I tried it for this article). AI as defined by the Oxford dictionary is "The theory and development of computer systems to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages." Does AI live up to its hype in healthcare?

I attended the AI for healthcare at NUS (https://nusmed.emeritus.org/ai-for-healthcare) to find out more! It is an 8-module online course conducted on Saturday afternoons over eight weeks.

The first two modules describe the use of biomedical data to solve clinical problems. The different sources and types of data in healthcare, namely structured data, e.g., patient's vitals: BP, HT, WT, HT, BMI, and unstructured data, e.g., clinical electronic documents, memos, discharge summaries. How these data are stored, tagged, and used ethically were discussed.

The third module describes the history of AI. Concepts of data mining, business intelligence, and machine learning were introduced. Deep neural network analysis, the workhorse of most AI models including large language model (LLM), was introduced. It uses a network architecture inspired by neural architecture. (Here "Deep" = multiple layers.) Each layer extracts different features from the data. The fourth module highlighted the use of deep neural network analysis on image recognition. Some of its applications include reading mammograms, x-rays, and retina photos. Modules 5 and 6 discussed the use of AI in drug discovery. Optimisation problems such as finding the optimal combination of drugs and their doses to treat the SARS COV-2 infection and the optimal cancer drug combinations and doses were discussed.

The last two modules focussed on applying AI in clinical practice. AI will most likely augment our clinical work, e.g., in reducing administrative and cognitive burden (AI assistant for documentation, AI conversational chatbot platforms for history-taking and counselling) and predicting diseases and outcomes.

Dr Tan Kee Tung and colleagues at an Artificial Intelligence AI Conference in 2023.

There was also an end-of-course AI project using the course materials. No coding was required. I worked on using 3-generation family health history (FHH) and other healthcare data to predict hereditary cancer syndromes, Familial hypercholesterolaemia, and diabetes in patients, and nudging them into behavioural change and reminders for timely cancer and metabolic screening.

So, is AI for healthcare a hype or help for us? I think AI, like all new technologies, offers good help, but it has its costs and risks. We can start by learning our electronic records system well and entering good electronic documents. AI requires extra computation capabilities like the Graphics Processing Units (GPU), which are costly and may not be environmentally friendly. The ethics of AI use need to be evaluated by industry and institutions and robust guidelines published. Perhaps in the future of AI in healthcare, just as during the Covid-19 pandemic, the good, knowledgeable, and empathic family physician will still be precisely what the world needs in a challenging time and AI can help us achieve that.

> *"I think AI, like all new technologies, offers good help, but it has its costs and risks."*

CM

Evolution of Healthcare Communication in the Primary Care Setting

by Dr Ng Liling, Family Physician, Editorial Team Member (Team B)

Healthcare communications have evolved rapidly over the years in the primary care setting. Traditional forms of communication involved handwritten communications through discharge summaries or memos, and face-to-face or telephone conversations with patients and healthcare professionals.

The portable phone set was introduced in 1992 and the first iPhone was launched on 29 Jun 2007. Who would have thought that an invention like this would greatly impact our lives and communication?

Conversations with colleagues or "corridor consults" became phone conversations over our smartphones. Text messaging became more common with the introduction of WhatsApp and Telegram. When the Personal Data Protection Act (PDPA) came about, specialised apps were developed for confidential conversations about patients. TigerConnect was one of the first phone apps developed for healthcare communications to enable confidential discussions on the patient's condition.

One of the key components of HealthierSG was digitalising the consultation. This enables easier sharing of data and information across different platforms. One of the initiatives started by SingHealth Delivering on Target (DOT) Primary Care Network (PCN) was SingHealth Partners Buddy, which was an online appointment system for SingHealth hospitals.

Phone applications such as Health Hub and SingHealth Buddy provided patients the platform to track their own appointments and lab results, and empowered the patient in their own health outcomes.

With artificial intelligence having increasing influence on healthcare settings, we might even see healthcare chatbots helping in FAQs, appointment booking, reminders, or queries for clinics in the future.

How has it impacted healthcare? We have become more efficient in sharing knowledge with our peers and patients. Digitalisation has given us a greater advantage in processing the data to improve health outcomes for our patients.

> *"We have become more efficient in sharing knowledge with our peers and patients."*

However, one must be mindful that the information that we handle is often sensitive in nature. Secure channels of communication are required when transmitting this information. Before we share this information with the relevant parties, informed consent needs to first be sought from the patient.

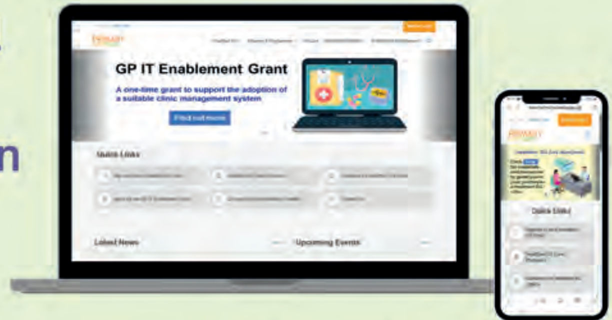
While digitalisation has offered us many benefits in our communications, it lacks the capacity to demonstrate empathy and non-verbal cues of communication. The ethical and legal aspects need to be considered as we continue to digitalise more aspects of healthcare.

> *"However, one must be mindful that the information that we handle is often sensitive in nature."*

CM

Primary Care Pages

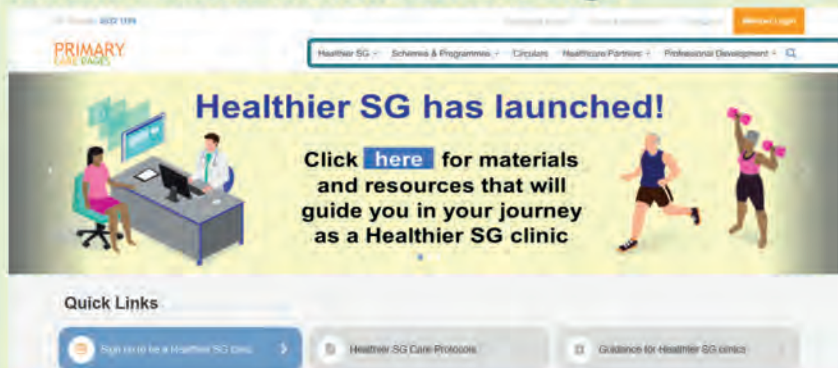
Enhanced functions and additional content to support national schemes and initiatives information and tools are just a click away!



by the Agency for Integrated Care

Primary Care Pages (www.primarycarepages.sg) is a one-stop online resource that provides family physicians with useful information about national schemes, continuing medical education events, Ministry of Health (MOH) circulars and more. With the launch of Healthier SG, we gave the site a new look, enhanced functions and additional content to better serve the needs of GPs.

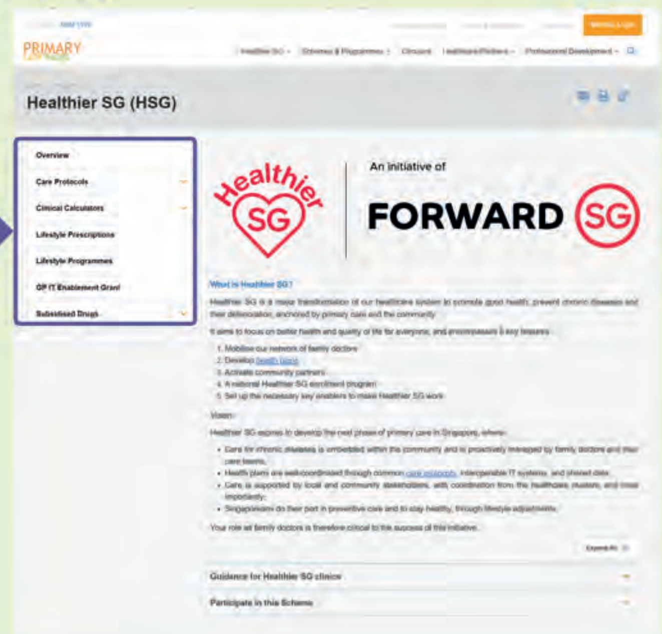
General Enhancements to the Home Page



- Frequently viewed topics were added to the primary navigation bar for easy reference
- The search function next to the navigation bar enables users to search the site for specific content

Dedicated section to support the launch of Healthier SG

- Protocols for common chronic conditions and preventive care situations
- Calculators to help evaluate a patient's risk of developing cardiovascular disease and foot ulcers
- Information to help patients develop positive lifestyle habits in between consultations
- Information on grants relating to Healthier SG
- Information on subsidised drugs and the Healthier SG Chronic Tier



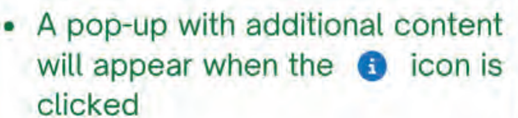
Healthier SG Care Protocols

A total of 12 care protocols have been developed for the launch of Healthier SG. They cover recommended health screenings, medications, lifestyle adjustments, and escalation to specialist and acute care when necessary. MOH will progressively develop care protocols for the other Chronic Disease Management Programme (CDMP) conditions over time.

- Enables user to email the page to a contact, print the information on the page or copy the page link

- Protocols will be updated regularly. Date of last update will be displayed at the top of each protocol for reference
- Preventive and chronic care protocols will consist of the following sections:
  - Background
  - Clinical Approach
  - Management
  - Data Submission
  - References

  The Data Submission section will provide information on the fields that need to be submitted using the care-reporting function of a Healthier SG-compatible CMS.



- A pop-up with additional content will appear when the icon is clicked

Enhancement to the circulars repository

- Search function to help locate relevant content among the increasing number of circulars

Visit www.primarycarepages.sg to check out the enhanced functions. Certain restricted content may require member account creation.

Family Practice Skills Course #120 (1 Day)

Combatting Common Respiratory Illnesses: Vaccination Strategies in Singapore

Sat, 6 July 2024: 2.00pm - 5.30pm

Please note that this FPSC will be conducted as "In-Person" (Limited Capacity).
Venue : NTUC Auditorium,
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TOPICS

Unit 1: Respiratory Syncytial Virus (RSV) – Public Health Impact and Prevention Strategies
Unit 2: COVID-19 Prevention and Treatment Strategies
Unit 3: Updates on Pneumococcal Vaccination (PCV20)

WORKSHOP

Case Studies

SPEAKERS

Dr Jade Soh
Consultant, Infectious Disease, Sengkang General Hospital

Dr Louisa Sun
Consultant, Infectious Disease, Alexandra Hospital

Adj Assoc Prof Kay See Choong
Respiratory Specialist, National University Hospital

All information is correct at time of printing and may be subject to changes.

- SEMINAR (2 Core FM CME points)
  DAY 1 • Unit 1 - 3: Sat, 6 July (2.00pm - 4.00pm)
- WORKSHOP (1 Core FM CME point)
  DAY 1 • Sat, 6 July (4.30pm - 5.30pm)

*Registration is on first-come-first-served basis.
Please register by 1 July 2024 to avoid disappointment.

- DISTANCE LEARNING MODULE
  (3 Core FM CME points upon attaining a minimum pass grade of 60% in online MCQ Assessment)
  • Read 3 Units of study materials in The Singapore Family Physician journal and pass the online MCQ Assessment.

This Family Practice Skills Course is sponsored by **Pfizer Pte Ltd. Singapore,** organised by **College of Family Physicians Singapore.**

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Name: Dr ____________________

MCR No: ____________ Clinic HCI Code: ____________

Mailing Address: (Please indicate: ○ Residential ○ Practice Address)

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E-mail: ____________________ Tel: ____________

Note: Any changes to the course details will be announced via e-mail. Kindly check your inbox before attending the course. Thank you.

Please mail the completed form and cheque payment to:
College of Family Physicians Singapore
16 College Road #01-02, College of Medicine Building, Singapore 169854

You may send your completed form to: **sfp@cfps.org.sg**
Successful applicants will be confirmed by email.

College of Family Physicians Singapore
Registration Number : S71SS0039J
Registration Period : 7 Aug 2023 to 6 Aug 2029