Editorial

The Paradigm shift of Pharmacy Profession at Post-COVID-19 Era in Malaysia

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Malaysia currently has a total 19,260 registered pharmacists with active practising certificate which is regulated by the Pharmacy Board of Malaysia and relevant pharmacy laws and regulations. In tandem with the evolvement of medicine, pharmacists are responsible for ensuring the safe and effective use of medications [1, 2], and they play a key role in providing healthcare to the public as a frontliner, educator and clinician [3-8]. For instance, in community pharmacies, pharmacists dispense prescription and over-the-counter medications, compound extemporaneous preparation [9-11], provide medication, immunization, travel medicine and disease advice to patients [12-15], and offer other value added services such as medication adherence tool, blood pressure and blood glucose monitoring [16-18]. It is worth noting that with the implementation of Regulation 23 of Poison Regulation as early as year 1952, dispensing separation have been fully implemented in all public hospitals whereby all supply of medications should be solely on prescription and the supply to be recorded, labelled and dispensed at the pharmacy. With medication dispensing as the core professional duties, hospital pharmacists are also responsible for the procurement, storage, and distribution of medications, as well as the preparation of radioactive diagnostic, cytotoxic drug and sterile products [5]. They also actively involved in patient care, such as pharmacokinetics, pharmacotherapy services, medication therapy adherence clinic, medication reconciliation, reviewing medication orders and providing drug and poison information to healthcare professionals [19, 20].

During the pandemic, due to the urgency and need of volunteer in national vaccination program, pharmacists have been involved as COVID-19 frontliner [21, 22]. They spearheaded not just the procurement, storage and logistic coordination but also clinical pharmacotherapy in ward and health screening prior to COVID-19 immunization [23-25]. At the same time in term of emergency and disaster relief work such as floods, pharmacists have quickly risen to the occasion and forged ahead beyond the pharmacy curriculum to champion healthcare delivery. Efforts on the ground include training and certification of immunisation for pharmacists, curriculum design of vaccination and disaster preparedness [26], travel medicine [27] volunteerism module to be embedded in the pharmacy curriculum in cultivating the initiative and preparedness. There are various ongoing and planned initiatives at individual or team basis such as food bank, mental health social enterprises, silence volunteerism, as well as the dispensing separation discourse that could transform the healthcare system of the nation.

As technology and the internet of things have proved the urgent need for digital health integration into our healthcare system, there have been commendable efforts to push for electronic/digital prescriptions, which could enable big data to demonstrate the importance of the role of pharmacists in validating the dispensing process. This is in line with the amendment of Poisons Act 1952, Poisons (Amendment) Bill 2022) that was approved by Malaysian Parliament in July 2022 [28, 29] that incorporated virtual and online transaction such as electronic prescriptions and online pharmacy. The evolving roles of pharmacists in digital health pose both challenges and opportunities that they face in this rapidly changing environment.

Following this digitalisation as success of several online medical consultation portals, pharmacists are being called upon to leverage their expertise in medication management to help patients navigate the complex landscape of digital health tools

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[30, 31]. This includes providing support and guidance on the safe and effective use of medications and collaborating with other healthcare providers to ensure the best possible outcomes for patients [32, 33]. One key area where pharmacists can add value in digital health is in the management of chronic conditions and infectious disease such as COVID-19. These diseases, such as asthma, diabetes, and hypertension, require careful pharmacotherapy services in order to minimise its complications. Pharmacists can use digital health tools, such as telemedicine platforms and mobile apps, to provide ongoing support and guidance especially to paediatric and older patients, helping them to better manage their health and avoid hospitalisation. Pharmacists can also play a key role in helping patients to navigate the complex landscape of digital health tools. With so many different apps and medical devices available, it can be difficult for patients to know which ones are safe and effective. Pharmacists can provide guidance on the selection and use of these tools, helping patients to make informed decisions about their healthcare [32, 34-38].

Driven by the post-pandemic need of sustainability and flexibility, the integration of digital health technologies into the healthcare system is here to stay. In fact, the transition to virtual healthcare helps pharmacists to leverage their expertise in digital health. For example, pharmacists can work with healthcare organizations and technology companies to develop new digital health tools and services that meet the needs of patients and providers. Several online pharmacy spin-off from the local brick and mortar pharmacies have become a viable healthcare business model. Meanwhile, pharmacists can also spearheading the digital transformation by combining both data science and digital health tools to carve out the competitive advantage of pharmacy in digital health.

To maintain the competitive advantage, the whole pharmacy team need to stay up-to-date with the latest digital health technologies as this field evolve at a rapid pace. With hindsight, pharmacist associations should continue playing proactive roles to offer Continuing Professional Education (a.k.a. CPE) training related to information technology and digital science. The expansion of pharmacists' roles into infection control and the integration of digital health technologies into the healthcare system present both challenges and opportunities. In fact, we are now standing on the shoulders of senior pharmacists giants that adapted successfully to the advent of computerisation in the 1980s, the current generation of pharmacists must remain steadfast and stay current with the latest technologies to develop data science competencies to be effective in the digital health ecosystem.

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