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## COMMENTARY

### **Roles and Challenges of Pharmacists in the Public Healthcare Institutions of Malaysia amidst Covid-19 Pandemic**

Abu Hassan Alshaari Abd Jabar<sup>1</sup>, Kamarudin Ahmad<sup>2,3</sup>, Noranizah Osman<sup>1</sup>, Zanisah Ahmad Torky<sup>1</sup>, Phan Hui Sieng<sup>1</sup>, Phang Yen Yen<sup>1</sup>, Chuo Yew Ting<sup>1</sup>

<sup>1</sup>*Pharmaceutical Services Division, Sarawak State Health Department*

<sup>2</sup>*Pharmacy Department, Miri Hospital, Sarawak*

<sup>3</sup>*Clinical Research Centre Miri*

## ABSTRACT

Pharmacists have been playing important roles in promoting health, prevent diseases and deliver healthcare services to individuals, communities and nations. Such functions have further emphasised and expanded amidst the COVID-19 pandemic. Notwithstanding, most of the recent publications highlight the roles of community pharmacists amidst this pandemic but paid little attention to the functions of pharmacists in public healthcare institutions. The knowledge gap is particularly urgent in Malaysia as most of the pharmaceutical services catered by the pharmacists in the public healthcare institutions. This commentary highlights the roles and challenges of pharmacists in the public healthcare institutions of Malaysia amidst Covid-19 outbreak. We discover three leading roles concerning (i) supplying of personal protective equipment, (ii) advancing of pharmaceutical cares and services; and (iii) monitoring of off-label drug use. We found, two aspects of the challenges pertaining (i) shortage of personal protective equipment; and (ii) unpredictable pandemic. This commentary may benefit those pharmacists, who practice in the public healthcare institutions from other countries with a similar healthcare delivery system.

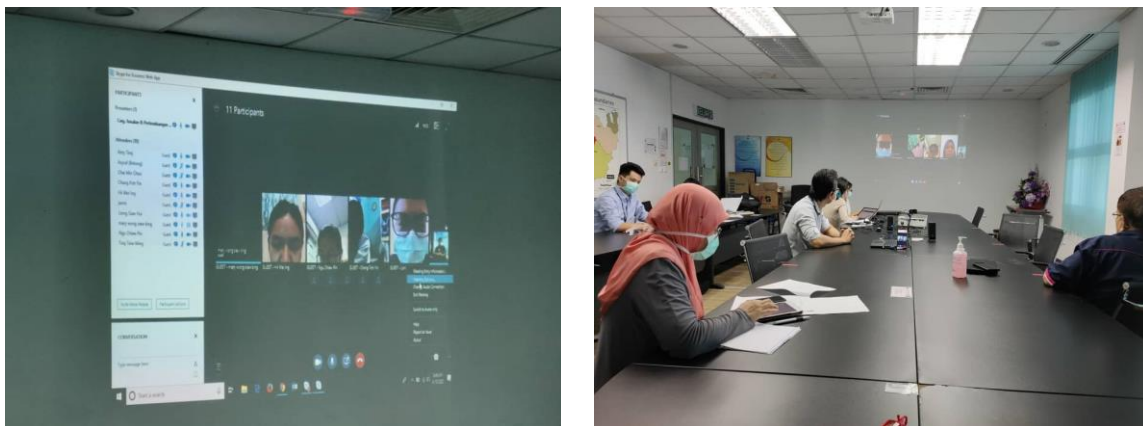
## INTRODUCTION

COVID-19 (coronavirus disease 2019) or termed as SARS-CoV-2 (stands for severing acute respiratory syndrome coronavirus 2) has imposed immense challenges to the world since late 2019 (1). Pharmacists, who have been playing important roles in promoting health, preventing diseases and delivering healthcare services, continue to play vital roles in combating the pandemic (2).

Notably, most of the recent publications (3-10) highlight the roles of community pharmacists amidst this pandemic but paid little attention to the functions of pharmacists who serve in the government sector. This commentary highlights the roles and challenges of pharmacists in the public healthcare institutions of Malaysia amidst Covid-19 pandemic. We invite, the Sarawak State Deputy Director of Pharmaceutical Services Division, to provide his insights on the issues. The four leading roles of pharmacists amidst the pandemic depicted, are the (i) supply of personal protective equipment (PPE), (ii) advancement in pharmaceutical cares and services; (iii) monitoring of off-label drug use, and (iv) optimisation of human resources. On the other hand, two aspects of the challenges are mainly on (i) shortage of PPE; and (ii) unpredictable pandemic.

### *Role 1: Supply of Personal Protective Equipment*

The Ministry of Health Malaysia has assigned a pharmacist in each state's Pharmaceutical Services Division to be the liaison officer, to deal with the supply and monitoring of PPE as this task suits the expertise and role of pharmacists in the management of medical supplies.



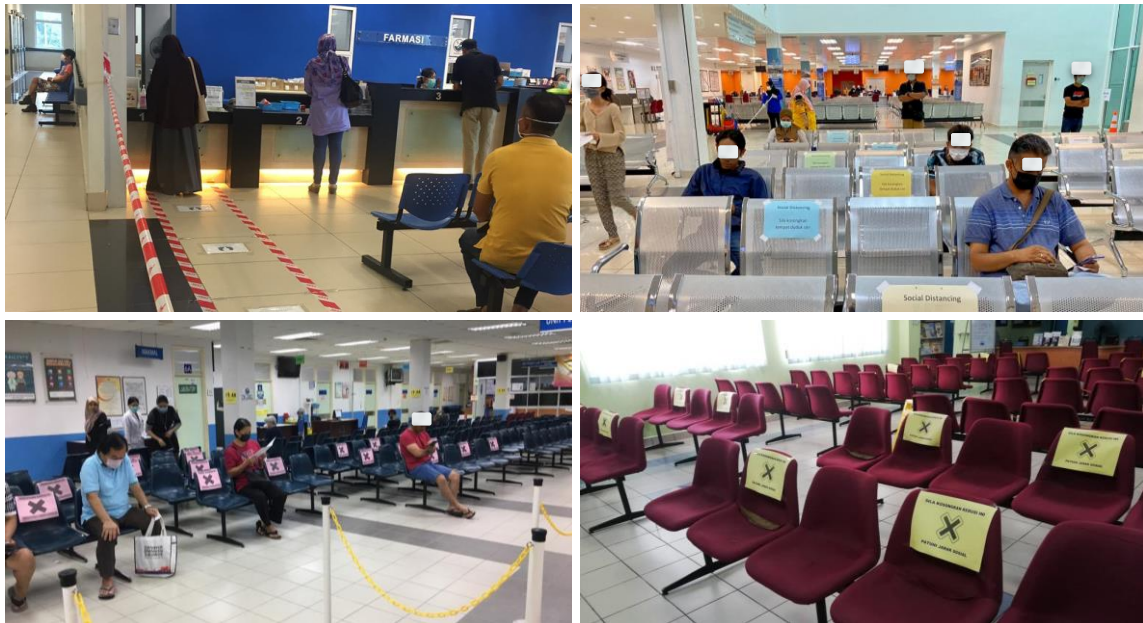
**Figure 1.** Illustration of a virtual conference with divisional pharmacists of primary care facilities

Nonetheless, the Sarawak State Pharmaceutical Services Division has formed a PPE Task Force in procuring, coordinating, distributing and monitoring of PPE with multiple stakeholders. Regular meetings conducted via virtual conference with stakeholders (e.g. virtual conference with divisional pharmacists of primary care facilities to ensure the sufficient supplies of PPE in each division; Figure 1).

***Role 2: Advancement in Pharmaceutical Services to Prevent the Spreading of COVID-19***

During the COVID-19 pandemic, pharmacists in the public healthcare facilities have implemented several strategies to prevent the spreading of the COVID-19 among healthcare workers and patients. We explore value-added services (VAS) that provide convenience and reduce clinic visits. For instances, the pharmacy VAS that has a significant increment in the usage among the patients is the collection of medication through postage; drive-through medication collection services; integrated medication dispensing system via phone appointment-based medication collection and collection of medicine at a locker (11). Besides, more medications are supplied for each prescription to reduce medication refilling appointments. After the implementation, there is a significant reduction (approximately 50%) in the number of patients' visit to the clinics, which minimises overcrowding and reduce the physical contacts among the patients and healthcare workers. We placed conspicuous signages and tagging to ensure the social distancing displayed at the patient lounge (for example, refer to Fig. 1).

The Malaysian National Security Council mandates the screening of patients' forehead temperature and sanitising of hands before entering the clinic. Besides, we provide hand sanitisers at the dispensing counter of the clinics and outpatient pharmacy counter. It is mandatory for all healthcare workers to wear three plies surgical grade face mask and to abide by physical distancing rule. All patients with influenza-like symptoms in the healthcare setting must wear three plies surgical grade face mask. The staffs split into teams and to work on an alternate scheduling system to allow physical distancing. The team splits enable the isolation of groups that may be exposed to COVID-19 that needed quarantine, as recommended by the World Health Organization (1). Nonetheless, we replace all physical meetings with teleconferencing facilities (e.g. Skype for Business).



**Figure 2.** Examples of tagging and signage to ensure the social distancing at the patient waiting area of primary health clinics in Sarawak

### ***Role 3: Monitoring the Efficacy and Safety of Off-label Drug Use for COVID-19***

Due to the non-existence of COVID -19 vaccines, several medications (12) prescribed with “off-label” use, for example, Chloroquine, Hydroxychloroquine, Remdesivir, Interferon beta-1a, Azithromycin and Lopinavir-ritonavir (12, 13). The clinical pharmacist plays an essential role in monitoring the medication efficacy and safety of these off-label drug use (3, 8, 9). Besides, pharmacists also needed in the management of drug trials (8). In Sarawak, we have six pharmacists involved in WHO’s COVID-19 SOLIDARITY Trial as study pharmacists (13).

### ***Challenge 1: Shortage of PPE Supplies***

There has been a global shortage of PPE supplies at the initial stage of the outbreak. Hence, all front-liners have been anxiously and desperately seeking the supplies of PPE and putting much expectations on pharmacists in channelling the PPE. Notwithstanding, pharmacists have been delivering excellent services to ensure the supplies meet the needs by seeking alternatives and providing in-house made PPE supplies to front-liners.

### ***Challenge 2: Risk of Contact with COVID-19***

The pharmacists, like other front-liners, were anxious about contacting COVID-19 (14). A study in China revealed that healthcare workers suffered from significant higher insomnia compared to other occupations (15). Also, anxiety among healthcare workers would undermine their confidence towards themselves and the healthcare delivery system (14). Hence, it is

crucial to ensure all healthcare facilities have sufficient supplies of PPE to make them feel safe and confident in delivering their services.

### ***Challenge 3: Miscellaneous Occasional Challenges***

COVID-19 is a disaster seldom encountered. It challenges the strategy and agility of all levels in management. Chains of commands need to be refined rapidly during the pandemic. Miscommunications among healthcare workers emerge when there are too much power distance and bureaucracy. Furthermore, a temporary blockage in the supply chain caused by movement control order or insufficient human resources to cope with the expansion of pharmacy VAS, increase the tensions among the healthcare workers.

## **CONCLUSION**

This commentary provides insights, from the perspectives of the management, on the roles of and challenges faced by the pharmacists in public healthcare institutions. Our strategies may benefit those pharmacists in public healthcare institutions from other countries with a similar healthcare system as in Malaysia.

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