COVID-19 – How prepared are emergency departments in embracing the new norm?

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Dear Editor,

When the spread of COVID-19 was declared as a pandemic on March 11, 2020 by the World Health Organization (WHO), the entire world was about to witness, arguably the worst health calamity in the modern history. As this article was being written, there were over 12 million cases reported worldwide, with almost 600,000 deaths. Although Malaysia has done remarkably well in containing the disease, with only 8500 cases and case fatality rate of 1.42% (compared to 7% universally) we are far from declaring total success in combating the disease.[1]

The initiative by the Malaysian government in implementing Movement Control Order (MCO) in March 2020 according to the Prevention and Control of Infectious Diseases Act 1988 and the Police Act 1967 was unprecedented and immensely effective in limiting the spread of the disease. This is further enhanced by our robust and tireless public health system in actively screening, detecting, and isolating all index cases. The net effect is not only the relatively low number of cases and mortalities, but more importantly the personnel involved in hospitals had much relieve and were spared from having surge of ill cases, and also evaded the exhaustion of resources available.

However, as the MCO was slowly being lifted, the healthcare facilities need to increase their vigilance while improvising and innovating their services to limit the risk of spread of undetected index cases to the healthcare workers (HCW) and other patients visiting hospital facilities.

One of the facilities of such high exposure is the emergency department (ED) in hospitals. As it is, before the pandemic hits Malaysia, the problematic issues in the ED over the past many years, especially in Klang Valleys and other big cities are the 'access block' and overcrowding.

The Australian College of Emergency Medicine (ACEM) defined access block as "the situation where patients are unable to gain access to appropriate beds within a reasonable amount of time and 'overcrowding' refers to situation where functions of the ED is impeded by the number of patients waiting to be seen by doctors, undergoing assessment and treatment or waiting departure , exceeding the physical or staffing capacity of the department.[2]

The National Audit Department in 2018 reported that ED in Malaysia receives up to 8 million patients nationwide every year and are understaffed by up to 53.1%, overcrowded and underfunded.[3]

From another perspective, the overcrowding and access block unfortunately is also a conducive area for the spread of any airborne and droplets diseases such as Covid-19 and tuberculosis (TB). As all the information about Covid-19 is still limited, we would like to highlight the prevalence of TB in ED. Study by M. Munisamy et al., reported a prevalence of 46 % of latent TB among HCW in Hospital Kuala Lumpur (HKL).[4] Data available from Vietnam shows that the prevalence of latent TB among personnel in ED are among the highest compared to the other department.[5] This is not surprising as 6 to 16 % of ED visits worldwide are related to respiratory symptom.[6] Although the mode of spread of COVID-19 is mainly droplets, similar risk should be expected given the factors contributing to such condition remain the same.

We hypothesize two main factors contributing to the hazardous situation which need to be addressed with urgency. The first is the limited numbers of isolation rooms, and secondly the prolonged boarding time of patients in ED. Some patients with severe acute respiratory illnesses (SARI) may need to be stabilised immediately in ED. With very limited or unavailability of isolation rooms with negative air pressure room, the management and treatment of patients will be done in the common area. Due to limited resources and space often, in some hospitals with dedicated isolation rooms in ED, the presence of many similar patients at same time renders some patients to be managed like other non-infectious patients.

One may argue that the usage of full personal protective equipment (PPE) is being implemented, but as long patients are managed in non-isolated areas, with prolonged stay of patients in ED due to access block, the risk of exposure still remain high. Compounding this situation further is the interconnected ventilation system between zones and offices in ED. Thus, the healthcare workers and other patients are also at risk of contracting the disease.

With increasing number of ED visits in Malaysia over the past few years all the zones are becoming more congested. It is not unusual to see the numbers of patients exceedingly twice the actual capacity of each zone (at peak hours) especially in tertiary hospitals. The Auditor-General in 2018 reported that the number of patients in some tertiary hospital's ED exceeded their level of care between 5.7 to 95.6%.[2] This dire

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situation does not only compromise the privacy of the patients as their bed need to be located side by side, but the staff to patient ratio is also not optimised. More precariously the social distancing becomes near impossible and risk getting the disease in the ED itself. This is also in direct contrast to the WHO's Infection Prevention and Control Programmes which strongly recommends for appropriate staffing level and adequate bed distancing in the ED.[7]

As has been emphasized before, it is more critical now for the hospital management to address this issue. An accelerated admission system, adherence to lean healthcare project proposals, and establishment and empowerment of hospital admission management unit are among the strategies being viewed by some ED and hospital management. There are also plans for strategic partnership with private healthcare systems, in order to upgrade the emergency medicine specialist services in these private facilities to reduce the burden of access block in government hospitals.

The first of Malaysia's ED isolation ward was established in HKL. There are plans to increase the number of isolation rooms in a few other hospital's ED and revamp and modify the whole ventilation system in adherence to the infectious diseases transmission prevention protocol.

Although all these proposals are at the preliminary stages, it is hoped that the implementation will be expedited and all other EDs in the country will also adhere to the new policies and the new norms not only for the current pandemic situation, but also for any future outbreak of infectious diseases.

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