Better preparedness and response for the COVID-19 Pandemic

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The March newsletter of Australasian College of Legal Medicine has published a reflection on the global health action in response to COVID-19.[1] It highlights from the time of first reporting of cases in mainland China (Wuhan City, Hubei Province) to WHO-Country Office in early January 2020 to first meeting of the International Health Regulations (IHR) (2005) Emergency Committee held on 23 Jan 2020 regarding the outbreak of novel coronavirus (2019-nCoV),[2] the number of cases have increased over 10 folds in mainland China and one third outside Hubei Province.[3] There were 9 countries/territories outside mainland China affected including USA apart from countries/territories nearby, Thailand, Japan, Korea, Hong Kong, Macau and Taiwan, and all infected cases had visited Wuhan.[3] WHO did not declare Public Health Emergency of International Concern (PHEIC) at that time.[3] While it is important to draw attention to Article of IHC[4] on international collaboration and assistance,[2] Articles 42 and 43 for health measures to be in place and advice to travellers under Chapter III would also be important. When WHO declared PHEIC on 30 January,[5] the number of cases had trebled globally and over 10 times in mainland China with 19 countries outside China affected and cases doubled in Hong Kong.[3] The following two weeks, four times increase in mainland China, outside mainland China including Hong Kong was observed.[3] During the following two weeks (last two weeks of February), cases in mainland China doubled but global cases had accelerated over 10 times. Cases in Hong Kong had risen at slower rate during that period with strict border control with mainland China.[1] During the first half of March, the cases in mainland China rose at slower rate but the global cases jumped over 10 times with over 150 countries affected. Hong Kong cases rose at faster rate from mid-March onward. WHO finally announced pandemic of COVID-19 on 11 March 2020.

One would not be surprised to foresee global outbreaks when there was rapid increase of cases outside the city of origin and 'travelled' to neighbour countries/territories including those far away and the trend continued rapidly within a short period of time. Declaration of PHEIC would facilitate countries for better response and preparedness. The conclusions and advice from the second meeting declaring PHEIC mentioned strong measures to detect disease early, isolate and treat cases, trace contacts, and promote social distancing measures commensurate with the risk, and strategic goals and measures to prevent and reduce spread of the infection will evolve with the situation.[5] The conclusions and advice also has statement to emphasize that the declaration of a PHEIC should be seen in the spirit of support and appreciation for China, its people, and the actions China has taken on the frontlines of this outbreak.[5] While it is a courtesy and supportive gesture to show appreciation of countries' efforts, should conclusions and advice contain more solid advice on strategic measures for preparing a potential pandemic? Fundamental measures of health protection and health promotion such as hand washing, respiratory hygiene, social distancing, self-care, caring for the sick can be effective strategic measures building on the concept of the epidemiological triangle of agent, environment, and host in the pathogenesis of disease to implement rigorous preventive measures to contain the agent infecting susceptible hosts.[6]

With regard to respiratory hygiene and hand washing, the worldwide prevalence of performing handwashing after contact with excreta was only 19% among different age groups and more health promotion on handwashing practice was needed.[7] Improvement is possible as a study has shown improvement of pre-school children's handwashing performance shortly after a step by step specialized programme.[8] During the pandemic, it becomes necessary to implement strict hygiene measures in public such as deterrent with no face mask minimising the spread and protection of hosts, and use of hand sanitizers upon entering and leaving public places to prevent contamination.

Non-pharmaceutical interventions based on sustained physical distancing have a strong potential to reduce the magnitude of the epidemic peak of COVID-19 and lead to a smaller number of overall case so the epidemic peak can be lowered and flattened to reduces the acute pressure on the health-care system.[9] Therefore, one should be cautious for premature and sudden lifting of interventions could lead to an earlier secondary peak, which could be flattened by relaxing the interventions gradually.[9] Global collective action is needed to reduce activities, travelling and gathering to bare minimum. Central co-ordination of delivery services or pick up orders will avoid overcrowding and minimise bulk purchase by individuals and allow more equitable distribution of resources. Use of modern technology would maintain physical distancing and avoid social distancing. Remote monitoring with back up support within the catchment area would monitor home safety for vulnerable population such as elderly, children, isolated families. Making use of virtual classroom/office and video conference would maintain essential work and services, teaching and learning. Schools and workplace should re-schedule to avoid all students/staff gathering at one time until the level of risk is low. Identification of unused premises would be converted for quarantine and isolation.

About 4 out of 5 patients will have relatively mild form of illness and most of the fatal cases have occurred in patients with advanced age or underlying medical comorbidities.[10] Home management is appropriate for low risk patients with mild infection who can be adequately isolated in outpatient setting.[11-13] They can be managed remotely by general practitioners (GPs)/family physicians with video consultation.[14] Breathless is concerning symptom with no current valid tool to assess remotely, but one would assess general clinical signs with measurement of respiratory rate, peakflow and oxygen saturation (93% as cut off).[14]

Not only GPs would help to manage the acute phase for those with milder form of infection, they would also provide whole person care to cater for their physical and psycho-social needs as result of illness and during the recovery phase. GPs would co-ordinate with other primary care providers to support the patients and families to ensure safety advice and monitoring for those living alone or cannot confidently in self-assessment. In Australia, GPs will be able to bulk bill phone or video consultations from 31 March to help containing the rapid spread of coronavirus and eligibility criteria has expanded to specialists, and mental health and allied health professionals.[15] GPs can also help to manage other cases not requiring hospital admission in ambulatory setting to reduce the case load in hospitals. GPs working with primary care providers would act as health resource personnel in community, acting as alternate source of care for patients with more stabilized conditions, facilitating self-management protocols for patients, and close monitoring of vulnerable population groups.[16] System of delivery of medication and

related health products can also be co-ordinated. This would prevent the bottle neck situation of acute hospital services.

WHO has issued operational guidance to maintain essential health services during an outbreak.[17] It is important to develop a well-structured community-based care system to cater the needs for the community so their health can still be maintained during unexpected health crisis. The rights to health is continuous public health efforts to protect and promote the health of the population in preparation of unexpected health crisis from time to time.[18]

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