COVID-19: emergency medicine perspectives from Hong Kong

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Introduction

On 31 December 2019, the Hong Kong Department of Health and the Hospital Authority notified us of a cluster of pneumonia cases in Mainland China, specifically in Wuhan, the capital of Hubei Province [1].

The message emphasised that all frontline clinicians should be extremely vigilant, especially for patients with a recent travel history with fever and respiratory symptoms. One of us (C.A.G.) was the Emergency Department (ED) consultant on-call for our 1400-bed teaching hospital over New Year and he correctly suspected that this was not a good omen for 2020. Unfortunately, that perception has come true with the emergence of the disease COVID-19, caused by the virus now known as ‘SARS-CoV-2’.

Hong Kong has vast experience of dealing with infectious disease outbreaks. Our hospital was the epicentre of the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003, and many of our staff have painful memories of the challenges and terrors brought by SARS. We have subsequently dealt with outbreaks of avian influenza, swine flu and now COVID-19 [2]. Our experience with multiple disease outbreaks has profoundly influenced our preparedness for the current epidemic. This outbreak comes at a difficult time for Hong Kong, which has had multiple episodes of civil unrest since May 2019 [3].

The outbreak so far in Hong Kong

On 4 January 2020, the ‘Serious Response Level’ was activated as part of the ‘Preparedness and Response Plan for Novel Infectious Diseases of Public Health Significance’. This lead to an immediate focus on enhanced disease surveillance, expanded laboratory diagnosis and isolation of suspected patients [4].

The response also facilitated the preparation of quarantine facilities for close contacts of known cases or those coming from high-risk areas, initially Wuhan or Hubei province in China. Hospital visitors were prohibited, pregnant staff were redeployed to low-risk areas, isolation beds were cleared and more capacity was created by converting general wards.

Undergraduate clinical teaching was suspended along with all face-to-face teaching, as part of ‘social distancing’, namely the avoidance of crowds and groups of people to minimise the chances of transmission. Handwashing or the use of alcohol-based gels was greatly encouraged, and face masks were recommended.

The first COVID-19 patient in Hong Kong was identified and admitted on 22 January 2020. The first 10 patients were all imported cases from China. Up to the time of writing, 129 cases of COVID-19 have been confirmed in Hong Kong with three deaths [5].

The emergency medicine response

The initial emergency medicine response to the outbreak was to ensure that all clinical staff understood the need for extreme vigilance and specific history taking, with an emphasis on travel history and fever and respiratory symptoms. All staff were advised to use personal protective equipment (PPE) including face masks, gown, gloves, eye protection and a face shield when seeing ED patients. Effective and regular hand hygiene has been strongly emphasised. ‘Fit testing’ for N95 masks was urgently completed for all ED staff if not done recently.

Criteria for admission for SARS-CoV-2 testing were broad from the outset.

On 25 January, the Emergency Response Level was activated; the Lunar New Year, the biggest holiday in the Chinese calendar, began on that day. ED attendances initially decreased by 25–30%, partly due to the holiday but also due to patient reluctance to attend for less serious problems. This was fortuitous given the extra time required to assess patients thoroughly at a time of extreme risk, and the need for PPE for all ED patient encounters.

Many meetings were held between senior ED staff and colleagues from inpatient teams (intensive care, respiratory medicine, infectious diseases and microbiology) to confirm clinical protocols, procedures and policies for potential COVID-19 patients. The absolute need to protect ED staff and inpatient teams from nosocomial infection was critically important, and so far no healthcare
worker in Hong Kong has been infected by SARS-CoV-2. A local study confirmed that the appropriate hospital infection control measures prevented the nosocomial transmission of SARS-CoV-2 [6].

The community response
At Lunar New Year there are usually fewer people travelling on the normally crowded public transport system. This may have helped to limit community spread early in the outbreak in Hong Kong. The general public began wearing surgical masks, despite the debate about their effectiveness.

Early decisions were made for schools and universities across the city to not restart face-to-face teaching after Lunar New Year, and switch to online learning. This forms part of the policy of ‘social distancing’ to further limit community spread of the virus. However, a local survey found that there are difficulties in fully adopting social distancing and in some cases, delays in diagnosis have increased the risk of community spread [7]. Memories of SARS from 2003 are still very fresh for many Hong Kong people and there has been great concern about the consequences of the COVID-19 outbreak. Surgical masks have been in very short supply, and for a time there was panic buying of rice, toilet paper and other basic goods despite there being no overall shortages throughout the city [8].

Severe restrictions have been placed on inbound travel from China, and subsequently South Korea, Iran, Italy and parts of Europe which have been affected by COVID [9]. This has led to a massive downturn in the local travel and tourism industry, with nearly empty hotels and flights and other transportation being severely curtailed.

Challenges as the outbreak evolves
ED attendances have slowly increased although not yet to pre-outbreak levels. From 3 February, 5 days of strike action was taken by medical and nursing staff who demanded that all borders between Hong Kong and China be closed and PPE provision should be improved [10]. This naturally led to more strain on already stretched clinical services. The switch to ‘working from home’ and ‘schooling from home’ in very small apartments has led to additional new pressures for a population which is much more familiar with daily commuting. Social distancing is good for infectious disease control, but social isolation can worsen mental health [11] and anxiety levels are reported to be borderline abnormal [7]. Finally, like all developed and highly connected places, Hong Kong’s social media has been a mixed blessing to parents struggling to keep their children’s education on track [12].

Summary
COVID-19 has presented us with unique and difficult challenges. The response so far has been effective, although the situation remains difficult for the people of Hong Kong and its healthcare providers. Only time will tell whether the response has been enough to avoid sustained widespread disease transmission within Hong Kong.

Acknowledgements
Conflicts of interest
There are no conflicts of interest.

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