Imported cases, community action, policy and institutional systems drive Hong Kong's COVID-19 experience

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Abstract

This paper investigates the profile of COVID-19 cases in Hong Kong, highlighting the unique age structure of confirmed cases compared to other states. Whilst the majority of cases in most states around the world have fitted an older age profile, our analysis shows that positive cases in Hong Kong have been concentrated amongst younger age groups, with the largest incidence of cases reported in the 15-24 age group. This is despite the population's rapidly ageing structure and extremely high levels of population density. Using detailed case data from Hong Kong's Centre for Health Department and Immigration Department, we analyze the sex and age distribution of the confirmed cases along with their recent travel histories and immigration flows for the period January to April, 2020. Our analysis highlights Hong Kong's high proportion of imported cases and large overseas student population in developing COVID-19 hotspot areas such as the United Kingdom. Combined with targeted and aggressive early policy measures taken to contain the virus, these factors may have contributed to the uniquely younger age structure of COVID-19 cases in the city. Consequently, this young profile of confirmed cases may have prevented fatalities in the city-state.

Keywords: COVID-19; Hong Kong; demography; aging; policy

Introduction

The Hong Kong Special Administrative Region of the People's Republic of China [hereafter Hong Kong] is a city and special administrative region of China in the eastern Pearl River Delta

by the South China Sea. In 2019, Hong Kong had roughly 7.5 million people in a 1,104-square-kilometre (426 square miles) territory whilst in Kowloon, where more than 3 in 10 residents reside, population density is at 48,930 persons per square kilometre. This makes it one of the most densely populated territories in the world (1). Apart from being a rapidly ageing society (2, 3), Hong Kong is also a migration destination. For the period 2015 to 2020, the net migration rate is 147,000 or a net of four in-migrants per 1,000 population (1).

With its proximity to mainland China and its very high population density, Hong Kong will continuously face the challenges of infectious diseases mainly because of increasing environmental pollution, high migration inflows and outflows, the emergence of new infections as well as the changing lifestyle and behaviour of its residents (4, 5). The most recent significant outbreak was the severe acute respiratory syndrome (SARS) outbreak which reached Hong Kong in March 2003 (5). Based on World Health Organization (WHO) data until July 11, 2003, a total of 1,755 SARS cases had been identified in the city-state, of which 298 people died of the disease (6). At that point, it was largely believed that Hong Kong was unprepared to be one of the epicenters of the SARS epidemic. From this recent experience, did Hong Kong learn the hard lessons of the past?

The WHO officially declared the novel Coronavirus infections (hereafter COVID-19) outbreak as a pandemic on March 11, 2020, after it had spread to more than 100 countries and resulted in tens of thousands of cases within a few months. In Hong Kong, however, the first case was reported on January 23, 2020. In early February, the government was strongly criticised for policy responses in a variety of issues including the legality and access of face masks, border closure, medical fees and quarantine policy (7). During this early period, unfavourable comparisons were made with other regional governments (especially Macau and Singapore) who appeared to be managing the crisis more effectively (8, 9). However, by the time of writing in late April 2020 Hong Kong could stake a claim to having got the disease 'under control', with no new cases in six out of the past ten days (10). That this occurred without the general lockdown policies seen in other parts of the world is even more remarkable.

Our study includes an examination of the age and sex distribution of the COVID-19 confirmed cases in Hong Kong and an analysis of how the different measures to combat this outbreak resulted in a relatively fewer number of cases and deaths. Specifically, as demographers we wished to explore the extent to which insights from demographic science could assist in explaining the nature of the Hong Kong experience of COVID-19. In this descriptive, exploratory paper, we highlight the potential impact of the young profile of the confirmed cases on the total number of mortalities and the effect of the early aggressive policy measures including travel bans, enforced quarantines and contact-tracing imposed by the Hong Kong government as early as January 27, 2020 in containing the spread of the COVID-19.

Results

Age Profile of Confirmed COVID-19 cases

Compared with the aging Hong Kong population (1), the COVID-19 confirmed cases have an entirely different distribution. Figure 1 shows the age and sex distribution of the 1,017 confirmed COVID-19 cases in Hong Kong as of April 16, 2020. In Hong Kong the majority (63.8%) of confirmed cases are in the 15 to 44 age bracket. Broken down further, 27.4% of cases are aged 15-24, 19.7% aged 25-34 and 16.7% aged 35-44. Less than a tenth (7.9%) are aged above 65. This age distribution of the local COVID-19 confirmed cases does not fit the general profile of other countries wherein the infections are more concentrated among those in the older age groups. Although, of course, this may be related to testing patterns by age, rather than true differences in incidence. The WHO Coronavirus disease 2019 (COVID-19) Situation Report 89 shows that as of April 13, 2020, there is a total of 716,570 confirmed cases with reported information on age and sex coming from 113 countries, territories and areas; of these confirmed cases, the median age for males is 52 (interquartile range, IQR: 36-65) years and for females 50 (IQR 35-64) years (11). Examples of countries with an older profile of confirmed cases are Mainland China wherein the majority of confirmed cases (54.0%) as of February 11, 2020 belong to the older age groups, at least 50 years old (12) and the Philippines wherein as of March 25, 2020, the majority of the confirmed cases are in the age group 50 and older (13).

There is also an imbalanced sex ratio among the COVID-19 confirmed cases in Hong Kong with a higher proportion among men in almost age groups except the 25-34 age groups and those in the 70 years old and older. This sex profile is similar to the outbreaks in other countries (12, 13) The youngest confirmed cases in Hong Kong are two males, under one-year-old while the oldest confirmed case is a 96-year-old female. Nearly half of the 1,017 confirmed cases (48.0%) have already been discharged from the hospital.

In short, COVID-19 confirmed cases in Hong Kong are found primarily among the working and school-age groups and among men. By April 16, 2020, almost three months after the first reported case on January 23, 2020, four deaths among confirmed COVID-19 cases were reported in Hong Kong. Three such were over 70 years old (2 males and 1 female) while the fourth was the case of a 39-year old male. It is possible that this young age structure of confirmed cases in Hong Kong contributed to the extremely low numbers of fatalities compared to other states.

FIGURE ONE ABOUT HERE

A large proportion of Hong Kong's confirmed cases were 'imported'; 61.0% of confirmed cases have travel history from countries with widespread infection or were directly infected by a confirmed case who travelled, hence, they are considered cases with imported transmission (see Figure 2). Two-fifths of these imported confirmed cases (41.1%) are young adults in the age group 15-24 years old. The proportion of imported versus local cases differs significantly based on age group. Nine in 10 of the confirmed cases in the 15-24 age group (91.4%), the group with the largest incidence of COVID-19, were in fact imported. In contrast, 59.7% of

cases aged 55-64 and less than half of those in other age groups are considered imported (data not shown).

FIGURE TWO ABOUT HERE

Of note is that most of Hong Kong's cases in the younger age groups occurred in a second wave of infections during March. Before March 18, 2020, the age group with the highest frequency of COVID-19 cases was 55-64 followed closely by the 65+ age group (see Figure 3). However, after March 18, 2020 the number of new cases in Hong Kong sharply increased, most of these being imported cases in younger age groups. This timing of these imported cases is similar to that experienced by China wherein the imported cases more than doubled starting from March 18, 2020, mostly coming from countries with high outbreak of COVID-19 infections like the United Kingdom (UK), United States of America (USA) and Spain (14). However, age data about imported cases is not available in China.

FIGURE THREE ABOUT HERE

Travel History of COVID-19 Cases

Our analysis of the travel histories of Hong Kong cases shows that the majority of imported cases in the 15-24 age group may be Hong Kong residents who are studying or working abroad. We used the travel history data collected and archived by the Centre for Health Protection (CHP) over the study period and matched case numbers from the case data to study the travel history and age profile of imported cases. The data collected by the CHP contains the travel histories of all confirmed COVID-19 cases up to fourteen days before the case was reported and formed part of attempts of the government to track and trace the movements of all newly reported cases. This is done in order to contact and isolate anyone with whom they had close contact in the days before the onset of symptoms, including those whom they may have sat close to on flights. Of the 508 COVID-19 cases with an overseas travel history tracked by the CHP, 47.4% were imported from the UK, 9.1% from the USA and 3.9% each from Qatar, Canada and Switzerland. By far the largest age group with a travel history was those aged 15-24 with 205 cases, of which the majority were from the UK (62.4%), 8.3% from the USA, and about 5.0% each from Switzerland, Qatar and the Netherlands. The next largest group with travel histories was those aged 25-34 with 86 cases, nearly half of these coming from the UK (48.8%). We are not able to ascertain the employment or other characteristics of these cases.

Hong Kong has a large population of mobile residents who hold citizenship or permanent residency but work, study or are retired overseas. According to the 2016 by-census, just under 220,000 permanent residents of Hong Kong were deemed 'mobile', meaning they had spent between one to three months in the city of the previous six (15). In 2016, 47,938 Hong Kong residents aged 15-24 were deemed to be mobile, most of whom were students. The next largest population of mobile residents were those aged over 65 (42,299) who were mostly retired, whilst a further 40,926 were aged 55 to 64 mostly employees or retirees. In addition, Hong Kong is

home to a sizable number of non-permanent residents; many of these residents may return to their home countries on a regular basis for study, work, or family visits. According to the 2016 Hong Kong by-census, the largest groups of non-Chinese nationals were Filipinos (186,000) and Indonesians (159,901), most of whom work as domestic workers on temporary foreign-worker permits. Hong Kong was also home to 35,069 British citizens, almost 15,000 Americans and 66,690 citizens from South Asian countries (India, Nepal and Pakistan), whilst a further 121,775 Hong Kong Chinese were registered as being domiciled overseas in 2016 (15).

The large increases in newly confirmed cases in the younger age groups, the majority of which were imported, occurred from March 10, 2020 onward (Figure 4). This was in tandem with a large increase in confirmed cases and deaths throughout multiple countries in Europe, the USA and Canada. On March 13, 2020, the Hong Kong Security Bureau had announced a 'Red Outbound Travel Alert' ("Red OTA") for the Schengen area, announcing a mandatory 14-day home quarantine for all arrivals from the Schengen area. This was followed by a Red OTA for Ireland, United Kingdom and the USA on March 15, 2020 with the announcement of home quarantine arrangements for all travellers from the three states to begin four days later (see SI Appendix Annex B for a full timeline of policy events).

Figure 4 shows the arrivals into Hong Kong over the period from January 24, 2020 to April 16, 2020. Most arrivals were Hong Kong residents travelling via the airport. On February 4, 2020, all land and sea border points were closed except for two control points – the Shenzhen Bay control point and Hong Kong-Zhuhai-Macao Bridge. Daily arrivals into the city fell dramatically after the end of the Chinese lunar new year holidays which is by the end of January, 2020 and took another dramatic fall after the home quarantine arrangements for all arrivals from China were put into place on February 8, 2020. Arrival numbers followed a relatively steady pattern at under 25,000 per day until dropping off sharply from March 19, 2020, when the new 14-day home quarantine arrangements were put in place for all arrivals into the city, regardless of whether or not they were residents. From March 25, 2020, all non-residents were barred from entering the city except for nationals of Macau, Taiwan or mainland China.

Other measures taken by the Hong Kong government

These border closures and sharply lower inbound-travel movements together with Hong Kong's aggressive policy of testing, contact-tracing and quarantine of confirmed cases and their close contacts (see SI Appendix Annex B) undoubtedly contributed to the sharp decline in newly confirmed cases during the month of April (16). On April 20, 2020, Hong Kong recorded its first day without a confirmed case, from a peak of more than 60 cases per day in late March. Social distancing and rapid population behavioural changes also likely played a role, with measures such as wearing masks, working from home and school closures leading to an estimated 44.0% reduction in seasonal influenza incidence (16). The containment of a severe local outbreak of COVID-19 in Hong Kong thus far, and the very high incidence of confirmed cases in younger age groups mostly amongst Hong Kong residents returning to the city from overseas hotspot areas, have surely contributed to the very low number of fatalities in the city-state, with only four

deaths reported by April 23, 2020 out of 1,030 confirmed cases. One death occurred in the 80 years and over age group, out of twelve total cases. In Italy, China and South Korea, vastly higher case fatality rates were recorded for those in the older age groups; as at March 31, 2020 case fatality rates for those above 80 years old were at 27.7% in Italy and 18.3% in South Korea (17, 18).

FIGURE FOUR ABOUT HERE

Discussion

A recent paper in *PNAS* highlighted the importance of a demographic approach to understanding COVID-19 transmission and fatality rates (18). In particular, it was suggested that the age structure of initial cases, along with early detection and treatment, likely explains the low numbers of fatalities in South Korea and Germany. The experience in Hong Kong shows that whilst an older population age structure may be important for understanding a higher prevalence of COVID-19 (18), it is not a given. Despite having more than 18.0% of the population over the age of 65 and an extremely high population density, a package of policies designed to contain the virus spreading from younger imported cases and becoming a sustained local outbreak ensured that case and mortality numbers stayed low.

A further difference between Hong Kong and other settings characterised by higher rates of infection (and fatality) is the lower levels of distribution of residential care and support among older persons. There is strong evidence that people living in residential/nursing homes are particularly vulnerable to not only infection and its rapid spread, but to severe COVID-19 infection and fatality (19–21); so much so that the WHO referred to care home infection and fatality rates as an ‘unimaginable human tragedy’ (22). In a study of official data in ten countries, deaths in care homes account for between 19–72% of all deaths (21) - although international comparison is difficult because of differences in cause of death reporting as testing procedures. In common with other parts of the world, the Hong Kong government has issued guidelines to support residential care homes in preventing infection (23), as well as offering other support in terms of provision of personal protective equipments (PPEs) and infection protection services (24) and a switch to online care support for those who would ordinarily visit day care centers (25). There may thus be institutional reasons for the low levels of transmission among older people. The size and percentage of the older population resident in care homes differs widely around the world (26). In the UK, where a high percentage of infections and fatalities have occurred in care homes (19, 20), we estimate that around 5.3% of the population aged over 70 is resident in care homes (27, 28). In addition, a further 6.9% of that population receive care support in their own homes, including from carers making multiple home visits in a day - potentially another area of risk for infection (27, 28). In Hong Kong, meanwhile, we estimate the proportion of over 70s in residential/nursing homes to be around 3.6% (1, 29). These lower rates of care home residence may have contributed to lower overall transmission and fatality numbers amongst the elderly by creating lower opportunities for sustained local spread within the elderly population.

An already neglected group in terms of health and other support mechanisms during this pandemic (30), low-income migrant workers represent a further group often characterised by communal living. Highly elevated transmission rates have been seen in some settings where such migrant workers often live in cramped, unsanitary conditions (31). In Singapore, for example, over half of the purpose-built and factory-converted dormitories have been affected (32); a factor held primarily responsible for the 'second wave' of infections in the city-state. It has been estimated that some 80% of all cases have been linked to such dormitories. Compared to Singapore, such 'dormitories' are rare in Hong Kong. Perhaps the primary, related housing issue in Hong Kong is 'subdivided housing': home to up to 209,000 poor, urban individuals (33) and sometimes referred to as 'coffin houses' because of their very small sizes (34). While often characterised by poor hygiene, environmental (35) and safety (36), it appears that policy measures in Hong Kong, which succeeded in stemming local transmission chains, meant these quasi-communal units were not left exposed to rapid COVID-19 transmission.

A final possible factor mentioned by Dowd et al. (18) concerns the possibility that 'intergenerational interactions, co-residence, and commuting may have accelerated the outbreak in Italy through social networks that increased the proximity of elderly to initial cases.' This would be derived from a mechanism whereby the younger population most susceptible to initial infection (37) transmit to the elder population through such contact. In Hong Kong, multi-generational residence is common (38), where around 50% of older-65s live with their adult children (39) - much higher than in Italy (or, indeed, any other setting in Europe or North America characterised by high transmission rates) (40). The extremely high population density of Hong Kong coupled with short distances and highly efficient transport systems means that there is a high degree of residential proximity as well regular contact between older parents and their children. A further dimension of intergenerational, intra-household interaction involves migrant domestic workers, who increasingly operate a key means of care support within the household. There is little evidence in Hong Kong that such workers were responsible for transmission within the household. As such, the hypothesis suggested for Italy appears inconsistent with the Hong Kong case at least.

As of April 29 2020, Hong Kong has reported no new cases for the sixth time in ten days (10). From the start of May, public facilities will start to reopen, some border restrictions are to be lifted and civil servants will return to work in their offices. Of course, in the near future it is eminently possible that events have taken a turn for the worse and a *third* wave of infections occur. This paper takes a social scientific approach to illustrate the particularities of COVID-19 outcomes in Hong Kong up until now; clearly, much more research is required to concretely establish both the epidemiological and social factors contributing to the Hong Kong experience. Despite this, Hong Kong has clearly demonstrated a capacity to control both the transmission and fatality of COVID-19 until this point. Policy interventions, institutional systems, household and living arrangements each played a role in a complex, interwoven way. However, we must not overlook the role played by the community itself who, through behavioural change and increased vigilance, appear to have been equally instrumental in shaping Hong Kong's

COVID-19 experience. It may be in this way that the greatest lessons of SARS have been learned (5).

Materials and methods

Data on confirmed COVID-19 cases was taken from the CHP of the Hong Kong Department of Health. We assessed the age and sex distribution of the confirmed cases, discharge status (discharged, hospitalized or died) and type of transmission. We estimated the trend of cumulative cases by age group from January 23 to April 16, 2020 to determine the age group that registers the highest number of confirmed cases over time. Daily migrant inflows and outflows data was retrieved from the Hong Kong Immigration Department showing arrivals at each border checkpoint into Hong Kong broken down by citizenship status. In addition, we retrieved detailed archived datasets pertaining to the travel histories of confirmed COVID-19 cases which are updated on an almost daily basis by the CHP. We excluded travel histories pertaining to domestic travel (buses, trains and ferries) and a small number of journeys pertaining to outbound from Hong Kong. We linked travel histories to confirmed case IDs to examine the age structure and timing of cases where the apparent source of infection was not in Hong Kong (i.e. not a community infection). This includes cases with a travel history from countries with widespread infection or where infection from a confirmed case who travelled occurred. By doing so, we highlight the importance of returnee Hong Kong residents from overseas hotspots on the relatively young age structure of confirmed cases during the second wave in March, 2020. We also gathered data on policy measures implemented by the Hong Kong government, highlighting the impact of major border closures and quarantine arrangements imposed by the Hong Kong government in reducing further numbers of imported COVID-19 infections. We also utilized secondary data for comparative demographic analyses from the Hong Kong Census and Statistics Department, United Nations Population Division and the Chinese Center for Disease Control and Prevention.

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Figure 1. Age and Sex Distribution of Confirmed COVID-19 Cases as Comapre with the
Population: Hong Kong
(n=1,017, as of April 16, 2020)

Data Source: Hong Kong Center for Health Protection, Department of Health; 2016 Population By-census Office, Census and Statistics Department

Figure 2. Distribution of Confirmed COVID-19 Cases by Transmission Type and by Age Groups:
Hong Kong (n=1,017, as of April 16, 2020)

Data Source: Hong Kong Centre for Health Protection, Department of Health

Figure 3. Number of Cumulative Confirmed Cases by Age Groups: Hong Kong from January 23 to April 16, 2020 (n=1,017)

Data Source: Hong Kong Center for Health Protection, Department of Health

Figure 4. Number of Arrivals¹ and Daily Confirmed Cases by Residential Status: Hong Kong from January 23 to April 16, 2020 (n=1,017)

*Data Source: Hong Kong Immigration Department;
Hong Kong Center for Health Protection, Department of Health*

¹ Arrivals data only available from January 24, 2020

Supplementary Materials

Annex A

Confirmed Cases Data

Data on confirmed COVID-19 cases was taken from the Centre for Health Protection [CHP] of the Hong Kong Department of Health. We assessed the age and sex distribution of the confirmed cases, discharge status (discharged, hospitalized or died) and type of transmission. We estimated the trend of cumulative cases by age group from January 23 to April 16, 2020 to determine the age group that registers the highest number of confirmed cases over time.

Population Data

We utilized data for comparative demographic analyses from the Hong Kong Census and Statistics Department, United Nations Population Division and the Chinese Center for Disease Control and Prevention.

Migrant Flows

Data on daily migrant inflows and outflows was retrieved from the Hong Kong Immigration Department, showing arrivals at each border checkpoint into Hong Kong broken down by citizenship status from January 24 to April 16.

R Code

```
## This code pulls daily data related to migrant inflows and outflows from the Hong Kong  
Immigration Department website and writes it into two data sets containing data on inflows and  
data on outflows
```

```
library(xml2)  
library(purrr)  
library(rvest)  
library(magick)  
library(dplyr)  
library(tidyr)
```



```

#set start date and number of days, create blank tbl_df's for results
start.date=as.Date("2020/01/24")
days<-c(0:87)
all_arr<-tibble(Border=as.character(),Date=as.Date(start.date),ResidencyStatus=as.character(),
Arrivals=as.character())
all_dep<-tibble(Border=as.character(),Date=as.Date(start.date),ResidencyStatus=as.character(),
,Departures=as.character())

for (i in days){

#set date and webpage
today<-start.date+i
web_date<-paste(substring(today,1,4),substring(today,6,7),substring(today,9,10),sep="")
webpage_url <- paste("https://www.immd.gov.hk/eng/stat_",web_date,".html",sep="")
webpage <- xml2::read_html(webpage_url)

#pull daily data from web, find data table
daily <- rvest::html_table(webpage,fill=TRUE)[[1]] %>%
  tibble::as_tibble(.name_repair = "unique") # repair the repeated columns

#delete columns and rows
daily<- daily[6:20,1:9]

#reshape using dplyr and tidyr
daily_arr<- daily %>%
transmute("HKRes"=X2,"Mainland"=X3,"Other"=X4,"Border"=X1,"Date"=today) %>%
gather(key="ResidencyStatus",value="Arrivals",HKRes:Other)

daily_dep<-daily%>%transmute("HKRes"=X6,"Mainland"=X7,"Other"=X8,"Border"=X1,"Date"=to
day) %>% gather(key="ResidencyStatus",value="Departures",HKRes:Other)

#add daily data to results df
all_arr<-bind_rows(all_arr,daily_arr)
all_dep<-bind_rows(all_dep,daily_dep)
}

#remove commas and change numbers to numeric class
all_arr$Arrivals<-as.numeric(gsub("\\,", "", all_arr$Arrivals))
all_dep$Departures<-as.numeric(gsub("\\,", "", all_dep$Departures))

```

Travel History Data

We retrieved detailed archived datasets pertaining to the travel histories of confirmed COVID-19 cases which are updated on an almost daily basis by the Centre for Health Protection. Our process for obtaining the final travel history dataset was as follows:

- Using the Hong Kong Government Open Data centre at data.gov.hk we extracted all historical CSV files updated by the Centre for Health Protection between January to April 2020.
- We merged the files and excluded travel histories pertaining to domestic travel (labelled as buses, trains and ferries).
- We excluded a small number of journeys pertaining to outbound flights from Hong Kong.
- We restricted the dataset to unique cases based on COVID-19 case ID number, date and flight ID.
- For case IDs who had logged multiple flights in the travel history database we took the starting city of their journey. For example, a case who had logged two flights from Paris to Dubai and Dubai to Hong Kong was coded as Paris.
- Based on the starting travel destination we coded the starting country of travel.
- We matched the case IDs to the confirmed cases dataset which included details about age, sex, onset of symptoms and date of confirmed test.

Annex B

Policy Measures

We also gathered data on policy measures implemented by the Hong Kong government, highlighting the impact of major border closures and quarantine arrangements imposed by the Hong Kong government in reducing further numbers of imported COVID-19 infections. A timeline of major events and interventions is listed below.

Timeline of major events and interventions related to the outbreak of the novel coronavirus (COVID-19) infection in Hong Kong

Date	Events and Interventions
January 23, 2020	Two important cases of novel coronavirus were confirmed. The Lady MacLehose Holiday Village under the Leisure and Cultural Services Department (“LCSD”) was activated as a quarantine center
January 24, 2020	Flights and high-speed train services between Hong Kong and Wuhan were suspended
January 25, 2020	The Chinese New Year holidays of secondary schools, primary schools, kindergartens, child care centers, and special schools so that they would resume classes extended not earlier than February 17, 2020.
January 27, 2020	Immigration restrictions on Hubei Province residents and persons visited Hubei Province in the past 14 days
January 30, 2020	The World Health Organization (WHO) declared that the outbreak of the novel coronavirus constituted a Public Health Emergency of International Concern (“PHEIC”)
January 31, 2020	Classes in all schools in Hong Kong were suspended, with classes to resume no earlier than March 2, 2020. Special work arrangement for government departments was extended until February 9, 2020, All-out efforts to support frontline healthcare staff and increasing supply of surgical masks through a multi-pronged approach were announced by the government.
February 04, 2020	First death confirmed. Cross-boundary passengers by land or by sea converged to Shenzhen Bay control point and Hong Kong-Zhuhai-Macao Bridge (“HZMB”) Hong Kong Port (clearance service suspended at other

	four control points)
February 05, 2020	A 14-day compulsory home quarantine arrangement for all the people entering Hong Kong from Mainland China was announced.
February 08, 2020	Compulsory home quarantine of persons arriving from mainland China.
February 13, 2020	Special work arrangement for government departments was extended until February 23, 2020. The government announced that all schools in Hong Kong would not resume classes before March 16, 2020.
February 25, 2020	Non-Hong Kong residents arriving from South Korea are restricted from entering Hong Kong .
March 1,2020	All arrivals (regardless of whether they are Hong Kong residents) to Hong Kong who have been to the Emilia-Romagna, Lombardy or Veneto regions in Italy or Iran in the past 14 days must stay in a quarantine centre for 14 days.
March 8, 2020	All inbound travelers arriving at the Hong Kong International Airport (HKIA) are required to complete and submit a health declaration form
March 13, 2020	Red OTA issued for the Schengen area, announcement of mandatory 14-day home quarantine for all arrivals from the Schengen area starting from March 17th.
March 14, 2020	Mandatory 14-day home quarantine for all people who have been to Italy (except Emilia-Romagna, Lombardy and Veneto regions), Bourgogne-Franche-Comte and Grand Est regions in France, the North Rhine Westphalia region in Germany, Hokkaido in Japan as well as the La Rioja, Madrid and Pais Vasco regions in Spain in the past 14 days, regardless of whether they are Hong Kong residents.
March 15, 2020	Red OTA issued for the United Kingdom and United States of American. Announcement of mandatory 14-day home quarantine for all arrivals starting from March 19th.
March 17, 2020	Mandatory 14-day home for all people who have visited the European Schengen Area* in the past 14 days regardless of whether they are Hong Kong residents.
March 19, 2020	Mandatory 14-day home for all overseas arrivals into Hong Kong regardless of whether they are Hong Kong residents.
March 25, 2020	Reject entry of non-residents from overseas (except citizens of

	mainland China, Macau S.A.R. and Taiwan).
March 28, 2020	Regulations on the operation of dining and other entertaining business.
March 29, 2020	Restriction on social distancing (prohibition of group gatherings with more than four people in public places).