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Short communication

COVID-19 in Vietnam: A lesson of pre-preparation

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ABSTRACT

Background: Vietnam was slowing the spread of COVID-19 to 200 cases by the end of March. From perspective of a relatively vulnerable healthcare systems, timely interventions were implemented to different stage of pandemic progress to limit the spread.

Method: The authors compiled literature on different public health measures in Vietnam in compared to the progression of COVID-19 from January to March 2020.

Results: Three stages of pandemic progression of COVID-19 were recorded in Vietnam. At 213 confirmed cases under treatment and isolation, a range of interventions were enforced including intensive and expansive contact, mass testing, isolation, and sterilization. Many were in place before any case were reported.

Conclusion: Preparation were key for Vietnam's healthcare system in the ever-changing landscape of COVID-19 pandemic.

1. The short phase of zero case

World Health Organization (WHO) recommended preparation as priority for all healthcare system in face of the evident – an upcoming pandemic. Vietnam, a country with approximately 1000 miles shared border with China, was hurried to close its border and limit mobility since the dawn of COVID-19 in Wuhan. As the news broke down, Vietnamese authorities quickly established the National steering committee to prevent and control COVID-19 [1]. Thermal screening and health checkpoints were set up at all immigration ports, air, sea and land borders. Due to the high volume of passengers immigrated from China, extra monitoring was in place for international flights from Wuhan and other provinces of the epicentre. At zero case recorded, Vietnam Prime Minister encouraged citizens to practice personal hygiene and mask-wearing in public, health promotion activities were active to inform people of scientific news of COVID-19 progression in the world.

2. First wave of Wuhan imported cases

On 22 January, first imported cases of COVID-19 from Wuhan were recorded in Vietnam. Over the period of the following 5 weeks of Northern Lunar New Year, the number of cases increased steadily to 16 cases with epi link to previous travel to Wuhan, China or contact with ones who did. Eleven cases were from one commune near the capital, stemming a total lockdown for more than 1000 people in this commune

for 21 days [2] All citizens in the lockdown commune were tested for COVID-19 and checked for symptoms daily to limit potential asymptomatic cases. Food and other necessities were provided free of charge, all households and the outdoor environment were sterilized frequently. By the end of February, all 16 cases had recovered and the country remained clear of COVID-19 for nearly 20 days.

From the first case, contact tracing was in place immediately to limit the spread. All contacts were advised to self-quarantine at their residence until contacted by local health authorities. Close contacts were tested for COVID-19 and put in compulsory quarantine for 14 days, and contacts to close contacts were placed under active monitoring at a residential location. Two days after the first cases confirmed, all international flights to and from Wuhan were halted. Two weeks later, all passengers from international flights from affected countries including China, South Korea, and Iran were tested and quarantined. Further social distancing measures were enforced including banning all traditional festivals and mass gatherings, closure of schools and universities in affected regions and metro-cities. Temperature screening and hand sanitizers were required at entry in public areas, residential and workspace buildings.

3. The second wave of non-China cases

3.1. Non-China imported cases

In March 2020, we saw a sweeping shift of epidemic distribution

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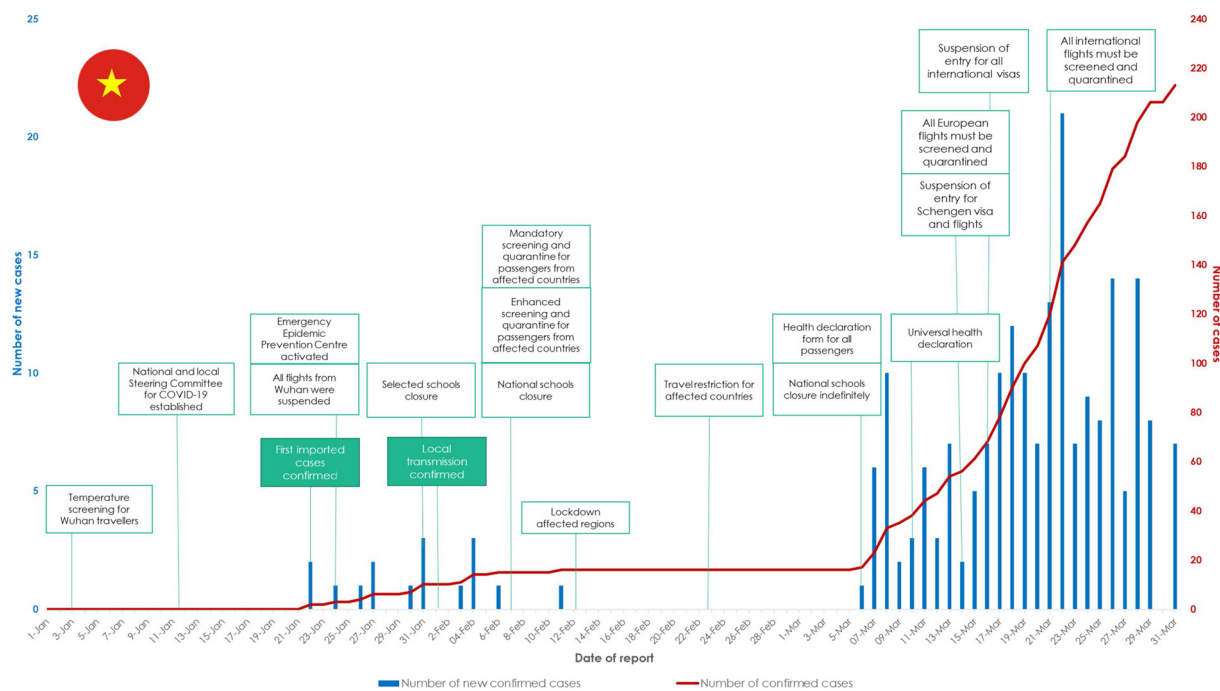


Fig. 1. Public health interventions to control COVID-19 spreading in Vietnam.

from Asian countries (China, Japan, Singapore, South Korea, Iran) to European and American continents [3]. The second wave of reached Vietnam early in March as one confirmed case arrived from the international flight from London was detected. This first case showed symptoms before the flight and later infected 15 secondary cases, many of which did not show typical symptoms of COVID-19 onset. Thanks to multijurisdictional cooperation with local authorities and health stations, sensitive and broad contact tracing was done on all passengers in every plane that had case(s) of COVID-19. In total, 150 imported cases were identified from 73 international flights, of which more than 10,000 passengers and crew members on flights were successfully traced down, tested, and quarantined for 14 days.

A series of policy and prevention measures were soon triggered, including mandatory health declaration, extra symptoms screening and SARS-CoV-2 testing for all incoming passengers. Intensive contact tracing was implemented on every levels of governmental health systems including the Ministry of Health, Ministry of Technology and Science, Ministry of Public Security, local Centre for Disease Control and local authorities. On March 21, mandatory SARS-CoV-2 testing and 14-day quarantine were required for all international passengers. One week later, a blanket travel ban for all international flights was released to restrict spill-over of cases.

3.2. Clusters transmission

On 18 March, Vietnam was in face of two challenges: 1) two clusters of local cases with unknown transmission and 2) the possibility of silent community transmission. As of 31st March, we recorded 213 confirmed cases and 3215 suspected cases were under monitoring around Vietnam. High proportion of asymptomatic COVID-19 cases at the point of the first test (50.6 %) was reported.

Quickly after finding an index case, cluster location was effectively put in lockdown and sterilized, high number of close contact and suspected cases of COVID-19 were put in either home quarantined or central quarantine areas for health monitoring and testing. In addition, local authorities stepped up social distancing measures, requesting temporary closure of non-essential entertainment spaces, including bars, night clubs, cinema, and karaoke clubs. Citizens and foreigners

were requested to wear face mask in public, gatherings for more than ten people were banned. Schools and universities remained close indefinitely, while intracity and intercity movement restriction was enforced. When the number of cases reached 200, national-wide social distancing for 15 days was instructed on 31 st March. Any non-essential outing was limited and penalties. On the same day, mass testing points were set up in Hanoi, successfully tested 800 people per day [4].

Keeping national health security at its core, the Vietnam healthcare system did not neglect social and financial support for citizens. Charge for testing SARS-CoV-2 are free for all suspected cases and close contact of cases, every confirmed cases were admitted to hospital for free isolation and treatment. Food and accommodation were provided free of charge during quarantine period regardless of nationality. Companies were encouraged to apply remote working, and students can access lessons from national television programmes and internet learning.

Slowing the spread of COVID-19 was initially achieved in Vietnam. As illustrated in Fig. 1, Vietnam's healthcare system put precaution to priority in regards to its own strengths and vulnerability. High levels of biosecurity at immigration points, as well as active case findings, were implemented as soon as zero cases recorded, giving Vietnam the benefit of speed. Strict restriction for affected regions, intensive contact tracing, and health monitoring was in place early, which in turn keeps effectively limit potential local transmission as well as spread to the community. Further measures are expected in light of different progressive scenarios of the disease. A lesson of pre-preparation would be a lesson for all of us, in an attempt to confront this dreadful pandemic, and more to come.

Author contributions

Ha-Linh Quach and Ngoc-Anh Hoang Thi are equal contributors.

Declaration of Competing Interest

None.

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