



COVID-19 RESEARCH UPDATES

2 FEBRUARY 2021

PRIMARY RESULTS & RECOMMENDATIONS

- The incidence of positive SARS-CoV-2 serology in four clusters was very low, and varied between 0.0% and 1.1%. The response to the COVID-19 pandemic has been effective in mitigating the spread of the COVID-19 outbreak into the community.
- There were undetected COVID-19 cases in the community, mostly of whom had an unknown history of exposure. Thus local lockdown, in addition to screening and contact tracing, is necessary to prevent transmission of infection with SARS-CoV-2.
- Despite the high incidence of CXR abnormalities, most patients had mild disease and 20% were asymptomatic. Novel biomarkers are urgently required so that patients at increased risk of pulmonary involvement of COVID-19 can be identified.
- Fear of being blamed results in insufficient self-reporting of symptoms and avoidance of testing. This hinders the effective management of outbreaks. Public communications should avoid blaming people with COVID-19 and their contacts. COVID-19 should be seen as a permanent threat that can put all members of the community at risk. Everyone in the community should maintain recommended COVID-19 preventive measures.
- While Vietnam has the vaccine production capacity to support an extended programme of COVID-19 immunization, there are significant challenges to ensuring an equitable, safe and efficient delivery system.



Thu-Anh Nguyen

COVID-19 SERO-PREVALENCE SURVEY



OBJECTIVE

To provide epidemiological evidence to support the Vietnamese government's public health intervention strategy. A COVID-19 sero-prevalence survey was conducted in communities with known COVID-19 cases to obtain unbiased estimates of the proportion of people with past infection of severe acute respiratory syndrome (SARS-CoV-2).

METHODS

A cross-sectional survey was conducted among people aged 5 and above, living in sub-communes with two or more reported cases of COVID-19. Each individual was:

- interviewed about their contact history, symptoms, and travel history; and
- tested for serology using the *Roche Elecsys Anti-SARS-CoV-2* kit.

Staff from the National Hospital of Tropical Diseases (NHTD), provincial CDCs, the lung hospitals and district health centers conducted interviews and collected blood samples. The serology test was performed at the laboratory of the NHTD.

RESULTS

From 3,034 people who were tested for SARS-CoV-2 antibody, 13 returned positive test results. 7 were women, 6 were men; and 9 were aged 20-60. Only one positive case reported headache and conjunctival symptoms; the rest were asymptomatic.

Among 148 health care workers who worked with COVID-19 patients in two facilities in Da Nang, none had positive SARS-CoV-2 serology results. Health care workers who were symptomatic were tested with RT-PCR; all were negative.

Table 1 presents the SARS-CoV-2 antibody results by sub-population.

Population	Household contact ¹	Other close contact ²	Community	Overall
Hoi sub-commune, Haloi village, Me Linh commune, Hanoi	50.0% (4/8)	3.9% (1/26)	0.2% (1/536)	1.1% (6/570)
Giao Ai sub-commune, Dien Hong village, Dien Ban commune, Quang Nam	0.0% (0/5)	0.0% (0/12)	0.0% (0/528)	0.0% (0/545)
Sub-commune 5, Ha Lam town, Thang Binh, Quang Nam	0.0% (0/4)	0.0% (0/10)	0.2% (1/602)	0.2% (1/616)
Le Son Nam sub-commune, Hoa Tien village, Hoa Vang commune, Da Nang	10.0% (1/10)	0.0% (0/5)	0.4% (5/1288)	0.5% (6/1303)

[1] Household contacts are those who live in the same household with someone who had been infected with COVID-19 (known as an 'index case'). A household is defined as a dwelling in which people share the same kitchen during the index case's infectious period.

[2] Other close contacts are those with whom the index case spent at least 15 minutes within 2 metres or a period of more than 2 hours within the same room during the index case's infectious period.

The infectious period was defined as the period from 48 hours before onset of first symptoms (or diagnosis, whichever came first) of the index case until they were in isolation ('break of contact').

CONCLUSIONS

Despite the presence of small numbers of undetected COVID-19 cases in the community, results of the current SARS-CoV-2 seroprevalence survey indicate that the response to the COVID-19 pandemic has been effective in limiting the spread of the COVID-19 outbreak into the community.

Study sites were selected based on the presence of known cases of COVID-19. It is expected that the community prevalence of COVID-19 antibody responses would be higher in such communities compared to the general population.

SARS-CoV-2 serology surveying is feasible and can provide dynamic information about the extent of the COVID-19 outbreak. The study provides an estimation of the effectiveness of public health intervention policies in Vietnam.

Click [HERE](#) for the study infographic.



 Viet Linh



RADIOLOGICAL AND CLINICAL CHARACTERISTICS OF PATIENTS HOSPITALIZED WITH LABORATORY-CONFIRMED COVID-19 IN VIETNAM: A DESCRIPTIVE STUDY

BACKGROUND

Pulmonary disease is a major manifestation of COVID-19 and an important cause of morbidity and mortality. Radiological examination, including chest X-rays (CXR) can indicate the presence of pulmonary abnormalities in COVID-19 patients.

OBJECTIVE

We aimed to characterize CXR abnormalities among hospitalized patients with confirmed SARS-CoV2 infection and compare their clinical and laboratory characteristics.

METHODS

We conducted a cross-sectional study among consecutively diagnosed patients with confirmed COVID-19 in northern Vietnam between 15th January and 15th April 2020. Eligible patients were ≥ 16 years old and had at least one nasal/throat swab that was PCR-positive for the SAR-CoV2 virus. CXR and other clinical investigations were performed at admission. The characteristics and clinical outcomes of COVID-19 patients were summarized using simple descriptive statistics.

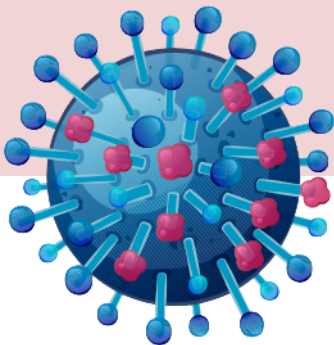
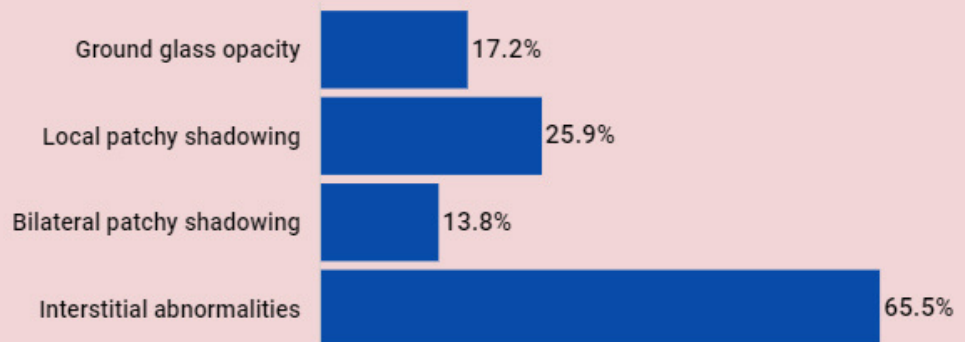
RESULTS

We enrolled 148 confirmed COVID-19 patients. The median age of participants was 36 years (IQR: 25-49) and more than half were women (61.5%). One-fifth of patients reported no infective symptoms.

CXR abnormalities were identified in 58 patients (39.2%) during the course of their illness; 10 (17.2%) had ground glass opacity, 15 (25.9%) had local patchy shadowing, 8 (13.8%) had bilateral patchy shadowing and 38 (65.5%) had interstitial abnormalities.

Patients with CXR abnormalities had higher activated partial thromboplastin time, aspartate aminotransferase, lactate dehydrogenase and procalcitonin levels compared to those without CXR abnormalities.

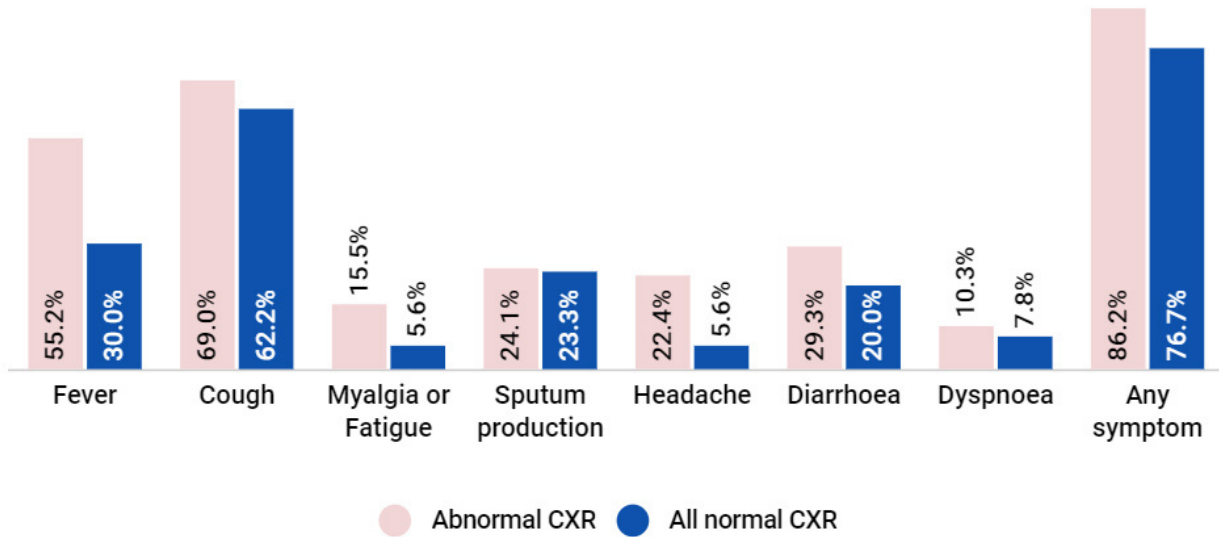
Despite the high incidence of CXR abnormalities, most patients had mild disease. Novel biomarkers that identify patients at increased risk of pulmonary involvement of COVID-19 are urgently needed.



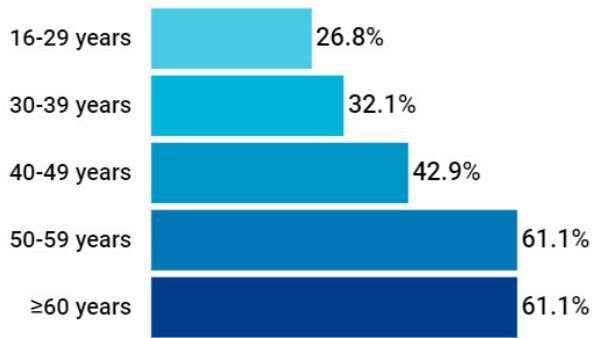
Click [HERE](#) for the study infographic.

Symptoms presentation *

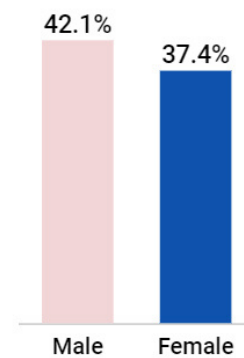
* From hospital admission to discharge



Abnormal CXR by age groups



Abnormal CXR by gender



STIGMA AND MASS MEDIA: COMMUNITY EXPERIENCES OF COVID-19 PREVENTION AND INFECTION IN VIETNAM



 Viet Linh

INTRODUCTION

Vietnam has so far successfully managed to contain the COVID-19 pandemic. Re-opening the economy would require extensive collective public and government action, while balancing adherence to COVID-19 mitigation guidelines. Thus long term psychological impacts of COVID-19 must be taken into account as individuals will continue to require screening, testing, contact tracing, isolation and treatment for COVID-19.

OBJECTIVE

This study aimed to explore community experiences of, and engagement with, the public health response and communication of the COVID-19 response, including experiences of stigma.

METHODS

We conducted 37 in-depth interviews with community members, including COVID-19 patients and their contacts, in various regions of Vietnam impacted by the COVID-19 epidemic. Interviews were recorded and transcribed verbatim. We commenced preliminary analysis through systematic debriefing discussions, before conducting a thematic analysis of interview data.

FINDINGS

The far-reaching effects of the COVID-19 pandemic has permeated through many aspects of life for most individuals. Those who were diagnosed with COVID-19 mostly provided positive feedback about the quality of medical care received while infected with, or suspected of being infected with, COVID-19.

Individuals infected with or exposed to COVID-19 who did not comply with the publicly expected guidelines, have commonly been portrayed negatively in the media and subjected to negativity within their communities. The early confirmed cases with COVID-19 in the first and second waves of the epidemic, and those who were criticized by the public for importing and triggering the spread of COVID-19 infections into the community, were vilified and stigmatized on social media. Participants, who were unaware of their infection status, said the biggest fear around COVID-19 was the social damage of being negatively associated with COVID-19 and unjustly blamed for community transmission.

The fear of being blamed as the source of transmission may have inadvertently had some positive impacts, such as encouraging personal protective practices. However, severe social boycotting and discrimination against those who have any association with COVID-19 has caused some to avoid

self-reporting health symptoms, tracking their social interactions, or getting tested. This has made disease management more difficult.

Click [HERE](#) for video on the key findings.

"... avoid blaming people with COVID-19 and those in contact with them. We need to see COVID-19 as a permanent threat with all individuals at risk..."

CONCLUSIONS

While fear of stigma may have had some positive impacts on the behaviour of some individuals, this may have significant detrimental ramifications for the social associations with COVID-19, proactive engagement in testing, long-term recovery and social reintegration of treated patients. Better education and improved policies are required to prevent stigmatization of those infected with COVID-19 and their contacts. We need to see COVID-19 as a permanent threat with all individuals at risk. The need for widespread community adherence to recommended COVID-19 preventive guidelines and trust of the community remains critical.

OPPORTUNITIES AND CHALLENGES FOR THE HEALTH SYSTEM IN IMPLEMENTATION OF A LARGE SCALE COVID-19 VACCINE PROGRAM IN VIETNAM

OBJECTIVE

We conducted an initial situational review to help inform government preparedness for the scale-up of COVID-19 vaccines, assessing key factors related to COVID-19 vaccine, treatment development, rollout, and characterisation of key challenges and decision points in Vietnam.

METHODS

We reviewed documents and conducted key informant interviews (Expanded Programme on Immunization (EPI)) and COVID-19 response staff at national, regional and provincial levels. We reviewed local vaccine companies, focusing on assessing national production capacity

and importation policies; targets for COVID-19 vaccine rollout; storage requirements and cold chain capabilities; data management and adverse event monitoring; and health system requirements for rollout.



RESULTS

Initial findings confirm that Vietnam's National EPI has been implemented effectively over the past 35 years at commune health posts nationwide. Cold chain, vaccine storage and distribution has been set up consistently, from national to grassroots level. The EPI has existing capability to routinely deliver vaccine for children and pregnant women, as well as conducting vaccine campaigns at large scale for specific target groups. The EPI information system has been rolled out nationwide, including at EPI facilities, private vaccine clinics, and obstetric clinics. We conclude that the EPI provides a strong foundation for the COVID-19 vaccine planning and rollout.

A National Advisory group (MoH) will determine priority groups for vaccination. Interviewees highlighted that priority groups are likely to be health staff working on the COVID-19 response, and vulnerable populations such as elderly with comorbidities. Other prioritised populations include border staff, army and police employees; and staff at COVID-19 quarantine centers.

Vietnam has solid vaccine production capacity for the EPI and currently has four companies involved in research and development of COVID-19 vaccines. However, these local vaccine candidates are still under

pre-clinical investigation and the feasibility of development and production of a local vaccine cannot be assumed. Licensing for technology transfer of any new vaccine developed overseas for local production will need careful political and commercial negotiation.

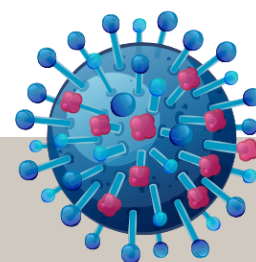


"...it is necessary to mobilize human resources to participate in monitoring and to build capacity for the AEFI program to deal with a vaccine rollout of this scale and novelty."

 Internet

RESULTS (CONT.)

Although the EPI has been operating for many years, challenges remain. The high turnover of senior EPI staff and the recent merger of some administrative and professional units has resulted in several new staff not receiving timely training. Pressure on safe delivery of vaccines affects enthusiasm of EPI staff. A fear among parents of post-vaccination reactions has resulted in vaccination delays and some children not being fully vaccinated. The infrastructure system of remote and isolated communes is still limited and in need of upgrading. Current cold chain systems at most provincial and district levels allow vaccines to be stored at temperatures from +2 to +8 degrees C, and in some places vaccines can be stored at -20 degrees C. However, there is no capacity to store vaccines at -70 degrees C, as required by some vaccine candidates. A number of refrigerators currently in use are over 10 years old and need replacing. A large scale operation of a new national vaccine program would require mobilization of funding, development of standard procedures, and capacity building. These requirements could be difficult to meet in a short timeframe.



The Injection Safety and Adverse Events Following Immunization (AEFI) program has also been established by the EPI. In each province, there is a professional Advisory Council to assess the cause of severe accidents or reactions in the administration of vaccines. However, the large scale rollout of a new COVID-19 vaccine across a wide range of population groups requires the AEFI to closely monitor and respond quickly if a serious adverse event occurs. In addition to the cooperation of COVID recipients, it is necessary to mobilize human resources to participate in monitoring and to build capacity for the AEFI program to deal with a vaccine rollout of this scale and novelty.

In summary, while Vietnam is, overall, well prepared for a COVID-19 vaccine, there are significant challenges that remain to ensure an equitable, safe and efficient delivery system.

Click [HERE](#) for the study infographic.

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The study is funded by the Australian
Department of Foreign Affairs and Trade.



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