


A COVID-19 outbreak among migrants in a hosting facility in Greece, April 2020

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Abstract

In April 2020, a coronavirus disease 2019 outbreak was identified among migrants/refugees in Greece. Overall, 155 of 450 hosted migrants and two of 46 employees were infected (attack rates: 34.4% and 4.3%, respectively). The mean age of infected migrants was 24.9 years (3 days–68 years). In addition, 177 community contacts were tested negative. Cases were cohorted in separate rooms from people tested negative. Surfaces were cleaned and disinfected daily. The implementation of measures for the containment of the outbreak was challenging due to language barriers and lack of space for cohorting. At that time, there was no official recommendation to the general population regarding the use of masks or other personal protective equipment. Extensive testing of vulnerable populations and building trust in order to report symptoms and comply with the recommendations are essential.

Keywords

Severe acute respiratory syndrome coronavirus 2, coronavirus disease 2019, migrants, refugees, outbreak, Greece

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Introduction

On February 26, 2020, the first case of coronavirus disease 2019 (COVID-19) was detected in Greece and measures to reduce person-to-person transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and contain the epidemic were implemented ([National Public Health Organization, 2020](#)). Refugees and migrants (hereafter referred to as migrants) were included in the preparedness and response plans in accordance with the international guidelines ([Orcutt et al., 2020](#); [World Health Organization, 2020](#)). Even though evidence shows that this vulnerable population has a low risk of transmitting communicable diseases to host populations ([World Health Organization, 2018](#)), intensified approaches are needed for the protection of the population that lives in settlements that a priori hinder satisfactory implementation of social distancing and hygiene practices. Thus, priority was given to the population living in hosting camps, reception and identification centers, and other facilities. Herein, we report a COVID-19 outbreak in a hosting facility for migrants in Greece.

Methods

Epidemiological surveillance

During the early phase of the first COVID-19 epidemic wave in Greece, testing for SARS-CoV-2 infection was recommended only for symptomatic people. Upper respiratory tract specimens were tested with real-time reverse transcriptase polymerase

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chain reaction (RT-PCR) at the reference laboratories and the results were notified to the National Public Health Organization (NHPO) within 24 h. Contact tracing was conducted for each notified case. Any individual that was within 2 m of an infected person for at least 15 min was considered a close contact.

Setting

The International Organization for Migration (IOM) offers temporary accommodation for the most vulnerable migrants in Greece through the activation of more than 6,000 places in hotels ([International Organization for Migration, 2019](#)). The reported outbreak of SARS-CoV-2 infection occurred in a hotel in Southern Greece. At that time, 450 people, mainly from sub-Saharan African countries, were hosted at the hotel. The median age of the hosted population was 24.1 years (range: 0 days to 68 years old) (SD: 14.5) and 254 (56.4%) were women. Thirty-two per cent of the population was children less than 15 years old. Overall, the hosted population comprised mainly of families or single women and children. In total, migrants originated from 22 different countries. At that time, 46 people were at close contact with the hosted population either as personnel of the hotel or as IOM aid workers.

Ethical issues

Written consent was not required, given that the data were collected within the context of epidemiological surveillance. Data were managed in accordance with the national and European Union laws.

Results

Outbreak

On April 16, 2020, a 45-year-old Greek woman was tested positive for SARS-CoV-2 infection at a hospital. She reported she had developed respiratory symptoms and fever on April

9, 2020. She was working as a cleaner at a hotel hosting migrants but reported she had not been at work for 8 days prior her symptoms onset. Her husband had similar symptoms and was also tested positive for SARS-CoV-2. The woman was also working at the hospital where COVID-19 cases had been diagnosed. Guests and personnel of the hotel did not report respiratory symptoms or fever in prior weeks. Therefore, the hospital was considered as the most probable place of exposure of the woman.

On April 19, 2020, a 28-year-old pregnant woman from Somalia living at the hotel was tested positive for SARS-CoV-2 at the hospital. The woman was asymptomatic and was visiting the hospital for pregnancy-related issues. The woman was tested as the hospital's policy was to test all patients upon entry, regardless of symptoms.

On April 20, 2020, all migrants and employees were tested for SARS-CoV-2. Of them, 149 were tested positive, including 147 migrants and two employees (attack rates: 32.7% and 4.3%, respectively). At the time, none of the positive migrants and employees reported symptoms. The 147 cases among migrants originated from 13 countries with more than 75% of them coming from Somalia and Democratic Republic of Congo. The demographic characteristics of positive- and negative-tested migrants are summarized in [Table 1](#). The median age of SARS-CoV-2-infected migrants was 24.9 years (range: 3 days to 68 years); 59.2% were females. Eventually, two children and a 19-year-old man developed symptoms on April 21 and 22 and required hospitalization.

Between 21 and 30 April, another seven cases among migrants were tested positive during repeated testing of the population and were set under quarantine for 14 days. Of them, one developed symptoms and had to be hospitalized. No patient died. No cases were detected after the end of April. Lastly, 177 citizens that reported close contact with migrants, such as shop owners in the area, were tested for SARS-CoV-2 infection and were negative.

Table 1. Demographics of migrants tested positive and migrants tested negative, hotel hosting migrants, Southern Greece, April 2020 ($n = 450$).

	Population tested positive ($n = 147$)	Population tested negative ($n = 303$)	p -Value
Gender			0.439
Female	87 (59.2%)	167 (55.1%)	
Male	60 (40.8%)	136 (44.9%)	
Median age (range) Years	24.9 (0–68)	23.1 (0–67)	0.859
Ethnicity			0.079
Somalia	59 (40.1%)	107 (35.3%)	
DRC ^a	53 (36.1%)	140 (46.2%)	
Cameroon	11 (7.5%)	21 (6.9%)	
Angola	7 (4.8%)	6 (2.0%)	
Ghana	6 (4.1%)	5 (1.7%)	
Other	11 (7.4%)	24 (7.9%)	

^aDemocratic Republic of Congo.

The total number of identified cases among migrants, including the pregnant woman, was 155 (attack rate: 34.4%). Among the 46 people working at the hotel, two were tested positive overall (attack rate: 4.3%). The temporal course of the outbreak is summarized in [Figure 1](#).

Outbreak control measures

Employees and hosted population were provided with recommendations regarding hand and surface hygiene and social distancing measures. Recommendations were given to the migrants in written with illustrations of good practices and practices that should be avoided. Regarding personal protective equipment, as this outbreak occurred at the early stages of the COVID-19 pandemic (April 2020) there was no recommendation at the time for migrants to wear masks.

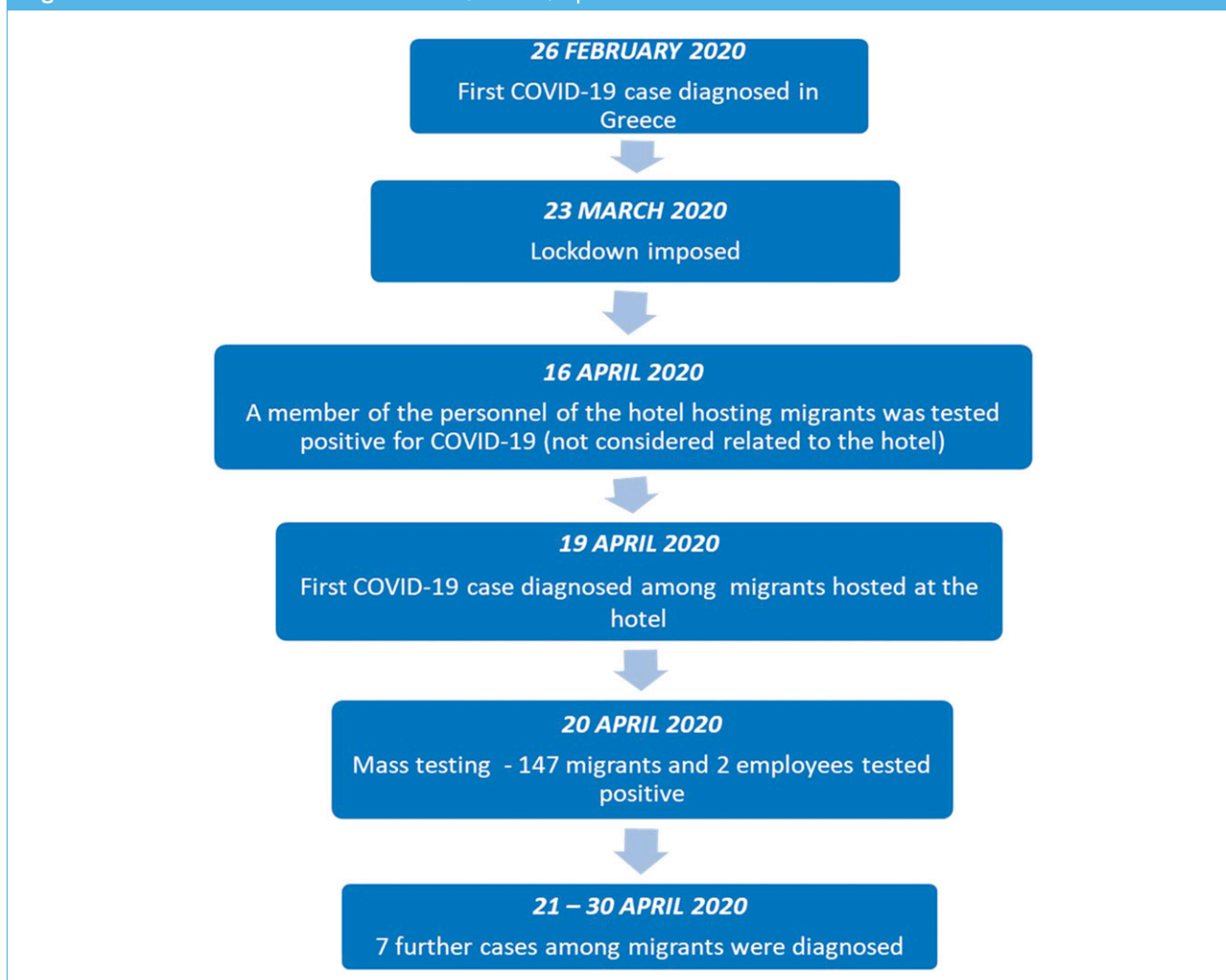
Interpreters were highly involved in an effort to lift language barriers, provide appropriate recommendations, and reassure the migrants that in case of symptoms onset they will have access to the healthcare system.

Those tested positive spent their quarantine in separate rooms from people tested negative. They were not allowed to visit shared areas of the hotel and they used different facilities (such as toilets, showers) than the rest of the population. When this was not possible, cases were moved to other facilities. Surfaces were cleaned and disinfected daily.

Discussion

COVID-19 pandemic shed light in pre-existing challenges in managing the refugee/migrant crisis in Greece ([Pavli and Maltezou, 2017](#); [United Nations High Commissioner for Refugees, 2020](#)). In 2019, the number of sea arrivals significantly increased compared to 2018 (59,726 vs 32,494, respectively) ([Eiset and Wejse, 2017](#)). In 2020, 36 camps, five RICs, and hundreds of hotels were used for the accommodation of migrants that illegally entered the country. Under these conditions, the risk of infectious diseases outbreaks had been high even before the COVID-19 pandemic ([Eiset and Wejse, 2017](#)).

Figure 1. Timeline of the COVID-19 outbreak, Greece, April 2020.



The implementation of measures for the containment of the reported outbreak was challenging. Public health authorities had to deal with additional barriers, such as the language and lack of space for cohorting cases and limiting contacts among the residents of the hotel. The high number of hosted population and the fact that migrants and especially children could not always comply with social distancing recommendations are considered the main reasons for the wide spread of the virus in the migrant population.

We cannot be sure whether the fact that no cases were identified in the weeks following the outbreak identification was a result of effective management of the outbreak. Given that this outbreak occurred in the very early stages of the COVID-19 pandemic in Greece when the laboratory capacity for testing was limited, the recognition of the outbreak might have been so late that most migrants had already been infected.

The low attack rate among people working at the hotel shows they complied with the given recommendations regarding preventive measures and keeping distances.

The young age of the migrant population has probably played a role in the low burden of COVID-19; however, it may also indicate that migrants have avoided reporting symptoms, due to a fear to engage with authorities (Brandenberger et al., 2020). This is why it is essential to build up trust with the population in order to minimize their fear that development of the disease will jeopardize their stay in Greece or their future re-location.

Another conclusion is that testing of an asymptomatic pregnant woman at the local hospital against the recommendation for testing only symptomatic people at the time led to the identification of the outbreak. Evidence indicates that up to 12% of transmission occurs before a case develops symptoms (Qian et al., 2020). Testing of the migrant population significantly increased in the following months that testing became more widely available.

Another difficulty during response was that a lot of people in the community considered themselves as close contacts of cases; however, it was difficult to differentiate who was actually at risk and who was not.

As COVID-19 pandemic is expected to have a long-lasting impact, early identification of cases and prompt response in vulnerable populations, such as migrants, need to be a priority.

Conclusions

The management of the COVID-19 outbreak among migrants in a hosting hotel in Greece was challenging due to

language barriers and lack of space for cohorting. Implementation of measures for reducing overcrowding in similar hosting facilities is a prerequisite for reducing the risk of infection in the population.

Declaration of Conflicting Interests

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