



Brief Report

Operating a National Hotline in Korea During the COVID-19 Pandemic



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ABSTRACT

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The importance of effective communication cannot be overestimated during a pandemic. The Korea Disease Control and Prevention Agency national 1339 hotline has been in operation since the Middle East respiratory syndrome coronavirus outbreak in 2016. The hotline is open 24 hours a day, 7 days a week, 365 days a year, and provides accurate, reliable information based upon the Korea Disease Control and Prevention Agency guidelines in response to queries. During the coronavirus disease 2019 (COVID-19) pandemic, the 1339 hotline received callers' questions about symptoms and the implications of their actions regarding the epidemic. Through the 1339 hotline, callers received the up-to-date information that enabled them to protect themselves as well as others from COVID-19. This public service may have influenced on reduced risk of virus transmission in Korea.

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There are aspects to pandemics that can heighten risk perception [1]. People tend to feel they are at an increased risk of contracting the disease and seek information to relieve this worry. The type of information, and the way people look for information vary greatly according to their age, occupation, level of knowledge, and the specific situations they are facing. It is important to manage the tendency to search for information about the disease by providing accessible accurate information to reduce social panic, and the risk of inappropriate actions.

The Korea Disease Control and Prevention Agency (KDCA) has operated a nationwide 1339 hotline since the Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2016. During the MERS-CoV outbreak, the temporary national hotline was set up to manage calls related to MERS-CoV queries. After the outbreak, the KDCA decided to continue operating the hotline to provide a prompt response to queries

such as information and guidance on emerging infectious diseases, and vaccinations for children, and international travelers. The 1339 hotline is free of charge, and operates 24 hours a day, 7 days a week, 365 days a year receiving between 300 to 400 calls per day with a response rate to the calls maintained above 95%.

The 1339 hotline provides accurate and reliable information based on KDCA guidelines. Queries that the 1339 hotline typically received between January 20th to June 6th, 2020 during the coronavirus disease 2019 (COVID-19) pandemic were regarding symptoms and the implications of their actions upon the epidemic. The operators asked questions according to a protocol to guide whether the callers should be tested for COVID-19, and to provide information on the nearest COVID-19 screening centers so that the callers see a doctor for COVID-19 testing. The protocolized questions were based

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on the latest KDCA guidance and operators who were non-medical personnel were trained by qualified KDCA staff who supported the 1339 hotline center. The KDCA staff included Epidemic Intelligence Service (EIS) officers and those who received EIS training and knew the fundamentals of infection control measures, and were able to understand and adapt to rapidly changing COVID-19 guidance. The EIS officers received the latest information on guidance and other updates related to frequently asked questions from the relevant KDCA divisions as soon as they were available, and this information was then passed onto callers through the 1339 hotline. For example, if the guidance update widened the COVID-19 “high risk” definition from above 65 years old to above 60 years old, and the disease scope widened to include asthma in chronic lung disease patients, those “high risk” callers with symptoms were “highly recommended” for COVID-19 testing. The KDCA broadcasted major updates on guidance changes through media briefings on the television and on an online channel, and sent the updates to the EIS officers supporting the 1339 hotline in advance of the briefings. Upon receiving updates, the EIS officer updated the protocols of questions and trained all operators accordingly, so that callers received information based on the updated guidance.

The 1339 hotline received all kinds of questions and requests related to COVID-19. Although most of the queries were responded to according to KDCA guidelines for COVID-19, some queries required judgement or detailed information, and were forwarded to an EIS officer or to authorized personnel in the KDCA.

In the Republic of Korea, the first case of COVID-19 was identified on January 20th, 2020. In the first quarter of 2020, there was a surge in newly confirmed cases in the southeast

provinces in Korea, specifically Daegu and its neighboring cities in Gyeongsangbuk-do, which led to an increase to 909 confirmed COVID-19 cases on February 29th, 2020. This was the highest number of confirmed cases recorded as of August 26th, 2020 in Korea. An exponential increase in the number of COVID-19 cases in those cities was mainly caused by viral transmission amongst members of a religious group attending a convention which subsequently facilitated transmission of the virus into communities and hospitals [2]. In the second quarter of 2020, there was mass infection of those attending Itaewon nightclubs. However, the rate of testing for COVID-19 amongst the clubbers was low, which created increased social anxiety.

Major infection events in Daegu and its neighboring cities in Gyeongsangbuk-do including transmission of infection at a religious convention, and at nightclubs in Itaewon, resulted in fluctuations in the number of calls to the 1339 hotline regarding COVID-19 (Figure 1). When the first case was identified in January, the number of calls to the 1339 hotline gradually increased from 300-400 calls per day to 20,923 calls on January 31st, 2020. The 95% response rate for the hotline dramatically decreased to 8.9% due to the sudden increase in demand for the hotline. By the end of February when the number of confirmed cases in Daegu and Gyeongsangbuk-do area peaked, the number of calls reached 70,154 per day and the response rate to the calls was 29.1%. In March, the number of calls ranged between a few thousand to 20,000 and the response rate recovered to above 95%. After the mass infection at Itaewon nightclubs, the calls to the 1339 hotline gradually increased reaching 35,424 calls on May 11th, 2020 which resulted in a decrease in the call response rate to 60.6%.

Pre-COVID-19, around 20 outsourced trained operators

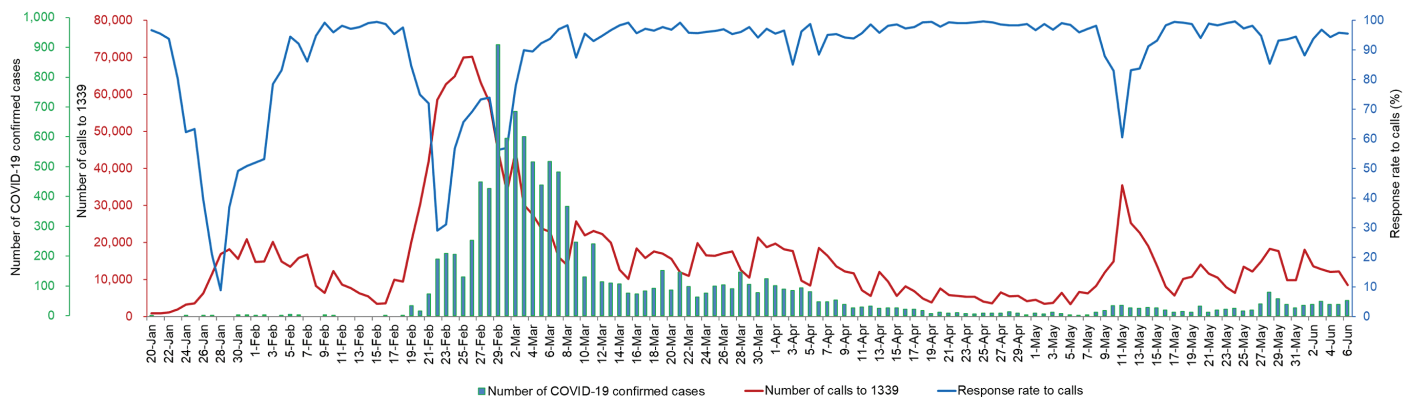


Figure 1. The number of calls to 1339, the response rate to calls, and the number of COVID-19 confirmed cases by date from January 20th to June 6th, 2020.

responded to 1339 calls. With the exponential increase in the number of calls to the 1339 hotline between January 20th to June 6th, 2020 during the COVID-19 pandemic, KDCA staffs were assigned to the hotline to provide prompt management of the highly variable number of calls received. Management of the number of operators, routing control of the calls, and support for the response to the calls were undertaken by KDCA senior administrative officers and EIS officers. This enabled fast decision making, collaboration with other government ministries, and financial investment when required. Human resources were required to respond to the increased number of calls. The KDCA recruited new people from outside the organization, and utilized other governmental call center resources to the 1339 hotline operation such as operators from the Ministry of Health and Welfare and the National Health Insurance Service. The KDCA increased the number of 1339 designated operators in 3 phases to reach the goal of approximately 300 operators. In addition, other call center operators supported the 1339 hotline full time or part time depending on the number of calls being received. Altogether, the KDCA was able to stand-by around 1,000 operators to take 1339 hotline calls.

The number and content of calls to the 1339 hotline sensitively reflected the country's current issues. For example, when it came to the election season, there were questions related to how people in quarantine could vote. The 1339 hotline offers the KDCA an insight into public concerns which can be responded to and acted upon.

The importance of effective communication cannot be overestimated in a pandemic [3]. The accessibility and

quality of information issued to callers on the 1339 hotline enabled delivery of accurate and up-to-date information to protect themselves from COVID-19, as well as others. This public service may have influenced on reduced risk of virus transmission in Korea.

Conflicts of Interest

The authors have no conflicts of interest to declare.

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