

Telephone consults at the Infectious Disease Outpatient Clinic during the early period of the COVID-19 epidemic

Yasuyo Osanai^{1,*}, Noriko Kinoshita², Kayoko Hayakawa², Keiko Tanaka¹, Tomomi Hamano³, Satoshi Kutsuna², Mugen Ujiie², Shinichiro Morioka², Kei Yamamoto², Masahiro Isikane², Sho Saito², Yasuo Sugiura⁴, Norio Ohmagari²

¹ Department of Nursing, National Center for Global Health and Medicine, Tokyo, Japan;

² Department of Infectious Diseases, Disease Control and Prevention Center, National Center for Global Health and Medicine, Tokyo, Japan;

³ Medical Administration Division, National Center for Global Health and Medicine, Tokyo, Japan;

⁴ International Health Care Center, National Center for Global Health and Medicine, Tokyo, Japan.

Abstract: Once novel coronavirus disease 2019 (COVID-19) emerged in Wuhan, China in December 2019 and the first case in Japan was reported the following month, telephone inquiries to the Infectious Disease Outpatient Clinic increased. During the first wave of the epidemic, before medical measures for this emerging infectious disease were in place, the Outpatient Clinic received a significant amount of inquiries, reflecting the prevailing social turmoil. During the second wave, inquiries did not increase because a proper system of medical care was in place in hospitals and communities. Therefore, in the early stages of an emerging infectious disease, relevant information needs to be quickly consolidated and it needs to be linked to measures that are appropriate to the situation.

Keywords: emerging disease, risk assessment, outpatient, foreign patient

The National Center for Global Health and Medicine (NCGM) is a medical facility assigned by the Japanese Government to deal with infectious diseases. The NCGM's Infectious Diseases Outpatient Clinic handles consultations regarding imported and general infectious diseases. Once novel coronavirus disease 2019 (COVID-19) emerged in Wuhan, China in December 2019 and the first case in Japan was reported the following month, telephone inquiries to the Outpatient Clinic increased.

The World Health Organization (WHO) has devised a rapid method of risk assessment for appropriate decision-making in response to a public health crisis (1). Information is essential to that process. During this crisis, telephone inquiries have served as a source of information regarding public concerns. Therefore, inquiries received at the Clinic were tracked, and COVID-19-related telephone inquiries during the initial response to the crisis have been reported here.

Nurses and a clerk of the Infectious Disease Outpatient Clinic were tasked with recording all COVID-19-related calls received at the Clinic. Telephone consults in the text refers to nurses or a clerk in the Clinic respond to patients on the advice of infectious disease specialists. From January 30 to August 31, 2020, 1,922 calls were received. The most common inquiry was "A request for a consult and an examination" (1,177), followed by "Other subjects"

(476) and "A request for hospitalization or transfer" (97). Many of the inquiries about "Other subjects" related to polymerase chain reaction (PCR) testing. In the first wave of the epidemic, there was a sharp increase in telephone inquiries to the Clinic, and this was presumably linked to an increase in positive cases in Tokyo (Figure 1) (2,3). As the early stages of an epidemic often generate uncertainty about the nature and impact of a disease (4), a telephone consultation system needs to be enhanced since the number of inquiries (including concerns) increases.

From January to early February when the disease was concentrated in China, the number of inquiries regarding Japanese returning from China increased, such as "I'm worried because my father is returning from China." There were 131 (6.7%) inquiries from foreign nationals. Foreign inquiries were mainly received from January to April. In late January, the NCGM conducted COVID-19 screening for returnees from Wuhan, and a system for receiving patients, including infection control measures, was established (5). At the time, Chinese medical interpreters assisted the Infectious Disease Outpatient Clinic in cooperate with the NCGM's International Health Care Center. On February 3 when the cruise ship Diamond Princess arrived in port, there were 14 inquiries from foreigners, 12 of whom were Chinese; this marked the first peak in the number of inquiries. During this period, people were highly

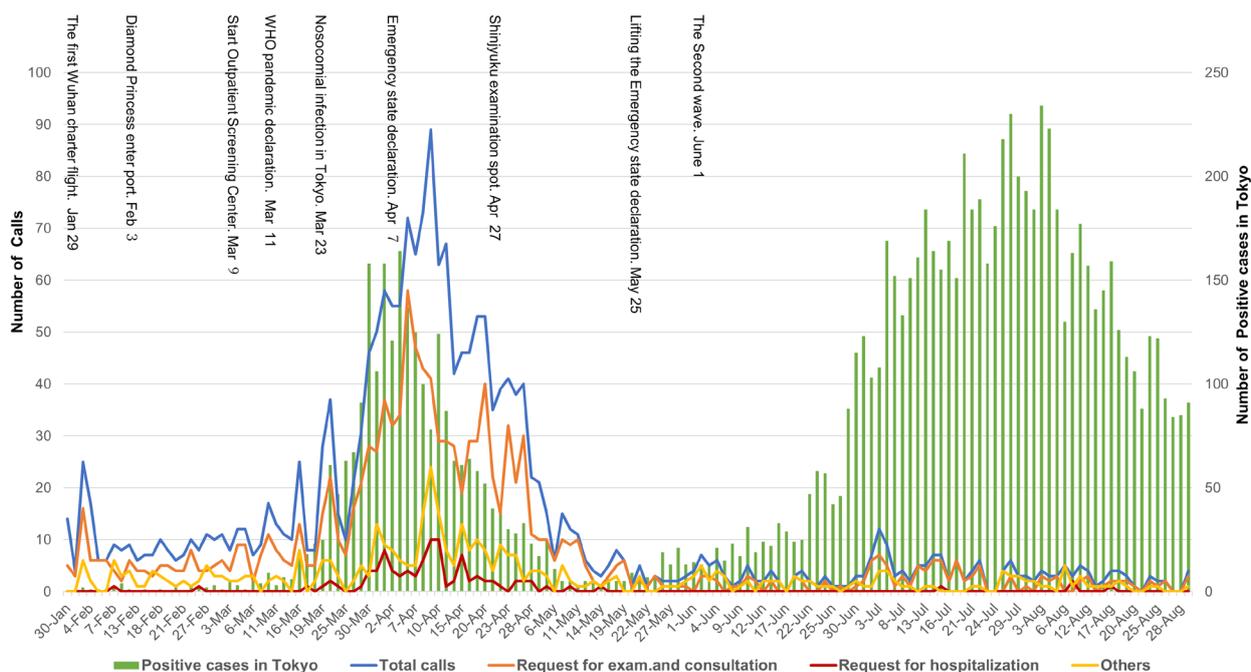


Figure 1. Changes in the number of telephone consults and positive cases in Tokyo. Positive cases in Tokyo: positive number by developed date; data source: <https://stopcovid19.metro.tokyo.lg.jp/cards/positive-number-by-developed-date/>

anxious (6).

Additional inquiries were received from Chinese citizens and travelers with a fever and other symptoms who were rejected by medical facilities. Therefore, affiliated medical facilities with Chinese-language capabilities were contacted and asked to treat mild cases of COVID-19. Directing Chinese patients with mild cases of COVID-19 to those affiliated medical facilities reduced the burden on the Outpatient Clinic. The initial development of a consultation system included the preparation of a telephone consultation manual, the assignment of a physician specializing in infectious diseases, and an immediate increase in the number of nurses answering telephones, all of which enabled consistent telephone consults and the collection of information.

In early February, a coherent clinical picture emerged from Wuhan (7). When travel restrictions from China were tightened in mid-February, consultations from returnees decreased. Conversely, the number of consults from Japanese people with symptoms began to increase. Responding to these inquiries via administrative procedures alone was difficult, and a testing and medical consultation system run by dedicated staff needed to be established. When reimbursement for PCR testing was included in National Health Insurance, preparations were begun to establish a fever consultation system at a different location than the Infectious Disease Outpatient Clinic, ahead of notification from the Ministry of Health, Labour, and Welfare (MHLW) and the local government.

The number of consultations peaked by April 9, two

days after the declaration of a state of emergency, and the number of "requests for hospitalization or transfer" of critically ill patients also peaked. At the end of April, Shinjuku City set up a "Shinjuku Examination Spot" on the premises of this hospital, in collaboration with other medical facilities and laboratories. Since then, the number of phone calls to the Infectious Disease Outpatient Clinic has decreased dramatically, and medical care at the Clinic has returned to normal.

The first wave of inquiries to the Infectious Disease Outpatient Clinic in the early stages of the epidemic reflected the prevalent social turmoil and resulted in a significant number of inquiries to this hospital. The immediate response to these inquiries helped to establish a system of medical care in hospitals and communities. During the second wave of the epidemic, the number of inquiries did not increase because hospitals and communities had adequate systems of medical care.

These experiences indicate that in the early stages of an emerging infectious disease, information needs to be quickly consolidated and it needs to be linked to measures that are appropriate to the situation. The hope is that this description of those experiences will help during similar situations in the future.

Funding: The work was supported by a Health, Labour, and Welfare Policy Research Grant for Research on Emerging and Reemerging Infectious Diseases and Immunization (grant number 20HA1006) and a grant from Japan's National Center for Global Health and Medicine (grant number 20A2003D).

Conflict of Interest: The authors have no conflict of interest to disclose.

References

1. World Health Organization. Rapid risk assessment of acute public health events. https://apps.who.int/iris/bitstream/handle/10665/70810/WHO_HSE_GAR_ARO_2012.1_eng.pdf (accessed July 18, 2020).
 2. Suzuki M. The fatality rate of COVID-19 and risk factors for its increased severity. <https://www.mhlw.go.jp/content/10900000/000662183.pdf> (accessed September 23, 2020). (in Japanese)
 3. Tokyo Metropolitan Government. COVID-19 response site. <https://stopcovid19.metro.tokyo.lg.jp> (accessed Sep 19, 2020). (in Japanese)
 4. Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University. Caring for patients' mental well-being during coronavirus and other emerging infectious diseases: A guide for clinicians. https://www.cstsonline.org/assets/media/documents/CSTS_FS_Caring_for_Patients_Mental_WellBeing_during_Coronavirus.pdf (accessed July 18, 2020).
 5. Hayakawa K, Kutsuna S, Kawamata T, et al. SARS-CoV-2 infection among returnees on charter flights to Japan from Hubei, China: a report from National Center for Global Health and Medicine. *Global Health & Medicine*. 2020; 2:107-111.
 6. Shigemura J, Ursano RJ, Morganstein JC, Kurosawa M, Benedek DM. Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry Clin Neurosci*. 2020; 74:281-282.
 7. Wang D, Hu B, Hu C, Zhu F, Liu X, Zhang J, Wang B, Xiang H, Cheng Z, Xiong Y, Zhao Y, Li Y, Wang X, Peng Z. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *JAMA*. 2020; 323:1061-1069.
- Received October 2, 2020; Revised October 26, 2020; Accepted November 9, 2020.
- Released online in J-STAGE as advance publication November 16, 2020.
- *Address correspondence to:*
Yasuyo Osanai, Department of Nursing, National Center for Global Health and Medicine, 1-21-1 Toyama Shinjuku, Tokyo 162-8655, Japan.
E-mail: osanai@hosp.ncgm.go.jp