

Public Health Report

Development of a partnership between academia, community, and government in response to the 2022 mpox outbreak in Japan

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Objectives In response to the steady rise in the number of cases of mpox in nonendemic countries, starting with an outbreak in the United Kingdom in May 2022, the World Health Organization declared a public health emergency of international concern on July 23, 2022. As of November 13, 2022, seven cases of mpox have been reported in Japan.

Methods A community engagement approach was applied to prevent the spread of mpox in Japan.

Results A tripartite partnership between academia, community, and government (ACG) was established to promote multisectoral communication between vulnerable communities, medical personnel involved in diagnosis and treatment, public health specialists at public health centers, epidemiologists at the National Institute of Infectious Diseases (NIID), and government and public administration. Through information sharing, this ACG partnership can translate accurate information into effective infection control measures.

Conclusion By developing and maintaining the ACG partnership, an environment will be created that allows an immediate response to future public health crises affecting vulnerable communities. This Practice Report describes the process of establishing an ACG partnership.

Key words : Academia, community, and government partnership, Mpox, Risk communication, Community engagement, Public health preparedness

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I. INTRODUCTION

Since an outbreak of mpox cases in individuals without a history of overseas travel was reported in the United Kingdom in May 2022, cases have continued to occur, resulting in an unprecedented outbreak, with 79,411 cases reported worldwide from January 1 to November 13, 2022¹⁾. The World Health Organization (WHO) took this situation seriously and declared the situation a “situation of public health concern” on July 23, 2022 after an emergency committee meeting¹⁾. In Japan, the first case of infection was reported on July 25, 2022 and seven cases were reported up to November 15, 2022¹⁾.

Mpox is an acute rash disease caused by infection

with the monkeypox virus, and occurs mainly in Central and Western Africa. The main symptoms are fever and rash, and most cases recover spontaneously in 2–4 weeks. However, cases of severe illness and death have been reported, especially among children, pregnant women, and immunocompromised persons in endemic countries. Mpox is transmitted through close contact with infected lesions, respiratory droplets, body fluids, and contaminated objects (i.e., fomites)¹⁾. Although anyone can be infected with mpox virus, the epidemiology of the current outbreak suggests that the infection may have spread within the gay, bisexual, and other men who have sex with men (gbMSM) sexual network.

When empowered to make decisions on preventive actions in populations at risk of mpox, communication about the risks associated with mpox and its prevention, diagnosis, and treatment, as well as rumors and misinformation, need to be addressed as quickly as possible^{2,3)}. Therefore, it is necessary to collaborate with health professionals, such as sexually transmitted disease specialists, and community-based organizations (CBOs), with a focus on the most socially vul-

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nerable communities²⁾.

WHO recommends that countries use risk communication and community engagement (RCCE) as a strategy to prevent the spread of infection¹⁾. The goal of RCCE activities in mpox is to inform and engage infected persons in order to control outbreaks of mpox and prevent transmission outside their sexual network. Therefore, the goal of this public health activity is to raise risk awareness, manage risk perceptions, maintain or improve trust in health authorities and response measures, and actively communicate to help people at risk make informed decisions to protect themselves and others from infection and serious illness¹⁾.

Community engagement (CE) is the process of working with and through groups of people in geographic proximity, special interests, and/or similar circumstances to address issues that affect population well-being and create environments and behaviors that improve the health of the community and its members⁴⁾. CE has been used to explore factors that promote or discourage participation in clinical trials targeting gbMSM⁵⁾ and to explore factors that influence the quality of primary care⁶⁾.

Models such as the social ecological model; the active community engagement continuum and diffusion of innovation; and community-based participatory research have been used for CE. These models share key CE elements that affect health outcomes, including power sharing, collaborative partnerships, interactive learning, incorporating the voice and agency of the beneficiary community into research protocols, and the presence of bicultural health workers in intervention implementation⁷⁾. In addition to community-researcher partnerships, academia-community-government (ACG) partnerships, with the recent addition of government, have been used for collaborative partnerships and have received a high level of stakeholder satisfaction^{8,9)}. This paper describes the process of community engagement implemented to minimize the spread of mpox in Japan under an ACG partnership.

II. METHODS

In implementing community engagement, we initiated communication with each community. It was logical to build a partnership with CBOs with rich experience in HIV and sexually transmitted infection awareness activities, including the gbMSM community. Through years of close communication, HIV researchers at the National Institute of Infectious Diseases (NIID) had built trust with CBO leaders who provide support to people with HIV and their families, and who are responsible for prevention and awareness-raising. However, in order for infection control to be deployed at the national and local levels, it was necessary to develop these relationships from the individual to inter-organizational level and to build more sustainable relationships. In addition, because it is impracti-

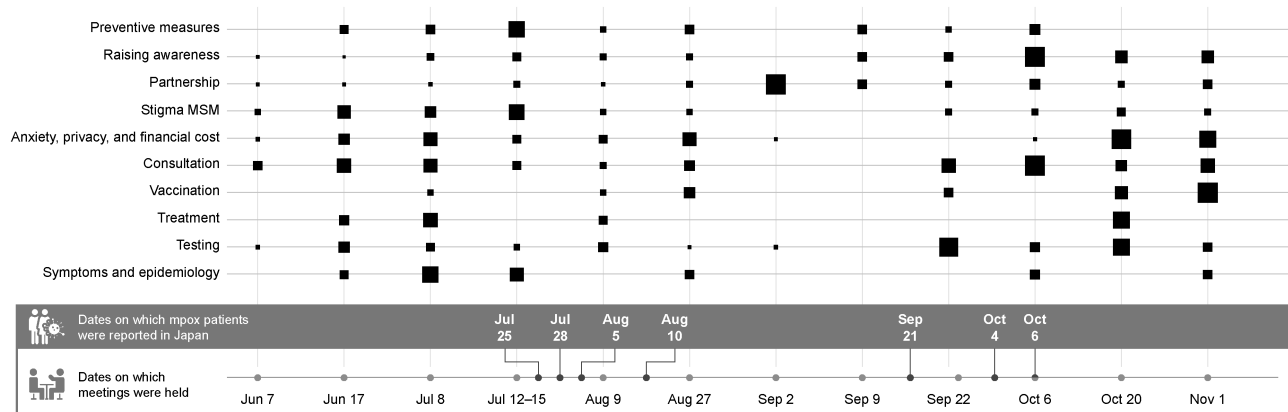
cal to conduct infection control measures without support from the government or local government administration, it was necessary to build partnerships among organizations with government support to enable knowledge transfer and trust when there is staff turnover and to enable a timely response to health crises. This also enabled the development of a system that can respond quickly in times of crisis.

Academia comprised a population of researchers that provided information from the medical, social, and natural sciences to this partnership. Community comprised several CBOs that contributed insights on at-risk populations, including language used, community concerns, and sexual behaviors. Government officials comprised representatives from national and local public health departments and infectious disease control. They advised on communication materials and information dissemination methods as well as non-RCCE-related matters. Because the personnel involved in forming and building the partnership gathered spontaneously, the structure of the partnership was flexible.

Twelve meetings attended by representatives from academia (NIID and National Center for Global Health and Medicine), CBOs, and government (Ministry of Health, Labour and Welfare, and metropolitan government) were held from June 7 to November 1, 2022. The text of meeting minutes was qualitatively analyzed using MAXQDA 2022 (VERBI Software 2021, Berlin, Germany). MK first identified topics by inductively coding the content of the meeting minutes¹⁰⁾, and then an independent second coder, FY, used the identified topics to code a portion of the data. MK and FY discussed coding differences to resolve them by consensus, and then MK coded the rest of the data.

III. RESULTS

Topics extracted were: preventive measures, raising awareness, partnership, stigma and MSM, anxiety, privacy, financial cost, consultation, and vaccination. Figure 1 shows the number of times that each topic was discussed during the partnership-building process. It is a diagram of the code matrix, with the meeting date and the date of the infected person report shown in the columns, and the codes shown in the rows. The square at each connection point represents the number of segments coded with a particular code in each row. The larger the square, the greater the number of segments assigned to a code, the larger the size of the square. Prior to the first case, symptoms, epidemiology, and concerns about stigma were often discussed, whereas vaccines and anxiety, privacy, and financial cost were more often discussed during the second half of the proceedings.

Figure 1 Occurrence of each topic during the academia-community-government partnership-building process

IV. DISCUSSION

Collaboration between CBOs and HIV researchers has been reported in Japan¹¹⁾ and worldwide¹²⁾. Although cooperation between government (national government, local government, public health centers) and CBOs has been reported, we did not find any reports describing partnerships among the CBOs, researchers, and governments, or the process of building such partnerships. A report described the process of building a partnership aimed at providing ongoing external support for training volunteers in home-based care of people living with HIV in a remote village in South Africa¹³⁾. However, to our knowledge, no previous studies have described the process of communication between individual CBO leaders and researchers to build collaborative partnerships for the prevention and control of infectious disease.

Prior to July 25, 2022, when the first infection was reported in Japan, the main topic of the meeting was communication for the purpose of infection prevention at Pride Month events, which had started in June, 2022. Therefore, the main topics discussed at the meeting were confirmation of symptoms and routes of infection, stigma concerns and maintaining privacy of those involved, and difficulties in accessing testing and consultation. On July 12 and 15, 2022, three CBO leaders were interviewed individually, and because the interviews were conducted as part of the process of developing materials for infection prevention communication, much was said about prevention methods. The CBO leaders also talked about the social and internal stigma toward MSM in Japan. The turning point in the ACG partnership-building process occurred at the meeting on September 2, 2022. Prior to the meeting, the importance of the partnership was recognized, but its positioning was unclear. However, the positioning of the partnership, and in particular the need to clarify the role of each entity and the roadmap for the partnership, was included in the meeting agenda for discussion. After the meeting, the participating represen-

tatives were transformed into an infectious disease communication roundtable. In building ACG partnerships, Joseph et al.⁸⁾ emphasized the importance of (1) clearly communicating and defining the value of the partnership and meeting structure to partners and others; and (2) communicating the important roles and contributions provided by community participants. One of the outcomes of this transformation was the implementation of risk communication for each stakeholder. Members of the partnership conducted online mpox seminars for health-care providers nationwide.

Researchers from academia also worked with CBOs to create and distribute disease awareness flyers for gbMSM; with local public health centers to explore risk awareness and acceptance among target audiences; and provided disease information to the community through gay media. The 2022 mpox outbreak is an example of a special situation in the gbMSM community, in which there was concern about the spread of infection within sexual networks. Mpox virus can infect anyone, so if there is concern about the spread of infection to other networks, it is desirable to build partnerships with other affected communities. RCCE with socially vulnerable communities are important in infectious disease outbreaks in order to mitigate social stigma and internal stigma. A sentiment analysis of the digital environment (Twitter) by Dsouza et al.¹⁴⁾ revealed that labeling of groups that originated mpox led to stigmatization of the lesbian, gay, bisexual, transgender, queer and intersex (LGBTQ+) community. Some Twitter users thought mpox was similar to previous infectious diseases such as HIV infection and COVID-19¹⁴⁾. Despite health authorities and the media disseminating information to prevent the spread of infection and stigma, many did not follow the advice that was provided. Members of the LGBTQ+ community were at risk of physical assault due to mounting stigma¹⁴⁾. The spread of misinformation and misinterpretation further amplified the stigma¹⁴⁾. This ACG partnership will enable rapid as-

assessment of risk perception, creation of risk messages, and evaluation of message comprehension and acceptance when an emerging or re-emerging infectious disease epidemic occurs within the sexual network of the gbMSM community in Japan in the future, and this will contribute to a more rapid response to the infectious disease crisis and more effective management.

However, we recognize that this is only the first step: the establishment of an ACG partnership is not enough to resolve the various issues that surfaced during the 12 meetings (such as lack of access to diagnostic and consultation systems). In the future, advocacy among additional stakeholders is needed to build on this partnership. In addition, it is unclear in this study what expectations and awareness each stakeholder had of this ACG partnership building and how the outcome of the partnership was viewed. Le et al.⁹⁾ identified the following unresolved issues related to ACG partnership building in HBV vaccine projects: (1) lack of funding, (2) transparency of partnership goals and outcomes, (3) equitable relationship with partners, (4) challenges in health information exchange, (5) challenges in evaluation and sustainability of the program, (6) completion of the project, and (7) time commitment. In order to make the ACG partnership, which was initiated to prevent the spread of mpox in Japan, sustainable, it will be necessary to obtain feedback from each partner and the gbMSM community.

V. CONCLUSION

An ACG partnership was established in response to the mpox outbreak in Japan, but several challenges in maintaining it remain. In order to respond to outbreaks of emerging and re-emerging infectious diseases in a timely manner, preparedness during normal times is critical. Therefore, the development and maintenance of this ACG partnership will create an environment that will allow for an immediate response to the next outbreak.

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