



A Capability Discussion of the Japanese and U.S. Emergency Responses to COVID-19: Key Points from the Sasakawa Peace Foundation USA's Emerging Experts Delegation (SEED) Study Trip, 2022

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Introduction

The Sasakawa USA Emerging Experts Delegation (SEED) study trip to Tokyo, Japan in August 2022 provided an excellent opportunity to review the commonalities and differences between COVID-19 response capabilities and outcomes in the United States and Japan. Five days of meetings with various national, local, academic, and industry experts allowed for robust conversation and an exchange of ideas. The preeminent benefit for study participants was learning how the Japanese COVID-19 response differs from the U.S. response and the outcomes of those

differences. Recently, some Administration for Strategic Preparedness and Response preparedness efforts have shifted to a capability-based focus. Instead of starting the preparedness process by envisioning specific tools that would be used in response efforts, the work focuses on the capabilities of the response. The SEED study trip provided an invaluable opportunity to view such capabilities in action. This report will discuss five key emergency response focus areas and how capabilities evident in Japan could inform future U.S. response activities.

There are many differences between Japan and the United States that impact how each of these key focus areas operate. In general, the Japanese population is older, healthier, and sees a doctor more frequently than the U.S. population.¹ In terms of healthcare, the United States uses a patchwork of multi-payer systems that have some single-payer elements, while Japan uses a universal healthcare system.² Japan also has laws regulating how the population and the government must respond in an infectious disease outbreak.³ These differences are major influencers in how a response operation can work. This report will discuss how these differences impact five key emergency response activities: research, medical countermeasure staging, surge capacity, public health surveillance, and barriers to healthcare in a disaster. Each of these activities is part of Emergency Support Function 8: Public Health and Medical, which outlines U.S. emergency response priorities and responsibilities.⁴

1.) Research

Research and emergency response represent somewhat of a paradox. Evidence-based research is vital to improving health outcomes in disaster response, yet is difficult to conduct during disaster situations in an ethical and practical way. During response operations funding, personnel, materials, and other resources are, by definition, overwhelmed. Allocating part of those overwhelmed resources to research may improve outcomes for future response operations but does not necessarily support the public health and medical outcomes of current disaster victims. The single-payer system provides an opportunity for retrospective data collection on changes in health

¹ Eileen M. Crimmins et al, "A Comparison of Biological Risk Factors in Two Populations: The United States and Japan," *Population and Development*, (September 2008): 34(3): 457–82. <https://doi.org/10.1111/j.1728-4457.2008.00232.x>.

² Haruka Sakamoto, Yosuke Kita, and Satoshi Ezoe, "How Japan's Universal Health Care System Led to COVID-19 Success," *The Diplomat*, August 28, 2020, <https://thediplomat.com/2020/08/how-japans-universal-health-care-system-led-to-covid-19-success/>.

³ *Infectious Diseases Prevention Law*, 1897.

⁴ National Response Framework: Emergency Support Function #8 – Public Health and Medical Services Annex. FEMA, 2008.

status caused by disaster situations. Even if medical providers do not share chart information, billing codes can be used to assess how healthcare needs to change (or stay the same) during and after disasters, and the single-payer system holds unique leverage to request standardized data reporting. Single-payer and other standardized data collection approaches can provide data for analysis that compares similar populations that differ in the extent to which they were exposed to a disaster. More specifically, automated data collection approaches create an opportunity to retrospectively analyze how different interventions in different areas impacted health outcomes. Retrospective analysis reduces the burden of resources on response operations and, if done concurrently with response operations (such as with a drawn-out disaster like COVID-19), could be done remotely. To protect patient privacy, strict data standards would be needed. Additionally, data collection would need to be standardized across patient care sites in a way that does not burden medical care providers or support staff. This standardization will be easier to implement if data collection is a routine part of patient care and is automated in the charting or billing process. Considerations will be needed for instances of severe power disruption that inhibit electronic medical recordkeeping.

The U.S. multi-payer system has some elements of single-payer health insurance that could provide similar data sets but because Medicare is restricted to specific populations, confounders that impede abstraction to the general U.S. population are introduced. During disasters, greater use of single-payer healthcare may increase the availability of data for analysis.

2.) Medical Countermeasures

The United States uses a complex network of medical countermeasure staging that includes stockpiling, vendor managed inventory, and forward deployment. However, this system struggles with “the last mile” aspect of medical countermeasure (MCM) delivery. While products are available and can be shipped to a receiving state, local, tribal, or territorial (SLTT) entity very quickly, administration (getting vaccines into patients) is the responsibility of the receiving SLTT organization.

Long-term free medical care provided by federal responders in a disaster response can reduce the income of local healthcare providers. One solution is to utilize local providers to conduct the last

mile administration and adapt single-payer elements to provide recovery healthcare. However, the logistics necessary to train, bill, and manage local healthcare providers to administer medical countermeasure is immense. For COVID-19 vaccinations in the United States, this need led to public-private partnerships with private pharmacies in order to shift the burden of administration away from traditional patient care locations like clinics and hospitals.

In Japan, healthcare is paid for by the government but much of the healthcare system is privately operated.⁵ Neither system seems to improve or imperil MCM delivery though each has unique strengths and challenges.

The United States added more single-payer-like elements to its system to fund COVID-19 medical countermeasures like testing and vaccinations. Essentially, the U.S. federal government funded all COVID-19 medical care for uninsured individuals and required that insurance providers fund COVID-19 care for covered individuals.⁶ The follow-up question is: would having a single-payer system to start with have changed the speed and rate that medical care was administered? Also, if private healthcare providers were guaranteed payment for administration of medical countermeasures, would they be more likely to train, store, and maintain a cache of medical countermeasures? Further research is needed to clarify how funding mechanisms for MCM administration impact communities affected by disaster, specifically current problems with last mile delivery.

3.) Surge Capacity

Surge capacity to meet public health and medical needs during a pandemic emergency was a huge problem for both the United States and Japan. Distribution of staff and resources were cited as problems in both countries, with resources being concentrated in urban centers.⁷ In the United States, surge staff were deployed from the military and from the U.S. Public Health Service

⁵ Haruka Sakamoto et al, Japan Health Services Review. *Health Systems in Transition*. Vol 8. No. 1, World Health Organization, 2018.

⁶ "Getting Your Covid-19 Vaccine." Centers for Disease Control and Prevention, accessed September 22, 2022, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect.html#:~:text=COVID%2D19%20vaccines%20are%20paid,19%20vaccine%2C%20it%27s%20a%20scam.>

⁷ Brystana G. Kaufman et al, "Half of Rural Residents at High Risk of Serious Illness Due to COVID-19, Creating Stress on Rural Hospitals," *The Journal of Rural Health*, (Autumn 2020): 36(4):584-590. <https://doi.org/10.1111/jrh.12481>.

Commissioned Corps and the National Disaster Medical System.⁸ One strategy common in both countries was the reduction of elective medical care unrelated to COVID-19. Patients with scheduled procedures were rescheduled when beds became available or sent to alternate facilities. It would be of interest to see if surge staffing policies could be expanded to include more international cooperation. Could medical students from one country be used in another to decompress specific tasks, within their ability and under supervision?⁹ A potential obstacle seen in the United States is the continued challenge of providing surge support across U.S. jurisdictional lines due to different credentialing and licensing rules. This issue would need to be closely examined with respect to international providers when planning for international surge support. While the United States and Japan continue to have new waves of COVID-19, the two countries are not necessarily synced and they, with other global neighbors, have the opportunity to explore greater preparedness collaboration around staff distribution.

4.) Public Health Surveillance

Public health surveillance continues to be a key capability of the ongoing COVID-19 emergency. Japan's public health centers were able to quickly adapt to the emerging COVID-19 crisis where U.S. systems took time to adjust to new public health surveillance needs. The Japanese response began with communications to the Japanese public about simple actions they could take to protect themselves and the public.¹⁰ Testing is a vital component of COVID-19 surveillance, and each country has approached the issue in ways that play to their own strengths. In Japan, infectious disease laws clearly outline that tests for infectious diseases must be reported, which generated a clear public health surveillance route. In contrast, the United States can only mandate reporting for laboratory tests. Once over-the-counter tests were introduced, the public could test at home and choose not to report. This data problem is reflected in some of the alternate surveillance options that some areas have pursued.¹¹ By finding alternate surveillance routes, such as testing sewage

⁸ "USNS Comfort Covid-19 Frequently Asked Questions," April 27, 2020, https://media.defense.gov/2020/May/18/2002302024/-1/-/1/FAQ_USNSCOMFORT_V6.PDF.

⁹ Panagiotis Stachteas, Nikolaos Vlachopoulos, and Emmanouil Smyrnakis, "Deploying Medical Students During the COVID-19 Pandemic," *Medical Science Educator*, (December 2021): 31(6):2049-2053, <https://doi.org/10.1007/s40670-021-01393-w>.

¹⁰ "Important Notice for Preventing COVID-19 Outbreaks. Avoid the 'Three Cs'!", Ministry of Health, Labour and Welfare, n.d., <https://www.mhlw.go.jp/content/3CS.pdf>.

¹¹ "National Wastewater Surveillance System (NWSS) – a New Public Health Tool to Understand COVID-19 Spread in a Community." Centers for Disease Control and Prevention, March 21, 2022, <https://www.cdc.gov/healthywater/surveillance/wastewater-surveillance/wastewater-surveillance.html>.

for SARS-COV-2 viral loads, the United States was able to create a surveillance system without individual testing data.

5.) Barriers to Healthcare in a Disaster

Healthy populations are more resilient to disasters and thus barriers to healthcare prior to disasters impact patient outcomes during disasters. The U.S. population struggles with many barriers to healthcare that are impacted by disasters. In some instances, with COVID-19, barriers to healthcare were reduced (e.g., U.S. government funded COVID-19 vaccination and therapeutics), but in others the barriers were increased (e.g., reduction of available beds for healthcare). Japanese citizens benefit from a universal health insurance program that reduces their financial barriers to healthcare. This program, coupled with regional healthcare and public health centers, results in a population that frequently interacts with healthcare and public health professionals.¹² In the United States, increased and regular access to healthcare may increase trust in healthcare providers during disasters and increase resilience of the population to withstand another pandemic. With increased baseline health during a disaster, the U.S. population would have had fewer deaths due to treatable illnesses like heart disease, but with limited medical resources during the pandemic many patients had poorer health outcomes. Patients also avoided healthcare during the pandemic based on perception of high COVID-19 transmission rates in healthcare settings.¹³

Conclusion

Collaborative research across the world provides the opportunity to understand how preparedness and response capabilities perform in the real world. Single-payer systems incentivize public health measures to reduce reactive healthcare and promote preventative care. Studying disaster response in other countries provides a window into what is possible. The global impact of COVID-19 provided an opportunity to look at other countries and see how theories we have previously explored react to real life situations. With greater cooperation we can find a solution to many problems and view potential pitfalls of each solution. By exploring COVID-19 response

¹² Niall McCarthy, "Americans Visit Their Doctor 4 Times a Year. People in Japan Visit 13 Times a Year" Forbes, September 4, 2014, <https://www.forbes.com/sites/niallmccarthy/2014/09/04/americans-visit-their-doctor-4-times-a-year-people-in-japan-visit-13-times-a-year-infographic/?sh=107d11fce347>.

¹³ Mark É Czeisler et al, "Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns - United States, June 2020," *MMWR Morbidity and Mortality Weekly Report*, (September 2020) : 69(36):1250-1257, <https://doi.org/10.15585/mmwr.mm6936a4>.

capabilities in the United States and Japan, public health experts can understand not only mission gaps in international cooperation but also how their own local mission gaps could be closed with innovative ideas. COVID-19 is the first truly global public health disaster of the current era. Every corner of the globe has been impacted by the illness and changes to the global supply chain. We must take these opportunities to increase international cooperation around public health disaster preparedness. This discussion touches on only a few of the many capabilities necessary in a public health response and ways that international cooperation can help us prepare for the next disaster.

Ms. Evans wrote in her personal capacity. The views and interpretations expressed by the author are solely her own.



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