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COMMENTARY
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Health system analysis for pandemic policies: Suggestions for the Japan Institute for Health Security (JIHS)

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Abstract: This commentary introduces an approach to health systems analysis and reform, presents the implications of the health systems approach for pandemic preparedness and responses, and offers potential suggestions for the Japan Institute for Health Security (JIHS) to consider adopting in its activities for pandemic policies and health systems. The paper examines actions for health system strengthening that have important implications for pandemic preparedness and responses in five areas of policy intervention (according to the book *Getting Health Reform Right*: *A Guide to Improving Performance and Equity*): *i*) *financing*, how funds are mobilized, placed in risk pools, and allocated in a health system; *ii*) *payment*, how different actors and institutions in a health system are paid; *iii*) *organization*, how a health system is organized and managed; *iv*) *regulation*, how government rules are used to change the actions of both private and public institutions; and *v*) *persuasion*, how information and targeted interventions are used to change the choices and behaviors of specific actors in a health system. The commentary also makes four tentative suggestions for JIHS: mobilize expertise in all health system areas, develop a new unit for health system analysis, establish global relevance, and merge the two organizations effectively.

***Keywords*:** health system analysis, pandemic preparedness and responses, Japan Institute for Health Security (JIHS)

Introduction

The establishment of the Japan Institute for Health Security (JIHS) marks a major turning point in Japan's institutions and policies for global health. Japan's decision to create this new organization is especially important given the sudden disengagement of the United States from global health.

Upon assuming power on January 20, 2025, President Donald Trump took two critical actions in this arena on his first day in office: first, issuing an executive order to withdraw the United States from the World Health Organization (*1,2*), and second, issuing an executive order to freeze all funds for foreign assistance for 90 days, effectively halting all activities of the U.S. Agency for International Development (USAID) (*3*). President Trump subsequently announced his intention to close the agency (*4*) and to terminate nearly all of its 10,000 staff, keeping only around 290 people (*5*). On March 10, Secretary of State Marco Rubio announced that 83% of USAID programs were closed (canceling 5,200 contracts) and that the remaining programs would be managed directly in the Department of State (*6*). The implications of these decisions are still unfolding around the world but clearly will have negative impacts on the health and well-being of vulnerable populations in low- and middle-income countries, as projected in a memorandum prepared by a USAID official before he was fired (*7*). These and other shifts in U.S. policy and strategy will also create significant challenges and opportunities for high-income nations, including Japan.

JIHS was created by merging two existing organizations: the National Center for Global Health and Medicine (NCGM) and the National Institute of Infectious Diseases (NIID). The full details of this merger are presented in other articles in this special issue. As with any organizational merger, many issues will need to be sorted out. Some are logistical and administrative (such as reporting structure, personnel contracts, how to deal with overlaps, how to deal with gaps, budgeting processes, *etc*.). Other issues may emerge related to integrating the mission, programmatic strategies, and organizational culture. I have a few suggestions on key issues and useful approaches for JIHS to use as it works through inevitable challenges.

My first suggestion for JIHS is to clarify the organization's name in English and Japanese. Various definitions of "health security" have been proposed in the international literature. It will be important for JIHS to specify its definition of "health security" in

both conceptual and operational terms. Considering the institute's name in Japanese complicates this further. A direct translation into English of the Japanese name of *Kokuritsu Kenko Kiki Kanri Kenkyu Kiko* (国立健康危機管理研究機構) is closer to "National Institute for Health Crisis Management and Research". Notably, the English name emphasizes the strategic aspects of protecting health security (a broad system-level concept), while the Japanese name highlights the importance of managing and researching health risks (a more technical and intervention-focused concept). The two names of JIHS in English and Japanese have been confirmed by the government and officially adopted for use. However, it still may be helpful for JIHS to clarify the meanings of the two different names as the organization moves forward with its operations.

My second suggestion is for Japan to learn about the institutional challenges of managing health security risks from other countries. What lessons can be learned from countries, such as the United States, that were not initially successful in dealing with the COVID-19 pandemic?

One lesson from the U.S. experience is that the existence of an institute does not automatically result in success in managing health crises. Consider the example of the U.S. Centers for Disease Control and Prevention (the CDC). In December 2022, over two years into the COVID-19 pandemic, the U.S. House of Representatives Select Subcommittee on the Coronavirus Crisis released a staff report on its findings. It cited details on over 80 incidents of political interference by the (first) Trump administration in the federal government's public health efforts to manage and control the pandemic in 2020. Committee chair Representative James E. Clyburn made this statement (*8*): "The Select Subcommittee's investigation has shown that the [first Trump] administration engaged in an unprecedented campaign of political interference in the federal government's pandemic response, which undermined public health to benefit the former president's political goals. As today's report shows, President Trump and his top aides repeatedly attacked CDC scientists, compromised the agency's public health guidance, and suppressed scientific reports in an effort to downplay the seriousness of the coronavirus. This prioritization of politics, contempt for science, and refusal to follow the advice of public health experts harmed the nation's ability to respond effectively to the coronavirus crisis and put Americans at risk".

When the second Trump administration took office in January 2025, they began a new round of extremely aggressive attacks on public health institutions and rejecting the use of science in making public policy. In February 2025, for example, the Trump administration appeared ready to fire many of the 135 members of the Epidemic Intelligence Service at the CDC, the "disease detectives" responsible for pandemic investigation and control in the U.S. and around the world (*9*) – but then one week later apparently decided not to eliminate the positions. The U.S. experience should be studied as JIHS considers potential political challenges in the future and develops strategies to protect public health institutions from potential political interference.

Health system analysis and reform

My main suggestions (below) are responses to the original question: how can health systems be improved to more effectively deal with pandemics? This is a critical topic, but so complex that it cannot be adequately addressed in a short essay. My goal here, therefore, is to introduce one approach to health system analysis, consider the implications for how health systems intersect with pandemics, and offer potential suggestions for what JIHS might do in this field.

Since the mid-1990s, I have been working with colleagues at Harvard University and the World Bank to develop and refine an approach to health system analysis and reform (*10*). This approach provides an action-oriented, structural method for assessing health system performance. It also recommends measures to address specific performance problems and improve overall system performance based on many countries' experiences. The approach is explained in detail in the book *Getting Health Reform Right*: *A Guide to Improving Performance and Equity* (*11*), which was published in 2004, and serves as the basis for a more recent publication targeted at practitioners, *Health Reform Manual: Eight Practical Steps* (*12*). The method has been widely used for training government officials on how to manage health system performance, and for assessing both national and sub-national health systems (for an example, see Ref. *13*).

This approach to health system analysis and reform uses five areas of policy interventions, shown in Figure 1, to influence three intermediate performance measures (efficiency, quality, and access) in order to improve three health system performance objectives: health status, public satisfaction, and financial risk protection. The five areas of policy interventions (also called control knobs) are (*11*): *i*) *Financing*: the sources of money for the health system, along with its risk pools and allocation; *ii*) *Payment*: how different actors and institutions in the health system are paid; *iii*) *Organization*: how the system is organized (including centralized versus decentralized, and public versus private sectors) and managed; *iv*) *Regulation*: the use of government rules to change the actions of both private and public institutions; *v*) *Persuasion*: efforts to change the choices and behavior of specific actors (providers, patients, consumers, and prescribers) through targeted interventions.

Two distinctive features of this approach to health system analysis and reform are worth noting. The first is its emphasis on considering different kinds of interventions throughout the policy cycle (problem

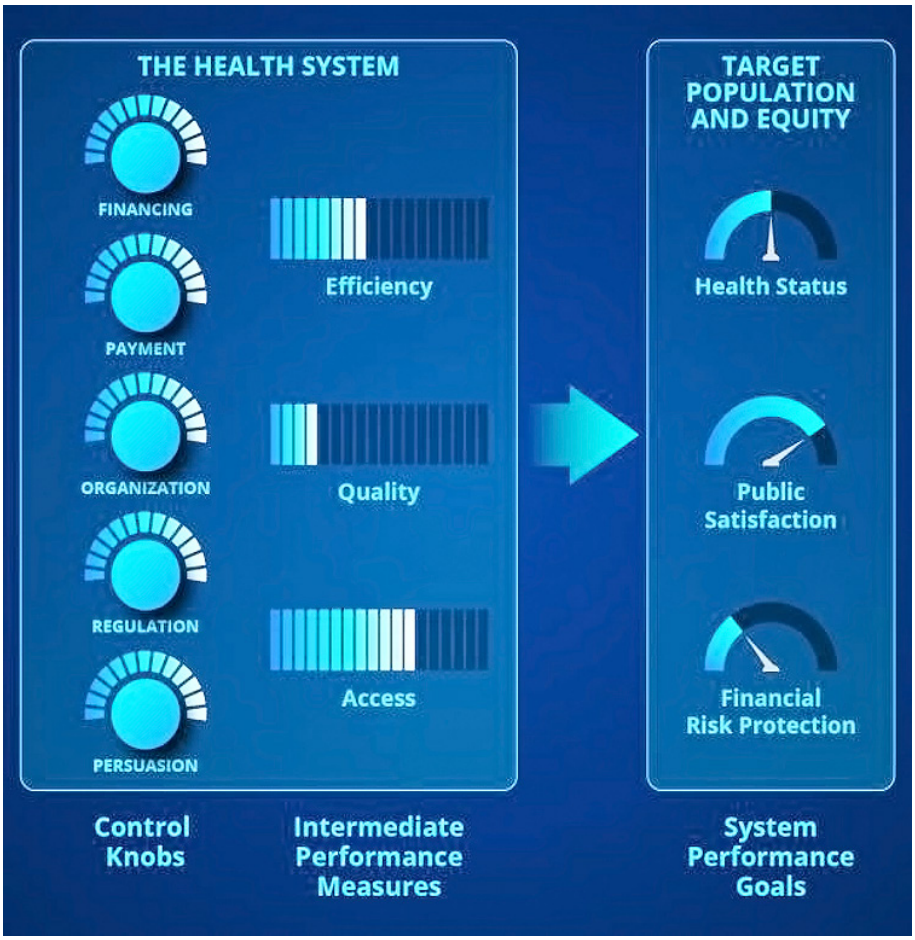

Figure 1. Framework for health system analysis and reform. Source: Reich *et al*., Health Reform Manual: Eight Practical Steps (*Ref. 12*); adapted from Roberts *et al*. (*Ref. 11*).

definition, diagnosis, policy development, political decision, implementation, and evaluation). The different stages of the policy cycle are incorporated into the eight steps of the *Health Reform Manual* (*12*). The second distinctive feature is that the approach incorporates three different kinds of analysis in health reform: technical (including epidemiological and economic assessments); ethical (with an introduction to applied philosophy); and political analysis (including how to do applied policy analysis (*14*)).

Health systems and pandemics

How can this approach to health system analysis be used in pandemic preparedness and responses? And how can it be used to suggest potential actions for JIHS?

First, let's consider how the three health system performance goals are related to pandemics. In terms of health status, a health system leader would probably seek to reduce infection rates, control the spread of infectious agents, and adopt measures that reduce morbidity and mortality following infection. Regarding public satisfaction, it would be important to communicate consistently and provide easily understood information (in order to promote public trust and encourage compliance with the desired pandemic interventions). For financial risk protection, it is important to design measures that assure patients do not bear the costs of prevention (such as immunization) or face burdensome costs of illness if they become sick, while also ensuring that access to diagnostics is financially accessible so that individuals can be identified and isolated in a timely manner to reduce further spread.

Next, let's explore the various policy intervention areas (the five dials at the left of Figure 1) and the implications of health system strengthening for pandemic preparedness and responses.

Financing involves collecting money, pooling it, and allocating it for health system functions. An important feature of financing for pandemics is the creation of dedicated pandemic emergency funds. These assure rapid resource mobilization at the national level and can then be distributed to local authorities for action. This requires flexible funding mechanisms to address new or unexpected needs. It is also likely that mechanisms will be required to allow for disbursing funds directly to people who have unexpected out-of-pocket pandemic-related expenses. Financing also has to be available for the implementation of epidemic surveillance systems, to rapidly develop real-time data systems for emerging

infectious agents, and for creating integrated data platforms for monitoring and rapid response. A third important activity for financing is long-term support for epidemiology training. A distinguished example is the U.S. CDC's long-standing and successful financing of the Epidemic Intelligence Service, although its future is uncertain under the current administration (*9*).

Payment involves the disbursement of funds to health facilities and providers to compensate them for services and commodities; payment modalities create incentives that shape individual and organizational behaviors. For pandemic preparedness and responses, it is important to use available funds to pay institutions and individuals to prevent and treat infectious diseases. Payment can also be used to provide fair compensation to frontline workers, especially when they experience heightened stress and personal risks during a pandemic. During the COVID-19 pandemic, burnout and inadequate pay led to healthcare workers' strikes around the world (including in Bosnia, Hong Kong, South Korea, Kenya, Peru, Spain, the U.S., and Zimbabwe (*15*)). In Japan, burnout became a major problem among public health nurses, who play an important community role in the Japanese health system (*16*) and bore the brunt of many frontline actions for COVID-19 (*17*). Payment also includes mechanisms for strategic purchasing, which allow timely procurement of essential supplies (including vaccines, personal protective equipment, and other critical resources). Payment mechanisms can also be used to stabilize market dynamics and ensure equitable access to pandemic control resources.

Organization involves structural decisions about the health system at the macro, meso, and micro levels, including what happens in the public versus the private sector and which decisions are made at each level of the health system. For pandemics, this includes the establishment and sustainability of emergency response units, with dedicated resources, staff, and protocols for efficient mobilization during a crisis. Organization involves addressing various questions, including: Who do these units report to? How are they funded? Where do they sit within different institutions? For example, Japan's experience with using its Disaster Medicine Assistance Teams (DMATs) – mainly intended for natural disasters – in the early responses to COVID-19 suggests that these response teams can also be helpful in pandemic response (*18*). Another important organizational goal is to ensure the continuation of essential health services during a pandemic, even during pandemic surges, for example, through plans for hospital load balancing (*19*). Enabling the use of flexible organizational models for health services (such as telemedicine and mobile clinics) to reach vulnerable populations in pandemics can also be important. Finally, public and private sector interactions during a pandemic can create both opportunities and challenges, particularly in terms of how they share (or hoard) resources, including medical countermeasures such as protective equipment, vaccines, medicines, diagnostics, and other essential supplies.

Regulation involves the use of government rules to change the actions of private and public institutions. For pandemics, it is important to streamline research and regulatory approvals for diagnostics, treatments, and vaccines. This can involve accelerating approval processes during health emergencies. Government agencies can create pre-approval frameworks that allow for the rapid evaluation and deployment of emergency-use technologies. One example of this accelerated regulatory approach was South Korea's legislation for reverse transcription polymerase chain reaction (RT-PCR) emergency use authorization and contact-tracing methods (prior to COVID-19), which allowed the country to mount a swift and effective response using the strategy named "3T–Test, Trace, and Treat" (*20*). How JIHS approaches regulation will be especially important, given its new role in the research and development of vaccines and treatments.

Persuasion, the fifth area of policy intervention, encompasses how government can influence the behaviors of people to engage in pandemic preparedness at the individual and community levels. Persuasion strategies can help shape individual behavior to promote effective pandemic responses. Clear communication and transparency about decisions and actions can also contribute to social trust in government action during pandemics. This is one area where Japan was particularly successful during the COVID-19 pandemic. The "Three Cs" campaign represented an effective form of policy communication (*21*) for persuasion. The Three Cs urged people to avoid *closed* spaces, *crowded* places, and *close-contact* settings. This became a catchy policy slogan in Japanese, based on its repeated use of the *kanji* 密 [mitsu] to signify "density", to encourage avoiding the 三つの密 (the three densities), pronounced as *mittsu* no *mitsu* or 三密 [*san mitsu*] (This was recognized as the Words of the Year for 2020!). This policy communication, combined with the existing habit of wearing masks as an "historically embedded social practice" (*22*), helped create an effective pandemic response in Japan.

Tentative suggestions for JIHS

What are the practical implications of this approach to health systems analysis and reform for pandemic preparedness and responses in general, and especially for the newly established JIHS? Here are four tentative suggestions, offered with humility, for JIHS to consider.

i) *Mobilize expertise in all health system areas*: Taking on new challenges requires new expertise. To strengthen the new organization's capacity in health system analysis for pandemic preparedness and responses, JIHS will require technical specialists for all five areas of policy intervention (financing, payment,

organization, regulation, and persuasion), as well as people with expertise in political and ethical analysis methods. This will require cultivating significant expertise in social science (such as economics, political science, organizational behavior, and policy communication), which may not have existed previously in either of the two organizations.

ii) *Develop a new unit for health system analysis*: Pandemic institutions (in Japan and elsewhere) need to create robust health system analysis units for pandemic policies. If JIHS seeks to provide ongoing strategic advice about how to prevent and manage pandemic outbreaks, it will need an established group assigned to this task. The unit would do well to foster both domestic and international experience, since JIHS may be called on to act within Japan as well as with other countries. This unit could provide training courses domestically and internationally on strategies for pandemic prevention and responses.

iii) *Establish global relevance*: JIHS could create a new model for transforming health systems to address pandemic preparedness that is relevant for Japan and adaptable for other countries worldwide. This role would be particularly important given the current international context, as the Trump administration removes the U.S. government from many global health organizations and from the broader sphere of international cooperation. The gaps created represent a strategic opportunity for Japan to use JIHS to expand its global role in pandemic preparedness and health systems. These global activities could include, for example, funding pandemic preparedness initiatives in other countries, establishing global courses on health systems and pandemic policies, creating regional partnerships for pandemic preparedness and health system strengthening, and fostering regulatory harmonization across countries related to pandemic policies.

iv) *Merge the two organizations effectively*: Combining two existing organizations (with different histories, cultures, and missions) and transforming them into a single new entity is an ongoing challenge, for both public and private sectors. JIHS no doubt is drawing the lessons from other contexts about how to manage this complicated process (*23*). One area of particular interest will be the role of the general hospital (which belonged to NCGM before the merger) to advance health system analysis for pandemic policies. This is an area that is not possessed by the U.S. CDC, and so could represent a significant potential advantage for the JIHS.

While the next global pandemic may or may not resemble the one we just experienced with COVID-19, it is important to learn from our recent experiences to prepare for a more effective response next time. I hope that some of the ideas presented above, about how health system strengthening relates to pandemic policies, are helpful in structuring and managing Japan's new institute for health security.

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