HGPI

Health and Global Policy Institute

Immunization and Vaccination Policy Project

# Recommendations for Truly Strengthening the Vaccine R&D and Production Pipeline

Health and Global Policy Institute (HGPI)

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# Introduction

## ■ Introducing Health and Global Policy Institute (HGPI)

Health and Global Policy Institute (HGPI) is a Tokyo-based independent and non-profit health policy think tank established in 2004. In its capacity as a neutral think-tank, HGPI involves stakeholders from wide-ranging fields of expertise to provide policy options to the public to successfully create citizen-focused healthcare policies. Looking to the future, HGPI produces novel ideas and values from a standpoint that offers a wide perspective. It aims to realize a healthy and fair society while holding fast to its independence to avoid being bound to the specific interests of political parties and other organizations. HGPI intends for its policy options to be effective not only in Japan, but also in the wider world, and in this vein the institute is very active in creating policies for resolving global health challenges.

## ■ The Significance of Vaccines in Japan and in Global Health

Immunizations and vaccinations have been called "the greatest invention in the history of medicine," and in the context of infectious disease control, they are considered the most cost-effective public health intervention. The Coronavirus Disease 2019 (COVID-19) pandemic has enabled people in Japan and around the world to reaffirm the value of immunization and vaccination. COVID-19 has damaged public health, upset familiar lifestyles, and hindered socioeconomic activities. It has spurred global action to improve vaccine research, development, and production systems as part of each country's security, or more specifically, to ensure health security in line with the protections provided by Article 25 of the Constitution of Japan, which guarantees the "right to maintain the minimum standards of wholesome and cultured living." Establishing a domestic vaccine production pipeline is not only important to ensure the necessary volume of vaccines can be provided to the public, but will also be essential for protecting the health and safety of the public from the threat of Vaccine Preventable Diseases (VPDs) while ensuring socioeconomic activities can continue. Given the future possibility that new pathogens or strains may emerge in Japan or in neighboring countries, building a world-class R&D pipeline for new vaccines is also a key issue for national security.

Debate on the importance of vaccines in the context of global health has been the subject of growing attention in recent years. Factors prolonging the ongoing global pandemic include the facts that COVID-19 is zoonotic, that it is highly infectious, and that achieving global herd immunity will be extremely difficult due to disparities in vaccine access. These factors led to the global spread of the virus and may have made it easier for mutant strains to emerge. To respond to this situation at the international level, the COVAX Facility was established to provide multiple countries with safe COVID-19 vaccines under the principle of international cooperation. There has also been progress on other international vaccine donation programs, such as Japan's bilateral donation initiative. These circumstances have contributed to growing momentum for vaccines to be classified as global public goods. As globalization continues to progress and it becomes increasingly difficult for any single country to act alone, the roles of immunization and vaccination have become extremely important. Drastic measures must be taken for Japan's R&D and production pipeline and regulatory system for pharmaceuticals.

## The Purpose of These Recommendations

During the COVID-19 pandemic, the time required to introduce a new vaccine to the market was shortened significantly due to reinforcements to the global vaccine R&D and production pipeline and the acceleration of regulatory approval processes. There has been progress in these areas in Japan, as well. Efforts to examine and establish necessary systems are advancing and include the Accelerated Parallel Plan presented in June 2020 as well as the Strategy for Strengthening Vaccine Development and Production Systems, which received Cabinet approval in June 2021. However, the effort to create a vaccine R&D and production pipeline in which all stakeholders cooperate under appropriate leadership has not yet succeeded, and as of the time of writing, a domestically-produced vaccine has not yet been approved. Past experience teaches us it will be difficult to rapidly develop necessary systems during ordinary times, after the pandemic is over. This means it is essential we establish best practices now, before our sense of crisis toward the pandemic abates. Looking to international developments, the "100 Days Mission," which aims to have safe and effective vaccines, diagnostics, and therapeutics within 100 days of an epidemic or pandemic threat being identified, was put forward at the G7 Summit in June 2021. Efforts in line with that mission are now underway among member nations. Japan, which is set to host the G7 in 2023, must show it has made clear contributions to this international goal.

Given these domestic and international developments, we gathered volunteer experts who possess a shared sense of caution toward this issue for discussions aiming to establish a domestic vaccine R&D and production pipeline that can reinforce national security and contribute to the international community during the ongoing COVID-19 pandemic or a future pandemic. This proposal summarizes those discussions. Discussion points have been arranged in three perspectives on initiatives that require rapid responses during the ongoing COVID-19 pandemic or require action during ordinary times for emergency preparedness: strengthening the vaccine R&D and production pipeline, improving the clinical trial environment, and reforming the pharmaceutical affairs system for vaccines. Through these recommendations, we hope specific measures are taken to advance Japan's immunization and vaccination policies and expand discussions among industry, Government, academia, and civil society so a system for protecting the health and safety of citizens from VPDs and maintaining socioeconomic activities can be created.

In June 2021, HGPI presented, "A Life Course Approach to Immunization and Vaccination Policy – Five Perspectives and Recommended Actions," which was based on discussions held in FY2020 as part of our Immunization and Vaccination Project. This document was created as an FY2022 initiative undertaken in accordance with those five perspectives.

# Executive Summary

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- Establish a system to focus resources on the most promising vaccine candidates based on cross-disciplinary discussions when resources are strained during emergencies, and improve transparency when doing so
- Designate a command center for pharmaceutical regulations and clinical trials and establish a strategic clinical trial environment

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- Enhance emergency preparedness during non-emergencies by developing and producing prototype vaccines
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- Consider an exemption system based on public discussions on the risks and benefits of vaccinations

# Recommendations

## 1. Reinforce the Vaccine R&D and Production Pipeline

### 1-1. The need for a true command center in the vaccine R&D and production pipeline and to rapidly establish that system

**Reinforce collaborative ties among industry, Government, academia, and civil society centered around a command center so infectious disease countermeasures can be coordinated during ordinary times and so vaccine R&D and production can proceed rapidly during emergencies**

When advancing discussions on a vaccine R&D and production command center, after clarifying the purposes and necessary functions of the command center, systems and structures suitable for those purposes must be developed. In addition to promoting stakeholder collaboration and budget allocation, vaccine R&D and production involves a wide range of factors such as epidemiological studies, establishing an environment for clinical trials, pharmaceutical regulations, the system for procuring raw materials and components, and vaccine hesitancy countermeasures. Expectations are high for efforts to energize the vaccine industry during ordinary times by addressing each inefficient element of the vaccine R&D and production pipeline while keeping the need for emergency preparedness in mind. During emergencies, the command center would be expected to provide suitable leadership while addressing these diverse factors in a comprehensive manner and, with full accountability, make rapid decisions on the strategic allocation of human, material, financial, and other resources as well as on review and approval.

In the United States, one of the first countries to successfully complete R&D on COVID-19 vaccines, under the leadership of the President, organizations like the Centers for Disease Control and Prevention (CDC), the Biomedical Advanced Research and Development Authority (BARDA), and the Food and Drug Administration (FDA) serve as command centers in their respective fields during emergencies and non-emergencies. Command centers in Europe include the European Centre for Disease Prevention and Control (ECDC), the European Health Emergency Preparedness and Response Authority (HERA), and the European Medicines Agency (EMA). While referring to examples from abroad such as these, after clarifying where responsibilities lie and outlining decision-making processes in each field, thorough and rapid discussions must be held in Japan to examine how research, development, and production can be streamlined for infectious disease countermeasures and vaccines.

**Establish a system to focus resources on the most promising vaccine candidates based on cross-disciplinary discussions when resources are strained during emergencies, and improve transparency when doing so**

The COVID-19 pandemic highlighted the absence of a domestic command center for vaccine R&D and production, like BARDA in the U.S. In response, the Strategic Center of Biomedical Advanced Vaccine Research and Development for Preparedness and Response (SCARDA) was established in March 2022 to build a system for strategic budget allocation. Comparing responses to the COVID-19 pandemic in Japan and U.S., the U.S. began investing in vaccine and pharmaceutical R&D and production in the early stages of the pandemic. By June 2020, these investments amounted to approximately 1 trillion yen. Until the passage of the Second Supplementary Budget for FY2020, Japan had only invested about 100 billion yen in vaccine R&D. While the U.S. is now recouping its investments through corporate taxes and other means, Japan has spent trillions of

yen on developed vaccines for its first and second rounds of vaccinations, showing an evident gap in investment capacity. Furthermore, while the U.S. was making enormous investments in mRNA, each researcher and company in Japan was using a different R&D modality. Vaccine development requires collective knowledge across multiple specialties like biology, immunology, and medicine, and the scale of Japan's national budget is limited when compared to the U.S. and other countries. To make suitable international contributions, Japan should strengthen cooperation across related organizations and establish a system for strategic decision-making based on discussions that cut across all fields involved in vaccine R&D and production.

While allocating budgets requires multi-disciplinary discussions, the long timeframe required to establish requirements and review public applications may be a reason for Japan's slow vaccine development during the COVID-19 pandemic. Faster responses must be taken. Emergencies are likely to strain raw materials, components, and human resources, so instead of allocating general budgets, budgets must be allocated strategically to the most promising vaccine candidates. When developing vaccines, phase 2 and 3 global clinical trials can cost as much as 50 to 100 billion yen, which means the scale of public funding can become enormous and companies who are not selected may be pushed out of the vaccine market. This means a high level of transparency will be essential when strategically allocating budgets. This will require holding public discussions with as much transparency as possible while being fully accountable.

**Designate a command center for pharmaceutical regulations and clinical trials and establish a strategic clinical trial environment**

Multiple organizations are involved in vaccines such as the Pharmaceuticals and Medical Devices Agency (PMDA); the Minister of Health, Labour and Welfare; the Evaluation and Licensing Division of the MHLW; and the Pharmaceutical Affairs and Food Sanitation Council. This means that in the event of an emergency, the decision-making process and responsibilities of each organization in the pharmaceutical affairs system must be clearly defined under the leadership of the MHLW. During the COVID-19 pandemic, the FDA in the U.S. predicted early on that it would be necessary to simplify non-clinical study results needed to start clinical trials and predicted the need for surrogate endpoints for mutant strains before advancing with clinical trials. Responsibility, leadership, and the roles of each organization must be clearly assigned and steps to ensure transparency must be taken so Japan can implement similar initiatives.

There are also high expectations that, based on leadership in the pharmaceutical affairs system, it will be possible to use more efficient review methods to assess vaccine efficacy while scientifically ensuring clinical trials are safe and ethical. For example, it will be necessary to scientifically examine the need to use human challenge studies (which assess efficacy by artificially infecting vaccinated individuals) and adaptive design (which allows for flexibility in clinical trial protocols for each phase), the suitability of applied assessment methods, and their safety and ethics. To that end, the clinical trial environment must be improved and collaboration among all stakeholders must be reinforced.

## 1-2. Taking steps during non-emergencies to strengthen the domestic vaccine R&D and production ecosystem and to promote international collaboration

### Enhance emergency preparedness during non-emergencies by developing and producing prototype vaccines

One goal of the aforementioned "100 Days Mission" is to strengthen rapid response capacity during emergencies by anticipating pathogens of pandemic potential and approving multiple prototype vaccines ready for phase 2 clinical trials in advance. Domestic stakeholders must collaborate to identify pathogens of pandemic potential and develop prototype vaccines in advance to reinforce Japan's economic and health security against pandemics and to contribute to international pandemic preparedness.

### Take steps during non-emergencies to consider highly feasible, dual-use manufacturing facilities and to develop systems for operating manufacturing facilities

During the COVID-19 pandemic, public financial support for establishing manufacturing facilities was provided as a push incentive, which promoted the establishment of such facilities. Manufacturing facilities established during previous pandemics were also utilized, which contributed greatly to faster domestic production. However, some of the older manufacturing facilities are only in operation rarely. If they stay out of operation until a future pandemic, that will not only be inefficient; it may also hinder rapid responses to future emergencies. Those facilities must be used as bases for vaccine manufacturing during non-emergencies. While continuously applying the PDCA cycle, they must contribute to vaccine production in ordinary times while retaining the potential for rapid operations in times of emergency.

Dual use of manufacturing sites is being considered so products like biopharmaceuticals can be produced during ordinary times and vaccines can be produced during emergencies. However, there are great differences in facilities required for biopharmaceuticals and vaccines or among vaccines if modalities are different. Therefore, it will be necessary to deepen discussions on what specific types of dual use are feasible. One potential solution would be to strategically determine how many sites are needed for each modality in advance so certain facilities can produce vaccines for different infectious diseases but of the same modality.

### Strengthen support for academia with promising basic research assets to improve the research environment

To promote vaccine development, basic research from a broad variety of related fields provides the essential foundation for development. Looking at the share of international papers from Japan and the top 10% most cited papers in the past 15 years, which are signs of scientific and academic research capacity on the international stage, it is clear Japan's international standing in terms of research capacity is in danger. Promoting basic research, the foundation of vaccine development, is urgent for improving Japan's long-term R&D capacity.

Academia in Japan currently faces a research environment that is, compared to other countries, extremely limited in terms of nature and volume of duties, budgets available for research, and incomes. From the perspective of career paths, this environment is not only contributing to the decline of Japan's scientific capacity; it may also be acting as a disincentive that lowers the rates students enter academia. This environment may also be preventing academia from producing entrepreneurs. To promote vaccine R&D, the environment for academia must be improved, starting with the fields of infectious disease and vaccines.

**Increase support for venture companies and similar organizations involved in innovative fields of R&D**

Venture capital (VC) and investors in the healthcare sector must be developed to foster biotech venture companies in drug discovery. Support from public finances is limited, so it will be important to collaborate with VCs and investors to promote biotech venture company development. It will also be necessary to advance efforts to match venture companies involved in developing innovative vaccines with pharmaceutical companies to strengthen support for the practical application of promising assets.

**Strengthen pull incentives to make the domestic vaccine market more sustainable, such as by making routine vaccinations during non-emergencies more predictable or through Government purchase of vaccines during emergencies**

Introducing new vaccines to the market, from development to commercialization, requires enormous investments. However, conditions for new vaccine approvals are unclear, and even when approvals are granted, the number of people eligible for vaccination can vary greatly depending on how a vaccine is categorized – whether it is routine or voluntary. This can make returns on investments more difficult to predict for vaccine makers, which is preventing progress in the vaccine industry. In contrast, as a national security measure to take during emergencies, the Government is considering purchasing vaccine assets that have reached a certain stage of development. This is likely to serve as a significant incentive for the private sector, which is responsible for vaccine development. During non-emergencies, however, it is difficult to predict if a vaccine will be added to the routine vaccination schedule under the Immunization Law. This disincentivizes vaccine development when crises are not occurring. To encourage vaccine development during non-emergencies, the criteria for addition to the routine vaccination schedule and the discussion process for doing so should be clarified.

When considering pull incentives like these, aspects such as the public health benefits of vaccine development or administrative perspectives from the private sector, which is responsible for vaccine development and production, must be taken into account when setting prices.

**Strengthen partnerships with global organizations, national Governments, and international funding agencies**

To establish a global vaccine R&D and production pipeline, ties must be strengthened with various organizations so pathogens can be imported and clinical trials can be conducted in endemic regions. These organizations include global Clinical Research Organizations (CROs) and Contract Manufacturing Organizations (CMOs), national regulatory authorities, Governments, international organizations, and international funding agencies. In particular, to support the R&D and production of therapeutics and vaccines, it will be necessary to actively participate in initiatives from international funding agencies and international organizations like the Global Health Innovative Technology Fund (GHIT Fund) and the Coalition for Epidemic Preparedness Innovations (CEPI). There is also room for improvement in the effective use of and returns from frameworks receiving funding from the Government of Japan. For example, as of January 2022, CEPI had only selected one research project from Japan for funding. To go beyond financial contributions to global initiatives and to take those initiatives as opportunities to increase Japan's R&D and production contributions as an advanced country in science and technology, each stakeholder in domestic R&D must have a global perspective and participate more actively in initiatives outside of Japan. In addition to allowing Japan to make greater international

contributions, expanding public investments in the domestic R&D pipeline and Japan's international R&D and production capacity will likely give rise to a cycle of funding through sources like international funds that will create job opportunities and further reinforce the system in Japan.

## 2. Create an Environment for Vaccine Clinical Trials

### 2-1. Establishing a domestic clinical trial environment during non-emergencies

**Conduct high-quality clinical trials efficiently, such as by establishing a large-scale public facility for clinical trials**

While scientific validity and ethics in clinical trials improved due to the enactment of good clinical practice (GCP) legislation for pharmaceutical clinical trials in the 1997 revision of the Pharmaceutical Affairs Act and accompanying ministerial ordinances, there are still many domestic sites that cannot meet these higher standards and an increasing proportion of clinical trials are being conducted outside of the country. Although many initiatives for revitalizing domestic clinical trials are underway, there is still room for improvement in the domestic clinical trial environment. Compared to clinical trials in other countries, domestic clinical trials in recent years have been high quality, but they have also been costly and time-consuming. Other issues include slow recruitment per site, the need to conduct trials across many sites in order to secure the required number participants, and inefficient cooperation among various stakeholders involved in conducting clinical trials (such as healthcare providers, pharmaceutical companies, clinical research coordinators (CRCs), site management organizations (SMOs), and CROs). To address these issues and to streamline the clinical trial system while lowering costs, increasing speed, and maintaining quality, it will be necessary to establish a large-scale, public clinical trial facility which can improve recruitment efficiency.

**Harmonize Japan's system for conducting clinical trials with international standards to facilitate participation in global clinical trials**

In other countries, there is active participation in vaccine development initiated by academia. Participating in global clinical trials for vaccines led by such organizations is likely to help establish an environment for vaccine clinical trials in Japan. Overseas, sponsors provide central management of clinical trial plans and other initiatives conducted across multiple sites in accordance with GCPs established by the International Conference on Harmonisation (ICH). Meanwhile, in Japan, the Clinical Trials Act enacted in 2017 does not contain the concept of sponsors. Instead, each clinical trial site is managed by an on-site investigator, which is inefficient. Including a revision of the Clinical Trials Act, the system must be reviewed with a focus on participation in global clinical trials.

**Build a system to prevent the hollowing out of clinical trials for certain populations, such as children**

There are fields like pediatric medicine and rare diseases in which clinical trials are difficult to advance. The U.S. has a framework for Pediatric Study Plans which requires pediatric study designs to be submitted when conducting adult phase 2 trials. A similar framework should be introduced in Japan to ensure children are not left behind. Such efforts should extend beyond pediatric medicine. It will be necessary to build a system for conducting clinical trials that promotes herd immunity without needlessly excluding people because they are in certain age groups or because they do not meet certain conditions.

**Reinforce communication strategies that contribute to fostering public understanding toward the need for clinical trials assessing innovative science and technology as well as toward the sound ethics and safety of those trials**

One reason for slow recruitment per site in Japan may be a lack of public understanding toward clinical trial participation. In the field of vaccines, the issue of vaccine hesitancy may be another

obstacle for public participation in vaccine clinical trials. Public understanding must be fostered toward the fact that clinical trials are necessary to achieve healthcare innovations that support the public as well as toward aspects of clinical trials like ethics and scientific safety.

### 2-2. Establishing a system during non-emergencies for conducting clinical trials abroad

**Reinforce global partnerships against infectious diseases using diplomatic frameworks**

When GCP standards were enacted in 1997, there was a growing trend throughout the domestic pharmaceutical industry to conduct clinical trials overseas. The vaccine industry must also actively expand its global network for conducting clinical trials outside of Japan. To support vaccine R&D when clinical trials must be conducted in regions where infectious diseases are endemic, it will be necessary to establish a global framework for monitoring infectious disease prevalence in each region and for rapid collaboration with clinical trial sites, clinical trial support companies, and other such organizations in endemic regions. In addition to the establishment of the ASEAN Centre for Public Health Emergencies and Emerging Diseases, expectations are high that diplomatic frameworks like the Quadrilateral Security Dialogue (a framework for collaboration and cooperation among Japan, the United States, Australia, and India, also known as QUAD) will be utilized to expand these collaborative platforms.

**Establish arrangements and procedures that are harmonized with international Good Clinical Practices (GCPs) and Good Manufacturing Practices (GMPs)**

To facilitate global clinical trials, vaccine clinical trials conducted outside of Japan must follow GCPs, which are internationally harmonized standards for conducting clinical trials; and clinical trial site and production facility operations in each country must be reinforced according to GMPs, which are standards for manufacturing systems.

## 3. Reform Vaccine Regulations

### 3-1. Enacting emergency pharmaceutical regulations rapidly in times of crisis

**Establish a Japanese emergency authorization system for domestically-produced vaccines**

Some of the first countries to launch COVID-19 vaccines have systems for authorizing pharmaceuticals for emergency use such as Emergency Use Authorization (EUA) in the U.S. and Conditional Marketing Authorization (CMA) in Europe. These systems provide authorization in emergency situations using different criteria than regulatory approvals during ordinary times. In Japan, approval from other countries' regulatory authorities like the FDA is a condition for special approval. Japan does not yet have a system in place for emergency use authorization or emergency approvals for domestic innovations, so rapid legislative measures are necessary. Because vaccines are administered to many healthy people to prevent infectious diseases as a form of social protection, the pharmaceutical affairs system requires high standards for both effectiveness and safety in ordinary times. During emergencies, however, safety standards must be maintained to the greatest degree possible while relaxing standards for effectiveness, and comprehensive judgments must be made as to whether known or potential benefits outweigh known or potential risks. Therefore, to enable legislative measures to establish an emergency approval system, after clearly communicating that approvals will be temporary, national consensus must be built toward the fact that overall assessment criteria for benefits and risks during emergencies will be different than those used during non-emergencies. Even if a special approval system for emergencies is created, a lack of public consensus may result in a smaller proportion of the public desiring vaccination and encourage vaccine hesitancy, so careful measures must be taken to ensure the system becomes firmly established. Discussions on this system are ongoing, and there is growing attention being placed on the future direction of these discussions and changes to the law.

**Provide support to help vaccines authorized for emergency use in Japan acquire use authorization overseas**

If vaccines approved for domestic use can be distributed to other countries, developing a domestic emergency use authorization system is also likely to strengthen Japan's global contributions to pandemic control. To that end, it is desirable that said vaccines can obtain prequalification and be added to the World Health Organization's (WHO) Emergency Use List (EUL), which contains international recommendations for the emergency use authorization of vaccines. It will be necessary to consider methods of providing public support for international assessment processes.

**Build a system for the continuous monitoring of safety and effectiveness after special approval or emergency use authorization has been granted**

It is essential that a system is built that provides rapid and continuous monitoring of safety and effectiveness after emergency approvals are granted and that allows regulators to consider suspending approval or taking similar actions based on evidence. The emergency approval system must include steps to rapidly deploy such a system during the approval process. To prepare for the implementation of an emergency approval system, creating a scientific verification system to provide compensation for side effects and examine serious side effects should also be considered.

### 3-2. Collaboration between the vaccine R&D and production pipeline and pharmaceutical affairs system during non-emergencies as a form of emergency preparedness

**Examine pharmaceutical regulations with surrogate endpoints in areas with no endemic diseases**

Large-scale phase 3 trials cannot be conducted without stable endemic diseases, so there are high expectations for advances in regulatory science that make it possible to assess effectiveness and safety without large-scale clinical trials. Vaccines and other pharmaceuticals always carry certain risks, not only during emergencies, and this fact must be kept in mind during non-emergencies to determine the degree to which rigorous assessment methods can be scientifically streamlined to minimize these risks and to incorporate advances in regulatory science into the pharmaceutical affairs system more rapidly. Expectations are also high for Japan to have more dynamic involvement in harmonization and coordination with the International Coalition of Medicines Regulatory Authorities (ICMRA) and the WHO, particularly for clinical trial design, such as in the use of non-inferiority trials with actual pharmaceuticals (vaccines that have already been approved), adaptive design, interim analysis and other clinical assessment methods, and trials with immunogenicity indices (neutralizing antibody values) as endpoints.

**Strengthen collaboration with overseas regulatory authorities for global clinical trials initiated by Japan and for simultaneous multi-country submissions**

Pharmaceutical regulations are not uniform across countries and to obtain approval overseas, greater investments are required to conduct clinical trials in each country where applications are filed. Among all pharmaceuticals and vaccines that were approved in Japan in FY2017, 39.4% underwent global clinical trials. However, only 6.73% underwent international clinical trials in Asia, so there are high expectations for steps to further strengthen cooperation among regulatory authorities in Asia and other economic or public health spheres.

Methods of handling data collected overseas in global clinical trials and similar initiatives during regulatory review in Japan will require further consideration while collaborating with regulatory authorities in each country. For example, when seeking domestic approval, it may be necessary to take into account items present in overseas clinical trial data (such as participant attributes like race or conditions applied during other clinical trials) when considering the need for additional clinical trials in Japan or the need to simplify or otherwise alter the trial after clarifying the purposes of doing so.

### 3-3. Establishing systems during non-emergencies for examination and approval authorities to provide exemptions

**Consider an exemption system based on public discussions on the risks and benefits of vaccinations**

When considering pharmaceutical regulations for rapidly and scientifically assessing safety and effectiveness, it will be necessary to sort out exempted items among: regulatory authorities or organizations responsible for review and approval, such as public health authorities; the companies developing vaccines; and the healthcare providers that will be conducting vaccinations. In particular, vaccine administration in Japan has been greatly influenced by past lawsuits, such as recent lawsuits over HPV vaccine side effects. There is a high risk of litigation in vaccine approval screenings, so organizations performing approvals must be extremely cautious. Even when the safety and effectiveness of a vaccine has been scientifically proven to a sufficient degree, because severe adverse events and side effects can still occur, it will be necessary to

organize a system of exemptions for examination and approval authorities, companies, and healthcare professionals based on public consensus toward the public health benefits and risks of vaccines.

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This proposal was compiled by Health and Global Policy Institute (HGPI) in its capacity based on a discussion conducted under the Chatham House rule at Working Group Meetings and interviews held in 2021 along with external discussions on the related topics as of March 31, 2022.

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