HGPI Health and Global Policy Institute

[Policy Recommendations]
Achieving a Sustainable Society of Health and Longevity Through the Co-Creation of Environment and Healthcare

-Recommendations for the 3rd Phase of The Healthcare Policy from the Perspective of Planetary Health-

Health and Global Policy Institute (HGPI)

■ Purpose and Expectations of The Healthcare Policy

The *Healthcare Policy* set forth by the Japanese government aims to create a society where citizens can enjoy healthy lives and longevity—a "society of health and longevity." This policy also emphasizes fostering economic growth in Japan through research and development in the medical field and creating new industries that contribute to the formation of a healthy and long-living society. The policy is implemented based on the *Health and Medical Strategy Promotion Act*, enacted in 2014, and is led by the *Headquarters for Healthcare Policy* established under the Cabinet.

During the 2nd phase of the policy (formulated in 2020), efforts were reorganized into integrated projects focusing on modalities such as cancer, cognitive function, rare diseases, infectious disease control, regenerative medicine, and genomic medicine. The emphasis was placed on cross-disciplinary technologies and applying emerging innovations effectively and efficiently across diverse disease areas. These efforts aimed to address health challenges and extend the nation's healthy life expectancy.

For the 3rd phase of The Healthcare Policy, it is anticipated that global issues such as climate change, environmental pollution, and biodiversity loss, which are closely interconnected with public health, will be acknowledged and addressed. Building a society of health and longevity inherently involves reducing the demand for medical services through primary prevention and health promotion. Such efforts can yield *co-benefits*—simultaneously contributing to both public health and environmental sustainability.

In 2022, Japan revised its *Global Health Strategy*, which underscored the importance of sustainability in achieving *Universal Health Coverage (UHC)*. Beyond the global health perspective, the integration of "planetary health"—a concept that recognizes the interdependence of human health and the health of our planet—into domestic health promotion and the formation of a society of health and longevity is essential for achieving sustainable progress.

Additionally, the concept of *sustainability* has become a key evaluation criterion for corporate management and investment decisions, as represented by ESG (Environmental, Social, and Governance) standards. These standards are now applied across various domains and are increasingly adopted as *Key Performance Indicators (KPIs)*. In the 3rd phase of The Healthcare Policy, it is crucial to incorporate not only environmental factors such as conservation and sustainable resource use but also social dimensions like health promotion, improved welfare, and economic inclusion. Furthermore, the policy must address economic aspects, including long-term economic growth and responsible resource management.

Finally, it is essential to generate synergies between healthcare initiatives and other national strategies set forth by the Japanese government. For example, the *G20 Principles for Quality Infrastructure Investment* and the *Osaka Blue Ocean Vision*, both endorsed at the G20 Osaka Summit, outline standards for infrastructure investments that promote sustainable growth by considering economic efficiency, environmental protection, social inclusivity, resilience, and transparency. These principles can serve as references for planning and implementing healthcare infrastructure projects to minimize impacts on local communities and the environment while achieving sustainable development.

Additionally, as international frameworks for regulating plastic usage are being discussed, the healthcare sector is expected to contribute exemplary practices that help achieve the goal of *zero new pollution caused by marine plastic waste by 2050*.

Key Areas of Focus from the Perspective of Planetary Health

Planetary health is a new approach based on the understanding that human health and the sustainability of the Earth's environment are mutually interdependent. From the perspective of planetary health, the following three areas are of particular importance when considering the potential of *The Healthcare Policy*:

1. **Sustainability in the Promotion of Research, Development, and Innovation in the Medical Field**

   It is essential to promote consistent research and development (R&D) in the medical field, from basic research to clinical applications, with a focus on pioneering fields such as regenerative medicine and genomic medicine, to create new treatments and medical technologies. In addition to this, it is now imperative to develop medical products, treatments, and technologies that consider environmental impacts, such as greenhouse gas (GHG) emissions. Clear medium- to long-term directions in this area must be established.

   A *New England Journal of Medicine* (NEJM) article published in May 2024 proposed including the carbon footprint (CFP) as an endpoint in randomized controlled trials (RCTs), which are used to evaluate the efficacy and safety of drugs and treatments. Furthermore, in the United Kingdom, the use of high-greenhouse-gas-emitting products such as certain anesthetics and asthma inhalers is being curtailed, with a shift toward environmentally friendly alternatives.

   In Japan, it will be crucial to consider the introduction of carbon pricing, which is expected to be implemented in the near future. Supporting hospitals, clinics, and pharmaceutical manufacturers in calculating and disclosing the carbon footprint of treatments and production processes will be vital. Additionally, strategies must be developed to foster a globally competitive medical industry. This effort will mitigate risks associated with future changes in international regulations while advancing the development and expanded use of environmentally conscious products, the implementation of green procurement, and the promotion of sustainable medical practices.

   In the medium to long term, these initiatives are expected to facilitate the development and global distribution of environmentally friendly products, while also avoiding risks related to regulatory changes in the international community.

2. **Building a Sustainable Healthcare System**

   Discussions on "building a sustainable healthcare system" have traditionally focused on financial sustainability. Moving forward, it is essential to integrate the perspective of planetary health and also address environmental sustainability. Efforts such as disease prevention, early detection and treatment, and the prevention of severe disease progression not only reduce the number of patients and lower medical costs by minimizing the use of advanced medical equipment but also contribute to reducing GHG (greenhouse gas) emissions from healthcare.

   Moreover, it is critical to advance decarbonization through medical digital transformation (DX), including the use of telemedicine and AI technologies. Additionally, the remanufacturing of single-use medical devices and the introduction of circular economy practices are essential steps to reduce medical waste and ensure efficient resource utilization.

   In the future, it is predicted that environmental changes, such as climate change, will impact the number of patients with various diseases and increase the burden on healthcare institutions responding to disasters and emerging infectious diseases. International regulations and consensus-building efforts regarding healthcare systems' responses to climate change are also progressing. Thus, discussions on building an environmentally sustainable healthcare system are expected to advance further.

3. **Demonstrating International Leadership**

   Japan possesses advanced knowledge and experience in extending healthy life expectancy and addressing the challenges of an aging society. Through initiatives such as the *Asia Health and Wellbeing Initiative* (AHWIN) and the *Africa Health and Wellbeing Initiative* (AfHWIN), Japan is well-positioned to globally disseminate its medical technologies and healthcare policies.

   Given Japan's extensive experience with natural disasters, the country is uniquely equipped to address global health challenges—including climate change and environmental issues that particularly impact Asia-Pacific nations facing typhoons and other disasters—while incorporating healthcare systems into these solutions.

   Japan's past leadership in promoting *Universal Health Coverage (UHC)* on the international stage provides a foundation for contributing to shared solutions for these challenges. By leveraging its expertise and experiences, Japan is expected to play a key role in addressing these global issues in collaboration with the international community.

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■ Specific Recommendations from the Perspective of Planetary Health

Global environmental issues such as climate change, environmental pollution, and biodiversity loss have direct impacts on the healthcare sector, making the development of sustainable healthcare systems an urgent priority. To realize The Healthcare Policy that reflects this perspective, the following specific measures are proposed:

Adaptation Measures for Climate Change

Climate change significantly increases health risks through the frequent occurrence of extreme weather events, rising temperatures, and air pollution. Concerns include the rise in heatstroke and infectious diseases, as well as challenges faced by patients with chronic conditions such as obesity and diabetes, who are particularly vulnerable to heat stress. Additionally, mental health issues have also been highlighted. Moving forward, it is essential to implement adaptation measures to address these challenges.

1. **Conducting Climate Vulnerability Assessments and Identifying High-Risk Areas**
   It is essential to evaluate the impacts of climate change on specific regions and populations through climate vulnerability assessments to prioritize the protection of high-risk areas and groups. Developing region-specific action plans will enable effective risk management. For instance, in rural areas where outdoor activities are more prevalent compared to urban areas, well-being is directly affected by climate change and environmental stress, leading to a decline in the quality of life, particularly for elderly populations. Moreover, the increasing restrictions on agriculture, industry, and school activities due to extreme heat have caused a further decline in quality of life (QOL). Therefore, adaptive policies are needed to help local communities maintain sustainable living conditions in the face of climate change.
2. **Establishing an Integrated Surveillance System**
   An integrated surveillance system that leverages climate data must be established to monitor and predict health risks caused by extreme weather, climate change, and air pollution in real time. This system will facilitate the development of early warning mechanisms to respond swiftly to disasters and the spread of infectious diseases.

Measures to Mitigate Health Impacts

To mitigate the health impacts caused by climate change, it is essential to implement adaptation measures in medical institutions and communities.

1. **Strengthening and Promoting Heatstroke Prevention Programs**
   As rising temperatures increase the risk of heatstroke, it is necessary to roll out prevention programs within local communities, particularly targeting vulnerable populations such as the elderly and young children. Efforts to promote measures to cope with summer heat should be expanded.
2. **Strengthening Measures Against Infectious Diseases**
   Changes in temperature and humidity due to climate change are driving the spread of infectious diseases. To safeguard public health, measures must be enhanced to address emerging infectious diseases such as malaria and dengue fever, while advancing comprehensive infectious disease prevention programs.

Reducing Greenhouse Gas Emissions (Mitigation Measures)

Since healthcare institutions consume significant amounts of energy and are a source of greenhouse gas (GHG) emissions, it is essential to advance decarbonization across the entire medical sector.

1. **Improving Energy Efficiency in Medical Facilities**
   To reduce energy consumption in medical facilities, it is necessary to improve energy efficiency through measures such as enhancing building insulation and implementing high-efficiency heat exchangers, as well as promoting the adoption of renewable energy. Strengthening energy management in healthcare facilities will reduce environmental impacts. Furthermore, these efforts are expected to extend to other fields, such as nursing care. Some domestic studies have already explored the relationship between insulation performance and medical costs, and similar measures could also be applied to general housing, alongside medical and care facilities.
2. **Introducing a Monitoring and Reporting System for GHG Emissions**
   A system to regularly monitor and report GHG emissions at the level of individual medical facilities must be introduced. Using this data, facilities can set specific reduction targets and track their progress toward achieving them.
3. **Promoting Healthcare Digital Transformation (DX)**
   The promotion of healthcare digital transformation (DX) aims to enhance service efficiency and quality, thereby improving public healthcare while also contributing to the reduction of GHG emissions in the healthcare sector.

Medications, which account for approximately 15% of GHG emissions in healthcare, can see reduced emissions through the promotion of healthcare DX by addressing issues such as polypharmacy and unused medicines. In addition, patient transportation to medical institutions accounts for roughly 10% of total GHG emissions in the healthcare sector. The expansion of online medical consultations is expected to help reduce these emissions as well.

Building a Sustainable Supply Chain

The manufacturing and distribution processes for pharmaceuticals and medical devices also generate environmental impacts, necessitating efforts to enhance sustainability across the entire supply chain.

1. **Improving Manufacturing Processes**
   Efforts must be made to improve energy efficiency and reduce environmental impacts in manufacturing processes, thereby promoting the development of sustainable medical technologies. To this end, it is necessary to support the adoption of new manufacturing technologies that minimize environmental burdens while encouraging large-scale investments in nature-positive initiatives and natural capital restoration. Additionally, the use of renewable energy in the production of pharmaceuticals and medical devices must be promoted to minimize environmental impacts. While these initiatives may incur additional costs, it is equally important to establish evaluation systems that recognize and reward such efforts by companies and organizations.
2. **Revising Procurement Standards**
   Sustainable procurement standards should be established to prioritize the acquisition of environmentally friendly pharmaceuticals and medical devices. Procurement criteria must also be reviewed to encourage waste reduction and recycling in the healthcare sector. Moreover, it is essential to cultivate understanding among healthcare professionals and patients, the consumers of these products, regarding the value of innovative, sustainable products. In the 3rd phase of The Healthcare Policy, the development of green procurement standards in the healthcare sector and prioritizing the procurement of environmentally conscious products and services are expected to enhance the overall sustainability of healthcare.
3. **Health and Environmental Benefits Linked to Carbon Trading Markets**
   Improving public health can reduce medical demand and, consequently, the environmental burden associated with healthcare. Achieving a healthy and long-living society across the nation may become a factor recognized in carbon trading markets in the future. Strengthening policies that simultaneously promote health and environmental conservation is essential to align these benefits with broader sustainability goals.

Measures Against Environmental Pollution

Environmental pollution poses significant health risks, such as respiratory and cardiovascular diseases, and has a serious impact on public health. Proper management of medical waste is particularly crucial.

1. **Introducing Eco-Friendly Packaging**
   It is necessary to adopt environmentally friendly materials for the packaging of products used in healthcare institutions and to implement measures to reduce waste.
2. **Improving Waste Management Systems**
   Enhancing the efficiency of medical waste management by ensuring proper segregation and recycling is essential to reducing environmental burdens. Promoting the use of reusable personal protective equipment (PPE) and eco-friendly materials is also necessary. Regarding the circular economy, measures must support the expansion of recycled material usage, efficient utilization of products, and the establishment of systems for arterial-venous cooperation (end-to-end waste management). This includes facilitating collaboration among industry, government, and academia to develop medium- to long-term roadmaps for specific products and materials. Additionally, efforts should be made to advance international cooperation and the formation of global rules related to resource circulation.
3. **Educating Healthcare Professionals**
   To promote sustainability in healthcare and reduce environmental pollution, educating healthcare professionals is essential. Training should focus on identifying when disposable items like gloves are necessary, understanding the proper use of sterile equipment, and improving awareness about the environmental impacts of pharmaceuticals, including antibiotics, in the context of antimicrobial resistance (AMR) prevention. Supporting education and knowledge dissemination in these areas is critical for reducing environmental impacts and fostering sustainable practices in healthcare.

Strengthening International Cooperation and Rule-Making

Climate change and environmental issues are cross-border challenges, making international cooperation and rule-making indispensable. The World Health Organization's (WHO) 14th General Programme of Work (GPW 14), covering the period from 2025 to 2028, identifies climate change and health as one of its six strategic priorities. In addressing challenges in the field of planetary health, Japan is expected to play a cross-sectoral and cross-organizational role by promoting the Sustainable Development Goals (SDGs) leading up to 2030 and setting a course for the future. Japan can leverage its leadership in promoting Universal Health Coverage (UHC) and extend this concept to incorporate environmental considerations under the banner of "Greener UHC," thus contributing to shared solutions while demonstrating ongoing international leadership.

1. **Active Engagement in the Alliance for Transformative Action on Climate and Health (ATACH)**
   At the 77th World Health Assembly (WHA), the Japanese government announced its participation in the *Alliance for Transformative Action on Climate and Health (ATACH)*. Building on this commitment, Japan is expected to demonstrate leadership not only in financial aspects but also in building sustainable healthcare systems that consider environmental impacts, thereby promoting comprehensive responses to climate change and health risks. Japan can aim to enhance the economic value chain by leveraging "environmental value" and advancing the sustainable use of resources and environmental protection on a global scale. These efforts will further strengthen Japan's contribution to solving global challenges.
2. **International Deployment of Sustainable Healthcare Systems**
   Japan's medical technologies and policies are expected to be disseminated globally, particularly contributing to addressing health challenges in the Asia region. By promoting environmentally sustainable healthcare systems, Japan will help strengthen international frameworks to address global health risks, fostering sustainable and resilient health systems worldwide.

■ Conclusion

The perspective of planetary health has already been incorporated into various government policies, including the *Revised SDG Implementation Guideline*, the *Sixth Basic Environmental Plan*, and the *Fifth Basic Plan for the Promotion of a Circular Economy*. Moving forward, it is essential for the Ministry of Health, Labour and Welfare (MHLW) to advance measures based on the planetary health perspective through initiatives such as the *MHLW Environmental Policy*, the *MHLW Global Health Vision*, and the *MHLW Low-Carbon Society Implementation Plan*. Furthermore, integrating the planetary health perspective into the *3rd Phase of The Healthcare Policy* will be crucial to developing a strategy for achieving a sustainable society of health and longevity.

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■ **About Health and Global Policy Institute (HGPI):**

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Health and Global Policy Institute

Health and Global Policy Institute (HGPI) is a Tokyo-based independent and non-profit health policy think tank, established in 2004. Since our establishment, HGPI has been working to help citizens shape health policy by generating policy options and bringing together stakeholders as a non-partisan think-tank. Our mission is to enhance the civic mind along with individuals' well-being and to foster sustainable, healthy communities by shaping ideas and values, reaching out to global needs, and catalyzing society for impact.

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