HGPI Health and Global Policy Institute

# Kidney Disease Control Promotion Project Public Symposium Event Report "Establishing Kidney Disease Control Measures with Patient, Citizen, and Community Engagement and Collaboration"

Health and Global Policy Institute

May 2025

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**1. Introduction: History of kidney disease control and background to this report**

Devoted efforts from all related parties have driven steady progress in measures against chronic kidney disease (CKD) in Japan. A group called the Kidney Disease Control Review Meeting convened in 2007 and formulated, "The Future of Measures for Kidney Disease Control." The Kidney Disease Control Review Meeting met once again in FY2018 to track progress and identify issues related to CKD control that had been encountered over the previous ten years, and their discussions were compiled in the "Report of the Kidney Disease Control Review Meeting." A five-year review was conducted in accordance with that report in 2023, and was followed by the presentation of the "Interim Evaluation of Efforts and Future Actions Related to the Kidney Disease Control Review Meeting Report," which examined progress on targets and specified items for further promotion. Despite progress in individual measures such as awareness raising, establishing regional healthcare provision systems, improving medical treatment standards, developing human resources, and promoting R&D, it is estimated that one in five adults in Japan currently has CKD.[1] CKD has become a new major disease for Japan and will require further countermeasures.

Against this backdrop, in 2022, Health and Global Policy Institute (HGPI) launched its Kidney Disease Control Promotion Project with the aim of elevating public awareness toward CKD and building momentum for more effective and organic CKD control measures. In its initial year, the Kidney Disease Control Promotion Project brought together an advisory board representing industry, government, academia, and civil society for discussions on a broad variety of topics including the need for CKD prevention and early intervention, the importance of collaboration among professions and related institutions, the need to share and expand best practices that were emerging from local governments and in communities, and the need to promote CKD control in a manner that encompasses the perspectives of people living with CKD and other affected parties. Those discussions were then compiled into recommendations. To further deepen the content of our FY2022 recommendations and to promote their adoption among local governments, in FY2023, we conducted interviews with 12 local governments to discuss best practices and issues related to CKD measures. Based on those interviews, we then discussed effective methods for promoting CKD measures in local communities at meetings of our multi-stakeholder advisory board. Those discussions were later compiled into policy recommendations that reflect the patient journey. Then, to encourage cross-referencing and to pursue nationwide equity in CKD control, we hosted meetings on lifestyle diseases in Fukuoka City and Sendai City. Those meetings gathered administrative officials from local governments who exchanged views on topics like promoting policy across lifestyle diseases or the need to reinforce multi-professional and intraorganizational collaboration. We then compiled discussion points raised at those meetings.

In FY2024, the project's third year, in August, HGPI and the Japan Kidney Association co-hosted a public symposium where we widely disseminated the content of previous discussions, including best practices, issues, and solutions identified over the course of the project. This report summarizes that symposium, which gathered experts from industry, government, academia, and civil society to discuss topics that included measures for early detection and intervention for CKD in communities and workplaces; recommendations for medical examination; support provided through multidisciplinary collaboration among primary care physicians, government officials, and paramedical personnel to people living with CKD who have yet to initiate maintenance dialysis or undergo renal transplantation; cooperation among primary care physicians and nephrologists; and the prevention of advanced cases of CKD.

[1] Japanese Society of Nephrology. "Evidence-based Clinical Practice Guidebook for Diagnosis and Treatment of Chronic Kidney Disease 2024." Tokyo Igaku-sha. 2024.

**[Event Overview]**

- **Date & Time:** Wednesday, August 28, 2024; 13:00 – 18:00 JST
- **Format:** Hybrid (In-Person and Online (Zoom Webinar))
- **Venue:** International House of Japan (5-11-16 Roppongi, Minato-ku, Tokyo)
- **Language:** Japanese
- **Participation Fee:** Free
- **Organizer:** Health and Global Policy Institute (HGPI)
- **Co-organizer:** Japan Kidney Association

**[Program]**

**13:00-13:10** **Opening Remarks "Towards Comprehensive CKD Counter-measures Promoted Together with Patients in Japan"**
**Masahiro Ishida** (Member, House of Councillors) *Pre-recorded

**13:10-13:30** **Keynote Lecture "Challenges, Progress, and Future Prospects for Chronic Kidney Disease Control"**
**Naoki Kashihara** (Chairman, Japan Kidney Association/ Director, Kawasaki Geriatric Medical Center)

**13:35-14:35** **Discussion 1 "Early Detection of CKD through Health Checkups and Early Intervention Utilizing the Medical Checkup Results"**
**Panelists:**
**Yoshitaka Isaka** (Professor, Department of Nephrology, Osaka University Graduate School of Medicine)
**Tae Shimada** (National Health Insurance and Pension Division, Public Health and Welfare Department, Public Health and Welfare Bureau, Okayama City)
**Tomohito Miyake** (Chief, Health Promotion Section, Health Promotion Division, Health and Medical Care Department, Okayama Prefecture)
**Moderator:**
**Eri Yoshimura** (Senior Manager, Health and Global Policy Institute)

**14:45-15:45** **Discussion 2 "The Role and Challenges of Primary Care Physicians in Promoting CKD Control"**
**Panelists:**
**Hidehito Imamura** (Executive Director, Japan Medical Association / President, Jiaikai)
**Keiko Uchida** (Medical Director, Shinjin-kai Yokosuka Clinic)
**Kazuo Kobayashi** (Japan Physicians Association / Director, Kobayashi Internal Medicine Clinic)
**Yurika Hosogoe** (Person living with kidney disease)

**Moderator:**
**Ryoji Noritake** (Chair, Health and Global Policy Institute)

**15:50-16:50** **Discussion 3 "The Role of Central Government in Furthering CKD Control Measures at the Municipal Level"**
**Panelists:**
**Mariko Ogawa** (Technical Chief, Health Promotion Section, Health and Medical

Affairs Division, Health and Welfare Department, Gifu Prefecture)
**Naoki Nakagawa** (Professor, Division of Cardiology and Nephrology, Department of Medicine, Asahikawa Medical University)
**Hiromi Mitsubayashi** (Member, House of Representatives)
**Motoyasu Yamazaki** (Executive Director for Medical Affairs, General Affairs Office, Health and Medical Care Bureau, Kanagawa Prefecture)

**Moderator:**
**Eri Yoshimura** (Senior Manager, Health and Global Policy Institute)

**16:50-17:00** **Closing remarks**
**Kiyoshi Kurokawa** (Honorary Chairman for Life, Health and Global Policy Institute)

*Titles omitted; in no particular order; affiliation and title at the time of participation

## About Health and Global Policy Institute

Health and Global Policy Institute (HGPI) is a non-profit, independent, non-partisan 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 will continue to be very active in creating policies for resolving global health challenges. HGPI's activities have received global recognition. It was ranked second in the "Domestic Health Policy Think Tanks" category and third in the "Global Health Policy Think Tanks" category in the Global Go To Think Tank Index Report presented by the University of Pennsylvania (as of January 2021, the most recent report).

## About the Japan Kidney Association

The Japan Kidney Association was established to collaborate with parties such as health professionals, citizens, related companies, and government agencies to overcome kidney disease. In addition to raising awareness for kidney disease, it builds collaborative treatment systems for kidney disease, operates the Kidney Disease Treatment Advisor System, and administers the Kidney Research Initiative-Japan (KRI-J), a collaborative platform involving academia, related companies, government agencies, and other organizations. Through the active pursuit of various initiatives for kidney disease, the Japan Kidney Association is committed to establishing an environment in which people throughout Japan can enjoy the benefits of high-quality healthcare for kidney disease.

**2. Opening Remarks "Towards Comprehensive CKD Counter-measures Promoted Together with Patients in Japan"**
Masahiro Ishida (Member, House of Councillors)

Initial efforts from the Parliamentary Association for Promoting Chronic Kidney Disease Control with Patients included compiling recommendations that are centered on the daily lives of people on dialysis treatment and that cover topics like regular hospital commutes. Another pressing issue that has emerged is that of "one's final abode," which refers to situations in which people cannot move into special long-term homes due to dialysis-related reasons. An important action to take for prevention will be including serum creatinine testing in health checkups. My hope is that we are proactive in addressing these issues in the future.

Regarding efforts to raise awareness, both interest and budgets vary among prefectures. Each local government needs to expand opportunities for residents to actively participate in thinking about CKD prevention, and I think this symposium will contribute to that.

Japan is experiencing aging among both patients and health professionals, and we are beginning to see closures among local dialysis clinics, particularly in rural areas. In response, we are advancing discussions examining mechanisms for maintaining dialysis provision systems in rural areas and which include the topic of telemedicine. Other key issues include preparing for mobilization during disasters, providing training during periods of non-emergency, and expanding premiums in the medical service fee schedule for renal rehabilitation or for dialysis for people living with dementia.

We have been advancing efforts to achieve a broad variety of policies for kidney disease control from these various perspectives, and I see this symposium as an opportunity to promote collaboration with the government, and that makes me very happy. I would love for us to have an active exchange of views and for us to unite in future efforts for kidney disease control.

**3. Keynote Lecture "Challenges, Progress, and Future Prospects for Chronic Kidney Disease Control"**

Naoki Kashihara (Chairman, Japan Kidney Association/ Director, Kawasaki Geriatric Medical Center)

**Changes in the national disease profile and challenges for CKD in Japan**

Overcoming CKD will reduce burdens on coming generations, build a sustainable and robust society, create an environment that enables social participation even for people with health concerns, extend "socially active life expectancy," and make society a place where people can live happily even with a disease. I believe this should be the objective of measures for CKD.

In 2024, it was estimated that the number of people living with CKD in Japan had increased to approx. 20 million people, or about one in five adults. In other words, CKD is now a common disease in Japan. By the end of 2022, it was estimated that there were approx. 350,000 dialysis patients (according to *Evidence-based Clinical Practice Guidebook for Diagnosis and Treatment of Chronic Kidney Disease 2024*). The 2022 facility survey found that there were 39,683 new dialysis patients, or 828 fewer people than in 2021. This was a turning point and we look forward to seeing the number of new dialysis patients continue to gradually decrease in the future.

In that context, there have been dramatic changes in the percentages of primary diseases among new dialysis patients. In the past, most people on dialysis had chronic glomerulonephritis, but diabetic nephropathy has been the most common condition since 1998. Successful prevention programs for severe diabetic nephropathy have led to a gradual decrease in the number of people with renal failure and whose primary disease is diabetes. Meanwhile, there has been a continued increase in nephrosclerosis, which is considered a kidney aging phenotype, so one future issue will be addressing nephrosclerosis.

**Initiatives from the Ministry of Health, Labour and Welfare (MHLW) for kidney disease control and the importance of building evidence**

In 2018, the Ministry of Health, Labour and Welfare (MHLW) Health Service Bureau presented a report from the Kidney Disease Control Review Meeting that set three overall goals:[2]

1. Provide early detection and diagnosis of CKD and high-quality, appropriate CKD treatment
2. Take thorough steps to prevent advanced cases of CKD
3. Maintain and improve quality of life (QOL) for people living with CKD (including those on dialysis or who undergo renal transplantation)

The MHLW is currently advancing two research initiatives for kidney disease policy: "Evidence Building to Contribute to Managing Progress of and Recommending New Measures Based on the Kidney Disease Control Meeting Report" and "Research to Promote CKD Measures Based on the Kidney Disease Control Meeting Report." Starting with various materials for the "Protect Your Kidneys with Five Healthy Habits!" campaign, the MHLW is also working to highlight CKD measures nationwide by presenting initiatives from the 47 prefectural governments, data on annual trends in CKD, criteria for referring patients to nephrologists or specialized health institutions, and downloadable reference materials.

[2] Ministry of Health, Labour and Welfare. "Report of the Kidney Disease Control Review Meeting – Further Promoting Kidney Disease Control." 2018. https://www.mhlw.go.jp/stf/shingi2/0000172968_00002.html. Last retrieved on March 25, 2025.

**The significance of performing serum creatinine testing in working-age adults**

Data on dialysis initiation rates by age and gender (from 2006 to 2020) shows a downward trend for women in all age groups but an upward trend for male senior citizens.[3] Reinforcing measures targeting working men in their 40s to 60s while advancing efforts to detect CKD early and prevent advanced cases is likely to achieve the greatest results in reducing the total number of new dialysis patients.

However, serum creatinine testing is not currently performed as part of regular health checkups conducted in accordance with the Industrial Safety and Health Act. While this may be due to challenges related to the cost of testing, considering the fact that providing one person with dialysis costs 5 to 6 million yen per year, from the perspective of reducing financial burdens for employers and insurers, it is ultimately more cost-effective to conduct serum creatinine testing to detect CKD early and prevent the need for dialysis. We submitted a request for serum creatinine testing to be included in health checkups with materials demonstrating this economic rationale.

According to previous studies, long working hours are a risk factor for CKD and the stress of night shift work has been associated with decreased kidney function. As those studies show, there are close relationships between work and CKD, so serum creatinine testing should be included in health checkups to detect declining kidney function early and avoid situations in which CKD is detected after retirement.


[3] Hanafusa N, Masanori A, Joki N. "Annual dialysis data report 2020, Japanese Society for Dialysis Therapy (JSDT) renal data registry (as of December 31, 2020)," Chapter 2, Figure 4. 2001. https://docs.jsdt.or.jp/overview/file/2020/pdf/2020all.pdf. Last retrieved on March 25, 2025.

**Efforts from the Japan Kidney Association**

The Japan Kidney Association is engaged in four initiatives: building public awareness and medical cooperation (at the Japan Association of Chronic Kidney Disease Initiatives, or J-CKDI); operating the Kidney Disease Treatment Advisor System; administering the Kidney Research Initiative-Japan (KRI-J), a support platform for the development of drugs, diagnostic methods, and devices; and cooperating with patient groups and related organizations. While the number of Kidney Disease Treatment Advisors has increased to approx. 2,200 over the past seven years, they are scattered among regions, making it difficult to achieve equitable coverage. It has been shown that multidisciplinary care provided by teams that include nurses, pharmacists, nutritionists, and other professionals can significantly lower estimated glomerular filtration rates and prevent advanced cases of CKD (Clin Exp Nephrol 2023.). Based on that and other data, the 2024 medical service fee schedule revision included new premiums for guidance and management of dialysis prevention for CKD.

J-CKDI divides Japan into 12 blocks and appoints a block representative and prefectural representative for each. Under that arrangement, activities are currently being developed in each region. People's lives or lifestyle patterns vary, so lifestyle disease intervention methods that are too biased toward particular lifestyles cannot be applied in a uniform manner throughout Japan. It is because these professionals are familiar with the circumstances in their communities that their routine activities are so important, and it could be said that each of their posts is on the frontline of CKD control.

While collaborating with our many partners, I would like for us to continue our activities to overcome CKD and advance efforts to make society a place where each of us can live well, even with a disease.

## 4. Discussion 1 "Early Detection of CKD through Health Checkups and Early Intervention Utilizing the Medical Checkup Results"

**Purpose of this panel discussion**

Subjective symptoms are difficult to detect in the early stages of CKD, making early detection and intervention through health checkups particularly important. Despite the need to improve health checkup uptake to screen risk groups during health checkups, to provide recommendations for medical examinations, and to ensure these parties are guided to care, industrial health insurance and National Health Insurance (NHI) face a number of shared issues. Research has shown that 95% of people at risk for CKD do not receive care. In addition to crystallizing issues in the current health checkup system, in this panel discussion, we joined multidisciplinary experts to share good examples from industrial health insurance or municipalities and drilled down into necessary next steps to further strengthen CKD control in the future, including how to best restructure the health checkup system or how to design or strengthen health checkups while keeping in mind the fact that medical resources in each region are limited.

**Panelists:**

**Yoshitaka Isaka** (Professor, Department of Nephrology, Osaka University Graduate School of Medicine)

**Tae Shimada** (National Health Insurance and Pension Division, Public Health and Welfare Department, Public Health and Welfare Bureau, Okayama City)

**Tomohito Miyake** (Chief, Health Promotion Section, Health Promotion Division, Health and Medical Care Department, Okayama Prefecture)

**Moderator:**

**Eri Yoshimura** (Senior Manager, Health and Global Policy Institute)

**The estimated number of people living with CKD increased in 2024**

- One potential issue is that estimating the number of CKD patients among people receiving health checkups may result in underestimation because people who attend health checkups tend to be highly health-conscious, and this can lead to a strong selection bias. To address this, a study was conducted to calculate CKD prevalence while taking factors like health checkup attendance history into account. It estimated that there are approx. 20 million CKD patients, or 1 in 5 adults, which is significantly higher than the previous estimate of approx. 13.3 million, or 1 in 8 adults (in 2024).[4] When considering reasons for the increase in the number of CKD patients, in addition to the impact of population aging, health checkup uptake must also be taken into consideration. Furthermore, an unpublished study using data from the Japan Health Insurance Association (JHIA) estimated that as many as 17.08% of working adults between the ages of 30 and 64 may have CKD.

**The significance of health checkups for early CKD detection**

- Urinalysis is a mandatory health checkup item and, based on the judgment of the physician conducting the checkup, serum creatinine is measured to monitor kidney function with a high degree of accuracy. Among some municipalities and employee health insurance providers, serum creatinine testing is a mandatory checkup item.

[4] Kobayashi A, Hirano K, Okuda T, Ikenoue T, Yokoo T, Fukuma S. Estimating the prevalence of chronic kidney disease in the older population using health screening data in Japan. Clin Exp Nephrol. 2025 Mar;29(3):276-282.

Serum creatinine is produced by the muscles, filtered by the kidneys, and excreted in urine. The impact of muscle mass means serum creatinine reference values are slightly higher for men and lower for women and senior citizens, so measured values are not necessarily proportional to kidney function. As such, CKD is not diagnosed by serum creatinine; it is diagnosed by estimated Glomerular Filtration Rate (eGFR), which is calculated from serum creatinine. To prevent progression to End-Stage Renal Disease (ESRD), the rate of eGFR decline should be monitored appropriately and slowed to the greatest extent possible through blood pressure management and nutritional therapy.

- A study conducted in Osaka Prefecture used municipal health checkup data to find that people who had yet to receive health checkups or undergo kidney function examination faced a higher risk of ESRD than those who had received health checkups. To detect CKD early, the number of people who receive health checkups should be increased, screening should be strengthened, and steps should be taken to thoroughly provide early interventions through specific health guidance and recommendations for medical examination.

**The effects of specific health guidance on encouraging people to visit health institutions**

- A survey that examined uptake for specific health checkups and specific health guidance in each region of Osaka Prefecture found that uptake for specific health guidance was low (under 5%) in two municipalities despite there being no significant difference in specific health checkup uptake compared to other regions. Those two municipalities have shorter life expectancies and extremely high prevalence for diabetes, hypertension, lipid abnormalities, renal failure, cerebrovascular disease, and heart disease. Low specific health guidance uptake may be impacting these circumstances and causing regional health disparities. Research data that is currently being compiled suggests that specific health guidance has a certain degree of effect in encouraging people to attend medical examinations. Specifically, one study examined if patients who received recommendations for medical examination after specific health guidance visited a health institution within six months. Around 80% of people in areas with high uptake visited a health institution compared to approx. 50% for those in areas with low uptake. As this example shows, gaps among regions and links between specific health guidance uptake and health institution attendance rates have been observed.

**Methods of enhancing the impact of recommendations for medical examination/specific health checkups and reinforcing health checkup attendance and adherence**

- In Okayama Prefecture, health education materials are being created to enhance the impact of recommendations for medical examination and specific health guidance. They include materials on how CKD is related to various health conditions or lifestyle diseases, like “Diabetes and CKD,” “Smoking and CKD,” and “Frailty and CKD,” and aim to provide health guidance tailored to each target group.

- While referring to the Japanese Society of Nephrology’s *Lifestyle and Dietary Guidance Manual for CKD* and *Dietary Therapy Standards for CKD*, Okayama Prefecture developed the “CKD Management Notebook” to distribute to people identified as at-risk for CKD in specific health checkups conducted by local governments in Okayama Prefecture, as well as to people who are eligible for measures aiming to prevent advanced cases of diabetic nephropathy. With it, people plot their CKD status on classification tables divided into red, yellow, and green to grasp the degree of progression of their condition in objective terms. Public health nurses use it to show people where their eGFR is in terms of CKD classification and to teach them what goals to set. Users have shared feedback like, “I would like to start by studying it on my own,” or “I want to know what it says, so please send it.”

The CKD Notebook has also been distributed to primary care physicians, so in addition to serving as a self-check tool for people to monitor their own kidney function, it is also being used as a tool for collaboration between primary care physicians and nephrologists. This aspect of the CKD Notebook has been highly evaluated by health institutions.

- Okayama Prefecture has compiled a handbook on concepts for effective follow-up for people whose specific health checkups identify them at-risk for CKD. It is titled, "Specific health checkup and Health Guidance Handbook: CKD Follow-up and Control Edition," and it is being provided to municipal governments in the prefecture to use as a point of reference. It describes how to classify and stratify people into three groups (those who require recommendations for medical examinations, enhanced health guidance, or enhanced information support) based on results from specific health checkups (eGFR values and number of risk factors for declined kidney function such as blood glucose, blood pressure, lipids, and uric acid), outlines step-by-step intervention methods for each group, encourages providing health guidance with educational materials, and shares guidance methods for each step. Specific methods introduced in Okayama City are as follows.

    - The eligible ranges for recommendations for medical examination are "urinary protein (+) or higher with eGFR below 90, or eGFR below 45" or "blood pressure, blood glucose, and lipid levels above standard values due to decreased kidney function." In addition to recommendations for medical examination sent separately by mail, in-person or telephone health consultations from public health nurses or nutritionists are also made available to eligible parties who want them. CKD management notebooks are also being distributed to eligible parties.
    - The eligible ranges for follow-up health guidance are "eGFR below 60 and at least two additional risks (defined as blood pressure, blood glucose, lipids, or uric acid of above standard values), or eGFR below 90 and at least three additional risks (excluding people eligible for specific health guidance and taking medication)." This group is directly provided with health guidance. Eligible parties are mailed directions on follow-up health guidance, and individual health guidance is provided by public health nurses or nutritionists to those who want it. Follow-up is also provided at six months. This guidance begins with an explanation using a check sheet to encourage awareness and understanding of the degree of kidney function decline. After building an understanding of which diseases might emerge as kidney function declines, guidance recipients are then told about diet and exercise therapy options to prevent their case from advancing. Many of the people who wish to receive health guidance are senior citizens with well-established lifestyle habits but who are also keenly aware of health issues. Therefore, this guidance aims to achieve lifestyle improvements by covering key points to keep in mind and items that can be addressed with specific actions. In the future, Okayama Prefecture would like to examine strengthening health guidance for working adults in their 50s and 60s.
    - The eligible ranges for enhanced information support are "eGFR below 60 and 0 or 1 additional risk factors, or eGFR below 90 and 1 to 2 additional risk factors." Eligible parties are sent educational texts on lifestyle diseases, how to interpret eGFR values, and CKD prevention.
    - Okayama City is also conducting evaluations on the results of the three approaches described above. In FY2023, a total of 1,006 people were eligible for recommendations for medical examination (325 with possible kidney function decline; 681 who were eligible for other reasons), and 84.1% of them were linked to medical treatment. This

result was obtained by using the Kokuho Database (KDB) system to check the treatment status of all eligible participants who received recommendations for medical examinations. Furthermore, public health nurses from each health center cooperated and collaborated with the health department to make in-person visits to high-risk individuals among those eligible for recommendations for medical examination. This is likely to have been a factor that contributed to high uptake for medical examinations. As for follow-up health guidance, a total of 747 people were eligible in FY2023. Among them, 43 people sought guidance, and 65.9% of that group maintained or improved their health status in checkup results the following year.

- In Okayama City, people eligible for medical consultations on CKD are told repeatedly each year that their kidney function may decline, and those who do not visit a health institution receive multiple recommendations to attend medical examinations. While it may be annoying to receive such recommendations multiple times, based on the recognition that it is important for people to recognize this risk as a problem they must address, Okayama City plans to continue these activities in the future.

**Making efficient and effective use of healthcare human resources in providing recommendations for medical examination or specific health guidance**

- While expectations are high for the role of public health nurses in providing recommendations for medical examinations and specific health guidance, public health nurses are a limited resource. The methods and frequency of providing those recommendations should be graded according to CKD risk, and interventions should be provided in a stepwise and efficient manner.

- The roles of occupational physicians should be reinforced to respond to CKD in working-age adults. At workplaces where health checkup data is accumulated over time, tracking changes in eGFR and its rate of decline or using information obtained from other health checkups to adjust the frequency of recommendations for medical checkup (e.g. from once per year to once every few years) could help occupational physicians provide patients and primary care physicians with information or referrals in a timely manner. This would let them make sure that health checkup attendance is not burdensome for patients or that effective use of local medical resources is being made.

**Good examples from local governments**

At this meeting, Okayama Prefecture and Okayama City shared information about innovative initiatives in areas other than items spanning the period from health checkups to recommendations for medical examinations or health guidance. Their good examples are as follows.

**Okayama Prefecture**

- Establishing a joint conference body for CKD and cardiovascular disease (CVD)
  Okayama Prefecture's Expert Committee for CKD and CVD Control was established in 2012. A cooperative system has been established at this expert committee and it provides policy recommendations and advice to the prefecture. Specially, to prevent advanced cases of diabetic nephropathy and extend healthy life expectancy for residents of Okayama Prefecture, its activities include building public awareness by hosting seminars and disseminating information; providing recipients of specific health checkups with early detection and intervention for CKD; and conducting surveys and research on the number of new and existing dialysis patients.
- Promoting collaboration among primary care physicians and nephrologists
  Okayama Prefecture has been divided into several regions and CKD networks have been

established in each region. These networks facilitate medical collaboration among primary care physicians and facilities specializing in nephrology and provide care that is tailored to patients' conditions.

- Formulating policies based on data analysis
  Data analysis on lifestyle diseases such as diabetes, hypertension, and CKD in Okayama Prefecture and each of its municipalities is conducted using the KDB to ascertain the disease profile of each municipality. Medical claims data is also analyzed to identify people on dialysis or predialysis patients with renal failure so they can be counted and so healthcare expenditures for these groups per municipality can be calculated.
- Raising awareness among prefecture residents
  To mark World Kidney Day (which is the second Thursday every March), Okayama Prefecture raises awareness among prefecture residents through public lectures, appearances on terrestrial news programs, posting banners, and posting information with digital signage at spots with foot traffic (major commercial facilities, train stations, buses, etc.). Paying close attention to the movement patterns of prefecture residents over the course of everyday life, the Okayama Prefectural government strives to present information to people from all walks of life. There are also efforts to raise public awareness of specific health checkups, but in the future, this will require further actions using nudge theory and similar methods.

**Okayama City**

- Improving specific health checkup attendance rates
  Aiming to maintain sound NHI system operations and to optimize healthcare spending, Okayama City is implementing measures under two pillars: those for improving specific health checkup uptake and those for CKD control. While specific health checkup attendance was 30.3% in 2019, it fell to 27.3% in 2020 due to the effects of the COVID-19 pandemic. In response, Okayama City introduced priority measures in 2021 that included contacting eligible parties through postcards, social media, and other means to provide recommendations for medical examination. Okayama City also asked each health institution to invite patients to health checkups. As a result, checkup attendance rates were 32.2% in FY2021 and 32.1% in FY2022, and its measures enabled Okayama City to maintain and improve upon this standard in FY2023.
- Formulating policies based on data analysis
  A 2010 healthcare expenditures analysis conducted by Okayama City NHI found that introducing CKD control measures were likely to help curb medical expenditures, which led the city to strengthen them. Serum creatinine, total cholesterol, and uric acid testing were made mandatory parts of specific health checkups in FY2011. To prevent advanced cases of CKD and the development of renal failure among people at risk of declined kidney function and at high risk of hypertension or other lifestyle diseases, Okayama City established an integrated system for strengthening specific health guidance and recommendations for medical examination, and it is engaged in efforts to continuously improve that system through the PDCA cycle.
- Raising awareness among city residents
  Okayama City takes part in the prefectural government's efforts for World Kidney Day and conducts an independent awareness campaign that includes distributing pamphlets at train stations and publishing articles to raise awareness in channels like the city's PR magazine. In addition to building recognition of CKD as a familiar disease among residents and for the importance for primary care physicians to encourage patients to adhere to medical examinations, Okayama City also recognizes the need to educate family members and others close to those with CKD to prevent people from dropping out of treatment. They aim to continue efforts to raise awareness so CKD can be recognized as a problem in the city and

prefecture, as well as throughout Japan.

**Organic collaboration between Okayama Prefecture and municipalities in in Okayama**

- In Okayama Prefecture, there is an organic division of roles as well as organic collaboration between the prefectural and municipal governments. A CKD network for collaboration among medical associations and nephrologists has been built under the leadership of the prefectural government. Municipal governments are responsible for providing people with timely recommendations for medical examinations which are then followed by coordinated treatment through the CKD network. This arrangement is making great contributions to the broad acceptance of CKD patients in the region. The prefectural and municipal governments also host an annual joint workshop where municipalities can exchange information on CKD control. These meetings allow them to brush up CKD measures every year by sharing best practices from municipalities, health expenditure analysis findings, and challenges. They also provide opportunities for the prefectural government to gather opinions. As part of the NHI Level Up Project, meetings are also being held to evaluate and share advice on municipal health action plans. To promote municipal governments' efforts, the prefectural government has created and is encouraging the use of materials for raising awareness and providing health guidance. The prefectural government's Expert Committee for CKD and CVD Control is also sharing information from meetings focused on CVD and is examining integrated and cross-cutting measures for those diseases. This leadership from the prefecture is having real positive effects on policy implementation among municipalities.

**The growing need for CKD measures targeting working-age adults**

- It is estimated that about 2.5 million working-age adults under age 65 have CKD, and among the nearly 40,000 people who begin dialysis each year (36,115 at the end of 2023), around 10,000 (9,459 at the end of 2023) are under age 65. As hemodialysis requires three 4-hour sessions per week, it results in an unavoidable reduction of working hours.[5] In one region, about 80% of senior citizens attend medical examinations after receiving a recommendation for medical examination after a health checkup, but this rate is low among working-age adults. For example, among men ages 40 to 49 who need an examination at a health institution, only about 30% of them attend one.[6]

- Risk factors for CKD progression include long working hours and overnight shifts. Other work-related factors like sleep deprivation and insufficient exercise are also known to contribute to the onset and progression of CKD. Additionally, working in extreme heat or humidity like Japan has experienced in recent years can cause dehydration and rapid kidney function decline, and certain chemicals can also harm the kidneys. This means measures from the perspective of occupational health and safety are also necessary. CKD control requires all-of-society efforts starting with employers and insurers.

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[5] The Japanese Society for Dialysis Therapy. "Annual dialysis data report 2023, JSDT Renal Data Registry (as of December 13, 2023." Calculated by HGPI based on data in Supplementary Table 14. https://docs.jsdt.or.jp/overview/file/2023/add/03.pdf. Last retrieved on March 24, 2025.

[6] Health Promotion Division, Health and Medical Services Department, Health and Medical Services Office, Osaka Prefectural Government. "Regarding Findings of Survey of Prefectural Residents for the Osaka Prefectural Health Promotion Plan Final Evaluation." https://www.pref.osaka.lg.jp/o100070/kenkozukuri/kenkouzousinkeikaku/index.html. Last retrieved on April 9, 2025.

**CKD control measures from the JHIA**

- With 40 million members, or about one-third of the national population, the JHIA is Japan's largest insurer. Its members also include employees of small, medium, and micro enterprises. Over half of the companies that belong to the JHIA have two or fewer employees, while about 90% have less than 30 employees. This means most of the companies in the JHIA do not staff occupational physicians, public health nurses, or other healthcare professionals, and this is also the root of issues related to elevating health literacy among employees.

- One of JHIA's key initiatives is conducting checkups focusing on lifestyle disease prevention in place of routine health checkups by subsidizing a package that includes some extra items like cancer screening. Serum creatinine testing is conducted as a mandatory item for everyone who receives those checkups, resulting in thorough CKD screening. In another initiative, JHIA is addressing cases in which people do not attend medical examinations even when they receive a recommendation to do so after a health checkup. About 10 million people receive health checkups each year through JHIA and approx. 1 million people among that group end up needing further examinations. Thanks to efforts from health institutions or organizations belonging to JHIA, about half of them receive a more detailed examination, but the rest do not attend an additional examination. The JHIA defines anyone whose medical claims data shows they have not attended a medical examination within three months of receiving a recommendation to attend one as an "individual who has not attended a medical examination at a health institution," and it sends notices directly to those individuals. Those notices include test values obtained during the health checkup and can be shared as-is with a health institution. However, among those who receive those notices, only about 15% attend a medical examination, and those who receive multiple notices over time tend to develop even higher rates of nonattendance. As this is a bedrock issue, measures to address it should be strengthened.


**5. Discussion 2 "The Role and Challenges of Primary Care Physicians in Promoting CKD Control"**
**Purpose of this panel discussion**

It is very important that people who are found to be at-risk for CKD through health checkups and other examinations receive ongoing treatment at the right times after seeing their primary care physicians, and for primary care physicians to engage in timely collaboration with nephrologists. However, there are a number of challenges facing efforts to treat CKD in communities, such as the fact that CKD treatment guidelines for primary care physicians are not yet well established, that some treatment environments may be ill-equipped to conduct urinalysis, and that paramedical personnel like nutritionists or Kidney Disease Treatment Advisors are unevenly distributed or too few in number. It is also important for nephrologists to provide follow-up on CKD interventions for patients receiving treatments outside of nephrology (such as for diabetes and hypertension), and for nephrologists to collaborate with the health professionals providing those treatments. This panel discussion examined the ideal structure of multidisciplinary cooperation in communities and necessary measures for predialysis patients, focusing on the roles of primary care physicians in the early detection and intervention of CKD in communities and in multidisciplinary collaborative efforts.

**Panelists:**
**Hidehito Imamura** (Executive Director, Japan Medical Association / President, Jiaikai)
**Keiko Uchida** (Medical Director, Shinjin-kai Yokosuka Clinic)
**Kazuo Kobayashi** (Japan Physicians Association / Director, Kobayashi Internal Medicine Clinic)
**Yurika Hosogoe** (Person living with kidney disease)

**Moderator:**
**Ryoji Noritake** (Chair, Health and Global Policy Institute)

**Expectations for occupational health in strengthening recommendations for medical examination**

- While one challenge is motivating people to attend medical examinations after health checkups, among working-age adults, medical examination uptake varies according to the size of their respective employers and levels of commitment to kidney disease prevention among employers and insurers. These variations may impact employee health later in life. To address this, we should consider methods of providing recommendations for medical examination that carry a certain degree of authority. For example, one company actively engaged in health promotion motivates employees to attend examinations by reflecting post-checkup health institution attendance in employee performance evaluations. During the early stages of CKD, when there are few subjective symptoms, even one visit to a nephrologist per year can help extend the predialysis phase of CKD without alternative therapies.

**Expectations for the roles and functions of primary care physicians**

- In recent years, the number of people at-risk for CKD has been on an upward trend, but in practice, it has been demonstrated that 45% of people who visit a primary care physician have CKD.[7] Given these circumstances, physicians who do not serve as primary care physicians or those who are not internists should recognize that patients may have comorbid CKD or that patients with CKD may worsen when providing treatments for pollen allergies, colds, skin conditions, eye diseases, non-communicable diseases, and other health concerns. They should possess the knowledge and capacity to detect potential cases of CKD in routine care and refer

[7] Kobayashi K, Miyakawa M, Sato K, Yasuda T, Kimura K. "Chronic kidney disease in non-diabetic and non-hypertensive patients attending primary care physicians." Journal of Blood Pressure. 2015, 22 (12), 923-928.

patients to nephrologists, and be able to make full use of the function of primary care.

- Since many people younger than age 40 do not have a primary care physician, it will be reassuring for patients to have a system in place that lets them feel certain they will be referred to and treated by a nephrologist, no matter which department they visit for a medical examination after a checkup.

- The July 2024 report of the Subcommittee on Implementing Systems to Utilize Primary Care Physician Functions includes enhancing education and training for physicians to ensure the availability of primary care physician services needed in communities, but in the future, it will be necessary to consider the priority of CKD-related content in educational programs on primary care physician services. Just as blood pressure has become widely perceived as CVD-related, in the future, it is desirable that a similar recognition that "metabolic syndrome is related to diabetes, CVD, and CKD" is built among the general public. The Japan Medical Association (JMA) should play a central role in cooperation with other societies in non-communicable diseases like CVDs, diabetes, and cancer while fostering mutual learning on innovative efforts to promote cross-cutting kidney disease control measures.

- Even when someone has a health concern other than kidney disease, because kidney function affects how many medicines are metabolized or excreted, it is essential to assess kidney function when prescribing medications.[8] However, a survey on kidney function assessments at time of prescription in one region found that approx. 20% of eligible people were notified about kidney function when receiving a prescription, which suggests that some physicians are issuing prescriptions without assessing kidney function.[9] In addition to physicians, when providing care, it will be necessary for pharmacists, nurses, and other healthcare providers across professions to also keep their antennas up with regards to kidney function.

- To improve CKD awareness among physicians other than nephrologists, there are high expectations for academic societies to take the lead and produce estimates of the future number of CKD patients based on demographic changes over the next 20 to 40 years and beyond, and to create and disseminate data that objectively shows the urgent need for CKD control.

- In dietary therapy for CKD, patients must maintain appropriate energy and protein levels in their diet, and this often results in enormous psychological burdens.[10] However, few primary care physicians employ nutritionists to provide dietary therapy to people with CKD or diabetes,[11] and there are more than a few cases in which primary care physicians provide perfunctory dietary guidance on their own even without sufficient expertise on nutrition. Guidance that is provided in a uniform, routine manner can lower patient motivation toward diet and therapy and may increase the risk of symptoms deteriorating. This means it is essential to provide more patient-oriented guidance that reflects the personality of the person

[8] Japanese Society of Nephrology. "Evidence-based Clinical Practice Guidebook for Diagnosis and Treatment of Chronic Kidney Disease 2024." Chapter 12, notes on drug therapy. Tokyo Igaku-sha. 2025. https://cdn.jsn.or.jp/medic/guideline/pdf/guide/viewer.html?file=1-178_v2.pdf. Last retrieved on April 8, 2025.

[9] Kobayashi, K. "Questionnaire survey to practicing physicians in Sagamihara City regarding assessment of renal function during drug administration." Japanese Journal of Nephrology. 2018, 60(2), 141-148.

[10] Japanese Society of Nephrology. (2014) "Dietary Therapy Standards for CKD, 2014 ed." https://cdn.jsn.or.jp/guideline/pdf/CKD-Dietaryrecommendations2014.pdf. Last retrieved on April 8, 2025.

[11] Kobayashi K. "Dietary therapy provided by primary care physicians for chronic kidney disease." Kidney and Dialysis. 2010, 86(4), 415-420.

in question or their family members. Regarding this point, in the future, as sincere efforts from primary care physicians who already have established relationships will be significant, there are high expectations for them to actively collaborate with nephrologists or nutritionists to contribute to dietary therapy.

- In addition to medical examinations, primary care physicians provide a variety of other services from prevention to treatment, including health checkups and vaccinations. This means they have many opportunities to see patients and build familiarity with them. Holding casual conversations with patients makes it easy for primary care physicians to gather holistic patient information for items outside of health examinations, such as their health management practices, supplement intake, or family history. Information obtained through everyday communication should be used to raise awareness on and treat CKD.

**Collaboration among health professionals in CKD treatment (from the perspectives of primary care physicians and nephrologists)**

- CKD treatment requires primary care physicians and nephrologists to engage in organic collaboration with a proper division of roles. Their roles should be determined according to each professional's respective strengths and weaknesses. For example, the management of blood pressure or renal anemia might be specialties of primary care physicians, while electrolyte management, guidance when starting dialysis, and dietary therapy are generally more likely to be specialties of nephrologists. Studies have also found that in-person, trusting relationships between primary care physicians and nephrologists are effective at facilitating collaboration in diagnosis and treatment. Rather than primary care physicians acquiring the knowledge of nephrologists, it is effective for these parties to engage in mutual collaboration in communities with an appropriate division of roles in place.

- Perspectives of primary care physicians on collaboration with nephrologists
  - The characteristics of CKD make it difficult for primary care physicians to interpret health checkup and laboratory data, as well health checkup results when patients are asymptomatic (or, in the gray zone). As a result, they may not be able to always refer patients to nephrologists when appropriate or provide patients with suitable explanations. While the Japanese Society of Nephrology's *Evidence-based Clinical Practice Guidebook for Diagnosis and Treatment of Chronic Kidney Disease* is regularly updated and indicates the appropriate frequency to refer patients to nephrologists per condition, it can difficult for primary care physicians to diagnose CKD, such as when there are mild symptoms (like swelling), or when test results are slightly above reference values.
  - Primary care physicians encounter difficulties in standardizing appropriate follow-up procedures after making referrals, and they are oftentimes left to rely on trial and error. Nephrologists who receive referrals should be diligent about communication and collaboration with primary care physicians and avoid letting busy schedules prevent them from tasks like providing treatment plans.

- Perspectives of nephrologists on collaboration with primary care physicians
  - There are often cases in which nephrologists want to collaborate with primary care physicians to provide patients with ongoing treatment, but they are unable to take part the next time the patient is seen or encounter extended delays in seeing the patient again. Nephrologists should be informed of the root causes of these issues—for example, if they are issues for individual patients, if symptoms or treatment plans were not fully communicated to the primary care physician, or if there are problems on the primary care physician's end—so that collaboration among physicians can be improved.

**Necessary support systems from the perspectives of predialysis CKD patients and other affected parties**

- **The necessary kidney disease control measures for those most affected**
  - CKD is difficult to cure completely and some patients may improve slightly with treatment, but in many cases, their only options are to maintain their current condition or prevent their condition from growing more severe. For some patients, this can result in heavy psychological burdens. Also, depending on their CKD stage and personal symptoms, patients may have no choice but to adhere to strict dietary restrictions. They need more opportunities to share their worries or frustrations with each other and for peer support to be enhanced.
  - For people living with CKD, dietary therapy begins the day instructions are given and continues 24 hours a day, 365 days a year. Even when someone is given instructions on proper caloric, protein, and sodium chloride equivalent intake, it is difficult for them to implement dietary therapy on their own. Such people require a framework or systems that provide thorough education on appropriate dietary habits. Dietary therapy also impacts patients' lives. Many patients experience mental distress over the loss of their ability to enjoy food due to permanent restrictions on diet, travel, or dining out. Such psychological burdens can lead to mental illnesses and even undernutrition caused by anxiety or a fear of food itself. This means there is an urgent need for collaboration among nutritionists and physicians and to create systems with the capacity to also support mental health.
  - Physicians are not perfect; they are only human and must engage in repeated trial and error while providing treatment. Patients should understand this and learn to view physicians as equals that will advance care alongside them. That understanding will facilitate treatment and continuous management.

- **Support systems underpinned by multidisciplinary collaboration**
  - There is an ongoing trend in which specialists are working to build support systems that are centered on patients and cut across diseases to "transition from healthcare that treats to healthcare that supports" through multidisciplinary cooperation and team treatment. While there are disparities among regions, hospitals, and departments, in the future, there will be an even greater need for efforts to ensure healthcare is high-quality through mutual collaboration among specialists. There are times when patients cannot express their true feelings to physicians but can share them when communicating with paramedical staff like nurses and nutritionists, and many patients feel more secure when they know that they are being supported and watched over by many specialists.
  - Steps must be taken to highlight which health institutions in each community have staff with expertise in kidney disease including nurses, pharmacists, or Kidney Disease Treatment Advisors. There is also a need for systems tailored to each community and that provide patients with easy access to the information and support they need to receive medical examinations and consultations.
  - To encourage them to continue treatment, predialysis patients with CKD are sometimes offered words like, "Do your best to avoid the need for dialysis." However, when someone starts to need it after developing an excessive fear of it, they may begin to feel hopeless, and that can impact QOL later on. The quality of dialysis in Japan is world-class, and consideration must be given to effective guidance methods with the premise that patients will continue to try to live true to themselves, even after starting dialysis.

**Reinforcing CKD control systems that involve all of society**

- With sights set on outcomes that improve QOL for patients and citizens, we must create frameworks for promoting CKD prevention, early intervention, and response as important all-of-society initiatives. In addition to considering quantitative costs like healthcare expenditures, achieving this will also require perspectives on QOL and social productivity for patients and citizens. We should start a virtuous circle with the long-term aim of reducing costs for society as a whole while ensuring well-being for patients and citizens. This will require active collaboration among industry, government, academia, and civil society to contemplate systems in which these stakeholders make mutual use of each other's knowledge and expertise to enable integrated support from prevention to treatment and social reintegration.

## 6. Discussion 3 "The Role of Central Government in Furthering CKD Control Measures at the Municipal Level"

**Purpose of this panel discussion**

A growing number of local governments are introducing measures for CKD. The content of those measures is developing according to issues in each region, and they are being adopted by other areas nearby. However, the absence of a national law with a high degree of authority means that CKD measures are sometimes inequitable, so both the national Government and local governments must continue working together to promote CKD control. In this panel discussion, we shared and disseminated precedents in municipal CKD control measures, lessons learned, and challenges faced by local governments. We also held an in-depth discussion on solutions and policy promotion.

**Panelists:**

**Mariko Ogawa** (Technical Chief, Health Promotion Section, Health and Medical Affairs Division, Health and Welfare Department, Gifu Prefecture)
**Naoki Nakagawa** (Professor, Division of Cardiology and Nephrology, Department of Medicine, Asahikawa Medical University)
**Hiromi Mitsubayashi** (Member, House of Representatives)
**Motoyasu Yamazaki** (Executive Director for Medical Affairs, General Affairs Office, Health and Medical Care Bureau, Kanagawa Prefecture)

**Moderator:**

**Eri Yoshimura** (Senior Manager, Health and Global Policy Institute)

**Developments in the national Government's kidney disease policies**

- In the legislature, work on kidney disease control measures is underway at the LDP Parliamentary Association for Kidney Disease Control chaired by former Minister of Health, Labour and Welfare Norihisa Tamura. Also, in October 2023, the MHLW's Kidney Disease Control Review Meeting presented a report titled, "Interim Evaluation and Future Measures." By implementing thorough measures to prevent advanced cases of kidney disease from developing, the national Government aims to reduce the number of new dialysis patients from 40,000 per year to 35,000 per year, but their numbers remain unchanged. Reasons behind this are the difficulty in standardizing methods to prevent advanced cases and insufficient collaboration among primary care physicians and nephrologists.

- The underlying causes of CKD are diverse, with the top three most prevalent being diabetic nephropathy, chronic glomerulonephritis, and nephrosclerosis. While strengthening measures for diabetic nephropathy, measures to strengthen hypertension management will also be necessary to address the recent increase in nephrosclerosis. Steps must be taken to help people with chronic renal failure in the predialysis phase maintain their conditions and delay the onset of dialysis as long as possible.[12]

**Promoting collaboration in regions (namely, multidisciplinary cooperation and collaboration among primary care physicians and nephrologists)**

- A particularly important step in improving healthcare provision systems in communities will be ensuring collaboration among primary care physicians and nephrologists, especially from the

[12] The Japanese Society for Dialysis Therapy. "Annual dialysis data report 2023, JSDT Renal Data Registry (as of December 31, 2023)," (Fig. 10) Primary diseases among chronic dialysis patients by prevalence (1983-2023). https://docs.jsdt.or.jp/overview/file/2023/pdf/02.pdf. Last retrieved on March 25, 2025.

initial stage of CKD. Ongoing support from the national Government will be needed to build a system that facilitates such collaboration. In addition, preventing advanced cases of CKD requires dietary therapy (such as protein intake management), and diabetic nephropathy requires even more complex nutritional management, so nurses, public health nurses, nutritionists, pharmacists, and other paramedical professionals must be trained so holistic responses to CKD can be provided.

- Regarding collaboration among primary care physicians and nephrologists, certain prefectures (including Kumamoto, Fukushima, and Chiba) have introduced systems in which primary care physicians who meet certain criteria (namely, that they have attended lectures from local nephrologists and are certified by a medical association) are registered as "Cooperating CKD Control Physicians," and can receive patient referrals. They are working to refer patients to nephrologists when appropriate tests on specified items have been conducted and referral criteria have been met. Discussions examining the possibility of expanding this program nationwide have now begun.

**Good examples from local governments**

**Kanagawa Prefecture**

- Backdrop for efforts to promote kidney disease measures
  - Two factors have made Kanagawa Prefecture a leader in kidney disease policy. The first is that the Governor has a strong personal interest in the field of kidney disease. Since his inauguration, the Governor has advocated for the concept of "Me-Byo," which posits that health is a continuous gradation with no fine line between good and bad health, and that based on this concept, people must remain vigilant about disease, even when healthy. This is fully compatible with CKD management, in which people must remain vigilant about declines in their eGFR, even without subjective symptoms. The second reason is that there is a high degree of enthusiasm toward CKD control among healthcare professionals at universities in Kanagawa Prefecture and they lent their cooperation to the administration. The goals of the Governor and the healthcare professionals are well matched.

- Applying the results of diabetes prevention efforts to CKD
  - The number of people starting dialysis because of diabetes is decreasing, and this may be one result of the Kanagawa Prefectural government's efforts to prevent advanced diabetes. Ahead of World Diabetes Day in November 2023, the Governor, the president of Kanagawa Prefecture Medical Association, and a director of the Kanagawa Prefecture Medical Association who specializes in diabetes held a joint press conference on the results of that initiative. Holding a press conference together allowed the Governor and the medical association to display that they have built a cooperative relationship and are united in their efforts.
  - Given the success of the program for advanced diabetes prevention, Kanagawa Prefecture is applying the same scheme to CKD control. The prefecture has formulated a CKD collaboration model that uses an expanded group of people eligible for the diabetes prevention program as well as people with hypertension that will be linked to collaboration in the region. People with diabetes will be connected to diabetes specialists and people with CKD will be connected to their primary care physicians or nephrologists. Kanagawa Prefecture's successful experience with diabetes control resulted in natural momentum to advance similar measures for CKD.
  - It is difficult to single out any one measure as the key to the success of the advanced diabetes prevention program, and the impact of recent advances in diabetes treatment

also cannot be ignored. In the first place, it is difficult and time-consuming to demonstrate the quantitative effects of measures for prevention or implemented in the me-byo phase. Efforts similar to those that reduced the number of people starting dialysis due to diabetes in Kanagawa Prefecture should be introduced to produce tangible effects for CKD, but in the future, Kanagawa Prefecture would like to further examine methods of presenting outcomes.

- Efforts to strengthen recommendations for medical examination are still in the preparation phase
  - Kanagawa Prefecture is currently considering the possibility of building a system in which the government also tracks progress for people whose specific health checkups find they may have CKD and require a medical examination, and which connects them to primary care physicians or nephrologists. They are currently making arrangements to launch that system in certain municipalities in the prefecture. They have high hopes of developing good model regions so their best practices can be spread throughout Kanagawa Prefecture.

**Asahikawa City, Hokkaido and nearby towns**

- Backdrop for efforts to promote kidney disease measures
  - Asahikawa City was selected to take part in the 2024 MHLW Model Project for the Establishment of a Treatment System and Multidisciplinary Collaboration for Severe CKD Prevention. When creating its severe diabetic nephropathy prevention program, a CKD prevention program was also created in Asahikawa City and nine nearby towns. This made it easier for residents of the surrounding towns to receive referrals to healthcare institutions in Asahikawa City.
  - To maintain the quality of this program, meetings on case studies are held multiple times per year. They are attended by local specialists including nephrologists, diabetes specialists, government public health nurses, and nutritionists. These meetings are descended from the "Voluntary Study Group on Activities for Health" meetings held throughout Japan by public health nurses and dietitians. There are many people in Hokkaido who have led meetings of those study groups who are collaborating in current efforts. Requirements of this model project include building collaborative relationships with parties like health insurance associations or facilities that conduct health checkups, and participants would like to do so in the future.

- Impacts of these measures
  - Public health nurses and dietitians involved in the region's CKD measures try to treat local residents like family and are diligent in their efforts. Physicians examine people in hospitals after they have already developed CKD, but government public health nurses and nutritionists focus on convincing people with CKD and no subjective symptoms to seek medical attention. They make repeated home visits to provide thorough explanations on topics like kidney function as well as guidance to connect people to healthcare. These slow but steady efforts are beginning to show remarkable results; while the number of new dialysis patients continues to increase nationwide, particularly among men age 75 and over, Hokkaido has seen a major decrease.
  - Smaller municipalities like the ones near Asahikawa City offer the advantage of better access to residents with less footwork. While it would be ideal if this initiative could be further expanded to neighboring municipalities, manpower limitations are likely to make it difficult to provide intensive health guidance of a similar nature in larger municipalities with populations of 10,000 people or more.

**Gifu Prefecture**

- Backdrop for efforts to promote kidney disease measures
  - Like the rest of Japan, the number of chronic dialysis patients in Gifu Prefecture has increased every year, and is now six times greater than 35 years ago. As for primary diseases, this increase has accompanied an increase in the number of people with diabetes or hypertension. Over the past decade, the number of new dialysis patients in Gifu Prefecture has remained mostly unchanged, but the number of people with diabetic nephropathy declined gradually since the 2017 launch of its severe diabetic nephropathy prevention program. Believing that measures for nephrosclerosis caused by hypertension are also necessary in addition to those for diabetes, Gifu Prefecture has taken up on the role of a flagship with the intent to build a prefecture-wide, cross-cutting system for diabetes and CKD.

- Implementing measures in accordance with a national Government report
  - Based on the 2008 report from the Kidney Disease Control Review Meeting, "The Future of Measures for Kidney Disease Control," the Gifu Prefectural government established a study group on CKD prevention measures in 2011, with the prefectural government serving as its secretariat. With Gero City—an area with few nephrologists—as a model, the study group showed how kidney disease control based on the life course can be promoted even with a shortage of nephrologists. Later, in accordance with the "Report of the Kidney Disease Control Review Meeting – Further Promoting Kidney Disease Control" presented in 2018, Gifu Prefecture once again took up the mantle of leadership for driving progress in this area in the past five years.
  - In FY2019, the first year of its initiative, Gifu Prefecture took a look back on past issues to outline the role of the prefectural government. In 2020, the Gifu Prefecture Medical Association established a Working Group on Collaboration in Healthcare to discuss how to promote understanding toward kidney disease control and to examine criteria for CKD management.
  - In 2021, directors responsible for CKD were placed at each of Gifu Prefecture's 22 regional medical associations to inform the public about the management system and to build systems for collaboration in each of their regions. They also formulated policies and other action plans while cooperating with the prefecture's Council for Promotion of CKD Control and the Council for Promotion of Diabetes Control, which were then explained to the directors responsible for CKD at the 22 regional medical associations and in 42 municipalities to illustrate how they can develop local systems.
  - In 2022, to respond to issues rooted in the uneven distribution of physicians, Gifu Prefecture established four model regions to introduce more focused countermeasures. In terms of the number of nephrologists, Gifu Prefecture is ninth from the bottom among all prefectures in Japan. There are some areas with only one nephrologist, so Gifu Prefecture thought it would be important to advance measures that take such regional characteristics into account. Consequently, it established four model regions where it is working to promote CKD control. When selecting the model regions, they were split into two categories according to regional characteristics. The first category is areas where tag teams of one medical association and one municipality can be formed. Regions where prefectural medical association physicians are directors responsible for CKD were selected to actively adopt, operate, and evaluate the prefecture's measures, as well as the tools for promoting patient understanding developed by the prefectural government.
  - The second category is for regions where one medical association includes several municipalities. The two regions selected for this category share two characteristics: they

are regions that do not contain hospitals and require CKD measures to be promoted together with other municipalities and with primary care physicians; and they are regions with steady progress in severe diabetic nephropathy prevention programs that they are expanding to encompass CKD control. In the Ena region, for example, a collaborative committee on severe diabetic nephropathy prevention was established in 2019. It also established a healthcare working team and a government working team. Both working teams decided on specific action plans and efforts to build CKD countermeasures through regional collaboration are now steadily advancing. The healthcare working team meets once every two months for case study sessions that feature lectures from the various participating professionals (including physicians, pharmacists, nurses, and public health nurses). They also share information and examine how to best structure CKD control in the region.

- At the same time, among the model regions, there are some that have encountered difficulties in maintaining their initiatives. Reasons behind this include the presence or absence of leaders who can guide the initiatives and the difficulty of collaborating with multiple agencies.

➢ Expanding the severe diabetic nephropathy prevention program to cover CKD

- Gifu Prefecture's severe diabetic nephropathy prevention program outlines the role of insurers, and it relies on those insurers to provide information to its health insurance administration council. Starting in 2022, "chronic kidney disease" has been included in contact forms for primary care physicians and the prefecture is asking them to engage in thorough collaboration for CKD in addition to diabetes. Gifu Prefecture is also working with the JHIA to begin issuing recommendations for medical examination to its members. Specifically, medical claims data at JHIA headquarters is being used to identify people who have not received a medical examination within three months of receiving a recommendation to attend one after a health checkup. Those people are reissued recommendations for medical examination. Gifu Prefecture has also introduced a unique initiative to provide recommendations for medical examination to people without medical claims data for six months. An evaluation of the past two months found that approx. 20% of those contacted through this initiative later sought treatment, so it is generating results. At the same time, a number of issues have been identified, such as the difficulty of providing continuous support or responding to citizens who do not attend medical examinations, or challenges that arise when linking data when someone moves from an employee's health insurance scheme (such as the JHIA) to NHI.

➢ Government efforts to promote multidisciplinary collaboration, such as among primary care physicians and nephrologists

- In addition to internists, many other specialists such as orthopedic surgeons serve as primary care physicians. Since they may specialize in other fields, it can be difficult for all physicians to carefully read CKD guidelines and implement them in their daily practice. To encourage collaboration among primary care physicians and nephrologists, Gifu Prefecture has sent patient referral flowcharts to primary care physicians that they can use to know at a glance when to make a referral. Some primary care physicians have expressed the opinion, "The flowchart made it easier to know the stages to collaborate with a nephrologist," while others shared comments like, "I am concerned my patient will not return after I refer them to nephrologist," or "I am concerned that if I refer so many people, it will be troublesome for the nephrologist." Meanwhile, nephrologists have expressed opinions like, "The closer the referred patients are to needing dialysis, the more advanced their cases are, so I would like them to be referred to a nephrologist at an

early stage. I would like for us to then instruct primary care physicians so they can provide patients with the proper management." In other words, rather than treating the development of collaborative tools as an endpoint in itself, to promote effective collaboration while full use is made of collaborative tools, steps must also be taken to build relationships of trust between primary care physicians and nephrologists.

- Gifu Prefecture tracks health checkup results over time and provides health guidance. During those efforts, there was a case in which the patient's eGFR had decreased and the primary care physician was asked to refer them to a nephrologist, but the physician said, "Their kidneys are still okay." The patient was not provided with a referral or intervention, and both the patient and public health nurse were left in a state of confusion. Public health nurses and nutritionists must talk to primary care physicians and build up relationships of trust so they can grasp what is truly meant when a physician says a patient is "still okay."
- Another unique characteristic of Gifu Prefecture's efforts is that the prefectural government is collaborating with a pharmaceutical association that keeps a close eye on kidney function when dispensing medicine. Pharmacists are working to promote understanding toward CKD during guidance provided when someone is being admitted to or discharged from a hospital. When doing so, they use tools developed by the prefectural government, such as an eGFR graph or stickers that denote kidney health and are placed in prescription notebooks. Pharmacists that use those tools have offered comments like, "I can confirm how well patients understand CKD, and I feel the need for further efforts to raise awareness and educate people," or "They make it easier to submit inquiries regarding prescriptions."

**Dividing roles among the prefectural government and municipal governments, and reinforcing collaboration within and among municipalities**

- The prefecture's role is to continuously visualize the initiatives of municipalities. One difficulty in advancing CKD policies is the diversity among municipalities in terms of size and administrative divisions. For example, Kanagawa Prefecture has three ordinance-designated cities, one core city, and two cities with public health centers. Taken together with the regions, this means that administration is divided into seven regions, so it is difficult to advance efforts among all of them in a concerted manner. With regions divided like this, steps must be taken to visualize and strike a balance among measures across the board in pursuit of equity.
- The positions of prefectures make it difficult for them to provide services directly to residents, so their role is to build frameworks that enable focused efforts from municipalities. In Gifu Prefecture, the prefectural government standardizes measures which municipalities then implement while reflecting their respective circumstances.
- It is effective for prefectures to take the initiative in securing budgets while municipalities collaborate with academia and nephrologists to implement measures to prevent advanced cases.
- In recent years, prefectural governments have devoted enormous efforts to healthcare digital transformation (DX). Kanagawa Prefecture recently announced the launch of efforts to establish a network of local electronic health records (EHRs) and healthcare and long-term care information at a joint press conference held by the Governor and the director of the region's core hospital. It will be useful for providing healthcare institutions with patient allergy information and for helping people access medical examinations during times of disaster or emergency. Since CKD control is in itself a form of healthcare collaboration, one role of prefectural governments may be to examine how to utilize healthcare DX as a tool for that collaboration while considering how to combine it with other policies.
- There are disparities in results among regions within certain prefectures. Raising the bar for

regions with low capacity for promoting policies can be considered a key role of prefectural governments, so in the future, it will be necessary to consider how to introduce quantitative assessments. It may also be necessary to consider items such as visualizing the state of collaboration among primary care physicians and nephrologists, evaluating cases in which patients were and were not connected to primary care physicians or nephrologists after health checkups, and comparing results with prefectural measures for CKD or other diseases.

- The smaller a municipality is, the closer its government sections (such as the one responsible for NHI and the one responsible for health guidance) can collaborate. In some cases, the same person is responsible for measures in multiple areas, and this can result in more consistent policies. Conversely, the larger a municipal government is, the more siloed its divisions, and efforts to work across sections often fail to make progress. Because there are some examples of smooth collaboration even at large municipalities, it will be important to spread their best practices to other municipalities and build effective collaboration systems.

**Future policy support expected from the national Government**

- Promoting CKD screening and treatment at healthcare facilities
  - The scope of insurance coverage for the items tested during medical examinations should be expanded. Albuminuria testing is currently covered for cases of suspected diabetic nephropathy but not for cases of suspected CKD. It will be necessary to consider granting insurance coverage to such cases to facilitate CKD screening by physicians. Furthermore, CKD cannot be fully managed with medical consultations lasting only a few minutes, so consideration should be given to updating the medical service fee schedule with new premiums for guidance on items related to everyday life like diet and exercise conditions.
  - The Primary Care Physician Function Reporting System will begin operations in April 2025. It will visualize and publicize which physicians serve as primary care physicians in each region and will make it possible to highlight which health institutions have the capacity to provide primary care for CKD. It is also within the realm of possibility that primary care physicians who do not specialize in nephrology can serve in equivalent roles by undergoing training in that field. The MHLW and the JMA must collaborate to promote and spread effective measures while referring to existing good examples.

- Reinforcing screening
  - While serum creatinine testing is not mandatory under the Industrial Safety and Health Act or the Act on Assurance of Medical Care for Elderly People, it is likely that consideration will be given to reinforcing screening in the future. CKD is also strongly linked to CVDs like heart disease and stroke. Specific health checkups are conducted to help people in middle age or their prime working years avoid the need to suddenly leave the workforce due to CVDs, and reinforcing CKD screening will be important for CVD prevention.

- Helping people balance treatment and work
  - Working-age adults with CKD require support to balance treatment and work so that they do not have to leave the workforce for reasons like treatment or recuperation. This will require strengthening patient support in workplaces and for these parties to be approached through Regional Occupational Health Centers. Work on a handbook is currently underway at a research group with a subsidy from the MHLW, and it is desirable that the handbook is adopted nationwide.

- Expanding budgets and grant programs
  - The MHLW is conducting a model project for the prevention of advanced cases of CKD that must be expanded nationwide in the future. The national Government's current budget for CKD control is approx. 200 million yen. Considering that the budget for CVD control is approx. 3 billion yen, the amount devoted to CKD control is small. In some ways, the proportion of the national budget allocated to a disease is a sign of its priority, so it will be necessary to advocate for an expansion of the budget and gradually establish an environment in which local governments can implement CKD control with peace of mind.
  - Relatively good results from Kanagawa Prefecture's diabetes control efforts have made the prefecture eligible for subsidies through the national Government's NHI Insurer Initiatives Support System. Because of this, Kanagawa Prefecture has established a framework that makes it easier for municipal governments to implement measures, and all municipalities in the prefecture have introduced programs as a result. On the other hand, municipalities generally secure budgets for CKD control by voluntarily applying through national Government subsidies, and the use of those budgets is left up to the discretion of each municipal government. There are high expectations for the establishment of indicators to evaluate efforts to optimize spending and other initiatives from insurers, and that will be applied to similar systems to further promote CKD measures.

- Creating guidelines for and improving CKD policy assessment
  - In addition to the number of new dialysis patients, Key Performance Indicators (KPIs) for kidney disease control should also cover factors that correspond to predialysis health status. The national Government should work with academia to determine what kinds of model projects are suitable and their necessary budgets, then present those KPIs.
  - While each prefecture presents the annual number of people who start dialysis due to diabetes, they do not present the number of people who start dialysis due to nephrosclerosis caused by hypertension. Given the results from Kanagawa Prefecture, in the future, each prefecture should present the number of people who start dialysis due to nephrosclerosis caused by hypertension.

## 7. Acknowledgments

We express our deepest gratitude to everyone who lent their cooperation. Please note that these recommendations were compiled by HGPI in its capacity as an independent health policy think tank, and that they do not in any way represent the views of any related party who assisted in their creation, or of the organizations to which those parties belong. 

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**Authors**
Eri Yoshimura (Senior Manager, Health and Global Policy Institute)
Nana Moriguchi (Associate, Health and Global Policy Institute)
Asako Okawa (Associate, Health and Global Policy Institute)
Yuki Goto (Program Specialist, Health and Global Policy Institute)
Kyoko Kobayashi (Project Assistant, Health and Global Policy Institute)

**Project sponsors (in Japanese syllabary order)**
AstraZeneca K.K.
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**Health and Global Policy Institute (HGPI)**
Grand Cube 3F, Otemachi Financial City, Global Business Hub Tokyo
1-9-2, Otemachi, Chiyoda-ku, Tokyo 100-0004 JAPAN
TEL: +81-3-4243-7156 FAX: +81-3-4243-7378 E-mail: info@hgpi.org

**Health and Global Policy Institute (HGPI)**
Grand Cube 3F, Otemachi Financial City, Global Business Hub Tokyo
1-9-2, Otemachi, Chiyoda-ku, Tokyo 100-0004 JAPAN
Tel: 03-4243-7156 Fax: 03-4243-7378 E-Mail: info@hgpi.org