

REVIEW

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# Sustainable development goals in nephrology nursing to support social development for Japan's changing population: recommendations for a new paradigm

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## Abstract

**Background** In accordance with the United Nations' 2030 Agenda for Sustainable Development and Japan's Diet Members Caucus on Global Health, we prepared a report and recommendations for nephrology nursing care in the context of population aging in Japan. Goals and strategies to support social activities are discussed.

**Summary** As the population continues to age in Japan, nephrology nursing must evolve to support society amid changes. We should aim for two goals: (1) the construction of a new social system to support people with kidney disease, and (2) the development of clinical nursing by securing nurses who are involved in nephrology nursing.

**Conclusions** Creating a new paradigm for nephrology nursing care in communities, creating knowledge, and advancing nursing practices for patients with renal failure care within community settings and at home, developing nurses with high expertise in nephrology nursing practice, and recognizing that nurses involved in the care of renal insufficiency will elevate the value of nephrology nursing. Promoting the role of nurses in the specialty of renal care will, in turn, heighten their ability to continue to provide support to society and contribute to its development.

**Keywords** Kidney failure, Nursing, Dialysis, Comprehensive care, Japan

## Background

In 2015, the United Nations General Assembly set the direction of the 2030 Agenda for Sustainable Development, which focuses on creating a society in which economic and social activities can be sustained well into the future. In Japan as well, there is progress toward the creation of a sustainable society through a process of trial and

error addressing the problems derived from the social conditions unique to the country [1].

In the field of nursing in Japan, the Japan Nursing Association has formulated a direction based on the Triple Impact Report from the Diet Members Caucus on Global Health. The report cites the part of universal health coverage, which states that caregivers are key actors in “ensuring healthy lives and promoting well-being for all people of all ages” and asserts that the power of nursing care will be important for the continuity of social activities in Japan. The report also confirms that the power of nursing care will be important in supporting the continuity of Japan's social activities. Furthermore, in the campaign “Nursing 2020 Now, a healthy society through the

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power of nursing!” she indicated that Goal 3, “Health and well-being for all,” Goal 5, “Achieve gender equality,” and Goal 8, “Job satisfaction and economic growth,” as the sustainable development goals (SDGs) should be embodied in the field of nursing and contribute to society [2].

We discuss specific goals and strategies for nephrology nursing to support social activities in our country based on these circumstances. The discussion includes three primary topics: (1) the state of social development in Japan, directions for achieving the SDGs as they relate to nephrology nursing, and (3) strategies for contributing to SDGs.

### State of development in Japan

Japan is a hyper-aged society, and the aging rate is about to reach 30% [3]. Similar to this trend, the average age of dialysis patients is about 70 years old, and the population continues to age [4]. As the number of people receiving renal disease treatment ages, the number of people who need not only treatment but also nursing care is increasing, and many people need support in their daily lives. As part of measures for a super-aging society, a regional medical care concept and a system of comprehensive regional support are being developed to enable people to continue to live healthy and independent lives despite the need for medical treatment and nursing care [5].

It is predicted that Japan will enter a high-death society while remaining a super-aged society. Also, with the assumption that many people will die in hospitals, it is known that the number of hospital beds is insufficient [6]. In line with this trend, regional medical institutions are also being promoted. There has been a lot of discussion about death in recent years, and it is generally accepted that it is the quality of life, not the length of life, that matters. People will continue to live in their familiar neighborhoods even though they are ill. Patients with kidney disease would want to be able to live like themselves in familiar neighborhoods. Also, they can live prosperously in the area until their last days. This requires community-based control of kidney disease in regional medical, especially urgent in areas with few medical institutions. Creating a foundation for initiatives that enable people to continue to live their normal lives until the end of their lives is what will lead to the continuation of social activities [7].

It is believed that people recovering from renal disease are also happy to continue to live as usual in their own living place throughout their lives, even though they have the disease. It is expected that they will continue their social activities as they take on roles in the community. In societies with self-contained communities, community-based nursing care will be more important than in the hospital [8]. Care for people with kidney disease should be available in region, regardless of the number of

medical facilities. We believe that the number and quality of nurses who provide care must be guaranteed.

Nurses with the knowledge and skills to guide the treatment of kidney disease are required to provide nursing care in a variety of settings, and the day will soon come when specialist nurses and certified renal failure nurses, who are specialists in renal disease nursing, will be working outside of hospitals [9].

The WHO estimates project a shortage of 9 million nurses and midwives by 2030 and a shortage of 30,000 to 130,000 nurses in Japan by 2025. Japan will need 1.96 million to 2.06 million nursing personnel by 2025, with an estimated shortage of 30,000 to 130,000 [10]. It is said that the shortage of workers in society as a whole will lead to a low-growth capitalist society [11], and furthermore, it is predicted that there will also be a shortage of nurses who are responsible for people’s lives in the community, making it difficult to provide nursing care at home [12]. In order to maintain social activities, it is necessary to improve the quality of nursing care that matches the individuality of the region along with the compact city concept that looks to improve the quality of health and welfare services by consolidating functions and raising the standard of living [13].

In order to care for elderly renal disease patients at home, it is necessary to increase the number of nurses and ensure high-quality care, but the current situation is that there is still a shortage of nurses. In Japan, despite the development of nurse center projects and efforts to find human resources the number of nurses is unstable [14, 15]. In the current situation of super-aging, declining population, and low-growth capitalism in today’s society, strategies are needed to ensure that nursing activities are fully developed for the development of society.

### Directions for achieving the SDGs as they relate to nephrology nursing

We believe that we can contribute to society by practicing nephrology nursing with the following two goals in order to continue our social activities in our country.

The construction of a new social system to support people undergoing treatment for kidney disease.  
Development of clinical nursing by securing nursing professionals involved in nephrology nursing.

### Strategies to contribute to the SDGs

**Establishment of an overall social system that responds to changes in Japan’s population and disease structure**

***Commitment to Comprehensive Care for Nephrology nursing***

Nurses should have a role in coordinating and supporting renal disease caregivers so that they can live at

home until the end of their lives, based on the direction of the vision for the regional healthcare concept [16]. Currently, the development of a system based on the characteristics of each region is underway, and it is necessary to know what characteristics and what services can be utilized in the region where the activities are based, as well as the services that are lacking [17].

The role of healthcare professionals is to listen to the wishes of elderly patients with kidney disease and adjust their treatment and lifestyle to fit their wishes [18], and whether nurses can respect the wishes of the patients and their families [19], and whether they can elicit the patients' wishes through repeated discussions in multiple professions will affect the treatment and lifestyle that fits the patients' wishes [20]. With regard to multidisciplinary collaboration, continued promotion of the collaboration not only within the hospital but also within the community to support the life of the patient [21]. Nurses should be aware that the government and local residents also have a role in collaborating to create the missing services to accompany the community.

#### ***Creation of new renal disease management and dialysis-related technologies and nursing care***

It can be said that in the past, in the treatment of renal disease convalescents when their condition is stable, nursing care has been provided on a community basis, with convalescents living in the community and receiving treatment through outpatient visits and outpatient dialysis at hospitals and clinics. It is possible to enhance advanced nursing care by following the knowledge and techniques for nursing care in outpatient treatment up to the present [22]. With the shortening of hospital stays and changes in care locations, the treatment and nursing care previously provided in the hospital must be modified to take place in a new form, changing its location to the community.

Furthermore, with Conservative Kidney Management, which has recently begun to attract attention, conservative therapy is one of the treatment options instead of dialysis therapy [23], and palliative care for pain and suffering caused by conservative therapy is essential to create nursing care knowledge to fit the needs of individual patients with kidney disease. Nurses must take on the role of creating new nursing care knowledge while developing the nursing care that has been developed so far.

Nurses should improve how to relieve physical distress, such as dyspnea and body pain, and how to relieve psychological distress, such as depression and anxiety. We can learn and apply leading knowledge in the areas of oncology and mental health to the practice, and we will develop the characteristics and methods of palliative care in nephrology nursing.

#### ***Development of clinical nursing by securing nursing professionals involved in renal disease***

##### ***Development of highly specialized nurses***

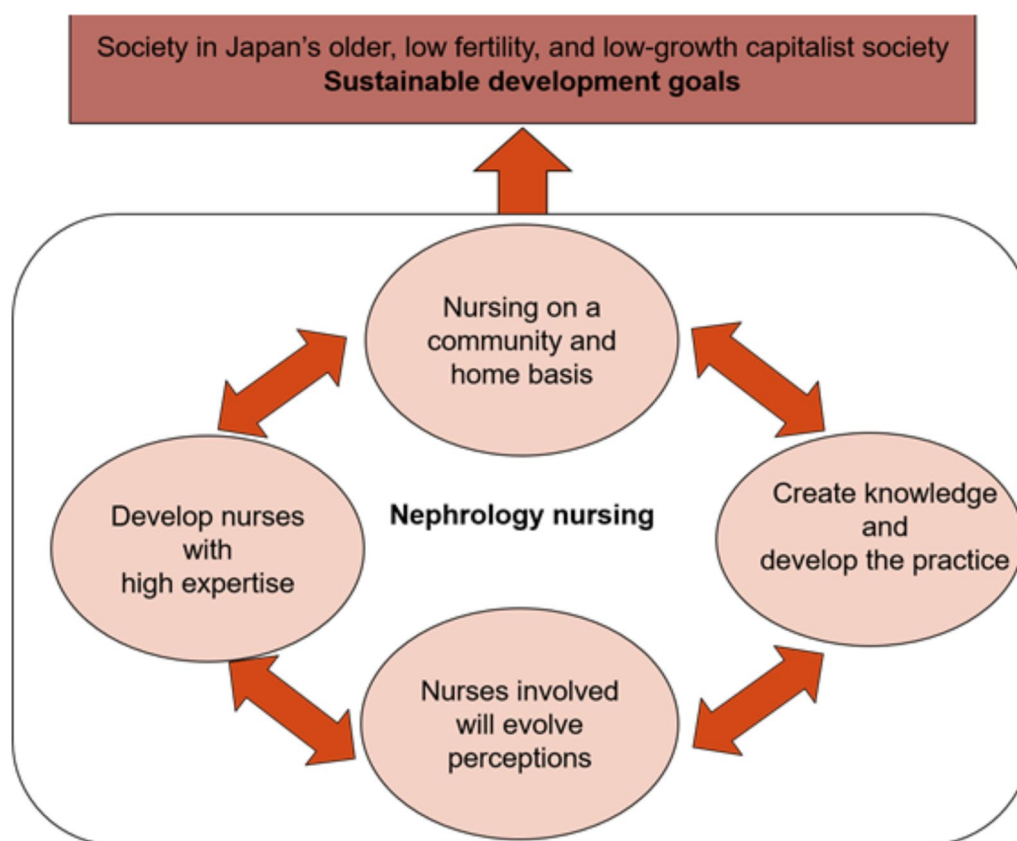
Nurses with knowledge and skills in nephrology nursing are needed in the community and at home to provide community-based treatment support and nursing care for people recovering from kidney disease. Currently, home-visit nurses are responsible for this part, but more advanced and diverse nursing care is needed in the community, so nurses with knowledge and skills in the treatment of kidney disease and nephrology nursing are needed. As for nephrology nursing specialists, among the approximately 250 chronic disease nursing specialists, only a few have chosen renal disease as a subspecialty. There are about 250 certified nephrology nurses and the number of specialists is not sufficient for both of them combined [24].

The number of nurses with knowledge and skills in nephrology nursing needs to be increased, and these nurses need to have the knowledge and skills to lead practice in the community and at home. In the education of nurses who provide nephrology nursing care, in addition to the knowledge rooted in past practice, they will further develop and practice community-based nursing activities and nursing care that is newly needed in the community [6]. We believe that there is an urgent need to develop highly specialized nurses who are responsible for the development and practice of nursing care [25].

##### ***Attractive nephrology nursing practice for the next generation of nurses***

As the number of young people in our country continues to decline, it is feared that the number of young people who wish to become nurses will also decline [26]. In the 2022 nursing curriculum, revisions were made to focus on health promotion and care support for people in the community and at home, and students at current nursing colleges and vocational schools are expected to complete basic education to community-completed nursing care-oriented studies of living in the community [27]. Future nurses, nurtured in such an academic environment, will use this education to create new nursing care strategies for the community and home. The number of nurses will decrease with the declining birthrate but enhancement of the value of nursing science and increasing its attractiveness as an academic discipline and profession will facilitate the development of talented young nurses who will become a force that will support society [28].

In addition, reforms in work styles have been proposed [29], and knowledge has been accumulated regarding the life-work balance of nurses in relation to job retention, childcare support, and career development. [30]. Nurses can exercise their abilities by practicing nursing in a rewarding manner as well as devising ways to work [31].



**Fig. 1** SDGs in nephrology nursing

Discussions and changes have begun in the way nurses work in the wards and dialysis departments where nephrology nursing care is provided. [32]. We want each nurse to be engaged in responsible nursing care while being valued as a person of value. We are convinced that this will lead to a rewarding nephrology nursing experience and will be a fundamental part of valuing the nursing care recipient, the patient, as a valuable human being.

Furthermore, we nurses should make efforts to enhance the value of nephrology nursing by publicizing our own nursing activities in practice, highlighting our expertise in nephrology nursing, and allowing young students to experience the excellence of our practice through practical training.

#### Statement of the role of renal failure

Nurses involved in nephrology nursing will have the ability to assemble nursing care that elicits the intention of the caregiver with kidney disease and the best treatment and care to support each caregiver [33] and will be able to practice with pride. Nurses involved in renal failure care need to develop a pioneering mindset to respond to the current perceived lack of interdisciplinary community collaboration [20]. Nurses also need to use their

specialties to play a coordinating role in harmonizing multidisciplinary care for patients with renal disease.

By continuing to meet the challenge of enhancing nursing care practice and communicating the role of nephrology nursing care to society, many people will recognize the role of nurses in nephrology nursing care. We believe that we can evolve as a valuable profession by practicing nephrology nursing care that is recognized by society.

#### Conclusions

Based on our discussion, we present the following recommendations for goals and strategies for creating a new paradigm of care for nephrology nursing to support social activities for patients in communities in Japan.

- Create knowledge and develop the practice of nephrology nursing on a community and home basis
- To develop nurses with high expertise in nephrology nursing practice
- Nurses involved will evolve perceptions of nephrology nursing as a valuable profession.

Fulfilling these goals should enable nephrology nursing to support and contribute to the development of society

in Japan's older, low fertility, and low-growth capitalist society (Fig. 1).

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#### Author contributions

NM planned the review and prepared the article; Yoshiko T and MN performed the literature search; Yoshiko T planned the context of this article; Yui T and NY reviewed the literature; Yui T and HK assisted in writing the article. All the authors have read and approved the final manuscript.

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#### References

- Ministry of foreign affairs of Japan: Japan SDGs action platform. Accessed 15 Sep 2022 <https://www.mofa.go.jp/mofaj/gaiko/oda/sdgs/about/index.html>
- Japanese nursing association : Nursing now campaign. Accessed 15 Sep 2022. [https://www.nurse.or.jp/nursing/practice/nursing\\_now/index.html](https://www.nurse.or.jp/nursing/practice/nursing_now/index.html)
- Cabinet office, Government of Japan. The white paper on the aging society 2022 chapter1 Aging population. 2022;2–6.
- Japanese society for dialysis therapy. JRDR 2020 chapter2 Dynamics of chronic dialysis patients on 2020. 2020;620–24.
- Iguchi S. 2025 Problems and community health care. *Med Technol*. 2020;48(3):310–4.
- Fukui T. Challenges of nursing for a super-aged and multi-death society. *J Japan Assoc Certif Nurse Special*. 2019;5:5–12.
- Shibata T. Approach to end-of-life care. *J Physiother Yamagata*. 2021;18:1–9.
- Masakane I, Takeda N, Aizawa Y. Community medical support for dialysis patients and families. *J Jpn Acad Nephrol Nurs*. 2018;20(1):33–8.
- Araki A. Continuing education for nurses and certification system. *Japan J Clin Dial*. 2021;37(3):225–30.
- Ministry of health, Labour and welfare, Act on assurance of work forces of nurses and other medical experts. Accessed 15 Sep 2022 <https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000095525.html>
- Katayama S. Macroeconomic consequences of population decline. *J Econ Sci*. 2022;25(2):25–34.
- Yamada M. What should we do?! Not enough visiting nurses. *Japan J Home Care Nurs*. 2014;9(19):700–3.
- Suzuki C. The role of the nurse in holding public lectures-educational activities of chronic kidney disease and their effects. *Japan J Clin Dial*. 2021;37(11):1285–9.
- Japanese nursing association. Priority policy 2: Support for Career Continuity as a Professional. Accessed 15 Sep 2022 <https://www.nurse.or.jp/nursing/nc/gaiyo/index.html#p1>
- Japanese Nursing Association News release 2022.4.1 Publication of results 「2021 Nursing Staff Survey. Accessed 15 Sep 2022 [https://www.nurse.or.jp/up\\_pdf/20220401121915\\_f.pdf](https://www.nurse.or.jp/up_pdf/20220401121915_f.pdf)
- Nakayama K, Maruta A. Positioning integrated community-based care systems within regional medical visions. *Niigata J Health Welfare*. 2019;19(2):18–27.
- Masuzawa S, Matsuda S. Analysis of characteristics of kanagawa prefecture in relation to regional chronic care capacity. *Yokohama Med J*. 2020;71(1):1–12.
- Komatsu Y. Shared decision making for renal replacement therapy. *Japan J Clin Dial*. 2020;36(3):219–25.
- Inamata Y, Miyabayashi I, Furuya I, Oozeki H, Ikeda Y. Seisen Jogakuin Coll J Nurs. 2021;1(1):39–51.
- Yamaguchi S, Sato A, Kurita T, Mitsuhashi H, Onishi T. Interprofessional collaboration in inpatient care, outpatient care and long-term care of dialysis patient. *Japan J Clin Dial*. 2022;38(3):233–9.
- Sato H. Dialysis medical care and medical treatment nurse system; relational with dialysis system. *J Jpn Ass Dial Physicians*. 2020;35(1):31–9.
- Wright LS. Quality improvement and alternate change methods. *ANNJ*. 2022;49(2):187–8.
- Moriyama T. Conservative kidney management (CKM). *Nippon Rinsho*. 2021;79(12):1955–63.
- Japanese nursing association. Accreditation system, Certified Nurse Specialist Certified Nurse Certified Nurse Administrator. Accessed 15 Sep 2022. <http://nintei.nurse.or.jp/nursing/qualification/cns>
- Mimura N, Takuwa Y, Tamura Y. Education of nephrology certified nurse including nursing designated care. *Japan J Clin Dial*. 2022; **(in press)**
- Ministry of Health, Labour and Welfare Annual Health, Labour and Welfare Report 2021 Chapter 7 Reliable and sustainable medical and nursing care for people. 2021;336–69.
- Sekine K. The ability required of public health nurses, midwives, nurses and assistant nurses and the intention of the revision of their education curriculum. *Iryo*. 2021;75(2):135–9.
- Ishikawa N. Learning support that fosters thinking, judgment and expressiveness. *Iryo*. 2021;75(2):140–2.
- Ministry of Health, Labour and Welfare. Toward realization of Work System Reform. Accessed 15 Sep 2022 <https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000148322.html>
- Maki O, Takagi H, Mito M. Trends in research on working styles for nurses raising children to continue their careers. *J Inst Nurs Sci Seitoku Univ*. 2022;3:43–54.
- Ki O. Making a workplace where workers can continue to work with vigor and enthusiasm. *Japan Journal of Nurs Health Sci*. 2017;15:15–20.
- Sato H. Range of the medical act of the nurse. *J Japan Assoc Dial Physicians*. 2021;37(13):1487–91.
- Aita K. Decision making for elderly patients in the reform period-problems of medical and care for the end of life. *Japan J Nurs Admin*. 2021;31(10):908–11.

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