

Collaboration between the Renal Disaster Preparedness Working Group of the ISN and the Disaster Preparedness and Response Committee of the KSN

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Member, North and East Asia Regional Board, The International Society of Nephrology

Introduction of the Republic of Korea (ROK)



Korea's Development Path

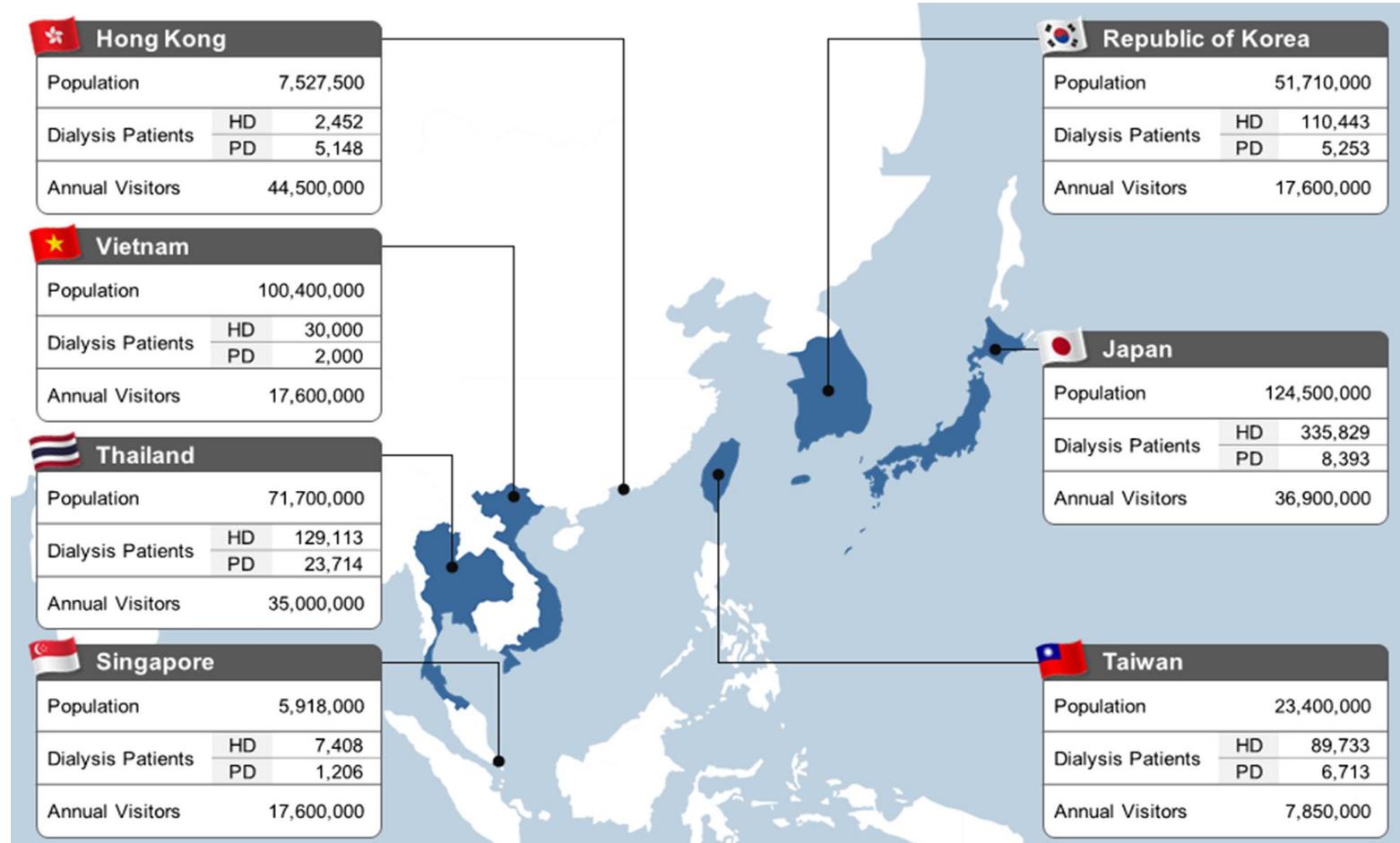
- 1950s–60s: One of the poorest nations in the world
- 21st century: High-income developed country
 - Samsung, LG, Hyundai, Kia
 - BTS, BlackPink, Squid Game, and KPOP-Demon Hunters
- Healthcare system: affordable & efficient

✓ Social Characteristics of Korean

- Fast, dynamic, competitive lifestyle
- High stress & pressure
- Life Expectancy - 2030 projection: Women: #1 worldwide (~86+ years), Men: #1 worldwide (~84 years), Driven by healthcare system, diet style, social support
- Ultra-low fertility rate:
 - 0.72 in 2023
 - 0.65 in Q4 2023 (world's lowest)

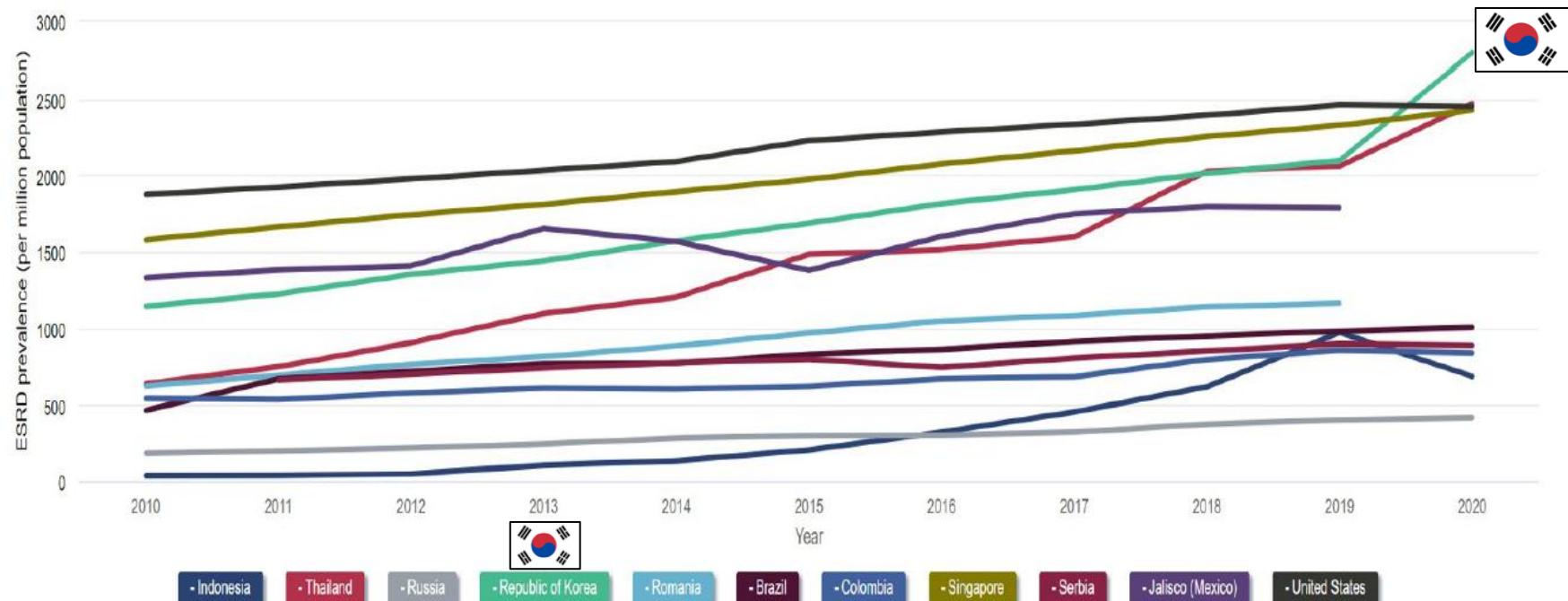


Regional healthcare landscape for the dialysis care in the Asia



By 2020, Korea reached the top countries in ESKD prevalence

Figure 11.12a Prevalence of treated ESRD in countries or regions with the largest percentage increase in prevalence, 2010 versus 2020

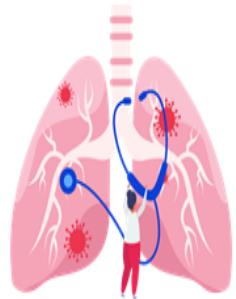


Data source: Special analysis, USRDS ESRD Database. Data presented only for countries from which relevant information were available. (a)Ten countries having the highest percentage rise in 2019/20 versus that in 2010/11, plus the U.S. NOTE: Data collection methods vary across countries, requiring caution in making direct comparisons.

The growth in the number of dialysis patients in South Korea is relatively rapid, compared to other countries

출처: USRDS

Hemodialysis: The Highest Per-Patient Medical Cost Among Major Diseases



Disease Category	Hemodialysis	Cancer	Diabetes
Number of patients	~140,000	~2,280,000	~5,710,000
Annual Cost (per patient)	KRW 28.97 million	KRW 5.77 million	KRW 3.07 million

Per Capita Medical Expenses : Hemodialysis vs. Major Diseases (2020–2021, HIRA Korea)

MERS 2015

Effect of isolation practice on the transmission of middle east respiratory syndrome coronavirus among hemodialysis patients

A 2-year prospective cohort study

HD patients		Inhospital		Medical staff	
N	Isolation practice	N	Isolation practice	N	Isolation practice
47	Single room isolation	3	Single room isolation	4	Single room isolation
26	Cohort isolation	0	Cohort isolation	20	Cohort isolation
0	Self-imposed quarantine	6	Self-imposed quarantine	10	Self-imposed quarantine



Park HC, Yoo KD, Lee YK:
Medicine (Baltimore).
2020;99(3):e18782.

Gyeongju 2016 and Pohang 2017 Earthquake

Special Article

Kidney Res Clin Pract 38:15-24, 2019
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<https://doi.org/10.23876/j.krcp.18.0058>



 Check for updates

Disaster preparedness for earthquakes in hemodialysis units in Gyeongju and Pohang, South Korea

Kyung Don Yoo^{1,2}, Hyo Jin Kim^{1,2}, Yunmi Kim², Jae Yoon Park^{1,3}, Sung Joon Shin^{1,3}, Seung Hyek Han⁴, Dong Ki Kim^{5,6}, Chun Soo Lim^{5,7}, Yon Su Kim^{5,6}

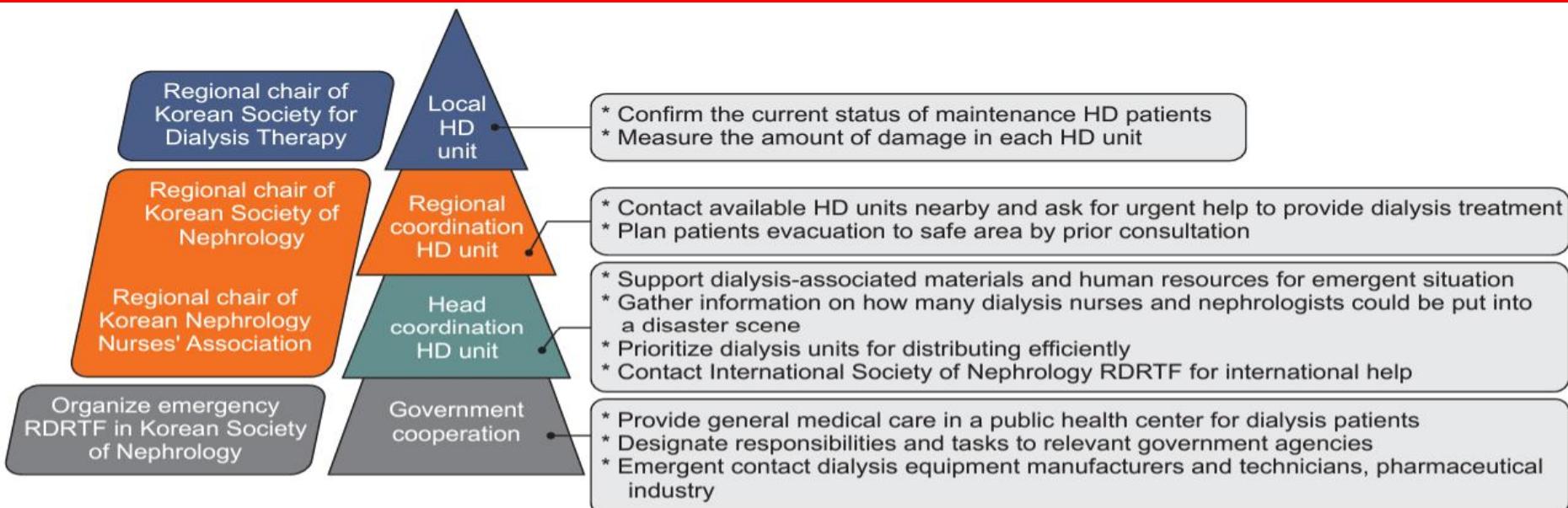


Figure 1. Proposed logistics for massive disaster and safety management plan in Korean hemodialysis (HD) units.
RDRTF, Renal Disaster Relief Task Force.

COVID outbreak in Dae-gu province 2019

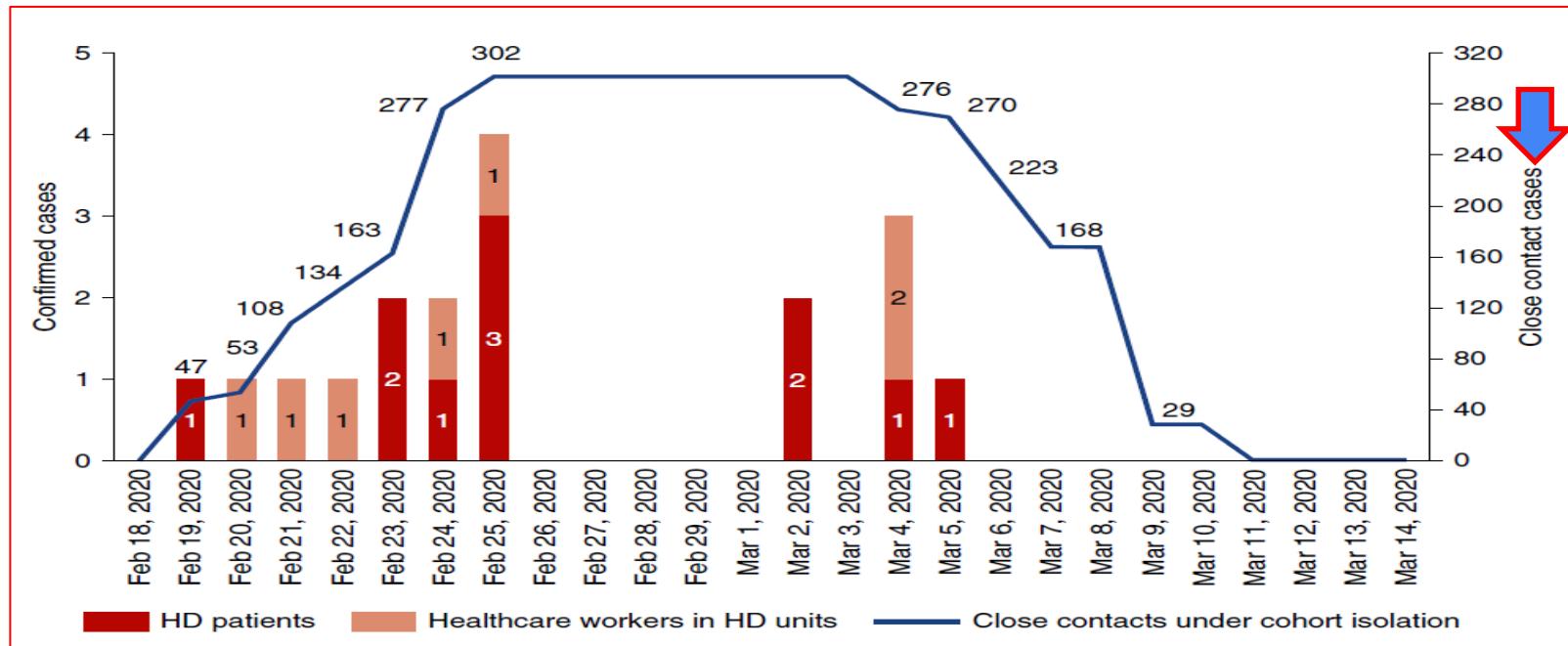
Secondary transmission rate: 0.66% only
(Compared to COVID-19's R_0 of 2.5–3.5 in general population)

CLINICAL RESEARCH

www.jasn.org

Hemodialysis with Cohort Isolation to Prevent Secondary Transmission during a COVID-19 Outbreak in Korea

Jang-Hee Cho ¹, Seok Hui Kang ¹, Hayne Cho Park ¹, Dong Ki Kim ¹,⁴
Sang-Ho Lee,⁵ Jun Young Do,² Jong Won Park,² Seong Nam Kim,⁶ Myeong Seong Kim,⁷
Kyubok Jin,⁸ Gun Woo Kang ¹,⁹ Sun-Hee Park,¹ Yong-Lim Kim,¹ and Young-Ki Lee ¹,³
on behalf of the Korean Society of Nephrology COVID-19 Task Force Team^{*}

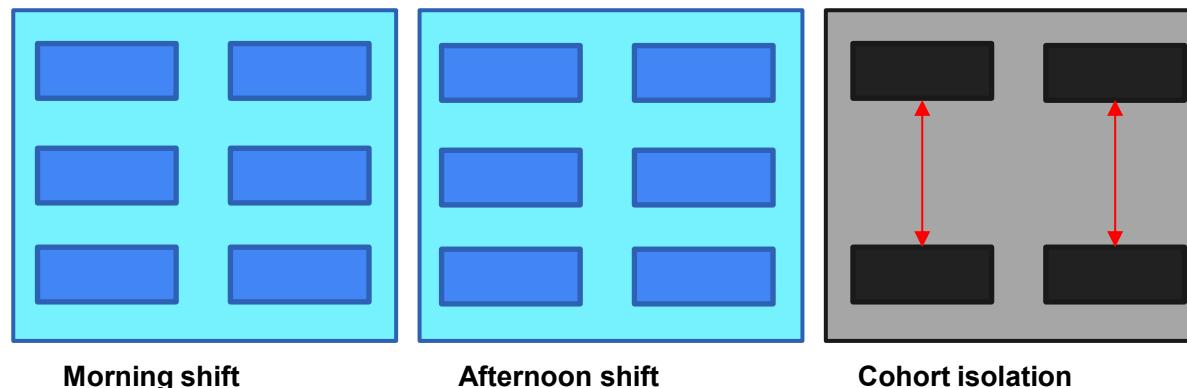


Emerging Infectious Disease Responses Must be tailored Each Nation's Dialysis Infrastructure

Overview of Global HD Guidelines During COVID-19

- **Cohort Isolation Strategy in Dialysis Units**

- Cohort COVID-19 patients & staff in same zone/shift
- Dedicated transport for COVID-positive cases
- Shared-ride patients should be dialyzed together
- Refer unstable cases to centralized hospitals
- Coordinate inter-institutional resources for rapid response



COVID outbreak in Dae-gu province 2019

KSN COVID19 Task Force Actions

- Developed and disseminated rapid clinical guidelines in cooperation with the KCDC.
- **Led cohort isolation protocols including:**
 - symptom-based triage
 - designated transport systems
 - exclusive nurse-patient cohorts
- Facilitated communication between local HD units, public health centers, and hospitals.
- Published outcomes in *JASN* as a global reference model for dialysis disaster

“Preparedness for disasters in dialysis units must be tailored to each nation’s infrastructure and dialysis delivery landscape.”

Special Article

Kidney Res Clin Pract 36:111-116, 2017
pISSN: 2211-9132 • eISSN: 2211-9140
<https://doi.org/10.23876/j.krcp.2017.36.2.111>



Middle East respiratory syndrome clinical practice guideline for hemodialysis facilities

Hayne Cho Park¹, Young-Ki Lee², Sang-Ho Lee³, Kyung Don Yoo⁴, Hee Jung Jeon², Dong-Ryeol Ryu⁵,
Seong Nam Kim⁶, Seung Hwan Sohn⁷, Rho Won Chun⁸, Kyu Bok Choi⁵;
The Korean Society of Nephrology MERS-CoV Task Force Team



Special Article

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<https://doi.org/10.23876/j.krcp.20.046>



Korean clinical practice guidelines for preventing transmission of coronavirus disease 2019 (COVID-19) in hemodialysis facilities

Hayne Cho Park¹, Do Hyo Young Kim¹, Kyung Don Yoo², Yang-Gyun Kim³, Sang-Ho Lee³,
Hye Eun Yoon⁴, Dong Ki Kim⁵, Seong Nam Kim⁶, Myeong Sung Kim⁷, Yoon Chul Jung⁸,
Yon Su Kim⁵, Young-Ki Lee¹; The Korean Society of Nephrology COVID-19 Task Force Team



“Disaster Preparedness and Response Committee”
established June 2022 in the Korean Society of Nephrology

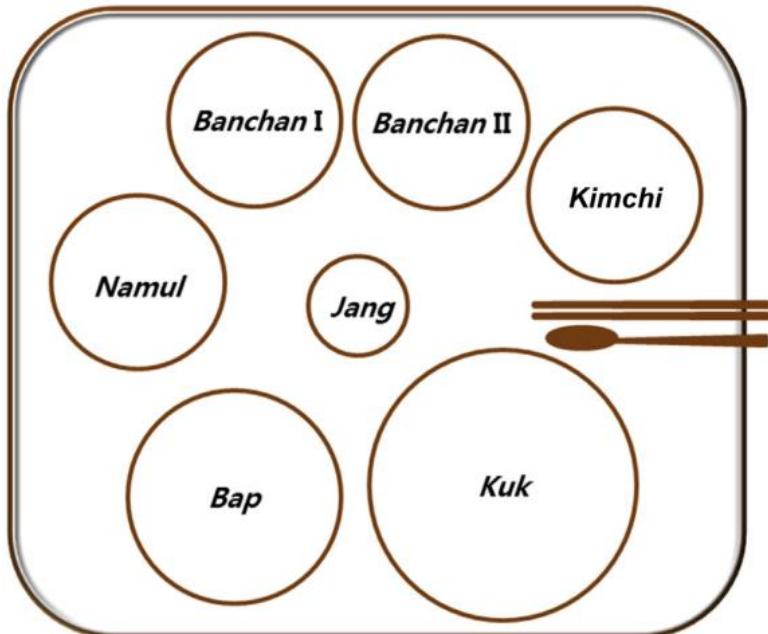
- Former MERS2015, COVID19 Task-force Team
- Based on the capabilities accumulated by overcoming MERS and COVID-19, the committee will prepare measures to respond to traditional disasters such as fires and power outages, as well as strengthen responses to earthquakes, typhoon damage due to climate change, and new infectious diseases.

Disaster Preparedness and Response by Evidence-Based

1. Education : Proposal for a Korean-Style Disaster Response Dietary Plan and Standardized Fire-Accident Drill for Hemodialysis Patients
2. Awareness : A survey on the disaster preparedness and awareness among medical staffs in Korean dialysis units
3. Network with expert for caring vulnerability of HD unit
 - National Emergency Medical Center (NEMC) – NEDIS research
 - Korean Society of Disaster Medicine (KSDM) – Emergency physician
 - Japanese Society for Dialysis Therapy (JSĐT) Crisis Management Team
 - International Society of Nephrology (ISN) Renal Disaster Relief Working Group

Definition of traditional Korean diet by the clinical dietitian

The structure of traditional Korean “bapsang”



- ✓ Bap is served alongside kuk.
- ✓ banchan is comprised of one type of kimchi, one namul, one vegetable dish (banchan I), and one high protein dish (banchan II), usually made from fish or meat as chim or gui.
- ✓ Jang, or salted dishes such as jangachi and jeotgal, are used to season food and stimulate one's appetite.
- ✓ A variety of bapsang can be constructed using diverse ingredients and cooking methods depending on the season, regions, and one's preference.

Special Article

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<https://doi.org/10.23876/j.krcp.24.242>



Disaster emergency meal plans for Korean patients who require hemodialysis

Yumi Jang^{1,2,*}, Seong Geun Kim^{3,*}, Sua Lee⁴, Hyun Ho Oh⁵, Nara Shin⁶, Young-Ki Lee^{7,8,†}, Kyung Don Yoo^{2,9,†},
on behalf of the Korean Society of Nephrology Disaster Preparedness and Response Committee

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²Basic-Clinical Convergence Research Institute, University of Ulsan, Ulsan, Republic of Korea

³Division of Nephrology, Department of Internal Medicine, Inje University Sanggye Paik Hospital, Seoul, Republic of Korea

⁴Division of Nephrology, Department of Internal Medicine, Daejeon Eulji Medical Center, Eulji University School of Medicine, Daejeon, Republic of Korea

⁵Sanggye Pure Internal Medicine Clinic, Seoul, Republic of Korea

⁶S&J Seoul Clinic, Seoul, Republic of Korea

⁷Department of Internal Medicine, Kangnam Sacred Heart Hospital, Seoul, Republic of Korea

⁸Hallym Kidney Research Institute, Hallym University College of Medicine, Seoul, Republic of Korea

⁹Department of Internal Medicine, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, Republic of Korea

Table 2. Implementation rates of disaster preparedness

Domain	Items regarding disaster preparedness	Implementation rate (n = 170)
Patient management	Average implementation rates of items in the patient management domain	71.2
	Securing the way of communication with their patients	147 (86.5)
	Disseminating information regarding how to check whether the facility is open or not at the time of a disaster	124 (72.9)
	Disseminating the way patients behave when a disaster happens during a dialysis session	105 (61.8)
	Disseminating procedures, routes, and places of evacuation in the facility	108 (63.5)
Administrative readiness	Average implementation rates of items in the administrative readiness domain	71.8
	Making a manual for disaster preparedness	135 (79.4)
	Regularly revising a manual for disaster preparedness	55 (32.4)
	Implementing annual disaster education for the staff	112 (65.9)
	Conducting annual disaster drills for the staff and ensuring the assignment of roles	43 (25.3)
	Keeping lists of emergency contact information between medical staff	164 (96.5)
	Checking regularly whether the contact network system among the staff is working	105 (61.8)
	Preparing an emergency kit and being ready to use it	167 (98.2)
	Keeping goods for disaster preparedness in an accessible place for the staff	167 (98.2)
	Stocking equipment and medicine that are necessary to sustain dialysis for over 3 days	150 (88.2)
Interinstitutional networking	Securing means of communication with the related organization in cases of fire, power outage, or water supply disruption	133 (78.2)
Facility safety	Keeping the emergency exit open and checking fire extinguishing equipment regularly	154 (90.6)

Data are expressed as percent only or number (%).

Network with expert for caring vulnerability of HD unit

- **National Emergency Medical Center (NEMC) (2022.11)**
- **Korean Society of Disaster Medicine (KSDM) (2023.11)**
- JSDT Crisis Management Team, JADP Countermeasure committee
- Japan-Korea Joint Conference on Dialysis Disaster Countermeasures (2024.06 Yokohama)
- ISN RDRWG Ali Abu-Alfa (2024.06 APCN Seoul)
- Asian Pacific Conference on Disaster Medicine (2024.11 Seoul)
- KSN2025 (2025.06 Seoul): Disaster Response Committee session

대한신장학회-대한재난의학회, 재난응급의료대응 협력 업무협약

노재영 기자 imph777@naver.com | 등록 2023.11.25 13:20:16



KSN Disaster Preparedness and Response Committee

Collaboration with Regional and Administrative Authorities

Original Article

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<https://doi.org/10.23876/j.krcp.24.170>



Emergency department visits for patients with end-stage kidney disease in Korea: registry data from the National Emergency Department Information System 2019–2021

AJin Cho^{1,2}, Seon A Jeong³, Hayne Cho Park^{1,2}, Hye Eun Yoon⁴, Jungeon Kim⁵, Young-Ki Lee^{1,2,*}, Kyung Don Yoo^{6,7,*};
on behalf of the Korean Society of Nephrology Disaster Preparedness and Response Committee

Original Article

Kidney Res Clin Pract [Epub ahead of print]
pISSN: 2211-9132 • eISSN: 2211-9140
<https://doi.org/10.23876/j.krcp.25.184>



Impact of health insurance status on hospitalization and mortality from emergency department admission in patients with end-stage kidney disease: a Korean nationwide registry analysis

AJin Cho^{1,*}, Kyung Don Yoo^{2,3,*}, Hye Eun Yoon⁴, Seon A Jeong⁵, Wookjin Choi⁶, Dai Hai Choi⁷, Jungeon Kim⁸,
Hayne Cho Park^{3,10,†}, Young-Ki Lee^{9,10,†}; on behalf of the Disaster Preparedness and Response Committee of
the Korean Society of Nephrology

Emergency Transport Protocol Proposal for Hemodialysis Patients

혈액투석환자 이송지침(안)

(제 18회 투석 회의, '24.01.18.)

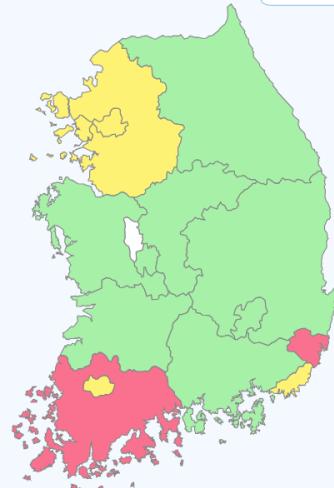
DW.NEMC.or.kr

응급의료모니터링시스템

■ 실시간 응급실 병상 가동률 ■ 실시간 응급실 평화지수

권역응급의료센터

■ 80%이상
■ 50%이상~80%미만
■ 50%미만



Network with expert for caring vulnerability of HD unit

- National Emergency Medical Center (NEMC) (2022.11)
- Korean Society of Disaster Medicine (KSDM) (2023.11)
- JSJT Crisis Management Team, JADP Countermeasure committee
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- ISN RDRWG Ali Abu-Alfa (2024.06 APCN Seoul)
- Asian Pacific Conference on Disaster Medicine (2024.11 Seoul)
- KSN2025 (2025.06 Seoul): Disaster Response Committee session



Kazuhiko Tsuruya, Nara Medical University.
Chairperson of the Crisis Management Committee of JSJT
Mariko Miyazaki, Tohoku University,
who experienced the Great East Japan Earthquake in 2011

Network with expert for caring vulnerability of HD unit

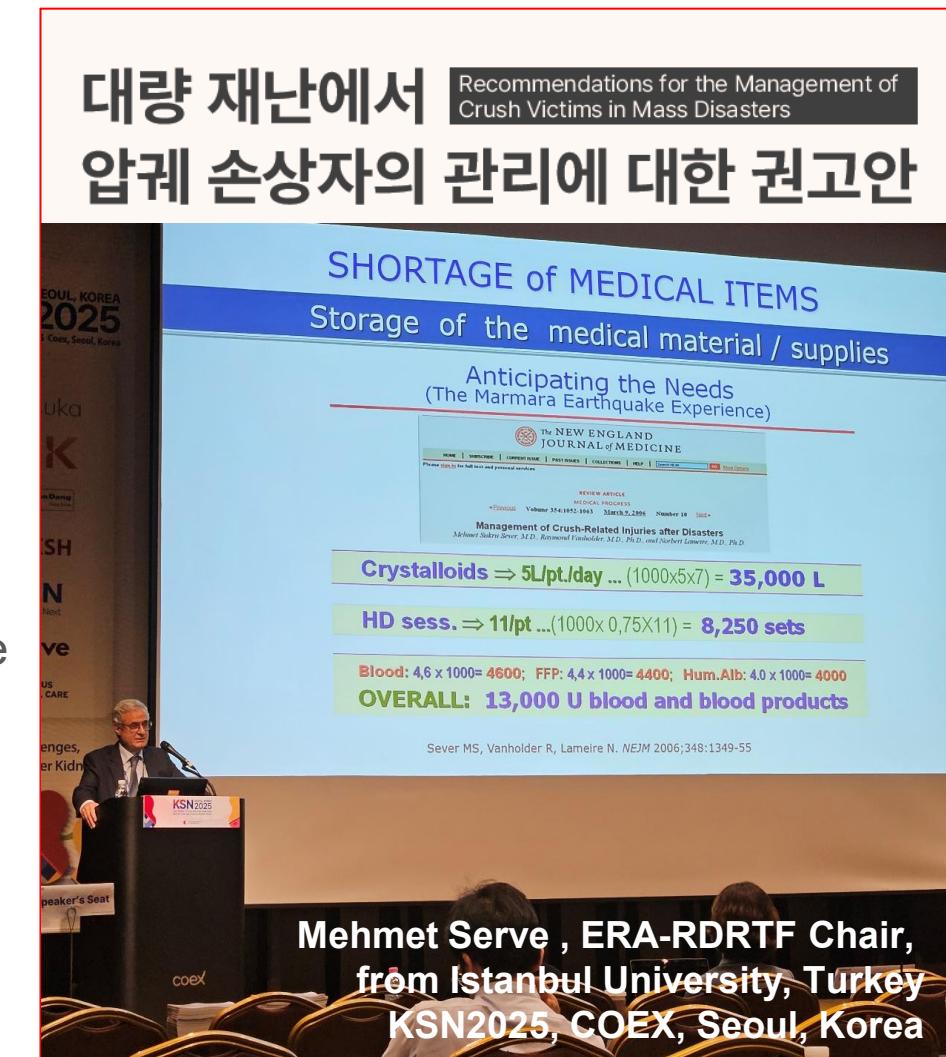
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- **KSN2025 (2025.06 Seoul): Disaster Response Committee session**



**Mehmet Serve , ERA-RDRTF Chair,
from Istanbul University, Turkey
KSN2025, COEX, Seoul, Korea**

Recommendations for the Management of Crush Victims in Mass Disasters from ERA-EDTA RDRTF (European version)

- Korean Translation Edition
- Korean Society of Nephrology (KSN)
KDisaster Preparedness and Response Committee
- Korean Society of Disaster Medicine (KSDM)
- *This Korean version is the 9th official translation worldwide*



- Korea has a rapidly growing ESKD population with a heavy reliance on in-center hemodialysis.
- Multiple disasters—earthquakes, MERS, and the COVID-19 outbreak in Daegu—revealed the vulnerabilities of dialysis units and the need for structured preparedness.
- Evidence-based national guidelines have been developed, but disaster and infectious-disease risks continue to evolve.
- Recent KSN DPRC highlight the importance of coordination among dialysis units, public health authorities, and national emergency systems.
- Next, I will introduce the collaborative framework between the ISN RDPWG and the KSN Disaster Committee.



Fostering international coordination in renal disaster preparedness: a collaboration between the Renal Disaster Preparedness Working Group of the International Society of Nephrology and the Disaster Preparedness and Response Committee of the Korean Society of Nephrology

“The authors would like to acknowledge the efforts of and express their gratitude to all other members of the Disaster Preparedness and Response Committee of the KSN and the ISN RDPWG (Serhan Tuglular, Sibel Bek, Hicham Cheikh Hassan, Bronwyn Hayes, Valerie Luyckx, Abdou Niang, Ahad Qayyum, Mohamed Sekkarie, Rukshana Shroff, Rümeysa Kazancioglu, and Anthony Russell Villanueva).”

⁷Renal Disaster Preparedness Working Group, The International Society of Nephrology, Brussels, Belgium

⁸Mount Elizabeth Novena Hospital, Singapore

⁹Division of Nephrology and Hypertension, Department of Internal Medicine, American University of Beirut, Beirut, Lebanon

¹⁰Section of Nephrology, Department of Internal Medicine, Yale University School of Medicine, New Haven, CT, USA

¹¹Division of Nephrology, Department of Internal Medicine, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea

¹²Severance Institute for Vascular and Metabolic Research, Yonsei University College of Medicine, Seoul, Republic of Korea

The role of international renal disaster preparedness working groups in difficult settings: bridge over troubled water



Kyung Don Yoo^{a,b}, Chia-Ter Chao^{c,d,e}, Jung Pyo Lee^f and Ali K. Abu-Alfa^{g,h}

KEY POINTS

- Man-made and natural disasters are on the rise and their impact on kidney patients is significant.
- International organizations have a major role to play in preparedness and response to disasters affecting kidney patients.
- A call-to-action is proposed to help dialysis and transplant centers, national professional renal societies, and countries deal with disasters, serving as a bridge over troubled waters to recovery.

NATIONAL AND REGIONAL RESPONSE TASK FORCES

The international nephrology community has been working to provide support and resources to various disaster zones. However, the scale and complexity of these crises highlight the need for more comprehensive, globally coordinated strategies to protect kidney patients in affected areas, alongside national and regional efforts. An exemplary national-level response plan has been suggested and implemented in South Korea [14]. The plan is well outlined and highlights the coordination between organizations extending down to the local levels to ensure effectiveness in disaster response. The efforts are overseen by the Disaster Preparedness and Response Committee of The Korean Society of Nephrology.

Let's Expand a Global Network to Protect Dialysis Patients From North & East-Asia to the World

Launched with a kick-off meeting on April 12, 2024, the initiative is focused on creating a unified emergency response strategy and enhancing global preparedness and response for nephrologists, health care workers, and patients. The Task Force will collaborate with key stakeholders, consolidate resources from the societies, and translate and circulate these materials. Ethical considerations, preparedness training courses, and patient education materials, including booklets and infographics, will be developed.

2025 ASN KIDNEY WEEK

The initiative to “establishing regional contact points to enhance coordination and collaboration across different parts of the world” is an official initiative of the ASN-ERA-ISN Kidney Patient Support Initiative.



ISN Renal Disaster Preparedness Working Group Meeting

4 July 2025

14:00-15:00 CET

ISN Renal Disaster Preparedness Working Group Meeting

1 December 2025

15:00-16:00 CET



RENAL DISASTER PREPAREDNESS WORKING GROUP

The purpose of the ISN Renal Disaster Preparedness Working Group (RDPWG) is to formulate preparedness plans for situations where there is disruption in the delivery of renal related services in a region and to guide ISN in its advisory role in such situations.

Renal Disaster Preparedness Working Group Members

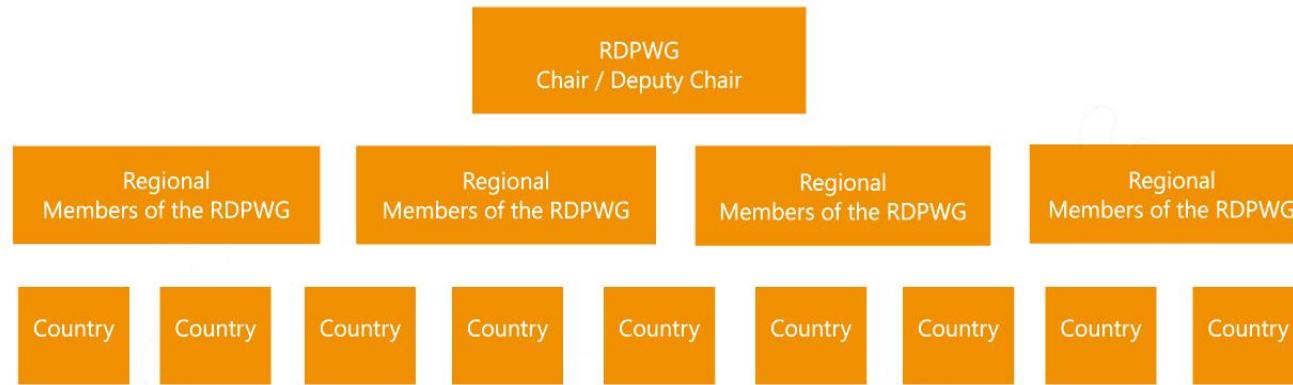
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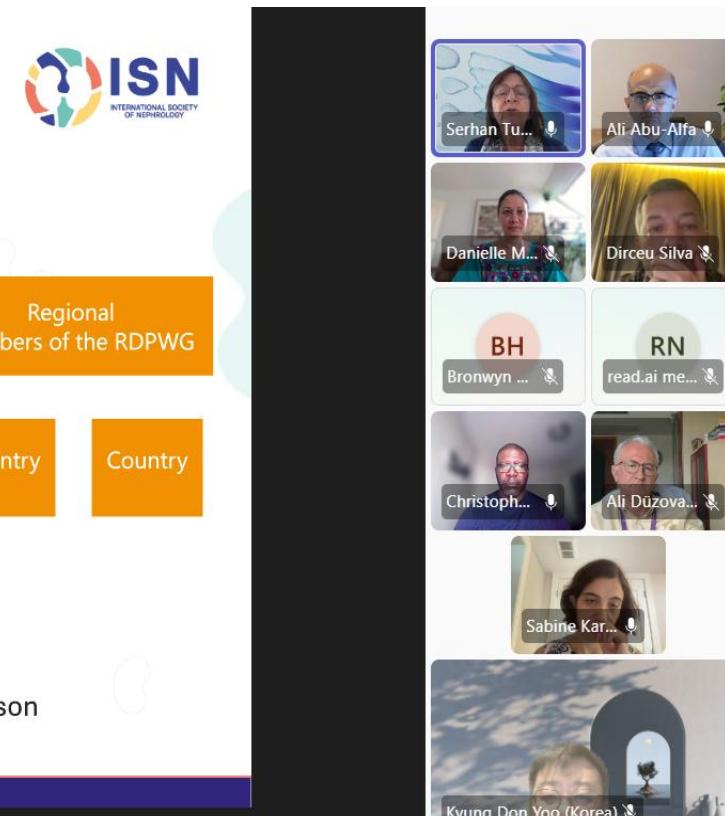
First Name	Last Name	Role	
Ali	Abu-Alfa	Chair	Lebanon
Serhan	Tuglular	Deputy Chair	Turkey
Abdou	Niang	Member	Senegal
Ahad	Qayyum	Member	Pakistan
Ali	Düzova	Member	Turkey
Bronwyn	Hayes	Member	Australia
Christopher	Atwater	Member	United States
Dirceu	Reis Da Silva	Member	Brazil
Ionut	Nistor	Member	Romania
Kyung Don	Yoo	Member	Republic of Korea
Marina	Wainstein	Member	Argentina
Sabine	Karam	Member	United States
Sonia	Guillouet	Member	France

“The ISN RDPWG aims to establish a robust collaborative framework with national disaster preparedness committees, beginning with the creation of a unified communication network.” (Ali-Abu Alfa, Chair of ISN RDPWG, Lebanon)

Renal Disaster Preparedness WG Model



- Identifying key person(s) for communication
- Does the country have a Disaster Task Force?
 - Yes: The key person is the local coordinator
 - No: Encourage for establishing one/ National Society can determine a key person





Collaboration between the Renal Disaster Preparedness Working Group of the ISN and the Disaster Preparedness and Response Committee of the KSN

- RDPWG: 2025 ongoing projects
 - ✓ Educational Programs (Webinars, Podcasts, X Spaces)
 - ✓ Toolkit Development
 - 1) Pre-Disaster: Framework, education, logistics
 - 2) During Disaster: Acute response, crush syndrome, dialysis continuity
 - 3) Post-Disaster: Recovery, plan revision, communication

Practical, visual 'cookbook-style' toolkit



Collaboration between the Renal Disaster Preparedness Working Group of the ISN and the Disaster Preparedness and Response Committee of the KSN

WCN'26 update: Disaster preparedness session confirmed in WCN'26 program

ISN-JSN-APSN Joint Session: Delivering Kidney Care in Humanitarian Crises

Time	Session
11 a.m. - 11:12 a.m.	ISN Roles in Humanitarian Works
11:12 a.m. - 11:24 a.m.	Preparedness for a Disaster: Pitfalls and Solutions
11:24 a.m. - 11:36 a.m.	Earthquake Disaster: Lessons Learnt from Japan
11:36 a.m. - 11:48 a.m.	Resilient Kidney Care: Adaptation and Recovery After a Disaster
11:48 a.m. - 12 p.m.	Q&A

- Disaster responses for dialysis units must be country-specific, reflecting each nation's infrastructure and dialysis delivery system.
- Korea's experiences show the value of proactive preparedness, standardized manuals, and real-world implementation.
- ISN RDPWG–KSN collaboration is building a regional expert network to strengthen dialysis resilience in Asia.
- Moving Forward
 - Establish clear communication channels between ISN RDPWG and national committees.
 - Share evidence-based tools and context-adapted strategies.
 - Work together to protect vulnerable HD patients during disasters.



“We express our deepest condolences to the Taiwan citizens who lost their lives in the disasters such as earthquakes. Let us work together in solidarity to strengthen future disaster preparedness.”



WhatsApp



ykd9062



Kyung Don Yoo, M.D., Ph.D.

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Member, Renal Disaster Preparedness Working Group,
The International Society of Nephrology (ISN RDPWG)
Member, North and East Asia Regional Board, The International Society of Nephrology (ISN)
Member, The Korean Society of Disaster Medicine (KSDM)
Academic director, The Korean Society of Geriatric Nephrology (KSGN)
Academic director, The Korean Society of Home Hemodialysis (KSHHD)

Disaster Preparedness Begins with Networking

Kakao

유경돈

ykd9062

