



# Optimizing patient outcomes in dialysis patients: the significance of dialysis specialists

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As the number of end-stage kidney disease (ESKD) patients with complex comorbid conditions increases rapidly, the medical burden to treat them is increasing, and efforts to improve the quality of life and prognosis of ESKD patients are important issues in the medical field [1].

Patients with ESKD have worse overall survival compared with the general population [2]. Survival rates may vary depending on age, comorbidities, and type of treatment, and the quality of dialysis facilities, and medical staff can affect the overall outcome of patients with ESKD, including patient safety and treatment effectiveness.

In particular, the role of the dialysis specialist can be an important factor in determining patient prognosis [3]. Dialysis specialists consider various factors, including the patient's overall health, lifestyle, preferences, vascular access, and medical history, to determine the most suitable dialysis regimen for each individual. They continuously monitor the patient's clinical condition and make necessary adjustments to the treatment plan based on responses to dialysis, blood test results, fluid balance assessments, medication, and potential complications. Additionally, dialysis special-

ists evaluate and manage vascular access, ensuring proper functioning and resolving any issues that may arise. To enhance patients' psychosocial well-being and adherence to treatment, it is important for medical staff to provide emotional support and address patients' concerns.

The role of dialysis specialists, such as ongoing monitoring, prompt intervention, and collaboration with the medical team, can significantly enhance the quality of life and overall well-being of patients with ESKD, ultimately leading to improved patient outcomes.

Therefore, it is important to define the qualifications of medical staff and develop appropriate quality control programs to manage them. Policies regarding the care of patients undergoing dialysis vary across countries. However, many countries have established specific guidelines, regulations, and qualifications for healthcare providers or medical staff involved in dialysis care, recognizing the importance of including physicians trained in dialysis management in patient care [4,5].

In the United States, prescription and administration of dialysis are regulated by guidelines and policies. The Centers for Medicare and Medicaid Services oversees the reimbursement and quality standards for dialysis services through the End-Stage Renal Disease program [6].

In the United States, physicians typically require specialized training in nephrology and board certification to

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provide dialysis care. They are responsible for overseeing the overall treatment of dialysis patients, including prescription and monitoring of dialysis, and managing complications. Collaboration with nephrologists is important to ensure proper patient care and dialysis management.

In Japan, physicians with nephrology training are qualified to prescribe and provide dialysis to patients [3]. Other countries also have systems in place to strengthen collaboration between physicians, nephrologists, and other specialists, with financial incentives for specialist care for patients with ESKD [4,7].

In Korea, the designation of dialysis specialists is a voluntary system provided by the Korean Society of Nephrology to identify specialists who meet certain requirements and demonstrate competence in the field of nephrology. To be certified as a dialysis specialist, physicians must complete at least 1 year of training at a dialysis specialist training hospital. Certification also requires ongoing professional development and continuing medical education.

However, it is important to note that the dialysis specialist system operated by the Korean Society of Nephrology is not mandatory in Korea. Efforts are being made to institutionalize the system; however, there are currently no supportive legal regulations. Consequently, physicians in Korea who have not received systematic training in dialysis patient management can prescribe and administer dialysis, although the government evaluates the proper operation of outpatient dialysis centers and assesses the quality of care provided.

Park et al.'s study [8] in *Kidney Research and Clinical Practice* provides strong support for the institutionalization of dialysis specialists. This study utilized large-scale national insurance data to enhance their reliability and value as evidence for improving dialysis-related systems and national policies. The study employed propensity score matching to enhance the data analysis. Although the socioeconomic level, insurance type, cause of death, and other factors were not analyzed, this study effectively demonstrated variations in the long-term prognosis of patients based on the quality of medical staff. The analysis incorporated diverse data such as hemoglobin, albumin, calcium, phosphorus, and dialysis adequacy, offering valuable insights into the impact of physician quality on patient mortality, dialysis efficiency, and important complications such as hypertension, anemia, and mineral metabolism.

Thus, this study significantly contributes to our understanding of the broad effects of physician quality in these areas. These results emphasize the need to improve the safety and survival of dialysis patients while highlighting the importance of institutional support.

Recognizing that regulations concerning medical staff are crucial for the quality management of dialysis centers, it is imperative to make efforts to establish a foundation for system improvements, as demonstrated in this paper. With these considerations, it is hoped that the national system will be enhanced through the continuous efforts of the medical community and government participation, ultimately creating a safe treatment environment for patients undergoing dialysis.

### Conflicts of interest

The author has no conflicts of interest to declare.

### Data sharing statement

The data presented in this study are available on request from the corresponding author.

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### References

1. Couser WG, Remuzzi G, Mendis S, Tonelli M. The contribution of chronic kidney disease to the global burden of major non-communicable diseases. *Kidney Int* 2011;80:1258–1270.
2. Bello AK, Okpechi IG, Osman MA, et al. Epidemiology of haemodialysis outcomes. *Nat Rev Nephrol* 2022;18:378–395.
3. Furumatsu Y, Nagasawa Y, Yamamoto R, et al. Specialist care and improved long-term survival of dialysis patients. *Nephrol Dial Transplant* 2010;25:1930–1935.
4. Bello AK, Levin A, Manns BJ, et al. Effective CKD care in European countries: challenges and opportunities for health policy. *Am J Kidney Dis* 2015;65:15–25.
5. Stevens PE, Levin A; Kidney Disease: Improving Global Outcomes Chronic Kidney Disease Guideline Development Work Group Members. Evaluation and management of chronic kidney disease: synopsis of the kidney disease: improving global

- outcomes 2012 clinical practice guideline. *Ann Intern Med* 2013;158:825–830.
6. Centers for Medicare & Medicaid Services (CMS), HHS. Medicare program; end-stage renal disease prospective payment system, payment for renal dialysis services furnished to individuals with acute kidney injury, and end-stage renal disease quality incentive program. Final rule. *Fed Regist* 2017;82:50738–50797.
  7. Stevens PE, de Lusignan S, Farmer CK, Tomson CR. Engaging primary care in CKD initiatives: the UK experience. *Nephrol Dial Transplant* 2012;27 Suppl 3:iii5–iii11.
  8. Park HC, Kim DH, Cho A, et al. Dialysis specialist care and patient survival in hemodialysis facilities: a Korean nationwide cohort study. *Kidney Res Clin Pract* 2023;42:379–388.