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The Role of Nephrology Nurses in Symptom Management – Reflections on the Kidney Disease: Improving Global Outcomes Controversies Conference on Symptom-Based Complications in Dialysis Care

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Introduction

People with kidney failure undergoing dialysis frequently report distressful symptoms, such as fatigue, pain, and pruritus. These symptoms have negative impacts on quality of life and other clinical outcomes, including health care utilization and mortality risk. Despite these tremendous impacts, symptom assessment and management can be challenging in clinical settings.[1] In May 2022, Kidney Disease: Improving Global Outcomes (KDIGO) held a Controversies Conference entitled Symptom-Based Complications in Dialysis to address the need for developing and testing solutions for assessing and managing symptoms associated with maintenance dialysis. The more than 60 participants included patients, physicians, behavioral therapists, nurses, pharmacists, and clinical researchers.

The KDIGO symptoms meeting addressed the following 4 themes: (i) strategies to incorporate symptom assessment into routine care; (ii) reducing burden of physical symptoms; (iii) optimizing management of psychological symptoms; and (iv) system-level opportunities to optimize symptom management. During the meeting discussions, the participants outlined foundational principles and consensus points related to identifying and addressing dialysis symptom-based complications and described gaps in the knowledge base and priorities for research.[2] The consensus points of the meeting (Table 1) reflect a dedication of kidney health professionals (physicians, nurses, allied health) to promote a multidisciplinary and individualized approach to symptom assessment and management that can be incorporated in routine clinical practice.

Nephrology nurses, who play an ever more pivotal role in the multidisciplinary assessment and management of dialysis-related symptoms, are one of the key parties in the KDIGO symptoms meeting. The aim of this report is to summarize our experience in this KDIGO meeting and discuss implications of the key symptom assessment and management issues that nephrology nursing can address. We suggest solutions to expand the capacity of nurses globally for identifying and managing symptoms (Table 2).

Identifying Symptoms

Participants identified a need to increase clinician awareness and responsiveness to both physical and psychological symptoms, especially given that early recognition and intervention can

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Table 1. Consensus points regarding identifying and managing dialysis-related symptoms

1. Clinicians should assess and focus on symptoms most important to individual patients.
2. Prioritization in symptom management should be based on patient perceptions of which symptoms are most negatively affecting their ability to live the life they want to live.
3. Nephrology multidisciplinary teams should take the lead in symptom management, with holistic care as the goal.
4. The approach to routine symptom screening should remain consistent regardless of dialysis modality.
5. Regular global symptom screening should be incorporated into routine clinical practice. This should ideally involve using (i) an open-question approach that explores patient priorities for symptom management and (ii) standardized PROMs.
6. PROMs play an important role in identifying patient-prioritized symptoms but should not be used in isolation.
7. PROMs for guiding clinical care should be— • Relevant to patients with kidney diseases, with evidence for validity • Short and simple, requiring limited burden/resources for completion • Adaptable for language and vulnerable patients, e.g., those who are frail or have cognitive impairment and/or low health literacy • Reliable and sensitive to change if being used to monitor treatment
8. The frequency of routine symptom screening should be individualized.
9. Symptom assessments should be incorporated into patient medical records to facilitate integration into overall clinical assessment and should be accessible to the interdisciplinary team within and beyond nephrology and the patient.
10. Health care use and cost-effectiveness studies for symptom assessment and management programs are needed.

PROM, patient-reported outcome measure.

mitigate the negative effects of the symptoms. Symptom assessment should be incorporated into routine care and may be guided with the use of an appropriate patient-reported outcome measure. People with kidney failure generally value trusting relationships with the health care team, and patients at the meeting emphasized the importance of clinicians listening to them so that impacts of symptoms on everyday life can be accurately captured.

Participants agreed that multidisciplinary nephrology teams should take the lead in symptom management in people with kidney failure, though it was recognized that certain aspects of care such as symptom acknowledgment and recognition can be assumed by any care team member, including patients' families, primary care teams, and complementary medicine practitioners, depending on local existing needs and available resources (Figure 1). Moreover, participants believed symptom assessment should be fully documented and be made accessible to all multidisciplinary care team members.[2]

Symptom experiences in kidney failure are indeed extensive and complex, simultaneously involving multiple body systems and functions. As an active part of the multidisciplinary team, nephrology nurses can initiate comprehensive physical, psychological, and social assessments to provide useful information for identifying and prioritizing symptoms and needs of patients. Of note, symptoms are subjective experiences that are not merely about physical abnormalities. As expressed by some patients (Figure 2), nurses need to attend to the feelings and concerns related to their symptom experiences and document them for sharing with other kidney health professionals.

Managing Symptoms

Participants acknowledged that additional research is required to optimize pharmacologic treatments for patients with impaired kidney function and identify effective nonpharmacologic interventions to reduce polypharmacy. Indeed, although nephrology nurses have long been engaging in patient education that promotes self-monitoring and management of symptoms, the widening scope of nursing practice regarding symptom control varies around the world, ranging from nephrology nurses providing dialysis to manage uremic symptoms to those using advanced practice skills for commencing treatment plans.[3] In some countries, roles of nephrology nurses include specialist and advanced practice, such as prescribing medications[4] and delivering nonpharmacologic interventions.[5] Despite some preliminary evaluation, a need exists to generate rigorous evidence to determine the best approach to nurse-led symptom control and support evidence-based practice of nephrology nurses.

Table 2. Nursing roles in symptom management and suggestions to expand the nursing capacity for symptom management

Nursing roles	Suggestions
Symptom assessment • Incorporate symptom assessment in daily nursing care. • Initiate comprehensive assessment for symptom identification and prioritization. • Share assessment information with multidisciplinary team. Symptom management • Provide appropriate treatments to alleviate symptom burden. • Develop advanced nursing practice to address gaps in symptom management.	Support nephrology nursing practice by clinical guidelines • Develop guidelines to define the roles of members in the multidisciplinary team. • Allocate manpower and financial resources on nurse-led services. Provide professional education on symptom management • Incorporate symptom management elements in post-basic training curricula. • Provide continuing education for practicing nephrology nurses, especially those in low-resource settings.
Symptom science research • Conduct nurse-led research to advance symptom science. • Apply evidence in clinical practice and advocacy to improve patient outcomes.	Encourage nurse-led research to advance symptom science • Identify gaps for collaborative research. • Secure adequate funding support for research.

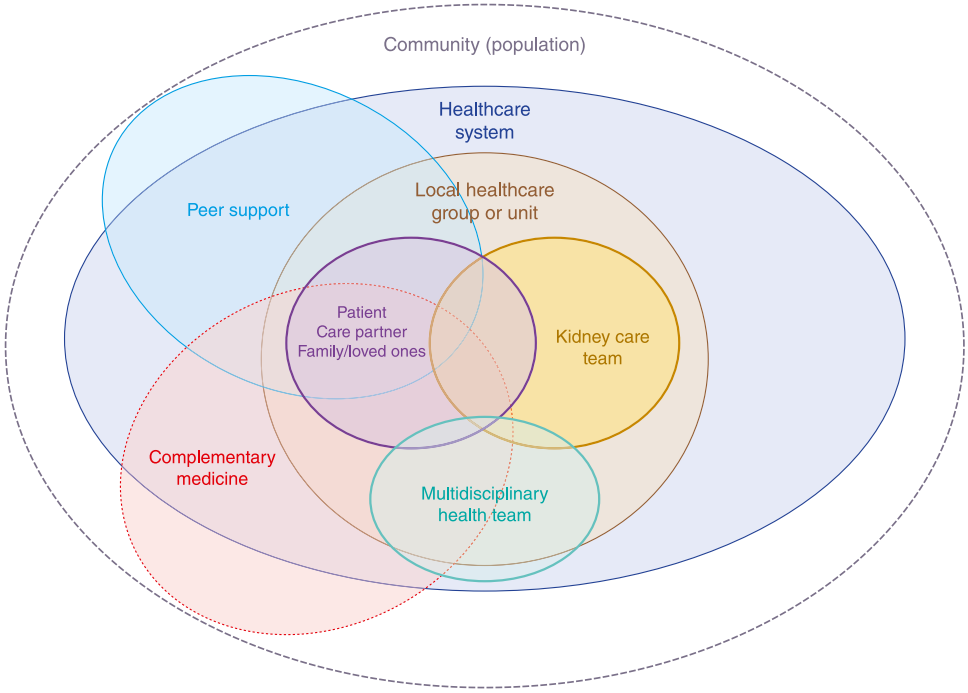

Figure 1. The complex overlap of responsibilities in symptom recognition and management for patients undergoing dialysis. Among these groups, the kidney care team will take the lead.

At the system level, roles of different kidney health professionals need to be clarified and symptom management should be emphasized in the clinical guidelines and curricula of professional education. A significant challenge to a multidisciplinary approach to symptom management is the shortage of kidney health professionals and the socioeconomic demands of symptom management across the world. Disparity in health care access and quality outcomes has been observed in chronic disease management at different socioeconomic levels, but this is more accentuated in low-resource regions.

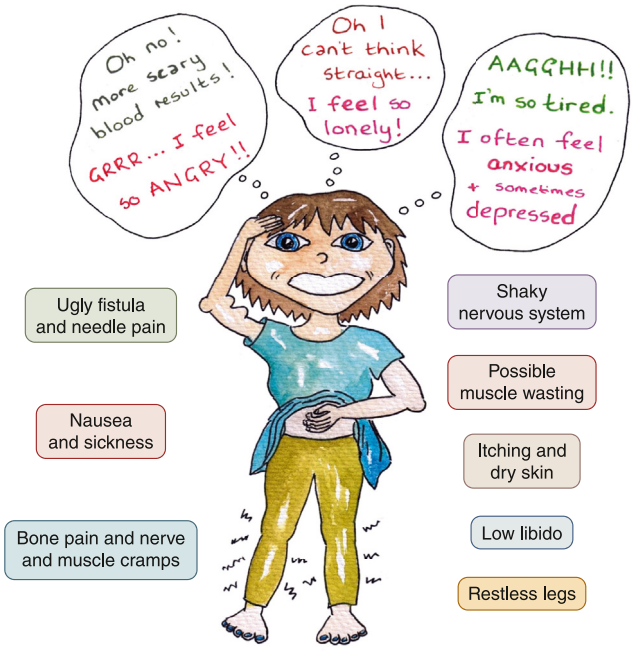

Figure 2. Illustration of concerns arising from symptom perception among people undergoing dialysis. As drawn by a patient participant, courtesy of Jayne Pigford.

Suggestion: Practical and Educational Support

We noted structural and educational challenges that hinder nurse-led symptom assessment and management. Although a practice model is currently lacking, roles and responsibilities of different kidney health professionals in symptom management need to be clarified in policies and clinical guidelines. For example, nephrology nurses should be important team members who could perform routine symptom assessment and initiate multidisciplinary action (e.g., nephrologists, psychologists, or social workers) to manage distressful symptoms. Such practices should be supported by relevant clinical guidelines, additional manpower, and financial resources.

In addition to the clinical guidelines, despite global efforts to

improve the standard of nephrology nursing education, a gap exists in providing specific knowledge about symptom management.[6] Professional education on symptom management can be incorporated in post-basic training courses as a core competency in nephrology nursing. To address this rapidly evolving area, continued education for practicing nephrology nurses needs to be provided. Notably, the educational needs of nephrology nurses in low-resource settings should not be neglected.

Advancing Symptom Science

In addition to clinical care, nephrology nurses ought to advance symptom management through evidence-based practice, research, and advocacy. Nurse researchers have led cutting-edge symptom science research, such as those exploring symptom clusters (e.g., specific group of co-occurring symptoms) of kidney disease[7] and conducting large-scale clinical trials to evaluate the effectiveness of nonpharmacologic interventions (e.g., exercise) in treating various symptoms.[8] Nurse-led research has expanded the body of knowledge and informed better symptom management practice in nephrology settings. Nephrology nurses have also advocated better care for patients undergoing dialysis in various international professional organizations. For example, nurses in the International Society of Nephrology Kidney Health Professional Working Group have promoted global collaboration and provided support for quality dialysis care all over the world.[9]

Suggestion: Research Support

Nurse researchers have made significant contributions in advancing the knowledge about symptom management in nephrology. This effort needs to be continued, in a collaborative approach, to address the unanswered questions in symptom science, such as how best to account for patients' lived experiences of symptoms, document interactions among symptoms and their underlying mechanisms, and identify cost-effective approaches to symptom management. Adequate funding should be secured to support nurse-led symptom science research. Clinical nurses are also encouraged to join this pursuit and translate evidence in their practice and advocacy.

Future Directions

KDIGO controversies conferences are crucial in bringing together expert thought leaders to discuss and debate nephrology-related issues that are not yet fully resolved. The inclusion of multiple disciplines, particularly nephrology nurses, has been an increasing positive feature in relevant KDIGO controversies conferences. This KDIGO meeting set forth an agenda for improved symptom management in nephrology. It deserves a high priority in dialysis care, and additional work is warranted to support different kidney health professionals regarding this matter. The strategy of leveraging the expertise from nurses and other members on the multidisciplinary care team will be vital in meeting KDIGO's foundational principles for dialysis care which include proper assessment, acknowledgment, documentation and management of symptom burden, and the means for their optimal delivery while considering the patients' biological, psychological, and social factors and local available resources.

DISCLOSURE

All the authors declared no competing interests.

REFERENCES

1. Ng MSN, Hui YH, Law BYS, Wong CL, So WKW. Challenges encountered by patients with end-stage kidney disease in accessing symptom management services: a narrative inquiry. *J Adv Nurs*. 2021;77:1391–1402. https://doi.org/10.1111/jan.14678
2. Mehrotra R, Davison SN, Farrington K, et al. Managing the symptom burden associated with maintenance dialysis: conclusions from a Kidney Disease: improving Global Outcomes (KDIGO) Controversies Conference. *Kidney Int*. 2023;104:441–454. https://doi.org/10.1016/j.kint.2023.05.019
3. Bonner A, Walker A. Nephrology nursing: blurring the boundaries: the reality of expert practice. *J Clin Nurs*. 2004;13:210–218. https://doi.org/10.1046/j.1365-2702.2003.00858.x
4. George S, McCann M. A nurse prescriber-led protocol for anaemia management in established haemodialysis patients: a retrospective study. *J Clin Nurs*. 2020;29:2535–2543. https://doi.org/10.1111/jocn.15275
5. Sharma S, Green T, Alexander KE, Bonner A. Educational or behavioural interventions for symptoms and health-related quality of life in adults receiving haemodialysis: a systematic review. *J Ren Care*. 2020;46:233–249. https://doi.org/10.1111/jorc.12329
6. Nazly A, Khamis E, Al Khatib H. The knowledge and educational needs of nurses regarding pain management of patients on maintenance hemodialysis: a qualitative study. *Open Nurs J*. 2021;15:93–102.
7. Ng MSN, So WKW, Wong CL, et al. Stability and impact of symptom clusters in patients with end-stage renal disease undergoing dialysis. *J Pain Symptom Manag*. 2020;59:67–76. https://doi.org/10.1016/j.jpainsymman.2019.08.013
8. Bennett PN, Fraser S, Barnard R, et al. Effects of an intradialytic resistance training programme on physical function: a prospective stepped-wedge randomized controlled trial. *Nephrol Dial Transplant*. 2016;31:1302–1309. https://doi.org/10.1093/ndt/gfv416
9. Bennett PN, Walker RC, Trask M, et al. The International Society of Nephrology nurse working group: engaging nephrology nurses globally. *Kidney Int Rep*. 2019;4:3–7. https://doi.org/10.1016/j.ekir.2018.10.013