

Culture of patient safety in dialysis care

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Abstract

Even though haemodialysis (HD) has transformed from an extraordinary to a commonplace procedure over the past 50 years, outpatient dialysis centres can be potentially hazardous for patients. Multiple safety risks are readily apparent in dialysis units, and adverse events are common occurrences. Among these are patient falls, medication errors, vascular access-related events, errors in machine and membrane preparation, failure to follow established policies, lapses in infection control, and communication breakdowns. Despite the known complexity of the HD procedure, environment, and associated patient safety risks, little is known about the state of patient safety cultures in the dialysis units. Patient safety is one foundation of high-quality care, and the Institute of Medicine recommends that all health care facilities across the care continuum develop and maintain a culture of patient safety. Creating, improving or maintaining a culture of safety in dialysis units is an essential requirement for minimising patient risks for harm, preventing or reducing errors, and improving the quality of care rendered. The routine assessments of patient safety culture in dialysis units can assist dialysis organisations in their efforts to identify threats to patient safety, reduce costs, and improve patient outcomes.

Keywords

Patient safety culture, haemodialysis, kidney failure.

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All nurses in dialysis units may not be familiar with the term *patient safety culture*, but as Carolyn Clancy (2011), who is a leader in the field of patient safety culture notes, they would easily be able to say if they can speak up about patient safety concerns without fear of retribution, or if they would feel safe receiving dialysis in their own dialysis unit if they had to. The concept of safety culture originated outside of health care, in studies of high-reliability organisations, such as aviation, that consistently minimise the occurrence of adverse events despite carrying out complex and hazardous work. Patient safety culture is defined as an organisation's commitment to safety at all levels of the organisation in the face of inherently complex and potentially hazardous procedures (Agency for Healthcare Policy and Research, 2012). Even though haemodialysis (HD) has transformed from an extraordinary to a commonplace procedure over the past 50 years, it can be potentially hazardous for patients (Holley, 2010), and it is well established that major gaps persist in the safety net around this complex treatment (Himmelfarb, 2010). Patient safety is one foundation of high-quality care, and improving the culture of safety in dialysis units is an essential requirement for minimising patient risks for harm, preventing or reducing errors, and improving the quality of care rendered.

Safety risks in dialysis care

Multiple safety risks are readily apparent in dialysis units such as water quality, infection control, inadequate hand hygiene, and faulty machine and equipment disinfection (Garrick *et al.*, 2012). In 2001, a survey report from the National ESRD

Patient Safety Initiative included a compiled list of top safety issues that occurred most often in dialysis units including patient falls, medication errors, vascular access-related events, dialyser errors, and excess blood loss/prolonged bleeding (National Patient Safety Foundation, 2001). In 2006, the Renal Physicians' Association in collaboration with the Forum of ESRD Networks conducted a survey of dialysis professionals and patients that focused on safety and assessed their attitudes towards patient safety (ESRD Health & Safety Survey, 2007). Findings from the survey revealed that dialysis units share important patient safety risks including lapses in communication, medication errors, patient falls, errors in machine and membrane preparation, failure to follow established policies, and lapses in infection control. Additionally, a review of adverse events in four outpatient HD units over an 18-month period revealed a total of 88 events over this time span, including infiltration of the vascular access, medication errors, dialysis circuit clotting and falls in the dialysis unit after the treatment (Holley, 2006).

Despite the patient safety challenges in HD settings, little is known regarding the state of patient safety cultures in the complex and potentially hazardous environment of dialysis units, and there is a dearth of evidence regarding the impact of safety cultures on the outcomes of patients receiving care in dialysis centres. In my analysis of survey data from 422 nurses who worked in outpatient dialysis units in the United States (US) (Thomas-Hawkins & Flynn, 2013), 86% of the nurses rated patient safety culture in their dialysis units as good to excellent. On the other hand, only 39% of nurses endorsed

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safe patient transitions during patient shift changes in dialysis units. Importantly, nurses' negative ratings of overall patient safety culture was independently associated with an increased odds of nurse reports of frequent occurrences of vascular access thrombosis and patient complaints. In addition, nurses' negative ratings of patient transitions during patient shift changes in dialysis units was independently associated with an increased odds of nurse reports of frequent occurrences of medication errors by nurses, patient hospitalisation, and vascular access infection. These preliminary findings underscore the premise that HD presents real threats to patient safety and provide support for strong cultures of safety in dialysis units. There is also an important need for more research in this area.

Developing cultures of safety in HD settings

To improve patient safety, the Institute of Medicine recommends that all health care facilities across the care continuum develop and maintain a culture of patient safety (Institute of Medicine, 2004). The Agency for Healthcare Research and Policy in the US (2012) notes the following as key features of patient safety culture in an organisation: 1) acknowledgement of the high-risk nature of their activities; 2) a determination to achieve safe operations; 3) an environment that is blame-free where individuals can report errors or near-misses without fear of punishment; 4) collaboration across ranks and disciplines to find solutions to patient safety problems; and 5) a commitment of resources to address safety concerns. Crucial among these is the premise that a *safe* organisation is not error-free (Garrick *et al.*, 2012). It is inevitable that people will make mistakes. Safe organisations anticipate potential unsafe events and avoid blaming unsafe and adverse events on an individual failure. However, removing blame from the workplace does not eliminate individual responsibility. A dialysis caregiver should be held accountable for not following established safety procedures. A *Just Culture* has emerged as one that reconciles the need for *no-blame* and *individual accountability* in organisations. Just Culture organisations focus on system issues that lead individuals to engage in unsafe behaviours while maintaining individual accountability by establishing zero tolerance for reckless employee behaviour (Dekker, 2012). In dialysis settings, a strong safety culture should include individual peer review and accountability as well as root cause analyses to discover system and process issues that contribute to unsafe care processes and adverse events (Garrick *et al.*, 2012).

An organisation's safety culture employs a significant influence on efforts to identify policies, practices, assumptions and omissions that could lead to medical errors (Clancy, 2011)]. The Agency for Healthcare Research and Quality has laid the groundwork for significant improvements in patient safety and outcomes through the provision of evidence-based patient safety culture surveys and recommends annual assessments of safety culture as one of its 10 top safety tips for hospitals (AHRQ, 2013). In the past decade, these tools have provided a basis for routine assessments of patient safety culture in health care organisations internationally to raise staff awareness about patient safety culture, assess the current state of patient safety culture,

identify strengths and areas for improvement, examine trends in safety culture over time, and evaluate the impact of safety culture initiatives and interventions. The routine assessment of patient safety culture in HD settings may be a critical first step for dialysis organisations in their efforts to identify threats to patient safety, reduce costs and improve patient outcomes. The feedback from these assessments can provide dialysis organisations with data to build or strengthen a culture of patient safety in HD units and, ultimately, to improve patient outcomes.

Conclusions

HD is a potentially hazardous and high-risk procedure for patients who receive care in dialysis settings, and safety risks and adverse patient events in dialysis units have been well documented. The Institute of Medicine recommends that all health care facilities develop and maintain a culture of patient safety. Moreover, the Agency for Healthcare Research and Quality recommends routine assessments of patient safety culture in health care settings. Despite these recommendations, little is known about the state of patient safety culture in dialysis facilities. Consequently, there is little evidence on which to guide strategies to develop and maintain patient safety cultures in these settings. Developing and maintaining a culture of safety in dialysis units is an essential requirement for minimising patient risks for harm, preventing or reducing errors, and improving the quality of care rendered. Additionally, the routine assessment of patient safety culture in dialysis units can be an important evidence-based strategy for dialysis organisations in their efforts to improve the quality of dialysis patient care and outcomes.

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