

ANZSN/RSA QI WORKSHOP 2024 RESOURCE LISTING

Websites

[ISPD Guidelines - International Society for Peritoneal Dialysis](#)

[Master Clinician's Guide to Quality and Safety \(nsw.gov.au\)](#)

[Dialysis Safety | CDC](#)

[Chapter 5 - Peritoneal Dialysis - ANZDATA Annual Report 2022](#)

[Intra-vascular device management | Queensland Health](#)

[Staphylococcus aureus bloodstream infection \(SABSI\) prevention resources | Australian Commission on Safety and Quality in Health Care](#)

[MHA Keystone Center | Michigan Health & Hospital Association](#)

[Healthcare-Associated Infections \(HAIs\) | HAI | CDC](#)

[SONG – Standardised Outcomes in Nephrology \(songinitiative.org\)](#)

[Be a Safe Patient | Dialysis Safety | CDC](#) Everyone has a role to play in preventing infections and improving dialysis patient safety. You can be a safe patient and take action to help prevent infections.

- Wash your hands often or use hand sanitizer.
- Cover your nose and mouth when you cough or sneeze.
- Learn about the dialysis process and know what to expect during treatment.
- Learn about things staff do to protect you from infections and read the CDC [Audit Tools and Checklists](#).
- Watch the [Speak Up Video](#) and ask questions during your dialysis treatments.

[Updates on Infectious and Other Complications in Peritoneal Dialysis: Core Curriculum 2023 - American Journal of Kidney Diseases \(ajkd.org\)](#)

The last few years have seen several developments in the field of peritoneal dialysis (PD), including successful use of acute PD, increasing emphasis on home dialysis utilization, and improved understanding of models of peritoneal solute transfer. This installment of AJKD's Core Curriculum in Nephrology emphasizes the latest data available for prevention and management of infectious and noninfectious complications of PD. Through case vignettes, appropriate strategies for diagnosis and care of patients with PD peritonitis are reviewed as well as noninfectious complications evident in clinical practice including complications from increased intra-abdominal pressure, namely pericatheter and abdominal leaks, hernia formation, and complications from pleuroperitoneal communication (hydrothorax). Although rates of incisional hernias and pericatheter leaks have decreased with improved peritoneal dialysis catheter insertion techniques, these mechanical complications continue to be common occurrences and are reviewed via pertinent clinical vignettes which aim to address and discuss common implications of these scenarios. Finally, this Core Curriculum article covers a practical overview of peritoneal dialysis catheter dysfunction.

Articles relating to Session One Topics

Haemodialysis

[Multifaceted Quality Improvement Interventions to Prevent Hemodialysis Catheter-Related Bloodstream Infections: A Systematic Review.](#)

Lazarus B, Bongetti E, Ling J, Gallagher M, Kotwal S, Polkinghorne KR. Am J Kidney Dis. 2023 Oct;82(4):429-442.e1. doi: 10.1053/j.ajkd.2023.02.006. Epub 2023 May 12. PMID: 37178814.

Plain-language summary: People with kidney failure rely on central venous catheters to facilitate life-sustaining hemodialysis treatments. Unfortunately, hemodialysis catheters are a common source of problematic bloodstream infections. Quality improvement programs have effectively prevented catheter-related infections in intensive care units, but it is unclear whether they can be adapted to patients using hemodialysis catheters in the community. In a systematic review that included 21 studies, we found that most quality improvement programs were reported to be successful. However, the findings were mixed among higher-quality studies, and overall the quality of evidence was low. Ongoing quality improvement programs should be complemented by more high-quality research.

[Multifaceted intervention to reduce haemodialysis catheter related bloodstream infections: REDUCCTION stepped wedge, cluster randomised trial.](#)

Kotwal S, Cass A, Coggan S, Gray NA, Jan S, McDonald S, Polkinghorne KR, Rogers K, Talaulikar G, Di Tanna GL, Gallagher M; REDUCCTION Investigators. BMJ. 2022 Apr 12;377:e069634. doi: 10.1136/bmj-2021-069634. PMID: 35414532; PMCID: PMC9002320.

Abstract

Objective: To identify whether multifaceted interventions, or care bundles, reduce catheter related bloodstream infections (CRBSIs) from central venous catheters used for haemodialysis.

Design: Stepped wedge, cluster randomised design.

Setting: 37 renal services across Australia.

Participants: All adults (age ≥ 18 years) under the care of a renal service who required insertion of a new haemodialysis catheter.

Interventions: After a baseline observational phase, a service-wide, multifaceted intervention bundle that included elements of catheter care (insertion, maintenance, and removal) was implemented at one of three randomly assigned time points (12 at the first time point, 12 at the second, and 13 at the third) between 20 December 2016 and 31 March 2020.

Main outcomes measure: The primary endpoint was the rate of CRBSI in the baseline phase compared with intervention phase at the renal service level using the intention-to-treat principle.

Results: 1.14 million haemodialysis catheter days of use were monitored across 6364 patients. Patient characteristics were similar across baseline and intervention phases. 315 CRBSIs occurred (158 in the baseline phase and 157 in the intervention phase), with a rate of 0.21 per 1000 days of catheter use in the baseline phase and 0.29 per 1000 days in the intervention phase, giving an incidence rate ratio of 1.37 (95% confidence interval 0.85 to 2.21; P=0.20). This translates to one in 10 patients who undergo dialysis for a year with a catheter experiencing an episode of CRBSI.

Conclusions: Among patients who require a haemodialysis catheter, the implementation of a multifaceted intervention did not reduce the rate of CRBSI. Multifaceted interventions to prevent CRBSI might not be effective in clinical practice settings.

[Prevention of Bloodstream Infections in Patients Undergoing Hemodialysis - PMC \(nih.gov\)](#)

Fisher M, Golestaneh L, Allon M, Abreo K, Mokrzycki MH. Clin J Am Soc Nephrol. 2020 Jan 7;15(1):132-151. doi: 10.2215/CJN.06820619. Epub 2019 Dec 5. Erratum in: Clin J Am Soc Nephrol. 2022 Apr;17(4):568-569. PMID: 31806658; PMCID: PMC6946076.

Abstract

Bloodstream infections are an important cause of hospitalizations, morbidity, and mortality in patients receiving hemodialysis. Eliminating bloodstream infections in the hemodialysis setting has been the focus of the Centers for Disease Control and Prevention (CDC) Making Dialysis Safer for Patients Coalition and, more recently, the CDC's partnership with the American Society of Nephrology's Nephrologists Transforming Dialysis Safety Initiative. The majority of vascular access-associated bloodstream infections occur in patients dialyzing with central vein catheters. The CDC's core interventions for bloodstream infection prevention are the gold standard for catheter care in the hemodialysis setting and have been proven to be effective in reducing catheter-associated bloodstream infection. However, in the United States hemodialysis catheter-associated bloodstream infections continue to occur at unacceptable rates, possibly because of lapses in adherence to strict aseptic technique, or additional factors not addressed by the CDC's core interventions. There is a clear need for novel prophylactic therapies. This review highlights the recent advances and includes a discussion about the potential limitations and adverse effects associated with each option.

Peritoneal Dialysis

[Peritoneal Dialysis–Related Infections : Clinical Journal of the American Society of Nephrology \(lww.com\)](#)

Cho, Yeoungjee^{1,2}; Chow, Kai-Ming^{3,4}; Kam-Tao Li, Philip^{3,4}; Runnegar, Naomi⁵; Johnson, David W.^{1,2}
Clinical Journal of the American Society of Nephrology . August 14, 2023. | DOI: 10.2215/CJN.0000000000000280

Abstract

Peritoneal dialysis (PD) represents an important treatment choice for patients with kidney failure. It allows them to dialyze outside the hospital setting, facilitating enhanced opportunities to participate in life-related activities, flexibility in schedules, time and cost savings from reduced travel to dialysis centers, and improved quality of life. Despite its numerous advantages, PD utilization has been static or diminishing in parts of the world. PD-related infection, such as peritonitis, exit-site infection, or tunnel infection, is a major concern for patients, caregivers, and health professionals—which may result in hesitation to consider this as treatment or to cease therapy when these complications take place. In this review, the definition, epidemiology, risk factors, prevention, and treatment of PD-related infection on the basis of the contemporary evidence will be described.

[Peritoneal Dialysis-Related Infection Rates and Outcomes: Results From the Peritoneal Dialysis Outcomes and Practice Patterns Study \(PDOPPS\) - PubMed \(nih.gov\)](#)

Perl J, Fuller DS, Bieber BA, Boudville N, Kanjanabuch T, Ito Y, Nessim SJ, Piraino BM, Pisoni RL, Robinson BM, Schaubel DE, Schreiber MJ, Teitelbaum I, Woodrow G, Zhao J, Johnson DW. *Am J Kidney Dis*. 2020 Jul;76(1):42-53. doi: 10.1053/j.ajkd.2019.09.016. Epub 2020 Jan 10. PMID: 31932094.

Abstract

Rationale & objective: Peritoneal dialysis (PD)-related peritonitis carries high morbidity for PD patients. Understanding the characteristics and risk factors for peritonitis can guide regional development of prevention strategies. We describe peritonitis rates and the associations of selected facility practices with peritonitis risk among countries participating in the Peritoneal Dialysis Outcomes and Practice Patterns Study (PDOPPS).

Study design: Observational prospective cohort study.

Setting & participants: 7,051 adult PD patients in 209 facilities across 7 countries (Australia, New Zealand, Canada, Japan, Thailand, United Kingdom, United States).

Exposures: Facility characteristics (census count, facility age, nurse to patient ratio) and selected facility practices (use of automated PD, use of icodextrin or biocompatible PD solutions, antibiotic prophylaxis strategies, duration of PD training).

Outcomes: Peritonitis rate (by country, overall and variation across facilities), microbiology patterns.

Analytical approach: Poisson rate estimation, proportional rate models adjusted for selected patient case-mix variables.

Results: 2,272 peritonitis episodes were identified in 7,051 patients (crude rate, 0.28 episodes/patient-year). Facility peritonitis rates were variable within each country and exceeded 0.50/patient-year in 10% of facilities. Overall peritonitis rates, in episodes per patient-year, were 0.40 (95% CI, 0.36-0.46) in

Thailand, 0.38 (95% CI, 0.32-0.46) in the United Kingdom, 0.35 (95% CI, 0.30-0.40) in Australia/New Zealand, 0.29 (95% CI, 0.26-0.32) in Canada, 0.27 (95% CI, 0.25-0.30) in Japan, and 0.26 (95% CI, 0.24-0.27) in the United States. The microbiology of peritonitis was similar across countries, except in Thailand, where Gram-negative infections and culture-negative peritonitis were more common. Facility size was positively associated with risk for peritonitis in Japan (rate ratio [RR] per 10 patients, 1.07; 95% CI, 1.04-1.09). Lower peritonitis risk was observed in facilities that had higher automated PD use (RR per 10 percentage points greater, 0.95; 95% CI, 0.91-1.00), facilities that used antibiotics at catheter insertion (RR, 0.83; 95% CI, 0.69-0.99), and facilities with PD training duration of 6 or more (vs <6) days (RR, 0.81; 95% CI, 0.68-0.96). Lower peritonitis risk was seen in facilities that used topical exit-site mupirocin or aminoglycoside ointment, but this association did not achieve conventional levels of statistical significance (RR, 0.79; 95% CI, 0.62-1.01).

Limitations: Sampling variation, selection bias (rate estimates), and residual confounding (associations).

Conclusions: Important international differences exist in the risk for peritonitis that may result from varied and potentially modifiable treatment practices. These findings may inform future guidelines in potentially setting lower maximally acceptable peritonitis rates.

Keywords: PD-related infection; Peritoneal Dialysis and Outcomes Practice Patterns Study (PDOPPS); Peritoneal dialysis (PD); bacterial infection; best practices; causative organism; epidemiology; facility practices; hospitalization; international comparisons; microbiology; peritonitis; peritonitis prevention; technique failure.

[Regional variation in the treatment and prevention of peritoneal dialysis-related infections in the Peritoneal Dialysis Outcomes and Practice Patterns Study - PubMed \(nih.gov\)](#)

Boudville N, Johnson DW, Zhao J, Bieber BA, Pisoni RL, Piraino B, Bernardini J, Nessim SJ, Ito Y, Woodrow G, Brown F, Collins J, Kanjanabuch T, Szeto CC, Perl J. *Nephrol Dial Transplant*. 2019 Dec 1;34(12):2118-2126. doi: 10.1093/ndt/gfy204. PMID: 30053214; PMCID: PMC6887924.

Abstract

Background: Peritoneal dialysis (PD)-related infections lead to significant morbidity. The International Society for Peritoneal Dialysis (ISPD) guidelines for the prevention and treatment of PD-related infections are based on variable evidence. We describe practice patterns across facilities participating in the Peritoneal Dialysis Outcomes and Practice Patterns Study (PDOPPS).

Methods: PDOPPS, a prospective cohort study, enrolled nationally representative samples of PD patients in Australia/New Zealand (ANZ), Canada, Thailand, Japan, the UK and the USA. Data on PD-related infection prevention and treatment practices across facilities were obtained from a survey of medical directors'.

Results: A total of 170 centers, caring for >11 000 patients, were included. The proportion of facilities reporting antibiotic administration at the time of PD catheter insertion was lowest in the USA (63%) and highest in Canada and the UK (100%). Exit-site antimicrobial prophylaxis was variably used across countries, with Japan (4%) and Thailand (28%) having the lowest proportions. Exit-site mupirocin was the predominant exit-site prophylactic strategy in ANZ (56%), Canada (50%) and the UK (47%), while exit-site aminoglycosides were more common in the USA (72%). Empiric Gram-positive peritonitis treatment with vancomycin was most common in the UK (88%) and USA (83%) compared with 10-45% elsewhere. Empiric Gram-negative peritonitis treatment with aminoglycoside therapy was highest in ANZ (72%) and the UK (77%) compared with 10-45% elsewhere.

Conclusions: Variation in PD-related infection prevention and treatment strategies exist across countries with limited uptake of ISPD guideline recommendations. Further work will aim to understand the impact these differences have on the wide variation in infection risk between facilities and other clinically relevant PD outcomes.

[Prevention of peritoneal dialysis-related infections | Nephrology Dialysis Transplantation | Oxford Academic \(oup.com\)](#)

Denise J. Campbell, David W. Johnson, David W. Mudge, Martin P. Gallagher, Jonathan C. Craig

Nephrology Dialysis Transplantation, Volume 30, Issue 9, September 2015, Pages 1461–1472, <https://doi.org/10.1093/ndt/qfu313>

Abstract

The use of peritoneal dialysis (PD) varies widely from country to country, with the main limitation being infectious complications, particularly peritonitis, which leads to technique failure, hospitalization and increased mortality. A large number of prophylactic strategies have been employed to reduce the occurrence of peritonitis, including the use of oral, nasal and topical antibiotics, disinfection of the exit site, modification of the transfer set used in continuous ambulatory PD exchanges, changes to the design of the PD catheter implanted, the surgical method by which the PD catheter is inserted, the type and length of training given to patients, the occurrence of home visits by trained PD nurses, the use of antibiotic prophylaxis in patients undergoing certain invasive procedures and the administration of antifungal prophylaxis to PD patients whenever they are given an antibiotic treatment course. This review summarizes the existing evidence evaluating these interventions to prevent exit-site/tunnel infections and peritonitis.

[Infection prophylaxis in peritoneal dialysis patients: Results from an Australia/New Zealand survey — Research @ Flinders](#)

Denise Campbell, David Mudge, Martin Gallagher, Wai Lim, Dwaraka Ranganathan, Walaa Saweirs, [Jonathan Craig](#)

[College of Medicine and Public Health](#) 2017

Abstract

Background: Clinical practice guidelines aim to reduce the rates of peritoneal dialysis (PD)-related infections, a common complication of PD in end-stage kidney disease patients. We describe the clinical practices used by Australian and New Zealand nephrologists to prevent PD-related infections in PD patients. **Methods:** A survey of PD practices in relation to the use of antibiotic and antifungal prophylaxis in PD patients was conducted of practicing nephrologists identified via the Australia and New Zealand Society of Nephrology (ANZSN) membership in 2013. **Results:** Of 333 nephrologists approached, 133 (39.9%) participated. Overall, 127 (95.5%) nephrologists prescribed antibiotics at the time of Tenckhoff catheter insertion, 85 (63.9%) routinely screened for nasal *S. aureus* carriage, with 76 (88.4%) reporting they treated *S. aureus* carriers with mupirocin ointment. Following Tenckhoff catheter insertion, 79 (59.4%) prescribed mupirocin ointment at the exit site or intranasally, and 93 (69.9%) nephrologists routinely prescribed a course of oral antifungal agent whenever their PD patients were given a course of antibiotics. **Conclusions:** Although the majority of nephrologists prescribe

antibiotics at the time of Tenckhoff catheter insertion, less than 70% routinely prescribe mupirocin ointment and/or prophylactic antifungal therapy. This variation in practice in Australia and New Zealand may contribute to the disparity in PD-related infection rates that is seen between units.

Intensive Care

[Arterial catheter outcomes in intensive care: an analysis of 1117 patients - Infection, Disease & Health \(idhjournal.com.au\)](https://doi.org/10.1016/j.idh.2023.09.020)

Samantha Keogh; Ms Emily Larsen; Dr Amanda Corley; Ms Mari Takashima; Nicole Marsh; Ms Melannie Edwards; Dr Health Reynolds; Dr Jayesh Dhanani; Fiona Coyer; Kevin Laupland; Claire Rickard

DOI: <https://doi.org/10.1016/j.idh.2023.09.020>

Introduction: Access to arterial circulation through arterial catheters (ACs) is crucial for monitoring and decision-making in intensive care units (ICU), but they carry the risk of complications including bloodstream infection (BSI).

Method: We conducted a secondary analysis of data from four randomised controlled trials in Australian ICUs, investigating the efficacy of AC dressing and securement techniques. De-identified data were combined into a single dataset, and per-patient outcomes analysed. The primary outcome was AC-BSI, defined as laboratory-confirmed bloodstream infection (LCBI) type 1 or 2, with a concurrent local infection. All-cause AC failure was defined as any unplanned removal. AC infection and failure were reported as rates per 1000 catheter days.

Results: Data from 1117 adult patients were analysed. Mean age was 58.8 years (± 16.6); and 41% (n=462) were male. Median AC dwell time was 110 hours (IQR 28.3-168.0). Fifteen patients had a confirmed BSI inclusive of one case (<0.1%) of AC-BSI due to *Candida parapsilosis* (0.18/1000 catheter days [95% CI 0.03-1.29]), and 14 cases of LCBI (1%; 13 LCBI-1 and 1 LCBI-2; 2.54/1000 catheter days [95% CI 1.51-4.30]). LCBI were most commonly *Enterococcus faecalis*; *Escherichia coli* and *Klebsiella pneumoniae*. There were four cases of local infection (<1%). Overall AC failure rate was 13% (n=146) or 26.53/1000 catheter days (95% CI 22.56-31.20).

Conclusion: ACs are frequently used in ICUs, but their associated complications and potential harm receive less attention than other invasive devices. This study highlights the importance of recognising and monitoring the risks associated with ACs to mitigate patient harm.

Articles relating to Session Two Topics

CARI Guidelines

[KHA-CARI guideline recommendations for infection control for haemodialysis units \(cariguide.org\)](https://cariguide.org)

Meg Jardine, Robert J Commons, Janak R De Zoysa, Muh G Wong, Nicole Gilroy, Julianne Green, Belinda Henderson, Rhonda L Stuart, David J Tunnicliffe, Carolyn Can Eps and Eugene Athan Nephrology 24 (2019) 951–957

Abstract

Aim: There is no national consensus on infection control in haemodialysis units in Australia and New Zealand. The primary aim of this guideline was to provide recommendations on screening for blood-borne viruses and multi-resistant organisms for dialysis units based on the available evidence.

Methods: The Kidney Health Australia Caring for Australasians with Renal Impairment guidelines, overall approach to guideline development follows the GRADE framework. A facilitated workshop was conducted to ensure that patient and caregiver concerns were considered. The evidence from relevant medical databases on the impact of screening on detection and transmission rates, hospitalization, mortality and psychosocial care, was reviewed and critically appraised. The guideline group made recommendations from the evidence available.

Results: The main guideline recommendations are: • Dialysis units adopt a comprehensive approach that encompasses standard infection control precautions. • Conduct routine surveillance for key blood-borne viruses and methicillin-resistant *Staphylococcus aureus*. • Conduct routine surveillance of individual levels of protection against hepatitis B for patients on haemodialysis. Use dedicated dialysis machines for HBV-infected patients. The evidence in totality was not found to support routine surveillance of vancomycin-resistant *Enterococci*. Enhanced surveillance in light of the local risk of transmittable infectious agents should be considered by dialysis units. Very few studies have reported on the potential adverse effects of screening and associated practices. **Conclusions:** Future research should focus on the potential benefits and adverse effects of screening and associated practices on clinical outcomes including infections prevented and health service delivery, and psychosocial domains for patients. Given the results of trials in the critical setting, the effectiveness of methicillin-resistant *Staphylococcus aureus* decolonization in people receiving dialysis therapy warrants further research.

Articles relating to Session Three Topics

Vaccination

[The Vaccine-Hesitant Moment | NEJM](#)

Heidi J. Larson, Ph.D., Emmanuela Gakidou, Ph.D., and Christopher J.L. Murray, M.D., Ph.D N Engl J Med 2022; 387:58-65 DOI: 10.1056/NEJMra2106441

Vaccine hesitancy is a state of indecision and uncertainty about vaccination before a decision is made to act (or not act). It represents a time of vulnerability and opportunity. Multiple surveys that were conducted to examine the sentiments concerning coronavirus disease 19 (Covid-19) vaccination have exposed new levels of volatility around vaccine hesitancy, particularly when the hesitancy is powered by digital media platforms. Spikes in vaccine hesitancy often coincide with new information, new policies, or newly reported vaccine risks. Some of the variability is due to factors such as a decline in the public's trust of experts, preferences for alternative health, political polarization, and belief-based extremism. In this review, we use the examples of hesitancy regarding the measles–mumps–rubella (MMR), human papillomavirus (HPV), and Covid-19 vaccines to look at the multifaceted issues that fuel vaccine hesitancy. Each of these examples is part of a larger, complex story.

[COVID-19 vaccine hesitancy | Nature Reviews Nephrology](#)

The COVID-19 pandemic has highlighted the vital role of vaccination in preventing life-threatening diseases and improving global health. Understanding and addressing the concerns of vaccine-hesitant individuals, including those with chronic diseases, is key to increasing vaccine acceptance and uptake.

Vaccines are among the most effective tools to protect individuals against vaccine-preventable diseases (VPDs) — including COVID-19 — and their associated morbidity and mortality¹. For people with chronic medical conditions, vaccines reduce the risk of further deterioration of health and death owing to VPDs². Vaccination directly protects vaccinated individuals and indirectly protects those who cannot be immunized or who do not respond robustly to vaccination, through the development of community immunity. Patients with kidney disease are particularly vulnerable to COVID-19 and those with impaired immune systems do not mount good antibody responses to the primary series of COVID-19 vaccination. Protection against COVID-19 for patients on dialysis can be increased through administration of a third dose in the primary vaccine series and personalized strategies for additional booster doses³.

[Vaccination in patients with kidney failure: lessons from COVID-19 - PMC \(nih.gov\)](#)

Babel N, Hugo C, Westhoff TH. Vaccination in patients with kidney failure: lessons from COVID-19. *Nat Rev Nephrol.* 2022 Nov;18(11):708-723. doi: 10.1038/s41581-022-00617-5. Epub 2022 Aug 23. PMID: 35999285; PMCID: PMC9397175.

Abstract

Infection is the second leading cause of death in patients with chronic kidney disease (CKD). Adequate humoral (antibody) and cellular (T cell-driven) immunity are required to minimize pathogen entry and promote pathogen clearance to enable infection control. Vaccination can generate cellular and humoral immunity against specific pathogens and is used to prevent many life-threatening infectious diseases. However, vaccination efficacy is diminished in patients with CKD. Premature ageing of the immune system and chronic systemic low-grade inflammation are the main causes of immune alteration in these patients. In the case of SARS-CoV-2 infection, COVID-19 can have considerable detrimental effects in patients with CKD, especially in those with kidney failure. COVID-19 prevention through successful vaccination is therefore paramount in this vulnerable population. Although patients receiving dialysis have seroconversion rates comparable to those of patients with normal kidney function, most kidney transplant recipients could not generate humoral immunity after two doses of the COVID-19 vaccine. Importantly, some patients who were not able to produce antibodies still had a detectable vaccine-specific T cell response, which might be sufficient to prevent severe COVID-19. Correlates of protection against SARS-CoV-2 have not been established for patients with kidney failure, but they are urgently needed to enable personalized vaccination regimens.

Clinician engagement

[Enabling clinician engagement in safety and quality improvement - PubMed \(nih.gov\)](#)

Fischer S, Patterson K, Marr C. *Aust Health Rev.* 2021 Aug;45(4):455-462. doi: 10.1071/AH20151. PMID: 33789788.

Abstract

Objective The aim of this study was to determine how individual, group and leadership factors influence clinician engagement in safety and quality improvement work. **Methods** The study was conducted through an online questionnaire. Participants were alumni of Australian healthcare safety and quality improvement capability development programs. Relationships between five factors influencing clinicians' perception of value for time and effort in safety and quality improvement work were explored. The five factors were psychological empowerment; task cohesion; social cohesion; transformational leadership behaviour of project leads and sponsors; and value for time and effort for self and patients. Correlation and regression analyses were used to explore the aspects of the hypothesised model. Moderation and mediation analysis was then used to explore the relationships further. **Structural**

equation modelling was used to determine the path model. Results All factors showed strong positive correlations, with psychological empowerment and transformational leadership having the strongest relationships with perceived value for effort for self and patient. The factorial structure of measures was examined, and all indicators loaded significantly on their corresponding latent constructs and the model showed a good fit to the data. Conclusions The findings of this study suggest that the most crucial factor to clinician engagement in safety and quality improvement at the point of care is the leader's behaviour and how that influences team dynamics and individual motivation and empowerment. What is known about the topic? Healthcare organisations remain challenged regarding clinician engagement in safety and quality improvement. Although much is known about clinicians' perceptions of safety and quality, there is more to understand about what practically motivates clinicians to engage. Tapping into individual, group and leadership factors' influences on clinician engagement offers a deeper perspective. What does this paper add? This study explored the individual, group and leadership factors that drive clinician engagement. The factors include the clinician's individual motivation and empowerment to participate, the group dynamics that surround the clinician and the leadership behaviours of the team's leader. The research design allowed for greater understanding about how and to what extent these factors drive clinician engagement. The study's findings can be applied in practice in capability development activities or leadership for safety and quality improvement. What are the implications for practitioners? Rather than taking a perspective that the clinician needs to engage, this study suggests a strong onus on leadership behaviours to engage those clinicians. Focusing on the self as leader and a leader's own behaviours, as well as how those behaviours are fostering positive team dynamics and motivating and empowering individual team members, will have a great benefit on clinician engagement in safety and quality improvement. Higher clinical engagement in safety and quality improvement should translate into better value care.

[The Making Dialysis Safer for Patients Coalition: A New Partnership to Prevent Hemodialysis-Related Infections.](#)

Patel PR, Brinsley-Rainisch K. Clin J Am Soc Nephrol. 2018 Jan 6;13(1):175-181. doi: 10.2215/CJN.02730317. Epub 2017 Aug 9. PMID: 28794000; PMCID: PMC5753304.

Abstract

The *Making Dialysis Safer for Patients Coalition* is a partnership of organizations and individual stakeholders that share the common goal to prevent bloodstream infections among patients receiving hemodialysis. Led by the Centers for Disease Control and Prevention (CDC), in collaboration with the CDC Foundation, this public-private partnership strives to improve adherence to evidence-based recommendations, share information and experiences, and engage patients in infection prevention efforts.

[How Nephrologists Can Transform Dialysis Safety to Prevent Infections](#)

Wong LP. Systems Thinking and Leadership:. Clin J Am Soc Nephrol. 2018 Apr 6;13(4):655-662. doi: 10.2215/CJN.09740917. Epub 2018 Mar 22. PMID: 29567864; PMCID: PMC5968907.

Infections are the second leading cause of death for patients with ESKD. Despite multiple efforts, nephrologists have been unable to prevent infections in dialysis facilities. The American Society of Nephrology and the Centers for Disease Control and Prevention have partnered to create Nephrologists Transforming Dialysis Safety to promote nephrologist leadership and engagement in efforts to “Target Zero” preventable dialysis infections. Because traditional approaches to infection control and prevention in dialysis facilities have had limited success, Nephrologists Transforming Dialysis Safety is reconceptualizing the problem in the context of the complexity of health care systems and organizational behavior. By identifying different parts of a problem and attempting to understand how these parts interact and produce a result, systems thinking has effectively tackled difficult problems in dynamic settings. The dialysis facility is composed of different physical and human elements that are interconnected and affect not only behavior but also, the existence of a culture of safety that promotes infection prevention. Because dialysis infections result from a complex system of interactions between caregivers, patients, dialysis organizations, and the environment, attempts to address infections by focusing on one element in isolation often fail. Creating a sense of urgency and commitment to eradicating dialysis infections requires leadership and motivational skills. These skills are not taught in the standard nephrology or medical director curriculum. Effective leadership by medical directors and engagement in infection prevention by nephrologists are required to create a culture of safety. It is imperative that nephrologists commit to leadership training and embrace their potential as change agents to prevent infections in dialysis facilities. This paper explores the systemic factors contributing to the ongoing dialysis infection crisis in the United States and the role of nephrologists in instilling a culture of safety in which infections can be anticipated and prevented.