LETTER TO THE EDITOR

Infection control in dialysis centres: A proactive approach to preventing the next blood-borne disease outbreak

Hafsa Shamim[1], Noor Amna[2], Wajiha Naz[3]

Respected Editor-in-Chief, In November 2024, a Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Virus Syndrome (AIDs) outbreak occurred at a reputable hospital's dialysis centre in Multan, infecting 30 patients, one of whom succumbed to the disease.[1] Following this incident, the Punjab Healthcare Commission (PHC) launched a crackdown on over 150 dialysis facilities across Punjab. The PHC reinforced its Minimum Service Delivery Standards (MSDS) for dialysis facilities, which include 37 mandatory compliance criteria.[2] Additionally, the commission issued strict guidelines for HIV testing and monitoring, warning that institutions failing to comply would face heavy penalties.

Patients undergoing dialysis are highly vulnerable to blood-borne infections such as hepatitis B, hepatitis C and HIV due to invasive catheter access and compromised immune function.[3] A failure to implement proper infection control measures can have devastating consequences. To mitigate these risks, all personnel involved—including nephrologists, trainees, nurses, dialysis staff, quality assurance managers, and administrators—must adhere to best practices in infection control.

In healthcare settings, including dialysis centres, contact transmission remains the primary mode of pathogen spread. Strict adherence to hand hygiene, the use of personal protective equipment (PPE)—such as gloves, masks, and gowns—and regular disinfection of environmental surfaces can significantly reduce infection risks. Among these measures, hand hygiene remains the single most effective method of prevention[4] Regular disinfection of the dialysis machine's internal hydraulic pathways and the surface of the dialysis machine along with water quality maintenance are essential to prevent contamination.[5]

[1]Department of Nephrology, Mega Medical Complex, Rawalpindi, Pakistan; [2]Marwa Diagnostic Center, Islamabad, Pakistan; [3]Department of Orthopaedics, Zimri, Orthopaedic Hospital, Islamabad, Pakistan.

Correspondence: Hafsa Shamim. e-mail: hafsa.sameda.shamim@gmail.com
ORCID ID: 0000-0003-3461-1662

Submission completed: 14-03-2025 **1st Revision received:** 04-04-2025
Acceptance: 19-04-2025 **Last Revision received:** 18-04-2025

Patients should be routinely screened for blood-borne infections which enables early detection and timely intervention. All susceptible dialysis patients and staff members must be vaccinated against hepatitis B. Patients positive for hepatitis B virus (HBV) should be isolated and assigned dedicated machines, equipment, and healthcare staff to prevent cross-contamination.[4]

Conducting routine audits and employing quality improvement strategies, such as the Plan-Do-Study-Act (PDSA) cycle, can help dialysis centres enhance infection control protocols and ensure compliance with regulatory standards.[5]

Furthermore, surveillance for infections and other adverse events along with infection control education and training form a part of the infection control programme which should be followed.[4] Effective implementation of these measures can significantly reduce infection rates and enhance patient safety, a vital concern in a developing nation such as Pakistan.

Disclaimer: None.

Conflict of Interest: None.

Funding Source: None.

DOI: https://doi.org/10.47391/JPMA.30680

References

1. Patient dies 30 others test positive for HIV at Nishtar's dialysis unit in Multan. Dawn News. [Online] [Cited 2025 January 28]. Available from: URL: https://www.dawn.com/news/1872183
2. Punjab Healthcare Commission. Minimum Service Delivery Standards (MSDS) for Dialysis Centers. [Online] [Cited 2025 February 11]. Available from: URL: https://www.phc.org.pk/#/download/phc-document%23cg-msds
3. Alfano G, Morisi N, Giovanella S, Frisina M, Amurri A, Tei L, et al. Risk of infections related to endovascular catheters and cardiac implantable devices in haemodialysis patients. J Nephrol. 2024 Mar 20. doi:10.1177/11297298241240502
4. Centers for Disease Control and Prevention (CDC). Recommendations for preventing transmission of infections among chronic haemodialysis patients. [Online] [Cited 2025 March 23]. Available from: URL: https://www.cdc.gov/mmwr/PDF/rr/rr5005.pdf
5. Waheed S, Philipneri M. Targeting zero infections in the outpatient dialysis unit: Core curriculum 2020. Am J Kidney Dis 2020;76:130–40. doi:10.1053/j.ajkd.2020.02.441

Author Contribution:
HS, NA & WN: Concept, design, data acquisition, analysis, interpretation, drafting, revision, final approval and agreement to be accountable for all aspects of the work.