

Editorial

Infection Prevention and Control in Bangladesh: A Continuing Journey Toward Safer Healthcare

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Healthcare-associated infections (HAIs) causing significant challenge in global public health, contributed to increased mortality, higher healthcare costs, and prolonged hospital stay. While approximately 1 in 10 patients is affected by an HAI, globally¹, in developed countries, 7 out of 100 patients acquire at least once against HAI.

But in developing nations this number rises to 15. In intensive care units (ICU) up to 30% patients in has at least one HAI in high-income countries, whereas in developing countries it remains two to three times higher².

Successful implementation of evidence-based infection prevention and control (IPC) measures is reported to result in a considerable reduction in HAIs, decreasing from 35% to 55%³.

Outbreaks of coronavirus disease 2019 (COVID-19) highlighted the critical role of effective IPC measures in managing and preventing infectious disease outbreaks in healthcare settings⁴. Although IPC practices improved during the COVID-19 pandemic, many healthcare facilities in Bangladesh still lack strong and effective infection control programs.

The World Health Organization has stressed on IPC as essential for strengthening health systems particularly in countries like Bangladesh where HAIs and antimicrobial resistance (AMR) constantly reported to remain major concerns⁵. Hospitals in Bangladesh do face multiple challenges, viz, overcrowding, limited infection control resources, low hand hygiene compliance, and lack of proper infection surveillance systems.

Dastgir Harun et al. (2022) reported in their recent study in 11 hospitals, only two were at an intermediate IPC level, while rest remained at the basic level. Hand hygiene compliance, too, was reported to be only 25.3%, indicating essential need for significant improvement in IPC practices⁶.

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Though national policies on AMR and IPC in In Bangladesh do exist under the country's Directorate General of Health Services (DGHS), its implementation at the facility level requires more sustained professional engagement and advocacies. It has been suggested that microbiologists, clinicians, and health administrators must work hand-in-hand in ensuring better functional ICP activities in all healthcare facilities in Bangladesh.

Limited resources remain a major challenge for the government in developing countries like Bangladesh. Improving awareness can strengthen existing policies and practices, allowing better healthcare services without significant additional cost. To support these issues, a movement was initiated by the IPC Alliance BD in 2020, a group of enthusiastic medical microbiologists working to build awareness to support Government of Bangladesh through comprehensive training on IPC⁷.

During the Emergence of COVID-19 pandemic, IPC Alliance BD provided a virtual platform for antimicrobial stewardship, regular training, and knowledge sharing activities mobilizing multidisciplinary professionals in close collaborated with DGHS to strengthen hospital-based IPC capacity-building.

One of the first major achievements was to take part in initiating a government office order for IPC implementation at all levels of hospitals through DGHS. And then, IPC activities complemented several activities against COVID-dedicated hospitals by a team formed by DGHS's CDC when >1,000 healthcare workers (physicians, nurses, technologists, and hospital managers) received IPC-training through step-wise initiatives.

The Alliance organized webinars involving stakeholders from different disciplines with the aim of forming a multidisciplinary Hospital Infection Prevention Society which also conducted a short certificate course on antimicrobial stewardship and some online CME programs on clinical microbiology in collaboration with Bangladesh Society of Medical Microbiologists (BSMM).

Additionally, the Alliance collaborated with the Postgraduate Surgery Academia (PGSA) in holding workshops on a multidisciplinary approach to IPC. This platform also contributed to the preparation of a basic IPC module for intern doctors in Medical Humanities book- an initiative of DGME.

One of the most significant achievements of this collaborative movement was the initiation of structured HAI surveillance in 2023 in 25 tertiary-level hospitals in Dhaka, covering catheter-associated urinary tract infection (CAUTI), central line-associated bloodstream infection (CLABSI), ventilator-associated pneumonia (VAP), and surgical site infection (SSI).

Such surveillance remains globally recognized as a cornerstone of infection reduction, as demonstrated by the frameworks of National Healthcare Safety Network of Centers for Disease Control and Prevention⁸. Furthermore, the IPC-Alliance contributed to development of National Antibiotic Stewardship Guideline of Bangladesh, too.

As such movement gained momentum, need for a formal institutional structure beyond an online platform became evident- a vision which culminated official registration of Alliance as Bangladesh IPC-Foundation (BIPCF) on 23 December 2025 adopting a clear vision and mission to strengthen IPC-practices through training, awareness and evidence-based excellence in hospitals/ communities.

Although we are proud to claim some progress made, several challenges still remain to be done viz., strengthening IPC in Bangladesh. Surveillance of HAIs, integration of IPC into medical education, and ensuring sustainable funding for long-term programs essential for future improvement. Strong multidisciplinary collaboration among clinicians, microbiologists, nurses, hospital administrators, and public health professionals is crucial to make IPC practices effective in all healthcare settings.

Through continuous commitment and coordinated efforts, Bangladesh can develop a safer and more resilient healthcare system that is better prepared to prevent infectious diseases thus limiting spread of antimicrobial resistance.

References:

1. World Health Organization. Report on the burden of endemic health care-associated infection worldwide. Geneva: World Health Organization; 2011.
2. Allegranzi B, Bagheri Nejad S, Combes's cure C, Grafman's W, Attar H, Donaldson L, et al. Burden of endemic health-care-associated infection in developing countries: systematic review and meta-analysis. *Lancet*. 2011; 377:228-241.
3. World Health Organization. World alliance for patient safety: global patient safety challenge 2005–2006. Geneva: World Health Organization; 2005.
4. Bong CL, Brasher C, Chikumba E, McDougall R, Mellin-Olsen J, Enright A. The COVID-19 pandemic: effects

on low- and middle-income countries. *Anesth Analg*. 2020;131(1):86-92.

5. World Health Organization. Guidelines on core components of infection prevention and control programs at the national and acute health care facility level. Geneva: World Health Organization; 2016.

6. Harun MG, Anwar I, et al. Infection prevention and control in health facilities in Bangladesh. *BMC Health Serv Res*. 2022; 22:1239.

7. Hossain MA. Make your intention infection prevention. *Bangladesh J Med Microbiol*. 2020;14(1):1-2. 8. Centers for Disease Control and Prevention. National Healthcare Safety Network (NHSN) patient safety component manual. Atlanta (GA): CDC; 2022