Healthcare Acquired Infections

Sector: Acute Care

Healthcare associated infections (HAIs) are infections that are acquired during the delivery of health care (also known as nosocomial infection) and are a significant patient safety issue. There are multiple factors increasing the risk of HAIs such as host factors (advancing age, underlying immunosuppression) complex treatment modalities, length of procedures, length of stay and an increasing prevalence of antibiotic-resistant organisms. HIROC legal claims suggest that a breach of infection prevention and control (IPAC) practices taking place around the time of the infection may lead to a finding that the breach contributed to the transmission of infection. Of particular concern is the rise of class-action lawsuits involving multiple potentially exposed patients. Formal and coordinated IPAC programs, environmental services, medical device reprocessing, decontamination and sterilization and surveillance and staff compliance at the bedside with routine infection control practices (e.g. hand washing) are key factors in managing this risk.

**COMMON CLAIM THEMES**

- Lack of monitoring of IPAC measures/interventions.
- Low compliance with IPAC policies/guidelines.
- Failure to isolate infected or colonized patients with the same significant antibiotic resistant organism.
- Delayed performance of ordered screening/testing.
- Conflicting definitions for “outbreak” within the IPAC team and externally.
- Delayed action/communication regarding:
  - Positive screening/test results to ordering practitioners, healthcare team and/or IPAC staff;
  - The presence and/or severity of an outbreak to internal and external stakeholders.
- Inadequate management of an outbreak.
- Improper use and wear of personal protective equipment.
- Facility design issues such as:
  - Poor chair/station spacing in hemodialysis;
  - Clean and dirty endoscope bins stored in close proximity to each other;
  - Insufficient/poorly placed hand washing sinks and alcohol hand sanitizers.
- Inadequate housekeeping staffing levels and cleaning measures (e.g. wrong type and/or improper application of surface and equipment cleaning products).
- Poorly conducted look backs and patient notifications (disclosure) following a large scale exposure.
- Poor clinical and cleaning documentation.

**CASE STUDY 1**

A patient underwent a total knee replacement and two days post-operatively, experienced diarrhea which continued for three days. The patient’s fluid levels were not monitored and the patient experienced dehydration, elevated creatinine levels and subsequent renal failure. A week after being admitted, stool cultures and a CT scan revealed C. difficile. Legal action was commenced by the family and the claim was settled as expert reviewers felt that proper infection control and isolation procedures were not utilized and that management of the infection did not meet the standard of care.

**CASE STUDY 2**

An outpatient hemodialysis patient with undiagnosed active tuberculosis (TB) came in contact with hundreds of patients and healthcare providers over a five month period. Following diagnosis, the healthcare organization engaged in a large-scale look-back and patient notification process. While there was a low risk of transmission, the dialysis patients were considered higher risk due to their immuno-compromised status. The healthcare organization elected to notify all of the hemodialysis patients, encouraging them to undergo testing. Healthcare providers were also offered testing. Four patients tested positive (latent) for TB during the first round of testing. The second round of testing identified a fifth patient and one healthcare provider. Being a low risk facility for TB, TB screening was not routinely offered to hemodialysis patients. The review indicated that there was a delay in the diagnosis of the initial patient despite symptoms of active TB and the healthcare organization did not follow infection prevention guidelines regarding the layout of the dialysis unit.

[Canadian Case Examples]
• HIROC claims files.


MITIGATION STRATEGIES
Note: The Mitigation Strategies are general risk management strategies, not a mandatory checklist. Please also refer to the Privacy Breach Risk Reference Sheet for more information on look backs and HIROC Critical Incidents & Multi-Patient Events Risk Resource Guide for more information on managing multi-patient events.

Reliable Care Processes
- Establish clear hand hygiene expectations (e.g. 4 moments of hand hygiene) for physicians, staff, contracted staff and volunteers.
- Establish immunization expectations for physicians, staff, contracted staff and volunteers.
- Ensure education and training on infectious disease risks, transmission, prevention practices and expectations for all staff, especially clinical, environmental staff and volunteers.
- Track and retain education attendance records.
- Adopt organism-specific patient screening, surveillance, isolation and cohorting practices.
- Consider pre-printed orders or standardized guidelines for Clostridium difficile.
- As practical, use single dose files for IV/IM medication.
- Use an aseptic technique for administration of IV/IM medication to prevent bloodborne pathogen transmission including the use of single dose vials.

Equipment and Supplies
- Ensure sufficient and accessible personal protective equipment/supplies.
- Ensure sufficient point-of-care sharps containers.
- Ensure sufficient numbers and ready access to hand wash sinks/hand sanitizer dispensers.

Cleaning and Environment
- Obtain IPAC input and collaboration with environmental services related to the selection of surfaces and finishes and appropriate cleaning and disinfection products.
- Establish clear environmental cleaning standards.
- Establish equipment re-use and cleaning standards (including prohibiting the re-use of syringes).
- Ensure appropriate spacing of chairs and stations within the hemodialysis program/clinic.
- Ensure appropriate separation of storage/handling areas for clean and dirty endoscopes.
- Ensure contracts with housekeeping providers conform to IPAC guidelines/policies.

Outbreak Management
- Standardize the definition for an outbreak and implement protocols for reporting and managing an actual or suspected outbreak including:
  - Expectations for notification of external stakeholders (i.e. ministry/public health representatives) as required by provincial/territorial legislation;
  - Creation and retention of detailed records including internal communications, notification of external parties, and consultations with clinical/epidemiology experts.

Monitoring and Measurement
- Track and report the incidence of healthcare acquired infections and outbreaks, by organism.
- Track and report hand hygiene compliance rates, organization-wide and by unit/clinic.
- Track and report equipment and environmental cleaning compliance.
- Track and report on high-level disinfection and sterilization (e.g. for endoscopes).
- Implement formal strategies to help ensure consistent adherence to healthcare acquired infections policies/practices (e.g. periodic chart/e-record audits, analysis of reported incidents/events, learning from medico-legal matters).

Resources
- Ensure appropriate levels of and/or access to qualified IPC practitioner(s) based on patient populations, volumes and acuity.
- Implement an antibiotic stewardship program.