

Facilities - Aging/Maintenance

An organization's aging infrastructure and lack of maintenance can lead to several impacts including and not limiting to loss of operations, injuries, increase in waste/inventory, poor patient experience and flow, financial impact, and reputational loss. This risk can also impede an organization's ability to meet strategic goals and objectives, and result in risk of non-compliance with regulations, codes, and standards. This Risk Profile includes building facilities and equipment-related aging and maintenance issues. This document contains information identified by HIROC subscriber healthcare organizations (acute and non-acute) in the Risk Register application to help you in your assessment of this risk.



Key controls/Mitigation strategies

- Strategic planning/budgeting
 - ✓ Capital planning and long-term planning for anticipated infrastructure needs
 - \checkmark Annual capital budgeting process
 - \checkmark Dedicated funds allocated for upgrades of aging infrastructure and emergencies
 - Infrastructure and facilities align with the organization's strategic priorities (e.g., service excellence, safety)
 - ✓ Computerized maintenance management system which provides advanced notice of replacement needs and assets nearing end of life (e.g., utilized for medical asset planning)
 - Emergency Department infrastructure planning with expertise in safety and security considered
 - Prioritization of redevelopment or replacement of aging infrastructure across multiple sites based on resource availability
- Funding
 - \checkmark Strong relationship with regional health authorities
 - \checkmark Regular communication with government representatives to increase awareness
 - \checkmark Prioritization of funding requirements
 - \checkmark Continuous efforts to apply for grants and funded infrastructure projects

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- Internal policies and processes
 - ✓ Safety and security of staff and patients are always kept at the forefront when making decisions related to capital planning and equipment purchases
 - \checkmark Formal committee to oversee all capital projects and emergency requests
 - ✓ Regular inspections and assessments to identify potential problem areas (e.g., fire inspections, infrastructure risk assessments, life safety assessments, environmental assessments, etc.)
 - ✓ Formal risk analysis (e.g., matrix) to understand impact of circumstances and urgency
 - ✓ Continuous risk identification and prioritization process for infrastructure upgrades
 - \checkmark Grouping of similar repair costs together to get better pricing/funding
 - ✓ Appropriate level of information about conditions and life expectancy of facilities and equipment are provided to decision makers
 - ✓ Formal preventative maintenance program actively followed, manufacturers recommendations identified
 - Access to knowledgeable and experienced maintenance team and/or engineers
 on call 24/7
 - ✓ Appropriately managed contracted service providers
 - Monitor temperature and humidity in areas such as operating room and medical devices reprocessing, etc.
 - \checkmark An inventory of equipment and infrastructure assets are maintained
 - ✓ Regular alerts and recalls reviews
 - \checkmark Infection control issues are identified and managed as required
 - ✓ Inventory of all manufacturers' warranties
 - \checkmark Spare parts inventory management
 - \checkmark Participation in groups with other facilities regarding planned maintenance
 - Documented plant management to reduce the risk of knowledge loss (e.g. succession planning)

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- ✓ Contingency plans/Emergency Code procedure and response plans in place including back up equipment (e.g, backup generators)
- ✓ Decommissioning of unsafe equipment
- ✓ Backup equipment (e.g. smaller cooler, additional ventilators)
- Physical controls
 - \checkmark Electrical improvements and red emergency power outlets
 - ✓ Updated plumbing in older buildings
 - ✓ Sprinkler system
 - \checkmark Updated fire alarm system, fire exit door replacement
 - \checkmark Appropriate sewers and storm drainage system
 - ✓ Updated communication system
 - ✓ Roof repairs
 - \checkmark Heating, Ventilation, and Air Conditioning (HVAC) system replacement
 - \checkmark Upgrade security systems such as cameras, building access, and alerts
 - ✓ Oil tank replacement
 - ✓ Floor plan review of current design functionality (use of space designer/architect)
 - \checkmark Workplace hazards monitored and addressed on a timely manner
 - ✓ Signage of any hazards



Monitoring/Indicators

- \checkmark % of scheduled preventive maintenance tasks completed on time
- ✓ % of reported broken/hazardous equipment reported which are within the preventative maintenance program
- \checkmark % downtime or % uptime

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- \checkmark # of Infection Prevention and Control (IPAC) audits for specific medical equipment
- \checkmark Hospital occupancy and use of isolation room (flow metrics)
- \checkmark Problem areas and # of maintenance service requests
- ✓ Alerts and recalls-code/standard compliance (e.g. building codes, fire codes, Canadian Standards Association)
- ✓ # capital project requests
- ✓ Budgets/forecasting
- ✓ Missing equipment
- ✓ Workplace hazards
- ✓ Facility conditions (e.g., daily monitoring of HVAC)
- \checkmark Infrastructure projects and their statuses
- ✓ Staff/patient/visitor complaints
- \checkmark Building automation system to monitor equipment and report on performance
- ✓ Regular audits
- \checkmark Periodic inspections by third parties to verify condition of assets
- ✓ Air quality testing results
- \checkmark Emergency code testing results (i.e. code grey, red)
- $\sqrt{}$ # of code grey and/or loss of a critical service/equipment annually
- ✓ Accreditation results

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