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Infection Prevention Plan FY2024

I. Description

Outlines the annual infection prevention priorities of Infection Prevention and UNC Hospitals.

II. Rationale

An organized, systematic plan based upon the annual infection control risk assessment that provides the foundation for an effective infection prevention program. This plan is the annual supplement to the Infection Prevention policy: [Infection Prevention Program](#).

III. Policy

A. Goals

1. Overall
 - Reduce risk of healthcare-associated infections (HAI) for all patients, staff, and visitors by limiting unprotected exposures to pathogens, transmission of infection associated with procedures, and transmission of infections associated with the use of medical equipment, devices, and supplies.
2. Targeted
 - a. Healthcare-associated infection reduction – at least 2% reduction of CLABSI hospital-wide, excluding those defined as mucosal barrier injuries (MBI).
 - b. Improving compliance with hand hygiene guidelines through the Clean In, Clean Out hand hygiene compliance program.

- Units and departments consistently (>90%) achieve designated thresholds for hand hygiene observations.

B. Risk Assessment

(see Attachment 1: Annual Unit - Based Risk Assessment)

(see Attachment 2: UNC Facility Risk Assessment)

1. Patient Populations at Increased Risk of Infection

- All intensive care unit patients
- Solid organ transplant patients
- Burn patients
- Hematopoietic Stem Cell Transplant (HSCT) patients
- Immunosuppressed patients (e.g., absolute neutrophil count [ANC] <1000, agranulocytosis)

2. Procedures/Devices that Increase Infection Risk

- Central venous catheters
- Indwelling urinary catheters
- Tubes, drains, other devices inserted percutaneously
- Intubation and prolonged ventilator support
- Surgical procedures
- ECMO/VAD

3. Epidemiologically Important Pathogens

- Legionella
- Mold (e.g., Aspergillus, Rhizopus, Mucor)
- MRSA
- VRE
- C. difficile*
- MDR Gram negative bacteria
- Carbapenem-resistant *Enterobacteriaceae*
- Candida auris*

4. High Consequence Pathogens

- High consequence pathogens will include pandemic influenza strains including highly pathogenic avian influenza (e.g., H5N1, H7N9), SARS-CoV, MERS-CoV, COVID-19, *Y. pestis*, agents of viral hemorrhagic fevers (Ebola, Marburg, Lassa, Congo-Crimean fever), certain Hanta viruses, certain pox viruses (e.g., smallpox, Mpox, vaccinia), and any other highly pathogenic emerging infectious disease as deemed appropriate.

C. General Strategies to Reduce Infection Risk

The following are evidence-based strategies recommended to prevent infections. Some of these are led by the Department of Infection Prevention and others by our partners with this department's support.

1. Identify risk for acquiring and transmitting infections based on geographic location, community and population served
 - a. Receive public health alerts on community illnesses and trends from the NC Public Health Department.
 - b. Public Health Epidemiologist at UNC Hospitals to act as liaison between UNC Hospitals and the public health department.
 - c. Attend biannual Public Health Institutional Task (PHIT) Force meetings with Public Health Department leadership and other facilities in our area.
2. Identify and control outbreaks
 - a. Review of microbiology, immunology, and molecular microbiology reports
 - b. Prospective and syndromic surveillance
 - c. Pulsed field gel electrophoresis of outbreak pathogens
 - d. Epidemiologic assessment as indicated (e.g., timeline, epidemic curve, case-control study)
 - e. Institution of prevention and control measures as indicated (e.g., isolation, cohorting of patients and staff, improved hand hygiene, active surveillance cultures, assessment of environmental cleaning, and enhanced environmental cleaning)
 - f. Exposure follow-up (in conjunction with Occupational Health Services [OHS])
3. Perform surveillance for healthcare-associated infections
 - a. Follow CDC National Healthcare Safety Network (NHSN) definitions
 - b. Prospective and targeted retrospective
 - c. Comprehensive: inpatient-related and outpatient-detected

- d. Calculation/distribution of monthly infection rates and line listing of infected patients for each inpatient unit/service line
 - e. Analysis of infection data to examine healthcare equity issues
 - f. Monthly and as needed analysis of potential for cross-transmission
 - g. Targeted surveillance for home health/hospice infections
 - h. Monitor incidence of healthcare-associated device-related or procedure-related infections
 - i. Central Line-Associated Bloodstream Infections (CLABSI)
 - ii. Ventilator-Associated Events (VAE)
 - iii. Surgical Site Infections (SSI)
 - iv. Catheter-Associated Urinary Tract Infections (CAUTI)
 - v. *Clostridioides difficile* infections (CDI)
4. Monitor and audit key process data on healthcare-associated device-related or procedure-related infections and make accessible to stakeholders, including leaders, licensed practitioners, nursing staff, and all UNC Hospitals staff through dashboard.
5. Conduct routine monitoring
- a. Biological indicators for tabletop sterilizers
 - b. Endoscopes used for Endoscopic Retrograde Cholangiopancreatography (ERCP)
 - c. Dental water lines
 - d. Water baths in Transfusion Services
6. Improve Hand Hygiene Compliance
- a. Support compliance monitoring through Clean In, Clean Out program and provide feedback to staff
 - b. Routinely evaluate the availability and acceptability of hand hygiene products
 - c. Provide just-in-time peer coaching
 - d. Provide frequent and tailored education on when and how to perform hand hygiene along with frequent visible reminders
 - e. Enlist organizational leaders to serve as role models
 - f. Ensure commitment of leadership to achieve and sustain compliance of \geq 90%. Managers must hold everyone accountable for proper hand hygiene.

- f. Work with units and service leader teams to perform case reviews for all CLABSI not classified as Mucosal Barrier Injuries (MBI)
- g. Create educational materials as needed on specific topics around CLABSI prevention projects:
 - i. Carolina Antimicrobial Stewardship Program (CASP): diagnostic stewardship
 - ii. Center for Nursing Excellence (CNE): all CLABSI prevention-related education
 - iii. Central Line Insertion Quality Improvement Consortium (CLIQIC): support for standardized insertion training and checklist for providers
 - iv. CVAD Liaison Team: various projects including central line necessity and maintenance of challenging dressings
 - v. Epic team: improvement of EMR related to documentation on central lines
 - vi. Vascular and Interventional Radiology (VIR) and Venous Access Team (VAT) - best line type for patient
 - vii. Value Analysis Team - product roll outs
 - viii. Multidisciplinary colleagues: Providers, nursing, pharmacy, nursing assistants, etc.

11. Implement evidence-based strategies for prevention of Surgical Site Infections (SSI)

- a. Annually review and revise SSI Prevention Bundle as needed and provide ongoing education on bundle.
- b. Collaborate with PreOp colleagues to ensure CHG wipes and appropriate education available for patients.
- c. Promote standardized, evidence-based practices for patient skin preparation prior to surgery. Use previously created LMS for staff education and updated LMS as needed.
- d. Collaborate with local and system groups to include evidence-based SSI prevention measures on Enhanced Recovery After Surgery (ERAS) pathways.
- e. Ensure Peri-Operative Services and Anesthesia infection control policies support prevention strategies.
- f. Participate in Peri-operative Quality Council to provide perspective from infection prevention on all peri-op projects

- b. Notify Risk Management of suspected sentinel event via internal notification system
 - c. Participate in root cause analysis and follow up as requested
- 15. Construction Rounds and Construction Risk Assessment Meetings
 - a. Rounds with Plant Engineering every 2 weeks to active construction and renovation sites in UNC Hospitals and on an as needed basis
 - b. Attend construction meetings held by Plant Engineering and Contract Services as needed
 - c. Review blueprints and risk assessments for all new construction and renovations in clinical areas
- 16. Infection Prevention Rounds
 - a. Evaluate compliance with infection prevention policies/practices
 - b. Communicate recommendations to manager with their follow-up documented
- 17. Policy Review and Revision
- 18. Committee Participation: Refer to the Infection Prevention policy: [Infection Prevention Program](#) for committee information
- 19. Periodic Comprehensive TB Risk Assessment
- 20. Consultation, Education/Training
 - a. In-services, presentations, educational material to staff, visitors/families, licensed practitioners, contract employees, students, and volunteers
 - b. Computer-based training modules
 - c. Educational videos
 - d. Newsletter articles
 - e. Educational materials (e.g., flyers, booklets, brochures)
 - f. Quality Improvement support from Infection Prevention Quality Improvement Staff
 - g. On-call availability 24/7 for Infection Prevention consultation
- 21. Additional Strategies to Reduce Infections for the Immunosuppressed Patient (e.g., absolute neutrophil count [ANC<1000], agranulocytosis)
 - a. Ideally a private positive pressure room, HEPA filtration for HSCT patients

- b. No live plants or fresh flowers
- c. Immunosuppressed diet per physician order
- d. Patient must wear tight-fitting surgical mask when outside room
- e. Child visitor restrictions during periods of high influenza, RSV, and/or COVID-19 community transmission

22. Additional Strategies for Home Health and Hospice

- a. Trend analysis of device-related infections (urinary catheter-associated UTIs and central line-associated bloodstream infections)
- b. Promote immunizations to prevent respiratory infections: influenza and pneumococcal pneumonia vaccines (as recommended by ACIP)

D. Specific Strategies to Address Infection Risks

- Based on the Facility Level and Unit-Specific Risk Assessments, the following strategies will be employed in FY24 for elements with scores of ≥ 5 :

a. Viral Hemorrhagic Fever

- i. Coordinate High Consequence Pathogen Preparedness Committee
- ii. Refine High Consequence Pathogen Preparedness plans and exercise development

b. CLABSI prevention

- i. Leadership of CLABSI-specific workgroups as part of FY24 CLABSI initiative and organizational goal
- ii. Identification of target areas and partnership with areas on development of strategies and metrics
- iii. Creation and maintenance of tools for CLABSI prevention (e.g., peer audits, CHG toolkit)
- iv. **All strategies listed in section III, C, 9.**

c. SSI Prevention

- i. Collaborate with ERAS partners to promote infection prevention elements being added to system ERAS pathways
- ii. All strategies listed in section III, C, 10.

d. *Candida auris*

- i. Identification of patients with *Candida auris*
 - ii. Implementation of transmission-based isolation precautions for patients with *Candida auris*
 - iii. Provide education for staff caring for patients with *Candida auris*
- e. Water intrusion
 - i. Multi-disciplinary workgroup will be formed
 - ii. Notification and evaluation process development
 - iii. Continue to expand products to prevent wipes from being flushed
- f. High Level Disinfection (HLD) for endoscopes and patient equipment
 - i. Support routine microbiologic testing
 - ii. Support tracking of usage and routine maintenance of endoscopes
 - iii. Provide staff education for HLD activities
 - iv. Perform Infection Prevention rounds in areas conducting HLD
 - v. Participate in organization-wide HLD workgroup
- g. Unit-level strategies
 - Inpatient units with risk assessment score >5
 - Rounding at least monthly to promote compliance with evidence-based practices for infection prevention relevant to the unit's surveillance data.

E. Evaluation of Plan Effectiveness

See Attachment 3 - Hospital Quality Assessment Performance Improvement Plan

1. Statistical analysis of infections
2. Trend analysis of infection rates
3. Device-associated rates to include home health and hospice
4. Monthly infection reports to nurse managers, clinical directors, infection control liaisons
5. Monthly infection reports to Infection Control Committee
6. Infection Prevention rounds report and annual compliance assessment
7. Support Occupational Health Services to monitor compliance with required and

recommended immunizations

8. Annual assessment of communicable disease exposures with trend analysis
9. Annual risk assessment for MDROs with trend analysis
10. Periodic assessment of process measures with staff feedback
 - a. Evidence based processes to prevent surgical site infections
 - b. Evidence based processes to prevent central line-associated bloodstream infections
 - c. Evidence based processes to prevent indwelling catheter associated urinary tract infections
 - d. Evidence based processes to prevent *Clostridioides difficile* infections
 - e. Evidence based processes to prevent ventilator associated pneumonia and ventilator associated events
 - f. Hand hygiene compliance
 - g. Isolation precautions compliance

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Attachments

[01: Annual Unit-Based Infection Risk Assessment FY24](#)

[02: UNC Facility Risk Assessment FY24](#)

[03: Hospital Quality Assessment Performance Improvement \(QAPI\) Plan FY24](#)

Approval Signatures

| Step Description | Approver | Date |
|---------------------------|--|---------|
| Policy Stat Administrator | Kimberly Novak-Jones: Nurse Educator | 10/2023 |
| | Thomas Ivester: CMO/VP Medical Affairs | 10/2023 |
| | Emily Vavalle: Dir Epidemiology | 10/2023 |
| | Sherie Goldbach: Project Coordinator | 10/2023 |

Applicability

UNC Medical Center

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