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Infection Prevention Plan FY 2021 - Final Goals

I. Description

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

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
    a. Reduce risk of healthcare-associated infections for all patients, healthcare personnel (HCP), 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 – 3% reduction overall across the infection types that are reported to CMS (MRSA bacteremia, *C. difficile*; CLABSI; SSI-Hyst; SSI-Colon surgery; CAUTI). (Note: these infection counts are based on CMS required reporting regulations, not necessarily all

hospital-wide infections) ***We finished the fiscal year with a 13.8% increase from our baseline period (CY19).***

b. Improving compliance with hand hygiene guidelines through the Clean In, Clean Out hand hygiene compliance program.

    i. Consistently sustain ≥90 percent compliance across locations and job classes.

        - At least 90 percent of all locations and job classes must sustain 90 percent compliance or higher (for all locations/job classes submitting at least 25 observations/month). ***Locations: Final FY21 performance - inpatient 7/12 months; outpatient 4/12 months. Job Classes: Final FY21 performance - inpatient 7/12 months; outpatient 1/12 months.***

    ii. Continue improving our culture of feedback.

        - Achieve overall feedback among staff with >75 percent across all locations. ***Final FY21 performance - inpatient 0/12 months; outpatient 0/12 months; OR 0/12 months (highest achieved: 60.8% for outpatient in January).***

B. Risk Assessment

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

(see Attachment 2: UNC Medical Center Risk Assessment)

1. Patient Populations at Increased Risk of Infection
    a. All intensive care unit patients
    b. Solid organ transplant patients
    c. Burn patients
    d. Hematopoietic Stem Cell Transplant (HSCT) patients
    e. Immunosuppressed patients (e.g., absolute neutrophil count [ANC] <1000, agranulocytosis)
2. Procedures/Devices that Increase Infection Risk
    a. Central venous catheters
    b. Indwelling urinary catheters
    c. Tubes, drains, other devices inserted percutaneously

d. Intubation and prolonged ventilator support
e. Surgical procedures
f. ECMO/VAD

3. Epidemiologically Important Pathogens
    a. Legionella
    b. Aspergillus/Rhizopus/Mucor
    c. MRSA
    d. VRE
    e. *C. difficile*
    f. MDR Gram negative bacteria
    g. Carbapenem-resistant *Enterobacteriacae*
    h. *Candida auris*
4. Highly Communicable Diseases
    a. Novel Influenza virus
    b. SARS-CoV-1
    c. MERS-CoV
    d. SARS-CoV-2
    e. Viral hemorrhagic fevers (e.g., Lassa fever, Ebola viral disease)
    f. Measles

C. General Strategies to Reduce Infection Risk

1. Identify risk for acquiring and transmitting infections based 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 UNCMC to act as liaison between the medical center and the public health department.
    c. Attend bi-annually 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, 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, enhanced environmental cleaning)
f. Exposure follow-up (in conjunction with 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. Monthly and as needed analysis of potential for cross-transmission
    f. Targeted surveillance for home health/hospice infections
    g. 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)
4. Conduct routine monitoring
    a. Biological indicators for tabletop sterilizers and vaporized hydrogen peroxide systems
    b. Endoscopes used for Endoscopic Retrograde Cholangiopancreatography (ERCP)
    c. Dental water lines
    d. Water baths in Transfusion Services

5. 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 ≥ 90%. Managers must hold everyone accountable for proper hand hygiene.
    g. Continue to support efforts to engage patient and families in hand hygiene improvement activities.
    h. Continue to promote engagement in Clean In, Clean Out across all areas.
6. Support Infection Control Liaison Program
    a. Unit-based staff, outpatient care services clinical staff, and ancillary care staff (i.e., ES, FNS, Patient Transport) with focused infection control training provided by Infection Prevention
    b. Responsible for assessing their unit's compliance with infection control policies/procedures and conducting performance improvement activities related to infection prevention (e.g., reducing device-associated infections, monitoring and improving hand hygiene compliance)
    c. Serves as the contact person to disseminate infection control information, updates, and answer staff questions
7. Ensure compliance with Infection Prevention related TJC National Patient Safety Goals
    a. Comply with either the current Centers for Disease Control and Prevention (CDC) hand hygiene guidelines and/or the current World Health Organization (WHO) hand hygiene guidelines.
8. Prevent HAIs due to multi-drug resistant organisms (MDROs).
    a. Annual risk assessment for MDROs.
    b. Ensure infection control policies support prevention strategies.
9. Assess compliance with evidence-based practices for prevention of central line-associated bloodstream infections.

a. Compliance with Central Line Insertions, Access, and Maintenance Bundle.

b. Standardized insertion training and checklist for providers.

c. Chlorhexidine treatments in intensive care units, MPCU, ISCU, CTSU, and dedicated oncology units.

d. Daily assessment for central line need.

e. Provide Central Line-Associated Bloodstream Infection rate data and prevention process measures to key stakeholders, including leaders, licensed independent practitioners, nursing staff, and other clinicians.

f. Support peer audits on Central Line Maintenance compliance and disseminate process measures on compliance to unit leadership monthly.

g. Mentoring and support of dedicated Central Venous Access Device team to assist with bedside insertions as needed and resource for unit staff with CVAD issues.

10. Assess compliance with evidence-based practices for prevention of surgical site infections.

    a. Ensure patient education provided in Pre-op visit. Use LMS for staff education.

    b. Promote standardized, evidence-based practices for patient skin preparation prior to surgery.

    c. Ensure Peri-Operative Services and Anesthesia infection control policies support prevention strategies.

    d. Trend surgical procedure specific infection rates and unit rates and provide feedback to key stakeholders.

11. Implement evidence-based strategies for prevention of catheter-associated urinary tract infections.

    a. Staff education regarding aseptic insertion of catheter.

    b. Insertion order must include indication for catheter.

    c. Daily assessment for urinary catheter need.

    d. Appropriate maintenance of indwelling urinary catheters.

    e. Perform peer audits on Indwelling Urinary Catheter Maintenance compliance and disseminate process measures on compliance to unit leadership monthly.

12. Manage HAIs as Sentinel Events When Indicated.

a. Review all HAIs for indications of an unanticipated death or permanent loss of function.

b. Notify Risk Management of suspected sentinel event.

c. Participate in root cause analysis and follow up as needed.

13. Construction Rounds and Construction Risk Assessment Meetings

    a. Walk-about rounds with Plant Engineering every 2 weeks to active construction and renovation sites in the medical center and on an as needed basis.

    b. Attend bi-weekly and as needed construction meetings held by Plant Engineering and Contract Services.

    c. Review blueprints and risk assessments for all new construction and renovations in clinical areas.

14. Infection Prevention Rounds

    a. Evaluate compliance with infection prevention policies/practices.

    b. Written recommendations to manager with their follow-up documented.

15. Policy Review and Revision

16. Committee Participation: Refer to the Infection Prevention policy: Infection Prevention Program for committee information

17. Periodic Comprehensive TB Risk Assessment

18. Consultation, Education/Training

    a. In-services, presentations, educational material to staff, visitors/families, attending physicians, residents, contract employees, students, and volunteers

    b. Computer-based training modules

    c. Educational videos

    d. Newsletter articles

    e. Educational materials (e.g., booklets/brochures)

    f. Quality Improvement support from Infection Prevention Quality Improvement Staff

    g. On-call availability 24/7 for Infection Prevention consultation

19. 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 influenza and RSV season

20. 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)

21. Additional Strategies for Outpatient Care Services

    a. Since most patient encounters with the healthcare system now take place in outpatient settings, UNC Health Care will maintain infection prevention programs in Outpatient Care Services, and this will include training and monitoring of practices on:

        i. the basic principles of disease transmission and the methods to prevent transmission

        ii. safe injection practices and proper use of single use and single patient devices/medications

        iii. principles of asepsis and hand hygiene

        iv. OSHA Bloodborne Pathogen Standard

        v. the principles of disinfection and sterilization

        vi. TB and respiratory protection per OSHA

D. Specific Strategies to Address Infection Risks

1. Based on the Facility Level and Unit-Specific Risk Assessments, the following strategies will be employed in FY21 for elements with scores of >5:

    a. Measles/outbreaks with vaccine preventable diseases

        i. Infection Prevention toolkit

        ii. Occupational Health assessment of immunization status

    b. COVID/Inadequate PPE supply

        i. Continued support of PPE acquisition team

ii. Continued support of PPE stewardship workgroup

iii. Continued support of PPE manufacturing workgroup

iv. Continued monitoring of PPE supplies

v. Continued monitoring and reporting of COVID cases at UNCMC

vi. Partnership with Occupational Health on Exposure evaluations

vii. Educational consultations for UNCMC on COVID related issues and policies

viii. Support UNCMC leadership in policy and decision making related to COVID-19 throughout the pandemic and during reopening of UNCMC.

ix. Support mask compliance efforts.

c. SSI prevention

i. Multidisciplinary workgroup

ii. Implementation of CHG treatment wipes for pre-operatively

iii. Improvement of process for pre-operative surgical skin preparation (i.e., clipping and final surgical skin antisepsis)

iv. Assessment of compliance with recommendations for antimicrobial prophylaxis

d. Water intrusion

i. Multi-disciplinary workgroup will be formed

ii. Policy development

iii. Continue to expand products to prevent wipes from being flushed

e. Storage of Patient Care Items

i. Infection prevention rounds to assess proper storage of supplies

ii. Consult with individual units to troubleshoot storage concerns

iii. Ensure no storage of patient care items within 3 feet of a sink if no splash-guard present

iv. Consult on design of patient care areas to ensure proper engineering controls and storage space for safe storage of patient care supplies.

f. Unit-level strategies

i. Inpatient units with risk assessment score >5

- Rounding to promote compliance with evidence-based practices for infection prevention relevant to the unit's surveillance data.

E. Evaluation of Plan Effectiveness

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 catheter associated bloodstream infections
    c. Evidence based processes to prevent catheter associated urinary tract infections
    d. Evidence based processes to prevent *Clostridioides difficile* infections
    e. Evidence based processes to prevent ventilator associated pneumonia
    f. Hand hygiene compliance
    g. Isolation precautions compliance

Attachments

01: Annual Unit-Based Infection Risk Assessment

02: UNC Medical Center Risk Assessment

Approval Signatures

Step Description	Approver	Date
Policy Stat Administrator	Kimberly Novak-Jones: Nurse Educator	09/2021
	Thomas Ivester: CMO/VP Medical Affairs	09/2021
	Emily Vavalle: Dir Epidemiology	09/2021
	Sherie Goldbach: Project Coordinator	09/2021