


Infection Control Manual		
	Policy Name	<b>Infection Control Plan FY 2018</b>
	Policy Number	<b>IC 0028</b>
	Date this Version Effective	<b>July 2017</b>
	Responsible for Content	<b>Hospital Epidemiology</b>

## I. Description

Outlines the annual infection prevention priorities of Hospital Epidemiology and UNC Health Care.

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## II. Rationale

An organized, systematic plan based upon the annual infection control risk assessment that provides the foundation for an effective infection prevention program.

## III. Policy

### A. Goals

1. Overall
  - a. Reduce risk of healthcare-associated infections for all patients, employee, and visitors.
2. Targeted
  - a. Healthcare-associated infection reduction – 10% reduction overall across the infection types listed below. (Note: these infection counts are based on CMS required reporting regulations, not necessarily all hospital-wide infections)

Infection Types – All CMS Reportable	Count-CY16	Reduce %	Reduce # for FY17
MRSA bacteremia; <i>C. difficile</i> ; CLABSI; SSI-Hyst; SSI- Colon surgery, CAUTI	437	10%	44

b. High Level Disinfection Standardization/Centralization

Currently there are 38 distinct locations where high level disinfection processes take place throughout UNC Healthcare facilities. In FY2018, we will work to create at least two areas where high level disinfection is centralized across multiple departments.

c. Clean In, Clean Out hand hygiene compliance program

- i. **Creation of Toolkit** to Spread to Other Facilities
- ii. **Incorporate Patients and Families** in at least two areas – from pilot phase through full implementation

- iii. **Consistently sustain the number of inpatient units and departments, outpatient/procedural areas, and job classes that have achieved 90 percent compliance**
  - 1) At least 90 percent of inpatient units and departments must sustain 90 percent compliance or higher
  - 2) At least 90 percent of participating outpatient/procedural areas must sustain 90 percent compliance or higher
  - 3) At least 85 percent of job classes must sustain 90 percent compliance or higher
- iv. **Consistently sustain the 90 percent compliance goal in operating rooms (ORs)**
- v. **Increase participation among Physicians/Advanced Practice Providers (APP) by 25% from FY17**
- vi. **Continue improving our culture of feedback.**
  - 1) Achieve overall feedback >75 percent in inpatient and outpatient areas

**B. Risk Assessment (see Appendix 1: Unit-Based Infection 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. Urinary catheters
  - c. Tubes, drains, other devices inserted percutaneously
  - d. Intubation and prolonged ventilator support
  - e. Surgical procedures
  - f. ECMO
3. Epidemiologically Important Pathogens
  - a. Legionella
  - b. Aspergillus
  - c. MRSA
  - d. VRE
  - e. *C. difficile*
  - f. MDR Gram negative bacteria
  - g. Carbapenem-resistant *Enterobacteriaceae*

h. *Candida auris*

4. Highly Communicable Diseases

- a. Novel Influenza virus
- b. SARS
- c. MERS
- d. Ebola viral disease

**C. Strategies to Reduce Infection Risk**

1. 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)
- f. Exposure follow-up (in conjunction with OHS)

2. Perform surveillance for healthcare-associated infections

- a. CDC National Healthcare Safety Network (NHSN) definitions
  - i. 100% accuracy as validated by NC Division of Public Health in April 2015 – for *C.difficile* and CLABSI
- b. Prospective
- c. Comprehensive: inpatient-related and outpatient-detected
- d. Calculation/distribution of monthly infection rates and line listing of infected patients for each inpatient unit
- 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 catheter-associated bloodstream infections
  - ii. Ventilator-associated pneumonias
  - iii. Surgical site infections
  - iv. Urinary catheter-associated infections

3. Conduct routine monitoring

- a. Biological indicators for sterilizers
- b. Endoscopes
- c. Pharmaceuticals
- d. Dental water lines

4. Improve Hand Hygiene Compliance
  - a. Routinely monitor compliance and provide feedback to staff
  - b. Routinely evaluate the availability and acceptability of hand hygiene products
  - c. Provide one-on-one coaching as needed
  - 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.
5. Support Infection Control Liaison Program
  - a. Unit-based and outpatient care services clinical staff with focused infection control training provided by Hospital Epidemiology
  - 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 and updates and answer staff questions, and updates
6. Ensure compliance with JC National Patient Safety Goals
  - a. Comply with WHO or CDC hand hygiene guidelines – see C.4 above
  - b. Prevent HAIs due to multi-drug resistant organisms (MDROs)
    - i. Annual risk assessment for MDROs
    - ii. Implement and assess prevention strategies outlined in this plan and under NPSG 07.03.01
  - c. Assess compliance with evidence-based practices for prevention of central line-associated bloodstream infections
    - i. Standardized insertion training for providers
    - ii. Chlorhexidine bathing in intensive care units
    - iii. Daily assessment for central line need
    - iv. Appropriate maintenance of central venous access devices including dressing, Biopatch, tubing and caps.
  - d. Assess compliance with evidence-based practices for prevention of surgical site infections
    - i. Ensure patient education provided by PreCare. Use LMS for staff education.
    - ii. Ensure Surgical Services and Anesthesia infection control policies support prevention strategies.
    - iii. Trend surgical procedure specific infection rates and unit rates and provide feedback to area leaders
    - iv. Review CMS core measures to assess compliance
  - e. Implement evidence-based strategies for prevention of catheter-associated urinary tract infections

## Infection Control Plan

- i. Staff education regarding aseptic insertion of catheter
  - ii. Insertion order must include indication for catheter
  - iii. Daily assessment for urinary catheter need
  - iv. Appropriate maintenance of catheter including daily perineal care, catheter securement, and keeping collection bag below the level of the bladder during transport and positioning.
7. 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
8. Construction Rounds and Construction Risk Assessment Meetings
  - a. Walk-about rounds with Plant Engineering every 2 weeks
  - 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
9. Infection Control Rounds
  - a. Evaluate compliance with infection control policies/practices
  - b. Written recommendations to manager with their follow-up documented
10. Policy Review and Revision
11. Committee Participation: Refer to Infection Control Program Policy for committee information
12. Periodic Comprehensive TB Risk Assessment
13. 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 Epidemiology Quality Improvement Staff
14. Additional Strategies to Reduce Infections for the Immunosuppressed Patient
  - a. Private positive pressure room, HEPA filtration for HSCT patients
  - b. No live plants or fresh flowers
  - c. Immunosuppressed diet per physician order Patient must wear tight-fitting surgical mask when outside room
15. Additional Strategies for Home Health and Hospice
  - a. Trend analysis of device-related infections (urinary catheter-associated UTIs and central catheter-associated bloodstream infections)

- b. Promote immunizations to prevent respiratory infections: influenza and pneumococcal pneumonia vaccines (as recommended by ACIP)

### 16. Additional Strategies for Outpatient Care Services

- a. Since most patient encounters with the health care system now take place in outpatient settings, UNC Health Care will maintain infection control programs in Outpatient Care Services, and this will include
- b. 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. 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 Control rounds report and annual compliance assessment
7. 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 *Clostridium difficile* infections
  - e. Evidence based processes to prevent ventilator associated pneumonia
  - f. Hand hygiene compliance
  - g. Isolation precautions compliance

### **IV. Reviewed/Approved by**

Hospital Infection Control Committee

### **V. Original Policy Date**

Jan 2010, July 2011, Aug 2012, July 2013, July 2014, July 2015, June 2016, July 2017

Appendix 1: Annual Unit-Based Infection Risk Assessment

Unit	Above upper limit confidence interval $\geq 3$ consecutive months/ year	$\geq 300$ central line days/ quarter	$\geq 300$ ventilator days/ quarter	$> 300$ urinary catheter days/ quarter	Estimated $> 25\%$ patient population immune suppressed (e.g., HSCT, Burn, solid organ transplant)	C diff events per 1000 patient days	MRSA per 1000 patient days	VRE per 1000 patient days	Total Points
BICU	1	1	1	1	1		1		6
CICU		1		1		1	1		4
HBH2BT						1	1		2
MICU		1	1	1	1	1	1	1	7
NSIU		1	1	1			1		4
SICU	1	1	1	1		1	1		6
TICU		1	1	1					3
NCCC	1	1	1		1				4
PICU		1	1	1			1		4
ISCU		1		1		1			3
MPCU		1		1		1	1		4
BMTU		1			1	1		1	4
NBN									0
REHB		1							1
3AD/ICCU		1							1
3NSH									0
3WST	1	1				1			3
3 WH					1				1
4ADN		1		1		1	1	1	5
4ADS/CTSU		1		1			1		3
4 ONC	1	1			1	1			4
4LD					1				1
4NSH									0
5AD									0
5BT		1		1					2
5CH/CICC		1			1	1		1	4
5EST									0
5NSH									0
5WH				1					1
5WST		1		1	1				3
6BT	1	1				1	1		4
6CH		1				1	1		3
6NSH		1		1					2
6WH		1		1	1	1	1		5
6 East		1		1		1	1		4
7CH		1		1		1			3
7NSH		1		1		1	1		4
8BT		1		1				1	3
HBH3BT				1			1		2
HBH4BT							1		1
Wakebrook									0
Home Health		1		1					2
Hospice Outpatient				1					1
Hospice Inpatient	TBD – collecting baseline data in FY18								

HIGH RISK =  $\geq 5$  POINTS, MEDIUM RISK = 3-5 POINTS, LOW RISK = 0-2 POINT

POINT SCALE: Points based upon previous year's device and infection data; revised annually. One point assigned for each of the following: Above upper confidence interval for 3 consecutive months,  $\geq 300$  central line days/quarter,  $\geq 300$  ventilator days/quarter,  $\geq 300$  urinary catheter days/quarter,  $\geq 25\%$  patient population immunosuppressed; exceeding the upper 95% confidence limit for overall prevalence of MRSA, VRE, *C.difficile* per 1000 patient days (hospital and community onset).