North Carolina SPICE
Statewide Program for Infection Control & Epidemiology

INFECTION PREVENTION/CONTROL RISK ASSESSMENT (ICRA)

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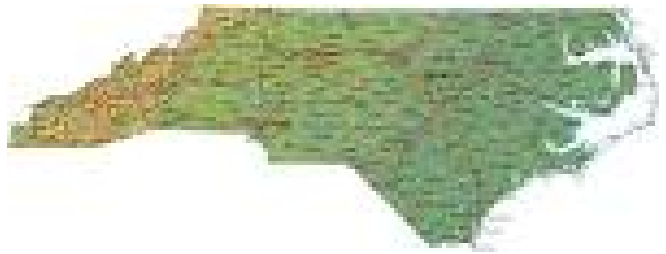
INFECTION PREVENTION RISK ASSESSMENT

- Components:
  - Risk Event
    - Geographic location
    - Infections
    - Environmental issues
  - Probability risk will occur
    - High, Medium, Low or None
  - Severity if the risk occurs
    - Life threatening, Permanent harm, Temporary harm, none



ASSESSING THE POPULATION

- Each organization serves different types of patients who are at varied risks for health outcomes (both negative and positive)
- Development of surveillance systems should be based on evaluation of interest of population
- Target to populations at risk for the outcomes of greatest importance

ORGANIZATION AND PATIENT POPULATION ASSESSMENT

- Relative frequency of event
- Cost of negative outcome (treatment, LOS, mortality, severity measures, and litigation, or public relations)
- Customer needs
- Community served
- Organizational mission and strategic goals
- Potential for improvement
- Meet regulatory requirements

SELECTING THE OUTCOME OR PROCESS FOR SURVEILLANCE

- The choice of outcomes or process to be measured defines the surveillance strategy
- Outcome is the result of care or performance
  - Example is:
- Process is a series of steps taken to achieve an outcome
  - Example is:

INFECTION CONTROL RISK ASSESSMENT

- How well prepared is the organization if the risk occurs
  - Poorly
  - Fairly well
  - Well
- Risk Score
  - Assign a numerical value to each of the above
  - Add or multiply
  - Scores with highest number is prioritized.

Update no less than annually; use as a tool to evaluate your infection prevention and control program and goals

External Disaster Preparedness: Influenza Epidemic

Event	Probability of Occurrence				Risk of Event					Preparedness			Score
	H	M	L	N	L.T	H/S	H D	M D	L D	P	F	G	
	3	2	1	0	5	4	3	2	1	3	2	1	
Staff Not Trained			X			X						X	6
Sterile Supply Not Avail	X				X							X	9
Isol Areas Limited	X						X			X			9

LT = Life Threatening
H&S Health and Safety
HD = High Disruption
MD = Moderate Disruption
LD= Low Disruption

H = High
M = Med
L= Low
N = None

P = Poor
F = Fair
G = Good

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Risk Assessment Grid

Event	Probability of Event Occurrence				Potential Severity/Risk Level of Failure				Organizational Response				Current State of Preparedness			Risk Level For Org
Emergency preparedness	H 3	M 2	L 1	N 0	Life Threatening 3	Permanent Harm 2	Temp Harm 1	Non 0	H 3	M 2	L 1	N 0	P 3	F 2	G 1	
Water Supply Unavail		X					X		X					X		8
Patient Care Supplies Unavail		X				X				X			X			9
Evacuation Required			X		X				X						X	8
HI Risk Procedures and Processes	H 3	M 2	L 1	N 0	Life Threatening 3	Permanent Harm 2	Temp Harm 1	Non 0	H 3	M 2	L 1	N 0	P 3	F 2	G 1	
Hand Hygiene Compliance >90%			X			X			X					X		8
Endoscope Contamination			X			X				X					X	6
Unauthorized Use of SUDs			X		X						X				X	6
Inadequate Cleaning/Disinfection of patient care equipment				X		X				X					X	5
Inappropriate use of Isolation		X				X				X			X			10

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BOOTS ON THE GROUND

- Risk assessment not produced in the IP's office
- Multi-disciplinary team approach
  - Infection Prevention
  - Employee Health
  - Pharmacy
  - Lab
  - Clinical Staff
  - Engineering
- Open forum/discussion
- Agenda, Leader, facilitator, recorder

Collaborative Tools For Learning

WHAT ARE THE INFECTION PREVENTION GOALS??

- The Joint Commission
  - Limit the transmission of infections associated with procedures
  - Hand Hygiene
  - Limit the transmission of infections associated with medical devices
  - Limit unprotected exposure to patient, families and visitors
  - Address prioritized risk

Benchmark Surveillance Data Summary Report

Confidential-Peer Review Only

Hospital-Acquired Infections and Bloodborne Pathogen Exposures

	Calendar Year						% Change 2015-2016
	2012	2013	2014	2015	Hospital 2016	BM 2016*	
Hospital-wide							
Primary Bloodstream Infections[1]	0.19	0.19	0.36	0.31	0.29	0.23	-6
Primary Catheter Associated BSI[2]	0.81	0.45	0.75	0.60	1.00	0.78	67
Hospital Onset MRSA Bacteremia LabID[1]	n/a	n/a	0.01	0.04	0.05	0.06	25
Hospital Onset CDI LabID(Molecular)[1]	n/a	n/a	0.90	0.91	0.98	0.57	8
Catheter Assoc. Symptomatic UTI[2]	1.40	2.19	2.02	1.82	0.93	0.70	-49
Employee BBP Exposures[1]	1.34	1.30	0.89	0.91	1.03	0.60	13
Physician BBP Exposures[1]	0.10	0.13	0.06	0.03	0.10	0.11	233
ICU							
Central Line Associated BSI[2]	0.6	0.3	0.9	1.1	1.3	0.9	18
Catheter Associated Symptomatic UTI[2]	2.8	4.6	1.9	4.4	1.3	0.6	-70
Ventilator Associated Events(VAE)[2]	n/a	n/a	4.5	13.2	12.7	8.4	-4
VAE - VAC[2]	n/a	n/a	2.3	9.3	10.7	5.8	15
VAE - IVAC[2]	n/a	n/a	0.8	2.0	2.0	2.1	0
VAE - Possible VAP[2]	n/a	n/a	1.5	2.0	0.0	0.5	-100

[1] Rate/1,000 Patient Days
[2] Rate/1,000 Device Days

Speaker	Topic	Concerns/Discussion
IT	Electronic Record	Access by Health Department to EPIC over weekend to check on positive PPD status of patients who come to the ED
IP	Acute care & ICU unit surveillance data	IP will break out the surveillance for specific units in the future
IP	Environmental Culturing	• Dialysis has water cultures performed routinely • Pharmacy Clean Room has particle counts
Pharmacy	Drug Shortages	The shortage of Vancomycin could become an issue
IP	Exposure Outbreaks	10E RNs contacted Infection Control re: diarrhea in 3-4 patients and also in some staff members • No organism identified • Hand Hygiene emphasized as well as continuing communication with IC & EH
IP OR	SSI comparisons	• Increase in Colon SSIs • Increase in Hips & Knees o Katie Jane has been scheduling LFD sessions with Infection Prevention assisting in group facilitation
CSR	IUS(Intermediate Use Sterilization)	Improvements noted
Staff	Question re: Fingernails	Clarification that this is an HR policy that should be reinforced by the Manager/Supervisor/Director
Staff	Emergency Preparedness	Overall concerns by group of the readiness of staff and also the numbers of staff that are or are not trained
Pharmacy	Cleanliness of Clean Room	Pharmacy is actively pursuing obtaining an outside vendor that is already utilized by others in the organization to clean the “Clean” Room
Engineering	HVAC Systems	Four(4) new HVAC systems are currently and/or will be installed
	Chemical & Water Program	The Cooling towers were tested last year by an outside company for Aspergillus and there was no growth
	Water Management	John is correlating with the Health System re: water management
ED	Haz-Mat	Concern re: numbers of people trained in Haz-Mat
Security	Haz-Mat	Security needs training in Haz-Mat
ED	Sepsis in patients, esp. new admits	Concern of lack of electronic systems to assist in the recognition and then in the care of these patients
IP	International travelers and potential of illnesses/communicable diseases brought into the local community via these travelers	Information via Local Health Department related to concern about respiratory (both droplet & airborne) illnesses and immediate recognition/appropriate assessment for isolation and then treatment of patients. Examples discussed were: patients with Pertussis.
IP	Animal Visitation	New policy that is for entire health system
IP Engineering	Lack of required TB Isolation Rooms	Anticipated that construction on 6S will include an AII room with an anteroom

EVENT	PROBABILITY OF OCCURRENCE				PATIENT EFFECT				Financial or Clinical Impact		INTENSITY OF ORGANIZATION'S RESPONSE NEEDED TO ADDRESS THE RISK				ORGANIZATION PREPAREDNESS TO ADDRESS SUCH A RISK AT THIS TIME			RISK LEVEL 16-30 Moderate >30 High	
SCORE	High (3)	Med (2)	Low (1)	None (0)	Life Threat (3)	Perm Harm (2)	Temp Harm (1)	None (0)	Moderate (2)	Minimal (1)	High (3)	Med (2)	Low (1)	None (0)	Poor (3)	Fair (2)	Good (1)	Total	
GEOGRAPHIC & COMMUNINTY																			
Transportation Mass Causality (MERS, Flu, Ebola transmission potential)		2			3				2		3						1	36	
Noncompliance with inter-facility communication of pts. with infections			1				1			1		2					1	2	
Prevalence of MRSA	3						1			1		2					1	6	
Hospital Acquired Infections																			
Surgical Site Infection-CardioVas		2			3				2			2					1	24	
SSI-joint procedures		2			3				2			2					1	24	
SSI abdominal Hysterectomy			1		3				2			2					1	12	
SSI colon procedures		2				2			2		3					2		48	
CAUTI		2					1			1		2					1	4	
Clostridium Difficile		2				2			2			2				2		32	
CLABSI		2				2			2		3					2		48	
Outbreak (Ebola, MERS, Flu, GI syndrome, CRE)		2			3				2		3					2		72	
VAE		2				2			2			2					1	32	
MDRO(MRSA, VRE.CRE, VISA)		2			3				2		3						1	72	
Exposures																			
Non-compliance with appropriate precautions to prevent BBP exposure		2			3					1			1				1	6	
Risk of TB Exposure			1			2			2		3						1	12	
Noncompliance with safe injection practices (standard precautions)			**1**			**2**				**1**		**2**					**1**	**4**	