

Quality+IC

Quality Processes for Infection Control

What's on First? Risk Assessment

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Session objectives

- Identify the process to complete an annual risk assessment
- Discuss times when a risk assessment can assist in determining special situations
- Review the process for risk assessment special situations

The Annual Risk Assessment

- Foundation of IP Program
 - Tailors your plan to facility
 - Identifies at risk populations/procedures
- Helps prioritize, focus surveillance
- Develop plan with measurable goals to reduce infections
- Broadens assessment outside of facility walls
- Regulatory or Accreditation requirement
 - Risk assessment of occurrence of communicable diseases for both residents and staff that is reviewed annually, or more frequently if indicated. Pg. 475 LTC COP
 - **Standard IC.01.03.01** The hospital identifies risks for acquiring and transmitting infections based on the following: Its geographic location, community, and population served. Joint Commission

When

- Minimum of annually
- New service line
- New program
- New contracts of essential service
- Change in regulations
- Major change in community
 - New industry
 - Increase/decrease population
- Emerging risks
 - MDRO-TB
 - Zika
 - MERS
- Results from Surveillance Monitoring, CAUTI, CLABSI, handwashing, injection safety

To begin

- Select a tool
 - Many available (Below LTC)
 - Scoring method: Numerical
- Probability
- Risk impact to patients, families
- Preparedness

Date Completed:	(date)															
Shared with Administratic	(date)															
Reviewed by:	(insert names)															
Potential Risks/Problems	Probability					Risk/Impact (Health, Financial, Legal, Regulatory)					Current Facility Preparedness					Score
	Very Likely	Likely	Maybe	Rare	Never	Catastrophic Loss (life/limb/function/financial)	Serious Loss (Function/Financial/Legal)	Risk of Re-Admission or Transfer to High	Moderate Clinical/Financial	Minimal Clinical/Financial	None	Poor	Fair	Good	Very Good	
	4	3	2	1	0	5	4	3	2	1	5	4	3	2	1	
ABX Resistant Organisms																
MRSA																
C Diff																
VRE																
ESBL/other Gram Negative bacteria																
Prevention Activities																
Lack of Hand Hygiene																
Lack of Respiratory Hygiene/ Cough Etiquette																
Improper Glove Use																
Lack of ABX Stewardship Program																
Lack of Resident Influenza Vaccination																
Lack of Resident Pneumovax Vaccination																
Isolation Activities																
Lack of Standard Precautions																
Lack of Contact																

Hospital Tool

1		SEVERITY = (MAGNITUDE - MITIGATION)								
2	EVENT	PROBABIL ITY	HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK	
3		<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning & Prevention</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>	
4	Issue	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-N/A 1-Low 2-Moderate 3-High	0-100%	
47	Occupational Health									
48	- Bloodborne Pathogen Exposure								0%	
49	- Tuberculosis Exposure								0%	
50	- Vaccine Preventable Comm Dis								0%	
51	- Non VP Comm Dis								0%	
52	- Other not specified above								0%	
53	Building / Facility									
54	- Water intrusion								0%	
55	- Construction & Renovation								0%	
56	- Utilities loss (refer to facility HVA)								0%	
57	- Surge capacity								0%	
58	- Other not specified above								0%	
59	Community									
60	- Bioterrorism								0%	
61	- Internal cluster/outbreak								0%	
62	- External outbreak								0%	
63	- Epidemic/Pandemic								0%	
64	AVERAGE SCORE								0%	
65		RISK = PROBABILITY * SEVERITY					<i>*Threat increases with percentage</i>			
66										

Tool available at: <https://higherlogicdownload.s3.amazonaws.com/APIC/eb3f0499-9134-44a4-9b14-f1d9f3915c3f/UploadedImages/ICRiskAssessmentAnalysis.xls>

ASC Tool

Element	Probability of Occurrence	Risk/Impact Severity Rating		Preparedness	Risk Factor Severity of Effect and Regulatory Requirement	Monitoring, Mitigation & Remediation Activities
	9: Frequent 3: Occasional 1: Uncommon 0: Remote	Patients 9: Life Threatening 3: Permanent Harm 1: Temporary Harm 0: None/Not Applicable	Staff 9: Life Threatening 3: Permanent Harm 1: Temporary Harm 0: None/Non-Applicable	9: Poor 3: Fair 1: Good	Total of Columns 1, 2, 3 and 4 R: Regulatory Requirement	P: Policy PI: Performance Improvement QA: Quality Assurance Activity ICC: Infection Control Committee Review
Device Associated Infections						
IV-related Infections	1	3	0	1	5	P
Foley-related UTI	1	1	0	1	3	P
Surgical Site Infections						
Wound Class 1	1	1	0	1	3	P, PI, QA, ICC
Wound Class 2	3	1	0	1	5	P, PI, QA, ICC
Infections with Organisms of Epidemiologic Significance						
Antibiotic Resistant Organisms of Epidemiologic Significance (VRE/MRSA)	3	3	1	3	14	P, PI, QA, ICC
TB Exposures/Reporting	3	3	3	1	10/R	P, QA, ICC
C. Difficile	3	1	0	1	5	P, QA, ICC
Influenza	9	1	1	1	12/R	P, QA, ICC
Infection Control Processes						
Poor Hand Hygiene Adherence	9	1	1	1	16/R	P, QA, ICC, all committees/groups
Blood and Body Fluid Exposure, Employee	3	0	1	1	5/R	P, QA
Blood and Body Fluid Exposure, Patient	1	1	0	1	3	P
Communicable Disease Exposure, Employee	3	0	1	1	5/R	P, QA
Communicable Disease Exposure, Patient	1	1	0	1	3/R	P, QA
Influenza Vaccination of Employees	9	1	1	1	13/R	P, QA
Epidemic (Naturally Occurring)	0	3	3	3	9/R	P, QA
Epidemic (Bioterrorism)	0	1	1	3	5/R	P, QA
Planning Activities / Emergency Mgmt.	0	3	3	3	9/R	P
N-95 Fit Testing	3	1	1	3	8/R	P, QA
Annual TB Assessment	3	1	1	3	8/R	P, QA
TST Conversion / Compliance	1	1	1	1	4/R	P, QA
TB Isolation / Exposures	3	1	1	1	6/R	P, QA

Next step

- Identify risk factor categories
 - Community description: size, average income, healthcare facility types in area
 - Infection types: Include emerging diseases (C. auris)
 - Emergency Preparedness/Response: tornados, floods; volunteer – paid responders, public health resources
 - Treatments and Service lines: system plans and training
 - Environment of Care: building multi-level, age, private rooms
 - Patient/Resident population: frequent dx, refugees, elderly
 - Cleaning and Disinfection: HH compliance, isolation, ATP results
 - **High Level Disinfection and Sterilization**
 - Healthcare worker factors: Employee illness, Contract employees, emergency room staffing, MD's in community, vaccinations
- Make subcategories and list in the negative
 - Lack of compliance
 - Lack of rapid response system

Modify the tool to mirror the quality indicator data collected

	2009	2010	2011	3 Year Average	2011 Relation To Benchmark	
					Above	Below
Surgical Site Infection Rates (Cases per 100 Procedures)						
Infections Class 1 Cases	5.6	5.3	4.1	5.0		X
Infections Class 2 Cases	12.5	8.5	4.8	8.6	X	
Average	9.1	6.9	4.4	6.8		X
Infections with specific MDROs						
MRSA	15.0	17.0	33.0	21.6	X	
VRE	6.0	4.0	2.0	4.0		X
Orthopedic Surgical Site Infection Rates						
Infections per 100 procedures	3.4	5.6	6.4	5.1	X	
General Surgery Surgical Site Infection Rates						
Infections per 100 procedures	5.8	4.9	4.7	5.1		X
Hand Hygiene Compliance Rates	67.0%	73.1%	77.4%	72.5%		X
Employee Influenza Vaccination Rates	58.0%	60.0%	57.0%	58.0%	X	
Employee Hepatitis B Immunization Compliance Rate	95.0%	95.0%	99.0%	96.0%	X	
Employee TB Screening Compliance Rate	98.0%	99.0%	99.0%	99.0%		X
Employee Blood and Body Fluid Exposures	15.0	6.0	24.0	15.0	X	

- Oregon Patient Safety Commission, SURVEILLANCE DATA COLLECTION TOOL

Utilize data to determine risks

- Occurrence data
- Employee illness
- Claims
- Patient Satisfaction surveys
- Regulatory complaints
- Infection rates
- Community risk

NPSG: Elements of Performance 2018

- **NPSG.07.03.01**
- Conduct periodic risk assessments (in time frames **defined by the hospital**) for multidrug-resistant organism acquisition and transmission. (See also IC.01.03.01, EPs 1–3)
- **NPSG.07.04.01**
- Conduct periodic risk assessments for central line–associated bloodstream infections, monitor compliance with evidence-based practices, and evaluate the effectiveness of prevention efforts. The risk assessments are conducted in **time frames defined by the hospital, and this infection surveillance activity is hospital wide, not targeted.**
- **NPSG.07.05.01**
- As part of the effort to reduce surgical site infections:
 - Conduct periodic risk assessments for surgical site infections in a time frame determined by the hospital.
 - Select surgical site infection measures using best practices or evidence-based guidelines.
 - Monitor compliance with best practices or evidence-based guidelines.
 - -Evaluate the effectiveness of prevention efforts.
 - **Note: Surveillance may be targeted to certain procedures based on the hospital's risk assessment**

NPSG: Elements of Performance 2018

- **NPSG.07.06.01**
- Measure and monitor catheter-associated urinary tract infection prevention processes and outcomes in high-volume areas by doing the following:
 - Selecting measures using evidence-based guidelines or best practices
 - Having a consistent method for medical record documentation of indwelling urinary catheter use, insertion, and maintenance
 - Monitoring compliance with evidence-based guidelines or best practices
 - Evaluating the effectiveness of prevention efforts
 - **Note: Surveillance may be targeted to areas with a high volume of patients using in-dwelling catheters. High-volume areas are identified through the hospital's risk assessment as required in IC.01.03.01, EP 2.**

Appendix 1: Annual Unit-Based Infection Risk Assessment

Unit	Above upper limit confidence interval ≥ 3 consecutive months/year	≥ 300 central line days/quarter	≥ 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 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		3
MICU	1	1	1	1	1	1	1	1	8
NSIU	1	1	1	1		1	1		6
SICU		1	1	1		1	1		5
TICU		1	1	1			1		4
NCCC	1	1	1		1				4
PICU		1	1	1			1		4
ISCU	1	1		1		1	1	1	6
MPCU		1		1		1	1	1	5
BMTU		1			1	1		1	4
NBN									0
REHB		1							1
3AD/CCU		1						1	2
3NSH									0
3WST		1				1		1	3
3 WH					1				1
4ADN	1	1		1		1		1	5
4ADS/CTSU		1		1					2
4 ONC		1			1	1		1	4
4LD					1				1
4NSH	1								1
5AD							1		1
5BT		1		1					2
SCH/ICC	1	1			1	1	1		5
5EST	1								1
5NSH									0
5WH				1					1
5WST		1		1	1				3
6BT		1				1	1	1	4
6CH		1					1		2
6NSH		1		1					2
6WH		1		1	1	1			4
6 East		1		1		1	1		4
6WST	1					1	1		3
7CH		1							1
7NSH		1		1		1			3
8BT		1				1		1	3
Wakebrook									0
Home Health		1		1					2
Hospice		1		1					2

HIGH RISK = >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, ≥ 300 central line days/quarter, ≥ 300 ventilator days/quarter, ≥ 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).

Assemble team

- Multidisciplinary team
 - Broader than IC committee
 - Possible members
 - Laboratory
 - Nursing Staff
 - Critical care or high risk service line
 - Employee health
 - Quality Director
 - Pharmacy
 - Environmental services
 - Director of Nursing
 - Explain purpose and importance
 - Plan for time!
- Orient to tool
- Scoring: Have help to calculate each item together and average to obtain final risk score
- Rank
 - Regulatory
 - Strategic Plan
 - Major risk to those you serve

Tools

Infection Control RISK ASSESSMENT AND PRIORITIZATION WORKSHEET

Event / Conditions and Problems	What is the potential impact of this condition/problem on patients, staff, and visitors?				What is the probability of this condition/problem impacting patients and staff?				What is your organization's preparedness to deal with this condition / problem?				Numerical risk level
	High (3)	Med (2)	Low (1)	None (0)	High (3)	Med (2)	Low (1)	None (0)	None (3)	Poor (2)	Fair (1)	Good (0)	Total
GEOGRAPHY & COMMUNITY:													
Transportation Mass Casualty													
TB Exposure													
Hurricanes													
Community-Acquired MRSA													
POTENTIAL INFECTION:													
Surgical Site Infection													
Endophthalmitis													
Fusarium													
VRE													
MRSE													
MRSA (hospital acquired)													
COMMUNICATION:													
Lack of notification of presence of HAI													
Lack of notification of employee with illness/disease													
EMPLOYEES:													
Poor Hand Hygiene Compliance													
Pink Eye, Viral Conjunctivitis													

Tools: Previous Year Column

2016																	Previous year
Potential Risks/Problems Probability + Risk + Preparedness = score	Probability					Risk/Impact (Health, Financial, Legal, Regulatory)					Current Systems/Preparedness					Score	
	Expect it	Likely	Maybe	Rare	Never	Catastrophic Loss (life/limb/function/financial)	Serious Loss (Function/Financial/Legal)	Prolonged Length of Stay	Moderate Clinical/Financial	Minimal Clinical/Financial	None	Poor	Fair	Good	Solid		
SCORE	4	3	2	1	0	5	4	3	2	1	5	4	3	2	1		
ABX Resistant organisms																	
MRSA																	
C Diff																	
VRE																	
Klebsiella pneumoniae Carbapenemase (KPC)																	
ESBL/other Gram Negative bacteria																	
Lack of Hand Hygiene																	
Lack of Respiratory Hygiene/ Cough																	
Lack of Patient Influenza Immunization																	
Lack of Patient Pneumovax																	
Lack of education to patient on MDRO																	
Lack of compliance with Standard																	
Lack of compliance with Airborne																	
Lack of compliance with Droplet																	
Lack of compliance with Contact																	

Rank
Criteria
Findings

		function		
Prevention Activities				
Failure of Hand Hygiene	3	2	2	3
Failure of Respiratory Hygiene	3	1	2	2
Lack of Employee Immunization	2	1	1	2
Lack of Visitor Education	3	1	2	3
Lack of Staff Education	2	1	1	3
Isolation Activities				
Failure of Standard Precautions	3	2	3	4
Failure of Negative Pressure Room	2	1	1	2
PPE not available/not worn	2	2	2	3
Policy and Procedures				
Healthcare Acquired Infections				
Surgical Site Infections	2	3	2	2
C. Difficile	2	3	2	3
Central Line Infection	2	2	2	2
Catheter Related UTI	3	3	2	4
Environment				
Failure to Terminal Clean room	2	1	2	3
Failure to identify Risk via Construction ICRA	2	1	1	2
Community Risk				
MRSA	3	2	3	3
Pandemic Flu Preparedness	2	2	1	3
Other				
VRE/MRSA	2	1	1	4
Sepsis	4	4	3	2

Findings/ Highest Risk Areas:

Standard Precautions/MRSA/VRE Transmission: Since we have changed our isolation policies for MRSA/VRE and use Standard Precautions instead of Contact Precautions for all infected or colonized patients unless their drainage is not contained or the patient is non-compliant with hand hygiene, the risk of MRSA/VRE may increase due to the policy change. Will

CAUTI: Because we have had 2 CAUTIs this year, and foleys seem to remain in longer due to poor renal function, retention, accurate I&O, and pain due to movement and obesity, we need to educate and attempt to try other measures to get the catheter out such as removing the after 3 days if dealing with retention, intermittent catheterization.

Sepsis: Because we have now initiated our Sepsis protocol this January we will be evaluating our treatment protocol and document how well we are following the protocol.

Move from Knowing to Doing

- After Scoring
- Develop strategy for your Infection Prevention and Control Plan
- Assign accountability
 - Get approvals of plan
- Establish timelines
- Measurement criteria
- Monitor progress
 - At least quarterly
 - Infection Control committee
- Make a cover letter to explain your process
- Share results
- Annually review and revise

Annual Goals

Goals	Objectives	Actions	Barriers
1. Achieve 95% compliance with hand hygiene	Consistently meet observational hand hygiene audit compliance of 95% or better	<ul style="list-style-type: none"> • Hand Hygiene Campaign has been approved by the ASC Governing Board • A physician champion has been named • Hand sanitizers installed on anesthesia carts 	Compliance by all HCWs and sustainability of improvements
2. Reduce surgical site infections by 10%	Prevent surgical site infections by: <ol style="list-style-type: none"> a. Using the CDC SSI bundle b. Audit surgical services for continuous compliance with antibiotic prophylactic guidelines for surgical procedures c. Audit compliance with eligible surgical patients receiving appropriate prophylactic antibiotics within one hour prior to surgical incision time d. All patients will have a preoperative bath with a CHG product 	<ul style="list-style-type: none"> • Rates continue to be monitored and processes audited • Education was provided to the ASC staff to improve compliance with SSI bundle • CHG preoperative bedside baths were implemented pre-operatively 	<ul style="list-style-type: none"> • Difficulty obtaining prophylactic ATB orders in time • Not able to provide CHG pre-operative baths to all patients due to time constraints
3. Increase ASC Influenza Vaccination Rates to 90%	Increase employee, medical staff, volunteer, and all HCP influenza vaccination rates	<ul style="list-style-type: none"> • Offer free vaccine to all employees during immunization clinic • Provide employees with a list of times and locations where they can receive influenza immunizations 	Difficult to schedule clinic when everyone is available

Special Situations

Special Situations

- Reprocessing of Endoscopes
- Risks associated: (most cited)
 - Not adhering to manufacturer's instructions for use (IFUs)
 - Not following recommended practices or evidence-based guidelines
 - Lack of documented staff competency
 - Lack of competent, trained oversight (supervisory)
 - IC involvement
- Walk current process: transport, cleaning and evaluation of cleaning, storage
- Preparation of high level disinfectant prepared according to manufacturer's instructions for use
 - Length of time
 - Temperature
 - Documentation/logs
 - Test strips – labeled, expiration date, follow instructions for use, correct test strip for solution
- Storage and drying

Tool that Works for Issue

Assessment Date: March 18, 2011

Scoring: Low = 1 Moderate = 3 High = 5

Team Members: Bill Rutala, Vickie Brown, David Weber, Kirk Huslage, Becky Brooks, Tina Adams, Brenda Featherstone, Lisa Teal, Emily Sickbert-Bennett, Maria Gergen.

Meeting Actions: Team members evaluated the evidence and determined that off-label use of a standard cleaning protocol in conjunction with a 20-minute, 20°C >2% glutaraldehyde immersion will achieve high-level disinfection.

Suggested Questions	Benefit	Risk
What is the impact on patient care delivery?	There are no data demonstrating benefit of utilizing an extended immersion time of 45-minutes at 25°C to achieve high-level disinfection. Numerous scientific studies and professional organizations [†] support the efficacy of >2% glutaraldehyde for 20-minutes at 20°C in conjunction with adequate cleaning prior to achieve high-level disinfection. Score - 5	There is no risk associated with the transmission of pathogens utilizing the 20/20 protocol, assuming adequate cleaning prior to disinfection. There are no published studies of transmission of infection when guidelines have been followed. Score - 1
How does the issue affect the staff?	In order to achieve adequate high-level disinfection by utilizing the label prescribed method would require 45-minutes, resulting in more staff time spent disinfecting scopes without a patient benefit. Score = 5	Requiring staff to follow label directions for actions with no proven benefit to employee or patient safety may serve to reduce efforts proven to improve patient outcomes. Score - 1
What is the impact on HAIs	There have been no published reports of cross-transmission of pathogens when current guidelines [‡] have been followed.	There are no data that demonstrate improved infection prevention and a reduction in HAIs with a 45-minute immersion at 25°C in the absence of adequate cleaning.

Many Uses

Infection Control Risk Assessment (ICRA) and Plan Concern: Use of Personal Fan

This Plan has been approved by Directors of Infection Prevention, Engineering and Quality

I. Risk Assessment Date: September 2015

Type	Patient Risk Group	Designation level of risk
Employee Health/Infection Prevention	None (Any risk would relate to employees)	Potential
Plan for Risk Mitigation		
1. Directors of Infection Prevention, Engineering and the Business Office met to discuss concerns, capture possible risks		Met 8/12/15
2. Employee requested fan due to MD recommendation secondary to respiratory issues.		Location reviewed and no patients are ever brought into this space and patients cannot gain access to this area without breaching code secured doors.
3. Engineering concerned regarding need to include fan in hospital wide maintenance and cleaning schedule		Engineering Department will provide date label and add to grid to assure the following noted new fan substitution occurs at the same scheduled frequency as maintenance would have occurred (twice annually)
4. Engineering concerned regarding trip and electrical hazard due to cord.		Hospital leadership agrees to provide <u>new small</u> portable fan twice annually (\$12.00). These fans are battery operated so have no cord.
5. Dir of Infection Prevention asked about other staff concerns		Department staff were <u>interviewed</u> and no objections/concerns were expressed.
6. Dir of Infection Prevention mentioned unlikely possibility of spread of infection via air current changes.		Engineering asserted that this small fan displaces very little air outside of the immediate area, but IP will monitor employee illness with heightened attention to this area.

Priority Scoring/Matrix (Coordinated Construction in Occupied Health Care Facilities, a product of OSHA)

Reviewed by: _____ IP/EH Director Signature: _____ Date: _____

Background: Eating and drinking is prohibited in the work areas where there is a reasonable likelihood for occupational exposure per OSHA Bloodborne Pathogen Standard. UNMH Staff and Providers are permitted to eat or drink only in designated areas, such as break, conference or meeting rooms or offices. Food is never allowed in patient care areas. Drinks should be consumed and stored only in designated areas when in patient care areas. This also includes areas that have face-to-face contact with patients (e.g., registration desk, front desks, nursing station desks).

Instructions: Hydration Stations may be instituted after a risk assessment designates an area for safe consumption and storage of covered and labeled containers. This checklist should be used to determine the suitability of consuming liquids in areas proximal to certain patient care or clinical care worksites. Checking "Yes" in any one of the below questions is sufficient cause to designate the area as unsuitable for consumption of any beverage (including bottled water) in that area.

Exact Area Name/Location: _____

Check All That Apply

Y <input type="checkbox"/>	N <input type="checkbox"/>	Is there a reasonable likelihood of patient laboratory specimens being brought to or placed on any of the work surfaces in the area under consideration?
Y <input type="checkbox"/>	N <input type="checkbox"/>	Is there a reasonable likelihood of soiled (used) patient care equipment or supplies (e.g., linens, meal trays, instrument or procedure trays, monitoring equipment, etc.) being brought to or placed on any of the work surfaces in the area under consideration?
Y <input type="checkbox"/>	N <input type="checkbox"/>	Is there a reasonable likelihood of infectious waste, such as a used syringe and needle or a filled Sharps Disposal container, being brought to or placed on any of the work surfaces in the area under consideration?
Y <input type="checkbox"/>	N <input type="checkbox"/>	Is there a reasonable likelihood of soiled non-clinical items, such as tools and supplies used by Facilities or soiled housekeeping items, being brought to or placed on any of the work surfaces in the area under consideration?
Y <input type="checkbox"/>	N <input type="checkbox"/>	Is there a reasonable likelihood that spilled liquids could come in contact with and seriously damage <i>critical</i> patient care electronic equipment of any kind located in the area under consideration?
Y <input type="checkbox"/>	N <input type="checkbox"/>	Is this an area of face to face contact with patient, families and or visitors?
Suitability Determination		
<input type="checkbox"/>	The above-named area is suitable for designation as a site where consumption of liquids from a container that is covered with a cap or lid is permitted.	
<input type="checkbox"/>	The above-named area is not suitable for designation as a site where consumption of liquids from a container that is covered with a cap or lid is permitted.	

Evaluator's Name: _____

Signature: _____ Date: _____

Please retain original in the Administrative Office of the area being evaluated and a copy in the Hydration Station.

Emergency Preparedness

Kaiser Permanente										
Emergency Management										
Hazards - Enter name of hospital										
Hazard and Vulnerability Assessment Tool										
Naturally Occurring Events										
Event	PROBABILITY	ALERTS	ACTIVATIONS	SEVERITY = (MAGNITUDE - MITGATION)						RISK
				HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this will occur			Possibility of death or injury	Physical losses and damages	Interruption of services	Preplanning	Time, effectiveness, resources	Community/Mutual Aid staff and supplies	* Relative threat
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High	Number of Alerts	Number of Activations	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 - 100%
Active Shooter										
Acts of Intent										
Bomb Threat										
Building Move										
Chemical Exposure, External										
Civil Unrest										
Communication / Telephony Failure										

TB Worksheet: Appendix B

Appendix B. Tuberculosis (TB) risk assessment worksheet

This model worksheet should be considered for use in performing TB risk assessments for health-care settings and nontraditional facility-based settings. Facilities with more than one type of setting will need to apply this table to each setting.

Scoring: ✓ or Y = Yes X or N = No NA = Not Applicable

1. Incidence of TB

- a. What is the incidence of TB in your community (county or region served by the health-care setting), and how does it compare with the state and national average?
- b. What is the incidence of TB in your facility and specific settings, and how do those rates compare? (Incidence is the number of TB cases in your community during the previous year. A rate of TB cases per 100,000 persons should be obtained for comparison.)* This information can be obtained from the state or local health department.

	Rate
Community	_____
State	_____
National	_____
Facility	_____
Department 1	_____
Department 2	_____
Department 3	_____

- c. Are patients with suspected or confirmed TB disease encountered in your setting (inpatient and outpatient)?

1) If yes, how many are treated in your health-care setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses for this information.)

Year	No. patients	
	Suspected	Confirmed
1 year ago	_____	_____
2 years ago	_____	_____
5 years ago	_____	_____

2) If no, does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?

- d. Currently, does your health-care setting have a cluster of persons with confirmed TB disease that might be a result of ongoing transmission of *Mycobacterium tuberculosis*?

2. Risk Classification

a. Inpatient settings

- 1) How many inpatient beds are in your inpatient setting?
- 2) How many patients with TB disease are encountered in the inpatient setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses.)
- 3) Depending on the number of beds and TB patients encountered in 1 year, what is the risk classification for your inpatient setting?
- 4) Does your health-care setting have a plan for triaging patients with suspected or confirmed TB disease?

Quantity _____

Previous year _____

5 years ago _____

___ Low risk
 ___ Medium risk
 ___ Potential ongoing transmission

b. Outpatient settings

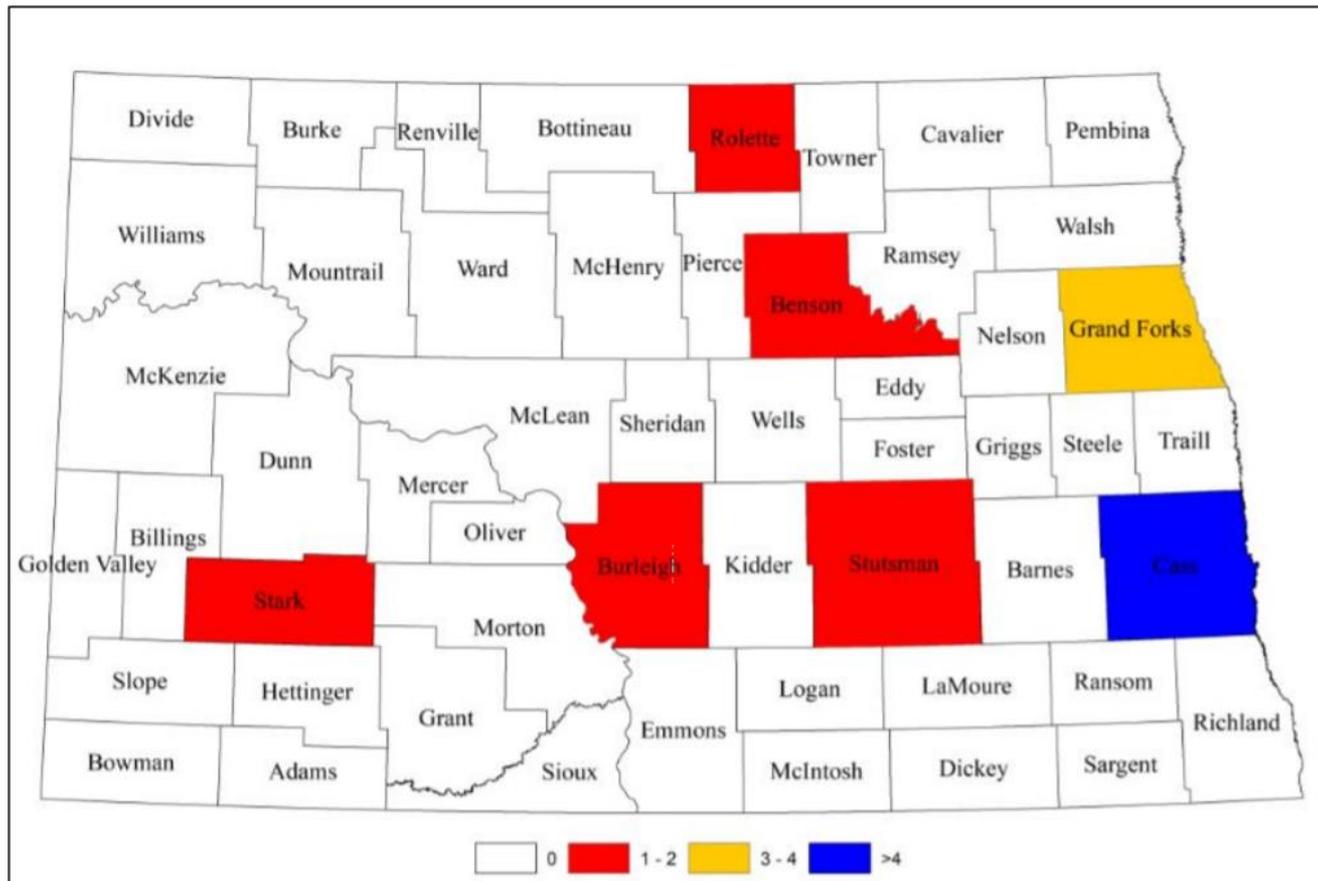
- 1) How many TB patients are evaluated at your outpatient setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses for this information.)

Previous year _____

5 years ago _____

North Dakota Epidemiology Report

Map 5: North Dakota Tuberculosis Cases by County, 2017



TB Worksheet: Appendix B

Appendix B. Tuberculosis (TB) risk assessment worksheet

This model worksheet should be considered for use in performing TB risk assessments for health-care settings and nontraditional facility-based settings. Facilities with more than one type of setting will need to apply this table to each setting.

Scoring: ✓ or Y = Yes X or N = No NA = Not Applicable

1. Incidence of TB

- a. What is the incidence of TB in your community (county or region served by the health-care setting), and how does it compare with the state and national average?
- b. What is the incidence of TB in your facility and specific settings, and how do those rates compare? (Incidence is the number of TB cases in your community during the previous year. A rate of TB cases per 100,000 persons should be obtained for comparison.)* This information can be obtained from the state or local health department.

Rate

Community _____
 State _____
 National _____
 Facility _____
 Department 1 _____
 Department 2 _____
 Department 3 _____

- c. Are patients with suspected or confirmed TB disease encountered in your setting (inpatient and outpatient)?

1) If yes, how many are treated in your health-care setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses for this information.)

Year	No. patients	
	Suspected	Confirmed
1 year ago	_____	_____
2 years ago	_____	_____
5 years ago	_____	_____

2) If no, does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?

- d. Currently, does your health-care setting have a cluster of persons with confirmed TB disease that might be a result of ongoing transmission of *Mycobacterium tuberculosis*?

2. Risk Classification

a. Inpatient settings

- 1) How many inpatient beds are in your inpatient setting?
- 2) How many patients with TB disease are encountered in the inpatient setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses.)
- 3) Depending on the number of beds and TB patients encountered in 1 year, what is the risk classification for your inpatient setting?

Quantity _____
 Previous year _____
 5 years ago _____

___ Low risk
 ___ Medium risk
 ___ Potential ongoing transmission

- 4) Does your health-care setting have a plan for triaging patients with suspected or confirmed TB disease?

b. Outpatient settings

- 1) How many TB patients are evaluated at your outpatient setting in 1 year? (Review laboratory data, infection-control records, and databases containing discharge diagnoses for this information.)

Previous year _____
 5 years ago _____

Risk Classification: Appendix C

134

MMWR

December 30, 2005

Appendix C. Risk classifications for various health-care settings and recommended frequency of screening for *Mycobacterium tuberculosis* infection among health-care workers (HCWs)*

Setting	Risk classification [†]		Potential ongoing transmission [§]
	Low risk	Medium risk	
Inpatient <200 beds	<3 TB patients/year	≥3 TB patients/year	Evidence of ongoing <i>M. tuberculosis</i> transmission, regardless of setting
Inpatient ≥200 beds	<6 TB patients/year	≥6 TB patients/year	
Outpatient; and nontraditional facility-based	<3 TB patients/year	≥3 TB patients/year	
TB treatment facilities	Settings in which <ul style="list-style-type: none"> • persons who will be treated have been demonstrated to have latent TB infection (LTBI) and not TB disease • a system is in place to promptly detect and triage persons who have signs or symptoms of TB disease to a setting in which persons with TB disease are treated • no cough-inducing or aerosol-generating procedures are performed 	Settings in which <ul style="list-style-type: none"> • persons with TB disease are encountered • criteria for low risk are not otherwise met 	
Laboratories	Laboratories in which clinical specimens that might contain <i>M. tuberculosis</i> are not manipulated	Laboratories in which clinical specimens that might contain <i>M. tuberculosis</i> might be manipulated	

CDC Worksheet (7 pages)

https://www.cdc.gov/tb/publications/guidelines/AppendixB_092706.pdf

Review of Risk

<https://doh.sd.gov/diseases/assets/TB-risk05.pdf>

09/27/2006

Centers for Disease Control and Prevention
Division of Tuberculosis Elimination

Appendix B. Tuberculosis (TB) risk assessment worksheet

This model worksheet should be considered for use in performing TB risk assessments for health-care facilities and nontraditional facility-based settings. Facilities with more than one type of setting will need to apply this table to each setting.

Scoring or Y = Yes X or N = No NA = Not Applicable

1. Incidence of TB

What is the incidence of TB in your community (county or region served by the health-care setting), and how does it compare with the state and national average? What is the incidence of TB in your facility and specific settings and how do those rates compare? (Incidence is the number of TB cases in your community the previous year. A rate of TB cases per 100,000 persons should be obtained for comparison.) ¹ This information can be obtained from the state or local health department.	Community rate _____ State rate _____ National rate _____ Facility rate _____ Department 1 rate _____ Department 2 rate _____ Department 3 rate _____
Are patients with suspected or confirmed TB disease encountered in your setting (inpatient and outpatient)?	Yes No
If yes, how many patients with suspected and confirmed TB disease are treated in your health-care setting in 1 year (inpatient and outpatient)? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Year No. patients Suspected Confirmed 1 year ago _____ 2 years ago _____ 5 years ago _____
If no, does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Currently, does your health-care setting have a cluster of persons with confirmed TB disease that might be a result of ongoing transmission of <i>Mycobacterium tuberculosis</i> within your setting (inpatient and outpatient)?	Yes No

2. Risk Classification

Inpatient settings	
How many inpatient beds are in your inpatient setting?	_____
How many patients with TB disease are encountered in the inpatient setting in 1 year? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Previous year _____ 5 years ago _____
Depending on the number of beds and TB patients encountered in 1 year, what is the risk classification for your inpatient setting? (See Appendix C.)	<input type="radio"/> Low risk <input type="radio"/> Medium risk <input type="radio"/> Potential ongoing transmission
Does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Outpatient settings	
How many TB patients are evaluated at your outpatient setting in 1 year? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Previous year _____ 5 years ago _____
Is your health-care setting a TB clinic? (If yes, a classification of at least medium risk is recommended.)	Yes No
Does evidence exist that a high incidence of TB disease has been observed in the community that the health-care setting serves?	Yes No
Does evidence exist of person-to-person transmission of <i>M. tuberculosis</i> in the health-care setting? (Use information from case reports. Determine if any tuberculin skin test (TST) or blood assay for <i>M. tuberculosis</i> (BAMT) conversions have occurred among health-care workers (HCWs).)	Yes No
Does evidence exist that ongoing or unresolved health-care-associated	Yes No

TB RISK ASSESSMENT WORKSHEET

Facility Name _____ Date Completed _____

Completed by (name) _____

Assessment completed for: Entire facility
 Area of facility (specify) _____
 Occupational group (specify) _____

Time interval (month & year) for conducting the TB risk assessment. This is usually done for the previous calendar year (i.e. January – December). _____ to _____

Background information:

Number of TB cases in the community (calculated by compiling the TB county data for the counties in which the facility staff and residents resided during the time period being assessed). TB county data by year is available on DOH website: <http://doh.sd.gov/diseases/infectious/TB/health-care.aspx> Click on "TB Program Statistics".

Counties included in risk assessment: _____

Facility size/type:

- Inpatient facility < 200 beds
 Inpatient facility ≥ 200 beds
 Outpatient or non-traditional setting

If evidence suggests person-to-person transmission of TB has occurred in the setting during the previous year:

- Yes No Clusters of TST* or BAMT** conversions.
Yes No HCW*** with confirmed TB disease.
Yes No Increase rates of TST or BAMT conversions.
Yes No Recognition of an identical strain of *M. tuberculosis* patients or HCWs with TB disease identified by DNA fingerprinting.

If "no" is answered to these 5 questions:

- LOW RISK**
Inpatient facility < 200 beds = < 3 cases
Inpatient facility ≥ 200 beds = < 6 cases
Outpatient or non-traditional setting = < 3 cases
- MEDIUM RISK**
Inpatient facility < 200 beds = ≥ 3 cases
Inpatient facility ≥ 200 beds = ≥ 6 cases
Outpatient or non-traditional setting = ≥ 3 cases

If "yes" is answered to any of the above, the facility may be ranked as **POTENTIAL ONGOING TRANSMISSION**. Follow the CDC risk assessment guidelines to re-assess the facility. Seek professional assistance if necessary. The potential ongoing transmission ranking is considered a temporary classification while the facility investigates the problem. Once interventions have been implemented and proven to work, the facility should assess to an appropriate lower ranking.

Select applicable risk category:

- LOW RISK
 MEDIUM RISK
 POTENTIAL ONGOING TRANSMISSION

Please refer to the CDC document *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 2005* for recommendations regarding the risk assessment process, whether annual TB skin testing is recommended as well as additional TB recommendations (pages 9-16 and Appendix C on page 134).

* TST: TB skin test ** BAMT: Blood assay for *Mycobacterium tuberculosis* *** HCW: Health care worker

Last revised 6-2014

Outpatient Facility TB Assessment:

<https://www.doh.wa.gov/Portals/1/Documents/Pubs/343-123-FacilityRiskAssessment.pdf>



DOH 343-123 July 2015

Outpatient/Nontraditional Facility-Based TB Risk Assessment

(Adapted from Guidelines for Preventing Transmission of TB in Health-Care Settings, 2005)

Facility Name: _____

PART A- TB CASES

Number of TB cases identified in your facility in the last year?

____ (<3) TB cases

____ (≥3) TB cases

PART B- COMMUNITY AND FACILITY RISK

Yes No

1. Are persons with TB disease expected to be encountered in your facility?
2. Does the majority of the population (patients, residents, admits, staff) encountered in your facility have one or more of the following medical risk factors:

- HIV infection
- Substance abuse (injection drug use)
- Silicosis
- Diabetes mellitus
- Severe kidney disease
- Low body weight
- Organ transplants
- Head and neck cancer
- Medical treatments such as corticosteroids
- Specialized treatment for rheumatoid arthritis or Crohn's disease

3. Does the majority of the population (patients, residents, admits, staff) encountered in your facility have one or more of the following population risk factors:

- Homeless
- Incarcerated
- Foreign born from high burden country
(<http://www.cdc.gov/tb/publications/LTB/appendix8.htm>)

PART C- INFECTION CONTROL PLAN

Yes No

Does your facility have an Infection Control Plan for confirmed or suspected TB cases that includes:

- a. How confirmed or suspected TB cases are triaged
- b. How confirmed or suspected TB cases are isolated

PART D- CONVERSION RATE (if annual testing is performed)

1. List the conversion rate for your facility (number of positive TSTs or IGRA's divided by number of people tested):

Last year: _____ Previous year: _____

2. Has the conversion rate increased significantly from the previous year?
Yes No

PART E- ASSIGNING A RISK CLASSIFICATION

1. If (<) 3 TB cases in part A and "No" is checked for each question in part B and "Yes" is checked for each question in part C this facility may be classified **LOW RISK**.
2. If (≥) 3 TB cases in part A or any "Yes" box is checked in part B or "No" box is checked in part C this facility is classified **MEDIUM RISK**.
3. If "Yes" is marked in part D this facility may be classified as **POTENTIAL ONGOING TRANSMISSION**.

Frequency of TB Screening Depending on Risk	
LOW RISK SETTING	<ul style="list-style-type: none"> • Baseline two-step TST or single IGRA and symptom screening upon hire/admission • Annual risk assessment • Chest x-ray and medical evaluation if TB test positive • No annual TB testing required* • Perform annual symptom screening if prior TB infection or TB disease
MEDIUM RISK SETTING	<ul style="list-style-type: none"> • Baseline two-step TST or single IGRA and symptom screening upon hire/admission • Annual risk assessment • Chest x-ray and medical evaluation if TB test positive • Perform annual TB tests, symptom screening, and risk assessment for each employee/resident* • Perform annual symptom screening if prior TB infection or TB disease
POTENTIAL ONGOING TRANSMISSION	<ul style="list-style-type: none"> • Report to local health department for guidance • This is a temporary classification only, warranting immediate investigation • Testing will be performed as needed (per the local health jurisdiction recommendations) until there is no evidence of transmission

*If a person is identified as a contact to an infectious case TB testing will be performed in accordance with local health jurisdiction protocols.

Risk assessment completed by: _____ Date: _____

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

Construction

- All new or renovation projects
 - Don't forget adjacent to your facility
- Protects patients, visitors, and staff from the risks associated with construction
- Steps:
 1. Define the Type of Project
 2. Identify the Patient Risk Group
 3. Determine the Class of Precautions
 4. Identify the areas surrounding the project
 5. Identify the specific site
 6. Identify issues related to ventilation, plumbing, electrical
 7. Identify containment measures, HEPA filter, barriers?
 8. Consider potential risk of water damage
 9. Work hours
 10. Do plans allow for adequate number of isolation/negative air flow rooms
 11. Do plans allow for required number and type of handwashing sinks?
 12. Does the IP and agree with the number of sinks? (FGI Guidelines)
 13. Does the IP agree with plans clean/soiled utility rooms?
 14. Plan to discuss containment issues with the project team

Construction

http://www.ashe.org/resources/tools/pdfs/assessment_icra.pdf

<https://www.nebraskamed.com/sites/default/files/documents/For%20Providers/ICAP%20Basic-ICRA-with-Matrix.pdf>

Step Two:

Using the following table, **identify the Patient Risk Groups** that will be affected. If more than one risk group will be affected, select the higher risk group:

Low Risk	Medium Risk	High Risk	Highest Risk
<ul style="list-style-type: none"> Office areas 	<ul style="list-style-type: none"> Cardiology Echocardiography Endoscopy Nuclear Medicine Physical Therapy Radiology/MRI Respiratory Therapy 	<ul style="list-style-type: none"> CCU Emergency Room Labor & Delivery Laboratories (specimen) Medical Units Newborn Nursery Outpatient Surgery Pediatrics Pharmacy Post Anesthesia Care Unit Surgical Units 	<ul style="list-style-type: none"> Any area caring for immunocompromised patients Burn Unit Cardiac Cath Lab Central Sterile Supply Intensive Care Units Negative pressure isolation rooms Oncology Operating rooms including C-section rooms

Step 2

Step Three: Match the

Patient Risk Group (*Low, Medium, High, Highest*) with the planned ... **Construction Project Type** (*A, B, C, D*) on the following matrix, to find the ... **Class of Precautions** (*I, II, III or IV*) or level of infection control activities required. **Class I-IV or Color-Coded Precautions** are delineated on the following page.

IC Matrix - Class of Precautions: Construction Project by Patient Risk

Patient Risk Group	Construction Project Type			
	TYPE A	TYPE B	TYPE C	TYPE D
LOW Risk Group	I	II	II	III/IV
MEDIUM Risk Group	I	II	III	IV
HIGH Risk Group	I	II	III/IV	IV
HIGHEST Risk Group	II	III/IV	III/IV	IV

Note: Infection Control approval will be required when the Construction Activity and Risk Level indicate that **Class III** or **Class IV** control procedures are necessary.

Step 3

Infection Control Risk Assessment (ICRA) during Construction and Renovation¹

This matrix is to be used to set guidelines on the appropriate infection prevention and control procedures required for the type of activity depending on where the activity will occur. The Infection Prevention and Control representative may add or omit requirements specific to a project. Recommended barriers are to be installed before construction begins.

Step 1: Identify the Type of Construction Activity Planned:

Type A	<p>Inspection and Non-invasive activities.</p> <p>Includes but is not limited to removal of ceiling tiles for visual inspection (limited to 1 tile per 50 square feet), painting, wall covering, electrical trim work, minor plumbing and activities that do not generate dust or require cutting of walls.</p>
Type B	<p>Small scale, short duration activities that create minimal dust.</p> <p>Includes but is not limited to installation of telephone and computer cables, access to chase spaces, cutting of walls or ceiling where dust migration can be easily controlled at the source.</p>
Type C	<p>Any work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies.</p> <p>Includes but is not limited to sanding walls, for painting or wall coverings, removing floor coverings, ceiling tiles and millwork, new wall construction, minor ductwork or electrical work above ceilings, major cabling activities and any activity that cannot be completed within a single work shift within the set containment.</p>
Type D	<p>Major demolition and construction projects</p> <p>Includes but is not limited to activities that require consecutive work shifts, heavy demolition or removal of a complete ceiling system and new construction.</p>

Steps 1-3 Adapted with permission V Kennedy, B Barnard, St Luke Episcopal Hospital, Houston TX; C Fine CA Steps 4-14 Adapted with permission Fairview University Medical Center Minneapolis MN Forms modified /updated; provided courtesy of Judene Bartley, ECSI Inc. Beverly Hills MI 2002. Bartley@ameritech.net Updated, 2009.

Lets Practice!

1	Infection Control Risk Assessment																
2	EVENT	PROBABILITY OF OCCURRENCE				PATIENT EFFECT				INTENSITY OF ORGANIZATION'S RESPONSE NEEDED TO ADDRESS				ORGANIZATIONAL PREPAREDNESS TO			RISK LEVEL
3	SCORE	High (3)	Med (2)	Low (1)	None (0)	Life Threat	Perm Harm (2)	Temp Harm (1)	None (0)	High (3)	Med (2)	Low (1)	None (0)	Poor (3)	Fair (2)	Good (1)	Total
4	Geography and Community																
5																	
6																	
7																	
8	Healthcare Acquired Infections																
9																	
10																	
11																	
12	Resistant Organisms																
13																	
14																	
15	Communication																
16																	
17																	
18	Staff																
19																	
20																	
21																	
22	Environment																
23																	
24																	
25	Supplies/ Equipment																
26																	
27																	
28	Emergency Management																
29																	
30																	

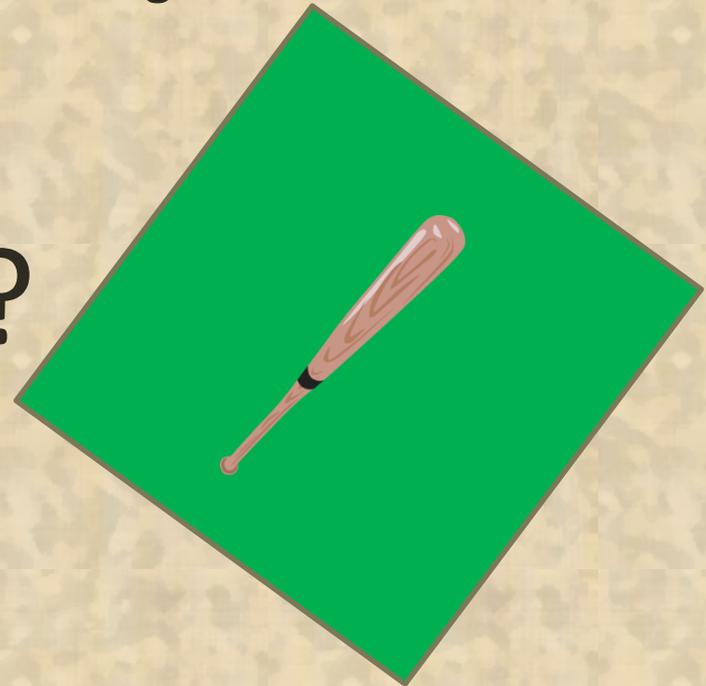
Special Situation

1																		
2																		
3	Special Situation Risk Assessment																	
4	Situation:																	
5	Background:																	
6	Assessment:																	
7	Potential Risks/Problems	Probability					Risk/Impact (Health, Financial, Legal, Regulatory)					Current Systems/Preparedness					Score	
8		High	Likely	Maybe	Rare	Never	Catastrophic Loss (life/limb/function/financial)	Serious Loss (Function / Financial/ Legal)	Prolonged Length of Stay	Moderate Clinical/ Financial	Minimal Clinical/ Financial	None	Poor	Fair	Good	Solid		
9		4	3	2	1	0	5	4	3	2	1	5	4	3	2	1		
10	Heading																	
11																		
12																		
13																		
14																		
15	Heading																	
16																		
17																		
18																		
19																		
20																		
21	Heading																	
22											1						1	2
23																		
24																		
25	Result:																	
26	Infection Control Committee Review and Approved:																	

Summary

- Risk Assessment integral part of Infection Control Plan
- Score objectively
- Must be done annually and as issues arise
 - Construction
- Needs to integrate with Quality and Strategic Plans
- Team effort to identify:

What's on First?



Quality+IC

Quality Processes for Infection Control

Contact Information

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