# INFECTION PREVENTION RISK ASSESSMENT

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Objectives:

- Describe the purpose of an infection prevention and control (IPC) plan
- Discuss the importance of incorporating the results of an infection control risk assessment into your IPC plan
- List modifications your IPC plan should include to accommodate risks present in your patient/resident population

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# What is an infection prevention and control (IPC) plan?

- Written, time-based (annual) strategy to operationalize how the IPC program's goals will be met in a facility.
  - Addresses gaps and risk factors at the facility, based on the annual IPC risk assessment
    - Provides goals and actionable items

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**A formal infection prevention plan can include, but is not limited to:**

- Defines program and scope of service
- Authority statement, including role of IP
- Demographic information
- Risk assessment and priorities
- Surveillance and methods employed for surveillance
- Corresponding policies and procedures

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# Sample IPC Plan

### Infection Control Mission/Vision Statement

(sample) The mission of the Infection Prevention & Control (IPC) program is to establish a comprehensive program to ensure that the organization has a functioning coordinated process in place to reduce the risks of endemic and epidemic healthcare acquired infections in patients (residents), healthcare workers, students and visitors on an ongoing basis and to optimize use of resources through a strong and preventive program.

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# Sample IPC Plan

### Scope of Care/Services

(sample) Reducing the risk of infection is achieved through surveillance, prevention and control of infections throughout the organization. The IPC program is directed by _____ (the infection preventionist, chair of the infection prevention committee and/or healthcare epidemiologist) to develop alternative techniques to address the real and potential exposures, select and implement the best techniques to minimize adverse outcomes, and evaluate and monitor the results and revise techniques as needed.

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# Sample IPC Plan

### IPC Authority Statement

(sample) In the interest of early and complete reporting, authority is given by the medical staff to nursing service to report any actual or suspected infection. Nursing service is also authorized to institute the isolation procedure appropriate to diagnosis by the attending physician with regard to a given patient. When any action concerning the physical care of the patient is to be taken, the medical staff member or designee shall be first notified.

In the absence of appropriate orders from the attending physician, the infection control practitioner shall have the authority to institute any appropriate control measures when it is reasonably felt a danger exists to any patient or personnel.

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# Sample IPC Plan

### Identify Demographics

(sample) The type of patients (residents) served are _____ and the age ranges of patients (residents) served is ____throughout ____.

Persons served also include internal and external healthcare providers, students, trainees, volunteers and visitors.

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# Sample IPC Plan

Plan should outline demographics, including, but not limited to:

- Number of beds / patient encounters
- Number of buildings
- Services provided (e.g., oncology, NICU, memory care)
- Ages of patients (residents) cared for
- Number of staff
- Geography / climate
- Population numbers, including area the facility encompasses- sq. miles

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# Sample IPC Plan

**Risk Assessment**

(sample) The facility performs an annual risk assessment to determine areas of focus for the annual Infection Control Plan. The document is designed to identify new, special or emerging infection risks in order to plan programs, processes or procedures to eliminate the effect of the risk. The risk assessment is a dynamic document allowing reassessment when conditions have changed. A multidisciplinary team performs the risk assessment using the previous year's healthcare associated infection data and Infection Control program summary.

**Insert a copy of completed Risk assessment**

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# Corresponding Policies and Procedures

Corresponding policies can include, but are not limited to:

- Hand Hygiene Program
- Antibiotic Stewardship Program
- Outbreak Investigations
- Transmission Based Precautions
- Infection Control Education
- Influenza Campaign
- Influx of Potentially Infectious Patients
- Environment of Care
- Occupational Health, including Bloodborne Pathogen Management and Training

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# Purpose of an Infection Prevention (IP) Risk Assessment

1

Determine infection prevention priorities

2

Use assessment components to develop effective IPC plan and program.

3

Develop a strategy for improvement and evaluation for highest risk areas.

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# Frequency of an IPC Risk Assessment

**Establish baseline risk assessment**

**Any time circumstances change, or significant changes occur**

- New services added
- New programs added
- Response to external events
- New risk identified, with need to reprioritize
- Change in regulations

**Review and update risk assessment annually**

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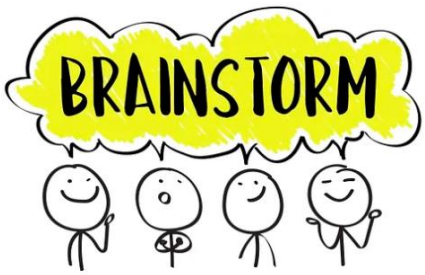
# It's a Team Effort

- Infection Preventionist(s)
- Administration
- Nursing Leadership
- Medical staff
- Pharmacy
- Environmental Services
- Safety/Risk Officer
- Engineering/Facilities
- Nursing Staff
- Quality Director
- Employee Health
- Lab
- PT/OT
- Respiratory Therapy
- Education

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# Risk Assessment Team Sport

- Input from everyone
- Do as a group or one-on-one with key personnel
- First time is most difficult
- You'll guide the process, but everyone contributes

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# Identify Sources of Risks

- Unusual occurrences
- Potentially compensable events
- Significant/sentinel events
- Medical/legal claims
- Regulatory complaints
- Audits
- Surveys
- Community standards of care/practice

- Risks may have subcategories
  - e.g., SSI (list individual procedures performed)

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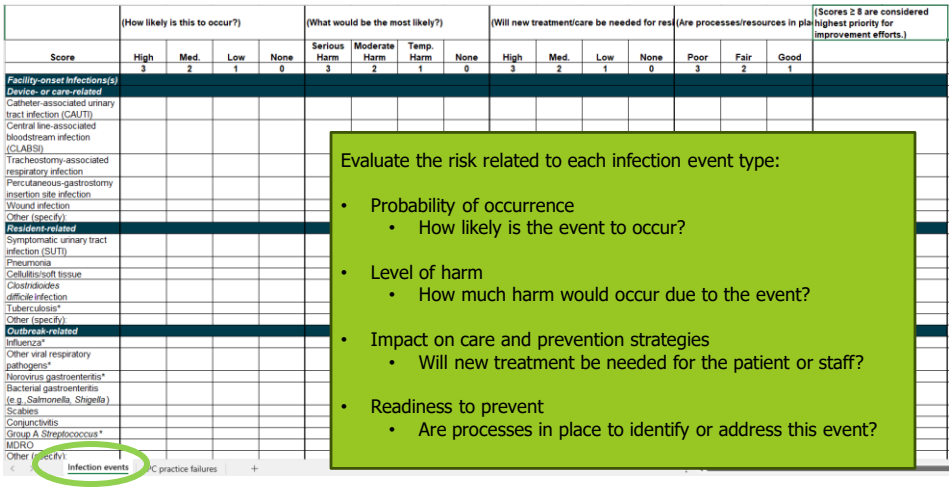
# Example Risk Assessment



| Score | (How likely is this to occur?) High 3 | Med. 2 | Low 1 | None 0 | (What would be the most likely?) Serious Harm 3 | Moderate Harm 2 | Temp. Harm 1 | None 0 | (Will new treatment/care be needed for resi High 3 | Med. 2 | Low 1 | None 0 | (Are processes/resources in pla Poor 3 | Fair 2 | Good 1 | (Scores ≥ 8 are considered highest priority for improvement efforts.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Facility-onset Infections(s)*** | | | | | | | | | | | | | | | | |
| ***Device- or care-related*** | | | | | | | | | | | | | | | | |
| Catheter-associated urinary tract infection (CAUTI) | | | | | | | | | | | | | | | | |
| Central line-associated bloodstream infection (CLABSI) | | | | | | | | | | | | | | | | |
| Tracheostomy-associated respiratory infection | | | | | | | | | | | | | | | | |
| Percutaneous-gastrostomy insertion site infection | | | | | | | | | | | | | | | | |
| Wound infection | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |
| ***Resident-related*** | | | | | | | | | | | | | | | | |
| Symptomatic urinary tract infection (SUTI) | | | | | | | | | | | | | | | | |
| Pneumonia | | | | | | | | | | | | | | | | |
| Cellulitis/soft tissue | | | | | | | | | | | | | | | | |
| *Clostridioides difficile* infection | | | | | | | | | | | | | | | | |
| Tuberculosis* | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |
| ***Outbreak-related*** | | | | | | | | | | | | | | | | |
| Influenza* | | | | | | | | | | | | | | | | |
| Other viral respiratory pathogens* | | | | | | | | | | | | | | | | |
| Norovirus gastroenteritis* | | | | | | | | | | | | | | | | |
| Bacterial gastroenteritis (e.g., *Salmonella, Shigella*) | | | | | | | | | | | | | | | | |
| Scabies | | | | | | | | | | | | | | | | |
| Conjunctivitis | | | | | | | | | | | | | | | | |
| Group A *Streptococcus* * | | | | | | | | | | | | | | | | |
| MDRO | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |

Infection events | C practice failures | +

Evaluate the risk related to each infection event type:

- Probability of occurrence
  - How likely is the event to occur?
- Level of harm
  - How much harm would occur due to the event?
- Impact on care and prevention strategies
  - Will new treatment be needed for the patient or staff?
- Readiness to prevent
  - Are processes in place to identify or address this event?

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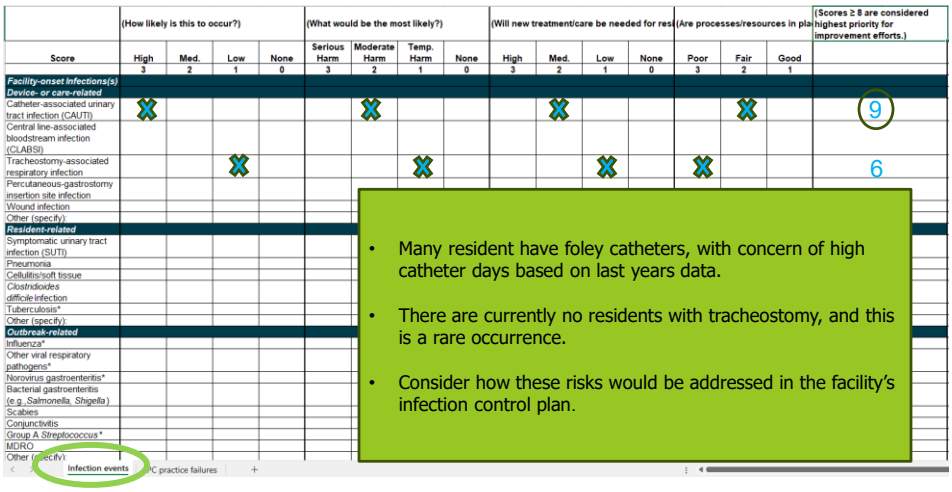
# Example Risk Assessment



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Facility-onset Infections(s)*** | | | | | | | | | | | | | | | | |
| ***Device- or care-related*** | | | | | | | | | | | | | | | | |
| Catheter-associated urinary tract infection (CAUTI) | X | | | | | X | | | | X | | | | X | | 9 |
| Central line-associated bloodstream infection (CLABSI) | | | | | | | | | | | | | | | | |
| Tracheostomy-associated respiratory infection | | | X | | | | X | | | | X | | X | | | 6 |
| Percutaneous-gastrostomy insertion site infection | | | | | | | | | | | | | | | | |
| Wound infection | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |
| ***Resident-related*** | | | | | | | | | | | | | | | | |
| Symptomatic urinary tract infection (SUTI) | | | | | | | | | | | | | | | | |
| Pneumonia | | | | | | | | | | | | | | | | |
| Cellulitis/soft tissue | | | | | | | | | | | | | | | | |
| *Clostridioides difficile* infection | | | | | | | | | | | | | | | | |
| Tuberculosis* | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |
| ***Outbreak-related*** | | | | | | | | | | | | | | | | |
| Influenza* | | | | | | | | | | | | | | | | |
| Other viral respiratory pathogens* | | | | | | | | | | | | | | | | |
| Norovirus gastroenteritis* | | | | | | | | | | | | | | | | |
| Bacterial gastroenteritis (e.g., *Salmonella, Shigella*) | | | | | | | | | | | | | | | | |
| Scabies | | | | | | | | | | | | | | | | |
| Conjunctivitis | | | | | | | | | | | | | | | | |
| Group A *Streptococcus* * | | | | | | | | | | | | | | | | |
| MDRO | | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | | |

Infection events | C practice failures | +

- Many resident have foley catheters, with concern of high catheter days based on last years data.
- There are currently no residents with tracheostomy, and this is a rare occurrence.
- Consider how these risks would be addressed in the facility's infection control plan.

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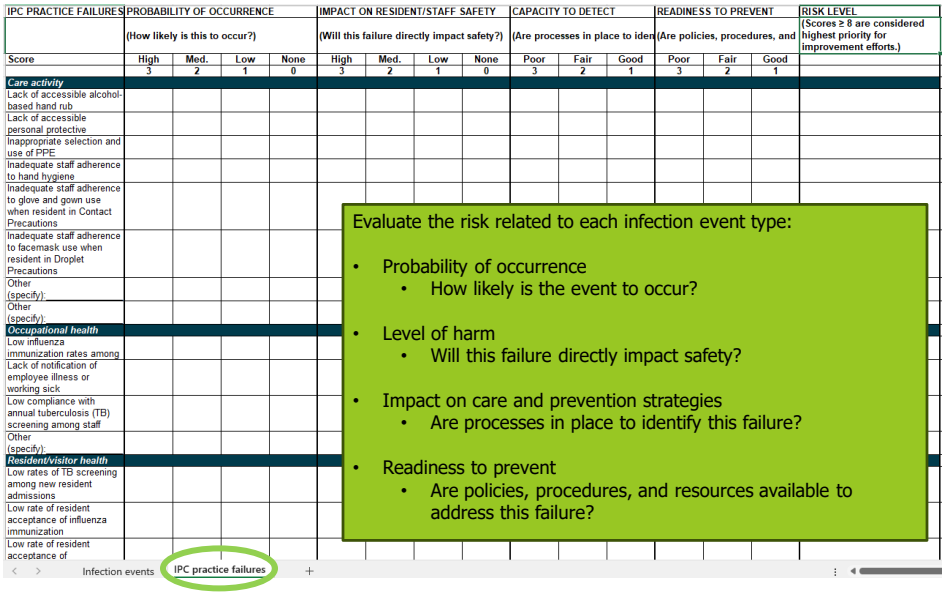
# Example Risk Assessment



| IPC PRACTICE FAILURES | PROBABILITY OF OCCURRENCE (How likely is this to occur?) | | | | IMPACT ON RESIDENT/STAFF SAFETY (Will this failure directly impact safety?) | | | | CAPACITY TO DETECT (Are processes in place to iden | | | READINESS TO PREVENT (Are policies, procedures, and | | | RISK LEVEL (Scores ≥ 8 are considered highest priority for improvement efforts.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Score | High 3 | Med. 2 | Low 1 | None 0 | High 3 | Med. 2 | Low 1 | None 0 | Poor 3 | Fair 2 | Good 1 | Poor 3 | Fair 2 | Good 1 | |
| *Care activity* | | | | | | | | | | | | | | | |
| Lack of accessible alcohol-based hand rub | | | | | | | | | | | | | | | |
| Lack of accessible personal protective | | | | | | | | | | | | | | | |
| Inappropriate selection and use of PPE | | | | | | | | | | | | | | | |
| Inadequate staff adherence to hand hygiene | | | | | | | | | | | | | | | |
| Inadequate staff adherence to glove and gown use when resident in Contact Precautions | | | | | | | | | | | | | | | |
| Inadequate staff adherence to facemask use when resident in Droplet Precautions | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | |
| *Occupational health* | | | | | | | | | | | | | | | |
| Low influenza immunization rates among | | | | | | | | | | | | | | | |
| Lack of notification of employee illness or working sick | | | | | | | | | | | | | | | |
| Low compliance with annual tuberculosis (TB) screening among staff | | | | | | | | | | | | | | | |
| Other (specify): | | | | | | | | | | | | | | | |
| *Resident/visitor health* | | | | | | | | | | | | | | | |
| Low rates of TB screening among new resident admissions | | | | | | | | | | | | | | | |
| Low rate of resident acceptance of influenza immunization | | | | | | | | | | | | | | | |
| Low rate of resident acceptance of | | | | | | | | | | | | | | | |

Infection events | IPC practice failures | +

Evaluate the risk related to each infection event type:

- Probability of occurrence
  - How likely is the event to occur?
- Level of harm
  - Will this failure directly impact safety?
- Impact on care and prevention strategies
  - Are processes in place to identify this failure?
- Readiness to prevent
  - Are policies, procedures, and resources available to address this failure?

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# Customizing your Template

**Facility Onset/Device Related Risks**

- CAUTI (Foley bundle non-compliance)
- CLABSI (Central-line bundle non-compliance)
- VAE
- SSI
- Wound infection
- Pneumonia
- MDRO (MRSA, VRE, ESBL, novel or targeted drug resistant infections)
- C. Diff

**Outbreak Related Risks**

- Novel Pathogens
  - Pandemic
- Respiratory illness
- Gastrointestinal illness
- Foodborne illness
- Waterborne illness
- TB
- Weather related event
- Bioterrorism

**IPC Practice Failure Risks**

- Non-compliance
  - Hand hygiene
  - Standard and transmission-based precautions
  - Environmental disinfection
- Occupational health gaps/potential exposures
- Improper disposal of medical waste and sharps
- Annual fit testing not completed
- Knowledge deficit of policies and procedures
- Lack of patient/resident/family education
- IP unable to devote anticipated hours to job

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# Scoring Key Examples

| INFECTION EVENT | PROBABILITY OF OCCURRENCE | | | | LEVEL OF HARM FROM EVENT | | | | IMPACT ON CARE | | | | READINESS TO PREVENT | | | RISK LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (How likely is this to occur?) | | | | (What would be the most likely?) | | | | (Will new treatment/care be needed for res | | | | (Are processes/resources in pla | | | (Scores ≥ 8 are considered highest priority for improvement efforts.) |
| Score | High | Med. | Low | None | Serious Harm | Moderate Harm | Temp. Harm | None | High | Med. | Low | None | Poor | Fair | Good | |
| | 3 | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 | 2 | 1 | |

| Probability | | | | | Impact | | | | | Preparedness | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 | 1 | 2 | 3 | 4 | 5 |
| Frequent | Probable | Occasional | Rare | Improbable | Catastrophic | Major | Moderate | Minor | No impact | Extremely high | High | Moderate | Low | Extremely Low |
| Almost certain | Quite likely | May occur | Not likely but possible | Not likely | Life threatening, Death | Severe or severly exacerbated injury or illness or significantly reduced life expectancy | Mildly exacerbated injury or illness, temporary harm | Trivially exacerbated injury or illness, may require first aid | No harm | extremely well prepared/ staff have drilled and know response | Staff have drilled | Staff know policy and procedure | Staff aware there is a procedure or policy | No awareness by staff |

| PROBABILITY | SEVERITY | | | | | |
|---|---|---|---|---|---|---|
| | ***HUMAN IMPACT*** | ***PROPERTY IMPACT*** | ***BUSINESS IMPACT*** | ***PREPARED-NESS*** | ***INTERNAL RESPONSE*** | ***EXTERNAL RESPONSE*** |
| *Likelihood this type of infection or problems with this process will occur in our patient population.* | *Severity of this for the patient* | *Additional cleaning / isolation / staffing needs due to this infection / problem* | *Increased length of stay/cost to the facility due to this infection / problem* | *Identification & prevention of this disease, infection, process problem, or care of this type patient in place* | *Staff knowledge & compliance of policy for prevention of this particular problem* | *External support/regulations for this type procedure/problem: OSHA, TJC, CDC, NIOSH etc.* |
| *0-not applicable*<br>*1-unlikely*<br>*2-seldom*<br>*3-occasional*<br>*4-likely*<br>*5-frequent* | *0-not applicable*<br>*1-extremely low or none*<br>*2-low*<br>*3-moderate*<br>*4-high*<br>*5-extremely high* | *0-not applicable*<br>*1-extremely low or none*<br>*2-low*<br>*3-moderate*<br>*4-high*<br>*5-extremely high* | *0-not applicable*<br>*1-extremely low or none*<br>*2-low*<br>*3-moderate*<br>*4-high*<br>*5-extremely high* | *0-not applicable*<br>*1-extremely high*<br>*2-high*<br>*3-moderate*<br>*4-low*<br>*5-extremely low or none* | *0-not applicable*<br>*1-extremely high*<br>*2-high*<br>*3-moderate*<br>*4-low*<br>*5-extremely low or none* | *0-not applicable*<br>*extremely high*<br>*2-high*<br>*moderate*<br>*4-low*<br>*5-extremely low or none* |

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# Next Steps. . .

Prioritize surveillance activities using risk assessment

- Outcome surveillance – healthcare-acquired and community acquired infections
  - Includes plan for identification of outbreaks
- Process surveillance – Do staff follow the facility's IPCP policies (e.g., monitoring hand hygiene, blood glucose monitoring practices)

Use the risk assessment and surveillance information to adjust policies and procedures with the goal of reducing infections.

Drive education / training efforts.

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# Next Steps. . .

Set goals to ensure that the data collected are consistent, useful, actionable and timely.

- IPC program goals should align with the organization's strategic goals.
- IPC program goal considerations:
  - Prioritized risks from risk assessment

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**S (Specific) - What am I trying to do?**
(Implement and perform a daily clinical necessity assessment protocol for the removal of central lines in the ICU, focusing on evidence-based criteria and interdisciplinary collaboration. Achieve a 90% compliance rate with the daily clinical necessity assessment protocol for central line removal within the next 3 months.

**M (Measurable) - How will I measure progress?**
(Compliance will be measured through documentation in patient charts and periodic audits.)

**A (Actionable) - Do I have the necessary resources and skills?**
Provide education and training sessions for healthcare providers in the ICU on the criteria for central line removal and the importance of daily clinical necessity assessments. Establish clear communication channels for interdisciplinary collaboration among nurses, physicians, and other relevant staff.

**R (Relevant) – Why is this important?**
Daily clinical necessity assessments for central line removal are crucial for preventing complications associated with unnecessary lines and promoting patient safety. This goal aligns with our commitment to evidence-based practice and optimizing patient care in the ICU.

**T (Timely) – What is the timeline to achieve the goal?**
Achieve a 90% compliance rate with the daily clinical necessity assessment protocol for central line removal within the next three months.

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# Developing an Action Plan

| Priority # | Priority | Goal | Objective | Strategies | Progress/Analysis | Evaluation |
|---|---|---|---|---|---|---|
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |

Based on the scoring of your risk assessment and the consensus of your team, you will prioritize the elements you will need to work on in the coming year.

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# Goals

| Priority # | Priority | Goal |
|---|---|---|
| 1. | CDI HAI | Decrease NHSN SIR by the end of FY2023 |
| 2. | Healthcare worker eye exposures | Reduce number of incident reports of eye exposures |
| 3. | Hand hygiene non-compliance | Improve hand hygiene compliance |

**Goals-**

- May not be strictly measurable or tangible
- Outcome to achieve long-term

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# Objectives

| Priority # | Priority | Goal | Objectives |
|---|---|---|---|
| 1. | CDI HAI | Decrease NHSN SIR by the end of FY2023 | • Reduce NHSN SIR by 10% in FY23<br>• SIR Rate in FY22 was 2.53<br>• Target: NHSN SIR of 2.28 or less for FY23 |
| 2. | HCW eye exposures | Reduce number of incident reports of eye exposures | 25% reduction in incident reports of employees reporting eye exposure during calendar year 2023 |
| 3. | Hand Hygiene non-compliance | Improve hand hygiene compliance | Overall Hand Hygiene compliance will be 90% or better for FY2023 |

**Objectives:**
- What you want to accomplish
- Specific action supports the goal
- Measurable and tangible
- Mid to short term

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# Strategies

| Priority # | Priority | Goal | Objective | Strategies |
|---|---|---|---|---|
| 1. | CDI HAI | Decrease NHSN SIR by the end of FY2023 | • Reduce NHSN SIR by 10% in FY23<br>• SIR Rate in FY22 was 2.53<br>• Target: NHSN SIR of 2.28 or less for FY23 | Q1<br>1. Assess which unit has highest rate<br>2. Develop education and auditing tool<br>3. Assess which unit has lowest rate and look at what they are doing. |
| 2. | Healthcare worker eye exposures | Reduce number of incident reports of eye exposures | 25% reduction in incident reports of employees reporting eye exposures during calendar year 2023 | Q1<br>1. Survey employees on *why exposures are occurring*<br>2. *Audit use of PPE/standard precautions* |

**Strategies**
- Action Plans/steps to achieve the objective
- The HOW and WHAT
- Assign responsibility – don't try to do all by yourself

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# Progress/Analysis

| Priority # | Priority | Goal | Objectives | Strategies | Progress/Analysis |
|---|---|---|---|---|---|
| 1. | CDI HAI | Decrease NHSN SIR by the end of FY2023 | • Reduce NHSN SIR by 10% in FY23<br>• SIR Rate in FY22 was 2.53<br>• Target: NHSN SIR of 2.28 or less for FY23 | Q1<br>1. Assess which unit has highest rate<br>2. Develop education and auditing tool<br>3. Assess which unit has lowest rate and look at what they are doing. | Q1<br>1. Unit assessments done<br>2. Education power point on C. diff done<br>3. Audit tool completed |
| 2. | Healthcare worker eye exposures | Reduce number of incident reports of eye exposures | 25% reduction in incident reports of employees reporting eye exposures during calendar year 2023 | Q1<br>1. Survey employees on why exposures are occurring<br>2. Audit use of PPE/standard precautions | Q1<br>1. Surveys completed<br>2. Audit completed |

**Progress/Analysis-**
Update and analyze your progress on at least on a quarterly basis.

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# Evaluation

| Priority # | Priority | Goal | Objective | Strategies | Progress/ Analysis | Evaluation |
|---|---|---|---|---|---|---|
| 2. | Healthcare worker eye exposures | Reduce number of incident report of eye exposures | 25% reduction in incident reports of employees reporting eye exposures during calendar year 2023 | Q1.<br>1. Survey employees on why exposures are occurring<br>2. Audit use of PPE/standard precautions | Q1.<br>1. Survey completed<br>2. Audit completed | Q.1<br>1. Lack of understanding by staff on when to use eye protection<br>2. 40% compliance rate with use of PPE and standard precautions |
| | | | | Q2.<br>1. Develop education on standard precautions<br>2. Audit where PPE is stored | Q2.<br>1. PPE education and quiz ready for distribution<br>2. Audit by floor of PPE storage completed | Q2<br>1. Education used during skills days to reach everyone<br>2. PPE found not to be at point of care. |

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# Evaluation

| Priority # | Priority | Goal | Objective | Strategies | Progress/ Analysis | Evaluation |
|---|---|---|---|---|---|---|
| 2. | Healthcare worker eye exposures | Reduce number of incident reports of eye exposures | 25% reduction in incident reports of employees reporting eye exposures during calendar year 2023 | Q3.<br>1. Unit base teams to problem solve how to get PPE at point of care e.g. patient rooms | Q3.<br>1. Units have identified safe/convenient place to store PPE near patient care<br>2. Education rolled out at skills days<br>3. Unit meetings to orientate staff to placement of PPE | Q3.<br>1. PPE package in each room<br>2. All staff completed education<br>3. Unit meetings held |
| | | | | Q4.<br>1. Audit use of PPE/standard precautions<br>2. Review number of incident report for eye exposure | Q4.<br>1. PPE/standard precaution compliance rate 80%<br>2. Incident reports down 5% | Q4.<br>1. PPE needs to be restocked in room after use – will need to develop plan<br>2. Continue to monitor incident reports since goal of 25% not attained<br>3. Need to audit replacement of PPE<br>4. Compare use of PPE and standard precaution compliance |

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# CONSTRUCTION RISK ASSESSMENT (ICRA)

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# ICRA Types of Work

**Step One:**
Using Table 1, Identify the Activity Type (A-D).

Infection Control Risk Assessment 2.0 (ICRA 2.0) | ASHE

| | |
|---|---|
| **Type A** | **Inspection and non-invasive activities.**<br>Includes but is not limited to:<br>• Removal of ceiling tile for visual inspection-limited to 1 tile per 50 square feet with limited exposure time.<br>• Limited building system maintenance (e.g., pneumatic tube station, HVAC system, fire suppression system, electrical and carpentry work to include painting without sanding) that does not create dust or debris.<br>• Clean plumbing activity limited in nature. |
| **Type B** | **Small-scale, short duration activities that create minimal dust and debris.**<br>Includes but is not limited to:<br>• Work conducted above the ceiling (e.g., prolonged inspection or repair of firewalls and barriers, installation of conduit and/or cabling, and access to mechanical and/or electrical chase spaces).<br>• Fan shutdown/startup.<br>• Installation of electrical devices or new flooring that produces minimal dust and debris.<br>• The removal of drywall where minimal dust and debris is created.<br>• Controlled sanding activities (e.g., wet or dry sanding) that produce minimal dust and debris. |
| **Type C** | **Large-scale, longer duration activities that create a moderate amount of dust and debris.**<br>Includes but is not limited to:<br>• Removal of preexisting floor covering, walls, casework or other building components.<br>• New drywall placement.<br>• Renovation work in a single room.<br>• Non-existing cable pathway or invasive electrical work above ceilings.<br>• The removal of drywall where a moderate amount of dust and debris is created.<br>• Dry sanding where a moderate amount of dust and debris is created.<br>• Work creating significant vibration and/or noise.<br>• Any activity that cannot be completed in a single work shift. |
| **Type D** | **Major demolition and construction activities.**<br>Includes but is not limited to:<br>• Removal or replacement of building system component(s).<br>• Removal/installation of drywall partitions.<br>• Invasive large-scale new building construction.<br>• Renovation work in two or more rooms. |

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# ICRA Patient Risk Group

**Step Two:**
Using Table 2, identify the Patient Risk Group(s) that will be affected. If more than one risk group will be affected, select the higher risk group.

| **Low Risk**<br>**Non-patient care areas such as:** | **Medium Risk**<br>**Patient care support areas such as:** | **High Risk**<br>**Patient care areas such as:** | **Highest Risk**<br>**Procedural, invasive, sterile support and highly compromised patient care areas such as:** |
|---|---|---|---|
| • Public hallways and gathering areas not on clinical units.<br>• Office areas not on clinical units.<br>• Breakrooms not on clinical units.<br>• Bathrooms or locker rooms not on clinical units.<br>• Mechanical rooms not on clinical units.<br>• EVS closets not on clinical units. | • Waiting areas.<br>• Clinical engineering.<br>• Materials management.<br>• Sterile processing department - dirty side.<br>• Kitchen, cafeteria, gift shop, coffee shop, and food kiosks. | • Patient care rooms and areas<br>• All acute care units<br>• Emergency department<br>• Employee health<br>• Pharmacy - general work zone<br>• Medication rooms and clean utility rooms<br>• Imaging suites: diagnostic imaging<br>• Laboratory. | • All transplant and intensive care units.<br>• All oncology units.<br>• OR theaters and restricted areas.<br>• Procedural suites.<br>• Pharmacy compounding.<br>• Sterile processing department - clean side.<br>• Transfusion services.<br>• Dedicated isolation wards/units.<br>• Imaging suites: invasive imaging. |

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# ICRA Class of Precautions

**Step Three:**

Match the Patient Risk Group (*Low, Medium, High, Highest*) from Step Two with the planned Construction Activity Project Type (*A, B, C, D*) from Step One using Table 3 to find the Class of Precautions (*I, II, III, IV or V*) or level of infection control activities required. The activities are listed in Table 5 – Minimum Required Infection Control Precautions by Class.

| | Construction Project Type | | | |
|---|---|---|---|---|
| **Patient Risk Group** | **TYPE A** | **TYPE B** | **TYPE C** | **TYPE D** |
| LOW Risk Group | I | II | II | III* |
| MEDIUM Risk Group | I | II | III* | IV |
| HIGH Risk Group | I | III | IV | V |
| HIGHEST Risk Group | III | IV | V | V |

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# ICRA Mitigation Activities

| Class of Precautions | Mitigation Activities (Performed Before and During Work Activity) |
|---|---|
| **Class I** | 1. Perform noninvasive work activity as to not block or interrupt patient care.<br>2. Perform noninvasive work activities in areas that are not directly occupied with patients.<br>3. Perform noninvasive work activity in a manner that does not create dust.<br>4. Immediately replace any displaced ceiling tile before leaving the area and/or at end of noninvasive work activity. |
| **Class II** | 1. Perform only limited dust work and/or activities designed for basic facilities and engineering work.<br>2. Perform limited dust and invasive work following standing precautions procedures approved by the organization.<br>3. This Class of Precautions must never be used for construction or renovation activities. |
| **Class III** | 1. Provide active means to prevent airborne dust dispersion into the occupied areas.<br>2. Means for controlling minimal dust dispersion may include hand-held HEPA vacuum devices, polyethylene plastic containment, or isolation of work area by closing room door.<br>3. Remove or isolate return air diffusers to avoid dust from entering the HVAC system.<br>4. Remove or isolate the supply air diffusers to avoid positive pressurization of the space,<br>5. If work area is contained, then it must be neutrally to negatively pressurized at all times.<br>6. Seal all doors with tape that will not leave residue.<br>7. Contain all trash and debris in the work area.<br>8. Nonporous/smooth and cleanable containers (with a hard lid) must be used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area.<br>9. Install an adhesive (dust collection) mat at entrance of contained work area based on facility policy. Adhesive mats must be changed routinely and when visibly soiled.<br>10. Maintain clean surroundings when area is not contained by damp mopping or HEPA vacuuming surfaces. |

Class I precautions require fewer interventions

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# ICRA Mitigation Activities

Infection control permit and approval will be required when Class of Precautions III (Type C) and all Class of Precautions IV or V are necessary.

| | |
|---|---|
| **Class V** | 1. Construct and complete critical barriers meeting NFPA 241 requirements including: Barriers must extend to the ceiling, or if ceiling tile is removed, to the deck above, and all penetrations through the barrier shall meet the appropriate fire rating requirements.<br>2. All (plastic or hard) barrier construction activities must be completed in a manner that prevents dust release. Plastic barriers must be effectively affixed to ground and ceiling and secure from movement or damage. Apply tape that will not leave a residue to seal gaps between barriers, ceiling or floor.<br>3. Seal all penetrations in containment barriers, anteroom barriers, including floors and ceiling using approved materials (UL schedule firestop if applicable for barrier type).<br>4. Construct anteroom large enough for equipment staging, cart cleaning, workers. The anteroom must be constructed adjacent to entrance of construction work area.<br>5. Personnel will be required to wear disposable coveralls at all times during Class V work activities. Disposable coveralls must be removed before leaving the anteroom.<br>6. Remove or isolate return air diffusers to avoid dust entering the HVAC system.<br>7. Remove or isolate the supply air diffusers to avoid positive pressurization of the space.<br>8. Negative airflow pattern must be maintained from the entry point to the anteroom and into the construction area. The airflow must cascade from outside to inside the construction area. The entire construction area must remain negatively pressurized.<br>9. Maintain negative pressurization of the entire workspace using HEPA exhaust air systems directed outdoors. Exhaust discharged directly to the outdoors that is 25 feet or greater from entrances, air intakes and windows does not require HEPA-filtered air.<br>10. If exhaust is directed indoors, then the system must be HEPA filtered. Prior to start of work, HEPA filtration must be verified by particulate measurement as no less than 99.97% efficiency and must not alter or change airflow/pressure relationships in other areas.<br>11. Exhaust into shared or recirculating HVAC systems, or other shared exhaust systems (bathroom exhaust) is not acceptable.<br>12. Install device on exterior of work containment to continually monitor negative pressurization. To assure proper pressure is continuously maintained, it is recommended that the device(s) have a visual pressure indicator.<br>13. Contain all trash and debris in the work area.<br>14. Nonporous/smooth and cleanable containers (with a hard lid) must be used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area.<br>15. Worker clothing must be clean and free of visible dust before leaving the work area anteroom.<br>16. Workers must wear shoe covers prior to entry into the work area. Shoe covers must be changed prior to exiting the anteroom to the occupied space (non-work area). Damaged shoe covers must be immediately changed.<br>17. Install an adhesive (dust collection) mat at entrance of contained work area based on facility policy. Adhesive mats must be changed routinely and when visibly soiled.<br>18. Consider collection of particulate data during work to monitor and ensure that contaminates do not enter the occupied spaces. Routine collection of particulate samples may be used to verify HEPA filtration efficiencies. |

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# ICRA Rounding

Inspect work areas daily, or more frequently as necessary:

Compliant?

Need to stop work?

**Daily Infection Control Checklist**
**Construction Site Monitoring**

Worksite Location_____
Date/Time_____
Reviewer_____

| Item | Met | Not Met | Corrective Action |
|---|---|---|---|
| General cleanliness of work area satisfactory | | | |
| Work areas separated from patient areas by barriers | | | |
| Work barriers intact, Seam sealed | | | |
| Doors and openings Closed | | | |
| All holes and penetrations are covered | | | |
| Vents blocked or Filtered | | | |
| Ceiling tiles Intact | | | |
| Negative pressure machines Running | | | |
| Clean dust mats/sticky mats in work area | | | |
| Clean dust mats/sticky mats at entrance area | | | |
| Adjacent areas clean (i.e., no dust tracks) | | | |
| No debris or unsecured tools in area | | | |
| Construction debris removed from site | | | |
| Debris removed in covered-container with seal | | | |
| Brick removal-debris wet and covered | | | |
| Compressed gas cylinders | | | |
| All fire detection and suppression equipment operable | | | |
| Exits and corridors clear and unobstructed | | | |
| Fire extinguishers accessible in construction area | | | |
| Temporary access and egress routes identified and clear | | | |
| Roads unobstructed for public and emergency access | | | |
| Signage in place (Not an Exit, Construction Area, etc) | | | |

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# Monitoring

In addition to daily checklist, any time you walk by a construction area be observant:

- Do I see dust?
- Footprints?
- Wet ceiling tiles?
- Opened doors- unzipped or tape loose on plastic?
- Debris removal in carts and covered?

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