

Performing a Facility Risk Assessment and Writing an Infection Prevention & Control Plan

Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health



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 three modifications your IPC Plan should include to accommodate risks present in your resident population



Performing a Facility Risk Assessment and Writing an Infection Prevention and Control Plan



IPC Program

- An IPC program, implemented within a health-care facility, is critical not only to prevent HAIs but also to prepare for and respond to communicable diseases crises
- The World Health Organization defined a set of essential core components to help plan, organize and implement an IPC program

[Core components for IPC \(who.int\)](https://www.who.int/csr/resources/publications/AM_CoreCom_IPC.pdf)

(https://www.who.int/csr/resources/publications/AM_CoreCom_IPC.pdf)

Elements of an IPC Program

An IPC program should include (but is not limited to):

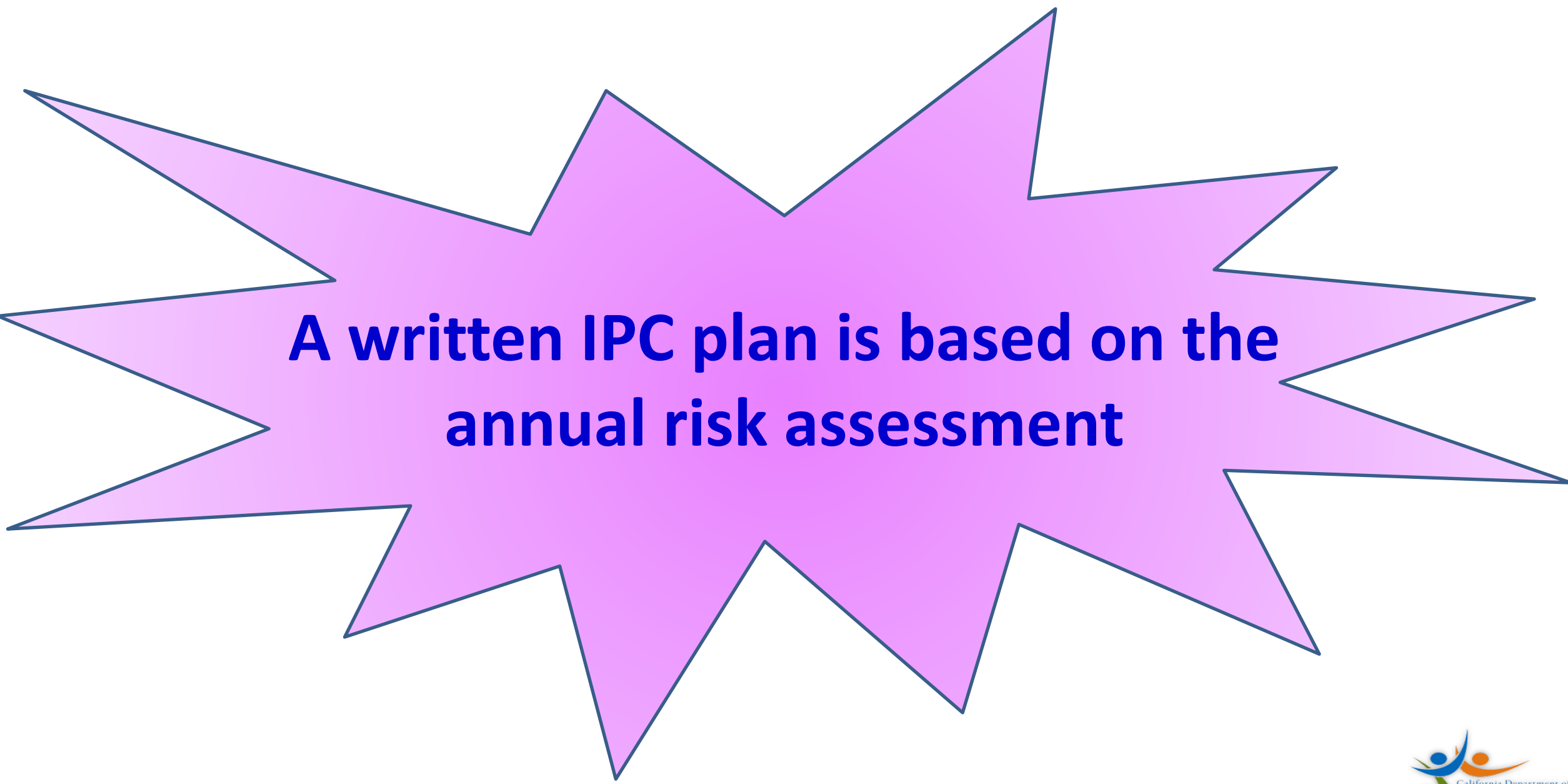
- Visible, tangible leadership support for IPC
- A written annual risk assessment
- **A written IPC plan based on the annual risk assessment**
- IP policies and procedures
- Education
 - Health care provider (HCP)
 - Patient/resident, family, caregiver education
- Adherence monitoring and feedback
- Antibiotic Stewardship Program

What is an IPC Plan?

- An IPC Plan is a written, time-based strategy to operationalize how the IPC Program's goals will be met in a facility
 - Addresses gaps and risk factors at the facility
 - Provides goals and actionable items
- Describes how a facility will meet the IPC program objectives

IPC Plan Should Include:

- The role of the Infection Preventionist
- Infection prevention goals for the year
- HAI surveillance to be conducted
 - Includes the incidence of infections
 - Such as *C. difficile* infections (CDI), urinary tract infections (UTI), pneumonia, or scabies
- How infections will be recorded and reported
- Policies and procedures to prevent transmission of infection
- How and where adherence monitoring will be performed
- How feedback will be given to HCP



**A written IPC plan is based on the
annual risk assessment**

The Annual Risk Assessment

An IPC plan includes elements identified by the annual risk assessment:

- Infection events
 - Numbers of HAI in the facility over the past year
 - Community rates of infectious disease
 - Facility or local outbreaks
- IPC practice failures
 - Gaps in infection prevention care practices
- Potential risk based on resident population type

Sample Annual Risk Assessment

INFECTION EVENT	PROBABILITY OF OCCURRENCE (How likely is this to occur?)				LEVEL OF HARM FROM EVENT (What would be the most likely?)				IMPACT ON CARE (Will new treatment/care be needed for)				READINESS TO PREVENT (Are processes/resources in)			RISK LEVEL (Scores ≥ 8 are considered high)
	Score	High 3	Med. 2	Low 1	None 0	Serious Harm 3	Moderate Harm 2	Temp. Harm 1	None 0	High 3	Med. 2	Low 1	None 0	Poor 3	Fair 2	
Facility-onset Infections(s)																
Device- or care-																
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																
<i>Clostridioides difficile</i> infection																
Tuberculosis*																
Other (specify):																
Outbreak-related																
Influenza*																
Other viral respiratory pathogens*																
Norovirus gastroenteritis*																
Bacterial gastroenteritis (e.g., <i>Salmonella</i> , <i>Shigella</i>)																
Scabies																
Conjunctivitis																
Group A <i>Streptococcus</i> *																
MDRO																
Other (specify):																
* Risk assessment should take into account the frequency of this disease in the community as part of determining probability of occurrence. Data from State/local health department may be informative.																

◀ ▶
Infection events
IPC practice failures
(+)
⋮
◀ ▶

CDPH HAI Program Webpage, [Sample Annual Risk Assessment](https://www.cdc.gov/long-term-care-facilities/media/excel/ipc-riskassessment.xlsx?CDC_AAref_Val=https://www.cdc.gov/longtermcare/excel/IPC-RiskAssessment.xlsx) (https://www.cdc.gov/long-term-care-facilities/media/excel/ipc-riskassessment.xlsx?CDC_AAref_Val=https://www.cdc.gov/longtermcare/excel/IPC-RiskAssessment.xlsx)

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MDRO																
Other (specify):																
* Risk assessment should take into account the frequency of the disease in the community as part of determining probability of occurrence and harm to residents as a result of exposure.																

The risk score for each infection event will vary, based on your facility's characteristics

CDPH HAI Program Webpage, [Sample Annual Risk Assessment](http://www.cdc.gov/longtermcare/excel/IPC-RiskAssessment.xlsx)
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Infection events

IPC practice failures

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- This facility utilizes many of urinary catheters
- They have very few tracheostomy patients. They stabilize, then transfer them to a sister facility
- Consider how these risks would be addressed in the facility's infection control plan

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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 identify)			READINESS TO PREVENT (Are policies, procedures, and res)			RISK LEVEL (Scores ≥ 8 are cons
Score	High	Med.	Low	None	High	Med.	Low	None	Poor	Fair	Good	Poor	Fair	Good	
	3	2	1	0	3	2	1	0	3	2	1	3	2	1	
Care activity															
Lack of accessible alcohol-based hand rub															
Lack of accessible personal protective equipment (PPE)															
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 staff															
Lack of notification of employee illness or working sick															
Low compliance with annual tuberculosis (TB) screening among staff															
Other															

Adapt the spreadsheet to factor in new IPC infection events or IPC practices (such as COVID-19 pandemic or PPE shortages)

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IPC practice failures

Annual Risk Assessment (Infection Events)

Numbers of HAIs in acute care or skilled nursing facility (SNF) over the past year

- Device-related HAI events
 - Catheter-associated urinary tract infections (CAUTI)
 - Central line-associated bloodstream infection (CLABSI)
 - Percutaneous-gastrostomy insertion site infections
- Wound infections
- Pneumonia
- Cellulitis/soft tissue infection

Not an all
inclusive list!

Annual Risk Assessment (Infection Events)

Community and/or facility incidence or outbreaks

- Tuberculosis
- *Candida auris*
- Carbapenem-resistant organisms (CRO)
- Measles
- *Clostridioides difficile*
- Influenza
- COVID-19
- Scabies

Annual Risk Assessment (IPC Practice Failures)

Gaps in infection prevention care practices such as hand hygiene, Standard, Enhanced, or Transmission-based precautions, environmental cleaning and disinfection

- Resource limitations
 - Personal protective equipment (PPE)
 - Staffing
- Adherence monitoring issues
 - Poor hand hygiene
 - Improper use of PPE

Annual Risk Assessment (IPC Practice Failures)

Occupational Health

- Low staff immunization rates
 - COVID-19 or influenza
- Low TB screening compliance
- Poor compliance with occupational health policy
 - Limited notification of employee illness
 - Staff working while sick

Annual Risk Assessment (IPC Practice Failures)

Patient/resident or visitor risks

- Immunization rates (low)
 - Such as Influenza, COVID-19, and pneumococcal
- TB screening rates
- Facility Policy education and compliance
 - Hand Hygiene
 - Respiratory Etiquette
 - Other
- Visitors visiting while ill

Annual Risk Assessment (IPC Practice Failures)

Environmental Factors

- Environmental Protection Agency (EPA) approved cleaning and disinfection products
- Appropriate cleaning and disinfection agent
- High touch surface cleaning
- Prevention of cross-contamination of surfaces
- Cleaning practices
 - High to low
 - Clean to dirty
- Daily and terminal cleaning practices

Annual Risk Assessment (IPC Practice Failures)

Medical Equipment

- Medication and sharps safety management
- Cleaning and disinfection of devices
- Proper equipment storage and transport

Antibiotic Stewardship

- Program leadership
- Policies and procedures
- Education
 - Staff, patients/residents, or family

Annual Risk Assessment (IPC Practice Failures)

Potential risk based on patient/resident population type

- Consider risks based on patient/resident characteristics
 - Level of care required?
 - Immunocompromised?
 - Invasive device use?
 - Ventilator
 - Feeding Tube
 - Urinary catheter
 - Patient/resident resources and demographics?

Annual Risk Assessment (Gap Analysis)

Local Community

- Community rates of infectious disease such as COVID-19, MDRO's, tuberculosis, influenza, and novel pathogens
 - Review local public health reports for these data

Annual Risk Assessment (Gap Analysis)

Identify gaps in HCP Education

- Job-specific infection prevention training
- New hire and annual training

Hand hygiene	Standard and Transmission-Based Precautions
Bloodborne pathogen exposure	Environmental cleaning
Linen handling	Hazardous waste disposal

- Additional training when gaps in care practice adherence or increased infection rates noted

Annual Risk Assessment (Gap Analysis)

Are there gaps in resident, family, caregiver education?

- Appropriate infection prevention education for residents, family members, visitors, and others included in the caregiving network
 - Include:
 - How infections are spread
 - How they can be prevented
 - What signs and symptoms should prompt evaluation
 - Instructional materials

Annual Risk Assessment (Gap Analysis)

Identify gaps in your occupational health program:

- Vaccinations:
 - Influenza
 - COVID-19
 - Others (such as MMR, Varicella)
- Respirator fit testing
- TB testing
- Infectious disease exposure investigations
- Post-exposure management

Annual Risk Assessment (Gap Analysis)

Identify gaps in your occupational health program:

- Occupational health Counseling
 - Infectious disease exposure risk
 - Work restriction
 - Latex allergies
- Compliance with CA regulation

[Bloodborne Pathogen Standard](#)

(www.dir.ca.gov/title8/5193.html)

[Airborne Transmissible Disease Standard](#) (PDF)

(www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/CDPH%20Document%20Library/ATD-Guidance.pdf)

Example: Using your Risk Assessment Score for IPC Plan

- There is a scabies outbreak in your facility
- Your risk assessment score for scabies on a scale of 1-9 is 2
 - There were no scabies outbreaks before today
- Your IPC plan states: “Facility staff will be educated on how to recognize scabies on hire and at the annual review”
- Is this OK?

It's Time to Make Changes

- Because you have an outbreak of scabies, you will change your risk score from 5 to 11

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- Risk levels >8 are considered high risk
- Your plan will change from “Facility staff will be educated on how to recognize scabies on hire and at the annual review”
- To “Facility staff will be immediately educated on signs of scabies” and “All residents and staff will be evaluated for possible scabies daily for two weeks” and “Any resident with new or unexplained rash will be placed in contact precautions until scabies is ruled out or treated” and “Licensing and certification will be notified as soon as possible”

Sample Infection Control Plan

Content of an Infection Prevention and Control Plan

- I. Facility Infection Prevention Risk Assessment
 - A. Use a template
 - B. Size, type, scope of services, procedures, surveillance data, geography, community
 - C. Patient population
 - D. Personnel (IP must have education in IP)
 - E. List prioritized risks
- II. Description of Infection Prevention and Control Program
 - A. Authority
 - B. Scope (must be organization-wide)
 - C. Personnel (number, qualifications, etc.)
 - D. Resources (computers/references/educational opportunities/ Infection Preventionist's professional activities/etc.)
- III. Goals and Objectives
 - A. Describe each broad goal
 - B. List at least one specific measurable objective for each goal- who, what, when, where, how
- IV. Strategies to reduce risks for each goal
 - A. Interventions associated with:
 1. Procedures
 2. Devices
 3. Medical equipment
 - B. Policies and procedures including Employee Health
 - C. Environmental issues- cleaning and disinfection, who, what, when, where, how
 - D. Infection Prevention training offered to personnel

Content of an Infection Prevention and Control Plan

Content of an Infection Prevention and Control Plan (page 2 of 2)

- V. Surveillance- focus on high-volume, high risk and problem prone procedures
 - A. Risk assessment
 - B. Plan and description of monitored indicators
 1. Outcome measures- SSIs, etc.
 2. Process measures- instrument/scope processing, etc.
 3. Antibiotic resistant organisms- MRSA, VRE, ESBLs, CRE, etc.
 4. Communicable disease reporting to health dept.
 5. Outbreak investigation plan
 6. Antibigram
 7. Reports (to whom sent and how often)
- VI. TB Exposure Control Plan (can be separate policy) CDC has an evaluation tool on their website
 - A. Risk assessment
 - B. Plan to reduce risk of transmission (plan can state that patients with TB or suspected TB are not seen in the ASC and if a patient presents with signs and symptoms of TB, they are immediately referred to the appropriate community resource.)

Sample ICP Plan

(apic.org/Resource_/TinyMceFileManager/Education/ASC_Intensive/Resources_Page/Content_of_an_Infection_Prevention_and_Control_Plan.pdf)

Summary

An IPC plan:

- Explains how a facility will meet the IPC program objectives
- Includes findings from the annual risk assessment
- Outlines the role of the IP and the surveillance to be conducted
- Describes how infections will be recorded or reported
- Outlines strategies to prevent infections
- Defines adherence monitoring practices
- Explains how feedback will be given to the HCP



Case Scenario



You are a new infection preventionist (IP) working at a healthcare facility. You have not created an infection prevention and control (IPC) plan for the facility, but you have a copy of the previous IP's IPC plan from last year.

What do you need to do to ensure your facility has a current IPC plan?

- a. Nothing, facilities only need to update the IPC plan every three years
- b. Use the previous IP's plan. Most of the information is still pertinent
- c. Ignore the old plan and start a new IPC plan using an IPC plan template
- d. Review the previous IPC plan and use the template to create a new, comprehensive plan for the facility

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- ✓ **Review the previous IPC plan and use the template to create a new, comprehensive plan for the facility**

You are comparing the ICP template to the previous IPC plan. It appears that the previous IP used the same template as the basis for their IPC plan.

How should you update the previous IPC plan?

- a. Include findings from a new risk assessment
- b. Outline how adherence monitoring and staff feedback will occur
- c. Update the IPC plan based on annual infection prevention goals
- d. Include policies and procedures addressing infection transmission, recording, and reporting
- e. All of the above
- f. Use the current plan; there is no need to make any changes

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What type(s) of infection prevention program(s) use an IPC Plan?

- a. Only IPC programs in acute care facilities
- b. Only IPC programs in skilled nursing facilities
- c. Only outpatient IPC programs, such as hemodialysis
- d. All IPC programs should develop an IPC plan each year

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- ✓ **All IPC programs should develop an IPC plan each year**

While you are completing the facility risk assessment plan, you notice that the template lists many infection event topics that are not applicable to your facility. What should you do?

- a. Continue to complete the risk assessment plan, skipping over items that are not applicable
- b. Complete all items on the template
- c. Adapt the template to address items applicable to your facility
- d. Search for a new facility risk assessment that is more applicable to your setting

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While you are completing your IC Risk Assessment you note that the template does not address several of the IPC Failures you have experienced, such as COVID-19 infections or PPE shortages. What should you do?

- a. Address only the items listed on the IC Risk Assessment template
- b. Add the new issues to the IC Risk Assessment form
- c. Purchase a new IC Risk Assessment
- d. Wait until the local health department adds these issues to your IPC Plan

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While completing your gap analysis, what resources can you use to learn about infection control events that are occurring in your local community (such as outbreaks or community rates of infectious disease)? Select all that apply.

- a. CAHAN Reports
- b. Local health department (LHD) website
- c. In-person reports from your nursing staff
- d. Contact person at your local health department
- e. LHD publications
- f. Information from a community blogger

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Questions?

For more information,
please contact
HAIPprogram@cdph.ca.gov