Behind the Mask:
Fundamentals of a Successful IPC Program

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Meet our Subject Matter Experts

Terry Micheels MSN, RN, CIC, FAPIC

Terry is a Masters-prepared registered nurse with 29 years' experience as an Infection Preventionist in acute care settings. Fourteen of her 29 years involved managing IPC programs for community- and academic multi-hospital systems, including outpatient and ambulatory services. She has been certified in Infection Control since 2009 and is a Fellow in APIC. She is currently an IPC Consultant. She has multiple publications and has presented at National Annual APIC Conferences, national IPC webinars and multiple regional conferences.

Alisha Sheffield BSN, RN CIC

Alisha is an Infection Preventionist and Registered Nurse with 21 years of experience in a variety of healthcare settings including ambulatory, acute care, and surgical areas. Over the past 13 years, she has worked as an Infection Preventionist in outpatient surgery as well as at a large academic medical center. Her recent work has focused on utilizing her IPC expertise to develop infection control tools and resources to assist Infection Preventionists in under-resourced settings.

Lauren Musil BSN, RN

Lauren is an Infection Preventionist with a background as Registered Nurse. She has a wide variety of healthcare experience having worked in neurology, neurosurgery, ambulatory surgery, home health and with the Nebraska Biocontainment unit. As an IP, her primary focus was in critical care, oncology, VAE prevention and as the IP to the Nebraska Biocontainment Unit. Her recent work has been spent in a grant funded role to develop innovative tools to aid IPs in rural and remote settings.

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    - E.g., RN, BSN

Disclosure Declaration

We have no financial disclosures or conflicts related to this presentation.

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The views and opinions expressed during this webinar are those of the presenters and do not necessarily reflect those of the University of Nebraska Medical Center, The Nebraska Medical Center or the Centers for Disease Control and Prevention.

Overall Series Objectives

Analyze the fundamental components of a robust infection prevention and control (IPC) program

Interpret guidelines, regulatory requirements, and best practice literature for a successful application to the infection prevention program

Utilize identified strategies to incorporate best practice into Infection Prevention programs

Integrate Infection Prevention program data to target prevention and improvement strategies.

Combine acquired knowledge to enhance collaboration and teamwork within the healthcare system.

IPC Program Objectives

Define the necessary elements of an IPC program.

Explore various roles and reporting structures to sufficiently report IPC program elements and data.

Utilize information presented to identify common Infection Prevention and Control program gaps and opportunities.

Evaluate Infection Prevention and Control program to ensure alignment with regulatory requirements.
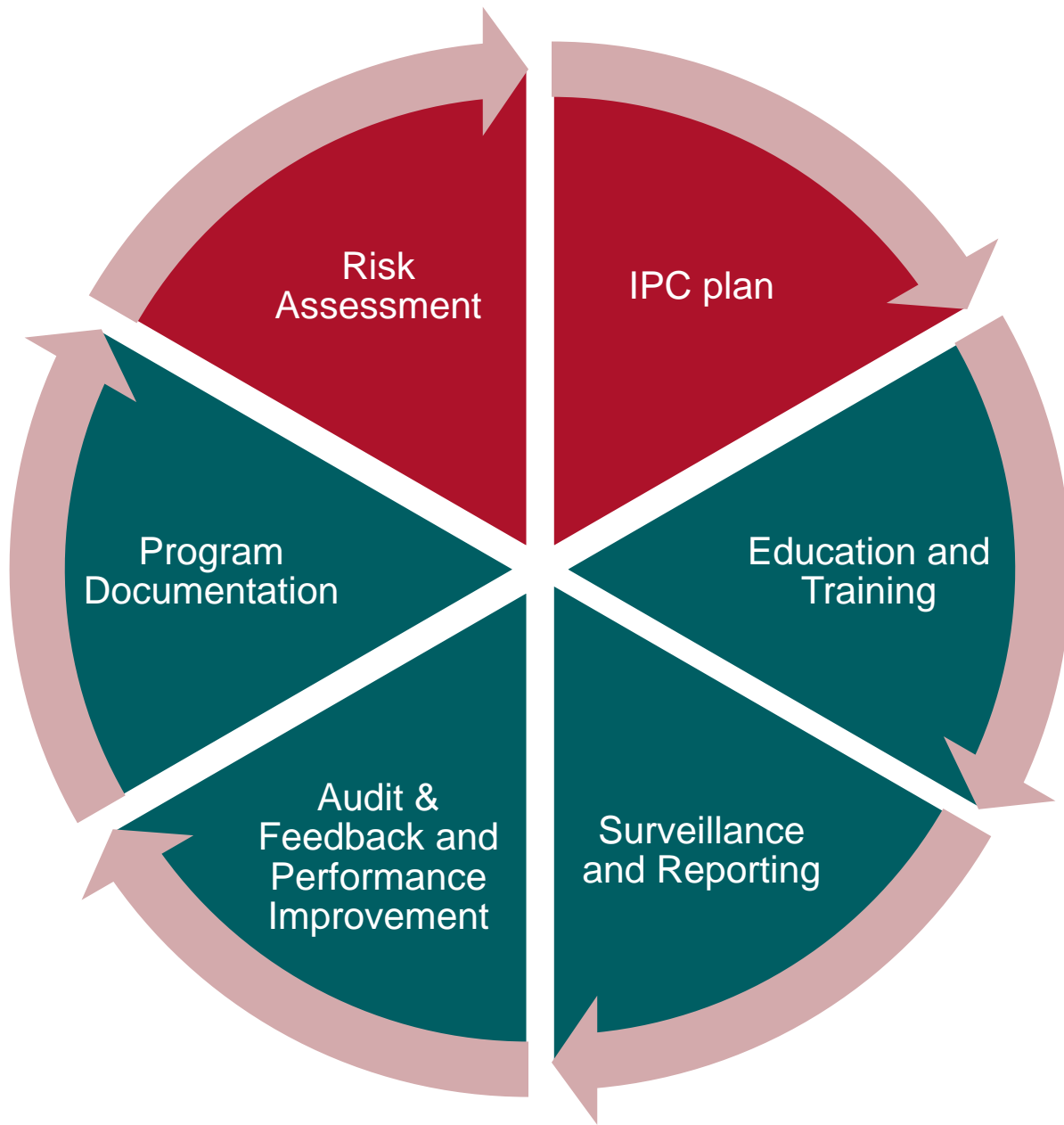
IPC Program Fundamentals

Programmatic

Documents and Processes that support the program

Implementation of Plan

Boots on the Ground

Tasks that support the program

Infection Prevention and Control Program: Purpose[7]

- System for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases

- Written standards, policies, and procedures for the program

- Antibiotic Stewardship

- Incident/variance reporting

Key members of IPC Programs[19]

Infection Preventionist

Key members of an IPC Program...

IPC Program Leader

Infection Prevention & Control Committee
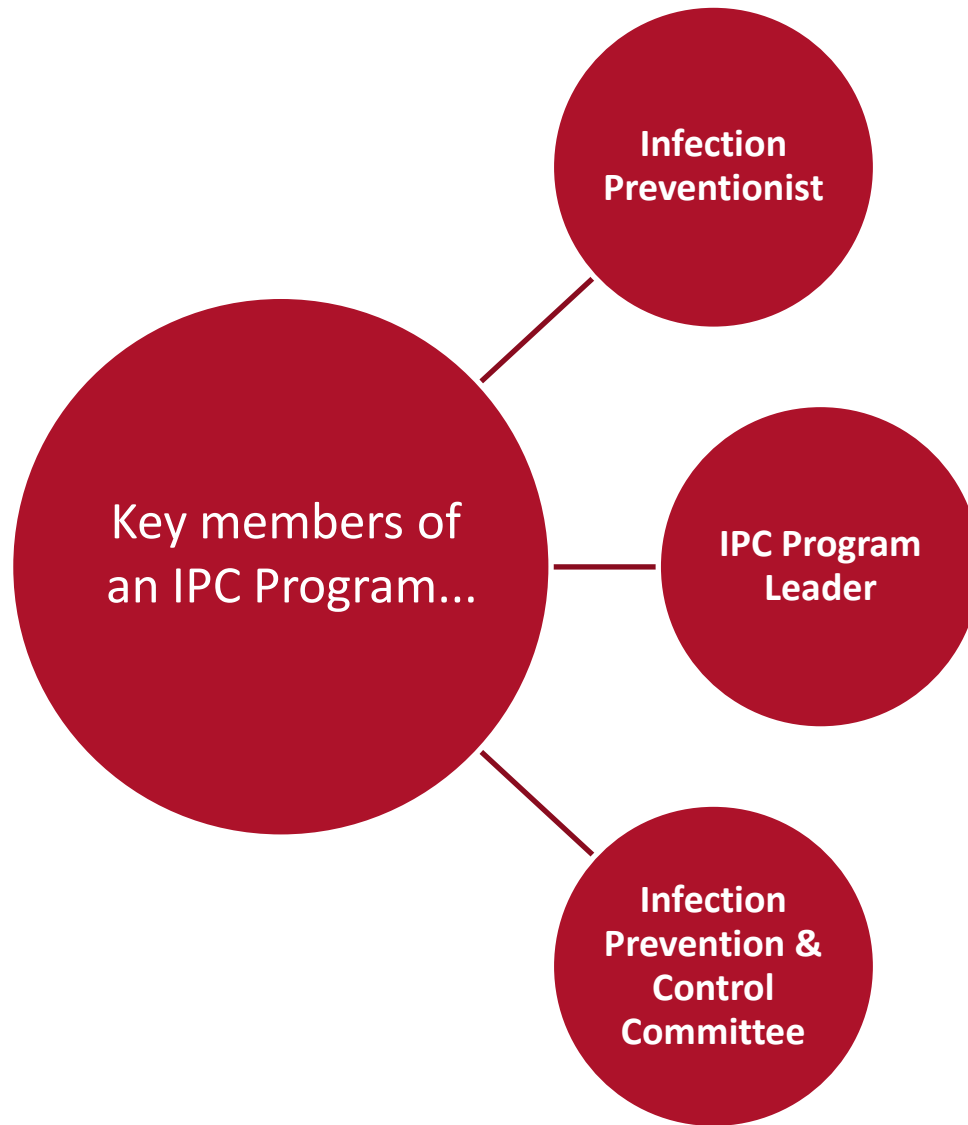
*Occupational health professional may be part of the team

IPC Program: Requirements[7]

1. Qualified Infection preventionist
   o Acute care- IP appointed by governing body based on medical and nursing senior leadership
2. IP participation on Quality Assurance and Performance Improvement (QAPI) committee
3. Annual review

IPC Program Leadership[19]

Infection Preventionist

- Qualified through education, training, experience and/or certification in infection prevention & control
- Completed specialized IPC training
- Predominate background in nursing, microbiology, public health or medical technology

IPC Program Leader

- Often a physician with specialized training in healthcare epidemiology and infection prevention serves in this role
- May serve as the chair of the IPC committee or as a technical advisor (e.g. Prescriptive authority for prophylaxis)

IP Education and Training[18]
Infection Preventionist Training Needs

Assign one or more *qualified* individuals with training in infection prevention and control to manage the facility's infection prevention program.

Centers for Disease Prevention and Control
Core Infection Prevention and Control Practices

IP Education and Training[6]
What counts as specialized training?

Specialized Training

- o Association for Professionals in Infection Control (APIC)
- o American Nurses Association (ANA)
- o Does your state health department offer training?
  - ▪ Nebraska Infection Control Network (NICN)

Free Educational Resources

- o CDC/STRIVE Infection Control Training
- o STRIVE Infection Control Training | CDC

Organizational Structure[15]

The Infection Preventionist is responsible for:

Communication and collaboration with the hospital's QAPI program on infection prevention and control issues.

Organizational Structure[19]

IPC committee*

- Central policy making body for IPC program
- Multidisciplinary
- Communicate and collaborate with:
  - QAPI
  - Antibiotic Stewardship

*not a regulatory requirement but is required in some states

Organizational Structure

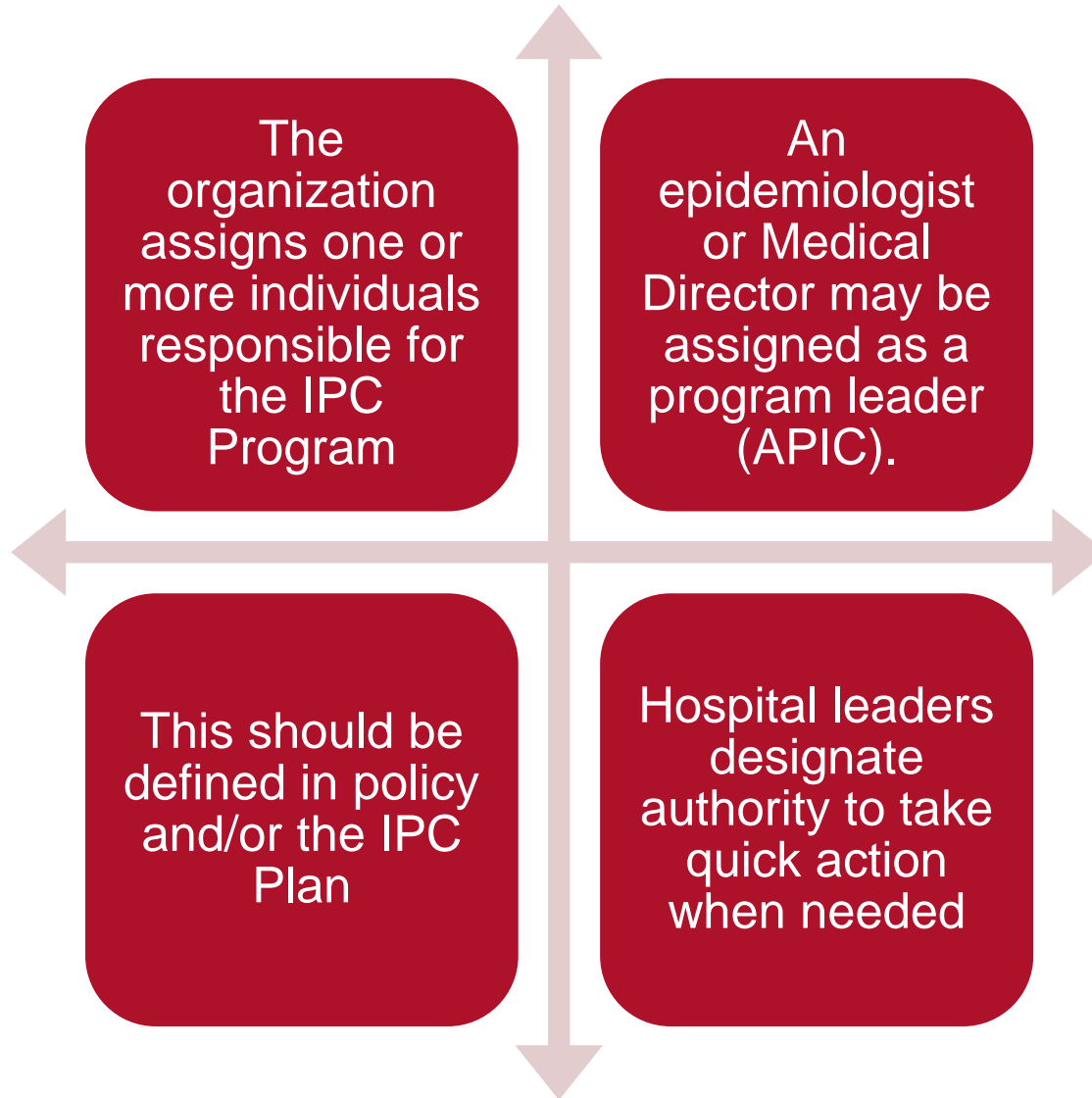**Without an IPC committee, the IPC team must:**

- Plan and develop policies, interventions, and decision-making
- Have a mechanism to obtain multidisciplinary support for changes and actions
- Disseminate IPC information to administration, medical staff, and frontline healthcare staff
- Conduct surveillance
- Provide feedback from monitoring/auditing IPC standards to relevant stakeholders
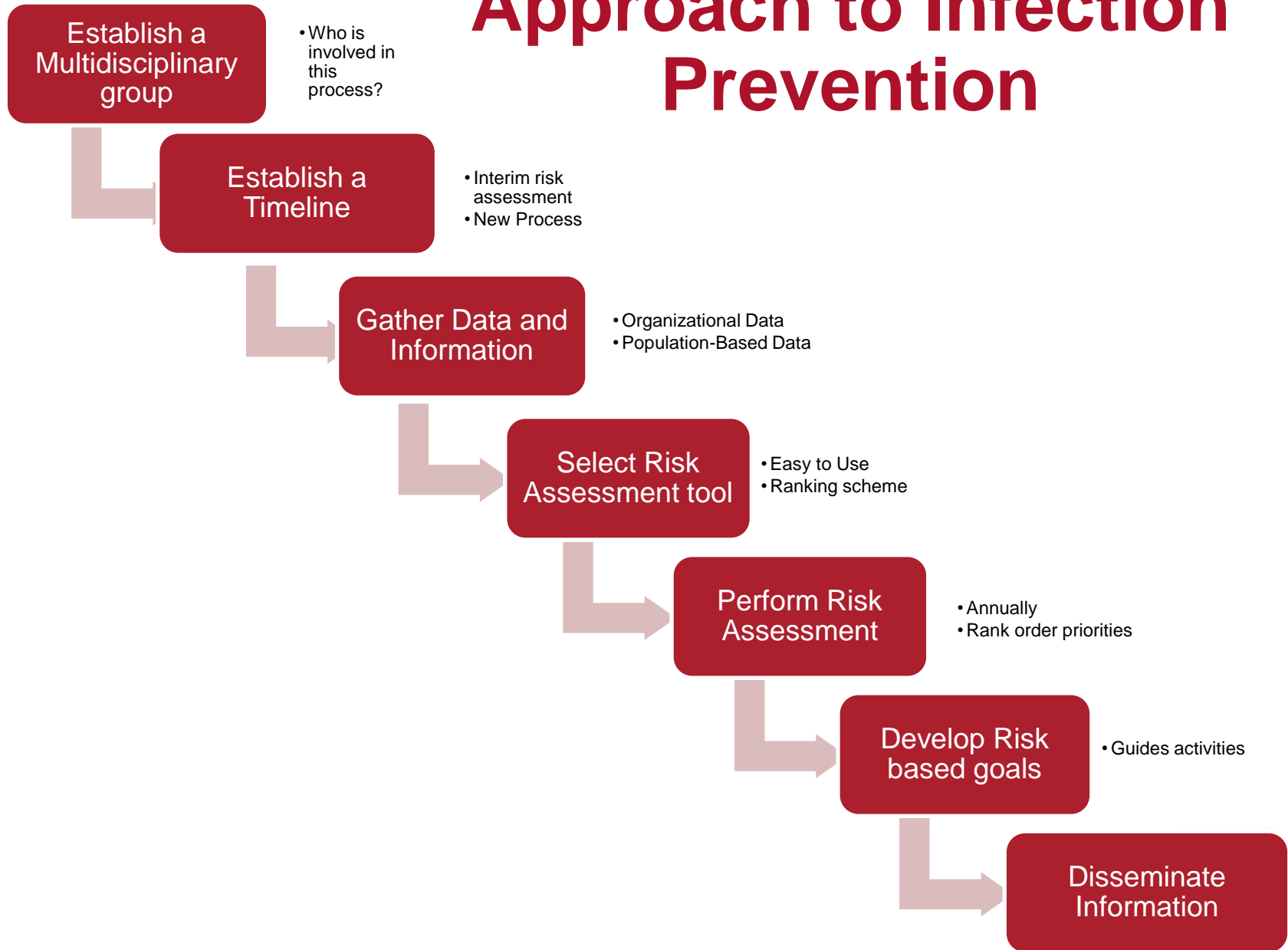
IPC Program Leadership

Administration

Infection Preventionists may report to:

Nursing or Medical Services

Quality Improvement Department

Other- Risk Management, Utilization Management, Infectious Disease

IPC Program Authority[20]

The organization assigns one or more individuals responsible for the IPC Program

An epidemiologist or Medical Director may be assigned as a program leader (APIC).

This should be defined in policy and/or the IPC Plan

Hospital leaders designate authority to take quick action when needed

A Risk-based Approach to Infection Prevention

Establish a Multidisciplinary group
- Who is involved in this process?

Establish a Timeline
- Interim risk assessment
- New Process

Gather Data and Information
- Organizational Data
- Population-Based Data

Select Risk Assessment tool
- Easy to Use
- Ranking scheme

Perform Risk Assessment
- Annually
- Rank order priorities

Develop Risk based goals
- Guides activities

Disseminate Information

IPC Program Risk Assessment

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this type infection / problems with this process will occur in our facility	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 in place	Staff knowledge & compliance of plan for prevention of this particular problem	External support/ regulations for this type procedure problem - Public Health, CHS, Gov. Agencies, etc.	Relative threat*
SCORE	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 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 - 100%
Immediate Use Sterilization	1	2	1	1	1	1	1	13%
High Level Disinfection	2	2	2	2	1	2	1	37%

Risk categories to include:
- Types of infections (HAIs), organisms of epidemiological significance, at-risk patients, geographical considerations, supply and equipment risks, communication risks, emergency preparedness, environmental issues, personnel risks, community considerations.

Hierarchy of Controls
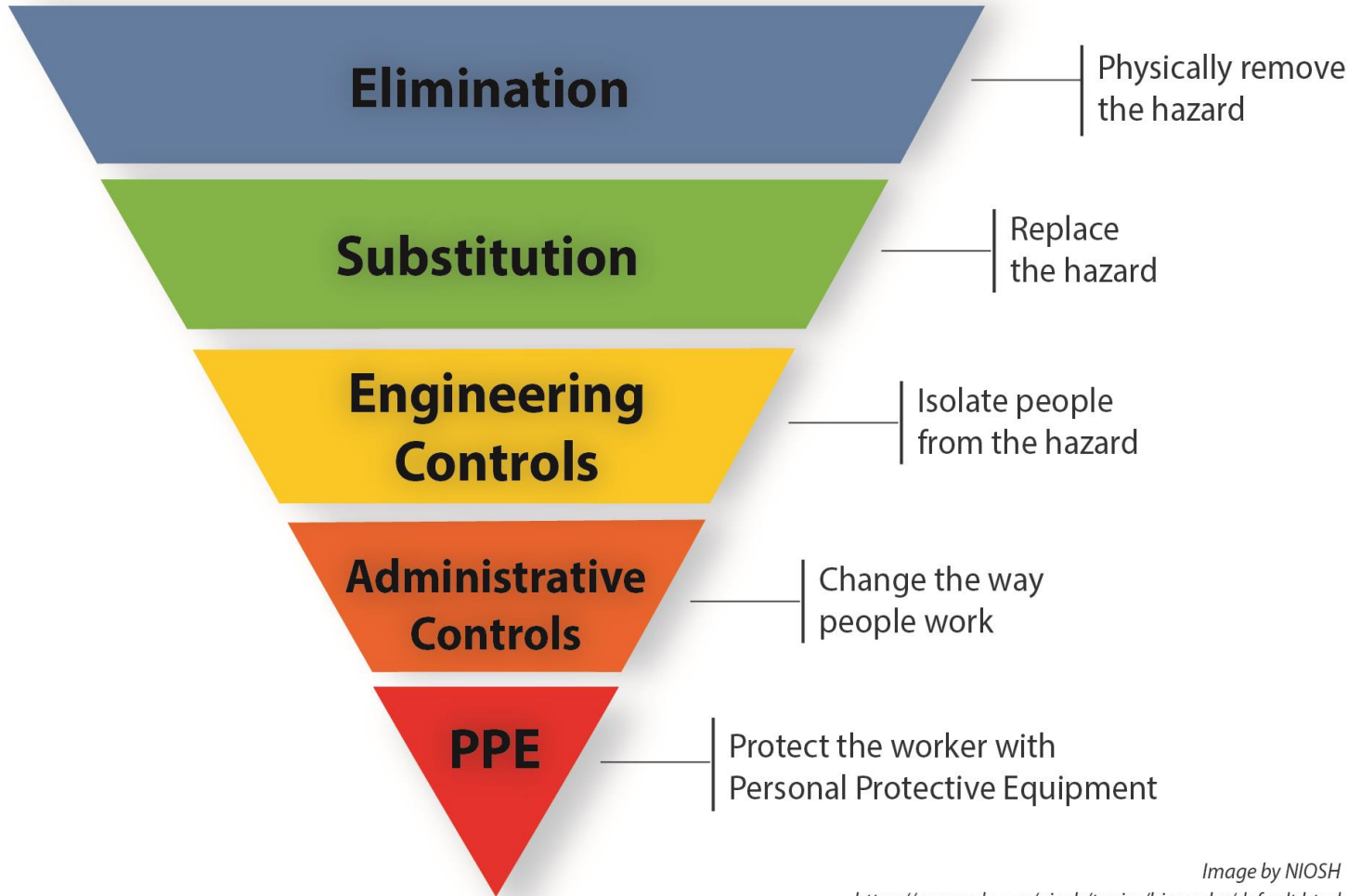
Most effective

Least effective

Elimination — Physically remove the hazard

Substitution — Replace the hazard

Engineering Controls — Isolate people from the hazard

Administrative Controls — Change the way people work

PPE — Protect the worker with Personal Protective Equipment

Image by NIOSH
https://www.cdc.gov/niosh/topics/hierarchy/default.html

IPC Program Goals

- IPC program goals should align with the organization's strategic goals
- IPC program goal considerations:
  - ✓ Prioritized risks (rank order risks by score)
    - ▪ Hierarchy of controls
  - ✓ Limit unprotected exposure to pathogens
  - ✓ Limit transmission of infections associated with procedures, the use of medical equipment, devices and supplies
  - ✓ Improve compliance with hand hygiene guidelines

IPC Goals
SMART goals

S- What am I trying to do?

M- How will I measure progress?

A- Do I have the necessary resources and skills?

R- Why is this important?

T- When will I achieve this goal?

IPC Goals
SMART goals

S- What am I trying to do?

Implement and perform a daily clinical necessity assessment protocol for the removal of central lines in the Intensive Care Unit (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 three months

M- How will I measure progress?

Compliance will be measured through documentation in patient charts and periodic audits.

A- 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- 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- When will I achieve this goal?

Achieve a 90% compliance rate with the daily clinical necessity assessment protocol for central line removal within the next three months.
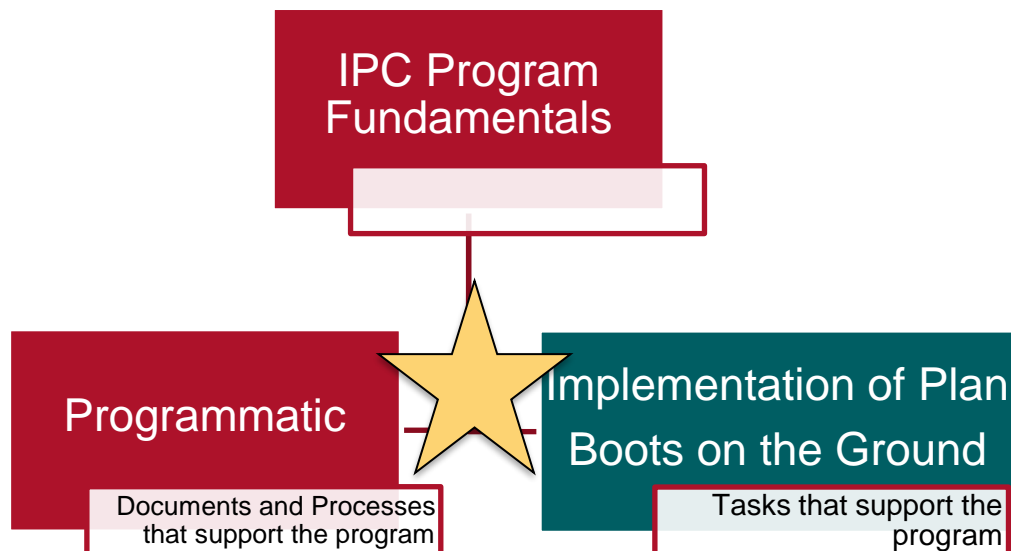
IPC Written Annual Plan

What is in an IPC plan?

- Focused on a given time, (e.g., annual)
- It's a statement of identified risks and priorities, goals, objectives, action plans and evaluation methods.

IPC Program Fundamentals

Programmatic

Documents and Processes that support the program

Implementation of Plan Boots on the Ground

Tasks that support the program

What is Included in IPC Written Plan?-[20]

- Program Mission and Vision
- Staffing and Credentials
- Scope of Services
- Decision Authority
- Risk Assessment & Priorities
- SMART goals

- Process and outcome measures
- Surveillance Plan
- Occupational Health
- Healthcare personnel Immunization program
- Outbreak Investigation
- Performance Improvement Activities
- Education Plan

Additional Plans

Bloodborne Pathogen, Exposure Control Plan[23, 24]

APPENDIX D MODEL EXPOSURE CONTROL PLAN (osha.gov)

Respiratory Protection Plan [8, 21]

DHHS (NIOSH) Publication 2015-117, Hospital Respiratory Protection Toolkit (cdc.gov)

Emergency Preparedness Plan [12]

Water Management Plan[27]

What is the Difference?

Policy

- ☐ High-level, broad, general, concise
- ☐ Outlines organizations intent on a topic
- ☐ Provides a framework that can adapt to changes
- ☐ Guides decision making
- ☐ Ensures coordinated compliance with applicable laws and regulations

Procedure

- ☐ Specific, Detailed
- ☐ Specify how a task or process is carried out- step by step
- ☐ Step by step instructions to follow when completing a task
- ☐ Less flexible
- ☐ Standardize processes for consistency

Policy

What?	Why?

↓
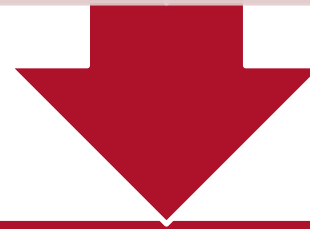
Procedure

How?	Where?	When?	What?

What is Included in Policy?[17]

Administrative Details	Policy Statement	Purpose	Scope	Responsibilities
•Policy name •Policy number •Effective Date •Review Date	•Description/overview •Concise •Outlines organization's stance	•Goal of the policy •Why its necessary	•Specify who/what is covered	•Responsibilities of roles related to the policy •Duties, authority, accountability

Definitions	**POLICY**	Training and Communication	References	Approval Authority and Revision History
• Key terms • Ensure common understanding	• All aspects of the policy • Exceptions, consequences etc. • Associated Procedures	• How organization will communicate the policy • Required training	• Laws • Regulations • Standards • Demonstrates compliance	• Approval process • Track changes over time • Review period

<table>
<tr><td rowspan="2">Company Logo</td><td>**POLICY NAME**
Ensure policy name is intuitive so the reader generally understands what topic the policy covers</td></tr>
<tr><td>**Policy Number**</td></tr>
</table>

Section:		Origin date:	
Owner:		Effective Date:	
Approved by:		Last Revised Date:	
Prepared by:		Next Review Date:	

Policy Statement

Brief description/summary/overview
Should not contain any substantive details of the policy

Purpose

Intended goal of the policy and why it is necessary at this organization.

Scope

To whom or what does the policy apply? All healthcare personnel? Specific departments e.g., Sterile processing staff? Non-clinical employees?

Responsibilities

Unit, department responsible for administering, enforcing or answering questions related to the policy.

Definitions

Include a glossary to define necessary terms if necessary.

Policy

THE BODY OF THE POLICY GOES HERE
Include all aspects of the policy, exceptions, and consequences for not following if applicable.
Associated Procedures- Link or reference to any associated procedures.

Education, Training and Communication

If necessary, include how this policy will be communicated and implemented

References

Include any applicable reference to law, regulations, guidelines etc.
If this policy is required for accreditation, state that information

Approval Authority and Revision History

Include staff accountability so users are aware who needs to approve at next revision
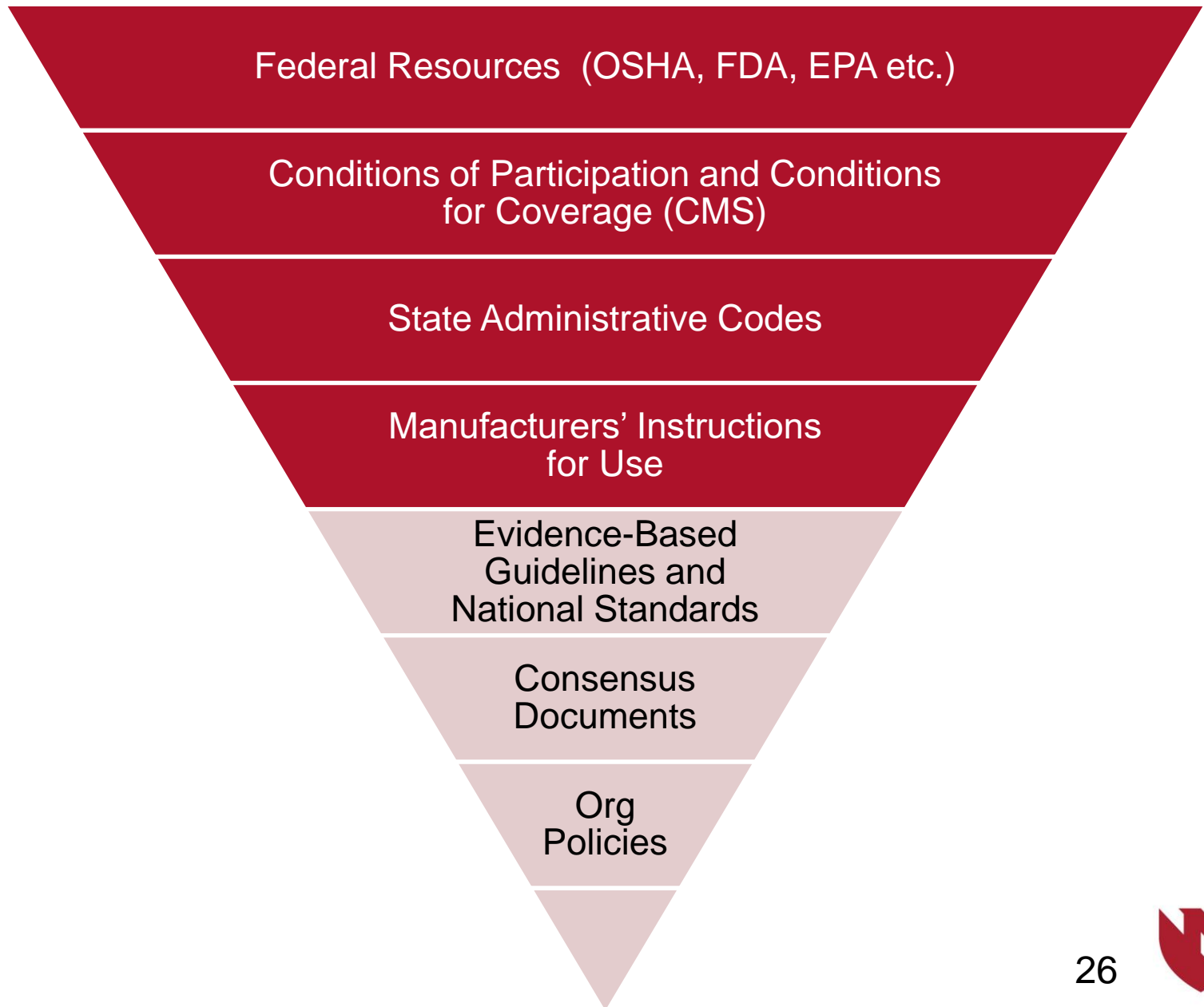
Necessary Signatures for Approval

Department Approval	Administrative Approval
Dr. XXXXXX Title: Medical Director/Department Chair Department:	XXXXXXXXX Title: Director/Manager etc. Department:

Appendix

Which Policies Do I Need? [1]

✓ IPC program policy	✓ Standard Precautions and Transmission based precautions	✓ Employee communicable diseases
✓ Hand Hygiene	✓ Injection Safety	✓ Bloodborne Pathogens and Exposure Control
✓ Variance/Safety event reporting and remediation	✓ Respiratory Protection	✓ Waste Management
✓ Antibiotic Stewardship	✓ Environmental Cleaning	✓ PPE

Federal Resources (OSHA, FDA, EPA etc.)

Conditions of Participation and Conditions for Coverage (CMS)

State Administrative Codes

Manufacturers' Instructions for Use

Evidence-Based Guidelines and National Standards

Consensus Documents

Org Policies

Communication of Policy

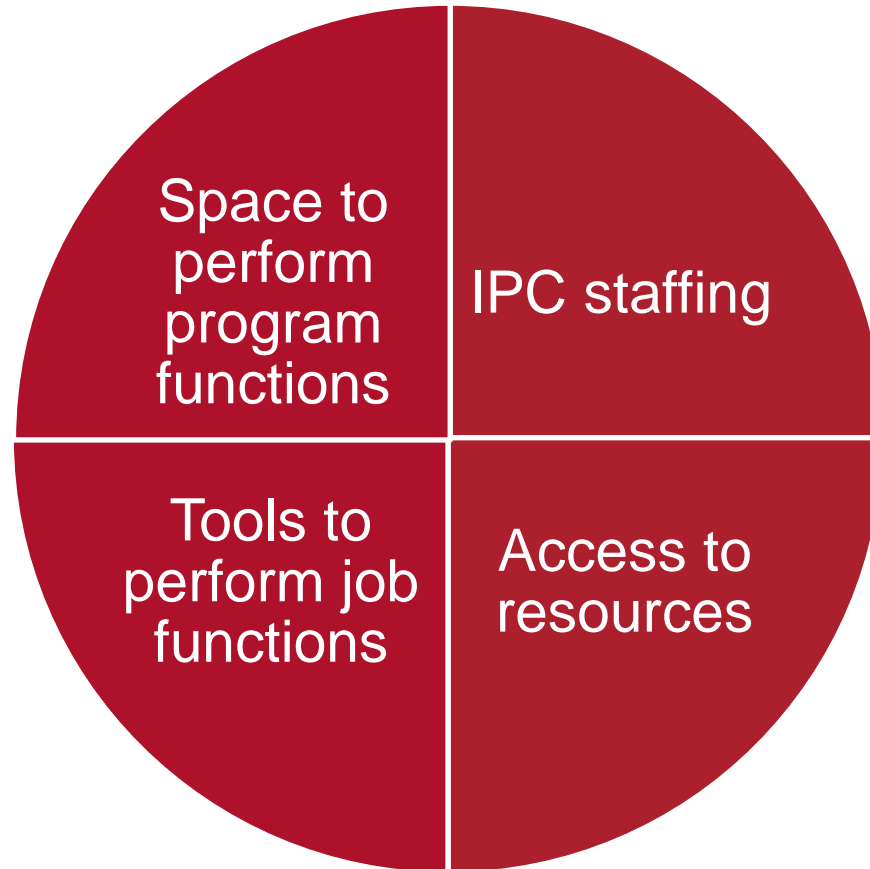| Written	In Person	Email
• If users are internal and external • If content is long and complex • If face-to-face is NOT necessary	• If content is controversial • If the intended audience is small • If content is important • If content needs explaining	• If face-to-face is not needed • If content is time sensitive • If topic is not controversial

Program Resources [3, 9]

Program Resources
IPC staffing

SENIC Project (1985)[16]

- 1 IP for every 250 beds
- Physician Participation

CDCs NNIS (1990)[22]

- 1 FT IP for the first 100 beds
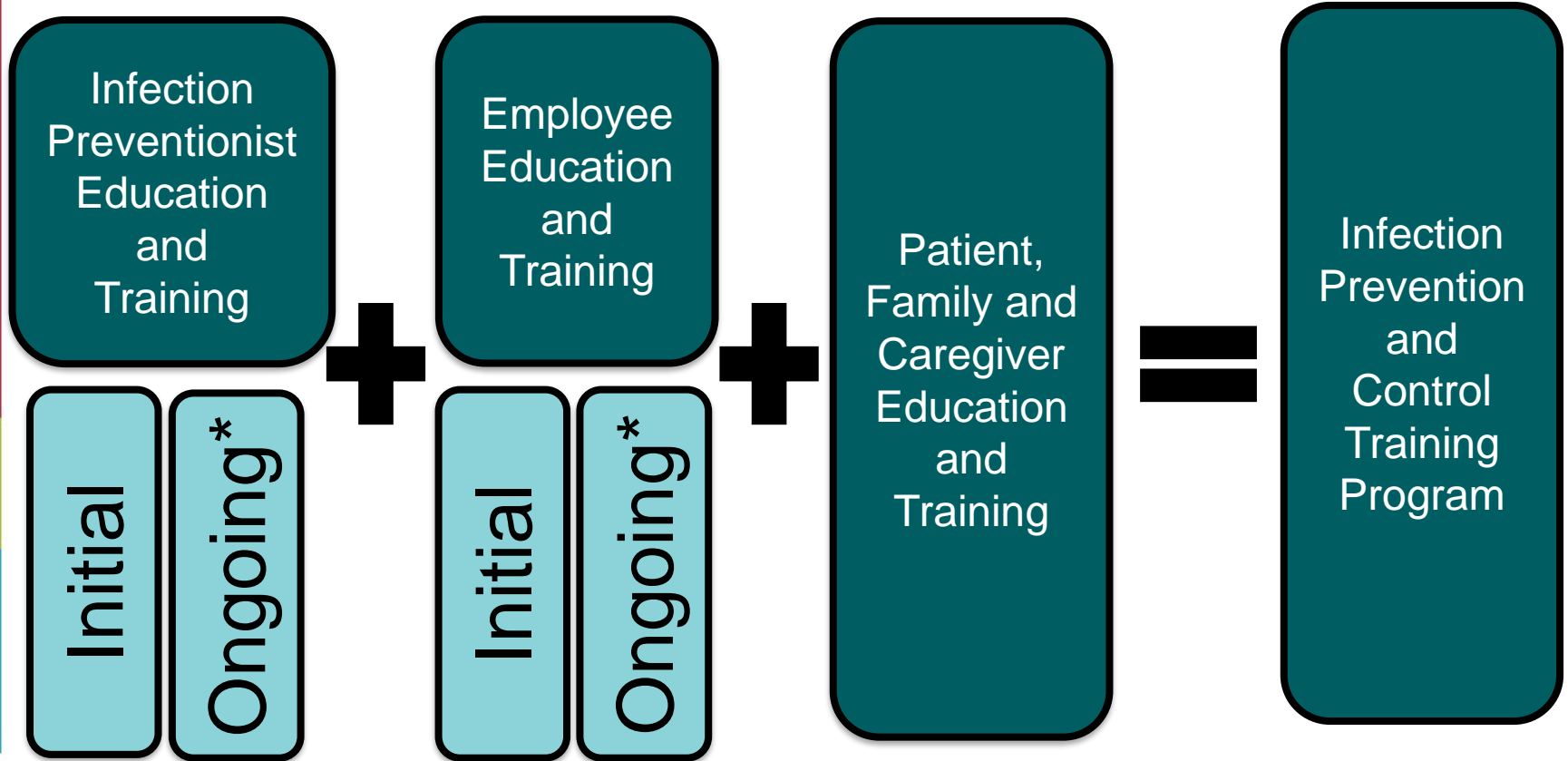- 1 FT IP for each consecutive 250 beds

Delphi Project (2002)[15]

- Staffing recommendations depends on complexity, patient population, unique needs, type of facility
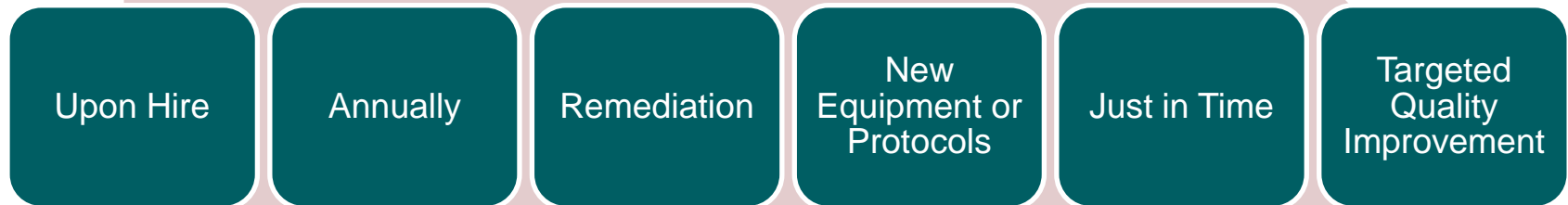
Bartles Systematic Approach 2018[5]

- It depends on hospital size, scope, services, patient population, type of care setting

Education and Training
Healthcare Workers and Patients

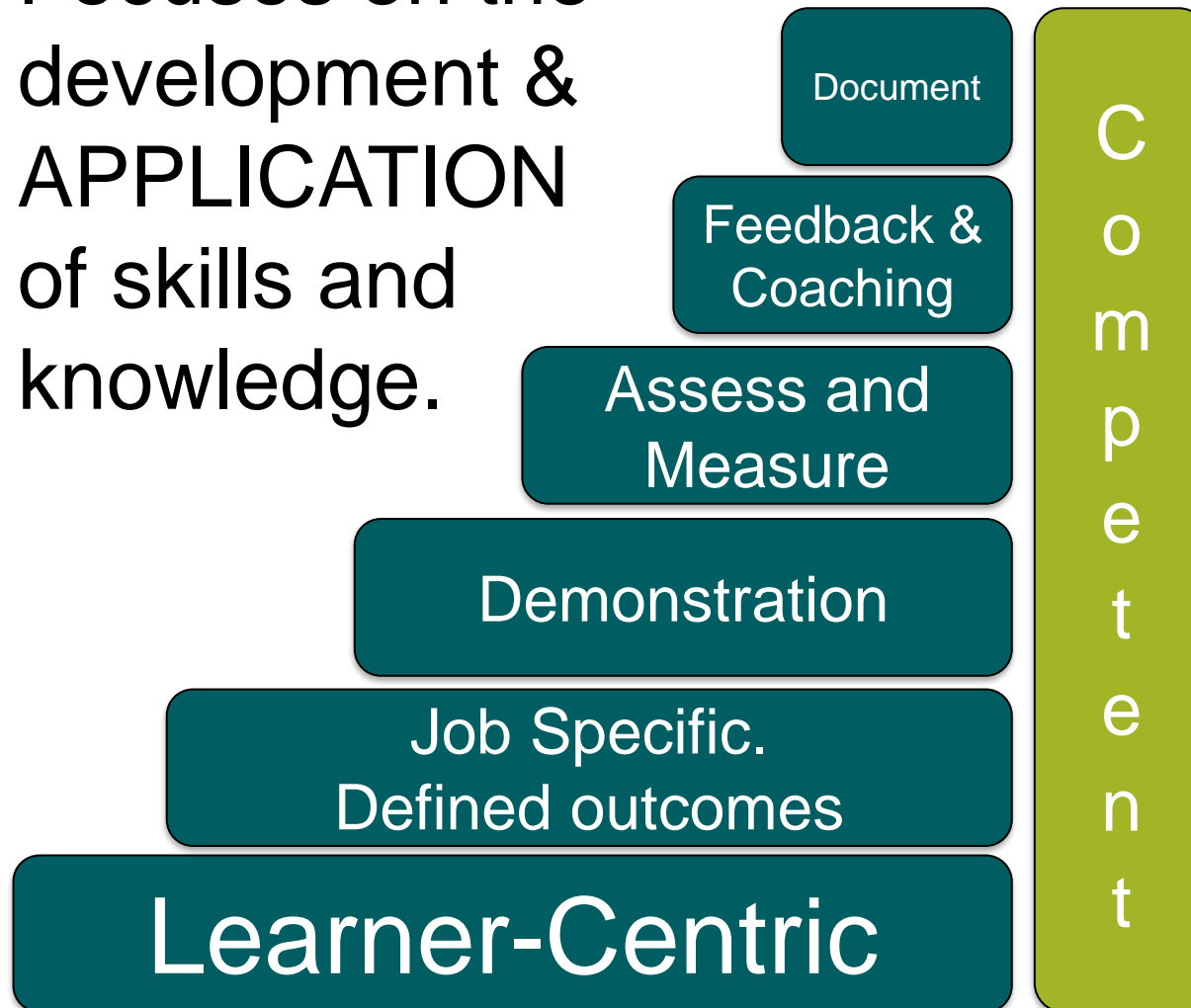**Infection Preventionist Education and Training**

Initial | Ongoing*

+

Employee Education and Training

Initial | Ongoing*

+

Patient, Family and Caregiver Education and Training

=

Infection Prevention and Control Training Program

Education and Training [13]
Employee

Who	What
Clinical Personnel	Policies & Procedures
Non-Clinical • Volunteers • Billing	Hospital Infection Control Practices
Specific Groups- Job-Specific training	Regulatory Requirements • BBP • Exposure Control
Physicians, Reps	Competency Based

Upon Hire · Annually · Remediation · New Equipment or Protocols · Just in Time · Targeted Quality Improvement

Competency Based Training [14]

- Focuses on the development & APPLICATION of skills and knowledge.

Document

Feedback & Coaching

Assess and Measure

Demonstration

Job Specific.
Defined outcomes

Learner-Centric

Competent

Documentation & Record Keeping

Documentation

Employee's names

Content summary of the session

Names and qualifications of trainers

Date of training

Record Keeping

Surveillance

Comprehensive method of measuring outcomes and related processes of care, analyzing the data, and providing information to members of the healthcare team to assist in improving those outcomes[3]

✓Foundational to a successful IPC Program
✓CMS Condition of Participation

What is Surveillance?

Measures outcomes to provide meaningful data for process improvement

Based on sound epidemiological and statistical principles[1]

Surveillance

Designed in Accordance with current guidelines and practice recommendations

Contributes to meeting program goals[4]

How to select what to report?

Outcome vs Process Measures

Assess population via risk assessment

Mandatory reporting requirements
(HAIs, MDROs, resistance patterns, etc.)

3,4

Essential Elements of Surveillance:

Assess & Define	Population Period of Observation
Select	Events to monitor Methodology
Apply & Identify	Case definition/ criteria (NHSN definitions) Data elements to be collected
Determine	Methods for data analysis

3,4

Surveillance Program Elements
Example

Acute care facility is conducting surveillance for device-associated infection rates and device utilization ratios in the ICU.

The team meets to develop the surveillance plan.

IP will monitor and collect data for primary bloodstream infections associated with central lines, CDI, and VAEs.

The respiratory therapy department will use its automated database to generate the number of ICU patients on a ventilator at the same designated time each day.

The ICU nursing staff will collect and record the number of patients with a central line each day.

The Patient Accounts representative will provide the count of patient days (data already collected for other purposes)

Written Surveillance Plan

Written Surveillance Plan

Can be incorporated into Infection Control plan or can be separate document.

Formalizes and documents the purpose, goals, methods, and strategy for the facility.

Provides information that can be used to target performance improvement activities. *E.g., improve CAUTI infections, decrease SIR, via intervention (implementing nurse driven catheter removal)*

Allows for strategic allocation of resources to enable effective surveillance.

Should be evaluated periodically to ensure the plan is meeting the needs of the facility.

What is Included?

Type of Healthcare Setting	Services Provided & Populations Served	Type of Surveillance Performed (Methods)	Events monitored and criteria used
• Acute Care • Long-term Care • Rehabilitation • Ambulatory Surgery Center	• Inpatient services • Surgical Services • Adult • Pediatric • Medical • Surgical	• Outcome vs Process • Total vs Targeted vs Combination • Methods for case identification, data collection & analysis	• CLABSI • CAUTI • VAE • SSI (Joint, C-section) • LabID • Immunizations

Surveillance Program Purpose, Goals and Objectives	Mandatory reporting requirements	Reports generated and who they are provided to	Process and frequency to evaluate
• Goals to provide information to guide interventions • E.g., collect CAUTI data, implement reduction strategy and track its impact.	• Reference state and federally (e.g., CMS, CDC, OSHA, etc.) required reporting requirements	• ICC • QAPI • Physicians/ Surgeons • Leadership	• Annual • As needed

Data Collection & Reporting

Data collected from surveillance utilized for:

- External Reporting
- Internal Reporting
- Quality/Performance
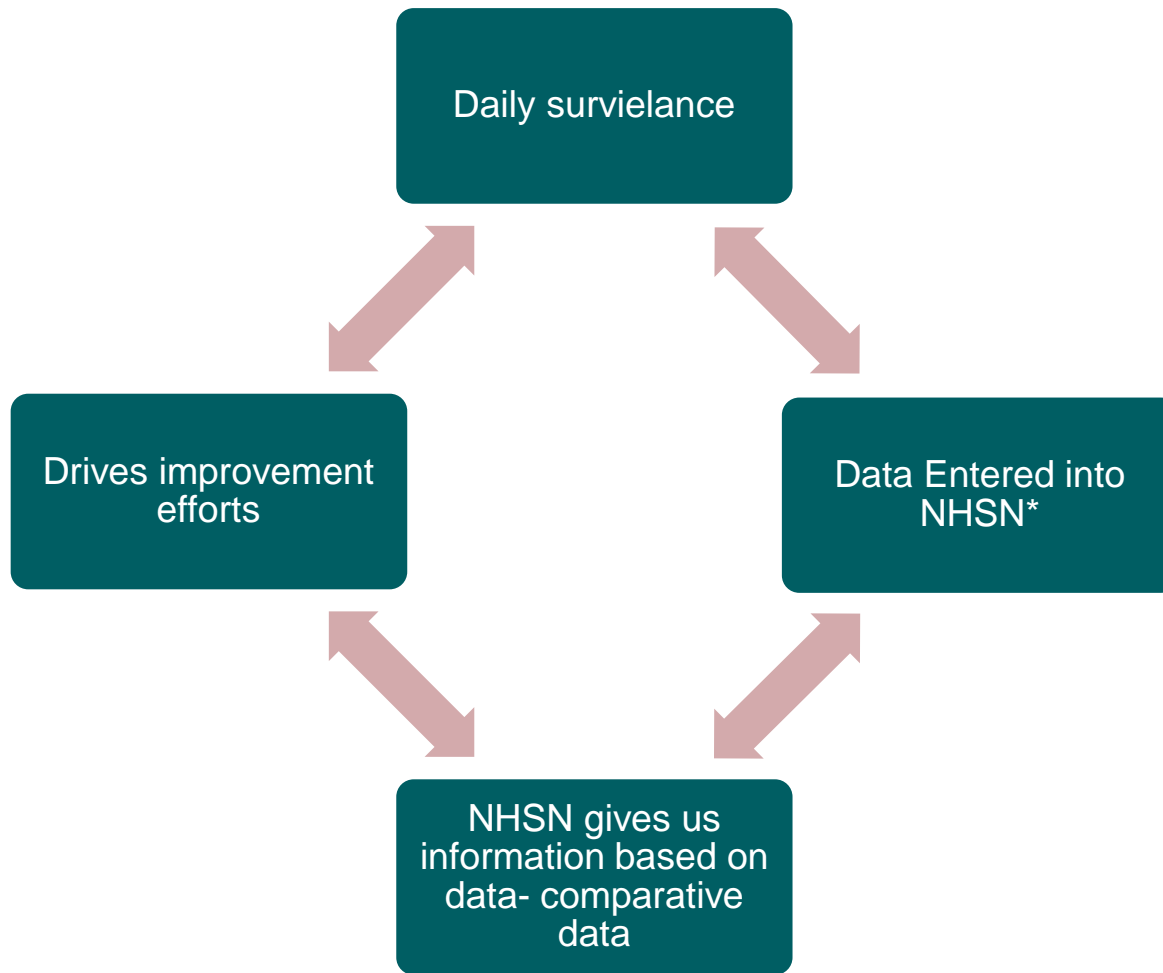
*If its in your NHSN reporting plan, you must submit the data

IP monitored CLABSI, CDI, and VAE in their facility's ICU for the past 12 months.

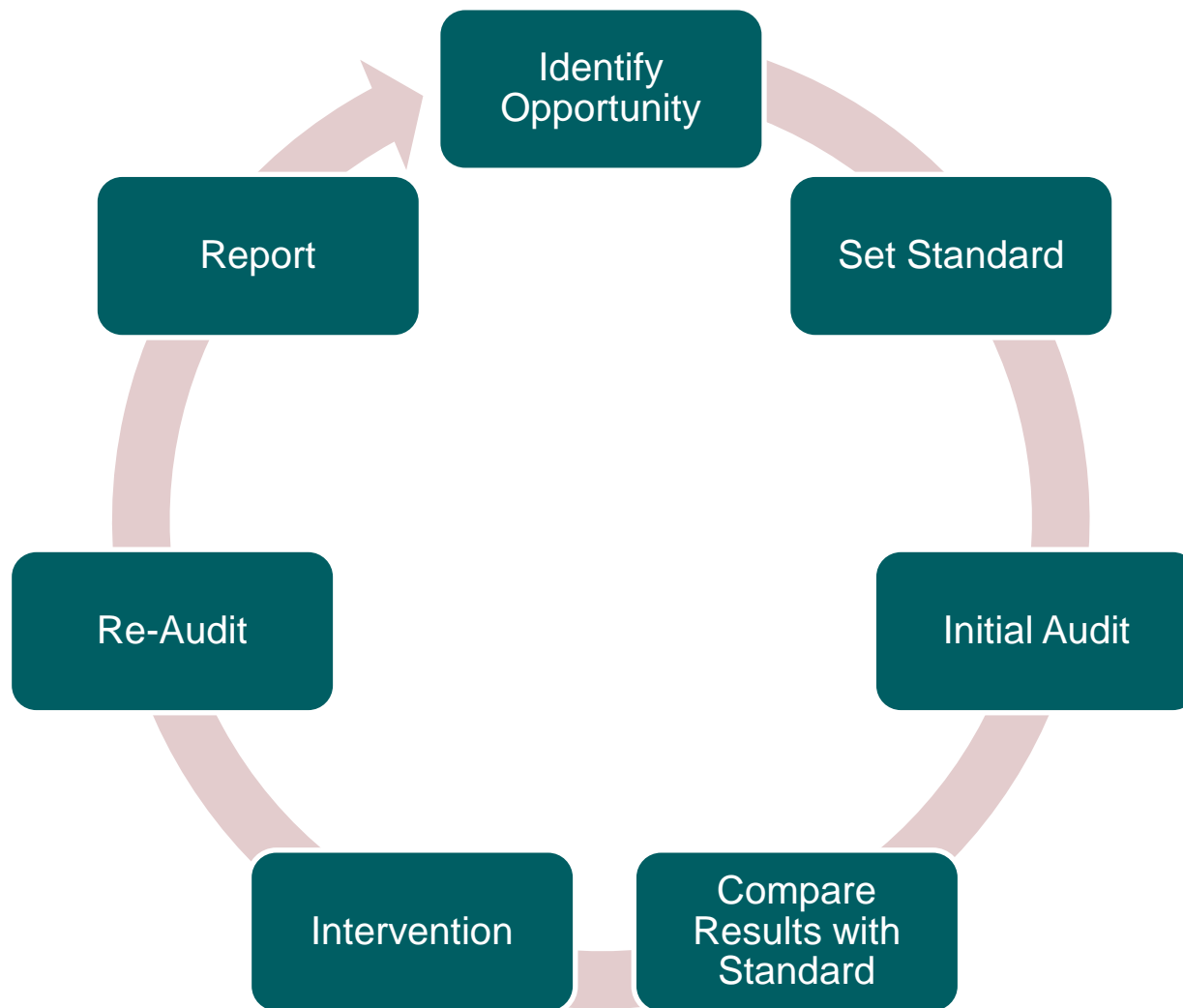|	
CLABSI **SIR 1.07** **SUR 0.75**	• Central lines remained in place for staff convenience • Policy and procedures for routine dressing changes were not routinely followed
VAE **SIR 0.97** **SUR 1.9**	• No policy or algorithm in place to prioritize non-invasive ventilation when appropriate
CDI **HO SIR 2.2**	• High incidence of patients with recent tube feeding or laxative • PCR only testing for CDI

Audit and Feedback

**Performance measures should be tailored to the care activities and the population served[4]

CLABSI Audit and Performance Improvement

CLABSI SIR 1.07 SUR 0.75

- Central lines remained in place for staff convenience.
- Policy and procedures for routine dressing changes were not routinely followed

Performance Improvement SMART goal

- Establish program for monitoring clinical necessity/removal of central line
- Perform competency-based training & education of identified improvement strategies

Initiative

- Develop protocol for central line necessity/removal
- Provide education and resources of new protocol to relevant roles (nursing, physicians, APPs)
- Perform baseline and repeat audits

Program Documentation

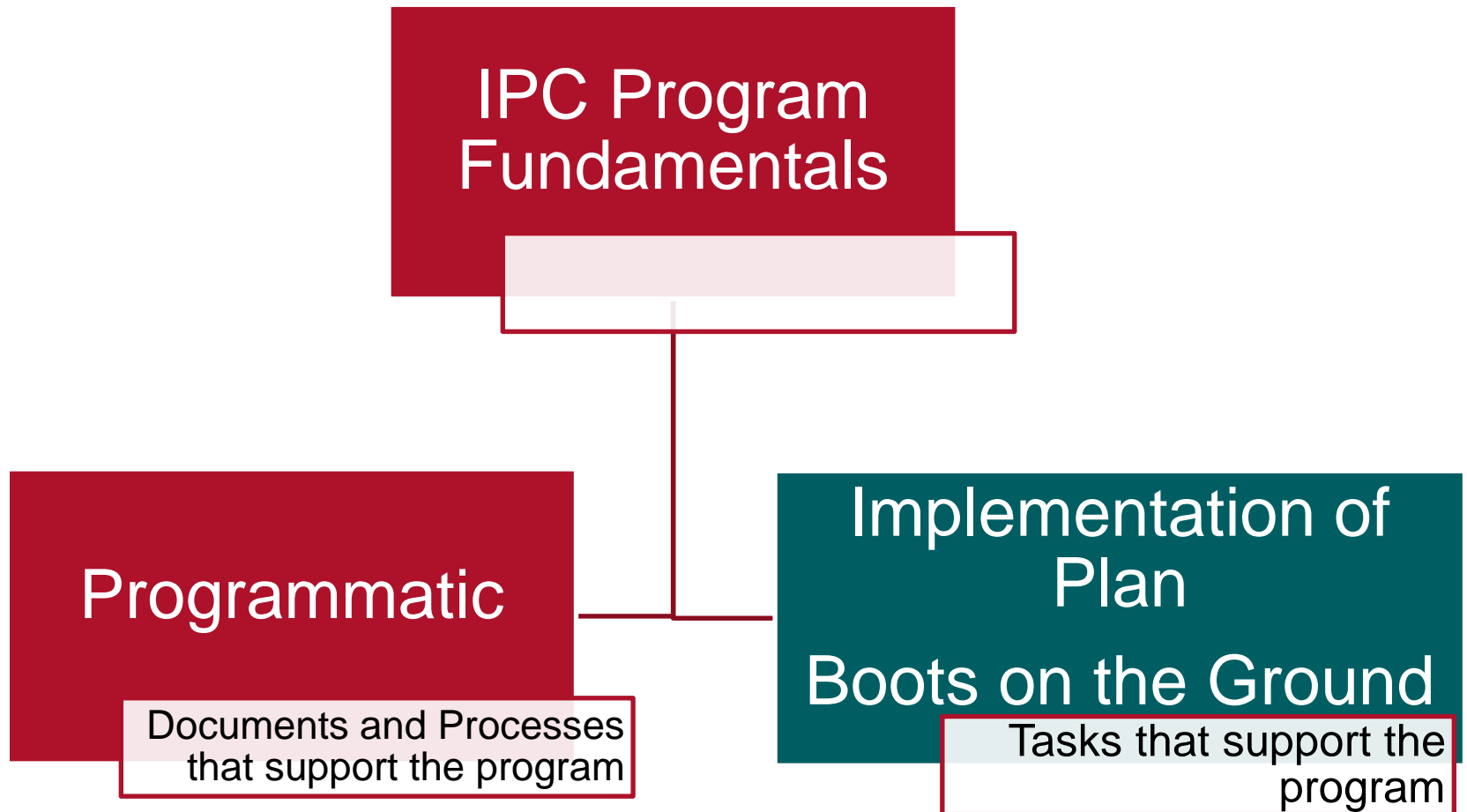## Provides a way for IPC program to monitor its work

- How well did we do?
- Did we meet our goals?
- Do we need to re-adjust our plan?

Allows for efficient tracking for a variety of reasons

- Regulatory/state visits
- Process/ performance improvement
- Track and trending data over time
- Ensure completion of requirements

Putting it All Together

IPC Program Fundamentals

Programmatic

Documents and Processes that support the program

Implementation of Plan

Boots on the Ground

Tasks that support the program

Putting it All Together
Programmatic Tasks

Leadership and program authority

Organziational and committee structure

Program resources

Policy and Procedure

Risk Assessment

Annual Plan

Putting it All Together
Implementation of Plan
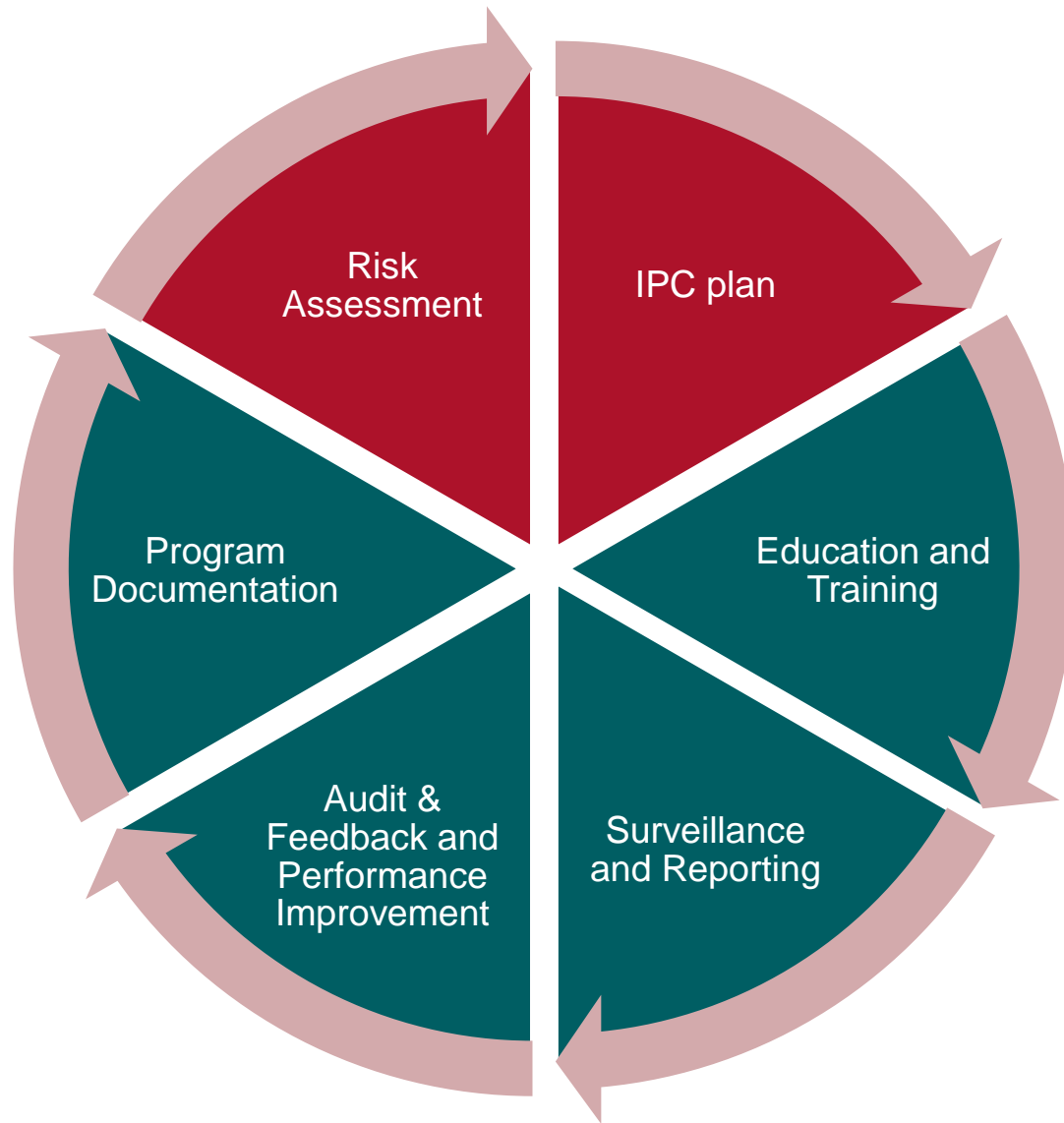### Boots on the Ground Tasks

- Education and training

- Surveillance and Reporting

- Audit and Feedback

- Program Documentation

Join us next month for a deeper dive into CLABSI Prevention and Improvement Programs

February 15th, 2024

Questions

Related References

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Related References

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Additional References Mentioned in Presentation and Office hours

Resource Title	Link
Self-Led Infection Control Evaluation (SLICE) Tool	https://ipslice.nebraskamed.com/Register
IPC support center site	https://innovateipc.org/ipc-support-center/
Risk Assessment templates	ASC_Risk_Assessment_Template.docx (live.com)
ICAR tool- Water Exposure Guide	https://www.cdc.gov/infectioncontrol/pdf/icar/IPC-mod11-water-exposure-508.pdf
ICAR tool- Water exposure observation checklist	ICAR Tool for General Infection Prevention and Control (IPC) Across Settings - Section 3: Observation Form - Water Exposure (cdc.gov)
NHSN Standardized Infection Ratio information	NHSN SIR Guide (cdc.gov)
Developing a *Water Management* program	Legionella: Developing a Water Management Program	CDC
Emergency Water supply planning guide	Emergency Water Supply Planning Guide for Hospitals and Healthcare Facilities (cdc.gov)