

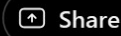
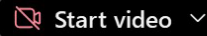
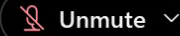


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Click here to see the participants list.



Click here to turn captions on.

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Click here to access the chat and choose to send messages to Everyone.

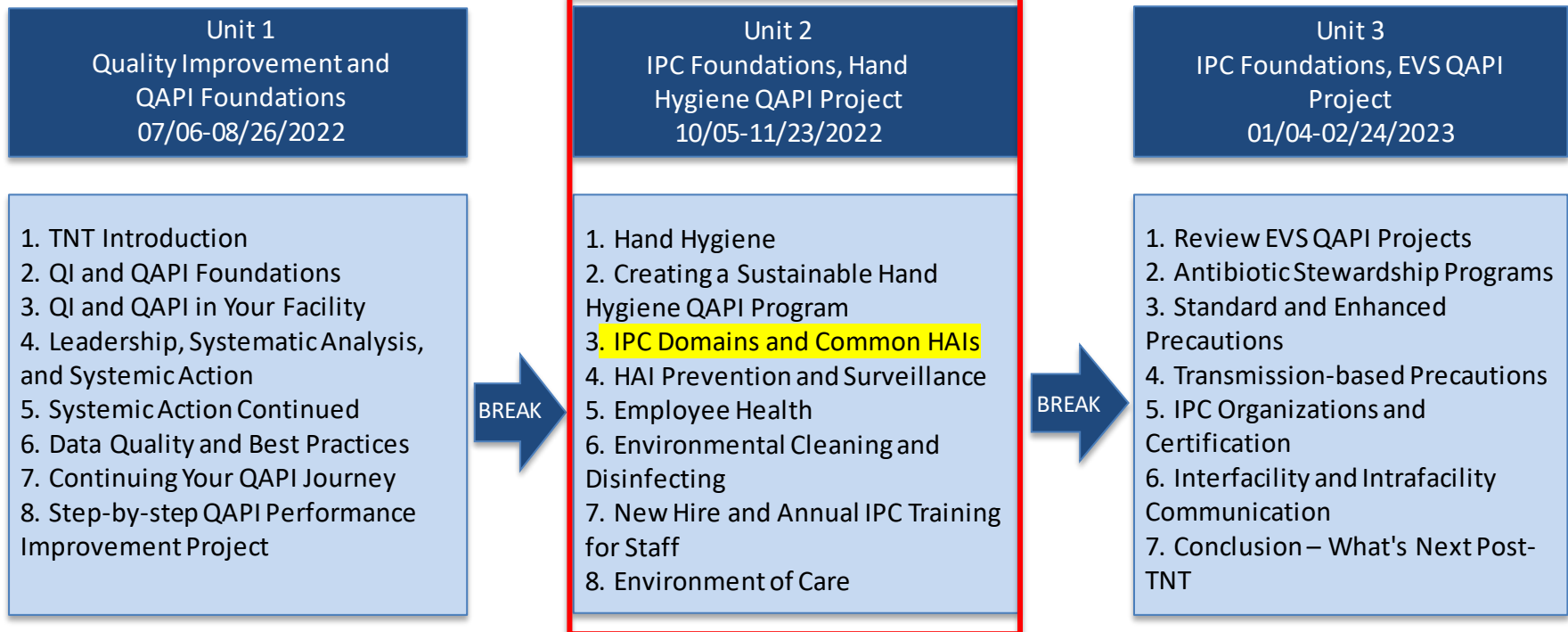


TNT Program Objectives

- Enhance quality improvement and quality assurance performance improvement (QAPI) at LA County SNFs by providing foundational quality improvement education across all roles in SNFs.
- Empower SNF staff to initiate performance improvement projects (PIPs) and own QI in their facility.
- Improve resident safety and clinical outcomes .



Didactic Sessions Schedule and Structure: Total 8 Months





Session Schedule

Topics	Date	Link
1 - Hand Hygiene	Wednesday, October 5th, 1:30-2:30 pm	
2 – Creating a Sustainable Hand Hygiene QAPI Program	Wednesday, October 12th, 1:30-2:30 pm	
3 - IPC Domains and Common HAIs	Wednesday, October 19th, 1:30-2:30 pm	
4 - HAI Prevention & Surveillance	Wednesday, October 26th, 1:30-2:30 pm	
5 - Employee Health	Wednesday, November 2nd, 1:30-2:30 pm	
6 - Environmental Cleaning & Disinfecting	Wednesday, November 9th, 1:30-2:30 pm	
7 - New Hire & Annual IPC Training for Staff	Wednesday, November 16th, 1:30-2:30 pm	
8 - Environment of Care	Wednesday, November 23rd, 1:30-2:30 pm	



Infection Prevention Domains & Common HAIs Part 1

Session 3

Krystal Smith, M.S., CIC
Jehan Mephors, RN





Session 3 Objectives

- Categorize infection prevention subdomains into 6 overarching domains
- Describe risk factors that contribute to HAI development
- Apply epidemiologic principles to HAI prevention and HAI performance improvement

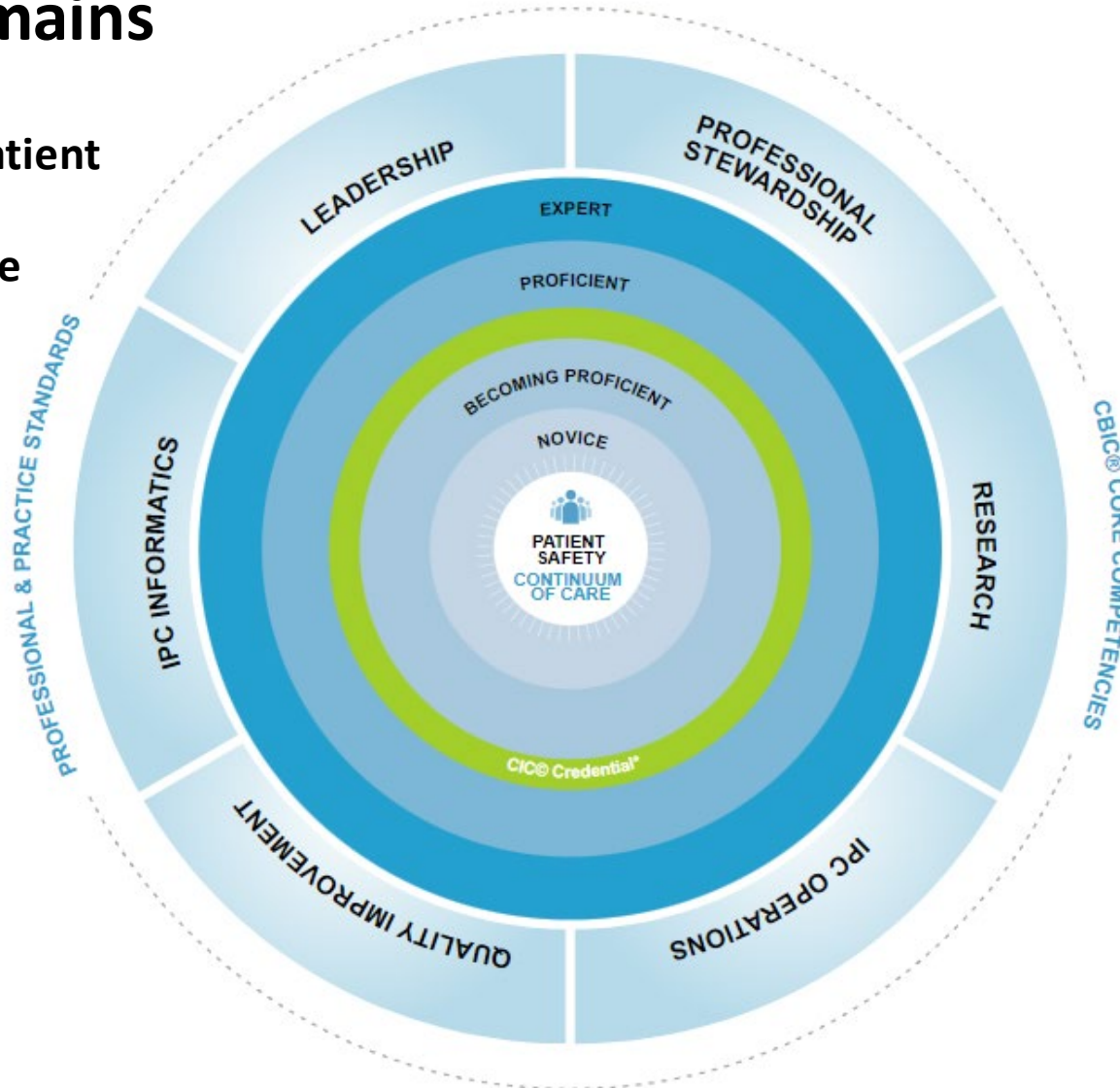


Infection Prevention Domains



Six IP Domains

Core: ensuring patient safety across the continuum of care



1. <https://apic.org/professional-practice/infection-preventionist-ip-competency-model/>
2. <https://apic.org/wp-content/uploads/2019/05/June-2019-AJIC-Article-APIC-Competency-Model.pdf>



CDPH Infection Preventionist Requirement

2. Understand the IP Training Requirements

As per CDPH AFL 20-84, the initial training for IPs should include the following topic areas and be a minimum of 14 hours:

- Role of the Infection Preventionist
- Infection Prevention Plan
- Standard, Enhanced Standard, and Transmission-Based Precautions
- Hand Hygiene
- Injection Safety
- HAI Prevention (e.g., Respiratory, BSI, UTI, Scabies, CDI, MDRO) ★
- Infection Surveillance ★
- Cleaning, Disinfection, Sterilization, and Environmental Cleaning
- Microbiology
- Outbreaks
- Antibiotic Stewardship
- Laws and Regulations (e.g., reporting requirements)
- Preventing Employee Infections

An additional 10 hours of continuing education in the field of IPC are also required as per CDPH AFL 20-84, on an annual basis.

Six IP Domains

IPC Operations

- Epidemiology & Surveillance
- Education
- IPC Rounding
- Cleaning, Disinfection, Sterilization
- Outbreak Detection & Management
- Emerging Technologies
- Antimicrobial Stewardship
- Diagnostic Stewardship

Quality Improvement

- IP as a SME
- Performance Improvement
- Patient Safety
- Data Utilization
- Risk Assessment & Risk Reduction

IPC Informatics

- Surveillance Technology
- EMR & Electronic Data Warehouse (EDW)
- Data Management, Analysis & Visualization
- Application of Diagnostic Testing & Techniques

1. <https://apic.org/professional-practice/infection-preventionist-ip-competency-model/>
2. <https://apic.org/wp-content/uploads/2019/05/June-2019-AJIC-Article-APIC-Competency-Model.pdf>

Six IP Domains

Leadership

- Communication
- Critical Thinking
- Collaboration
- Behavioral Science
- Program Management
- Mentorship

Professional Stewardship

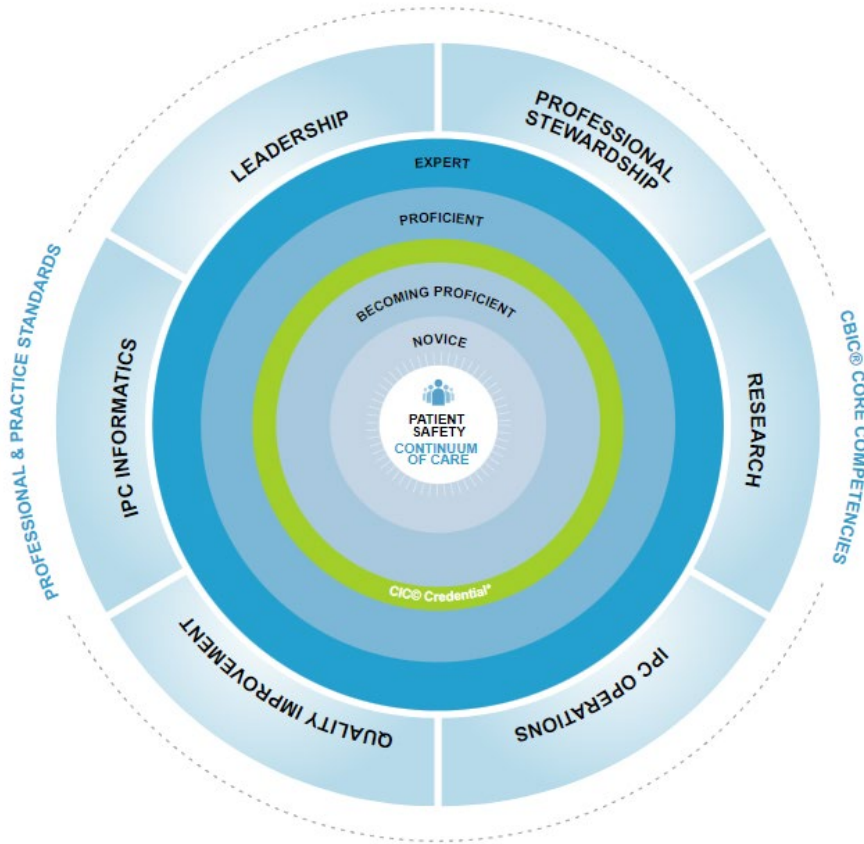
- Accountability
- Ethics
- Financial Acumen
- Population Health
- Continuum of Care
- Advocacy

Research

- Evaluation of Research
- Comparative Effectiveness Research (CER)
- Implementation & Dissemination Science
- Conduct or Participate in Research or Evidence-Based Practice

1. <https://apic.org/professional-practice/infection-preventionist-ip-competency-model/>
2. <https://apic.org/wp-content/uploads/2019/05/June-2019-AJIC-Article-APIC-Competency-Model.pdf>

6 IP Domains vs 6 Aims for Improvement (IOM)



**Ensuring patient safety
across the continuum of care**



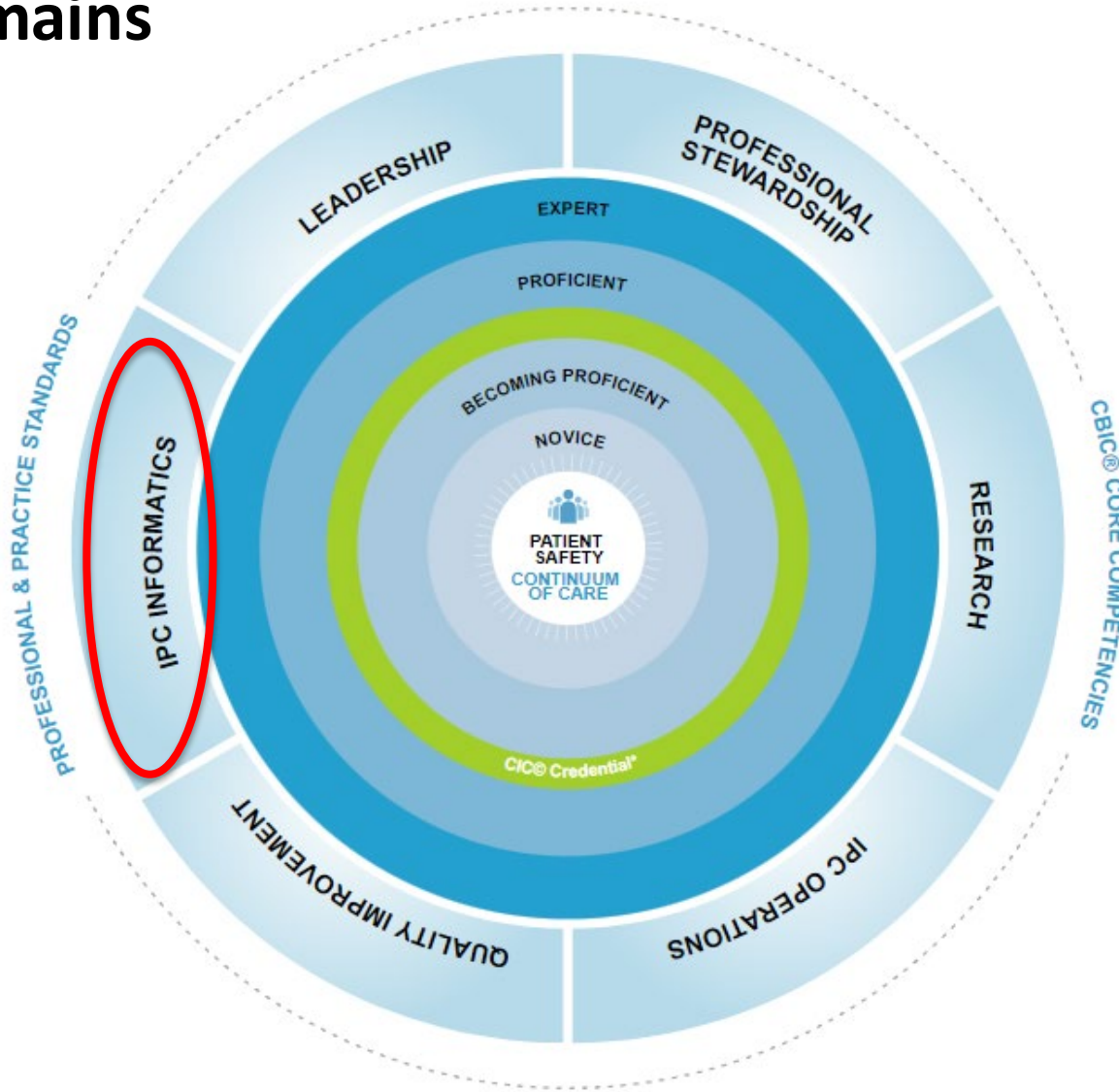
**Quality healthcare must be
patient centered and safe**



Infection Prevention & Control (IPC) Informatics



Six IP Domains





Best Practices for Data Management

Data must be

- Accurate
- Clean
- Truthful

Make sure this happens by

- Tracking data appropriately
- Entering all data completely
- Doing data quality checks

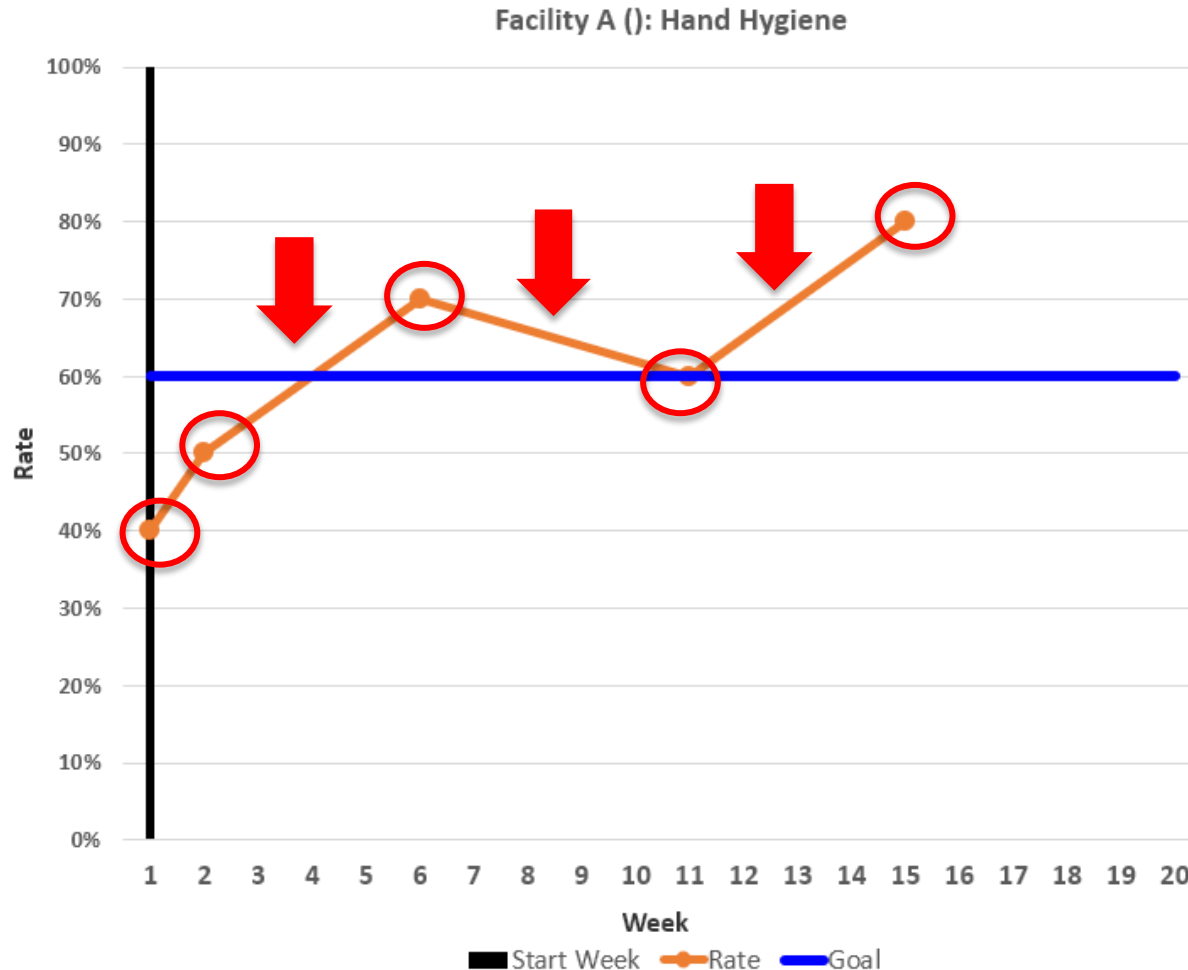
Reporting incorrect data can impact safety and funding

- Inaccurate patient data can lead to unintended interventions and treatments
- Incomplete facility data can lead to amendments in funding and reimbursements

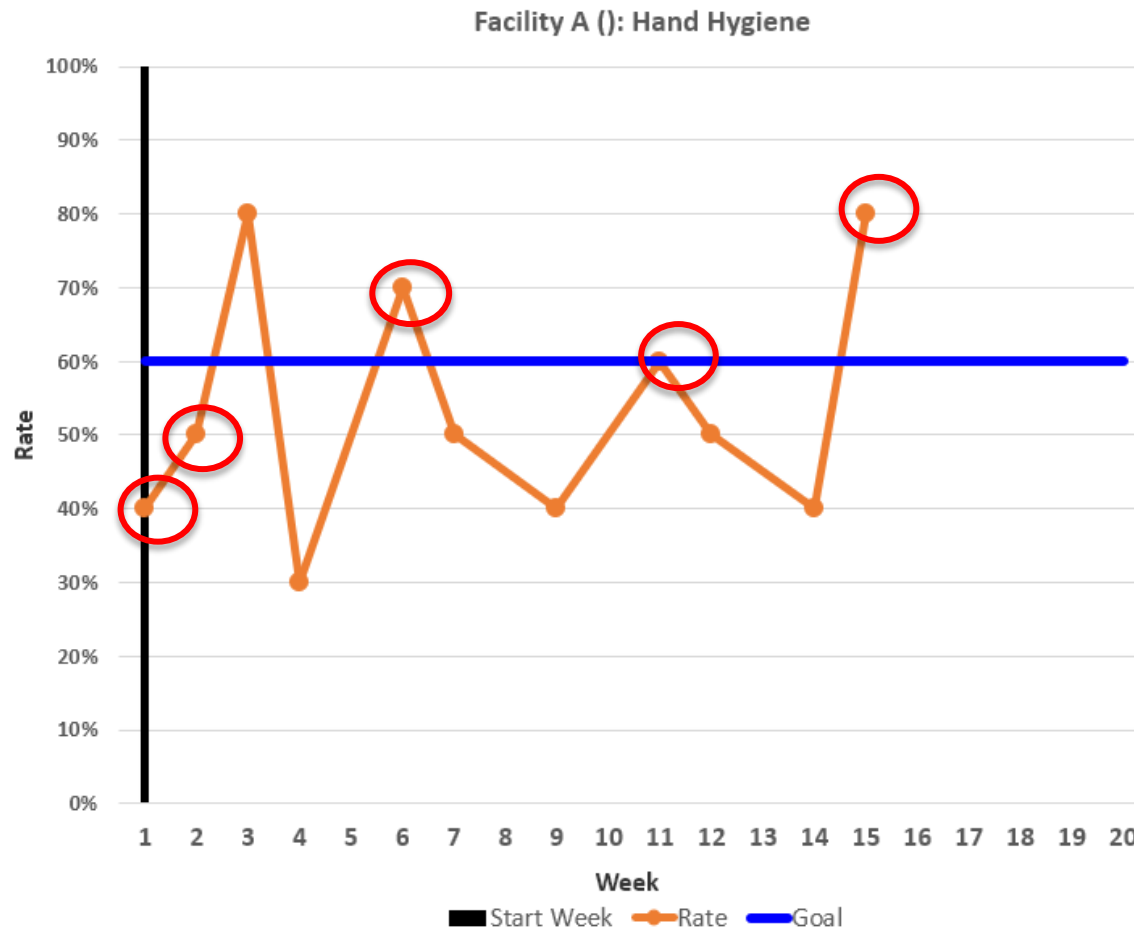
Best Practices for Data Management

Individual-level data	Summary data for external reporting	Internal data projects
<p><i>Ex: Resident charts or staff directories/databases</i></p> <ul style="list-style-type: none">• Digital• Up to date• Use categories, key words, or labels instead of free text	<p><i>Ex: Survey or other required reports for facility-wide data</i></p> <ul style="list-style-type: none">• Use reports to summarize data by time or type• Use spreadsheets to track data questions over time• Make sure data is summarized regularly	<p><i>Ex: Quality improvement projects</i></p> <ul style="list-style-type: none">• Make data collection easy <p><i>Smart phone apps, paper, shared spreadsheets</i></p> <ul style="list-style-type: none">• Organize data by date (day, week, etc.) to track changes over time

Example of Inconsistent Data Tracking: Is adherence truly improving?



Example of Consistent Data Tracking

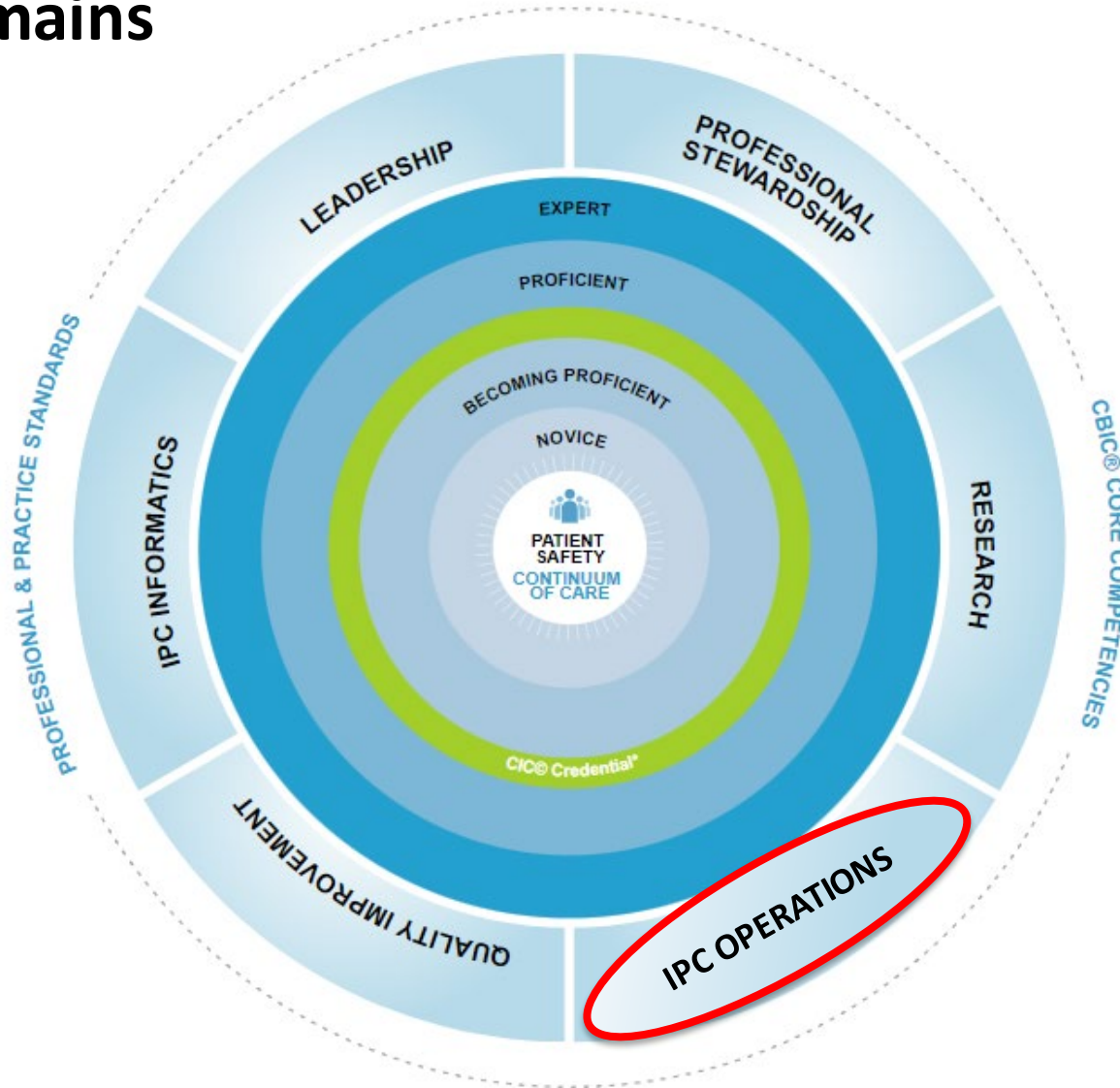




Healthcare Associated Infections Overview



Six IP Domains





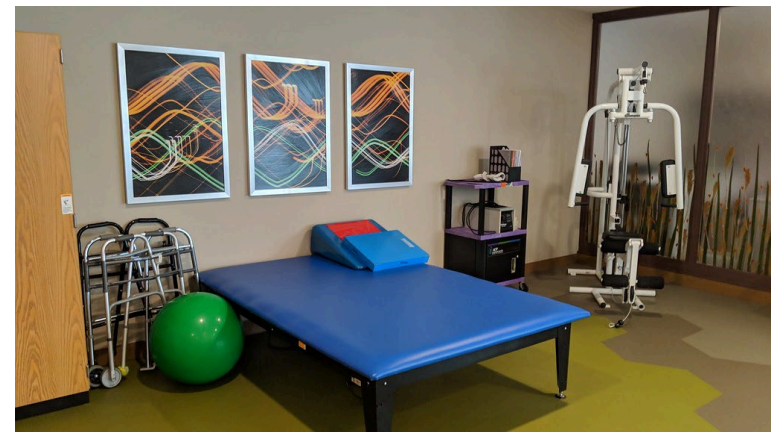
Healthcare-associated Infection (HAI)

- Infection that is acquired while receiving health care
- **Preventable**
- All health care settings
- Dependent on several risk factors

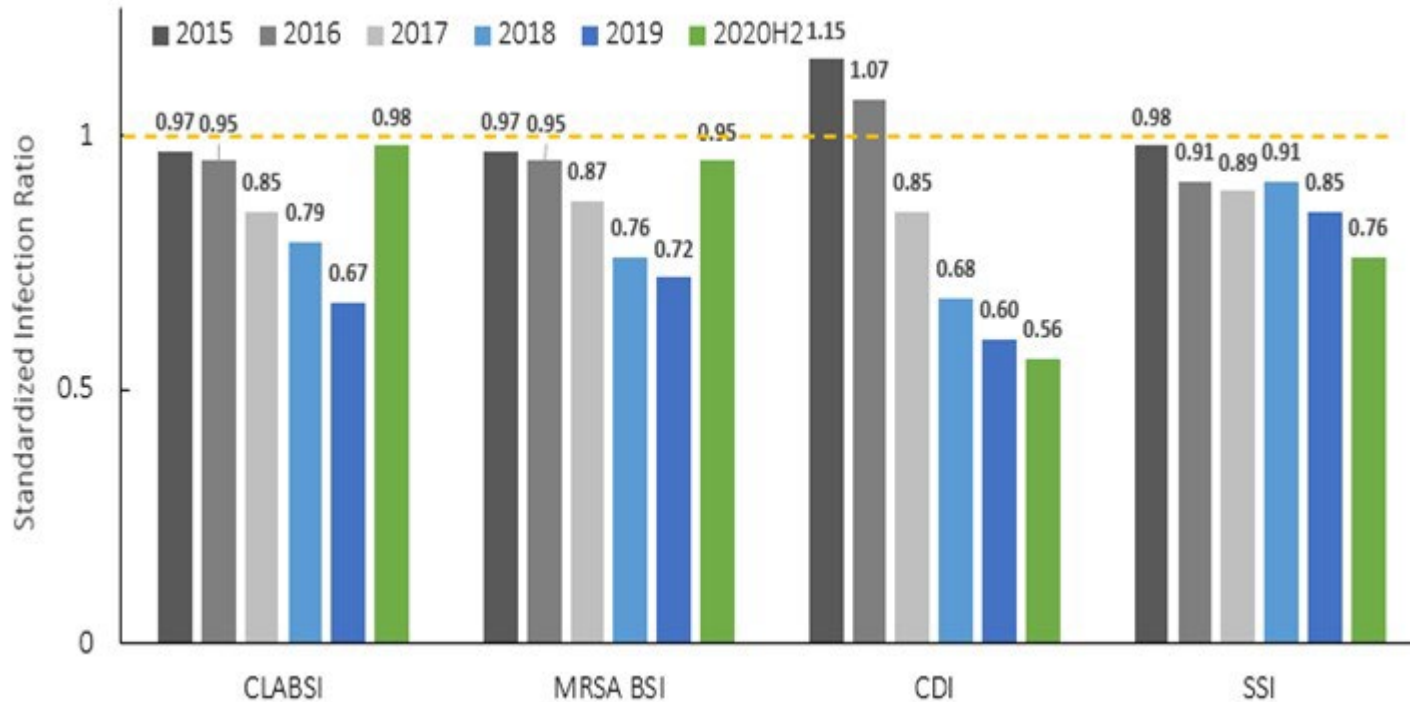
Why should we care about HAIs?

- Estimated 1 to 3 million serious infections occur in SNF residents and as many as 380,000 die of their infections each year
- People go to SNFs/LTCFs to **recover**, not to get sick from another disease
- HAIs can have devastating emotional, financial, and medical outcomes including deaths
- HAIs should not be the norm

https://www.cdph.ca.gov/Programs/CHCO/HAI/Pages/SNF_PreventingCommonHAI.aspx



Healthcare-Associated Infection Incidence in California Hospitals, 2015–2020*



NOTE. Dashed horizontal line reflects the national baseline for the standardized infection ratio (SIR). An SIR below the dashed line represents HAI prevention progress if the reduction was statistically significant.

*Latter six months of 2020 (2020H2).



Audience Question

Name a healthcare-associated infection that you are familiar with.



HAI Types

MDRO	Multi-Drug Resistant Organism
SSTI	Skin & Soft Tissue Infections
SSI	Surgical Site Infection
CAUTI	Catheter-Associated Urinary Tract Infection
VAP	Ventilator-Associated Pneumonia
CLABSI	Central Line-Associated Blood Stream Infection

1. <https://www.cdc.gov/hai/infectiontypes.html>



Audience Question

MDRO

SSTI

SSI





CAUTI

VAP

CLABSI

Which are most common
in skilled nursing
facilities?

HAI Types

MDRO	<u>Multi-Drug Resistant Organism</u>	
SSTI	<u>Skin & Soft Tissue Infections</u>	
SSI	Surgical Site Infection	
CAUTI	Catheter-Associated <u>Urinary Tract Infection</u>	
VAP	Ventilator-Associated <u>Pneumonia</u>	
CLABSI	Central Line-Associated Blood Stream Infection	

HAI Risk Factors

Risk Factors

- Age
- Tube manipulation/management
- Prolonged hospitalization
- Neurogenic bladder
- Unable to clear bacteria from airways
- Immobility
- Feeding tubes
- Swallowing difficulties
- Inadequate oral care
- Ventilator dependent
- Surgical service
- ICU/CCU

Risk Factors

- Antimicrobial exposure
- Requiring ADL assistance
- Recent hospitalization
- Underlying disease (e.g., diabetes)
- Multiple IVDs
- Systemic antibiotics
- Active infection elsewhere
- Transplant
- Multiple catheters
- Emergency insertion
- Hemodialysis
- Etc.

1. https://www.cdph.ca.gov/Programs/CHCO/HAI/Pages/SNF_PreventingCommonHAI.aspx
2. https://www.cdph.ca.gov/Programs/CHCO/HAI/Pages/IP_TrainingForSNFs_OnlineCourse.aspx

Audience Question



Do any of these describe your residents?



- Age
- Tube manipulation/management
- Prolonged hospitalization
- Neurogenic bladder
- Unable to clear bacteria from airways
- Immobility
- Feeding tubes
- Swallowing difficulties
- Inadequate oral care
- Ventilator dependent
- Surgical service
- ICU/CCU

- Antimicrobial exposure
- Requiring ADL assistance
- Recent hospitalization
- Underlying disease (e.g., diabetes)
- Multiple IVDs
- Systemic antibiotics
- Active infection elsewhere
- Transplant
- Multiple catheters
- Emergency insertion
- Hemodialysis
- Etc.

Audience Question: How does your facility mitigate risk factors for HAIs?

Risk Factors

- Age
- Tube manipulation/management
- Prolonged hospitalization
- Neurogenic bladder
- Unable to clear bacteria from airways
- Immobility
- Feeding tubes
- Swallowing difficulties
- Inadequate oral care
- Ventilator dependent
- Surgical service
- ICU/CCU

Risk Factors

- Antimicrobial exposure
- Requiring ADL assistance
- Recent hospitalization
- Underlying disease (e.g., diabetes)
- Multiple IVDs
- Systemic antibiotics
- Active infection elsewhere
- Transplant
- Multiple catheters
- Emergency insertion
- Hemodialysis
- Etc.



HAI Prevention/Containment Strategies

- Laboratory identification, Testing
- Surveillance
- Infection Control Measures (Standard, Enhanced, Transmission Based Precautions)
- Adherence Monitoring
- Environmental Cleaning and Disinfection
- Interfacility Communication
- Antimicrobial Stewardship
- Regional Prevention
- Reporting



HAI, Surveillance, and Reporting

- **Surveillance 101**
 - Collection, recording, analysis, interpretation, dissemination and usage of data
 - Know what you are tracking and trending, and why
 - Consistency: time, effort/resources, definitions
 - McGeer criteria
- **Reporting:** local, state and federal requirements



Multi Drug-Resistant Organisms

And Clostridioides difficile infection





Audience Question:

What are MDROs?

Multi-Drug Resistant Organisms

Contamination Source

- Contaminated healthcare worker hands
- Contaminated equipment
- Pathogens in the environment
- Other residents

Common Pathogens

- Carbapenem-resistant Enterobacterales (CRE)*
- Carbapenem-resistant Acinetobacter baumannii (CRAB)*
- Carbapenem-resistant Pseudomonas aeruginosa (CRPA)*
- Candida auris*

CP-CRE or CPE = Carbapenemase producing CRE

CDC AR threat report:

<https://www.cdc.gov/drugresistance/biggest-threats.html>





Audience Question:

What is the difference between
infection and colonization?



Colonization vs Infection

Colonization

- The organism is found in or on the body but is not causing disease, or signs and symptoms.
- Treatment is not required for colonization
- Colonization can be a source of contamination

Infection

- Microorganisms invade the body and cause signs and symptoms of disease.
- Usually requires treatment.

Carbapenem-resistant *Enterobacterales* (CRE)

- *Enterobacterales* – gram negative bacteria include *Escherichia coli* (*E. coli*) and *Klebsiella pneumoniae*.
- Sink drains and toilets are increasingly recognized as an environmental reservoir and CRE transmission source.
- Can cause infections including pneumonia, bloodstream infections, wounds, or surgical site infection, and meningitis.



Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

- Commonly found in the environment, like soil and water.
- Can cause infections in the blood, urinary tract, and lungs (pneumonia), or in wounds.



<https://www.cdc.gov/hai/organisms/acinetobacter.html>

Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA)

- Commonly found in water sources and healthcare environments.
- Cause serious infections on the blood and lungs (pneumonia).



<https://www.cdc.gov/hai/organisms/pseudomonas.html>

Candida auris

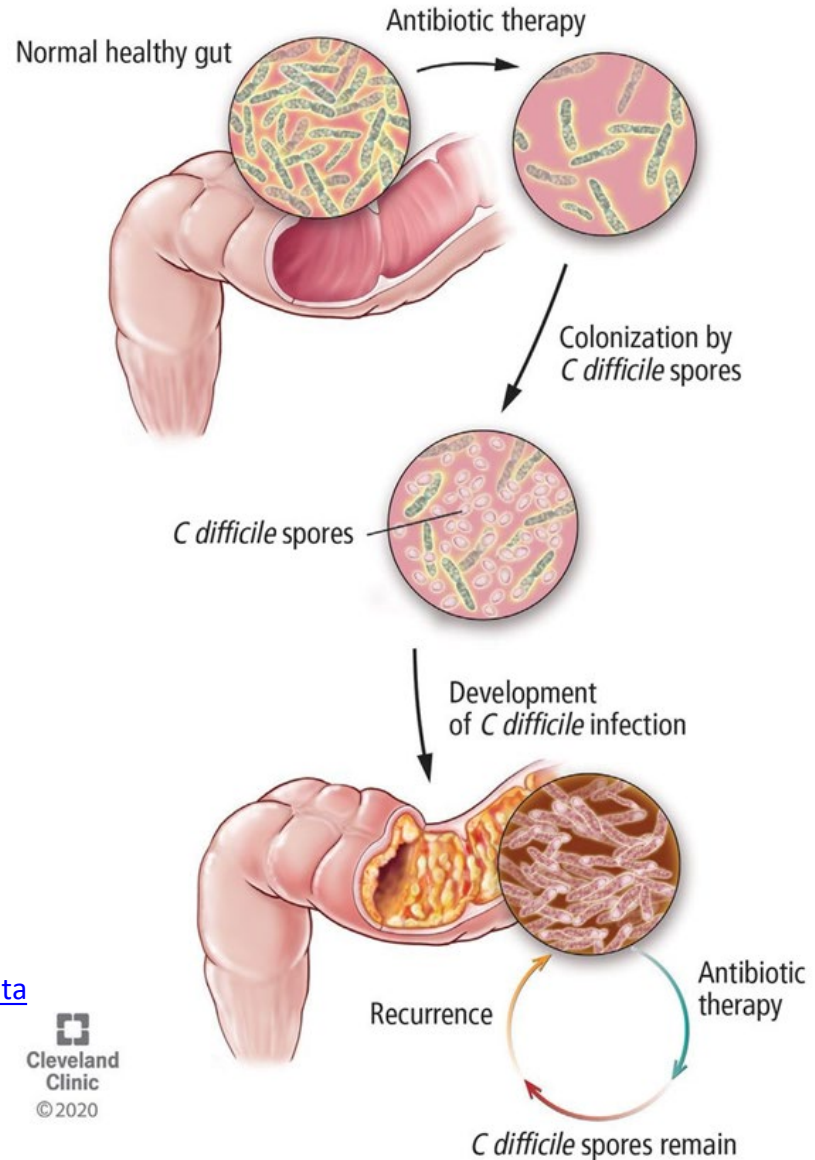
- A fungus often multidrug-resistant (antifungal drugs).
- Can survive on surfaces for long periods.
- Residents with lines, tubes and unhealing wounds are at high risk for *C.auris* colonization or infection.



<https://www.cdc.gov/fungal/candida-auris/candida-auris-qanda.html>

Clostridioides difficile infection (CDI)

C difficile infection



1. <https://www.ccm.org/content/87/6/347/tab-figures-data>



Reporting MDROs to LAC DPH

Organism	Disease categories	Criteria	Who reports
<i>Candida auris</i> (<i>C. auris</i>)	<i>C. auris</i>	<i>Candida auris</i>	Lab and provider
Carbapenem-resistant Enterobacterales (CRE)*	CRE	Enterobacterales that are resistant to one or more carbapenems (independent of any carbapenemase testing)	Provider only
	CP-CRE	<ul style="list-style-type: none">• Carbapenemase positive (CP)-CRE by phenotypic or molecular test OR• Carbapenemase unknown (no carbapenemase test performed)	Lab only
Carbapenemase-producing <i>Acinetobacter baumannii</i>	CP- <i>Acinetobacter</i> spp.	<i>Acinetobacter</i> spp. positive for carbapenemase by phenotypic or molecular test	Lab only
Carbapenemase-producing <i>Pseudomonas aeruginosa</i>	CP- <i>P. aeruginosa</i>	<i>P. aeruginosa</i> positive for carbapenemase by phenotypic or molecular test	Lab only
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	VRSA	<i>S. aureus</i> with a vancomycin MIC ≥ 16	Lab only
Pan-resistant organisms (Suspect PDR)	Suspect PDR	Gram negative bacteria that are non-susceptible to all antibiotics tested	Lab only

http://publichealth.lacounty.gov/acd/docs/MDRO_HOO_Compliance_Instructions.pdf

Updated information and instructions for MDRO reporting can be found at:

- <http://publichealth.lacounty.gov/acd/Diseases/CRE.htm>
- <http://publichealth.lacounty.gov/acd/Diseases/NMDRO.htm>



Reporting MDROs to LAC DPH

**COUNTY OF LOS ANGELES
Public Health**

Resize font: + | -

[Returning?](#)

Enable speech

LACDPH MDRO Reporting Portal

Laboratories and providers in Los Angeles County (LAC) may submit reports of multi-drug resistant organisms (MDROs) [reportable](#) to the Department of Public Health (DPH) using this survey. We will collect information as relevant to the organism being reported. Additional guidance on reporting instructions can be found on our [CRE](#) and [novel MDRO](#) websites.

You may save and continue your work at any time. At the end of the survey, you will receive a record ID number and option to send yourself a confirmation email. You will not be allowed to modify answers once submitted.

If you have any questions or concerns, please email us at hai@ph.lacounty.gov.

Organism Reported

Which organism is being reported?
** must provide value*

- Carbapenem-resistant Enterobacterales (CRE)
- Carbapenem-resistant Pseudomonas aeruginosa (CRPA)
- Carbapenem-resistant Acinetobacter baumannii (CRAB)
- Candida auris (C. auris)
- Vancomycin-resistant Staphylococcus aureus (VRSA)
- Pan-resistant gram-negative organism
- Other (specify)

reset

Facility Information

Where are you reporting from?
** must provide value*

- Hospital
- Skilled Nursing Facility
- Reference Laboratory
- Other (specify)

reset

[REDCap MDRO Reporting Portal](#)



MDRO Prevention and Control

- Hand hygiene
- Standard Precautions
- Enhanced Standard Precautions (ESP)
- Transmission-Based Precautions (TBP)
- Proper Cohorting
- Appropriate cleaning and disinfection using an EPA registered disinfectant
- Antimicrobial Stewardship Program
- Staff education and training
- Identification and Communication (inter and intrafacility)
- http://publichealth.lacounty.gov/acd/docs/LACDPH_TransferringGuidanceforMDROs.pdf

Enhanced Standard Precautions (ESP)

- A **resident-centered** and **activity-based** approach for preventing MDRO transmission.
- The use of gown and gloves by healthcare personnel during **high-contact resident care activities** for those known to be colonized or infected with a MDRO as well as those at increased risk of MDRO acquisition.

STOP
ALTO

Enhanced Standard Precautions
Medidas de Precaución Estándar Avanzadas
See nurse before entering the room
Ver a la enfermera antes de entrar al cuarto.

EVERYONE MUST: <small>todos deben</small>	PROVIDERS AND STAFF MUST ALSO: <small>los proveedores y el personal también deben</small>	
Clean hands on room entry and when exiting <small>limpiarse las manos antes de entrar y al salir del cuarto</small>	Wear gloves and a gown for the high-contact resident care activities <small>usar guantes y una bata para las actividades de alto contacto de los residentes en el cuarto</small>	

8 Moments for Enhanced Standard Precautions
8 momentos para las medidas de precaución estándar avanzadas

1. Before all body fluid contact (caring, cleaning, handling, changing bed linen, handling) <small>antes de todo contacto con fluidos corporales, antes de limpiar, manejar, cambiar ropa de cama, antes de manejar ropa de cama sucia</small>	2. Before and after changing linens and waste <small>antes y después de cambiar sábanas y desechos en los procedimientos</small>
3. Before and after direct patient care <small>antes y después de la atención directa al paciente</small>	4. After care <small>después de la atención</small>
5. Before and after preparing to leave the room <small>antes y después de prepararse para salir del cuarto</small>	6. Handling the environment <small>manejo del ambiente</small>

For a complete version of this poster, visit: <http://publichealth.lacounty.gov/acd/docs/IPEnhancedStandardPrecautions.pdf>



High-Risk Factors for MDRO Colonization and Transmission

Risk Factor	Definition
Presence of indwelling devices	<ul style="list-style-type: none">• Urinary catheter, feeding tube, endotracheal or tracheostomy tube, vascular catheter
Wounds or presence of pressure ulcer (unhealed)	<ul style="list-style-type: none">• Wounds secondary to an underlying disease which may interfere with the normal healing process.

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/CDPH%20Document%20Library/Enhanced-Standard-Precautions.pdf>



Enhanced Standard Precautions (ESP)

[AFL 22-21 Enhanced Standard Precautions for Skilled Nursing Facilities, 2022](#)

This includes updated guidance to SNFs for safely caring for residents with medical devices and unhealed wounds who are at increased risk for transmission of multidrug-resistant organisms (MDRO) in compliance with state and federal regulations.

Enhanced Standard Precautions for Skilled Nursing Facilities (SNF), 2022

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/CDPH%20Document%20Library/Enhanced-Standard-Precautions.pdf>

If you have any questions, please contact us at hai@ph.lacounty.gov

Facility internal surveillance: MDRO Events Module in NHSN

- Uses standardized surveillance definitions to monitor MDROs.

LabID Event Module

Locations	Specific Organism Type	Lab ID Event All Specimens
Facility-wide Inpatient (FacWIDEIn) ▼	CDIF - C. difficile ▼	<input checked="" type="checkbox"/>
Facility-wide Inpatient (FacWIDEIn) ▼	ACINE - MDR-Acinetobacter ▼	<input checked="" type="checkbox"/>
Facility-wide Inpatient (FacWIDEIn) ▼	▼	<input type="checkbox"/>

Add Row Clear All Rows Copy from Previous

Click to add additional organisms.

- CEPHRKLEB - CephR-Klebsiella
- CRE - CRE (CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella)
- MRSA/MSSA - MRSA with MSSA
- MRSA - MRSA
- VRE - VRE

https://www.cdc.gov/nhsn/pdfs/lcf/lcf-labid-event-protocol_current.pdf



Calculated MDRO Metrics in NHSN

- Total MDRO rate per 1,000 resident days
- Percent of MDRO CO LabID events
- Percent of MDRO LO LabID events
- Percent of LO MDRO LabID events that are ACT-LO LabID events
- MDRO LO rate per 1,000 resident days

LabID = laboratory identified

CO = community onset

LO = long-term care facility onset

ACT-LO = acute care transfer long-term care facility onset



Quality Dashboard: Continual Monitoring of Signals for Change/Improvement



TNT SNF Quality Dashboard - Sunny Meadows Center [your facility name here]

Strategic Quality AIM 1: Reduce Resident Infections

Strategic Quality AIM 2: Increase Culture of Safety

Legend for "Ranking" column

ON PATH - goal achieved for reporting period.

OFF PATH - goal not met, but at or within 20% of goal

BELOW - performance is 20% or more below goal

What we are measuring.....		Stretch Goal	Ranking	Performance	Mean/Cumulative	Data Period Reported	Data Source
Infection Prevention & Control							
HAI (Healthcare associated infections)	Total UTI incidence rate per 1,000 resident days						QAPI/NHSN
	Total MDRO rate per 1,000 resident days						QAPI/NHSN
	Total CDI (<i>C. diff</i>) infections) rate per 1,000 resident days			2	1	7/1/22-9/30/22	QAPI/NHSN
Process Measures	Overall hand hygiene percent adherence	80%		55%	-	4/1/22-6/30/22	QAPI/NHSN
	Overall gown and glove use percent adherence	95%		73%	-	4/1/22-6/30/22	QAPI/NHSN
	Percentage of staff completing quarterly Infection Prevention & Control in-services/education	100%		100%		4/1/22-6/30/22	QAPI

LAC DPH TNT's [SNF Quality Dashboard Template](http://publichealth.lacounty.gov/acd/TNTProgram.htm): "Stretch Goals" tab

Quality Dashboard – Selecting Performance Improvement Projects (PIPs)



TNT SNF Quality Dashboard - Sunny Meadows Center [your facility name here]		Legend for "Ranking" column							
Strategic Quality AIM 1: Reduce Resident Infections		<div style="background-color: green; color: white; padding: 2px;">ON PATH - goal achieved for reporting period.</div> <div style="background-color: yellow; color: black; padding: 2px;">OFF PATH - goal not met, but at or within 20% of goal</div> <div style="background-color: red; color: white; padding: 2px;">BELOW - performance is 20% or more below goal</div>							
Strategic Quality AIM 2: Increase Culture of Safety									
What we are measuring.....		Stretch Goal	Goal	Ranking	Performance	Mean/Cumulative	Data Period Reported	Data Source	Team lead
Infection Prevention & Control									
HAI (Healthcare associated infections)	Total CAUTI incidence rate per 1,000 resident days	5			50		4/1/22-6/30/22	QAPI/NHSN	Charge nurse
	Percentage of residents who have or had a catheter inserted and left in their bladder		1.1%		5.0%		4/1/22-6/30/22	QAPI/NHSN	Lucy
	Total CDI (C. diff infections) rate per 1,000 resident days	0.25	1.0		1.5	1.5	4/1/22-6/30/22	QAPI/NHSN	IP Suzy

LAC DPH TNT's [SNF Quality Dashboard Template](#): "Active PIPs" tab

Facility internal surveillance: CDI Events Module

- Uses standardized surveillance definitions to monitor MDRO and CDI.

LabID Event Module

Locations	Specific Organism Type	Lab ID Event All Specimens
Facility-wide Inpatient (FacWIDEIn) ▼	CDIF - C. difficile ▼	<input checked="" type="checkbox"/>
Facility-wide Inpatient (FacWIDEIn) ▼	ACINE - MDR-Acinetobacter ▼	<input checked="" type="checkbox"/>
Facility-wide Inpatient (FacWIDEIn) ▼	▼	<input type="checkbox"/>

Add Row Clear All Rows Copy from Previ

Click to add additional organisms.

- CEPHRKLEB - CephR-Klebsiella
- CRE - CRE (CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella)
- MRSA/MSSA - MRSA with MSSA
- MRSA - MRSA
- VRE - VRE

https://www.cdc.gov/nhsn/pdfs/ltc/lcf-labid-event-protocol_current.pdf



Calculated CDI Metrics in NHSN

- Total CDI rate per 1,000 resident days
- Percent of CO CDI LabID events
- Percent of LO CDI LabID events
- Percent of ACT-LO CDI LabID events
- CDI LO incidence rate per 1,000 resident days
- CDI treatment prevalence on admission
- CDI treatment ratio



Skin and Soft Tissue Infections



Skin and Soft Tissue Infections

Infection examples

- Cellulitis, soft tissue, wound
- Scabies
- Fungal oral/perioral
- Herpesvirus
- Conjunctivitis

Many of the MDROs we just covered are responsible for skin and soft tissue infections!

Common wound causes

- Surgery
- Blood flow impairments
- Injury
- Burn
- Neuropathy, impaired sensation
- Pressure

Ensure your staff is familiar with wound care and management procedures in your facility – wound care teams!

1. https://www.cdph.ca.gov/Programs/CHCO/HAI/Pages/SNF_PreventingCommonHAI.aspx



SSTI Revised McGeer Criteria Example

Table 4. Skin and Soft Tissue Infection (SSTI) Surveillance Definitions		
Syndrome	Criteria	Selected Comments*
Cellulitis, soft tissue, or wound infection	<p>Must fulfill at least 1 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pus at wound, skin, or soft tissue site <input type="checkbox"/> At least four of the following new or increasing sign or symptom <ul style="list-style-type: none"> <input type="checkbox"/> Heat (warmth) at affected site <input type="checkbox"/> Redness (erythema) at affected site <input type="checkbox"/> Swelling at affected site <input type="checkbox"/> Tenderness or pain at affected site <input type="checkbox"/> Serous drainage at the affected site <input type="checkbox"/> At least one of the following <ul style="list-style-type: none"> <input type="checkbox"/> Fever <input type="checkbox"/> Leukocytosis <input type="checkbox"/> Acute changed in mental status <input type="checkbox"/> Acute functional decline 	<ul style="list-style-type: none"> • More than 1 resident with streptococcal skin infection from the same serogroup (e.g., A, B, C, G) may indicate an outbreak • Positive superficial wound swab culture is not sufficient evidence to establish a wound infection
Scabies	<p>Must fulfill both 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Maculopapular and/or itching rash <input type="checkbox"/> 2. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Physician diagnosis <input type="checkbox"/> Lab confirmation (scraping or biopsy) <input type="checkbox"/> Epidemiologic linkage to a case of scabies with lab confirmation 	<ul style="list-style-type: none"> • Must rule out rashes due to skin irritation, allergic reactions, eczema, and other non-infectious skin conditions • Epidemiologic linkage refers to geographic proximity, temporal relationship to symptom onset, or evidence of common source of exposure
Oral candidiasis	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Presence of raised white patches on inflamed mucosa or plaques on oral mucosa <input type="checkbox"/> 2. Medical or dental diagnosis 	
Fungal skin infection	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Characteristic rash or lesions <input type="checkbox"/> 2. Physician diagnosis or lab confirmation of fungal pathogen from skin scraping or biopsy) 	
Herpes simplex or Herpes zoster infection	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. A vesicular rash <input type="checkbox"/> 2. Physician diagnosis or lab confirmation 	<ul style="list-style-type: none"> • Reactivation of herpes simplex (cold sore) or herpes zoster (shingles) is not considered a healthcare-associated infection
Conjunctivitis	<p>Must fulfill at least 1 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pus from one or both eyes for ≥ 24 h <input type="checkbox"/> New or increased conjunctival erythema +/- itching <input type="checkbox"/> New or increased conjunctival pain for ≥ 24 h 	<ul style="list-style-type: none"> • Conjunctivitis symptoms (pink eye) should not be due to allergy or trauma
<input type="checkbox"/> SSTI criteria met		<input type="checkbox"/> SSTI criteria <u>NOT</u> met

* Refer to original article (Stone ND, et al. Infect Control Hosp Epidemiol 2012;33:965-77) for full comments



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Surgical Site Infections





Surgical Site Infections (SSIs)

- All surgical sites can be considered contaminated
- Some lead to clinical infection
- Variety of sources

1. <https://www.cdc.gov/nhsn/training/roadmap/psc/ssi.html>

SSIs

Classification:

- Class I: clean
- Class II: clean-contaminated
- Class III: contaminated
- Class IV: dirty

Risk Index: 0-3 points

- Class III or IV
- ASA score 3+
- Prolonged procedure

Schematic representation of the anatomical classification of surgical-site infections



Adapted from: Horan T C, Gaynes R P, Martone W J, Jarvis W R, Emori T G. CDC definitions of nosocomial surgical site infections, 1992: a modification of CDC definitions of surgical wound infections. *Infect Control Hosp Epidemiol* 1992; **13**: 606–8. Reproduced with permission.

1. <https://www.sciencedirect.com/science/article/abs/pii/S0263931909001744>

2. <https://www.cdc.gov/nhsn/training/roadmap/psc/ssi.html>



SSIs

- There are specific surveillance windows
- SNF care teams can identify some SSIs
- Should inform the operating facility
 - Prompt treatment
 - Prevent further complications
 - Increase SSI surveillance accuracy



UNIT 2 Hand Hygiene QAPI Project





Unit 2 Hand Hygiene QAPI Project – Current State

A3 Project Title

Project Lead: Infection Preventionist or SNF Leader

Project Team: IP, Admin, DSD, Dietary Manager,

Facilitator: Infection Preventionist or SNF Leader

Laundry Manager, Purchasing

Project Champion(s): EVS Manager, IP, DON, DSD, Laundry Manager

Director

Date Updated: 10/19/22

1) Problem Statement: (description of the problem and its effect)

Staff are not performing adequate hand hygiene.
Inadequate hand hygiene leads to increased HAIs.

2) Current State: (depiction of the current state, its processes, and problems)

Best Practices/Literature Search:

3) Goal: (how will we know the project is successful; standard/basis for comparison)

4) Root Cause Analysis: (investigation depicting the problems' root causes)

5) Solutions: (action plans and findings of tested solutions)

Root Cause	Tested Solution	Responsible	Due	Finding

6) Check: (summary of the solutions' results, overall goal success, and any supporting metrics)

Goals and Metrics	Baseline	Target	Current
Goal			
Supporting Metric			
Supporting Metric			

7) Act: (action taken as a result of the Check, and a plan to sustain results)

- 1.
- 2.
- 3.



3 Tools to Identify Current State and Root Causes

- Staff Interviews
- Process Map
- Fishbone/Ishikawa Diagram



Staff Interviews

1. Don't tell them your hypothesis
2. Don't assume you already know
3. Avoid questions with 'yes/no' responses

Examples:

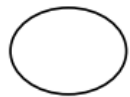
- What do you not like about the process of hand hygiene in this facility?
- If you could change anything about the process, what would you change? How? Why?

Source: <https://www.cms.gov/outreach-and-education/outreach/opendoorforums/downloads/qapiresourceguide090810.pdf>

Process Map/Flowchart Pointers

How do you develop a flowchart?

Flowcharts are diagrams that use shapes to show the types and flow of steps in a process. The shapes represent different types of steps or actions.



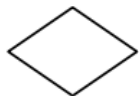
= beginning and end of a process



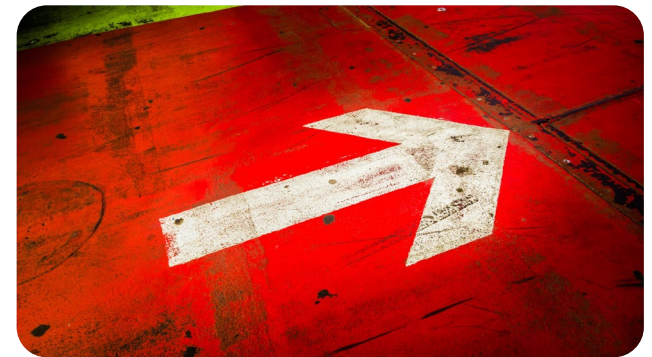
= direction or flow of the process



= a task or activity performed in the process

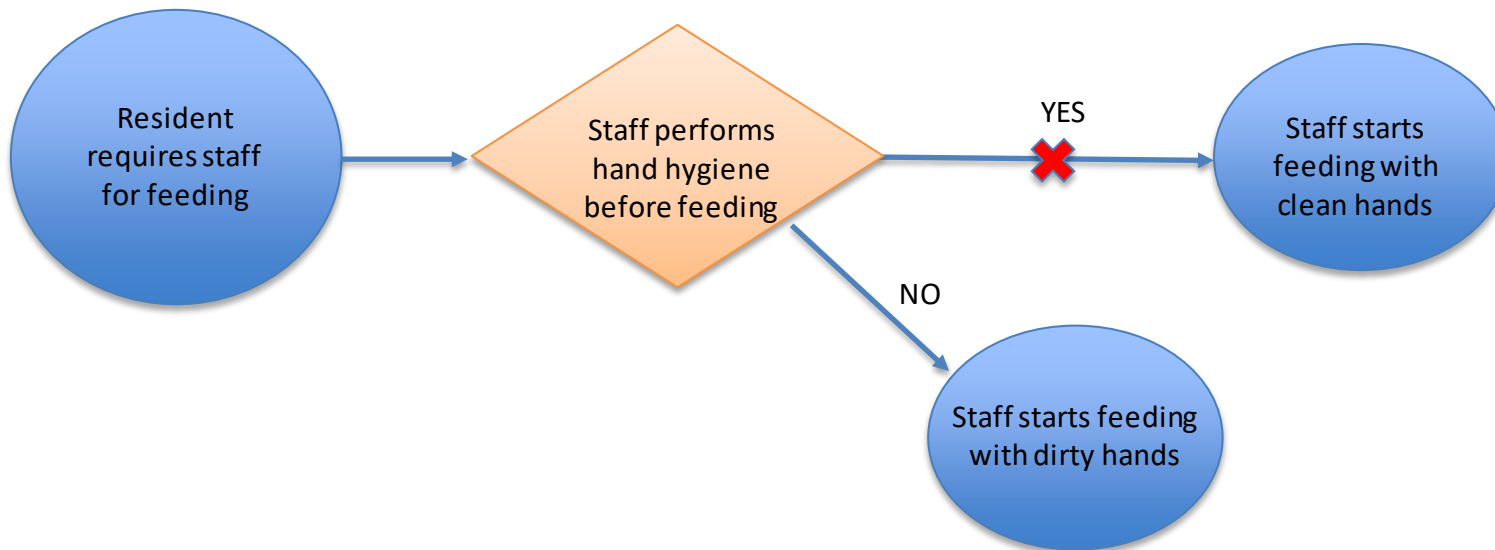


= a decision point (yes/no)



1. CMS QAPI Flowchart Guide: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/downloads/FlowchartGuide.pdf>

Process Map Example



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Project Team: IP, Admin, DSD, Dietary Manager,

Facilitator: Infection Preventionist or SNF Leader

Laundry Manager, Purchasing

Project Champion(s): EVS Manager, IP, DON, DSD, Laundry Manager Director

Date Updated: 10/19/22

1) Problem Statement: (description of the problem and its effect)

Staff are not performing adequate hand hygiene.
Inadequate hand hygiene leads to increased HAIs.

2) Current State: Staff interviews and/or process mapping revealed:

- ABHS is not accessible
- ABHS makes my hands dry
- I don't know the process of HH

Best Practices/Literature Search:

3) Goal: (how will we know the project is successful; standard/basis for comparison)

4) Root Cause Analysis: (investigation depicting the problems' root causes)

5) Solutions: (action plans and findings of tested solutions)

Root Cause	Tested Solution	Responsible	Due	Finding

6) Check: (summary of the solutions' results, overall goal success, and any supporting metrics)

Goals and Metrics	Baseline	Target	Current
Goal			
Supporting Metric			
Supporting Metric			

7) Act: (action taken as a result of the Check, and a plan to sustain results)

- 1.
- 2.
- 3.



Questions





Sources

- <https://www.cdc.gov/hai/>
- <https://www.e-cep.org/journal/view.php?number=20125553508>
- https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF_PreventingCommonHAI.aspx
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- <https://www.cdc.gov/nhsn/training/roadmap/psc/ssi.html>

October 16 - 22, 2022

IIPW 2022

“The Future is Infection Prevention:
50 Years of Infection Prevention”

INTERNATIONAL
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50 YEARS
OF INFECTION
PREVENTION