vSNF Workgroup | Workshop #8

Infection Surveillance in Skilled Nursing Facilities

September 14, 2022

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

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Agenda

12-12:05PM	Welcome
12:05-1:25PM	Infection Surveillance in SNF Questions and Discussion
1:25-1:30PM	Next Steps

Infection Surveillance in Skilled Nursing Facilities

September 14, 2022

Infection Preventionist Training for Skilled Nursing Facilities
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health

Implicit Bias

- Describes how our unconscious attitudes or judgements can influence our thoughts, decisions or actions
- Includes involuntary, unintentional perceptions made without awareness
- Occurs as our brains sort information and perceive data to understand our world
- Affects our decisions, contributing to societal disparities
  - Self awareness about implicit bias can promote healthcare diversity and equality
- Learn more about your own implicit bias at Project Implicit (implicit.harvard.edu/implicit/)

Objectives

- Discuss basic principles of epidemiology and how they apply to healthcare-associated infection (HAI) surveillance
- Review recommended surveillance practices
- Describe surveillance outcome and process measures for infection prevention
- Review surveillance definitions (NHSN and McGeer Criteria)

Surveillance

The purpose of surveillance is to identify infections and to monitor adherence to recommended IPC practices in order to reduce infections and prevent the spread of pathogens among residents, staff, and visitors.

CDC LTCF IP Training Course (courses.cdc.train.org/Module4_InfectionSurveillance_LTC/module_4_infection_surveillance_lesson_1_9_purpose_of_surveillance.html)

Epidemiology

- Definition: Study of disease in populations

  Clinical care: focus on the individual

  vs

  Epidemiology: focus on the group
- Healthcare epidemiology answers questions such as:
  - What factors contribute to increased infection rates?
  - What populations are at higher risk for developing HAI?
  - How have HAI changed over time?
- Assessment of trends over time

Epidemiology of Infection Prevention

- Goal is HAI prevention
- Professional societies
  - Association for Professionals in Infection Control and Epidemiology (APIC)
  - Society for Healthcare Epidemiology of America (SHEA)
  - Infectious Diseases Society of America (IDSA)
- Epidemiology and surveillance underlay HAI prevention
  - Use data for action!

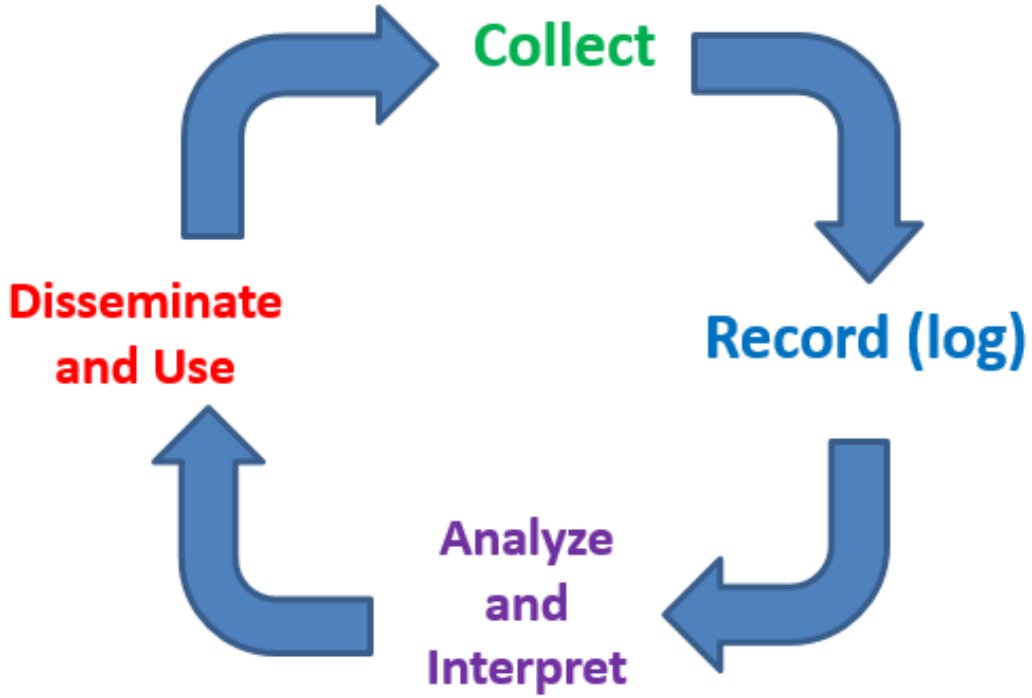
Epidemiologic Surveillance

- The ongoing, systematic collection, recording, analysis, interpretation, and dissemination of data
- Reflects rate of disease onset or current disease status of a community or population (e.g., SNF)
- Aims to identify risk factors for disease
- Used for public health action to reduce illness and death

Surveillance

A surveillance system is an information loop that starts and ends with communication and action

Flow of Surveillance Data



Key Tenets of HAI Surveillance

- A written surveillance plan
  - Discussed in Communications Module
  - Based on the facility annual risk assessment
  - What HAI am I tracking? Why?
  - How will data be used?
  - Where are opportunities to prevent HAI in my facility?
- The intensity of surveillance efforts need to be maintained over time
- Stay consistent over time; always apply same surveillance definitions

Recommended Practices for Surveillance

1. Assess the population
2. Select the outcome or process for surveillance
   - Comply with State and Federal requirements
3. Use surveillance definitions (McGeer criteria in LTC)
4. Collect surveillance data
5. Calculate and analyze infection rates
6. Apply risk stratification methods
7. Report and use surveillance information

AJIC *Am J Infect Control,* 26:277-88, 1998

AJIC *Am J Infect Control,* 35:427-40, 2007

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Examples of Process Measures

- CAUTI prevention: percent urinary catheters with appropriate indication
- CLABSI prevention: percent adherence to central line maintenance practices
- CDI prevention: thoroughness of environmental cleaning
- HAI prevention: percent adherence to hand hygiene

Examples of Outcome Measures

- Central line associated bloodstream infection (CLABSI) rate
- Urinary Tract Infection (UTI) rate
- Catheter associated UTI (CAUTI) rate
- *C. difficile* infection rate

Measuring Infections

Incidence

- Number of persons in a population who develop a disease or condition within a specified period of time
- **Measure of NEW infections**

Prevalence

- Proportion of persons in a population who have a disease or condition at a given point in time
- **Measure of infections that are present**

Incidence

Incidence measures the frequency of **disease onset** (i.e., rate). Answers: 'What is the risk of X occurring?'

$$\text{Incidence} = \frac{(\#\text{ of } \textbf{new cases}) \text{during a specified time period}}{\text{(size of a specific population)}}$$

Example:

$$\frac{\text{5 scabies infections}}{\text{180 residents}} = 0.027 \times 100 =$$

2.7 new infections per 100 residents in the facility during January 2020

Prevalence

Prevalence measures disease status in a population at a particular time.
Answers: 'How common is X?'

Prevalence = (# of **existing cases**) during a specified time period
(size of a specific population)

Example:

$$\frac{\text{2 residents colonized with MRSA}}{\text{10 residents admitted Mar 31, 2019}} = 0.2 \times 100 = 20\%$$

Incidence Density Rate

Incidence density accounts for **variation in the time** each person is at risk for the event.

$$\text{Incidence density rate} = \frac{\text{(\# of new cases)}}{\text{(person-time at risk)}} \quad \text{during a specified time period}$$

Example:

$$\frac{\text{5 UTI}}{\text{1050 of resident days}} = 0.00476 \times 1000 = 4.76 \text{ UTI per 100 resident days in in June 2020}$$

Clinical vs Surveillance Definitions

- Clinical
  - Patient centered
  - Used for therapeutic decisions
- Surveillance
  - Population based
  - Applied exactly the same way each time

Laboratory-based surveillance

A surveillance method in which the reports of cases come from clinical laboratory data only (forgoing case review/symptoms)

HAI Surveillance Definitions

- Case definition (surveillance definition)
  - Clinical and laboratory characteristics that a patient must have to be counted as an event or case for tracking purposes
  - **Time, place, & person** (e.g., age, sex)
  - Universal case reporting
  - A surveillance system in which all cases of a disease are to be reported

Applying Surveillance Definitions

- Always refer to written definitions to ensure accuracy of applying case definitions
  - Use standardized, published, validated definitions where available
    - McGeer for Long Term Care
    - NHSN for Acute Care Hospitals
- For accurate and valid comparisons, use the same definitions
  - If definitions change, the comparability of rates over time will be compromised

LTC Constitutional Criteria Used in Definitions

Constitutional findings used as part of infection surveillance definitions

- Fever
- Leukocytosis
- Acute change in mental status from baseline
- Acute functional decline

Constitutional Criteria - Fever

A. Fever

- ❑ Single oral temperature >37.8°C (>100.0°F)

  OR

- ❑ Repeated oral temperatures >37.2°C (99°F)

  or rectal temperatures >37.5°C (99.5°F)

  OR

- ❑ Single temperature >1.1°C (2°F) over baseline from any site (oral, tympanic, axillary)

Constitutional Criteria - Leukocytosis

B. Leukocytosis

- ❑ Neutrophilia (>14,000 leukocytes/mm^3)

  (New 1/1/21: NHSN UTI definition neutrophilia >10,000 leukocytes/mm^3)

OR

- ❑ Left shift (>6% bands or ≥1,500 bands/mm^3)

Constitutional Criteria – Acute Change in Mental Status From Baseline

C. All criteria must be present

- ❑ **Acute onset**

AND

- ❑ **Fluctuating course** -behavior coming and going or changing in severity during assessment

AND

- ❑ **Inattention** – unable to keep track of discussion or easily distracted

AND EITHER

- ❑ **Disorganized thinking-** rambling conversation, unclear flow of ideas, unpredictably switches subject

OR

- ❑ **Altered level of consciousness –** different from baseline, hyperalert, sleepy, drowsy, difficult to arouse, non responsive

Constitutional Criteria – Acute Functional Decline

D. Acute functional decline

- A new **3-point increase** in total activities of daily living (ADL) score (range, 0-28) from baseline based on the following ADL items scored from 0 (independent) to 4 (total dependence):
  - Bed mobility
  - Transfer
  - Locomotion within LTC facility
  - Dressing
  - Toilet use
  - Personal hygiene
  - Eating

Respiratory Infections Surveillance Definitions

- Four respiratory infection definitions with varying criteria
  1. Common cold symptoms/pharyngitis
  2. Influenza-like illness
  3. Pneumonia
  4. Lower respiratory tract (bronchitis or tracheobronchitis)

Common Cold or Pharyngitis Surveillance Definition

- **At least 2** criteria must be present
  - ❑ Runny nose or sneezing
  - ❑ Stuffy nose
  - ❑ Sore throat, hoarseness, or difficulty swallowing
  - ❑ Dry cough
  - ❑ Swollen or tender glands in the neck

Influenza-like Illness Surveillance Definition (SNF)

- **Both Criteria 1 and 2** must be present
  - ❑ 1. Fever (refer to constitutional criteria)
  - ❑ 2. **At least 3** of the following influenza-like illness sub-criteria
    - ❑Chills
    - ❑New headache or eye pain
    - ❑Myalgias or body aches
    - ❑Malaise or loss of appetite
    - ❑Sore throat
    - ❑New or increased dry cough

Pneumonia Surveillance Definition (SNF)

- **All 3** criteria must be present
  - ❑ 1. Interpretation of a chest radiograph as demonstrating **pneumonia** or the presence of a **new infiltrate**
  - ❑ 2. **At least 1** of the following respiratory subcriteria
    - ❑ New or increased cough
    - ❑ New or increased sputum production
    - ❑ 0_2 saturation <94% on room air or a reduction in 0_2 saturation of >3% from baseline
    - ❑ New or changed lung examination abnormalities
    - ❑ Pleuritic chest pain
    - ❑ Respiratory rate of >25 breaths/minute
  - ❑ 3. **At least 1** of the constitutional criteria

Lower Respiratory Tract Infection Surveillance Definition

Bronchitis or tracheobronchitis

- **All 3** criteria must be present
  - ❑ 1. Chest radiograph either not performed, or negative for pneumonia or new infiltrate
  - ❑ 2. At least **2** of the respiratory subcriteria listed in previous slide
  - ❑ 3. At least **1** of the constitutional criteria

CDC Criteria – National Health Safety Network (NHSN)

- Definitions used by Acute Care Hospitals (ACH)
- Types of Infections:
  - Ventilator Associated Event (VAE)
  - Pneumonia (PNU 1, PNU2, PNU3) in ventilated and non-ventilated patients

CDC Criteria – National Health Safety Network (NHSN) Pneumonia Definitions

- Pneumonia (PNEU) is identified by using a combination of imaging, clinical and laboratory criteria.
- Ventilator: Any device used to support, assist, or control respiration (inclusive of the weaning period) through the application of positive pressure to the airway when delivered via an artificial airway, specifically an oral/nasal endotracheal or tracheostomy tube.

CDC Criteria – National Health Safety Network (NHSN) Pneumonia Definitions (Continued)

- Ventilator-associated pneumonia (VAP): A pneumonia where the patient is on mechanical ventilation for > 2 consecutive calendar days on the date of event, with day of ventilator placement being Day 1,* AND the ventilator was in place on the date of event or the day before.

NHSN: Ventilator Associated Event (VAE)

Patient has a baseline period of stability or improvement on the ventilator, defined by ≥ 2 calendar days of stable or decreasing daily minimum* FiO2 or PEEP values. The baseline period is defined as the 2 calendar days immediately preceding the first day of increased daily minimum PEEP or FiO2. *Daily minimum defined by lowest value of FiO2 or PEEP during a calendar day that is maintained for > 1 hour

NHSN: Ventilator Associated Condition (VAC)

After a period of stability or improvement on the ventilator, the patient has at least one of the following indicators of worsening oxygenation: 1) Increase in daily minimum* FiO2 of ≥ 0.20 (20 points) over the daily minimum FiO2 of the first day in the baseline period, sustained for ≥ 2 calendar days. 2) Increase in daily minimum* PEEP values of ≥ 3 cmH2O over the daily minimum PEEP of the first day in the baseline period† , sustained for ≥ 2 calendar days. *Daily minimum defined by lowest value of FiO2 or PEEP during a calendar day that is maintained for > 1 hour. †Daily minimum PEEP values of 0-5 cmH2O are considered equivalent for the purposes of VAE surveillance.

NHSN: Infection-related Ventilator-Associated Complication (IVAC):

All VAC Criteria Met and:
On or after calendar day 3 of mechanical ventilation and within 2 calendar days before or after the onset of worsening oxygenation, the patient meets both of the following criteria:
1) Temperature > 38 °C or < 36°C, OR white blood cell count ≥ 12,000 cells/mm3 or ≤ 4,000 cells/mm3 .
AND
2) A new antimicrobial agent(s) (see Appendix for eligible antimicrobial agents) is started and is continued for ≥ 4 qualifying antimicrobial days (QAD).

NHSN: Possible Ventilator-Associated Pneumonia (PVAP)

All IVAC Criteria Met and:
ONE of the following criteria is met (account for organism exclusions specified in the protocol):
1) Criterion 1:
Positive culture of one of the following specimens, meeting quantitative or semi-quantitative thresholds† as outlined in protocol, without requirement for purulent respiratory secretions:

- Endotracheal aspirate, ≥ 105 CFU/ml or corresponding semi-quantitative result
- Bronchoalveolar lavage, ≥ 104 CFU/ml or corresponding semi-quantitative result
- Lung tissue, ≥ 104 CFU/g or corresponding semi-quantitative result
- Protected specimen brush, ≥ 103 CFU/ml or corresponding semi-quantitative result

NHSN: Possible Ventilator-Associated Pneumonia (PVAP)

All IVAC Criteria Met and:
ONE of the following criteria is met (taking into account organism exclusions specified in the protocol):
Criterion 2:
Purulent respiratory secretions (defined as secretions from the lungs, bronchi, or trachea that contain ≥ 25 neutrophils and ≤ 10 squamous epithelial cells per low power field [lpf, x100])†
PLUS organism identified from one of the following specimens (to include qualitative culture, or quantitative/semi-quantitative culture without sufficient growth to meet Criterion #1):

- Sputum
- Endotracheal aspirate
- Bronchoalveolar lavage
- Lung tissue
- Protected specimen brush

NHSN: Possible Ventilator-Associated Pneumonia (PVAP)

All IVAC Criteria Met and:
ONE of the following criteria is met (taking into account organism exclusions specified in the protocol):
Criterion 3:
One of the following positive tests:

- Organism identified from pleural fluid (where specimen was obtained during thoracentesis or within 24 hours of chest tube placement; pleural fluid specimens collected after a chest tube is repositioned or from a chest tube in place > 24 hours are not eligible for PVAP)

NHSN: Possible Ventilator-Associated Pneumonia (PVAP)

Criterion 3 (continued):
One of the following positive tests:

- Lung histopathology, defined as: 1) abscess formation or foci of consolidation with intense neutrophil accumulation in bronchioles and alveoli; 2) evidence of lung parenchyma invasion by fungi (hyphae, pseudohyphae, or yeast forms); 3) evidence of infection with the viral pathogens listed below based on results of immunohistochemical assays, cytology, or microscopy performed on lung tissue
- Diagnostic test for Legionella species
- Diagnostic test on respiratory secretions for influenza virus, respiratory syncytial virus, adenovirus, parainfluenza virus, rhinovirus, human metapneumovirus, coronavirus

NHSN: Clinically Defined Pneumonia (PNU1)

Signs and Symptoms

At least one of the following

- ❑ Fever (>38.0 °C)
- ❑ Leukocytosis (≥12,000 WBC/mm^3)
- ❑ Leukopenia (≤ 4,000)
- ❑ For adults ≥ 70 years old, altered mental status with no other recognized cause

And at least two of the following:

- ❑ New onset of purulent sputum[3] or change in character of sputum[4] , or increased respiratory secretions, or increased suctioning requirements
- ❑ New onset or worsening cough, or dyspnea, or tachypnea[5]
- ❑ Rales[6] or bronchial breath sounds
- ❑ Worsening gas exchange (for example: O2 desaturations (for example: PaO2/FiO2 ≤ 240)[7] , increased oxygen requirements, or increased ventilator demand)

Criteria for ≤12 years of age omitted

NHSN: Clinically Defined Pneumonia (PNU1)

Must meet Imaging and Signs & Symptoms criteria

Imaging Test Evidence

Two or more serial chest imaging test results with at least one of the following [1, 2, 14]:
New and persistent or Progressive and persistent

- ❑ Infiltrate
- ❑ Consolidation
- ❑ Cavitation
- ❑ Pneumatoceles, in infants ≤1 year old

Note: In patients without underlying pulmonary or cardiac disease (for example: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), one definitive imaging test result is acceptable. [1]

NHSN: Specific Site Algorithm for Pneumonia with Common Bacterial or Filamentous Fungal Pathogens and Specific Laboratory Findings (PNU2)

Must meet Imaging, Signs & Symptoms criteria, and Laboratory Evidence

Imaging Test Evidence

Two or more serial chest imaging test results with at least one of the following [1, 2, 14]:
New and persistent or Progressive and persistent

- ❑ Infiltrate
- ❑ Consolidation
- ❑ Cavitation
- ❑ Pneumatoceles, in infants ≤1 year old

Note: In patients without underlying pulmonary or cardiac disease (for example: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), one definitive imaging test result is acceptable. [1]

NHSN: Specific Site Algorithm for Pneumonia with Common Bacterial or Filamentous Fungal Pathogens and Specific Laboratory Findings (PNU2)

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- ❑ Fever (>38.0 °C)
- ❑ Leukocytosis (≥12,000 WBC/mm^3)
- ❑ Leukopenia (≤ 4,000)
- ❑ For adults ≥ 70 years old, altered mental status with no other recognized cause

And at least one of the following:

- ❑ New onset of purulent sputum[3] or change in character of sputum[4] , or increased respiratory secretions, or increased suctioning requirements
- ❑ New onset or worsening cough, or dyspnea, or tachypnea[5]
- ❑ Rales[6] or bronchial breath sounds
- ❑ Worsening gas exchange (for example: O2 desaturations (for example: PaO2/FiO2 ≤ 240)[7] , increased oxygen requirements, or increased ventilator demand)

NHSN: Specific Site Algorithm for Pneumonia with Common Bacterial or Filamentous Fungal Pathogens and Specific Laboratory Findings (PNU2)

Laboratory Evidence

At least one of the following

❑ Organism identified from blood [8, 13]

❑ Organism identified from pleural fluid [9, 13]

❑ Positive quantitative culture or corresponding semi-quantitative culture result[9] from minimally-contaminated LRT specimen (specifically, BAL, protected specimen brushing or endotracheal aspirate)

❑ ≥ 5% BAL-obtained cells contain intracellular bacteria on direct microscopic exam (for example: Gram's stain)

❑ Positive quantitative culture or corresponding semi-quantitative culture result[9] of lung tissue

❑ Histopathologic exam shows at least one of the following evidences of pneumonia:

o Abscess formation or foci of consolidation with intense PMN accumulation in bronchioles and alveoli

o Evidence of lung parenchyma invasion by fungal hyphae or pseudohyphae

NHSN: Specific Site Algorithm for Pneumonia in Immunocompromised Patients (PNU3)

Must meet Imaging, Signs & Symptoms criteria, and Laboratory Evidence

Imaging Test Evidence

Two or more serial chest imaging test results with at least one of the following [1, 2, 14]:
New and persistent or Progressive and persistent

- ❑ Infiltrate
- ❑ Consolidation
- ❑ Cavitation
- ❑ Pneumatoceles, in infants ≤1 year old

Note: In patients without underlying pulmonary or cardiac disease (for example: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), one definitive imaging test result is acceptable. [1]

NHSN: Specific Site Algorithm for Pneumonia in Immunocompromised Patients (PNU3)

Signs and Symptoms

Patient who is immunocompromised (see definition in footnote10) has at least one of the following:

- ❑ Fever (>38.0 °C)
- ❑ For adults ≥ 70 years old, altered mental status with no other recognized cause
- ❑ New onset of purulent sputum[3] or change in character of sputum[4] , or increased respiratory secretions, or increased suctioning requirements
- ❑ New onset or worsening cough, or dyspnea, or tachypnea[5]
- ❑ Rales[6] or bronchial breath sounds
- ❑ Worsening gas exchange (for example: O2 desaturations (for example: PaO2/FiO2 ≤ 240)[7] , increased oxygen requirements, or increased ventilator demand)
- ❑ Hemoptysis
- ❑ Pleuritic chest pain

NHSN: Specific Site Algorithm for Pneumonia in Immunocompromised Patients (PNU3)

Laboratory Evidence

At least one of the following

❑Identification of matching Candida spp. from blood and one of the following: sputum, endotracheal aspirate, BAL or protected specimen brushing [11, 12, 13]

❑Evidence of fungi (excluding any Candida and yeast not otherwise specified) from minimally-contaminated LRT specimen (specifically BAL, protected specimen brushing or endotracheal aspirate) from one of the following:

– Direct microscopic exam

– Positive culture of fungi

– Non-culture diagnostic laboratory test

OR Any of the following from: LABORATORY CRITERIA DEFINED UNDER PNU2

Collect Surveillance Data

- Include IP, staff, and others with responsibility or interest
- Limit collection to only what is needed
- Be involved in efforts when creating or revising the electronic health records to enable HAI data collection

Prospective Surveillance

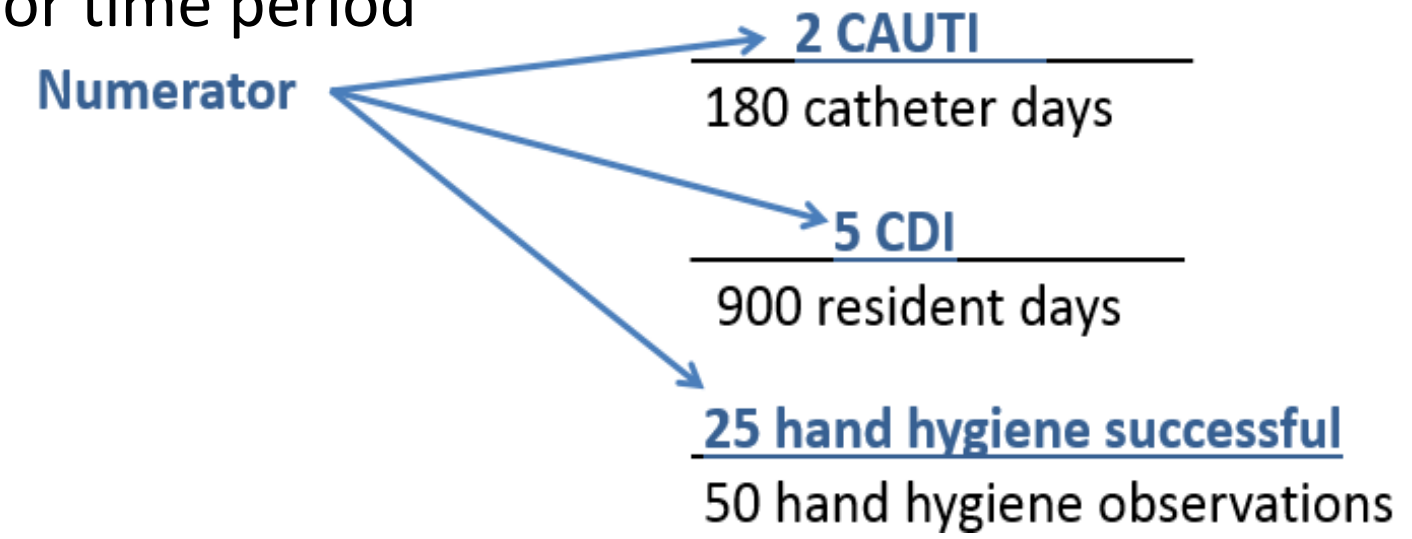
- Initiated when patient is still under the care
- Advantages
  - Ability to capture information in real time
  - Can interview caregivers
  - Can gather findings not recorded in patient record
  - Easier to demonstrate temporality (e.g., before and after observations) and therefore make causal inferences

Retrospective Surveillance

- Closed record review after patient has been discharged
- Advantages:
  - Allows for comprehensive review of sequential events
  - Efficient
- Disadvantage:
  - Does not allow for prompt intervention
  - Important/relevant information my be missing
- Administrative (billing, coding) data alone **cannot accurately identify HAI**
  - May be useful for identifying **possible HAI**

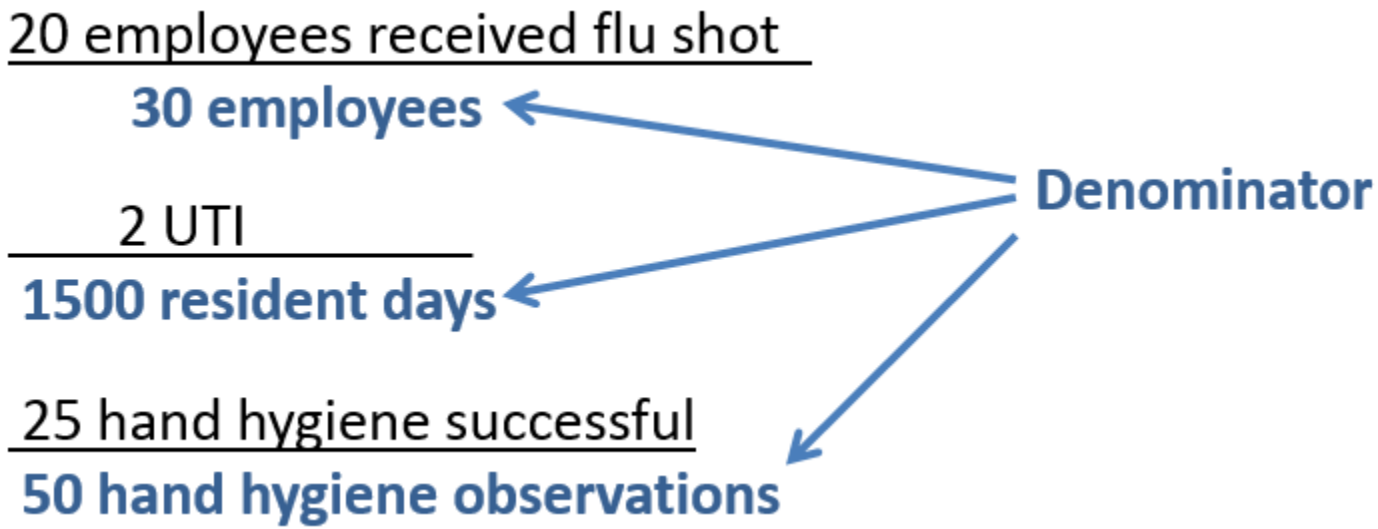
Numerator Data

- Numerator = number of instances of the “event” being measured
- Includes:
  - HAI identified through **active** surveillance: CLABSI, CAUTI
  - HAIs identified by **laboratory** finding alone: CDI
  - Care **practices, processes**, observations: hand hygiene, gown and glove use compliance
- Record point in time or time period



Denominator Data

- Denominator = number of residents or procedures being followed, the population size, or person-time at risk (resident or line days)
- Includes: procedures, observations, number of employees or number of resident days



Risk Factor Data

- Factors that increase a patient's risk for HAI include
  - Patient characteristics and co-morbidities
  - Facility characteristics
  - Unit / ward type
  - Community disease prevalence
  - Invasive device use and duration
  - Surgical procedure type, duration, approach, and other circumstances
- Data collection includes risk factor data necessary for risk adjustment

Apply Risk Adjustment Methodology

- **CLABSI and CAUTI:** Infection risk takes into account patient location
- **SSI:** Probability of infection calculated for each surgical patient; varies by surgery
- **CDI & MDRO (LabID):** Infection type risk accounts for facility characteristics, disease burden (community prevalence), and testing method (for CDI)

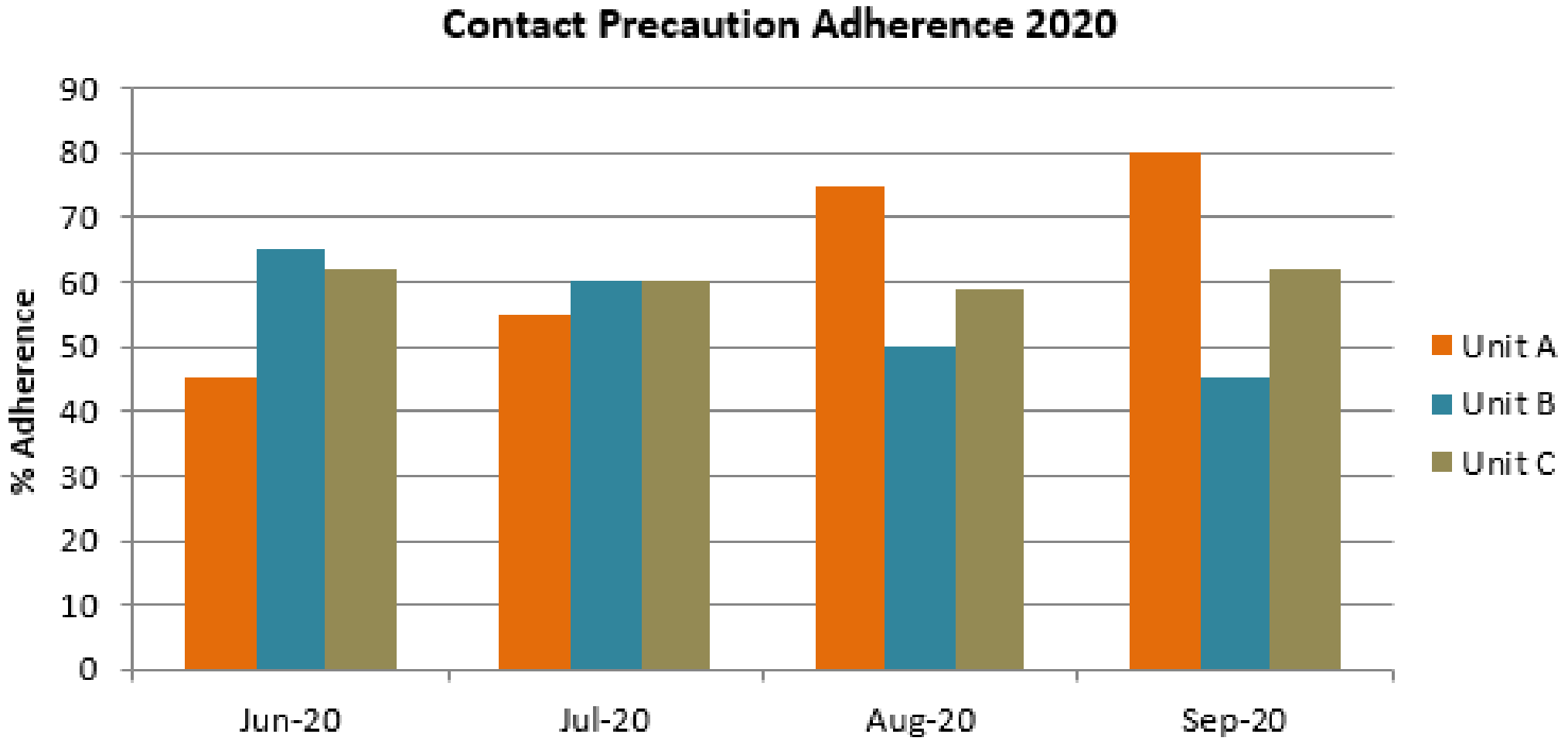
Report and Use Surveillance Data

"The demonstrable power of surveillance is in sharing findings with those who need to know and who can act on the findings to improve patient safety."

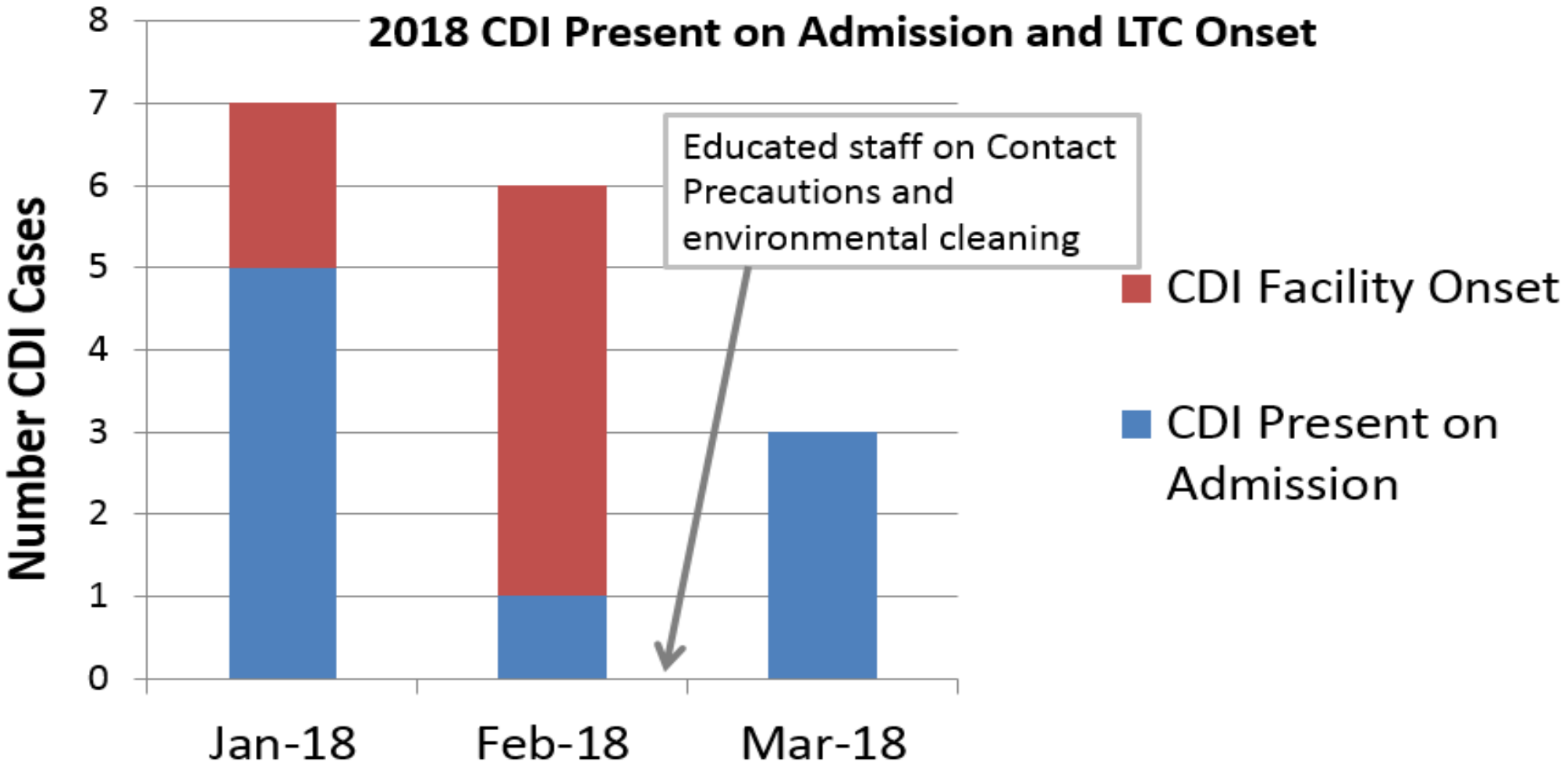
AJIC Am J Infect Control, 35:427-40, 2007

- Plan for distribution of findings
- Report to health care providers most able to impact patient care
- Report in a manner to stimulate improvement
- Use visual displays of data (e.g., charts, graphs, tables)

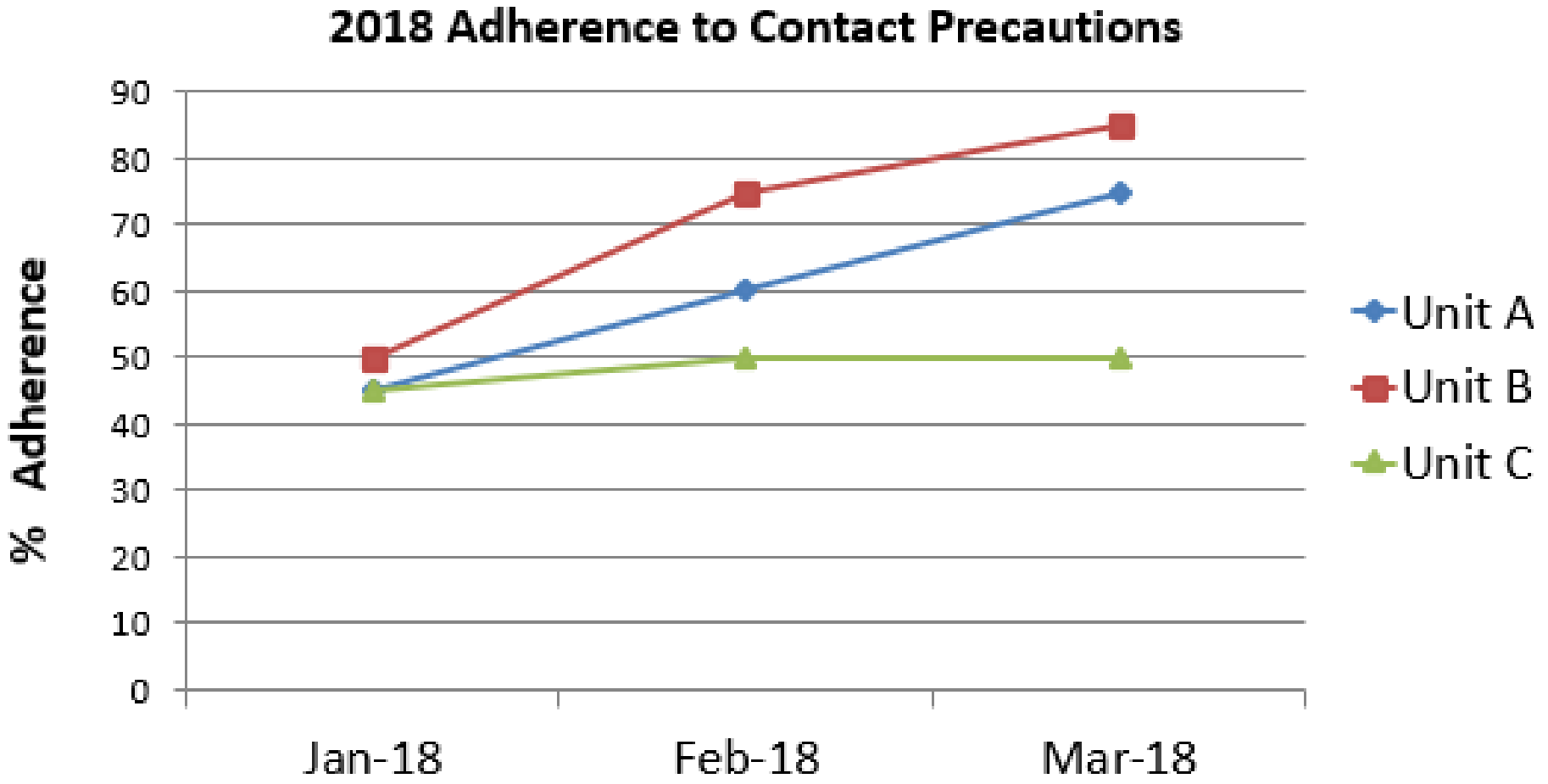
Sample Bar Chart



Sample CDI Chart



Sample Line Graph



Sample Surveillance Log

ContinueCARE Hospital at Baptist Health Corbin

Infection Surveillance Log

Patient Name	Culture Date	Site	ORGANISM CULTURED	ABX start	ABX stop	HAI Y/N	TYPE ISOLATION
Admit Date:_____MRN:_____ Prev.Hospt:_____ DOB:_____ ___Dialysis: ___Vent ___Trach ___Wounds ___CL date:_____ ___FC date:_____ reason:_____ Co-morbidities:							

[APIC IP Talk](Community.apic.org/communities) (Community.apic.org/communities)

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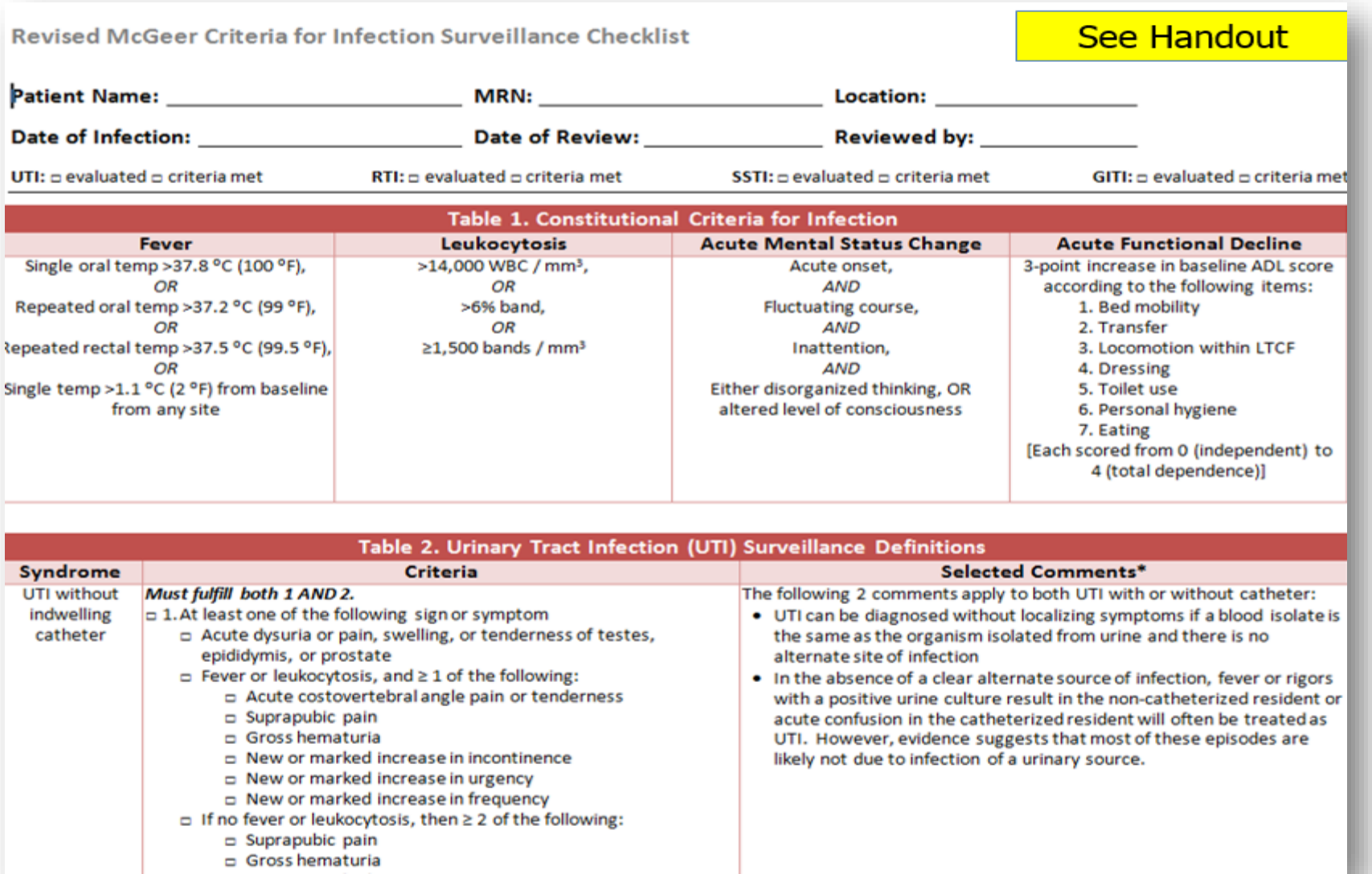
Sample Resident HAI Worksheet



Revised McGeer Criteria for Infection Surveillance Checklist

See Handout

Patient Name: _____ **MRN:** _____ **Location:** _____

Date of Infection: _____ **Date of Review:** _____ **Reviewed by:** _____

UTI: ▫ evaluated ▫ criteria met **RTI:** ▫ evaluated ▫ criteria met **SSTI:** ▫ evaluated ▫ criteria met **GITI:** ▫ evaluated ▫ criteria met

Table 1. Constitutional Criteria for Infection

Fever	Leukocytosis	Acute Mental Status Change	Acute Functional Decline
Single oral temp >37.8 °C (100 °F), *OR* Repeated oral temp >37.2 °C (99 °F), *OR* Repeated rectal temp >37.5 °C (99.5 °F), *OR* Single temp >1.1 °C (2 °F) from baseline from any site	>14,000 WBC / mm³, *OR* >6% band, *OR* ≥1,500 bands / mm³	Acute onset, *AND* Fluctuating course, *AND* Inattention, *AND* Either disorganized thinking, OR altered level of consciousness	3-point increase in baseline ADL score according to the following items: 1. Bed mobility 2. Transfer 3. Locomotion within LTCF 4. Dressing 5. Toilet use 6. Personal hygiene 7. Eating [Each scored from 0 (independent) to 4 (total dependence)]

Table 2. Urinary Tract Infection (UTI) Surveillance Definitions

Syndrome	Criteria	Selected Comments*
UTI without indwelling catheter	***Must fulfill both 1 AND 2.*** ▫ 1. At least one of the following sign or symptom ▫ Acute dysuria or pain, swelling, or tenderness of testes, epididymis, or prostate ▫ Fever or leukocytosis, and ≥ 1 of the following: ▫ Acute costovertebral angle pain or tenderness ▫ Suprapubic pain ▫ Gross hematuria ▫ New or marked increase in incontinence ▫ New or marked increase in urgency ▫ New or marked increase in frequency ▫ If no fever or leukocytosis, then ≥ 2 of the following: ▫ Suprapubic pain ▫ Gross hematuria	The following 2 comments apply to both UTI with or without catheter: • UTI can be diagnosed without localizing symptoms if a blood isolate is the same as the organism isolated from urine and there is no alternate site of infection • In the absence of a clear alternate source of infection, fever or rigors with a positive urine culture result in the non-catheterized resident or acute confusion in the catheterized resident will often be treated as UTI. However, evidence suggests that most of these episodes are likely not due to infection of a urinary source.

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Summary

- The IP must understand the basic principles of epidemiology and apply them to HAI surveillance
- Accurate and consistent data collection, recording, analysis, interpretation, and communication of findings is an essential part of the infection prevention and surveillance plan
- Surveillance of process measures helps focus prevention activities to improve adherence to care practices that prevent infections
- Consistent application of standard surveillance definitions will ensure accurate comparison over time

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Questions?

For more information,
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Timeline

- **October 12:** Quality Improvement Project – Part 1
- **November 9:** Interfacility Transfer Communication (Joint meeting with LTACH partners)
- November 2022 – January 2023: Midpoint IP assessments
- **Through October 2023:** Continued monthly workshops and QI project implementation

Next Steps

- ❑ Fill out the **course evaluation** (Required for CEU)
- ❑ Continue to **check in monthly** with your HAI Program IP
- ❑ Join us for our **next workshop on Wednesday, October 12, 2022**, 12-1:30PM: Quality Improvement Project Updates – Part 1
- ❑ **Access resources** on the vSNF webpage (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/vSNF.aspx)

Questions?

Contact Erin Garcia at Erin.Garcia@cdph.ca.gov