

SURVEILLANCE TECHNIQUES AND METHODOLOGIES

Evelyn Cook, RN, CIC

SPICE

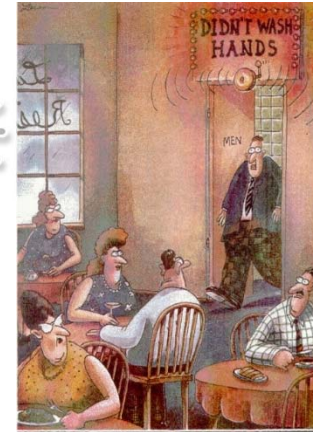
Goals of Surveillance Lecture

- Describe the recommended practices for surveillance
- List the elements required for an organization surveillance system
- Describe standardized definitions used for surveillance
- Apply information to case studies

Key Concepts

- Surveillance is an essential component of an effective infection prevention program.
 - Should be based on sound epidemiological and statistical principles
 - Should be designed in accordance with current recommended practices and consist of defined elements
 - Plays a critical role in identifying outbreaks, emerging infectious disease and bioterrorist events

Definitions

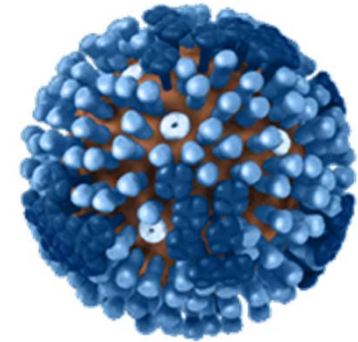


- Continual observation of a person or group, especially one suspected of doing something illegal (Bing Dictionary)
- Is the monitoring of the **behavior**, activities, or other changing information, usually of people for the purpose of influencing, managing, directing or protecting. (Wikipedia)



“Local IP”

Definitions cont'd



- **Disease surveillance** is an epidemiologic practice by which the spread of disease, is monitored in order to establish patterns of progression. **The main reason of disease surveillance is to predict, observe, and minimize the harm caused by outbreak, epidemic, and pandemic situations, as well as increase knowledge about which factors contribute to such circumstances.** A key part of modern disease surveillance is the practice of **disease case reporting.**

Health
Department

Definition cont'd

- “Surveillance is a 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 and processes”



- Observation
- Monitor behavior
- Establish patterns/trends
- Measure outcomes, processes; Analyze data; feedback of data to improve outcomes and processes

Evolution of Surveillance Programs

- 1958: AHA recommended in response to outbreaks of *Staphylococcus aureus* infections in hospitals.
- 1960's: CDC recommended hospital base programs include surveillance
- 1976: TJC first included infection surveillance, prevention and control standards in its accreditation manual

The SENIC Project. Study on the Efficacy of Nosocomial Infection Control.

- CDC undertook in 1974
- Three primary objectives:
 - 1) to determine whether (and, if so, to what degree) the implementation of infection surveillance and control programs (ISCPs) has lowered the rate of nosocomial infection,
 - 2) to describe the current status of ISCPs and infection rates, and
 - 3) to demonstrate the relationships among characteristics of hospitals and patients, components of ISCPs, and changes in the infection rate.



SENIC Findings

- SENIC found that hospitals reduced their nosocomial infection rates by approximately 32% if their infection surveillance and control program included four components:
 - 1) appropriate emphases on surveillance activities and vigorous control efforts,
 - 2) at least one full-time infection-control practitioner per 250 beds,
 - 3) a trained hospital epidemiologist, and
 - 4) for surgical wound infections (SWIs), feedback of wound infection rates to practicing surgeons.

Rational for conducting Surveillance

- Determine baseline (endemic)
- Early detection of epidemics (adverse outcomes)
- Assess the effectiveness of prevention and control measures
- Monitor the occurrence of adverse outcomes to identify risk factors
- Observe practices to promote compliance
- Target performance improvement
- Compliance with regulations and accrediting agencies (including health department)
- Monitor bioterrorism events
- Provide information for the education of healthcare personnel

New Developments in HAI Surveillance [Past Decade]

- Continuing shift from acute care to ambulatory, LTCF
- Decreased LOS across continuum of care
- Emerging and reemerging infectious diseases
- Bioterrorism and syndromic surveillance
- Use of surveillance data to monitor non-infectious events
- Active surveillance culturing
- Culture change promotes moving beyond benchmarking and aiming for zero HAIs

National Healthcare Safety Network (NHSN)

- NHSN is an internet-based surveillance system that integrates the surveillance systems previously managed separately in the Division of Healthcare Quality Promotion (DHQP) at CDC
 - National Nosocomial Infections Surveillance (NNIS) system
 - Dialysis Surveillance Network (DSN)
 - National Surveillance System for Health Workers (NaSH)



Purposes of NHSN

Original

- Collect data from a sample of US healthcare facilities to permit valid estimation of the
 - magnitude of adverse events among patients and healthcare personnel
 - adherence to practices known to be associated with prevention of healthcare-associated infections (HAI)
- Analyze and report collected data to permit recognition of trends



Purposes of NHSN

- Provide facilities with risk-adjusted data that can be used for inter-facility comparisons and local quality improvement activities
- Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare personnel safety problems and prompt intervention with appropriate measures
- Conduct collaborative research studies with members



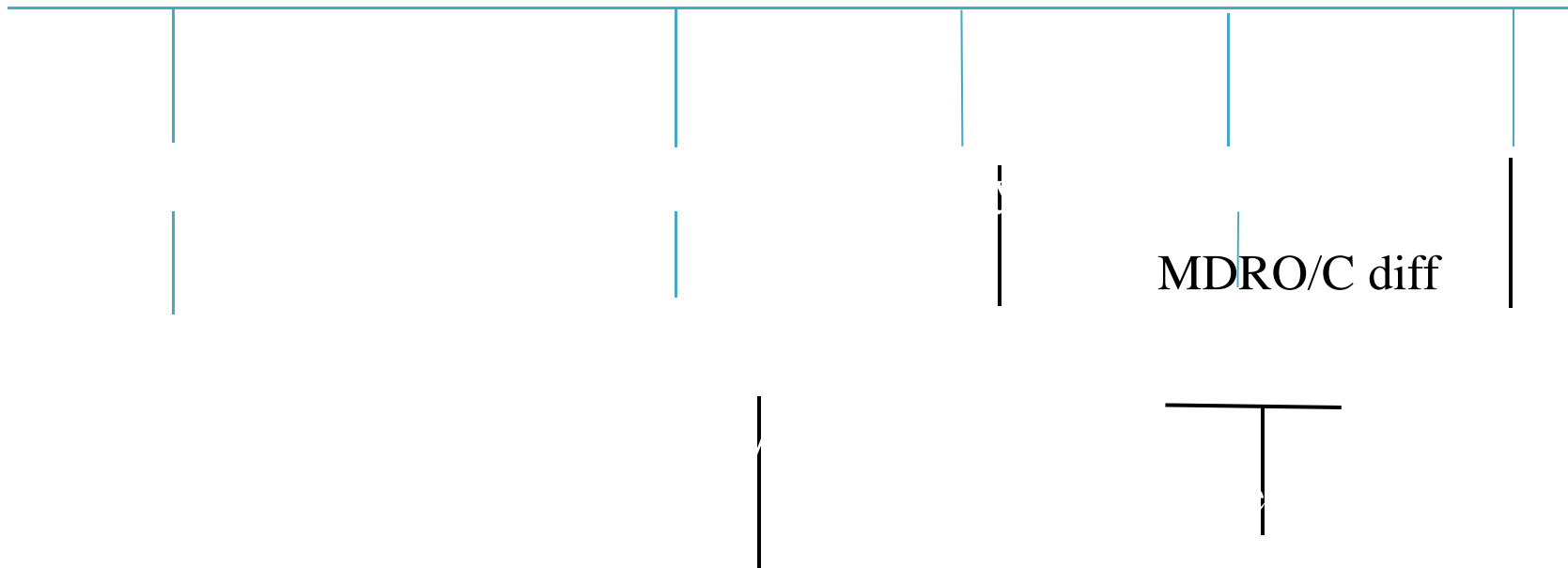
Purposes of NHSN “Ongoing”

- Facilities that participate in certain reporting programs operated by the Centers for Medicare and Medicaid Services (CMS) do so through use of NHSN.
- Furthermore, some U.S. states use NHSN as a means for healthcare facilities to submit data on healthcare-associated infections (HAIs) mandated through their specific state legislation.



The Essentials of surveillance

- Know the protocol/criteria
- Consistently apply the criteria
- Report events meeting criteria; exclude those that don't
- Failure to do so:
 - Breach of NHSN Rules of Behavior
 - Decreased usefulness of national comparative data
 - Unfair comparisons between facilities
 - Possible validation discrepancies
 - Potential impact of CMS Inpatient quality Reporting score and facility reimbursement
- Concerns about the criteria should be sent to NHSN-NOT addressed by non-reporting of events or facility adjudication



Patient Safety Component Modules

- Device-associated
 - CLABSI – Central line-associated bloodstream infection
 - CLIP – Central line insertion practices
 - VAE – Ventilator-associated events (adult locations only)
 - VAP – Ventilator-associated pneumonia (in pediatric locations (in-plan or off-plan), or NICU and adult locations (off-plan))
 - CAUTI – Catheter-associated urinary tract infection
- Procedure-associated
 - SSI

Patient Safety Component Modules

- Antimicrobial Use and Resistance (AUR)
 - The primary objective of the Antimicrobial Use option is to facilitate risk adjusted inter- and intra-facility benchmarking of antimicrobial usage.
 - A secondary objective antimicrobial usage on national levels



Patient Safety Component Modules

- Choices for Multidrug resistant organism (MDRO) and CDI Module:
 - LabID Event :
 - (MRSA & C difficile)
 - Infection Surveillance
 - Prevention Process Measures
 - Active Surveillance Testing

Data Collection and Reporting Requirements for Patient Safety Component

1. Submit a Monthly Reporting Plan to inform CDC which, if any, of the patient safety modules will be used for that month.
2. Adhere to the selected module's protocol(s) exactly as described in the *NHSN Manual Patient Safety Component Protocol*
3. Use surveillance methodology as described in the Protocol

Data Collection and Reporting Requirements for Patient Safety Component

4. Report events and appropriate summary or denominator data indicated on the Plan to CDC within 30 days of the end of the month
5. Submit data for at least one module for a minimum of 6 months of the calendar year
6. Complete an annual survey for your facility
7. Pass quality control acceptance checks that assess the data for completeness and accuracy.
8. Agree to report to state health authorities adverse event outbreaks identified in the facility by the surveillance system and about which you are contacted by CDC.

Types of Surveillance

- Total (or Whole) House Surveillance
 - All HAIs are monitored in the entire population
 - Calculate rates for specific population (not an overall facility wide rate)
- Targeted Surveillance
 - Particular care units
 - Infections related to medical devices
 - Organisms of epidemiological importance
- Combination Surveillance Strategy
 - Most use a combination and monitor targeted events that occur in defined populations while concurrently monitoring select HAIs and laboratory reports from house-wide locations



Examples might be MRSA and C difficile house wide but CAUTIs in the ICU only.

Surveillance Methods

- *Results with MS versus ES (HAIs in ICU) were:
 - Sensitivity 40% vs 87%
 - Specificity 94% vs 99%



**Effectiveness of an automated surveillance system for intensive care unit-acquired infections: Vienna , Austria; 2006-2007*

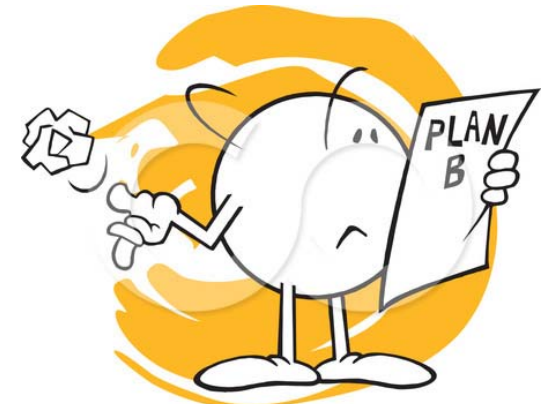
APIC Position Paper: The Importance of Surveillance Technologies in the Prevention of Healthcare-Associated Infections (HAIs)

- Streamline and facilitate efficient review of relevant data, promoting rapid identification of sentinel events and detection of outbreaks
- Expand and better define the scope of infection prevention activities
- Reduce infection prevention department time spent on surveillance and clerical tasks
- Improve response to public health issues
- Regulatory compliance
- Financial performance
- Potential to enhance antibiotic stewardship pr



Recommended Practices for Surveillance

- I. Assess the population 
- II. Select the outcome or process for surveillance and determine the time period 
- III. Use surveillance definitions
- IV. Collect surveillance data
- V. Calculate and analyze infection rates
- VI. Apply risk stratification methodology
- VII. Report and use surveillance information
- VIII. **Validate surveillance methodologies and findings**



©Johnny Sajem * www.ClipartOf.com/1094458

***Note:** “In-plan” surveillance means that the facility has committed to following the NHSN surveillance protocol, in its entirety, for that particular event, as shown in the facility’s NHSN monthly reporting plan. “Off-plan” surveillance is surveillance that is done because a facility has decided to track a particular event for internal use. Data that are entered into NHSN “off-plan” are not included in NSHN annual reports or other NHSN publications. A facility makes no commitment to follow the NHSN protocol for “off-plan” events.

Using Surveillance Definitions

- Define clearly all data elements
 - outcome or process
 - “at risk” population
 - risk factors
- Use standardized written case definition
(These are surveillance definitions and not clinical definitions!!!!)
- If definition (CDC-NHSN) change, highlight
Others may be trained to screen data sources for these infections, but the IP must make the final determination. (NHSN)
in reports (remember mandatory reporting)

Key Terms



	SSI	LabID	VAE
Infection Window Period	NA	Not Applicable	Not Applicable
Date of Event	Yes		
POA	NA		
HAI	NA		
Repeat Infection Time Period	NA		
Secondary BSI Attribution Period	*		

Key Terms



- *NHSN Infection Window Period:*
 - Defined as the 7-days during which all site-specific infection criteria must be met. It includes the day the first positive diagnostic test that is an element of the site-specific infection criterion, was obtained, the 3 calendar days before and the 3 calendar days after.
 - For site-specific infection criteria that do not include a diagnostic test, the first documented localized sign or symptom that is an element of NHSN infection criterion should be use define the window
- *Date of Event:*
 - The date the **first** element used to meet an NHSN site-specific infection criterion occurs for the **first** time within the seven-day infection window period

Infection window period

- Diagnostic test examples*
 - Laboratory specimen collection
 - Imaging test
 - Procedure or exam
 - Physician diagnosis
 - Initiation of treatment
- Localized sign or symptom examples:
 - Diarrhea
 - Site specific pain
 - Purulent exudate

Key Terms

- *Date of Event (DOE)*
 - The date the **first** element used to meet an NHSN site-specific infection criterion occurs for the **first** time within the seven-day infection window period

Note: The element MAY have been present before the infection window period



Key Terms



- *Present on Admission (POA)*
 - When the date of “event” occurs during the POA time period.
 - Defined as the day of admission to an inpatient location (calendar day 1), the 2 days before admission, and the calendar day after admission.

Hospital Day	Date of Event	Classification
2 days before admit	Hospital Day 1	POA
1 day before admit	Hospital Day 1	POA
Admission (Day 1)	Hospital Day 1	POA
Day 2	Hospital Day 2	POA
Day 3	Hospital Day 3	HAI
Day 4	Hospital Day 4	HAI
Day 5	Hospital Day 5	HAI

Present on Admission cont'



- *Acceptable documentation:*
 - **Patient-reported signs or symptoms** documented in the medical record by a healthcare professional (must be in your facility medical record documentation).
 - Physician diagnosis can be accepted only when physician diagnosis is an element of the specific infection criteria
- Infections in newborns with date of event on hospital day 1 or day 2 are considered POA. Day 3 or after are HAIs, includes acquired transplacentally (for example but not limited to: herpes simplex, toxoplasmosis, rubella, cytomegalovirus, or syphilis) or as a result from passage through the birth canal.

Key Terms



- *Healthcare-associated Infection (HAI)*
 - The date of event occurs on or after the 3rd calendar day of admission to an inpatient location where day of admission is calendar day 1
- *Repeat Infection Timeframe (RIT)*
 - A 14-day timeframe during which no new infections of the same type are reported.
 - The date of event is Day 1 of the 14 day RIT.
 - Additional pathogens recovered during the RIT from the same type of infection are added to the event.
 - Applies during a patient's single admission including the day of discharge and the day after.
 - May have negative cultures during RIT
 - Do not change device-association determination during RIT

(SUTI identified, foley placed and while still in RIT meets definition for CAUTI. Add pathogen to initial event and do not change the SUTI to CAUTI)

Key Terms



- *Secondary BSI Attribution Period:*
 - Is the period in which a positive blood culture must be collected to be considered as a secondary bloodstream infection to a primary site infection
 - This period includes the Infection Window Period combined with the [Repeat Infection Timeframe \(RIT\)](#). It is 14-17 days in length depending upon the date of event.
 - For SSI surveillance a 17 day period that includes the date of SSI event 3 days prior and 13 days after, is still used to attribute a BSI as secondary to an SSI

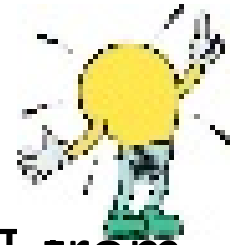
Hospital Day	BSI	RIT	Infection Window	Infection Window	RIT		
1			 Fever > 38.0 C	DOF			
2							
3						Urine culture >100,000 cfu/ml <i>K. pneumonia</i>	
4							
5							
6							
7							
8							
9							
10			Blood Culture; <i>K. pneumonia</i> /Yeast	Blood Culture: <i>K. pneumonia</i> /Yeast			
11							
12							
13							
14							
15							
16							
17							
18							
19							
20			UTI & Secondary BSI with <i>K. pneumonia</i>	Primary BSI with <i>Yeast</i>			
21							
22							
23							
24							

Key Terms



- *Transfer Rule:*
 - If the date of event (**not all elements**) is on the date of transfer or discharge or the next day, the infection is attributed to the transferring, discharge location.
- *Vital Signs:*
 - For fever use the temperature documented in the patient's medical record.
 - If a specific value for a vital sign is not stated in a CDC/NHSN HAI definition criterion, (hypotension) the facility should use the vital sign parameters as stated in its policies and procedures for clinical practices.

Tidbits of Interest



- Additional pathogens recovered during the RIT from the same type of infection are added to the event
 - Example: SUTI with *E. coli*; during RIT SUTI with *S. aureus*; add *S. aureus* to initial event
- BSI pathogens may be assigned to more than one infection source at the same time
 - Example: SUTI and IAB
- In instances where a patient has been transferred to more than one location on the date of an infection, or the day before, attribute the infection to the first location in which the patient was housed the day before the infection's date of event
 - Example: 3/22: Unit A 3/23: Unit A, Unit B, Unit C 3/24: Unit C, Unit D (Definition of CAUTI met). Assign to Unit A

Clinical Disagreement?

	Surveillance Definitions	Clinical Diagnosis
Purpose	Identify trends <u>within a population</u> for prevention	Identify disease in, and treatment for, <u>individual patients</u>
Components	Limited predetermined data elements	All diagnostic information available
Clinical Judgment	Excluded if possible	Valued

Bottom Line: At times clinical judgment and surveillance determinations will not match. Surveillance determinations always “trump” in epidemiologic surveillance



Collecting Surveillance Data

- Train personnel in data collection methods
- Develop a data collection form to fit the surveillance objective
- Determine the appropriate approach to surveillance concurrent (prospective) and/or retrospective
- Incorporate post-discharge surveillance for certain outcomes
- Collect data from a variety of sources (communication with caregivers)
- Be aware that passively obtained data may be biased

Organization-Specific Sources of Population Information

- Medical records
- Financial services
- Quality/utilization management
- Surgical database
- Administrative/management reports
- Risk management
- Public health reports
- Community agencies
- Occupational Health
- Human resources records

Calculating and Analyzing Surveillance Rates

- How do you want to express surveillance information:
 - Standardized Infection Ratios (SIRs) [observed/predicted]
 - Rates [number of infections/number at risk] X a variable
 - Raw numbers
- Use appropriate calculations
- Be consistent with methodology
 - Surveillance intensity
 - Accuracy of case and population of definitions
 - All aspects of surveillance remains the same

Why Analyze?

- Cover the basics:
 - How many HAIs?
 - Rate and DU ratio
 - Over what period of time?
- Interpret the statistical results
 - P-value
 - Percentile
- Highlight successes or pitfalls.
 - Which locations experienced 0 HAIs?
 - Trends- have rates gone up or down
 - If a goal is set how is the progress?

- Supplement the data
 - What were the organisms identified? Any trends?
 - What interventions have started during the time period?
 - Changes in staff or types of patients?
 - Any external (or internal) validation programs take place during the time period
 - Has surveillance methodologies changed (enhanced knowledge on definitions for example)

Why Analyze?

In Summary

- Help facilitate internal validation activities and help ensure accuracy
- Inform prioritization and success of prevention activities
- Data entered into NHSN may be used by: CDC, CMS, State Health Department, special study groups (HENs)
- At the end of the day, these are YOUR data- you should know your data better than anyone else.

Applying Risk Stratification Methodology

- Foster understanding and acceptance by recipients of the data
 - Explain how the data has been stratified by risk
- Allows comparisons to be made
- Facilitate validity of interventi



Applying Risk Stratification Methodology

- Determine to what extent the methods have been validated
- Ascertain if relevant stratification methods are recommended by key organizations (CDC/NHSN)
- If no validated methods are available obtain biostatistical or epidemiologic assistance. For some rates, risk stratification may not be possible
- Be sure subpopulations large enough to be statistically meaningful

NHSN 2006-2008 Summary: CLABSI in Level III NICUs

Central line-associated BSI rate

<u>Birth</u> <u>Weight</u>	<u>Central</u> <u>line days</u>	<u>No. of</u> <u>CLABSI</u>	<u>Pooled</u> <u>Mean</u>
≤750 g	122,272	481	3.9
751-1000 g	111,293	373	3.4
1001-1500g	112,926	276	2.4
1501-2500g	90,384	216	2.4
>2500g	82,677	157	1.9

AJIC 2009;37:783-805

Standardized Infection Ratio (SIR)

- In HAI data analysis, the SIR compares the actual number of HAIs in a facility or state with the baseline U.S. experience (i.e., standard population), adjusting for several risk factors that have been found to be most associated with differences in infection rates.
- Standardized infection ratio (SIR) = the observed number of infections divided by the predicted number of infections.
- Available for CLABSI, **MBI-LCBI**, CAUTI, SSI and LabID events (MRSA bacteremia and CDI) data and VAEs

Standardized Infection Ratios (SIRs)

- A score of less than 1 means that the hospital had fewer events than hospitals of similar type and size.
- A score of 1 means the hospital's score was no different than hospitals of similar type and size.
- A score of more than 1 means the hospital had more events than hospitals of similar type and size.
- Lower numbers are better. A score of zero (0)

Reporting and Using Surveillance Information

- A plan for the distribution of surveillance information should be incorporated into the development of each surveillance component
- Surveillance (should) go to those health care providers who are most able to impact and improve patient care



Data Feedback: A Success Story

SIP Data

- CMS undertook study of 56 hospitals and 43 Medicare Quality Improvement Organizations
 - All 50 states represented
 - 34,133 procedures evaluated
- First looked at baseline practices of these institutions...

Surgical Infection Prevention

Performance Stratified by Surgery

Surgery (N)	Antibiotic within 1 hour %	Correct Antibiotic %	Antibiotic Stopped within 24 hours %
Cardiac (7,861)	45.3	95.8	34.3
Vascular (3,207)	40.0	91.9	44.8
Hip/knee (15,030)	52.0	97.4	36.3
Colon (5,279)	40.6	75.9	41.0
Hysterectomy (2,756)	52.4	90.8	79.1
All Surgeries (34,133)	47.6	92.9	40.7

SIP Results

- During the 1 year collaborative, hospitals improved in all three QI measures
 - Antibiotic timing compliance: 92%
 - Appropriate antibiotic choice: 95%
 - Duration of antibiotic therapy: 85%
- Most importantly, the rate of SSI was reduced by a mean of 27%

Validate Surveillance Data

- “In the context of powerful inducements for facilities to “look good”, meaningful external validation is essential to assure that NHSN surveillance meets the requirements for which it was intended; that outcomes for reporting facilities are appropriate, that NHSN data are credible, and that the focus of NHSN surveillance will be better patient care.”

Why We Should Validate

- Study of 30 hospitals in Connecticut in 2008 validated reporting of CLABSI (mandatory reporting)
 - >50% under reporting of CLABSI
 - Reasons included:
 - Interpretation of primary vs secondary
 - Recognized pathogen vs skin contaminate
- In January 2012 Department of Public Health in Oregon published a review they had conducted for validation of CLABSI
 - Sensitivity of reporting 72%
 - Specificity of reporting 99%

North Carolina Validation Study

Four Phases; 7/2009-6/2011

Sensitivity estimate (95% C.I.)

- CLABSI: 72.6% (69.2%, 75.9%)
- CAUTI: 73.8% (68.2%, 79.4%)

Specificity estimate (95% C.I.)

- CLABSI: 97.1% (96.5%, 97.7%)
- CAUTI: 91.4% (90.1%, 92.8%)



North Carolina Validation Study

Conducted in 2015

Sensitivity estimate

- CLABSI: 79%
- C difficile: 53%

Specificity estimate

- CLABSI: 100%
- C difficile: 88%

Validation Tools from CDC

The screenshot shows a web browser window displaying the CDC website. The address bar shows the URL: www.cdc.gov/nhsn/toolkit/validation-clabsi/index.html. The page title is "National Healthcare Safety Network (NHSN)". The main content area features the heading "NHSN Validation Guidance and Toolkit; Validation for 2012 Central Line-associated Bloodstream Infection (CLABSI) in ICUs". Below this heading is a list of appendices:

- NHSN Validation Guidance and Toolkit; Validation for 2012 Central Line-associated Bloodstream Infection (CLABSI) in ICUs (Chapters 1–3) [PDF - 798 KB]
- Appendix 1 Facility Self-validation Tool for CLABSI Surveillance [PDF - 96 KB]
- Appendix 2 Template Denominator Collection Methods Survey for CLABSI Surveillance [PDF - 107 KB]
- Appendix 3a External Validation; Targeted Facility Selection [PDF - 353 KB]
- Appendix 3b External Validation; 5% Simple Random Sample of Facilities [PDF - 69 KB]
- Appendix 3c External Validation; Medical Record Selection [PDF - 74 KB]
- Appendix 4 Template Letter Requesting External Validation Site Visit [PDF - 67 KB]
- Appendix 5 and 5a ICU CLABSI Medical Record Abstraction Tool and Tennessee Checklists for Validation [PDF - 55 KB]

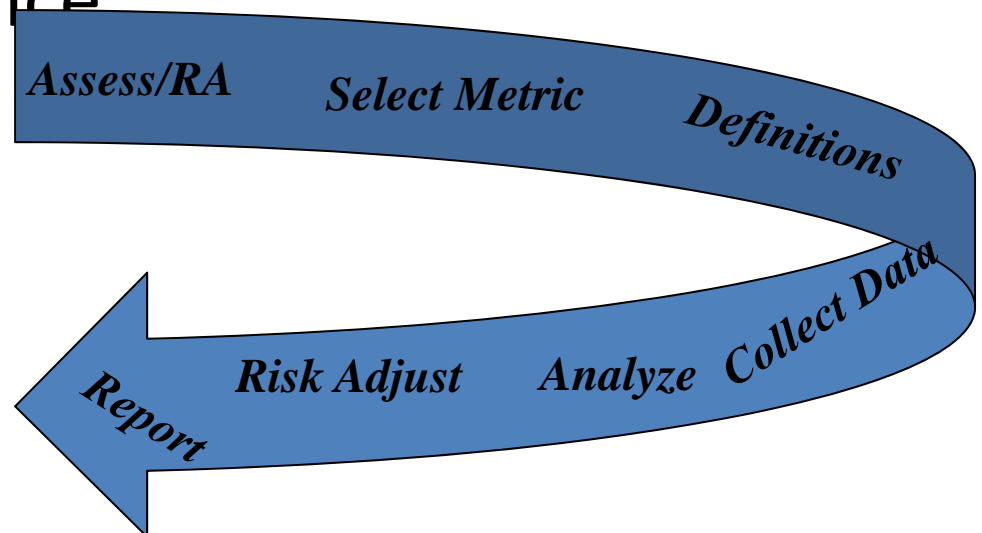
On the right side of the page, there are several utility boxes: "Email page link", "Print page", "NHSN Login", and "Get email updates". At the bottom right, there is a "CMS NHSN Requirements" box with the text "Click here for more information". The browser's taskbar at the bottom shows various application icons and the system clock indicating 8:17 PM on 3/21/2013.

Future Trends in Surveillance

- ↑ SSI post-discharge monitoring ✓
- ↑ National and global surveillance ✓
- ↑ Requirements for public and mandatory reporting ✓
- ↑ Use of HAI data for pay-for-performance ✓
- ↑ Expanded electronic surveillance ✓
- ↑ Coordination of disease surveillance between HCFs and PHDs ✓

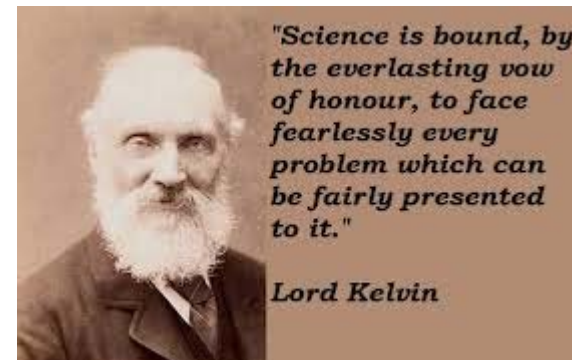
Conclusions

- Surveillance methodology evolves in response to changes in healthcare delivery, especially growing need for other settings
- Move from measuring clinical outcomes to performance improvement



Summary

“Good surveillance does not necessarily ensure the making of the right decision, but it reduces the chances of wrong ones.”



Alexander D.
Langmuir

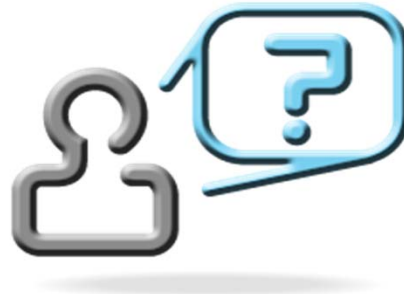


- Oncology patient being followed by home health nurses, is admitted to the hospital on 4/1. Home health assessments reviewed and were noted to be positive for fever on 3/30 and 3/31. On arrival to ED patient noted to be hypotensive.
- Port-a-cath accessed on 4/2 and blood specimen sent for CBC, electrolytes and culture
- Culture results returned on 4/3 and

- A. Patient has a central line associated bloodstream HAI
- B. Patient has a neutropenic fever and does not meet the definition of a CLABSI
- C. Patient has a bloodstream infection that is POA



- Types of infection prevention surveillance include which of the following:
 - A. Targeted
 - B. Total house
 - C. Combination surveillance
 - D. A and B
 - E. A, B and C



- Patient is admitted to your medical unit, from the nursing home, secondary to a change in mental status. Foley catheter in place on admission.
- Urine specimen obtained at time of admission and was positive for numerous WBCs and nitrites and $>10^5$ cfu E. Coli. Foley catheter remains in place
- On day three patient is febrile with a temp of 101, repeat urine culture is ordered but not sent.
- On day four patient is asymptomatic
- On day five patient has a specimen collected from the foley and sent for urine culture
- On day six culture is reported as positive for $>100,000$ cfu E. coli

- Which of the following is accurate?
 - A. Patient has a symptomatic UTI POA attributable to nursing home
 - B. Patient has a neurological deficit and the UTI is secondary
 - C. Patient does not meet criterion for UTI
 - D. Patient has a CAUTI HAI that is attributable to the medical unit



- Manual Surveillance is more sensitive and specific when compared to electronic surveillance methods

- A. True
- B. False



- You have identified an HAI that “technically” meets the NHSN definition, however in your professional judgment you believe this patient was infected at time of admission.
- You request the ID physician, who is very well respected, to review the case and he agrees that this is POA and ICU staff should not be made to feel responsible for this infection.

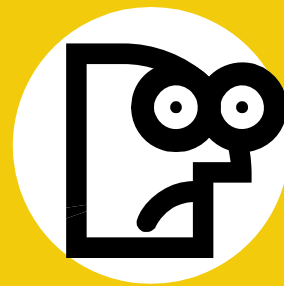
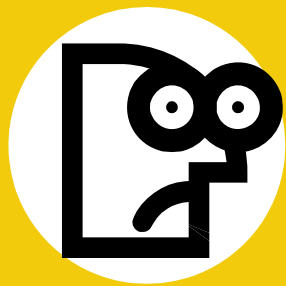
- You should:
 - A. Follow your professional judgment and report the infection as POA
 - B. Report the infection as an HAI and report to NHSN if part of your reporting plan
 - C. Document the ID physician's comments as rationale for not reporting the infection



- Is the following statement true or false?
- An SIR of 1.5 means you had more infections than was predicted

A. True

B. False



It's QUESTION TIME!!