An Introduction to Infection Prevention for the Novice
Gail Bennett, ICP Associates Inc.
A Webber Training Teleclass

Thanks for joining us today!

How do I know if we have a comprehensive infection prevention program?

Infection Prevention Activities
- Surveillance
- Education
- Consultation
- Performance Improvement
- Policies and Procedures
- Committee Management
- Outbreak Investigation

Surveillance: The Method
"The ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know."

Surveillance of Infections

CDC Definition
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Types of Surveillance

- Traditional, total house surveillance
  - Finding ALL healthcare associated infections ALL of the time
  - Useful to establish endemic rates
  - Rarely used by hospitals; may be required for LTCFs
  - Time consuming

- Limited, periodic surveillance
  - Surveillance of specific healthcare associated infections for a specific time period
  - A good method to use in rotating infections to be monitored and when time is limited

- Targeted Surveillance
  - Geographic locations or types of healthcare associated infections may be targeted for review
  - May consider:
    - High risk
    - High volume
    - Problem prone

What's Recommended for Healthcare Associated Infection Surveillance?

- Active
- Prospective
- Patient-based
- Incidence
- Priority-directed
- Risk-adjusted

Changes in Surveillance due to Setting

- General surveillance methods
- Definitions used
- Reporting of data

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Healthcare Associated Infection Definition

- A localized or systemic condition that resulted from adverse reaction to the presence of an infectious agent or its toxin
- Not present or incubating on admission to the healthcare facility

Two surveillance questions

1. Is infection present?
   - Use definitions of infection to determine
2. Is it healthcare associated?
   - Determine by the incubation period of the organism
   - Previously facilities used 48 or 72 hour rule (bacteria) – LTCFs and others often still use that. Acute care follows National Healthcare Safety Network (NHSN) criteria.
   - Viruses – individual incubation periods
   - Exceptions: SSI - 30 days
   - With implant: 1 year

Definitions of Infections for Acute Care

- CDC definitions
- http://www.cdc.gov/nhsn/psc.html

Definitions of Infections for LTC

- McGeer definitions
- www.apic.org

Final Definitions of Infections for Home Care

- American Journal of Infection Control, 2008
- Developed by APIC
- www.apic.org

Definitions of Infections for Behavioral Health, Correctional Facilities, Drug Treatment Facilities, Rehab, LTACs

- Standardized definitions have not yet been published
- Must adapt existing definitions
- Long Term Acute Care facilities (LTACs) may consider acute care definitions
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Low numbers or low risk for development of HAIs?

- Outcome surveillance:
  - Patient/client infections

- Process surveillance:
  - Monitoring hand hygiene
  - Monitoring process for exposure work-ups
  - Monitoring timing of doses of hepatitis B immunization given

Forms and software programs give structure to surveillance

Methods of Presentation of Data (if using a manual system)

- Line listing
- Resistant organism line listing
- Monthly summaries
- Tables, graphs, charts
- Maintain in surveillance notebook

Line listing of inpatient infections

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Year</th>
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Line listing of outpatient infections

Healthcare-associated infection summary report by inpatient days

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
<td>Gastro &amp; Pulmonary</td>
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<td>TOTAL</td>
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Surveillance notebook
- Large enough to hold 1-2 year’s data
- Divided by month (Jan. - Dec. tab dividers)
- Behind the month’s tab:
  - Monthly summary
  - Line listing
  - Outbreak forms
  - Compliance monitoring
  - Lab results (if you choose to keep them)

Two surveillance questions
1. Is infection present?
   - Use definitions of infection to determine
2. Is it healthcare associated?
   - Determine by time
   - Bacteria frequently may incubate in 48 hours
   - Viruses - incubation period
   - Exceptions: SSI - 30 days
   - With implant: 1 year
   - Acute care facilities generally use the NHSN criteria

Healthcare Associated Infection Rates using Device Days
New cases of CAUTI X 1000 =
Total indwelling catheter days
# CAUTI per 1000 indwelling catheter days

Calculation: 10 patients with an indwelling catheter were identified as CAUTI. Total indwelling catheter days for all patients (580) = 10/580 = .01724 X 1000 = 17.4 CAUTI per 1000 indwelling catheter days

Statistics (example LTC)
New infections for the month
\[
\text{Total resident days} \times \frac{\text{New infections}}{1000} = \text{inf/1000 resident days}
\]
Example: 11 inf./3100 days = .00354 X 1000
= 3.5 infections per 1000 resident days

Statistics (example outpatient visits)
New infections for the month
\[
\text{Total outpatient visits} \times \frac{\text{New infections}}{1000} = \text{inf/1000 outpatient visits}
\]
Example: 1 inf./210 outpatient visits = .0047 X 1000
= 4.7 infections per 1000 outpatient visits

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Education
- Orientation
- Annual, mandatory programs
- One on one teaching

Orientation (Examples)
- Pamphlets
- TB Fact Sheet
- Hepatitis B Vaccine Fact Sheet
- General IP information, e.g., hand hygiene, PPE
- BBP training:
  - May use a variety of methods
  - Training must be done BEFORE we offer vaccine
  - Qualified person must be available to answer questions

Annual Mandatory IC Training
- Must include bloodborne pathogens and TB
- 100% attendance required by OSHA

Scenario
- CCOHS walks in your facility in 2010 and starts requesting documents
- "I need your documentation of all employees (FT and PT) for 2008 and proof that they all completed the 2008 mandatory bloodborne pathogens training program."
- "How quickly can you have that ready?"

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Documenting 100% attendance at annual, mandatory IC program

- Recommendation: if no software program to monitor attendance, print a list of all associates working with the facility at the time of the training.
- Have each associate sign in beside their name.
- Review list for those associates who have not signed beside their names to know who needs to attend a make-up course.
- Maintain the records in a safe place.

One on One Teaching

- May provide during compliance or surveillance rounds.
- Anytime non-optimal technique is observed.
- Provide privacy for staff when counseling is done.
- Document in your records.

Consultation – You’re the Consultant

Use resources to get answers!
- Web sites
- Professional Guidelines
- Textbooks
- Guidelines/policy manuals
- CHICA or APIC chapter
- Other

Excellent resource
- $35.00
- 629 pages
- Heymann, Editor
- 19th Edition
- Available at www.amazon.com and other sites

- Centers for Disease Control and Prevention (www.cdc.gov)
- NHSN (www.cdc.gov/nhsn)
- CHICA-Canada (www.chica.org)
- Association for Professionals in Infection Control and Epidemiology (www.apic.org)
- Infection Control certification (www.cbic.org)
- Webber Training (www.webbertraining.com)
- ICP Associates (www.icpassociates.com)
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Quality Assurance/Performance Improvement

- Performance Improvement Program – have an active PI program for Infection Prevention
- Compliance Monitoring
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Notifiable Diseases Reporting Requirements

- Have P&P based on regulations, standards, and current guidelines
- Enforce your policies
- Monitor for compliance
- Review regularly
- Make changes as needed

Committee Management: Infection Control

- Meet on a regular schedule
- Make the meeting convenient
- Have a well prepared written agenda
- Prepare concise, accurate minutes that show problem-solving for IC

Outbreaks

- Outbreak (excess cases over normal)
- Inpatient facilities will usually recognize their outbreaks
- May be more difficult with outpatient facilities

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Outbreak Investigation

- Know when and where to get help!
- Clearly document your investigation.
- See outbreak investigation form.

Recent outbreaks relating to Ambulatory Care ....and an important message to all healthcare organizations!

- Failure to adhere to basic principles of aseptic technique for the preparation and administration of parenteral medications
- Unsafe practices
  - Syringe reuse between patients during parenteral med administration to multiple patients
  - Contamination of medication vials or IV bags by accessing them with a used syringe and/or needle
  - Failure to follow basic injection safety practices when preparing and administering parenteral meds to multiple patients
  - Inappropriate use of fingerstick devices and glucometer equipment between patients
  www.apic.org

Glucometers

- Decontaminate after every use!
- See manufacturer’s recommendation re: product to use

Problem-solving for Infection Prevention

- Assessing
- Planning
- Implementing
- Evaluating

Thank you!!

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<tr>
<th>Date</th>
<th>Teleclass</th>
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<td>11 Mar 10</td>
<td>(Novice Teleclass) MRSA Prevention Basics</td>
<td>Speaker: Dr. Bill Jarvis, Jason &amp; Jarvis Associates</td>
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<td>18 Mar 10</td>
<td>(Novice Teleclass) How to Prepare for CIC Certification Without Becoming Certifiable</td>
<td>Speaker: Susan Cooper, Southeastern Ontario Infection Control Network</td>
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<td>(Free Teleclass) Voices of CHICA</td>
<td>Speaker: Directors &amp; Guests of the Community &amp; Hospital Infection Control Association of Canada</td>
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<td>(Novice Teleclass) Infections in the Elderly</td>
<td>Speaker: Christine Nutty, Infection Advice Inc.</td>
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<td>Microbial Control of Electronic Medical Equipment</td>
<td>Speaker: Dr. Charles John Pistenik, Indiana University School of Dentistry</td>
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<td>06 Apr 10</td>
<td>Simple Precautions – Simplifying Infection Control</td>
<td>Speaker: Dr. Jim Hutchinson, Health Care Corporation of St. John’s</td>
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<td>13 Apr 10</td>
<td>(Free Teleclass) Infection in Healthcare Facilities Around the World</td>
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www.webbertraining.com/schedulep1.php