

APIC 2023 Annual Conference

Dante Mayes

Infection Prevention Epidemiologist

Alameda Health System

First Conference Experience

- New to Infection prevention
- Everything was a learning opportunity
- Meeting new and experienced professionals
- Learning about other IP professionals' experiences
- Trying to learn as I go

Next Annual Conference

- Prioritize more sessions in areas of most relevance to my role
- Ask more questions in Exhibitor hall
- Spend a little more time networking

Topic of Interest

Sometimes 2nd Place is Best: Determining Secondary Bloodstream Infection Attribution

LaTasha R. Boswell BSN, MPH, RN, CIC

Monday June 26,2023

Objectives:

- Gain a better understanding of secondary BSI attribution
- Understand important verbiage and terminology

Overview

- Key Terms & Concepts
 - IWP
 - RIT
 - SBAP
 - Endocarditis
 - Definitive/Equivocal Imaging Test Findings
 - Clinical Correlation
 - Gross Anatomic Exam

Definitive Imaging Test Findings

- “Definitive for”: Confirms the presence of an infection on an imaging test
 - Does not require clinical correlation (antimicrobial therapy for a specific infection)

- **Examples:**
 - “Abscess visualized in the LLQ”
 - “Infected seroma”
 - “Pyelonephritis”
 - “Osteomyelitis”
 - “Sinusitis”



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Equivocal Imaging Findings

- Does not confirm the presence of an infection.

Equivocal Imaging	Findings from medical imaging studies that do not conclusively identify an infection or infectious process. Imaging findings such as these require additional conclusive clinical evidence that an infection is present, such as physician documentation of antimicrobial therapy for treating the infection or infectious process. Example of definitive imaging: abscess visualized in the right lower quadrant. Example of equivocal imaging: fluid collection visualized in the right lower quadrant.
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Examples:

- “Fluid collection”
- “Biliary ductal dilatation”
- “Possible osteomyelitis”
- “Questionable abscess”
- “Abscess vs seroma”
- “Infectious vs Inflammatory”

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Clinical Correlation

- Physician documentation of antimicrobial treatment for site-specific infection related to equivocal imaging findings.
- Indicated only when there is an equivocal imaging test.
 - If there is no equivocal imaging, clinical correlation is not needed.
- Not required to be captured during the IWP.
- Examples:**
 - “Altered mental status, pain, nausea. Start Rocephin for intraabdominal infection.”*
 - “I do suspect pneumonia as he had significant secretions on bronchoscopy during the tracheostomy, and he developed leukocytosis yesterday, and he now has fevers. I started vancomycin, cefepime, levofloxacin, and metronidazole.”*

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Let's Talk About the “itis” Conditions

- Not all “itis” conditions are created equal!
- Most “itis” conditions are associated with an inflammatory process that does not always indicate presence of infection.
- Imaging findings alone for conditions below are not definitive or equivocal for infection:
 - Colitis
 - Peritonitis
 - Pancreatitis
 - Cholecystitis
- Imaging findings below are either definitive for or equivocal for an infection
 - Pyelonephritis (Definitive for Urinary System Infection)
 - Cholangitis - “Biliary ductal dilatation”(Equivocal for cholangitis)
 - Osteomyelitis – (Definitive for a Bone infection)



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Summary

- Applying secondary BSI attribution correctly will ensure you are appropriately ruling out a primary BSI.
- Ensure close attention is paid to blood culture matching.
- Also paying close attention to “itis” conditions.

Interesting Poster Presentation



**Shirley Ryan
AbilityLab**

Engagement with Electronic Medical Record Documentation for Prevention of Catheter-Associated Urinary Tract Infections

Clare Marlin, MS, MS, BSN, BA, RN, CIC, CRRN, CCRC¹; Ami J. Hughes, PhD, MPH, CIC¹
¹ Shirley Ryan AbilityLab, Chicago, Illinois




Learning Objectives	Results	Clinical Practice Impacts																													
1. Identify one example of how catheter-associated urinary tract infection (CAUTI) prevention evidence-based practices (EBP) can be incorporated into electronic medical record (EMR) documentation for professional nurses. Examples include creating EMR documentation fields supporting current CAUTI prevention EBP, as well as incorporating options for documentation fields aligned with CAUTI prevention assessment. 2. Determine how an interdisciplinary team can identify EMR documentation fields for revision to align with CAUTI prevention EBP based on current Centers for Disease Control and Prevention (CDC) guidance. Engagement with interdisciplinary team members creates ongoing collaboration and supports critical-thinking in continued CAUTI prevention initiatives. 3. Explain how EMR documentation can be revised to support an ongoing, and detailed, assessment of an indwelling urinary catheter (IUC) for CAUTI prevention. As CAUTI prevention knowledge is shared within the professional nursing literature, ensuring its inclusion into the clinical workflow supports ongoing alignment with EBP.	EMR documentation fields were newly created for alignment with CAUTI prevention EBP. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #800080; color: white;"> <th>Newly Created EBP-based Field</th> <th>EBP Significance</th> <th>Examples of Documentation Selections</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="background-color: #800080; color: white;">Urethral Site Assessment</td> <td rowspan="2" style="background-color: #800080; color: white;">Encourages continuity of a focused assessment to document potentially infectious changes from the patient's baseline.</td> <td>• Encrusted</td> </tr> <tr> <td>• Reddened</td> </tr> <tr> <td rowspan="2" style="background-color: #800080; color: white;">Signs of Leakage</td> <td rowspan="2" style="background-color: #800080; color: white;">Promotes monitoring of continuous IUC drainage to indicate the patient's bladder is emptying appropriately.</td> <td>• Yes</td> </tr> <tr> <td>• No</td> </tr> <tr> <td rowspan="2" style="background-color: #800080; color: white;">Foley Patent (i.e. Urine flow)</td> <td rowspan="2" style="background-color: #800080; color: white;">Supports evaluation of the continuous unobstructed passage of urine, which includes maintaining appropriate positioning of the IUC tubing and ensuring the collection bag is below bladder-level.</td> <td>• Yes</td> </tr> <tr> <td>• No</td> </tr> <tr> <td rowspan="4" style="background-color: #800080; color: white;">Signs of Infection (i.e. Concerns for infection)</td> <td rowspan="4" style="background-color: #800080; color: white;">Fosters a review of CAUTI-associated signs and symptoms which may prompt an appropriate urine culture collection.</td> <td>• Altered mental status</td> </tr> <tr> <td>• Bladder discomfort</td> </tr> <tr> <td>• Costovertebral angle pain</td> </tr> <tr> <td>• Leukocytosis</td> </tr> <tr> <td rowspan="3" style="background-color: #800080; color: white;">IUC Care or Maintenance Performed By</td> <td rowspan="3" style="background-color: #800080; color: white;">Provides guidance for educational opportunities in technique, including hand hygiene, to support CAUTI prevention.</td> <td>• Lower abdominal discomfort</td> </tr> <tr> <td>• Family/Caregiver</td> </tr> <tr> <td>• Patient</td> </tr> <tr> <td></td> <td></td> <td>• Staff</td> </tr> </tbody> </table>	Newly Created EBP-based Field	EBP Significance	Examples of Documentation Selections	Urethral Site Assessment	Encourages continuity of a focused assessment to document potentially infectious changes from the patient's baseline.	• Encrusted	• Reddened	Signs of Leakage	Promotes monitoring of continuous IUC drainage to indicate the patient's bladder is emptying appropriately.	• Yes	• No	Foley Patent (i.e. Urine flow)	Supports evaluation of the continuous unobstructed passage of urine, which includes maintaining appropriate positioning of the IUC tubing and ensuring the collection bag is below bladder-level.	• Yes	• No	Signs of Infection (i.e. Concerns for infection)	Fosters a review of CAUTI-associated signs and symptoms which may prompt an appropriate urine culture collection.	• Altered mental status	• Bladder discomfort	• Costovertebral angle pain	• Leukocytosis	IUC Care or Maintenance Performed By	Provides guidance for educational opportunities in technique, including hand hygiene, to support CAUTI prevention.	• Lower abdominal discomfort	• Family/Caregiver	• Patient			• Staff	➤ Advance the critical importance of patient care continuity through EMR documentation. ➤ Provide the opportunity for education on current CAUTI prevention EBP for professional nurses. ➤ Implement the use of the EMR documentation system as a supportive tool to optimize patient outcomes, including a reduction in CAUTI rates. ➤ Augment current organizational policies regarding IUC maintenance and care.
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Background ➤ CAUTIs present negative consequences for both patients and healthcare organizations. ➤ At an acute inpatient rehabilitation organization, an EBP literature review for CAUTI prevention was conducted. ➤ The opportunity for further development of professional nursing EMR documentation to promote CAUTI prevention emerged from the EBP literature review.		Clinical Practice Impacts ➤ Advance the critical importance of patient care continuity through EMR documentation. ➤ Provide the opportunity for education on current CAUTI prevention EBP for professional nurses. ➤ Implement the use of the EMR documentation system as a supportive tool to optimize patient outcomes, including a reduction in CAUTI rates. ➤ Augment current organizational policies regarding IUC maintenance and care.																													
Methods ➤ An interdisciplinary team, composed of Infection Prevention, Information Systems (IS), Nursing Education, and direct-care professional nursing members, collaborated, reviewed, and revised the EMR documentation of IUCs. ➤ The interdisciplinary team identified EMR documentation fields for alignment with CAUTI prevention EBP to foster continued critical evaluation of IUC function. ➤ Professional nurses were educated on the EMR updates electronically, and in real-time, by colleagues with IS expertise.		Conclusion ➤ The interdisciplinary team implemented the CDC's recommendations for CAUTI prevention by utilizing its administrative infrastructure's fourth component of the system of documentation to promote continued patient safety and quality improvement. ➤ EMR documentation review and revision was implemented to support professional nursing evaluation of IUCs.																													
		Future Steps ➤ Review how artificial intelligence (AI) can enhance current and future CAUTI prevention initiatives within the EMR such as exploring the potential for real-time Provider alerts. ➤ Assess future opportunities for the collaborative implementation of administrative infrastructure components of CAUTI prevention including additional education and training. ➤ Continue to ensure interdisciplinary teams are utilized, and supported, in leading EBP implementation within Magnet-designated organizations.																													
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		References Carr, H. (2014). Urinary tract infection. In P. Grotto & K. M. Boston (Eds.), <i>APIC Text of Infection Control and Epidemiology</i>. Association for Professionals in Infection Control and Epidemiology. Felix, K., et al. (2014). Guide to preventing catheter-associated urinary tract infections. In L. Greene (Ed.), <i>APIC Implementation Guide</i>. (pp. 1-87). Association for Professionals in Infection Control and Epidemiology. Healthcare Infection Control Practices Advisory Committee. (2009). <i>Catheter-associated urinary tract infections (CAUTI)</i>. U.S. Department of Health & Human Services, Centers for Disease Control and Prevention. Lo, E., et al. (2014). Strategies to prevent catheter-associated urinary tract infections in Acute Care Hospitals: 2014 update. <i>Infection Control & Hospital Epidemiology</i>, 35(5), 464-479.																													
		Disclosure Statement The authors have nothing to disclose.																													

- How can AI (artificial intelligence) enhance CAUTI prevention initiatives?