AMERICA'S ESSENTIAL HOSPITALS

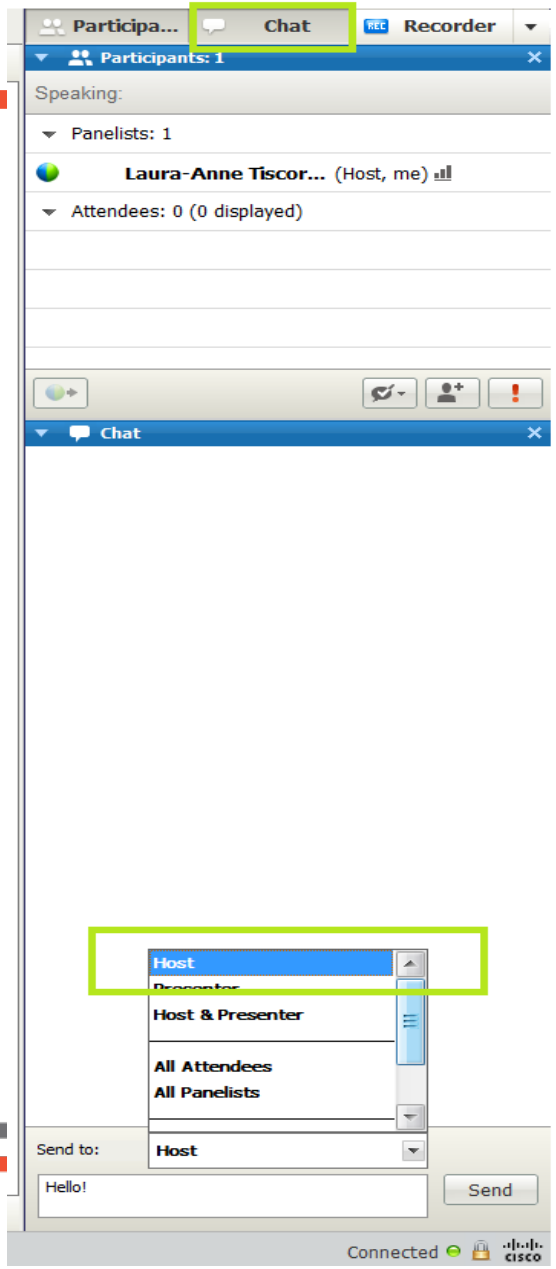
Patient Harm Series I: New Tools to Prevent CAUTI

Essential Hospitals Engagement Network

April 16, 2014

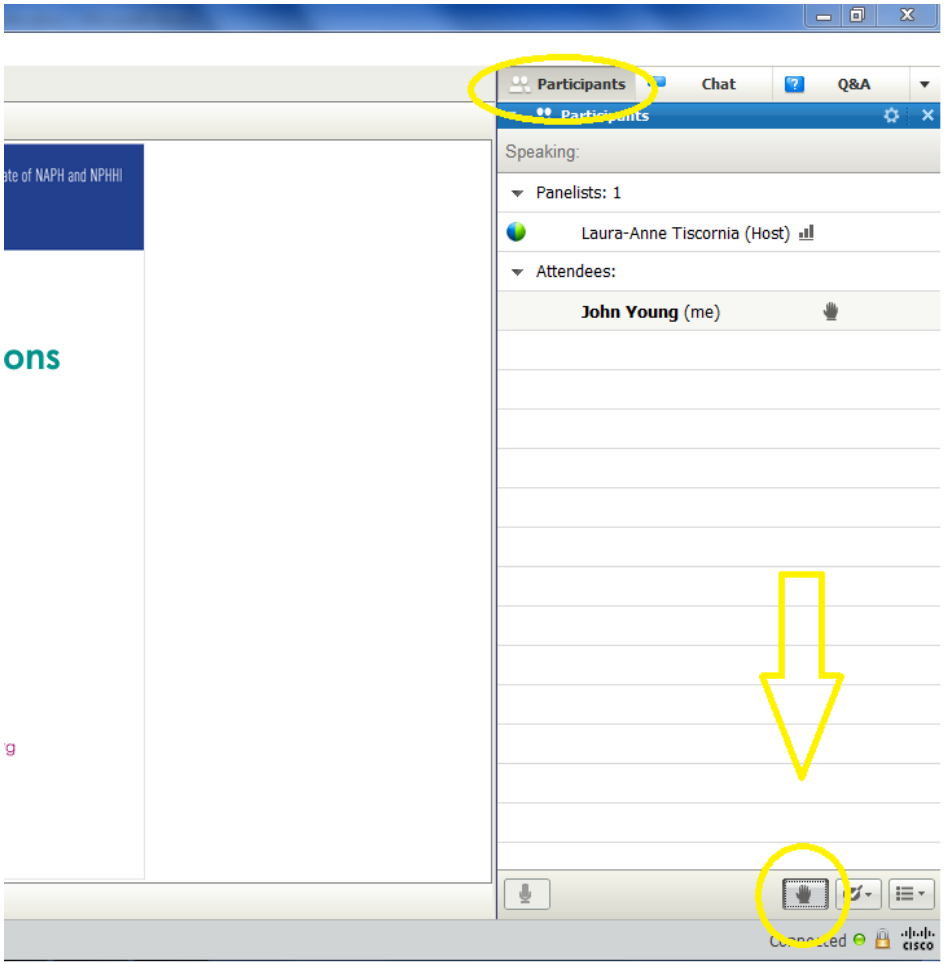
CHAT FEATURE

The chat tool is available to ask questions or comments at any time during this event.

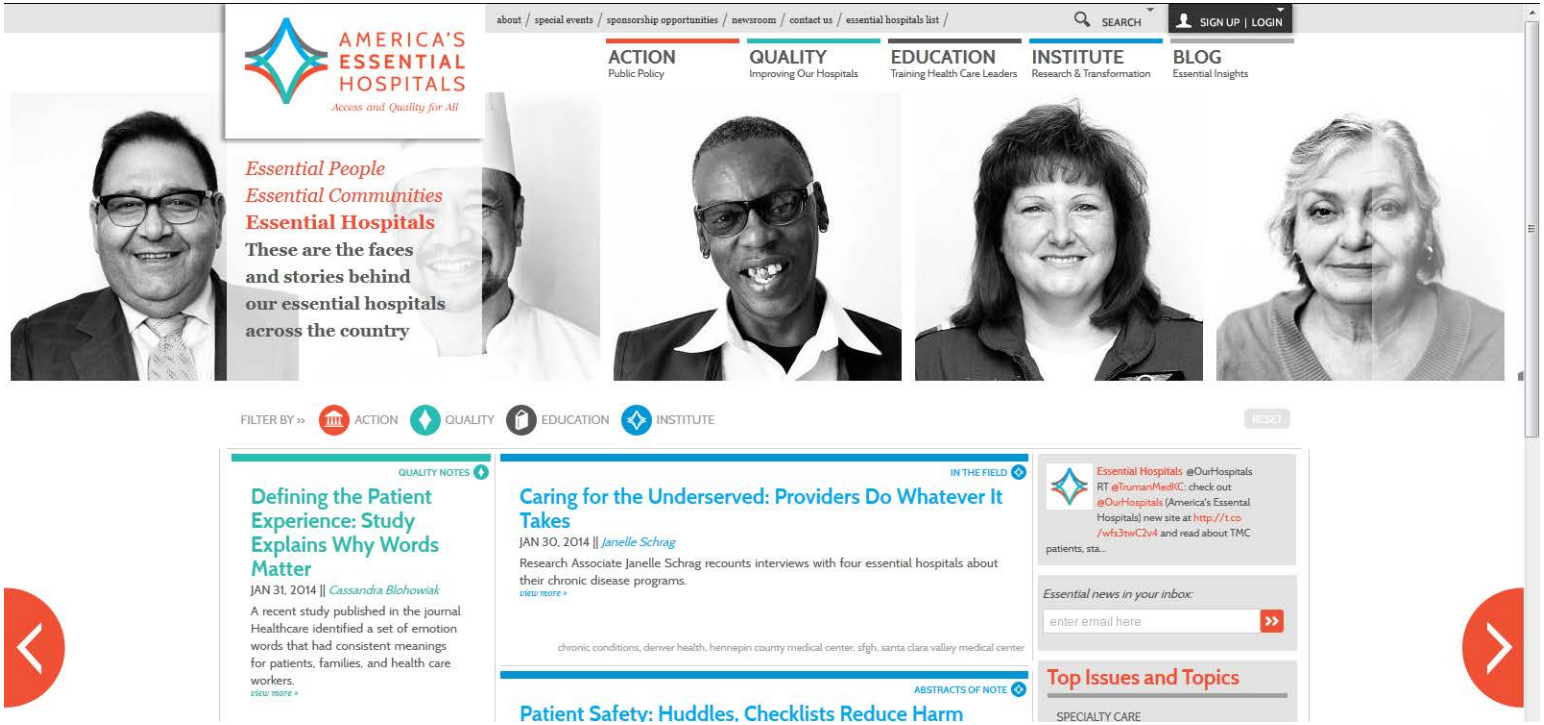


RAISE YOUR HAND

If you wish to speak telephonically, please "raise your hand." We will call your name, when your phone line is unmuted.



ENGAGE AT OUR NEW WEBSITE!



Network with peers, learn how essential hospitals are changing lives
Now live at essentialhospitals.org

LEADERSHIP FOR SAFETY WORKSHOPS

- May 8-9 | Dallas, Texas

- Exclusive workshops led by renowned leadership expert Jim Reinertsen, MD, designed to help hospital leaders and managers understand their role in safety and equip them to lead the achievement of real, measured improvement.

- Participate in one of these free events to:
  - » see safety issues more clearly at the leadership and unit level;
  - » improve your culture of safety through best practices that reduce patient harm and hospital costs; and
  - » collaborate in small groups with leaders and managers from members of America's Essential Hospitals and other Hospital Engagement Networks.

AGENDA

- Partnership for Patients and 2014
- Refined criteria for appropriate and inappropriate use of urinary catheters in hospitalized medical patients (Jennifer Meddings, MD)
- National data and ICU-specific surveillance (Carolyn Gould, MD, MSCR)
- Q & A
- Upcoming events

2014 PARTNERSHIP FOR PATIENTS

Partnership for Patients (PfP)

- CMS-funded
- Reduce nine hospital-acquired conditions by 40 percent
- Reduce readmissions by 20 percent

Hospital Engagement Networks (HENs)

- 27 contracted organizations
- 3,700 U.S. hospitals

Essential Hospitals Engagement Network (EHEN)

- 22 hospitals nationwide
- Only essential hospital-focused HEN
- Special focus on health equity

MEMBERS-ONLY CAUTI RESOURCES

- CAUTI tab includes
  - » Resources
  - » Links
  - » Discussion thread
  - » Recordings of past webinars

- http://essentialhospitals.org/groups/ehen/cauti/

SPEAKER INFORMATION

Jennifer Ann Meddings, MD
Assistant Professor, Internal Medicine
University of Michigan Medical School

Carolyn Gould, MD, MSCR
CDR, United States Public Health Service
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

Preventing Catheter-Associated Urinary Tract Infection: Disrupting the Lifecycle of the Urinary Catheter

Jennifer A. Meddings, MD, MSc

University of Michigan Medical School

Disclosures:

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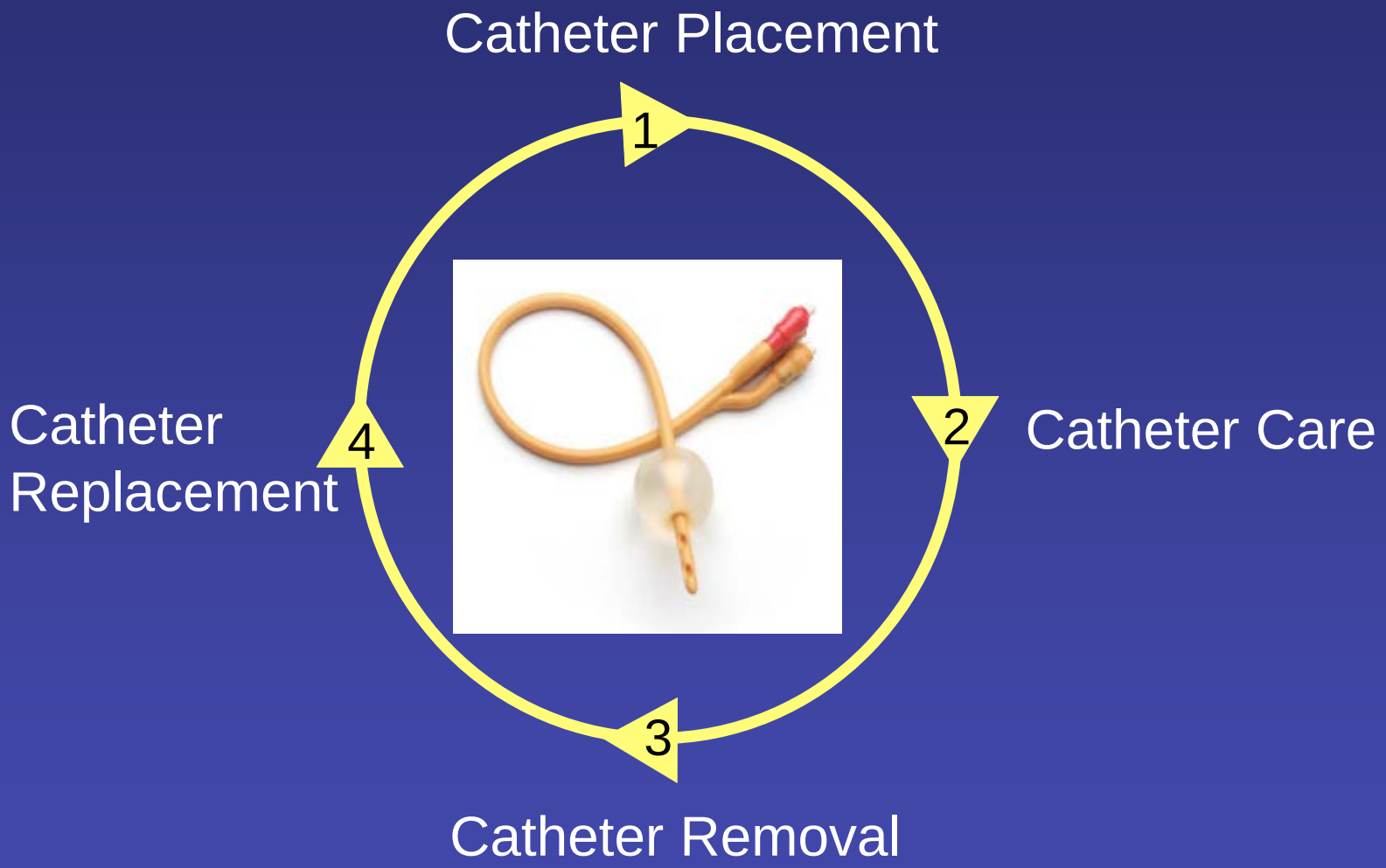
“Lifecycle” of the Urinary Catheter



Meddings J, Saint S. Disrupting the life cycle of the urinary catheter. *Clin Infect Dis.* 2011;52(11):1291-1293

Outline

Disrupting the Lifecycle of the Urinary Catheter

Avoid Unnecessary and Improper Placement

1

2 Maintain Awareness and Proper Care of Catheters in Place

3 Prompting Catheter Removal

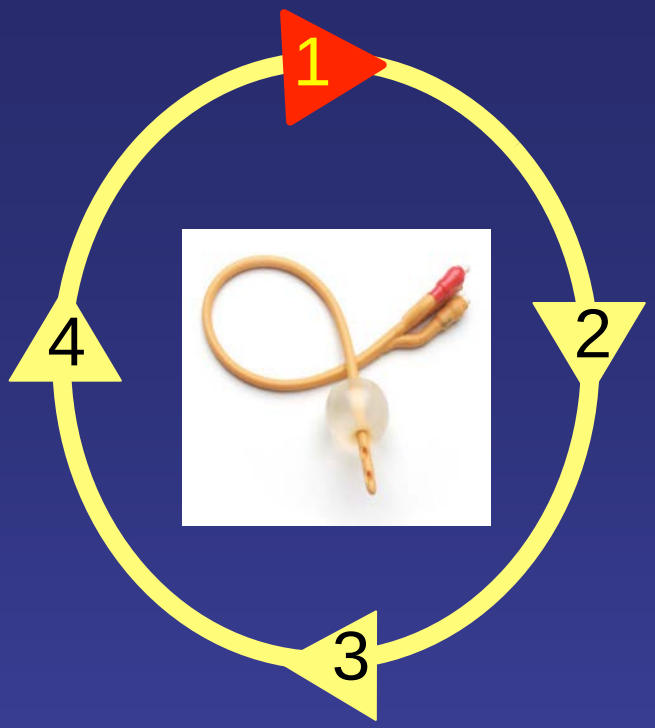
4 Preventing Catheter Replacement

Meddings J, Saint S. Disrupting the life cycle of the urinary catheter. *Clin Infect Dis.* 2011;52(11):1291-1293

1. Avoid Unnecessary Placement

To place or not to place?

21-55.7% catheterizations were unjustified[1]

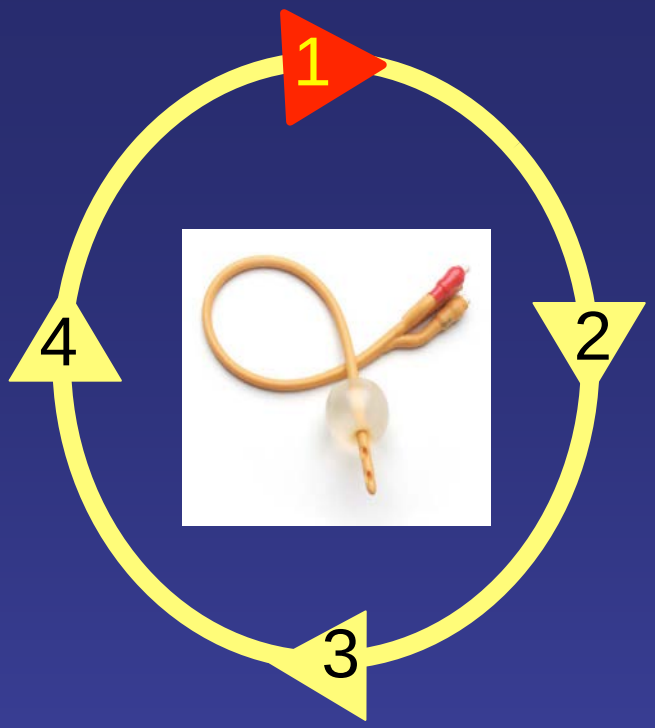


Just Say
No
to Urinary Catheters!

So why is this so hard?

[1]Meddings et al. *BMJ Qual Safety September* 2013

1. Avoid Unnecessary Placement



Challenges

- **Multiple environments**:
  1. Emergency Department,
  2. Pre/Post Operating Room,
  3. Inpatient Unit: acute care, ICU, rehabilitation, long-term care.

- **Different systems of care:** procedures, resources, priorities.

- **No Single Source for Distribution (unlike Pharmacy for antibiotics):** more difficult to regulate, monitor and provide feedback regarding use of urinary catheters.

- **Lack of Consensus and/or Interpretation on Appropriate Indications for Urinary Catheters**

Changing Catheter Use, by Environment

Setting	Specific Strategy	References
Emergency Department	Indication checklists, stickers attached to catheter kits	Gokula et al (2005 and 2009) Fakih et al, 2010
ICU	Daily checklists used in multi-disciplinary rounds	Dumigan et al, 1998 Huang et al, 2004 Stephan et al, 2006 Jain et al, 2006 Reilly et al, 2008 Elpern et al, 2009 Fuchs et al, 2011
Peri-Procedure	Procedure-specific protocols for catheter placement and post-op stop orders.	Stephan et al, 2006 Fuchs et al, 2011 Many genitourinary protocol studies.
General Admissions	Reminders vs. stop order written, verbal, electronic	Cornia et al, 2003 Saint et al, 2005 Fakih et al, 2008 Topal et al , 2005 Crouzet et al, 2007 Apisarnthanarak et al, 2007 Knoll et al, 2011

Appropriate Catheter Indications

Patient has acute urinary retention or obstruction

Need for accurate measurements of urinary output in critically ill patients.

Perioperative use for selected procedures:

- urologic surgery or other surgery on contiguous structures of genitourinary tract,
- anticipated prolonged surgery duration (removed in post-anesthesia unit),
- anticipated to receive large-volume infusions or diuretics in surgery,
- operative patients with urinary incontinence,
- need to intraoperative monitoring of urinary output.

To assist in healing of open sacral or perineal wounds in incontinent patients.

Requires prolonged immobilization (e.g., potentially unstable thoracic or lumbar spine)

To improve comfort for end of life care if needed.

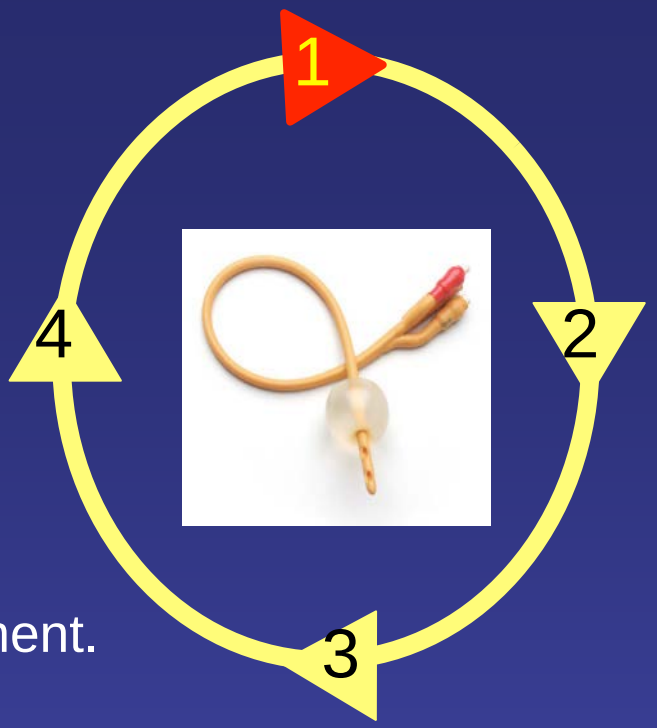
Gould C, et al. Infection Control & Hospital Epidemiology, 2010;31:319-326.

Not Appropriate Indications for Catheters

- Substitute for incontinence care tasks.
- Means to obtain urine for diagnostic tests when patient can voluntarily void.
- Prolonged postoperative duration without appropriate indications.
- Routinely for patients receiving epidural anesthesia/analgesia.

Gould C, et al. Infection Control & Hospital Epidemiology, 2010;31:319-326.

1. Avoid Unnecessary Placement



Tools to Reduce Placement:

Require physician order for placement.

Require appropriate indications for catheter placement.

Bladder scanners to evaluate/confirm urinary retention.

Catheter Orders with Decision Support:

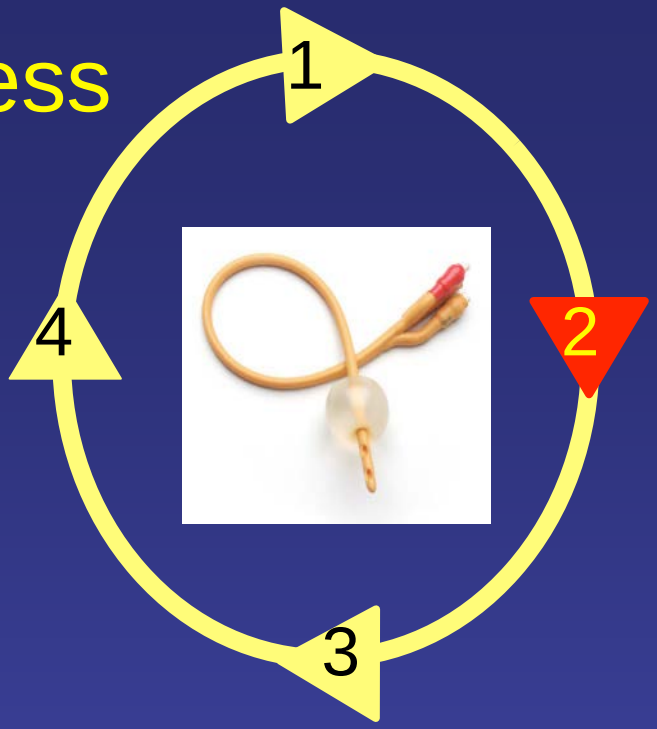
- Embed reminders for appropriate indications,
- Embed reminders about alternatives to indwelling catheter use,
- Start clock (24-48^{o}) for catheter removal reminders or stop orders.

1. Avoid Unnecessary Placement

Alternative to Consider	Indications
Bladder ultrasound	Urinary retention protocols, to avoid catheterization if no significant urine present
Intermittent catheterization	Chronic neurogenic bladder: spinal cord injury/disorder, other neurologic disease. Prostate enlargement Post-operative urinary retention
External catheters	"Condom" catheters: Cooperative male patients with other catheter indications, but no obstruction or urinary retention. Female external catheters: in development
Other care strategies	Bedside commodes, garments/pads, barrier creams, prompted toileting, "people power"

2. Maintain Catheter Awareness of Catheters in Place

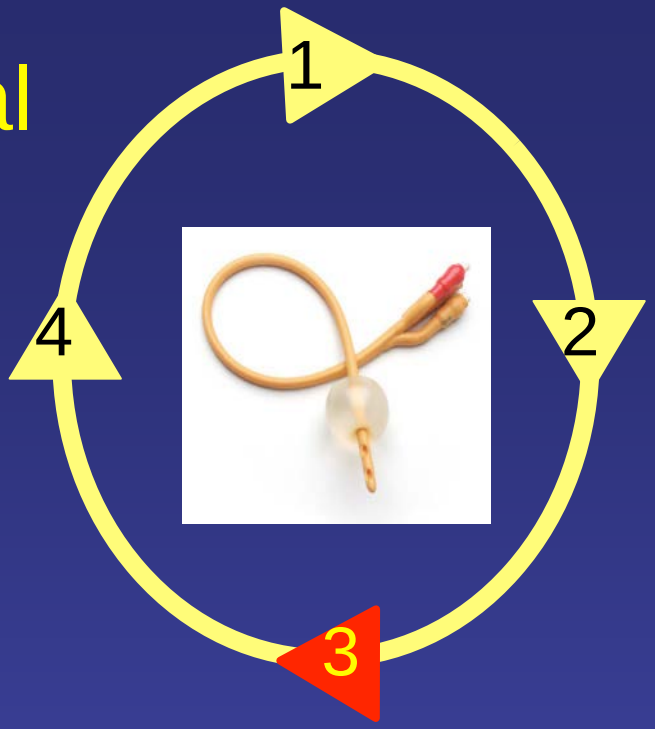
Level of Training	Proportion Unaware of Catheter Status[1]
Medical Students	18%
House Officers	25%
Attending Physicians	38%



[1]Saint et al. The American Journal of Medicine, Oct 15 2000; 109(6):476-480.

Options: Daily care checklists, more obvious catheter documentation; Routine reminders of catheter presence to physicians/nurses

3. Prompt Catheter Removal



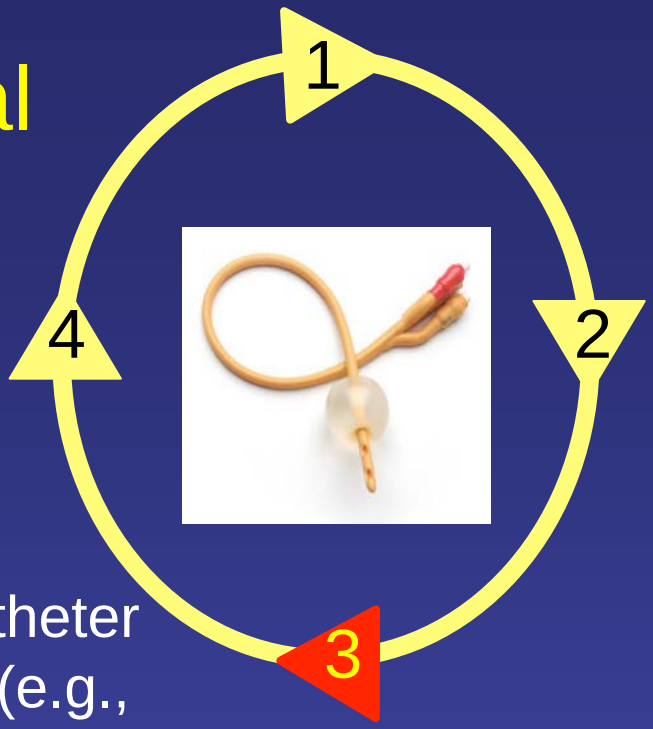
- ~30-50% of continued catheterization days were unnecessary[1]
- Prolonged catheterization is the #1 risk factor for catheter-associated urinary tract infection.[2]

Traditional Steps to Catheter Removal:

1. Physician recognizes catheter is present.
2. Physician recognizes catheter is no longer needed.
3. Physician writes order to remove catheter.
4. Nurse sees order and plans to remove the catheter.
5. Urinary catheter is removed.

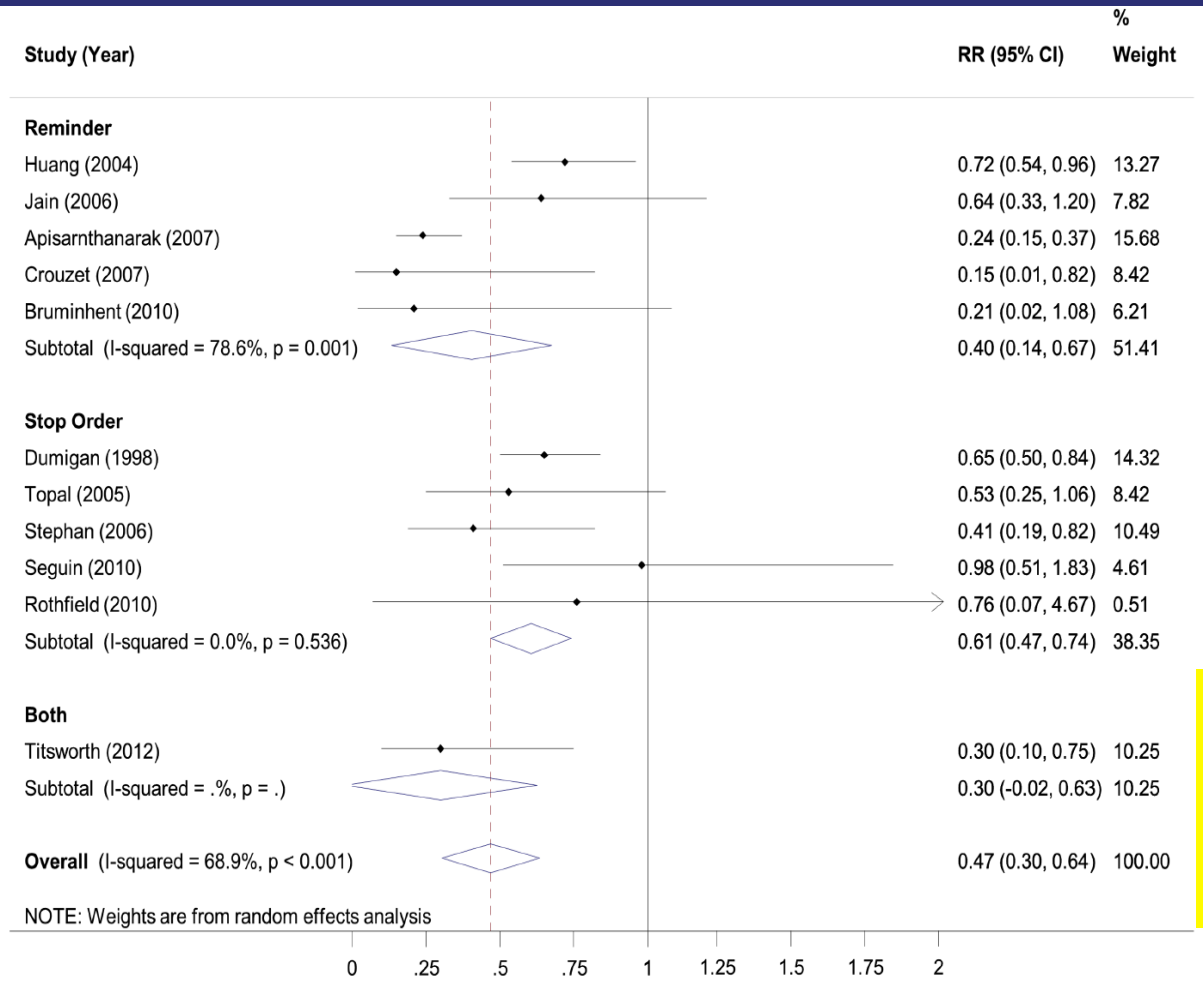
[1]Hooton T, et al. IDSA Urinary Catheter Guidelines, CID 2010;50 (1 March):625-663.
[2]Foxman, B. The American Journal of Medicine, 113 Suppl 1A, pp. 5s-13s, 2002.

3. Prompt Catheter Removal



- Reminder: reminds that a urinary catheter is still in use; may also remind of appropriate indications to continue catheterization.
- Stop Order: prompts removal of urinary catheter based upon specified time after placement (e.g., 24 hours), based upon clinical criteria and when no longer meeting appropriate use criteria.
- Can be directed at physicians or nurses (reminder vs. empowered)
- Can be written, verbal, or electronic (computer order entry)

Catheter Reminders & Stop Orders: Impact on CAUTI rates



53% fewer catheter-associated UTIs*

Figure 2 Meta-analysis of rate ratios for catheter-associated urinary tract infection episodes per 1000 catheter days, for intervention versus control groups, stratified by type of intervention to prompt catheter removal.

Meddings J, Rogers MA, Krein SL, Fakih MG, Olmsted RN, Saint S. *BMJ Qual Saf.* 2013.

Catheter Reminders & Stop Orders:
Impact on Days of Catheter Use (Mean Duration)

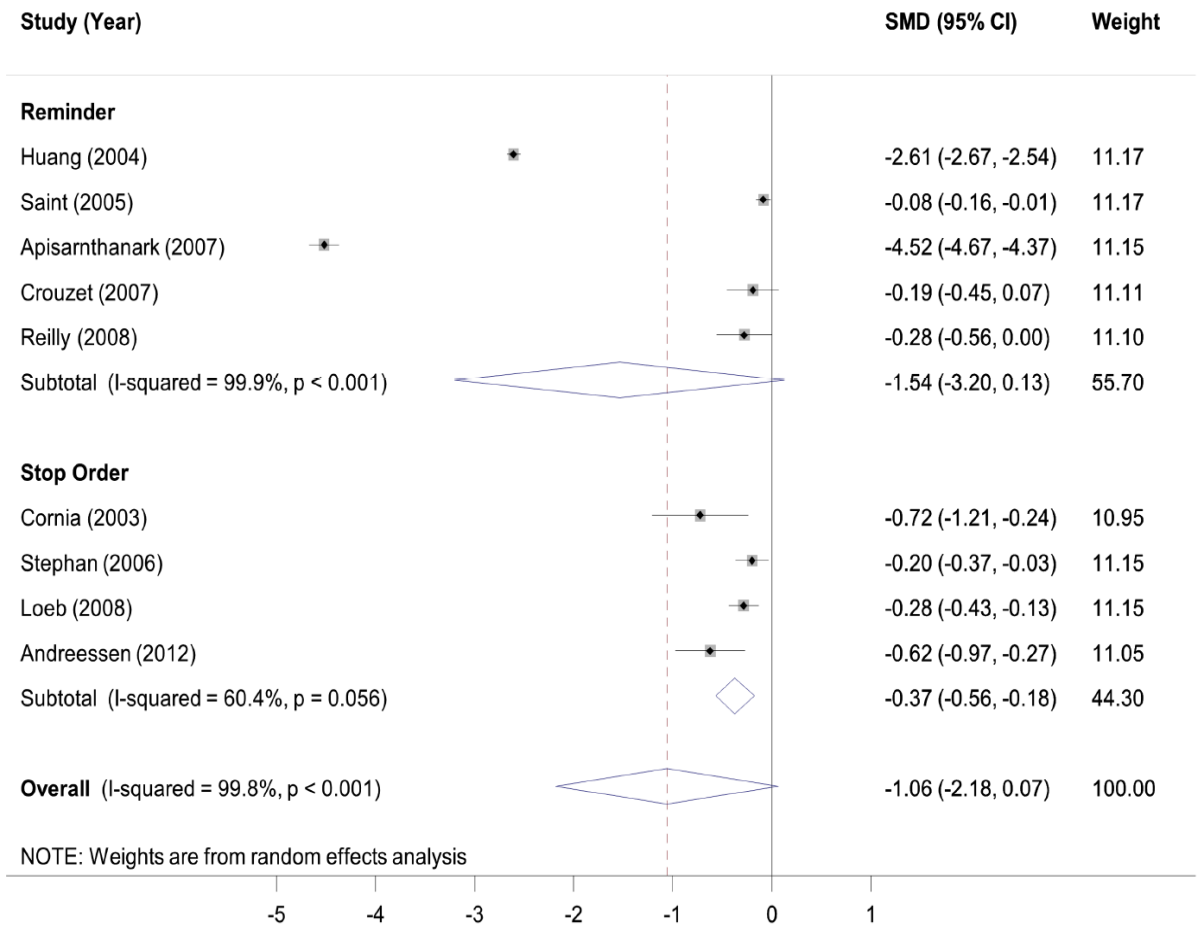


Figure 4 Meta-analysis of the standardised mean difference in days of urinary catheter use, for intervention versus control groups, stratified by type of intervention to prompt catheter removal.

Meddings J, Rogers MA, Krein SL, Fakih MG, Olmsted RN, Saint S. *BMJ Qual Saf.* 2013.

Catheter Reminders & Stop Orders: Pearls and Pitfalls

Pearls:

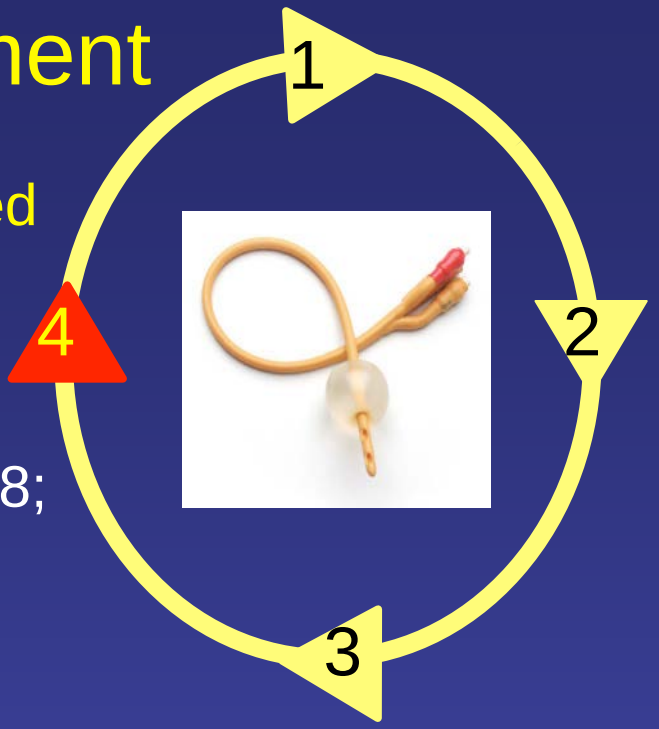
- Tailor reminder type to care setting (stickers, electronic, etc.).
- Embed appropriate indications to guide catheter use.
- Remember to include reminders about catheter alternatives.
- Automated, timed reminders/stop orders (similar to antibiotic stop orders).
- Direct reminder to primary care team (not consultants by mistake, etc.).
- Empower nurses to remove without additional order from physician.
- Reminders/stop orders that prompt review and action while at the bedside may be more effective than reminding when not at bedside.

Pitfalls:

- Reminders often ignored.
- Some catheter orders can increase catheter use by accident.
- Challenging to sustain impact of reminders/stop orders.

Meddings J. Interventions to reduce urinary catheter use: it worked for them, but will it work for us? *BMJ Qual Saf*. Dec 2013;22(12):967-971.

4. Prevent Catheter Replacement



Do Reminders or Stop Orders lead to increased need for re-catheterization?

No evidence to support higher re-catheterization needs, by 4 studies (Loeb, 2008; Crouzet, 2007; Saint, 2005; Cornia, 2003).

Tools to prevent catheter replacement:

- Urinary retention evaluation protocols: use of bladder scan, straight catheters, without requiring contact with physicians.
- Same tools as preventing initial placement: Catheter-order restrictions, indication guidance, alternatives to indwelling catheters

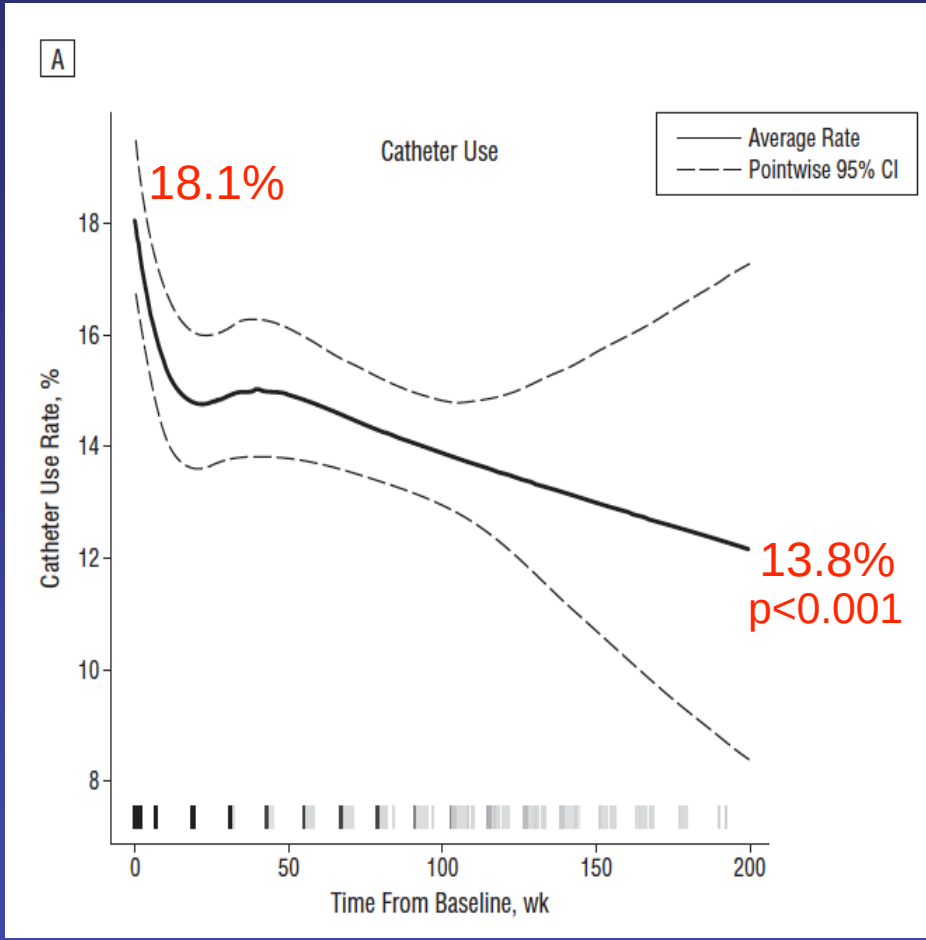
Use of “Bladder Bundles”

- Aseptic insertion and proper maintenance is paramount.
- Bladder ultrasound may avoid indwelling catheterization.
- Condom or intermittent catheterization in appropriate patients.
- Do not use the indwelling catheter unless you must!
- Early removal of the catheter using reminders or stop-orders appears warranted.

Note: Changing catheter use = changing habits and behavior.
Invest in nurse and physician “champions” to motivate and problem-solve with peers, and keep monitoring catheter data to sustain change.

Saint S, Olmsted RN, Fakih M, et al. The Joint Commission Journal on Quality and Patient Safety 2009;35:449-55
Meddings J. Interventions to reduce urinary catheter use: it worked for them, but will it work for us? *BMJ Qual Saf*. Dec 2013;22(12):967-971.

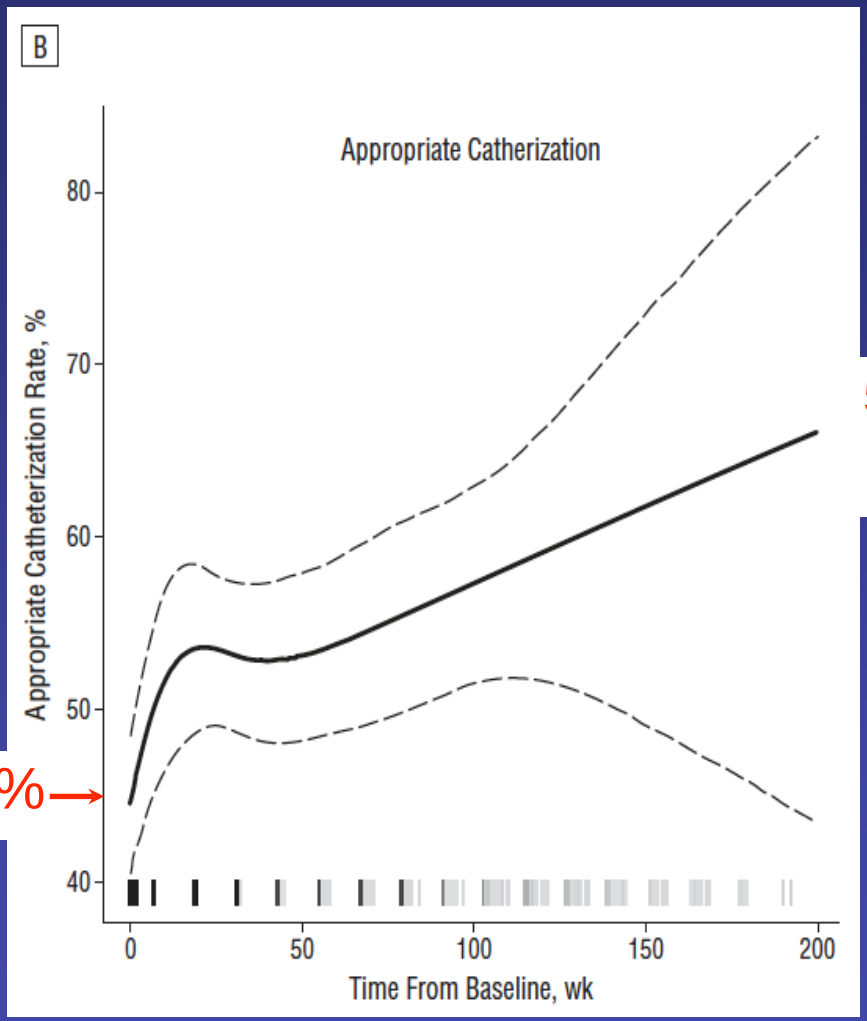
Success in Changing Urinary Catheter Use MHA Keystone Initiative for Michigan Hospitals



Sustained & significant reduction in urinary catheter use

Fakih MG, Watson SR, Greene MT, et al. Reducing inappropriate urinary catheter use: a statewide effort. *Arch Intern Med.* Jan 9 2012.

Success in Changing Urinary Catheter Use
MHA Keystone Initiative for Michigan Hospitals



44.3% →

57.6%

p=0.005

Sustained and significant improvement in appropriateness of urinary catheter use

Fakih MG, Watson SR, Greene MT, et al. Reducing inappropriate urinary catheter use: a statewide effort. *Arch Intern Med.* Jan 9 2012.

Not Recommended

- Routine screening for UTI in asymptomatic patients.
- Antimicrobial urinary catheters (Pickard et al, 2012).
- Routine antimicrobial prophylaxis.
- Bladder irrigation as method to prevent infection.
- Adding antimicrobials to urine collection bags.
- Routinely changing catheters or collection bags.
- Vigorous peri-urethral cleaning.

Take-Home Points

- Reminders and Stop Orders can disrupt the catheter "lifecycle" at all stages: placement, awareness of continued use, prompting removal, and preventing replacement.

- Changing catheter use is challenging because it requires behavior change: invest in nurse and physician champions, and keep monitoring and providing feedback of catheter use to sustain change.

- Avoid screening for asymptomatic UTIs, to prevent unintended patient harm.

Thank you!

www.catheterout.org

Q & A

Jennifer Ann Meddings, MD
Assistant Professor, Department of Internal Medicine
University of Michigan Medical School

Catheter-Associated Urinary Tract Infection: The National Perspective

Carolyn Gould, MD, MSCR

Division of Healthcare Quality Promotion

Centers for Disease Control and Prevention

Essential Hospitals Engagement Network

Patient Harm Series II: New Tools to Prevent CAUTI webinar

April 16, 2014

CAUTI: HHS Agency Priority Goal

HHS Action Plan to Prevent Healthcare-associated Infections
5-year reduction goal for CAUTI: 25%

CAUTI baseline = 2010 = SIR 0.94 (2009 referent period)
FY 2012 end goal: 10% reduction = SIR 0.85
FY 2013 end goal: 20% reduction = SIR 0.75

http://www.hhs.gov/ash/initiatives/hai/

Picture courtesy of CMS

http://www.cdc.gov/HAI/pdfs/progress-report/hai-progress-report.pdf

NATIONAL

HEALTHCARE ASSOCIATED INFECTIONS PROGRESS

Healthcare-associated infections (HAIs) are infections patients can get while receiving medical treatment in a healthcare facility. The standardized infection ratio (SIR) is a statistic used to track HAI prevention progress over time; lower SIRs indicate better progress. The infection data are collected through CDC's National Healthcare Safety Network (NHSN). HAI data gives healthcare facilities and public health agencies knowledge to design, implement, and evaluate HAI prevention efforts.

NATIONAL PROGRESS OVERVIEW	NATIONAL SIR	CHANGES IN INFECTION VS. NATIONAL BASELINE
Central Line-associated Bloodstream Infections (**CLABSI**)	0.56	↓ 44%
Catheter-associated Urinary Tract Infections (**CAUTI**)	1.03	↑ 3%
Surgical Site Infections, Colon Surgery (**SSI**)	0.80	↓ 20%
Surgical Site Infections, Abdominal Hysterectomy Surgery (**SSI**)	0.89	↓ 11%
Hospital-onset *Clostridium difficile* Infections	0.98	↓ 2%
Hospital-onset MRSA Bloodstream Infections	0.96	↓ 4%*

CAUTIs ↑ 3% HIGHER COMPARED TO NAT'L BASELINE

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS

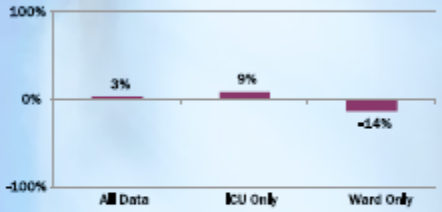
When a urinary catheter is not inserted correctly, not kept clean, or left in a patient for too long, germs can travel through the catheter and cause a catheter-associated urinary tract infection in the urinary system, which includes the bladder and kidneys.

US hospitals reported a significant increase in CAUTIs between 2011 and 2012.

3,597 hospitals across the nation reported CAUTI data in 2012.

13% 13% of hospitals have an SIR significantly worse than the national SIR of 1.03.

Changes in CAUTI vs. 2009 National Baseline



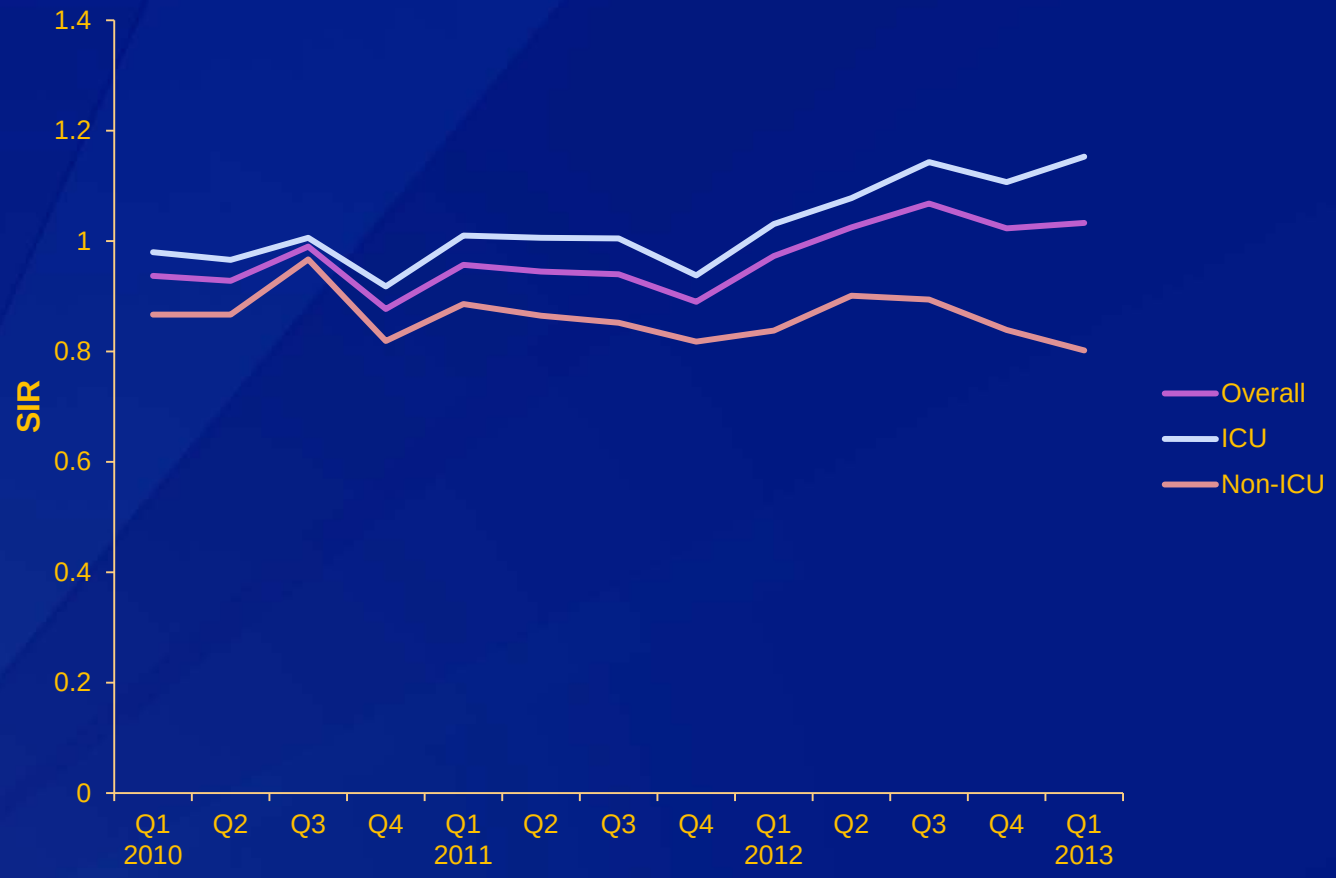
Learn how well your hospital prevents infections: www.medicare.gov/hospitalcompare

- 2012 HAI Progress Report: www.cdc.gov/hai/progress-report/
- Preventing HAIs: www.cdc.gov/hai
- NHSN: www.cdc.gov/nhsn

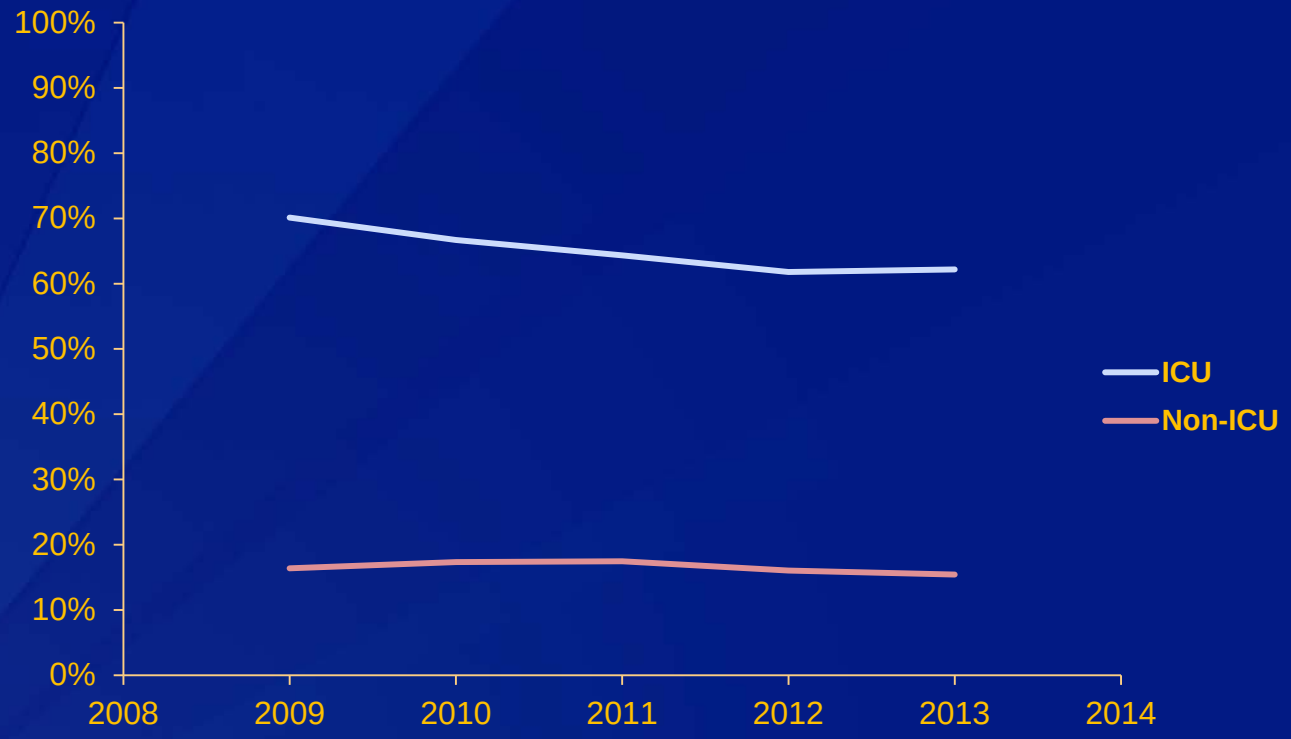
THIS REPORT IS BASED ON 2012 DATA, PUBLISHED MARCH 2014

http://www.cdc.gov/HAI/pdfs/progress-report/hai-progress-report.pdf

National Data: Trends in CAUTI SIRs



National Data: Trends in Urinary Catheter Device Utilization Ratios (DUR)



CAUTI SIRs and Device Utilization Ratios 2013 (Q1-Q3)

ICU	
No. of locations reporting	5483
SIR	1.18
DUR%	60

WARD	
No. of locations reporting	5840
SIR	0.81
DUR%	17

Using Data: Targeted Assessment for Prevention (TAP)

- Evaluating national data to target prevention measures to facilities with greatest need for improvement
  - TAP report ranks facilities by excess numbers of infections above a set benchmark defined at a national, state, or group level
- CDC is partnering with organizations (QIOs, HENs, state health departments) to target prevention efforts toward facilities with highest excess numbers of infections
  - Group users can create their own TAP reports
- Plan to build in TAP report function into NHSN application

NHSN Data for Action

NHSN Data
Over 4,700 hospitals currently reporting CAUTI data

Targeted assessment for prevention (TAP) strategy

Target hospitals with highest excess numbers of infections

Technical Assistance

- HENs
- QIOs
- CUSP
- Other partners

TAP strategy: initial evaluation of national data

	Number of Hospitals	No. of excess CAUTIS (observed-expected)
Hospitals Reporting CAUTI (2012)	3580	
Hospitals with SIR > 1	1164	5184
Targeted hospitals to reach national SIR goal (0.75)	827	5048
Targeted hospitals accounting for 80% of excess CAUTIs	400	4282

Data courtesy of Minn Soe, CDC

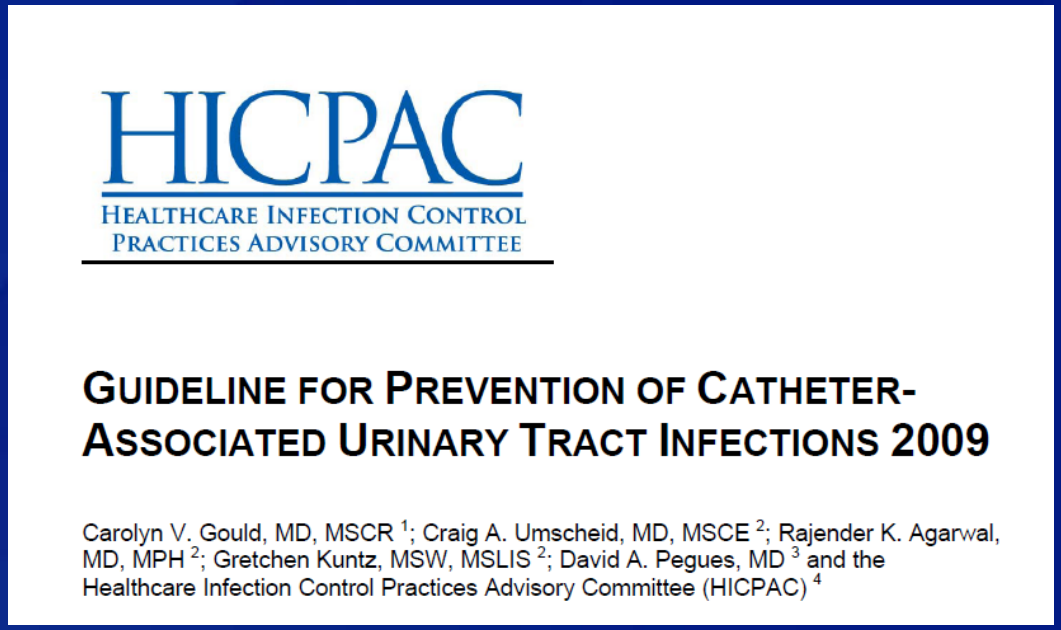
Sample CAUTI TAP Report

FACILITY RANK	ORGID	STATE	BEDS	NO.LOCATION (ICU,NON-ICU)	CAUTIS (ICU,NON-ICU)	DEVICE DAYS (ICU,NON-ICU)	DU% (ICU,NON-ICU)	CAD (ICU, NON-ICU)	SIR (ICU,NON-ICU)	ICU: TOTAL NO. PATHOGENS (% EC,YS,PA,KPO,FS,PM,ES)
1	001	AA	325	6(4,2)	42(34,8)	6861(5364,1497)	26(56,9)	22.9(17.8,5.2)	2.2(2.1,2.8)	37 (24, 14, 16, 8, 11, 0, 0)
2	002	AA	586	3(2,1)	73(70,3)	14292(13898,394)	48(70,4)	21.6(20.1,1.5)	1.4(1.4,2)	78 (27, 17, 10, 17, 12, 1, 0)
3	003	AA	471	3(2,1)	28(26,2)	6255(5880,375)	51(72,9)	15.6(15.1,0.6)	2.3(2.4,1.4)	28 (21, 36, 7, 7, 7, 0, 0)
4	004	AA	340	1(1,0)	36(36,.)	6760(6760,.)	84(84,.)	13(13,.)	1.6(1.6,.)	36 (36, 36, 8, 6, 0, 0, 0)
5	005	AA	646	4(4,0)	45(45,.)	11569(11569,.)	71(71,.)	12.2(12.2,.)	1.4(1.4,.)	45 (22, 31, 4, 9, 2, 2, 16)
6			469	16(7,9)	39(32,7)	14240(9989,4251)	24(55,10)	7.8(7.6,0.2)	1.3(1.3,1)	36 (19, 47, 3, 3, 11, 0, 0)
7			200	3(2,1)	14(12,2)	4408(4125,283)	40(61,7)	4.9(4,0.9)	1.5(1.5,1.9)	12 (42, 25, 25, 0, 0, 0, 0)
8			500	3(3,0)	13(13,.)	6322(6322,.)	59(59,.)	3.7(3.7,.)	1.4(1.4,.)	13 (23, 54, 0, 8, 0, 8, 8)
9			418	1(1,0)	12(12,.)	3614(3614,.)	81(81,.)	3.7(3.7,.)	1.4(1.4,.)	13 (38, 31, 8, 0, 0, 0, 8)
10			283	3(2,1)	9(8,1)	4690(3744,946)	36(63,14)	2.9(3.4,-0.5)	1.5(1.7,0.7)	9 (22, 22, 0, 11, 22, 0, 0)
11			258	3(2,1)	13(11,2)	7784(6588,1196)	44(63,16)	2.8(3.1,-0.3)	1.3(1.4,0.9)	11 (18, 9, 18, 0, 9, 0, 0)
12			200	3(2,1)	6(6,0)	3010(2590,420)	38(56,13)	2.2(2.8,-0.7)	1.6(1.9,.)	6 (0, 50, 0, 17, 17, 0, 0)

- Facilities are ranked by “CAD” (cumulative attributable difference) in descending order
- CAD = observed – expected number of CAUTIs

Acting on Data

- Assessment of gaps in infection prevention in high-ranking facilities
  - Tools currently being piloted
- Implementation of specific interventions directed at gaps



HICPAC

HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE

GUIDELINE FOR PREVENTION OF CATHETER-ASSOCIATED URINARY TRACT INFECTIONS 2009

Carolyn V. Gould, MD, MSCR [1]; Craig A. Umscheid, MD, MSCE [2]; Rajender K. Agarwal, MD, MPH [2]; Gretchen Kuntz, MSW, MSLIS [2]; David A. Pegues, MD [3] and the Healthcare Infection Control Practices Advisory Committee (HICPAC) [4]

http://www.cdc.gov/hicpac/pdf/CAUTI/CAUTIguideline2009final.pdf

CAUTI Core Prevention Measures

Catheter Use

- Insert catheters only for appropriate indications
- Leave catheters in place only as long as needed

Catheter Insertion

- Ensure that only properly trained persons insert and maintain catheters
- Insert catheters using aseptic technique and sterile equipment

Catheter Maintenance

- Maintain a closed drainage system
- Maintain unobstructed urine flow

http://www.cdc.gov/hicpac/cauti/001_cauti.html

CAUTI Core Prevention Measures

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Implementation Strategies

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Catheter Maintenance

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- Maintain unobstructed urine flow

http://www.cdc.gov/hicpac/cauti/001_cauti.html

Example of Auditing Tool

Urinary Catheter Checklist	Yes	No
Insertion		
Hand hygiene performed before and after insertion		
Catheter placed using aseptic technique and sterile equipment		
Catheter secured properly after insertion		
Catheter insertion and indication documented		
Maintenance		
Hand hygiene performed before and after manipulating catheter		
Catheter and collecting tubing are not disconnected (irrigation avoided)		
Urine bag emptied using aseptic technique		
Urine samples obtained aseptically (via needless port for small volume)		
Urine bag kept below level of bladder at all times		
Catheter tubing unobstructed and free of kinking		
Need for urinary catheters reviewed daily with prompt removal of unnecessary urinary catheters		

Focus on ICUs

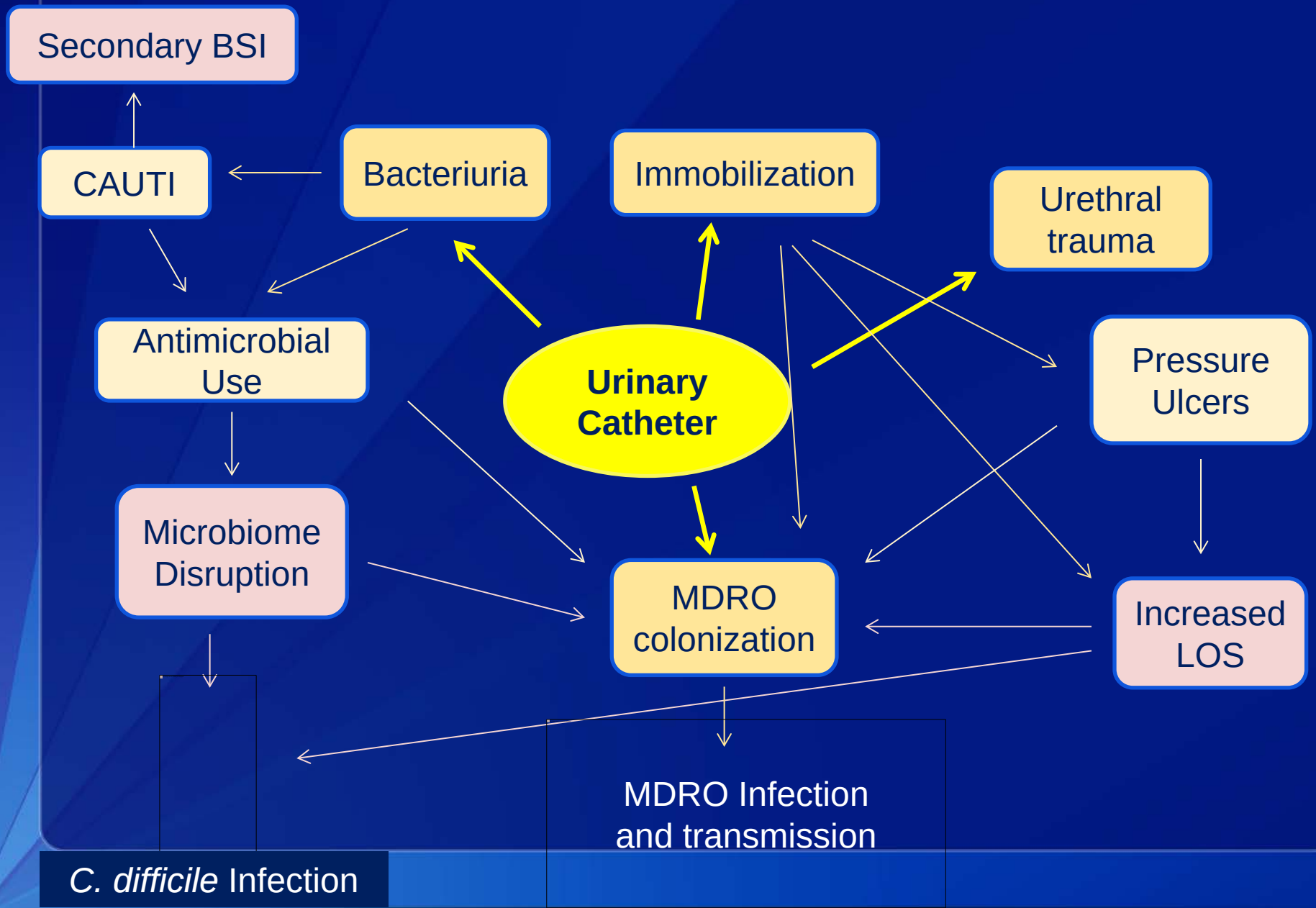
- Nationally, CAUTI SIRs not decreasing in ICUs
- Challenges
  - High prevalence of urinary catheters
  - High prevalence of fever as well as bacterial and yeast colonization
- Approaches
  - Focus on removing devices and reducing antibiotic use
    - Change paradigm of device use – how many people actually need hourly measurement of urine output?
  - Improve urine culturing practices
- Planning multicenter evaluation of barriers to CAUTI prevention in high-acuity areas (ICUs, LTACHs)

Getting to the source: the urinary catheter

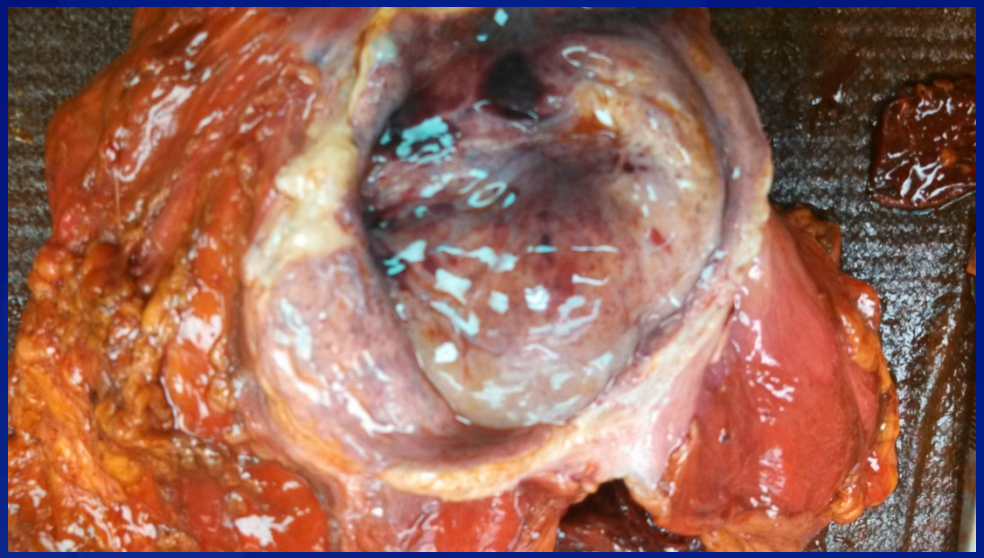
- 70-75% of healthcare-associated UTIs are associated with catheters (95% of UTIs in ICUs)
- Non-infectious complications common
  - Urethral strictures/erosion, hematuria, blockage
  - Discomfort/pain
  - Restriction of activities – “one-point restraint”
- Physicians frequently unaware

Burton DC, Edwards JR, Srinivasan A, et al. Infect Control Hosp Epidemiol 2011;32:748-56
Saint S, Lipsky BA, Baker PD, et al. J Am Geriatr Soc 1999;47:1453-7
Saint S, Lipsky BA, Goold SD. Ann Intern Med 2002;137:125-7
Hollingsworth JM, Rogers MA, Krein SL et al. Ann Intern Med 2013;159:401-10
Saint S, Wiese J, Amory JK, et al. Am J Med 2000;109:476-80

Downstream effects of urinary catheters



Hidden damage: hemorrhage and ulceration of bladder mucosa from urinary catheter

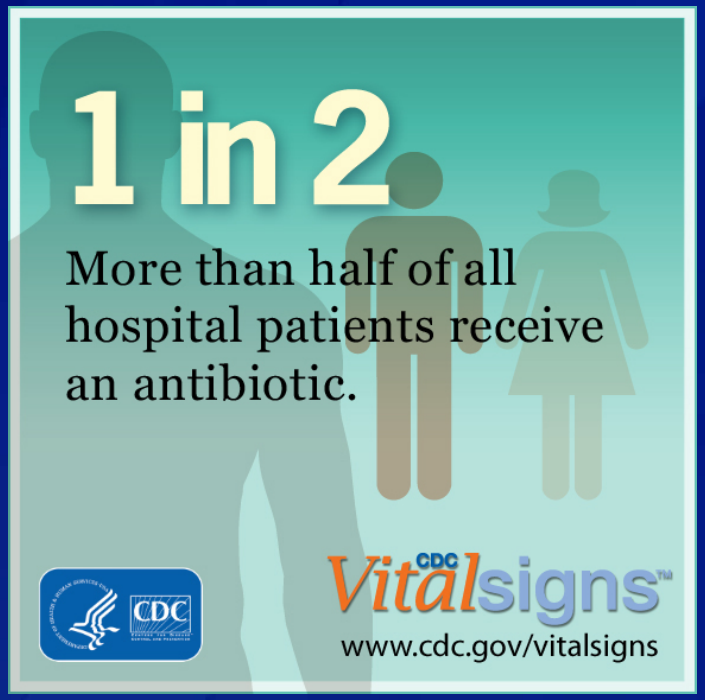


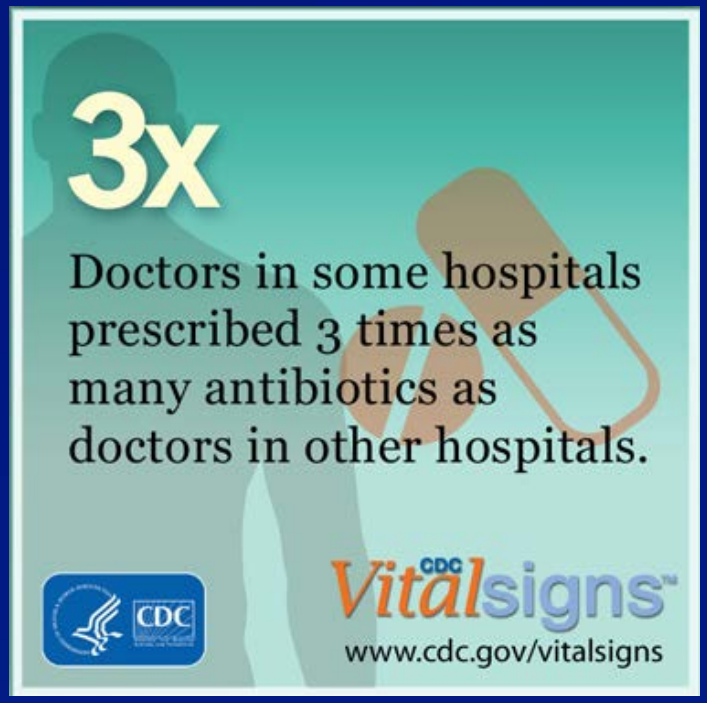
Photos courtesy of Nancy E. Cornish M.D.
Division of Laboratory Science and Standards, CDC

Device utilization ratio: a quality metric

- Device utilization ratio (DUR) for urinary catheters is currently not reportable
- A comparative metric requires risk adjustment (like SIR)
- CDC is currently exploring development of a risk-adjusted, comparative measure for urinary catheter utilization to be used as a quality measure for acute care

Collateral damage: Antimicrobial use





- *"UTI" is one of the leading causes of unnecessary antimicrobial use*
- *Exposure to antibiotics increases the risk of CDI 3-fold for up to 3 months*

Hensgens MP, Goorhuis A, Dekkers OM et al. J Antimicrob Chemother 2012;67:742

Unnecessary antimicrobials in patients with CDI

- Review of 246 patients with current or recent CDI
  - 77% received at least 1 unnecessary antimicrobial dose
  - 26% received only unnecessary antimicrobials
  - Leading indications for unnecessary use were **putative UTI** and pneumonia

Shaughnessy MK, Amundson WH, Kuskowski MA. Infect Control Hosp Epidemiol 2013;34:109-16

Inappropriate treatment of catheter-associated asymptomatic bacteriuria (ASB)

- 32% of catheter-associated ASB episodes at one center were treated inappropriately with antibiotics
- Independent risk factors for inappropriate treatment of ASB:
  - Older age
  - Gram-negative organisms
  - Higher urine WBC
- Three patients developed *C. difficile* infection shortly after treatment for ASB

Cope M. Clin Infect Dis 2009;48:1182-8

Strategies to reduce treatment of ASB

- Reduce inappropriate catheter use
- Reduce inappropriate orders for urine cultures
  - Avoid reflex orders for UA/Ucx for “soft” indications (e.g., falls)
  - If you look you will find (and treat)!
    - Difficult for clinicians to ignore a positive culture, regardless of symptoms
    - Pressure to treat – from physicians, RNs, patients, families
- Reduce contamination/colonization
  - If CAUTI suspected, remove/replace long-term catheters (> 2 weeks) prior to culture

Doernberg SB, V Dudas, KK Trivedi, ID Week 2012, Poster presentation
Hooton TM. Clin Infect Dis 2010;50


CDC

Thank you!
Questions?

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

Q & A

Carolyn Gould, MD, MSCR
CDR, United States Public Health Service
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

UPCOMING EVENTS

- **Patient Harm Series III: VTE Measures and Prevention**
  May 8, 2-3 pm ET

- **Free Membership Networking Opportunity!**
  Leadership for Safety Workshops
  Dallas, Texas
  May 8 – Workshop for C-suite leaders and board members
  May 9 – Workshop for hospital directors and managers

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- **Check out the NEW Essential Hospitals Engagement Network website:** http://essentialhospitals.org/groups/ehen/