



**WISCONSIN DEPARTMENT**  
*of* **HEALTH SERVICES**

# **Wisconsin HAI Long-Term Care Education Series**

August 26, 2021

# Today's Agenda

- Wisconsin Long-Term Care Urinary Tract Infection (UTI) Toolkit
  - **Christopher J. Crnich, MD, PhD**, Chief of Medicine, Madison VA Hospital and Associate Professor of Medicine in the Division of Infectious Diseases, UW School of Medicine and Public Health

**HAI Long-Term Care Education Seminar**  
**August 26, 2021**

**The Wisconsin Long-Term Care Urinary Tract  
Infection (UTI) Toolkit**  
**([https://crc.chsra.wisc.edu/uti-  
toolkit/index.php](https://crc.chsra.wisc.edu/uti-toolkit/index.php))**

Christopher J. Crnich, MD PhD  
On Behalf of the Wisconsin Healthcare-Associated Infections in  
Long-Term Care Coalition

# Acknowledgements:



The Wisconsin Long-Term Care UTI toolkit was developed by the Wisconsin HAI in Long-Term Care Coalition and its members (<https://www.dhs.wisconsin.gov/regulations/nh/hai-introduction.htm>)



**Wisconsin Partnership Program**  
UNIVERSITY OF WISCONSIN  
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Funding for evaluation of the UTI toolkit was provided by the UW School of Medicine and Public Health from the Wisconsin Partnership Program (<https://www.med.wisc.edu/wisconsin-partnership-program/>)

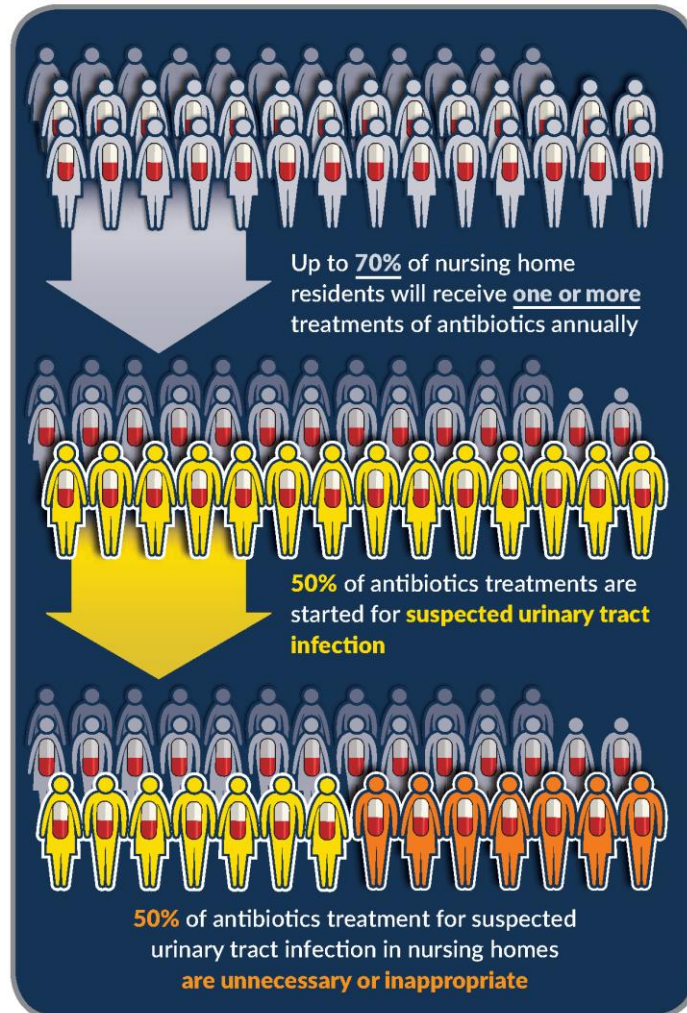


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The UTI toolkit is freely available to the public on the Wisconsin Clinical Resource Center (<https://crc.chsra.wisc.edu/>) which is administratively housed in the University of Wisconsin Department of Medicine

# Frequency and Consequences of Treating “Suspected Urinary Tract Infection (UTI)”

## ANTIBIOTIC USE IN NURSING HOMES



## HARMS AT INDIVIDUAL LEVEL

### ADE

- 20% of all adverse drug events (ADEs) in nursing homes caused by antibiotics
- Antibiotic-associated ADEs are one of the most common reasons for transfer to ER

### CDI

- *C. difficile* infection (CDI) is a life-threatening intestinal disease caused by antibiotics
- 12% of nursing home residents treated inappropriately for UTI develop CDI

### ARO

- ~50% of nursing residents are colonized with antibiotic-resistant organisms (AROs)
- Antibiotic exposure is the single most important risk factor for ARO colonization

## HARMS AT FACILITY LEVEL



Residents in nursing homes with higher antibiotic use have a **24% increased risk** of antibiotic-related harm



Antibiotics account for **1/3 of all survey penalties** for inappropriate medication use in Wisconsin nursing homes

## HARMS AT POPULATION LEVEL



- Half of the residents transferred to the hospital are colonized with *C. difficile* and/or antibiotic-resistant bacteria which may be spread to others
- Nursing homes have been repeatedly implicated in the regional spread of resistance
- Mathematical models suggest that antibiotic resistance cannot be controlled in hospitals without controlling resistance in nursing homes

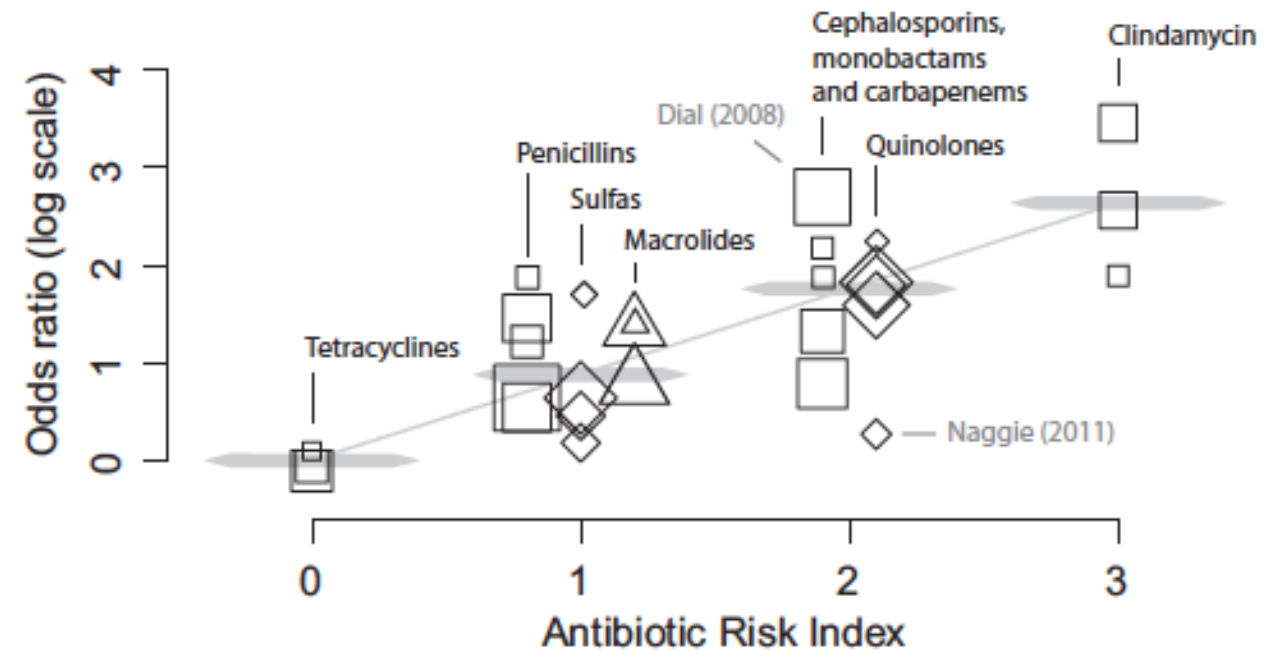
# Providers Don't Think They Are Treating Asymptomatic Bacteriuria

- UTI, as well as many other conditions, can result in resident change-in-condition (Table)
- Non-localizing signs often (>60%) the only reason provided by clinicians when asked why they suspect UTI
- There is no evidence that behavior change, falls, anorexia, or functional status associated with UTI

D	Drugs	BEERS Criteria (e.g., anticholinergic, benzodiazepines, hypnotics) OR dose change
	Dementia	Dementia Lewy bodies: Fluctuations in alertness and attention
	Discomfort	Pain
E	Eyes, ears, environment	Sensory deprivation; vulnerability to environment
L	Low oxygen states	Myocardial infarction, stroke, pulmonary embolus
I	Infection	Pneumonia, sepsis, symptomatic UTI
R	Retention	Urinary retention, constipation
I	Ictal states	Seizure disorder
U	Underhydration/ nutrition	Dehydration
M	Metabolic Causes	Low or high blood sugar, sodium abnormalities
S	Subdural hematoma	Head trauma

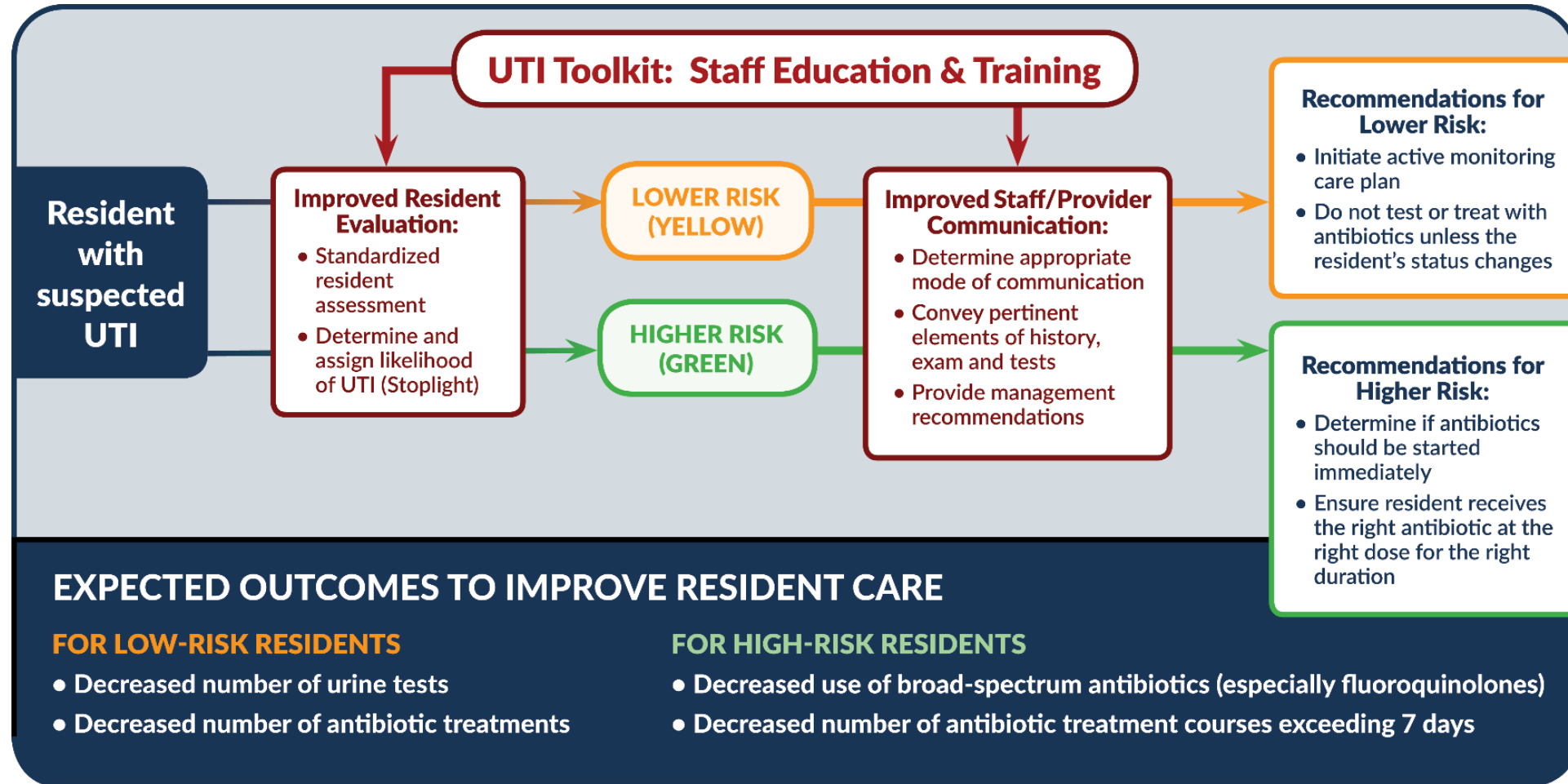
# Use of Fluoroquinolone Antibiotics for UTI Rx is Common in NHs

- High rates of FQ resistance among bacteria that cause UTI
- Major driver of infection with *Clostridioides difficile* (Figure)
- High rates of adverse effects (Table)
- FDA → do not use for treatment of common infections



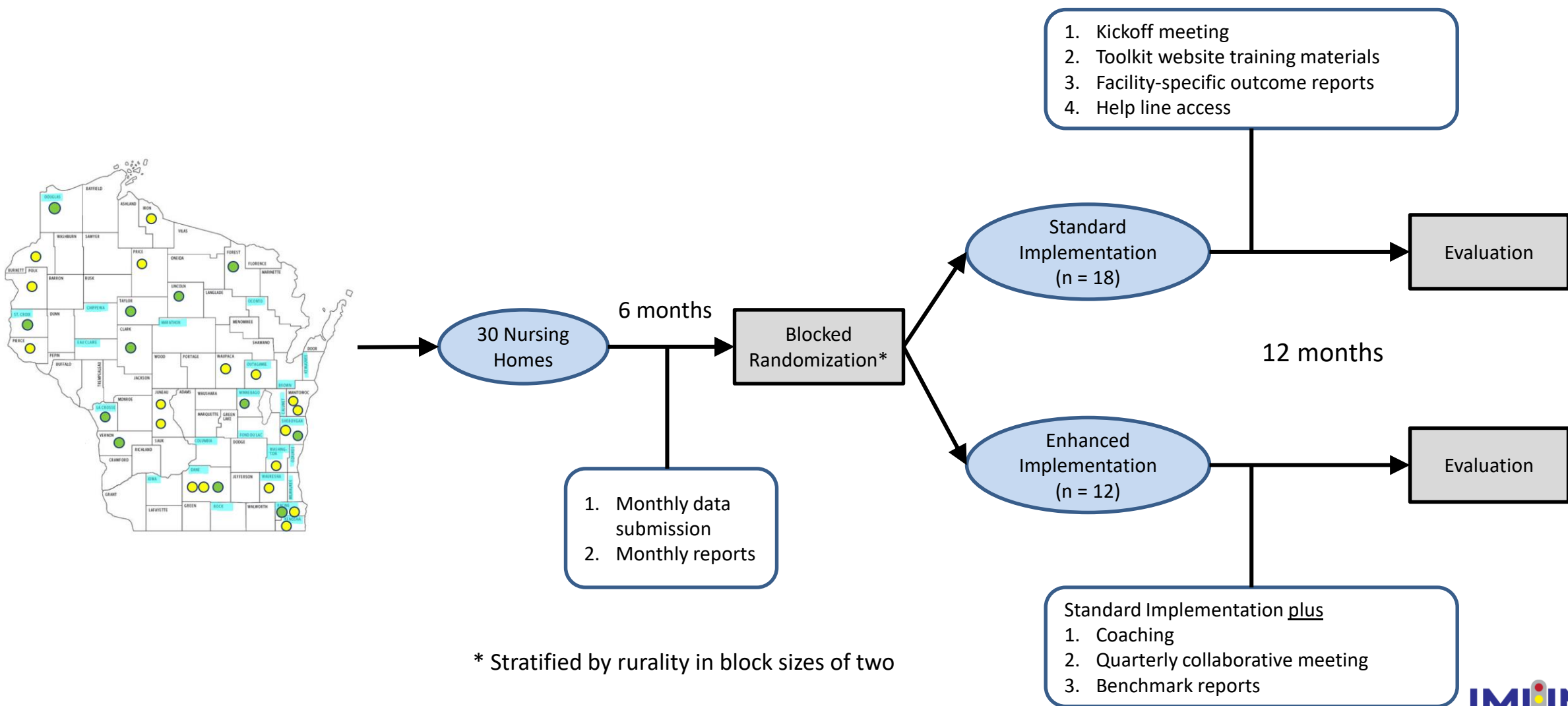
Adverse Effects of Fluoroquinolones	
Gastrointestinal	Nausea and vomiting
CNS	Headaches, dizziness, sleep disturbances
Musculoskeletal	Tendon rupture, arthropathy
Cardiovascular	QT prolongation, aortic aneurysms
Skin	Rash (maculopapular)

# Behavioral Objectives of WI UTI Toolkit

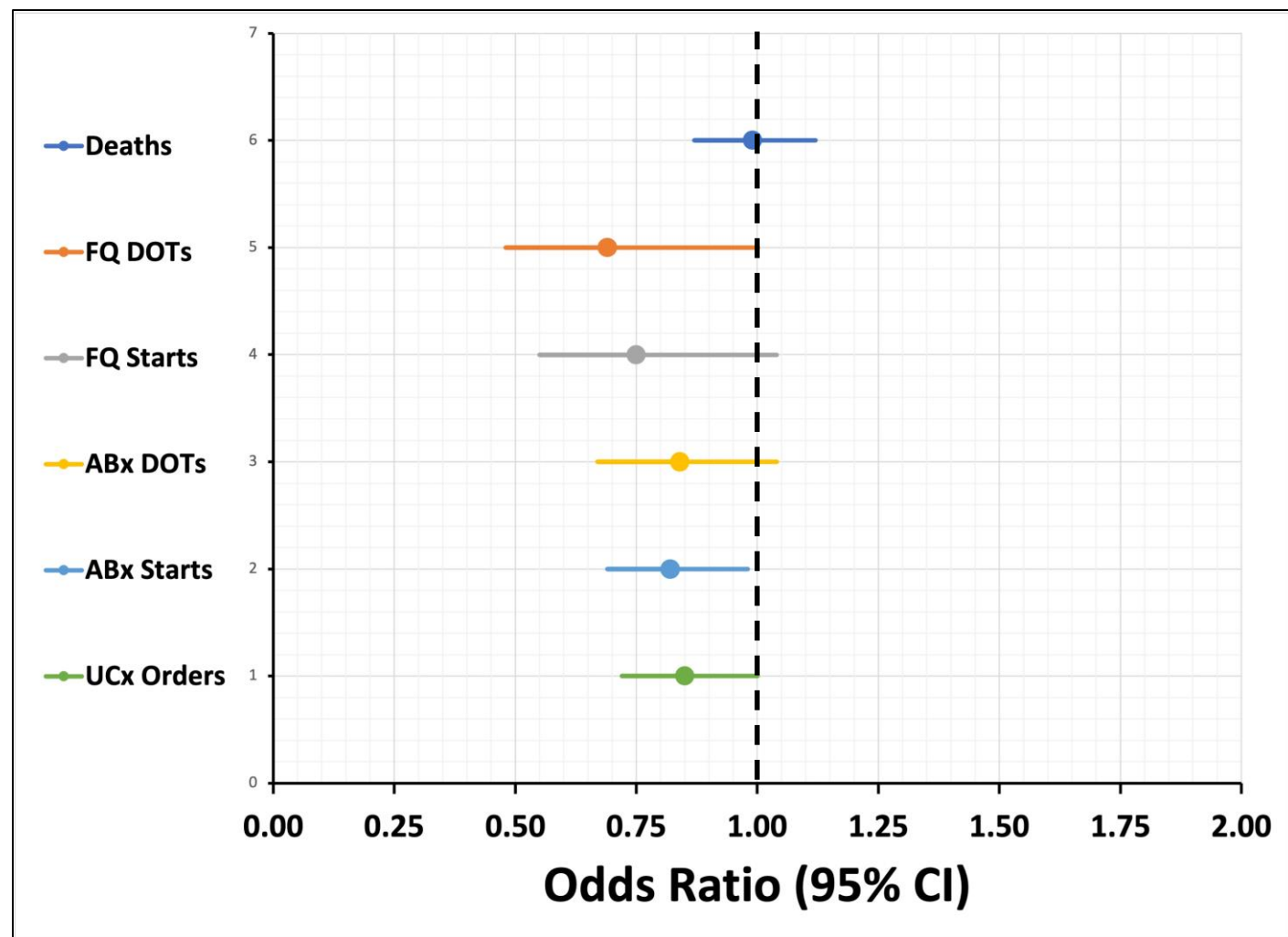




# IMUNIFI study overview



# Outcomes in NHs that Implemented WI UTI Toolkit



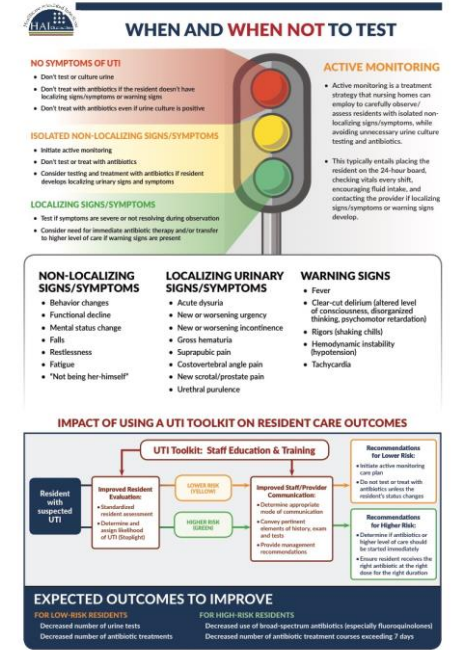
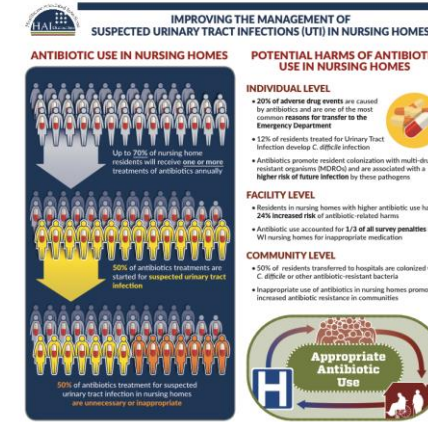
**What is the  
Wisconsin Long-Term Care UTI Toolkit?**

# Comprised of 5 Modules

1. Overview & Rationale
2. UTI Prevention
3. Urine Testing
4. UTI Treatment
5. Quality Improvement

# Module 1: Overview & Rationale

- Slidesets & Recordings
  - Overview (Champion, Leadership)
  - Clinical Rationale (All Staff)
  - Regulatory Rationale (Champion, Leadership)
- Staff Informational Materials
- Resident/Family Informational Materials



**Our Approach to the Management of Suspected Urinary Tract Infections (UTIs)**

Our staff is committed to providing the best possible care for your loved ones. Part of that commitment includes using antibiotics only when they are necessary. Concern about a possible urinary tract infection (UTI) is the most common reason for starting antibiotics in nursing homes. However, UTIs are often over-diagnosed. Cloudy or smelly urine, behavioral changes like refusing to eat or being combative or having problems with balance or falls do not necessarily mean that a resident has a UTI. These changes can be due to other factors, such as medications, diet, or dehydration.

**Why is it important to use antibiotics correctly?**

Antibiotics can save lives when used **correctly**. However, common germs can turn into dangerous "super bugs" when antibiotics are used **incorrectly**. Super bugs are germs that can't be treated with even the strongest antibiotics. Infections caused by these super bugs are more likely to require hospitalization.

**What do we do when your loved one shows signs of a possible UTI?**

Whenever there is a concern that your loved one may have a UTI, our staff will talk with that person to learn more about their symptoms. We will perform an in depth exam that includes checking vital signs (temperature, blood pressure, heart rate and breathing rate) and their urinary condition, and we will explore if there are other explanations for the symptoms.


**How do we manage possible UTIs?**

- If your loved one's symptoms and vital signs suggest the **risk of a UTI is high** (examples: fever, frequent or painful urination, blood in urine), our staff will contact their health care provider. The provider may order a urine test or other tests to decide the appropriate treatment. This may take a few days, and during this time, we will monitor your loved one closely for any changes.
- If your loved one's symptoms and vital signs suggest that the **risk of a UTI is low**, our staff will check their vital signs more often, encourage drinking more fluids, increase monitoring, and follow guidelines for when to contact their provider. This is called "active monitoring."
  - If your loved one develops additional symptoms, these will be detected during active monitoring, and your loved one will receive appropriate treatment.
  - If your loved one's symptoms improve during active monitoring, then they did not have a UTI, and we will have avoided unnecessary antibiotics.

Taking this approach will allow us to promote safe, appropriate use of antibiotics and reduce the spread of dangerous superbugs. Please let us know if you have any questions.

# Module 2: How To Prevent CAUTI

- Slidesets and Recordings
  - Background & Risk Factors
  - Indications for Catheterization
  - Proper Insertion and Maintenance
- Informational Materials
  - Insertion Checklist (AHRQ)
  - Maintenance Checklist (AHRQ)
  - Procedure for Proper Collection of Urine Specimen
- Additional Resources
  - Links to AHRQ CAUTI resources
  - Links to NEJM instructional videos
  - Links to hand hygiene resource

**AHRQ Safety Program for Long-Term Care:  
HAIs/CAUTI**  
Appendix G.  
Indwelling Urinary Catheter Insertion Checklist

**Instructions for Use**

**Purpose**  
Use of a standardized indwelling urinary catheter (IUC) insertion checklist can ensure that residents are protected through application of nationally recognized evidence-based practices during this invasive procedure to reduce the risk of cross infection.

**Rationale**  
The development of biofilms, bacteria colonization, asymptomatic bacteriuria, and symptomatic urinary tract infections are common to urinary catheter use. The risk of acquiring a catheter-associated urinary tract infection (CAUTI) due to urinary catheter insertion depends on aseptic technique during catheterization and on host susceptibility. Poor insertion technique can lead to the risk of cross transmission of microorganisms from the health care worker's hands and/or the equipment to the susceptible resident.

**When Applicable**  
Anytime a new IUC is inserted. The results of the completed checklist provide the facility team with information on progress and barriers related to the processes involved in catheter insertion, such as use of aseptic techniques.




**Next Steps**  
The completed checklist can be forwarded to the quality improvement team for review and potential improvement opportunities.


**For All Indwelling Urinary Catheter Procedures:**

- **Resident Name.** Identify the resident by completing the fields for resident full name, medical record number, unit/room, and the date and time that the IUC is being inserted.
- **Inserting Clinician.** Complete fields for inserting clinician's name, full signature, and title.
- **Technique Reviewer.** Complete fields for name of staff member present during insertion to ensure that correct procedural steps and aseptic technique are performed. Note that this person may also be assigned the task of completing the insertion checklist during the procedure.
- **Prior to, During, or After IUC Insertion:** Check the box next to each step when completed.
  - Use the comment section to list breaks in technique, if applicable, and corrective actions.
  - Check that the catheter is inserted based on the Centers for Disease Control and Prevention (CDC) appropriate indications for IUC use.<sup>1</sup>

**References**

1. Gould CV, Umscheid CA, Agarwal RK, et al. Guideline for prevention of catheter-associated urinary tract infections 2009. Infect Control Hosp Epidemiol. 2010 Apr;31(4):319-26. PMID: 20156062.

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**AHRQ Safety Program for Long-Term Care:  
HAIs/CAUTI**  
Appendix H.  
Indwelling Urinary Catheter Maintenance Checklist

**Instructions for Use**

**Purpose**  
Use of a standardized indwelling urinary catheter (IUC) maintenance checklist can ensure that residents are protected through application of nationally recognized evidence-based practices during this invasive procedure to reduce the risk of cross infection.

**Rationale**  
The development of biofilms, colonization, asymptomatic bacteriuria, and symptomatic urinary tract infections are common to urinary catheter use. The risk of acquiring a catheter-associated urinary tract infection (CAUTI) due to urinary catheter insertion depends on aseptic technique during catheterization, duration of catheter use, the quality of catheter care, and host susceptibility.

**When Applicable**  
To be completed at least once a month on all residents with a urinary catheter. The results provide the facility team with information on progress and barriers related to the catheter maintenance process measures.




**Next Steps**  
Completed checklist can be forwarded to the quality improvement team for review and potential improvement opportunities.

**For All Indwelling Urinary Catheter Maintenance Processes—**

- **Resident Name.** Identify the resident by completing the fields for resident full name, medical record number, unit/room, and the date and time that the IUC is being checked.
- **Date of Insertion.** Insert the date the last IUC was inserted.
- **Inserting Clinician.** Insert the name and title of the clinician who inserted the last IUC.
- **Reviewer Name.** Insert the name and title of the staff member who is assuring that the correct procedural steps and aseptic technique are performed.
- **Routinely Assess IUC Appropriateness/Need.** Document the frequency with which the need for the catheter is assessed.<sup>1</sup>
- **Before IUC Maintenance**
  - Check the box next to each step when completed.
  - Use the comment section to list breaks in technique and corrective action.
- **Specimen Collection**
  - If necessary, follow the steps to obtain a specimen for urine collection from a resident with an IUC.

**References**

1. Gould CV, Umscheid CA, Agarwal RK, et al. Guideline for prevention of catheter-associated urinary tract infections 2009. Infect Control Hosp Epidemiol. 2010 Apr;31(4):319-26. PMID: 20156062.

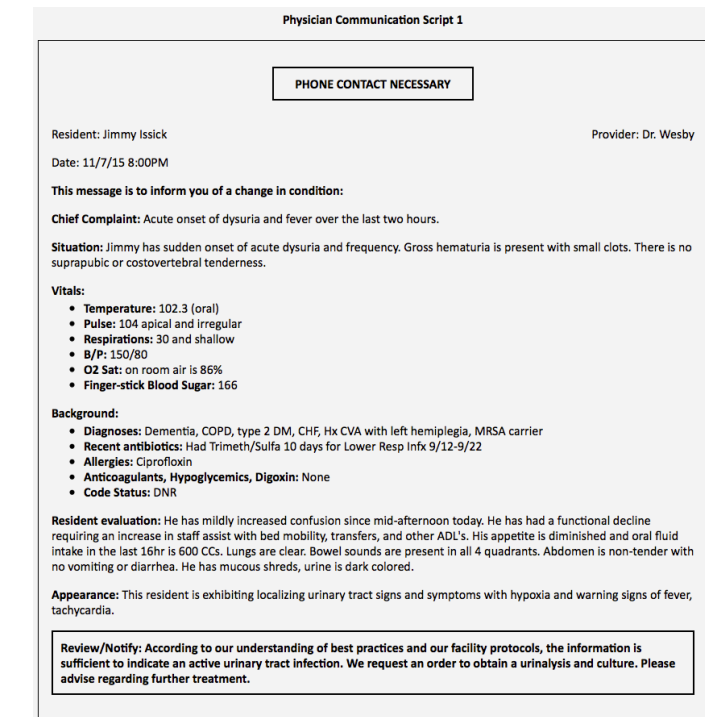
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- Slidesets & Recordings
  - What is a UTI?
  - When to Submit a Urine Specimen

- Case Studies
  - Scenarios w/ walkthrough
  - Blank communication templates
  - Answer keys

- Tools
  - When to test decision aide
  - Active monitoring tool
  - Educational plan for champion

- | Active Monitoring Tracking Form   |      |   |   |      |                   |   |      |   |   |
|---|------|---|---|------|-------------------|---|------|---|---|
| Resident Name _____   |      |   |   |      | MRN _____         |   |      |   |   |
| Facility _____ DOB _____  |      |   |   |      | Room Number _____ |   |      |   |   |
| A. Warning Signs  |      |   |   |      |                   |   |      |   |   |
| Symptoms or Signs   | Date |   |   | Date |                   |   | Date |   |   |
|   | D    | E | N | D    | E                 | N | D    | E | N |
| Fever<br>(single temperature 100 F or greater<br>or multiple recurrent temperatures of<br>99 or greater (MAY SUBSTITUTE<br>FACILITY CRITERIA IF THEY EXIST) |      |   |   |      |                   |   |      |   |   |
| Delirium  |      |   |   |      |                   |   |      |   |   |
| Rigors  |      |   |   |      |                   |   |      |   |   |
| Hypotension   |      |   |   |      |                   |   |      |   |   |
| Tachycardia (elevated heart rate)   |      |   |   |      |                   |   |      |   |   |
| Leukocytosis (WBC >14,000<br>cells/mm <sup>3</sup> or <6 bands)   |      |   |   |      |                   |   |      |   |   |
| B. Localizing Signs/Symptoms  |      |   |   |      |                   |   |      |   |   |
| Symptoms or Signs   | Date |   |   | Date |                   |   | Date |   |   |
|   | D    | E | N | D    | E                 | N | D    | E | N |
| Acute dysuria – burning / pain on<br>urination  |      |   |   |      |                   |   |      |   |   |
| Gross hematuria   |      |   |   |      |                   |   |      |   |   |
| Suprapubic pain – either reported or<br>noted when pressing on abdomen  |      |   |   |      |                   |   |      |   |   |
| New urinary frequency or urgency  |      |   |   |      |                   |   |      |   |   |
| C. Non-Localizing Signs/Symptoms  |      |   |   |      |                   |   |      |   |   |
| Symptoms or Signs   | Date |   |   | Date |                   |   | Date |   |   |
|   | D    | E | N | D    | E                 | N | D    | E | N |
| Change in behavior  |      |   |   |      |                   |   |      |   |   |
| Functional decline (requires more<br>assistance)  |      |   |   |      |                   |   |      |   |   |
| Mental status change  |      |   |   |      |                   |   |      |   |   |
| New fall  |      |   |   |      |                   |   |      |   |   |
| Restlessness  |      |   |   |      |                   |   |      |   |   |
| Fatigue/less interactive  |      |   |   |      |                   |   |      |   |   |
| Not her-himself   |      |   |   |      |                   |   |      |   |   |
| Other (Specify: _____)  |      |   |   |      |                   |   |      |   |   |
| Other (Specify: _____)  |      |   |   |      |                   |   |      |   |   |
| Other (Specify: _____)  |      |   |   |      |                   |   |      |   |   |
| Evaluate resident for symptoms/signs above each shift. Check appropriate box if present.  |      |   |   |      |                   |   |      |   |   |
| D = Day Shift    E = Evening Shift, M = Night Shift   |      |   |   |      |                   |   |      |   |   |





## NO SYMPTOMS OF UTI

- Don't test or culture the urine
- Don't treat with antibiotics
- Don't treat even if urine tests are abnormal

## ISOLATED NON-LOCALIZING SIGNS/SYMPTOMS

- Initiate active monitoring temporary care plan\*
- Don't test the urine and don't treat with antibiotics initially
- Consider testing and treatment with antibiotics if symptoms not improving or localizing signs/symptoms develop

## LOCALIZING SIGNS/SYMPTOMS

- Test if symptoms are severe or not resolving during monitoring
- Evaluate need for immediate antibiotic therapy and/or transfer to higher level of care if warning signs are present

### NON-LOCALIZING SIGNS/SYMPTOMS

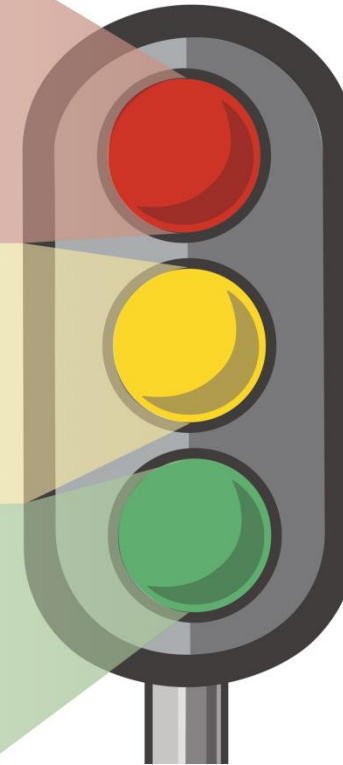
- Behavior changes
- Functional decline
- Mental status change
- Falls
- Restlessness
- Fatigue
- "Not being her-himself"

### LOCALIZING URINARY SIGNS/SYMPTOMS

- Acute dysuria
- New or worsening urgency
- New or worsening incontinence
- Gross hematuria
- Suprapubic pain
- Costovertebral angle pain
- New scrotal/prostate pain
- Urethral purulence

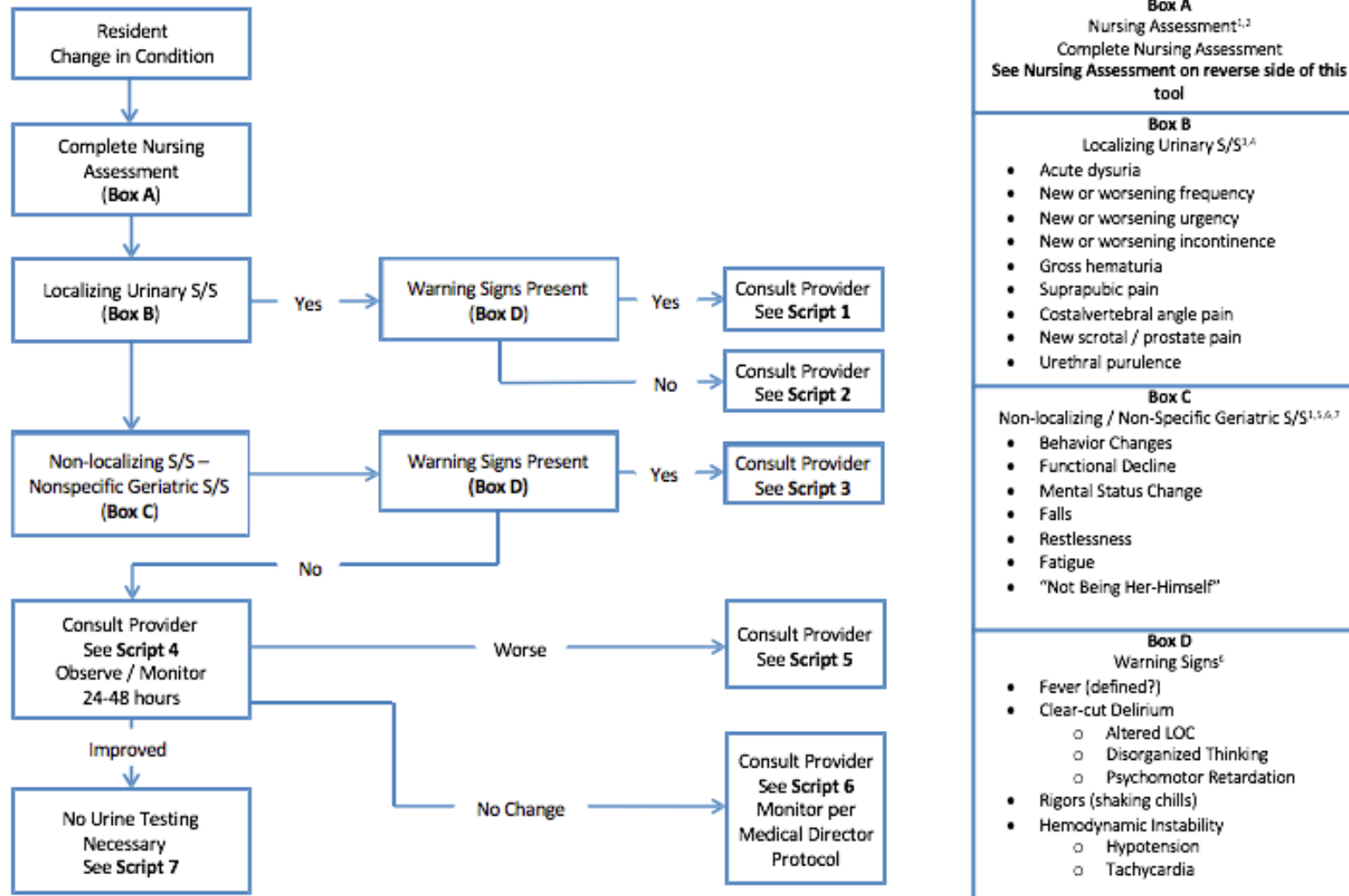
### WARNING SIGNS

- Fever
- Clear-cut delirium (altered level of consciousness, disorganized thinking, psychomotor retardation)
- Rigors (shaking chills)
- Hemodynamic instability (hypotension)
- Tachycardia

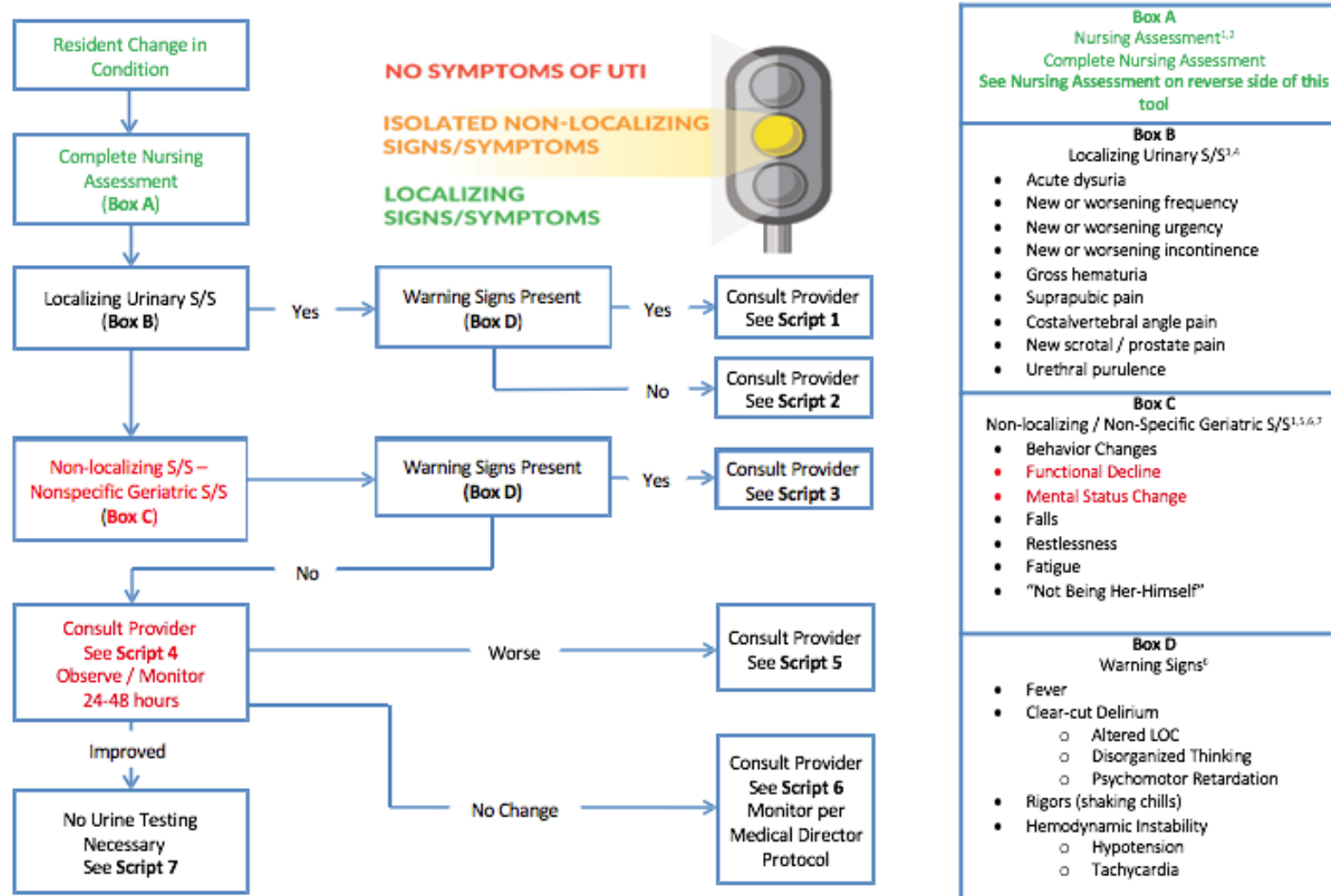




# When To Test – Nursing Tool



# When To Test – Nursing Tool



# Communication Script for Isolated Non-Localizing Presentation



## Script 4 PHYSICIAN COMMUNICATION No Localizing Urinary Tract S/S's: No Warning S/S's

May Fax

Resident: Suzi Notsosick Provider:  
Date: 10/21/15 4:30PM

Dr. Wesby

**This message is to inform you of a change of condition**

**Chief Complaint:** Generalized discomfort and mild confusion since lunch today.

**Situation:** She has a complaint of generalized discomfort. She has had a mental status change of mild lethargy and mild confusion tending to wander but is orientable. She didn't go to activities this afternoon. Appetite poor since this morning. She remains alert. She has a recent med change consisting of addition of gabapentin 300 mg bid oral for pain.

**Vitals:** Temperature 97.2 (oral) Pulse 68 and regular, Respirations 20, B/P 120/62. O2 Sat on room air is 97%.

**Finger-stick Blood Sugar:** 106

**Background:**

**Diagnoses:** Compression fracture multiple vertebral bodies, osteoporosis, osteoarthritis, GERD. Hx of mastectomy.

**Recent antibiotics:** None

**Allergies:** Doxycycline

**Anticoagulants, Hypoglycemics, Digoxin:** None

**Code Status:** Full Code

**Resident Evaluation:** She has not recently fallen. There is no exposure to infectious residents or visitors. Lungs are clear and there is no chest pain. She has had no change in BMs with last one yesterday and there is no vomiting or diarrhea. There are no localizing urinary symptoms or signs. There are no skin rashes or sores, and no new joint, chest, or abdominal pains.

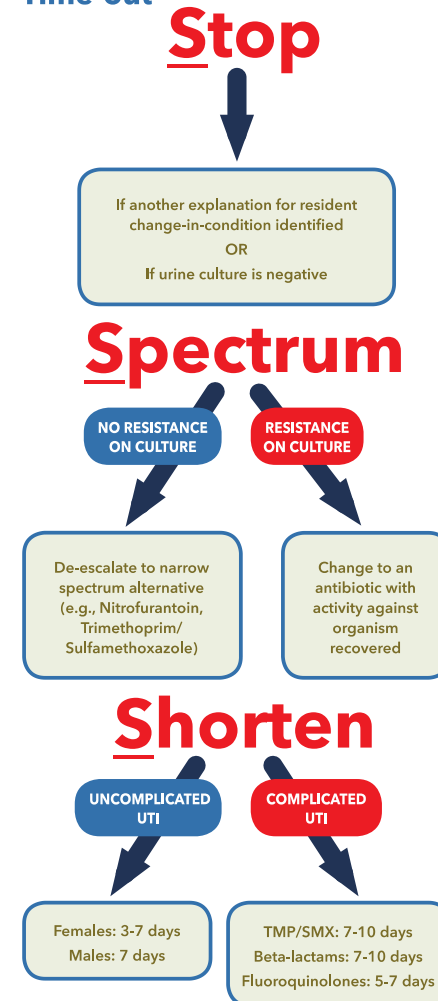
**Appearance:** This resident is an elderly female with 24-36 hours of complaint of poorly localized general discomfort with mild confusion and poor appetite. She has no warning signs, no localizing urinary signs or symptoms and no signs or symptoms of other focal infection.

**Review/Notify:** According to our understanding of best practices and our facility protocols, the information is insufficient to indicate an active urinary tract infection. The resident does NOT need an immediate prescription for an antibiotic or urine testing. We are asking for an order for a 24-48 hour period of observation and will call physician with resident change of condition. Please advise.

# Module 4: When & How to Treat

- Slidesets & Recordings
  - When to treat
  - How to treat
  - Antibiotic timeout
  - Collaborative practice agreement
- Tools
  - Stoplight
  - Nursing tool
  - Active monitoring
  - **Provider Brochure**
  - Pharmacy collaborative practice policy and letter
- Additional Resources
  - Links to external prescribing guides
  - Links to renal function calculators

## The 3 "Ss" of the Antibiotic Time-out



## Active Monitoring

### WHAT IS ACTIVE MONITORING?

It is a temporary care plan during which nursing staff more closely monitor the resident for signs and/or symptoms suggestive of infection. This includes:

- Obtaining additional labs (not urine tests, though!)
- Promoting fluid intake (IV/PO) if there is concern for dehydration
- Measuring vital signs at least once per shift
- Monitoring for and documenting development and/or worsening of localizing and non-localizing signs and symptoms (see stoplight figure)
- Contacting the provider if the resident's clinical status changes in meaningful ways (e.g., development of warning signs or new/worsening localizing /non-localizing signs/symptoms)

### EXAMPLE OF A PHYSICIAN ORDER SET FOR ACTIVE MONITORING

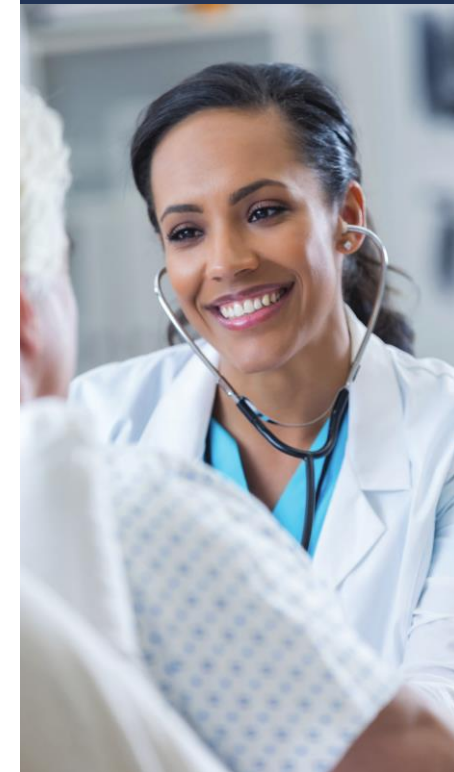
- ☐ Obtain vital signs (BP, Pulse, Resp Rate, Temp, Pulse Ox) every \_\_\_\_ hours for \_\_\_\_ days.
- ☐ Record fluid intake each shift for \_\_\_\_ days.
- ☐ Notify physician if fluid intake is less than \_\_\_\_ cc daily.
- ☐ Offer resident \_\_\_\_ ounces of water / juice every \_\_\_\_ hours.
- ☐ Notify physician, NP, or PA if condition worsens, or if no improvement in \_\_\_\_ hours.
- ☐ Obtain the following blood work \_\_\_\_\_.
- ☐ Consult pharmacist to review medication regimen.
- ☐ Contact the physician, NP, PA with an update on the resident's condition on \_\_\_\_\_.

### BENEFITS OF ACTIVE MONITORING

- Reduces unnecessary testing and antibiotics
- Allows rapid detection of any further deterioration that requires intensification of treatment plan
- Provides additional information that might help identify the cause of the original change in condition (e.g., dehydration)
- Helps reassure family that facility staff are keeping a close eye on their loved one

Funding for this project was provided by the UW School of Medicine and Public Health from the Wisconsin Partnership Program

## MANAGEMENT OF SUSPECTED UTI IN NURSING HOMES





# Module 4: When & How to Treat

- Slidesets & Recordings
  - When to treat
  - How to treat
  - Antibiotic timeout
  - Collaborative practice agreement
- Tools
  - Stoplight
  - Nursing tool
  - Active monitoring
  - **Provider Brochure**
  - Pharmacy collaborative practice policy and letter
- Additional Resources
  - Links to external prescribing guides
  - Links to renal function calculators

**WISCONSIN HEALTHCARE-ASSOCIATED INFECTIONS IN LTC COALITION**

### When and When Not to Test

**NO SYMPTOMS OF UTI**

- Don't test or culture urine
- Don't treat with antibiotics if the resident doesn't have localizing signs/symptoms or warning signs
- Don't treat with antibiotics even if urine culture is positive

**ISOLATED NON-LOCALIZING SIGNS/SYMPTOMS**

- Initiate active monitoring
- Don't test or treat with antibiotics
- Consider testing and treatment with antibiotics if resident develops localizing urinary signs and symptoms

**LOCALIZING SIGNS/SYMPTOMS**

- Test if symptoms are severe or not resolving during observation
- Consider need for immediate antibiotic therapy and/or transfer to higher level of care if warning signs are present

### Uncomplicated Urinary Tract Infection (Cystitis)

- Urethral symptoms (dysuria, frequency) are predominant
- Signs of complication\* are absent
- Can often wait for culture results before starting treatment
- Females can often be treated for less than 7 days depending on the agent used

**\* SIGNS OF COMPLICATION**

- Fever
- Flank pain
- Rigor/chills
- Urinary catheter
- Hypotension/Tachycardia
- Elevated WBC

EMPIRIC TREATMENT OF UNCOMPLICATED CYSTITIS			
Preference	Estimated Creatinine Clearance (eCrCl)		
	>30	15 - 30	<15
<b>FEMALES</b>			
First	Nitrofurantoin 100mg BID (5 days) OR TMP/SMX 160/800 BID (3 days)	TMP/SMX 80/400 BID (3 days)	Ciprofloxacin 250mg BID (3 days)
Second	Fosfomycin 3gm (Once) Re-dose on day 3 to extend treatment >3 days	Fosfomycin 3gm (Once) Re-dose on day 3 to extend treatment >3 days	Fosfomycin 3gm (Once) Re-dose on day 3 to extend treatment >3 days
Third	Ciprofloxacin 250mg BID (3 days)	Ciprofloxacin 250mg BID (3 days)	—
<b>MALES</b>			
First	Nitrofurantoin 100mg BID (7 days) OR TMP/SMX 160/800 BID (7 days)	TMP/SMX 80/400 BID (7 days)	Ciprofloxacin 250mg BID (7 days)
Second	Fosfomycin 3gm (Dose on days 1, 3, 5)	Fosfomycin 3gm (Dose on days 1, 3, 5)	Fosfomycin 3gm (Dose on days 1, 3, 5)
Third	Ciprofloxacin 250mg BID (7 days)	Ciprofloxacin 250mg BID (7 days)	—

### Complicated Cystitis or Pyelonephritis

- Signs of complication (see middle panel) are present
- Don't wait for culture results if resident has high fever, rigors or hypotension/tachycardia
- Use agents that provide high blood and urine levels (IV agents, TMP/SMX, and fluoroquinolones)

May need to extend therapy beyond 7 days if symptoms severe at onset or if resident is not back to baseline after 72 hours of effective therapy. See online module for more information.

EMPIRIC TREATMENT OF COMPLICATED CYSTITIS			
Preference	Estimated Creatinine Clearance (eCrCl)		
	>30	15 - 30	<15
First	TMP/SMX 160/800 BID (7-10 days)	TMP/SMX 80/400 BID (7-10 days)	Ciprofloxacin 250mg BID (5-7 days)
Second	Cefpodoxime 200mg PO QID (7-10 days) OR Cefuroxime 500mg PO BID (7-10 days)	Cefpodoxime 200mg PO QID (7-10 days) OR Cefuroxime 500mg PO QID (7-10 days)	Cefpodoxime 200mg PO QID (7-10 days) OR Cefuroxime 500mg PO Q48* (days 1, 3, 5, & 7)
Third	Ciprofloxacin 500mg BID (5-7 days)	Ciprofloxacin 250mg BID (5-7 days)	—

RESIDENT ILL (BUT NOT ENOUGH TO HOSPITALIZE) AND/OR CONCERN FOR TMP/SMX AND/OR CIPROFLOXACIN RESISTANCE

**Culture Results Unknown**

First-Line: Ceftriaxone 1gm q24  
 Second-Line: Gentamicin 5 mg/kg q24  
 +/- Vancomycin 1gm q12

**Culture Results & Susceptibilities Known**

Culture Result	1st Line	2nd Line	3rd Line
Non-Pseudomonas Gram-Negative (e.g. E. coli)	TMP/SMX	Cefpodoxime/ Cefuroxime	Ciprofloxacin
Pseudomonas sp.	Ciprofloxacin	Levofloxacin	—
Staphylococcus sp.	TMP/SMX (MSSA or MRSA)	Cephalexin (MSSA only)	—
Enterococcus sp.	Amoxicillin	Doxycycline	—

# Module 5: Implementing & Sustaining Change

- Slidesets & Recordings
  - Preparing for change
  - Using data to drive change
  - Sustaining change
  - Sustain planning
- Additional Resources
  - Provider notification email and letter templates
  - CDC/AHRQ antibiotic stewardship educational video
  - Abx Stewardship Policy Template
  - Developing an Abx Stewardship Program instructional video
  - Antibigram development training video
  - Urine test tracking tool (use data submission portal instead)



## Special Article

### Template for an Antibiotic Stewardship Policy for Post-Acute and Long-Term Care Settings

Robin L.P. Jump MD, PhD<sup>a,b,\*</sup>, Swati Gaur MD, MBA, CMD<sup>c</sup>, Morgan J. Katz MD<sup>d</sup>, Christopher J. Crnich MD, PhD<sup>e,f</sup>, Ghinwa Dumyati MD<sup>g</sup>, Muhammad S. Ashraf MBBS<sup>h</sup>, Elizabeth Frentzel MPH<sup>i</sup>, Steven J. Schweon RN, MPH, MSN, CIC, HEM<sup>j</sup>, Philip Sloane MD, MPH<sup>k</sup>, David Nace MD, MPH, CMD<sup>l</sup> on behalf of the Infection Advisory Committee for AMDA—The Society of Post-Acute and Long-Term Care Medicine

# Tool Inventory



## Wisconsin Long-Term Care Urinary Tract Infection Toolkit



Intro Overview & Rationale UTI Prevention Urine Testing UTI Treatment Quality Improvement Tool Inventory

### TOOL INVENTORY

OVERVIEW AND RATIONALE



HOW TO PREVENT CATHETER-ASSOCIATED URINARY TRACT INFECTION (CAUTI)



WHEN TO TEST A URINE SPECIMEN



[UTI Stoplight](#) This document provides a reference using the stoplight colors – red, yellow, green – to assess suspected UTI.

[When to Test Nursing Tool](#) This tool provides a flowchart to assist in identification of next steps and management of a suspected UTI.

[Communication Script Template](#) This form may be used to assist in gathering information related to suspected UTI for use in contacting the medical provider.

[Active Monitoring Tracking Form](#) This form provides across-shift tracking of active monitoring for residents who have isolated non-localizing signs/symptoms.

WHEN & HOW TO TREAT A UTI



# **Developing a WI UTI Toolkit Change Team**



# The Power of the Team

*If you want to go fast,  
go alone...*

*If you want to go far,  
go together.*

*African proverb*





# Team as Verb



To Team...the act of  
Teaming...

To put together in order to  
do something or to achieve  
a particular effect.

# Change Team Roles

- Executive Sponsor
- Change Leader
- Diverse team members
- Specific roles might include:
  - Data Coordinator
  - Sustain Leader

\* Ideal size is 4 to 6 persons



# Responsibilities of the Executive Sponsor<sup>1</sup>

- Identify the problem
- Articulate clearly the purpose of change efforts
- Appoint the change leader and change team
- Create project boundaries and guidelines
- Monitor the project's progress
- Advocate for the project
- Offer encouragement and support to the change team

1. In a NH, this individual would typically be the administrator, director of nursing or medical director. To be successful, one of these individuals if not all need to be on board and supportive of the change efforts.

# Appointing a Change Leader and their responsibilities<sup>2</sup>

- Appointing change leader
  - Logistical (time, role, and first hand knowledge)
  - Organizational (peer credibility and authority)
- Change leader responsibilities
  - Oversee project management
  - Plan and run the change team meetings
  - Maintain change team energy
  - Cultivate commitment among team members.

2. In a NH, this individual would typically be the infection control practitioner, director of nursing or the assistant director of nursing.

# Change Leader Skills and Personal Characteristics

- Organized
- Independent
- Good at delegating
- Persistent
- Innovative and curious
- Comfortable with data
- Focused
- Optimistic

# Assembling the team

1. Choose staff who:
  - a. Have a good working knowledge of the different clinical areas in the facility
  - b. Have a wide and diverse range of strengths
2. Include staff who:
  - a. Represent different types of employees (RN vs. CNA vs. Prescriber)
  - b. Work where change(s) will be implemented
  - c. Would be affected by the change
3. Consider including a resident or family member

# Successful Change Teams

- Conduct regular meetings (Note: these do not need to be separate but could be included in regular quality meetings).
- Adjust the implementation as needed based upon continuous dialogue.
- Maintain team engagement in the face of competing priorities.
- Stay focused on your original problem areas and goals.
- Maintain executive sponsorship and team alignment.
- Monitor project data.



# **Implementing the WI UTI Toolkit in Your Facility**

## **Familiarity with the WI UTI Toolkit will allow you to:**

- Serve as a resource in your facility for questions from staff, providers, administration, residents and their families regarding antibiotic stewardship
- Develop a staff educational plan which allows you to share information provided in the WI UTI Toolkit
  - Adapt the educational template to make this work within your facilities existing workflow
- Encourage participation by staff in the antibiotic stewardship process

# Implementing the Toolkit in Your Facility

- Preparation
  - Champion/Educator
  - Staff
  - Providers

# Champion/Educator Preparation

- Familiarize yourself with this WI UTI Toolkit (allow ~3-4 hours for Toolkit review)
- Display the following posters in the nursing station and supply additional copies to nursing staff as needed
  - When to Test Nursing Tool
  - UTI Stoplight
  - Provider Infographic
- Prepare for Staff Education:
  - Have staff preview Module 3: When to Test a Urine Specimen Module (~15 minutes per video). Staff preview of these sections will allow you to complete Application of Nursing Tool education in one 30-minute staff meeting.
  - Schedule a staff meeting for Application of Nursing Tool education (~30 minutes)

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# Staff Preparation

## 5 Steps of the Nursing Process

- Assessment
  - Systematic, dynamic way to collect and analyze data
- Diagnosis
  - Nurse's clinical judgement regarding a resident's health condition
- Outcomes/Planning
  - Goals based on assessment and diagnosis
- Implementation
  - Nursing care implemented according to plan
- Evaluation
  - Of resident's status and response to care

# Initial Staff Education

**Staff Training – determine how best to conduct this in your facility**  
**– monthly staff meeting, new employee orientation, etc.**

1. Review Module 3: When to Test a Urine Specimen
  - Section 1: What is a Urinary Tract Infection (UTI)
  - Section 2: When to Submit a Urine Specimen for Testing
  - 5 Steps of the Nursing Process
  - Assessment of residents with Change of Condition
2. Show video presentation of Module 3 - Section 3: Application of Nursing Tool to Case Studies to staff  
This presentation discusses Case Study 1 and allows time to complete and review Case Study 2.
3. Allot time to complete and review Case Studies 3-7
4. Review the following resources and placement within facility with staff
  - When to Test Nursing Tool
  - UTI Stoplight
  - Staff and Provider Infographic
5. Review the following resources with staff and discuss how best for families to access these resources
  - Staff & Provider Infographic
  - The Resident and Family Education Tools & Resources section of the Overview & Rationale module



# Re-education of Staff

Allot time at monthly staff meeting for review of WI UTI

Toolkit information:

- Resident assessment after change of condition
- Determination of likelihood of a UTI
- Communication of resident change of condition and recommendations for treatment to providers

# Provider Preparation (Ideally by Medical Director OR Facility Pharmacist OR Both)

- Notify providers of facility's planned implementation of the WI UTI Toolkit
  - Provider letter
  - Provider email template
- Recommend that providers review:
  - Module 4: When and How to Treat a UTI
  - Staff and Provider Infographic
  - Provider Prescribing Brochure

**WHAT COULD POSSIBLY GO  
WRONG**



# Resistance to change

- Staff attitudes are important to consider when implementing change.
- Engaged and enthusiastic staff have a great deal to offer a change project including ideas, insights and personal experience.
- Staff indifference or resistance will make every step of the process more difficult and can significantly impede or derail progress.
- Staff resistance may be right because the change is a bad idea at this time.

# Resistance to change

- Ensuring buy-in or overcoming resistance prevents errors in judgement to implement bad policies or procedures.
- Moving forward with change despite staff resistance can
  - Cause problems associated with continued negative attitudes
  - Decrease the likelihood that changes will be sustained
  - Reduce chances to create a culture of improvement
  - Increase likelihood that future resistance will be encountered

# Resistance to change: Why staff might be wary?

- Skepticism is a belief that the change
  - Will not yield improvement
  - Cannot be successfully implemented and sustained
- Lack of understanding
  - Why the change is necessary
  - How will the change help the organization.
- Defensiveness
  - Concern that the project is intended to assign blame
  - Implies that the staff are not doing a good job
- Anxiety
  - Unsure about the change and how it will affect responsibilities and workload
  - Belief that the project is being forced on them with no input into what happens

# Overcoming Resistance to change

Staff Concerns	Example of Strategies to Overcome Resistance
Skepticism	Education and communication about the changes and its benefits Emphasize downstream benefits of the change (e.g., improved resident outcomes) Set expectations that change is not immediate and does not have to be perfect overnight
Lack of Understanding	Communicate the purpose of the change when it is first being implemented (why it is necessary and how it will improve the organization) Create a system to provide feedback (share concerns)
Defensiveness	Communicate the purpose of the change when it is first being implemented (why it is necessary and how it will improve the organization) Provide updates about the change on a regular basis Involve staff in the process of implementing the change
Anxiety	Communicate the purpose of the change when it is first being implemented Provide updates about the change on a regular basis Ensure staff that you are listening to them and taking their concerns seriously

**Overarching strategy is to build a strong team**



Questions?

# Questions

HAI Prevention Program

[dhswihaipreventionprogram@dhs.wisconsin.gov](mailto:dhswihaipreventionprogram@dhs.wisconsin.gov)

608-267-7711

<https://www.dhs.wisconsin.gov/hai/ip-education.htm>

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 [HAI Infection Prevention Education](#)

## HAI Infection Prevention Education

The resources below are intended to connect health care facility infection preventionists (IP) with education materials to support their role in preventing, detecting, and responding to healthcare-associated infections. IPs play an essential role in facility infection prevention policy development, surveillance, and risk assessment.

IPs serve as a resource to other staff and programs within their facilities. In addition to the state in-person trainings and online references below, there are a number of links to trusted education resources, including the Centers for Disease Prevention and Control (CDC), the Centers for Medicare and Medicaid Services (CMS), and the Association for Professionals in Infection Control and Epidemiology (APIC).



## Professional Resources

- ▣ [Infection Preventionist Starter Kit, P-02992](#) (PDF)

# **Upcoming LTC Education Session**

Thursday, September 23, 2021

OSHA Emergency Temporary Standards