Urinary Retention Toolkit: Resources and Strategies to Reduce Catheter-Associated Complications in Long-Term Care Facilities

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Capstone Project and Field Experience Presentation

Trotter Hall 112

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Presentation Overview

- Introduction
  - Field experience overview
  - Urinary retention in Long-term care (LTC)
- Management practices and challenges
  - Indwelling catheters
  - Intermittent catheters
  - Alternative management practices
- Establishment of toolkit
- Conclusions

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Definitions

- KDHE: Kansas Department of Health and Environment
- HAI: Healthcare-associated Infection
- KFMC: Kansas Foundation for Medical Care
- UR: Urinary Retention
- LTCF: Long-Term Care Facility
- CAUTI: Catheter-Associated Urinary Tract Infection

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Field Experience Overview

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- Bureau of Epidemiology and Public Health Informatics (BEPHI)
- HAI program
  - Directed by Joseph Scaletta
  - Created in 2009
  - Monitors HAIs throughout Kansas

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Kansas Foundation for Medical Care

- Not-for-profit organization
- *"Leading innovation to improve the quality, effectiveness and safety of healthcare"*
- Brenda Groves

Field Experience Objectives

- Develop resources relating to urinary retention and strategies to reduce urinary tract infections and catheter use for LTCFs
- Distribute toolkit to over 300 LTCFs in Kansas
- Present project at a Kansas Healthcare-Associated Infections Advisory Group Meeting

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Field Experience Activities

- CDC - Zika virus national briefing call
- Numerous webinars focusing on infection prevention and control
- *Clostridium difficile* coaching calls
- Kansas Quality Improvement Partnership (KQIP) quarterly meeting
- Kansas Hospital Association (KHA) Infection Prevention (IP) conference in Wichita
- Epidemiology and Laboratory Capacity
- Presented toolkit at the Kansas Healthcare-Associated Infections Advisory Group meeting
- Patient notification for an infection prevention breech concerning flexible endoscope in an ambulatory surgical center

Overview of Long-Term Care

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Long-Term Care

- Provide a residence to the elderly, disabled, and cognitively impaired
- Approximately 1.5 million older adults[1]
- 1-3 million infections annually[2]
- Limited financial resources
- Lack of current technology
- High turnover rates in staff members

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Overview of Urinary Retention

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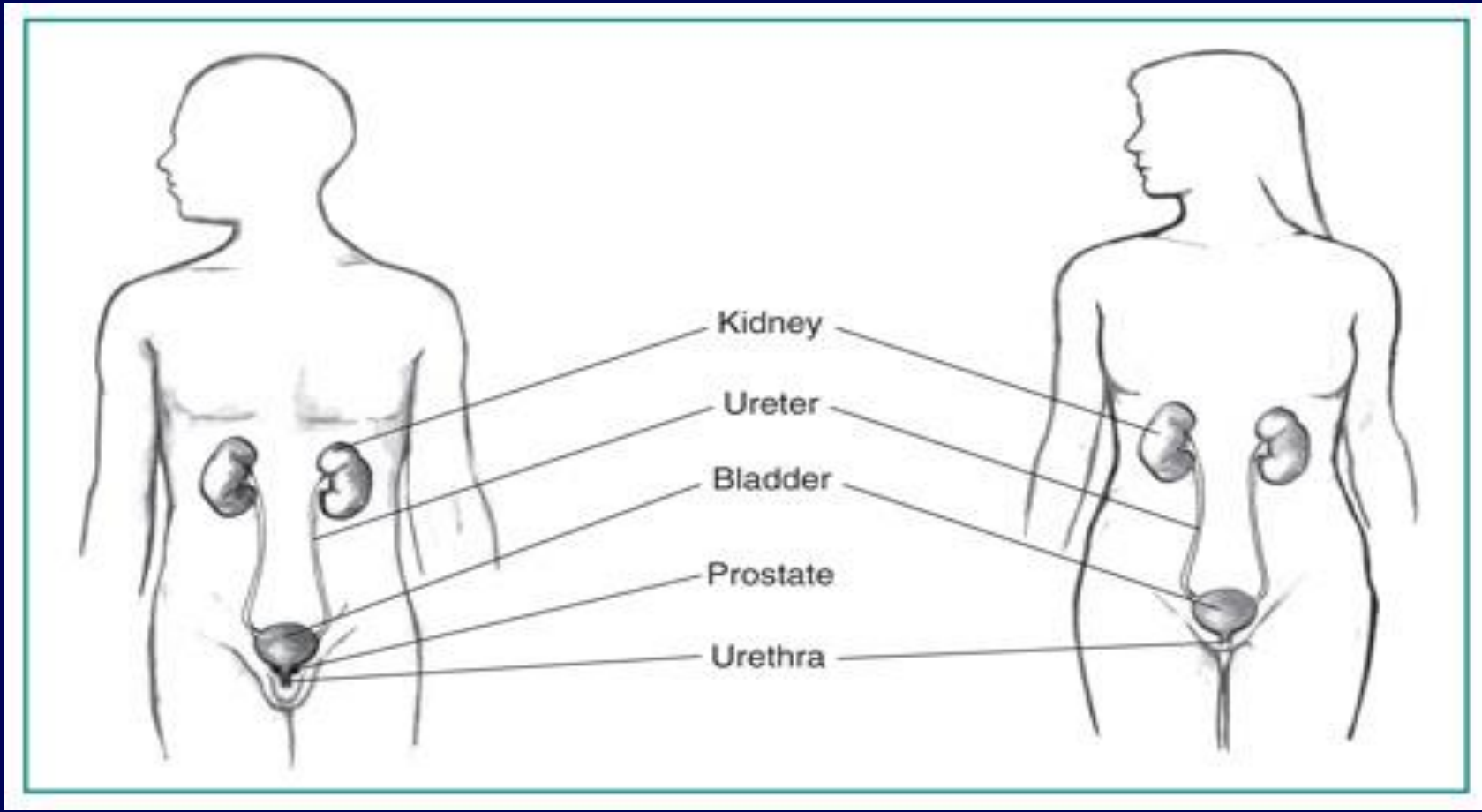
The Urinary Tract



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What is Urinary Retention?

- Inability to voluntarily and completely void urine
- Common condition of both sexes
- Prevalent in aging populations
  - Men > 70 have a 10% increased risk
  - Men > 80 have a 30% increased risk [4]

Complications of UR

- Inability to urinate
- Frequent urination
- Pain or discomfort of the lower abdomen
- Weakening of the detrusor muscle of the bladder

Causes of UR

An individual may suffer from UR due to the following:

- Obstruction that can occur both intrinsically or extrinsically
- Infectious or inflammatory disease processes
- Being on certain medications
- Suffering from neurogenic bladder
- Experiencing trauma to the urethra or bladder[4]

Urinary Retention Management Practices

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Catheters

- Most common management practice for UR
- Pose severe health complications for residents
  - CAUTIs
  - Trauma to the urethra or bladder
  - Catheter blockage and subsequent urine reflux
  - Impaired mobility
  - Pyscho-social impacts on quality of life

Indwelling Urethral Catheters

- Long term catheters
- Most common in LTCF residents
  - 5-10% of residents have an indwelling catheter[5]
- Can cause an array of health issues in LTC residents
  - CAUTIs

CAUTIs

- CAUTIs are the most common adverse event associated with indwelling urethral catheters
- Indwelling catheters result in over 1 million CAUTIs annually[8]
- Financial impact on LTCF
  - Each episode costs approximately $600
  - Subsequent infections also costly[9]

Intermittent Urinary Catheters

- Insertion and removal of a catheter several times a day to void the bladder
- Preferred method of catheterization
- Complications include:
  - Urethritis
  - Urethral bleeding
  - Creation of a false passage[10]

Alternative Management Practices for Urinary Retention

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Bladder Scanners & Intermittent Catheters

- Used to measure post-voidal residual (PVR) volume
- Non-invasive machine
- Decrease residents risk of infections or trauma
- LTCF may lack financial resources to purchase machine

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Scheduled Toileting & Bladder Retraining

- "A behavioral technique that calls for scheduled toileting at regular intervals"[13]
- Developed after a three day toileting trial
- Helps to maintain bladder integrity
- Bladder retraining is also a behavioral technique
- Requires adequate personnel

Comparison

Management type	Advantages	Disadvantages
Catheters	-Effective way to empty bladder for immobile residents	-Infections -Urethral damage -Alters residents quality of life
Bladders scanners/Intermittent catheters	-Non-invasive -early removal of indwelling catheter -Decreased risk of CAUTIs	-Cost prohibitive -Altered readings -Some complications related to catheters
Scheduled toileting plan	-Voiding at regular intervals -Prevents bladder damage -Individualized program -No risk of catheter complications	-Requires adequate personnel -Residents must maintain voiding diary

Urinary Retention Toolkit

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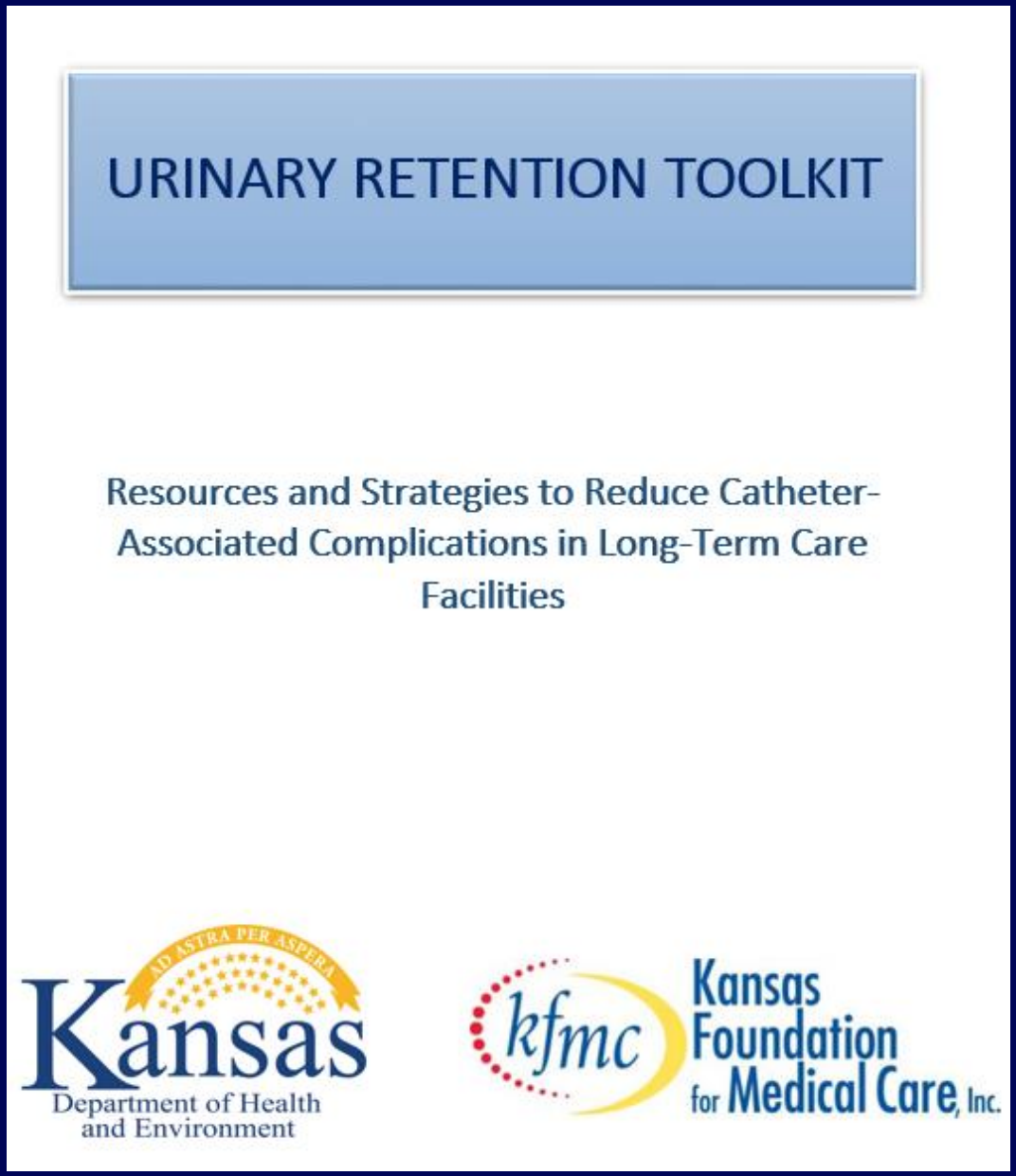
Establishment of a Toolkit



- Developed as a collaborative effort between the KDHE and the KFMC

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Why a Toolkit?

- Recognize the health and economic issues with commonly used UR management practices such as indwelling catheters
- To provide resources and strategies for alternative UR management options
- Demonstrate how alternative management can be beneficial

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Toolkit Learning Objectives

- Define the term UR
- Identify causes of UR
- Identify how UR is managed in LTCFs
- Describe why indwelling catheters are a health hazard in LTCFs
- Identify and describe alternative management practices for UR in LTCFs

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Toolkit Content

- Section 1: Introduction to UR
  - Background information
  - Bladder physiology
  - Epidemiology of UR
  - Causes of UR

Toolkit Content

- Section 2: Assessing for UR
- Follows nursing assessment steps
  1. Assessment
  2. Diagnosis
  3. Plan
  4. Implementation
  5. Evaluation

Toolkit Content

- Section 3: UR Management Practices
- Indications for use, complications, and benefits of each of the following are discussed
  - Indwelling catheters
  - Intermittent catheters
  - Bladders scanners and Intermittent catheters
  - Scheduled toileting and bladder retraining
  - Small section on bladder massages and the benefits

SBAR Communication Form
and Progress Note

INTERACT
Version 3.0 Tool

Before Calling MD / NP / PA:

☐ **Evaluate the Resident:** Complete relevant aspects of the SBAR form below
☐ **Check Vital Signs:** BP, pulse, and/or apical heart rate, temperature, respiratory rate, oximetry, and finger stick glucose, if indicated
☐ **Review Record:** Recent progress notes, labs, orders
☐ **Review an INTERACT Care Path** or **Acute Change in Condition File Card**, if indicated
☐ **Have Relevant Information Available when Reporting**
(i.e. medical record, vital signs, advance directives such as DNR and other care limiting orders, allergies, medication list)

SITUATION

The change in condition, symptoms, or signs I am calling about is/are _____

This started on _____ /_____ /_____ Since this started has it gotten: ☐ Worse ☐ Better ☐ Stayed the same

Things that make the condition or symptom ***worse*** are _____

Things that make the condition or symptom ***better*** are _____

This condition, symptom, or sign has occurred before: ☐ Yes ☐ No

Treatment for last episode *(if applicable)* _____

Other relevant information _____

BACKGROUND

Resident Description
This resident is in the NH for: ☐ Post-Acute Care ☐ Long-Term Care

Primary diagnoses _____

Other pertinent history *(e.g. medical diagnosis of CHF, DM, COPD)* _____

Medication Alerts
☐ Changes in the last week *(describe below)* ☐ Resident is on warfarin/coumadin: Result of last INR _____ Date _____/_____/_____

Allergies _____

Vital Signs

BP _____ Pulse _____ Apical HR _____ RR _____ Temp _____ Weight _____ lbs *(date _____/_____/_____)*

For CHF, edema, or weight loss: last weight before the current one was _____ on _____/_____/_____

Oximetry % _____ ☐ on room air ☐ on O2 *(liters/minute)* _____

Residents Name _____

(continued)

Toolkit Content

- SBAR – Situation, Background, Assessment, Recommendations
- Communication with physicians

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Toolkit Content

- World Health Organization Hand Hygiene

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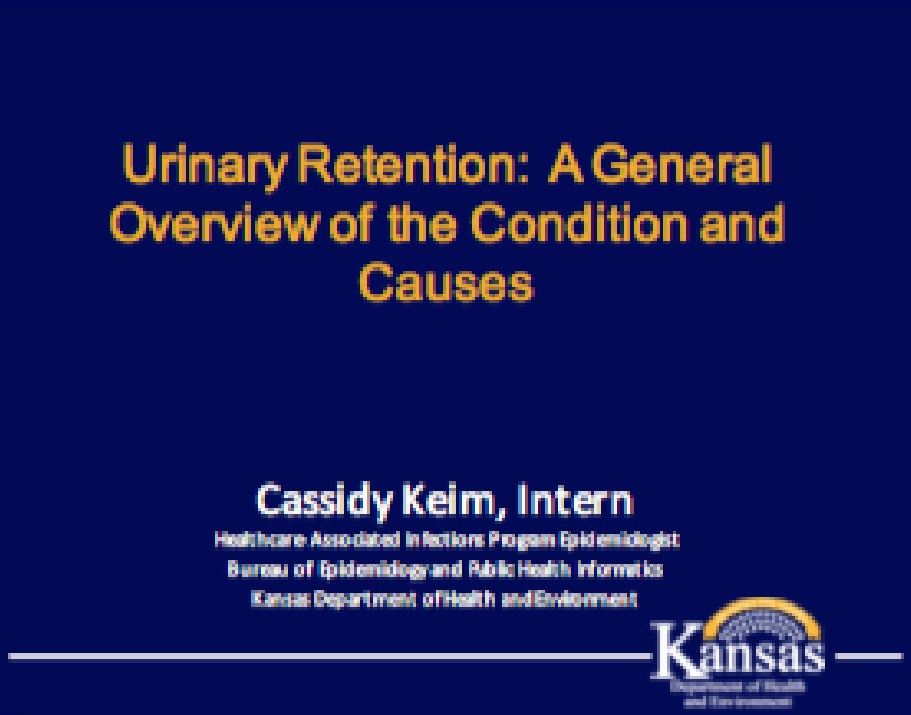

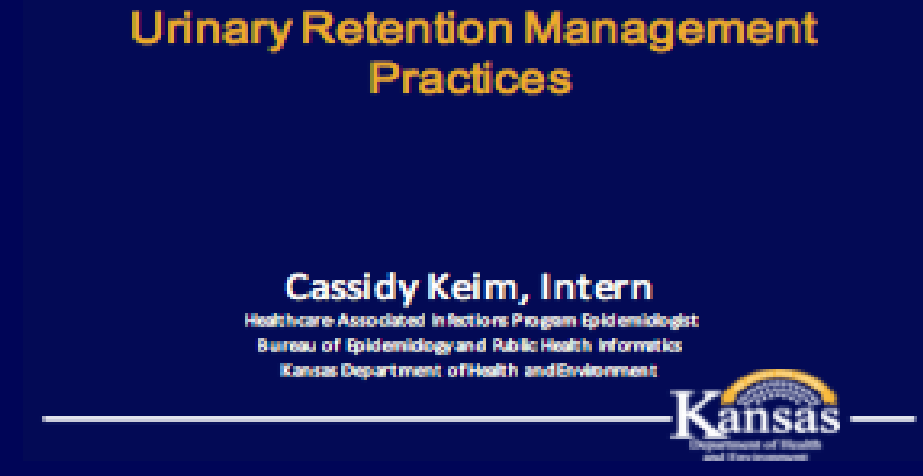

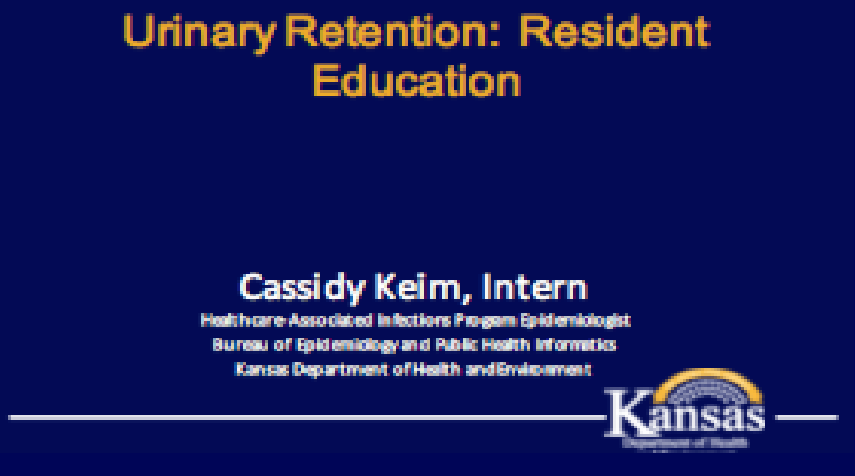

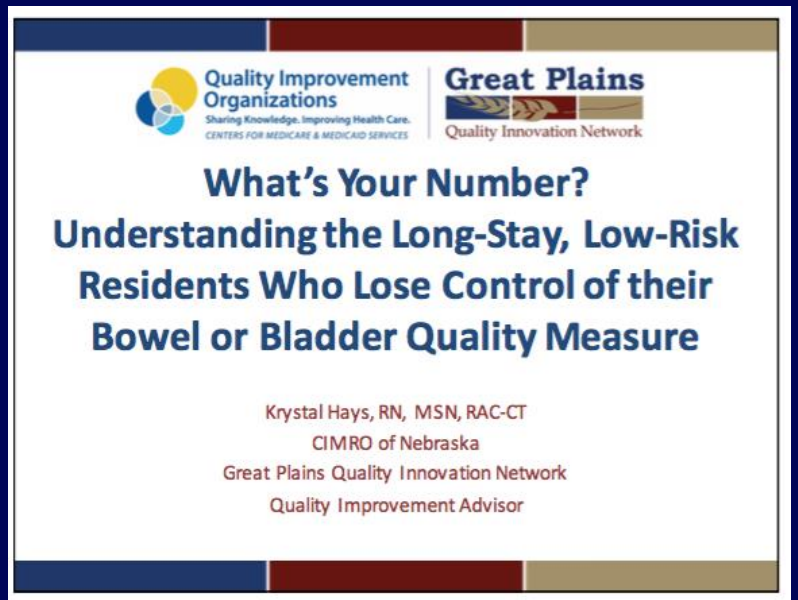

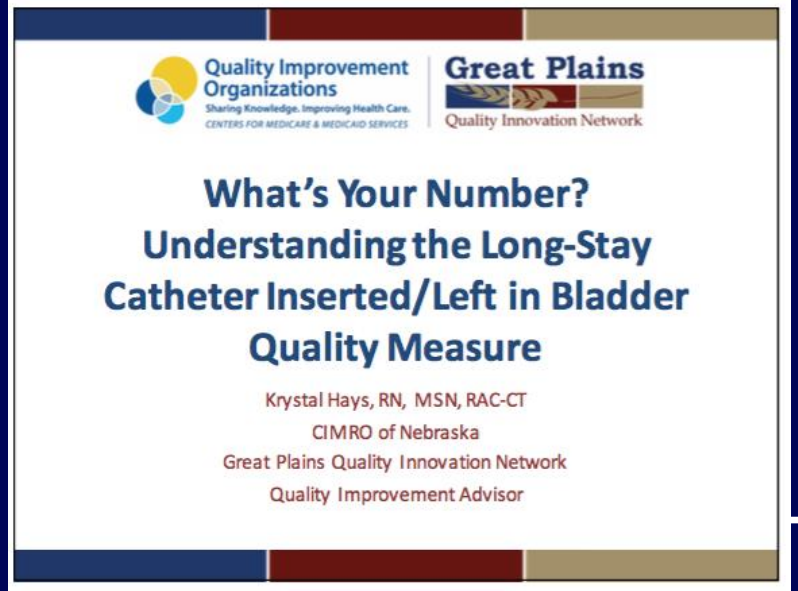

Toolkit Content

- Educational resources for healthcare providers
- Information on filling out Medical Data Sheets

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Toolkit Content

Causes of Urinary Retention	Assessment Process	Management Practices	Catheter Complications	Random
10	10	10	10	10
20	20	20	20	20
30	30	30	30	30
40	40	40	40	40
50	50	50	50	50

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Core Competencies

- Pathogens/Pathogenic mechanisms
  - Infectious organisms causing urinary tract infections
- Immunology/Host response
  - Aging adults have weakened immune systems
  - More susceptible to disease
- Environmental influences
  - Characteristics of LTCFs lead to increase rates of infection
- Disease surveillance
  - National Healthcare Safety Network (NHSN)
  - Kansas does not have a mandate to report HAIs
- Effective communication
  - Toolkit is an effective communication tool
  - Identifies issue of infections related to catheter use in LTCFs
  - Provides resources to individuals working in healthcare

Conclusions

- CAUTIs are a major public health issue
- Toolkit provides resources and strategies to reduce catheter use in LTCFs; therefore reducing catheter-associated complications
- Ultimate goal is to improve resident health and quality of living in LTCFs

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Questions?

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