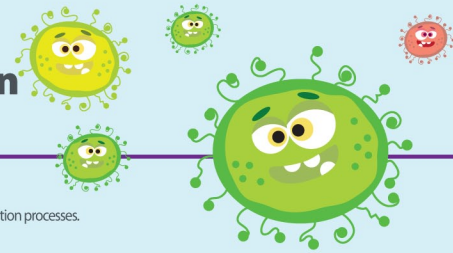




# Utilizing Technology to Enhance Evidence-Based Practice in the Prevention of Hospital-Acquired Urinary Tract Infection

CHRISTUS St. Michael Health System | Evelyn White, RN, BAAS, IP, CIC



## 1. Background & Significance:

- CHRISTUS St. Michael Health System is a 312-bed, acute-care facility located in Northeast Texas.
- Hospital acquired urinary tract infection increased in FY 2008.
- FY2008: 2.34% urine NIM rate.

## 2. Purpose:

Decrease urine NIM by 10% through infection prevention processes.

## 3.

### Nosocomial Infection Marker (NIM)

- An accurate, hospital-wide electronic surrogate marker for hospital-acquired infection.
- Computed from electronic data.
- Does not require chart review or the subjective application of infection detections.
- NIMs are determined from laboratory and patient admitt. discharge-transfer data.
- Isolates are rigorously filtered to remove duplicates, contaminants, and colonizations.

### Nosocomial Infection Marker (NIM v2008) Scorecard

Unit	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ICU	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1
CVICU	2.5	2.3	2.1	1.9	1.7	1.5	1.3	1.1	0.9	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.1
SICU	3.8	3.5	3.2	2.9	2.6	2.3	2.0	1.7	1.4	1.1	0.8	0.5	0.3	0.2	0.1	0.1	0.1
Other	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total</b>	<b>5.0</b>	<b>4.7</b>	<b>4.4</b>	<b>4.1</b>	<b>3.8</b>	<b>3.5</b>	<b>3.2</b>	<b>2.9</b>	<b>2.6</b>	<b>2.3</b>	<b>2.0</b>	<b>1.7</b>	<b>1.4</b>	<b>1.1</b>	<b>0.8</b>	<b>0.5</b>	<b>0.3</b>

NIM DATA IS ENTERED, AUTOMATED SCORECARDS GENERATED, AND SUMMARIES PRESENTED TO MANAGERS MONTHLY.

### Urine NIMS - Unit Summary Report FY2009

Unit	ICU	CVICU	SICU	Other	Total
Jan	1.2	2.5	3.8	0.5	8.0
Feb	1.1	2.3	3.5	0.4	7.3
Mar	1.0	2.1	3.2	0.3	6.6
Apr	0.9	1.9	2.9	0.2	5.9
May	0.8	1.7	2.6	0.1	5.2
Jun	0.7	1.5	2.3	0.1	4.6
Jul	0.6	1.3	2.0	0.1	4.0
Aug	0.5	1.1	1.7	0.1	3.4
Sep	0.4	0.9	1.4	0.1	2.8
Oct	0.3	0.7	1.1	0.1	2.2
Nov	0.2	0.5	0.8	0.1	1.6
Dec	0.1	0.3	0.5	0.1	1.0
<b>Total</b>	<b>10.0</b>	<b>20.0</b>	<b>30.0</b>	<b>5.0</b>	<b>65.0</b>

## 4.

### Our Strategy:

- A team reviewed the procedures for collection of urinary specimens, the placement of urinary catheters, and the care of urinary catheters.
- An Infection Preventionist analyzed electronic surveillance data in real time.
- Implemented and monitored new evidence-based practices.



## 5.

### Implementation:

Developed a UTI Prevention Bundle

### Advantages in Using Bundles:

- Decrease morbidity and mortality
- Improve patient outcomes
- Cost savings

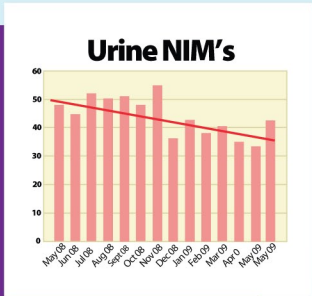
### UTI Prevention Bundle

- Use alcohol gel hand hygiene before placing Foley catheter
- Use silver/antibiotic coated Foley catheters
- Use the smallest diameter size of the Foley catheter
- Do not irrigate the balloon prior to insertion
- Thoroughly wash perineal area with soap and water before the sterile catheterization procedure
- Insert Foley catheters with aseptic technique
- Secure Foley catheter to the thigh using Cath
- Secure from prysis.

## 6.

### Evaluation & Ongoing Progress:

- **Decreased** urine NIM by **12.6%** hospital wide, **60%** in CVICU, **20%** in SICU
- **Potential** avoidance of 35 UTIs with **cost savings of \$93,780.**
- Estimated length of stay **reduced by 144 days.**



**Infections, "Urine" trouble now!**  
It's **Bundle B**lacker to the rescue!