

# Using the Electronic Medical Record to Decrease Catheter-Associated Urinary Tract Infections

## The Christ Hospital, Cincinnati, Ohio

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### Significance:

Virtually all hospital-acquired urinary tract infections (UTI) are associated with indwelling catheters, resulting in increased morbidity, mortality, costs and length of stay. The Center for Disease Control reports up to 69 percent of CAUTI may be preventable with recommended measures. Those with catheters greater than two days were 21 percent more likely to develop UTI.

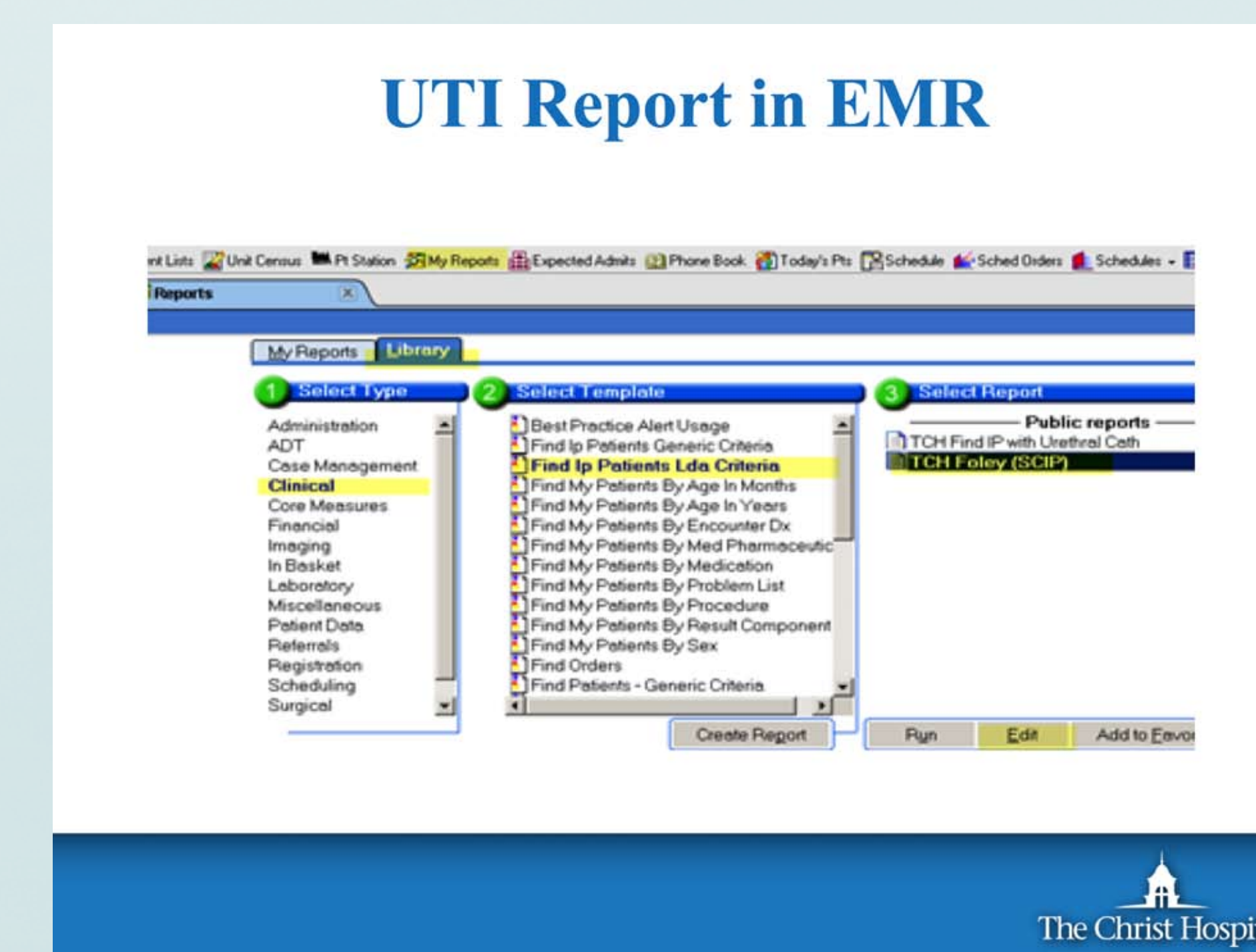
### Purpose:

To reduce Catheter Associated Urinary Tract Infections (CAUTI), to increase compliance of core measure SCIP- 9 and to improve patient outcomes by applying new applications in the Electronic Health Record (EHR) and targeting education.

### Strategy and Implementation:

The CAUTI taskforce had three major objectives.

1. Devise an EHR report to empower staff in reducing CAUTI. The daily report is run by each unit and includes: patient demographics, catheter type, insertion date and line days. The charge nurse on the unit reviews information and follows-up with direct care providers to address concerns and to suggest removing catheters as soon as possible for medical patients or by post-operative day two [POD 2] in surgical patients.
2. Revise computerized order entry system to include catheter removal in post-op order sets and to require the physician to document the reason for use of a catheter after POD 2.
3. Develop a plan for teaching nurses and physicians. Topics included early removal of catheters, aseptic technique, care of the patient with a catheter, and routine communication of catheter days in reports. Posters were placed in strategic places to remind staff, and in-service programs were offered.

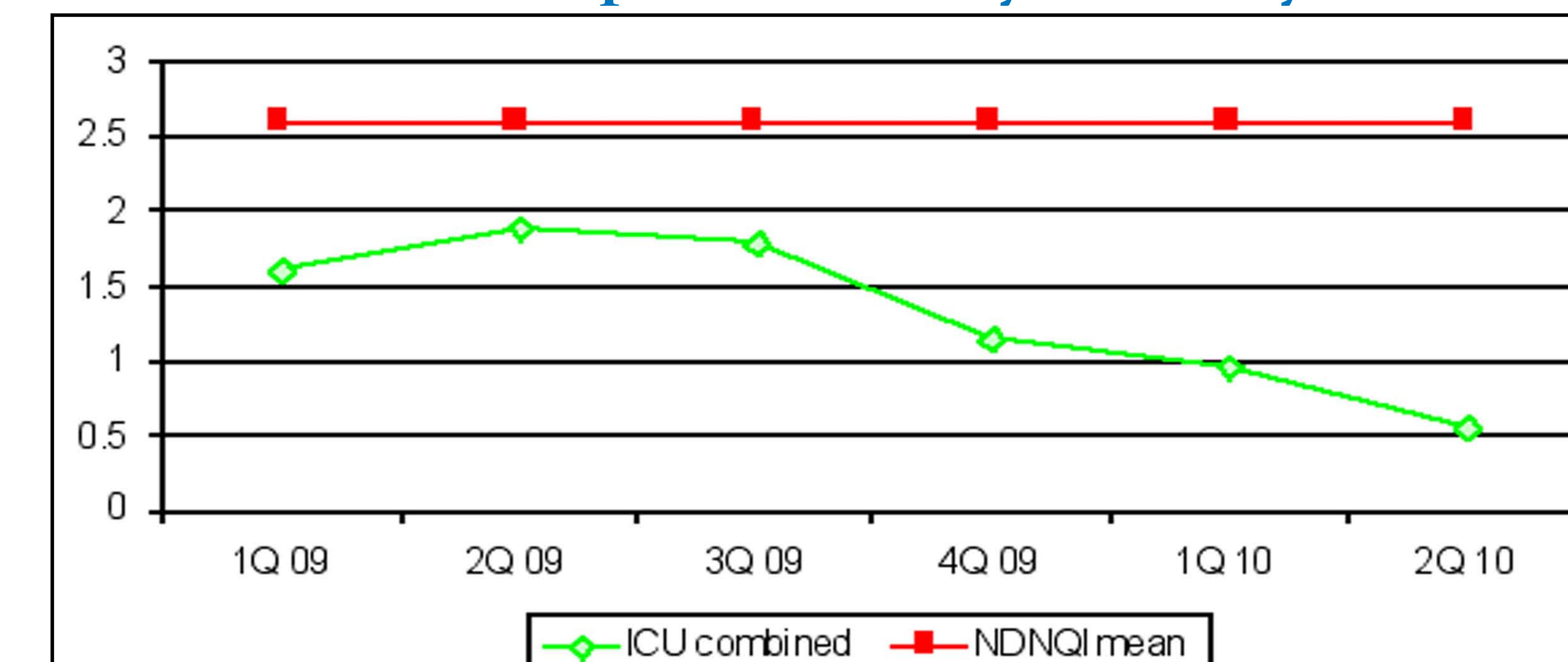


Report Details							
Patient Name	Line Name	Line Site/Insertion Date	LLA status	Line Type	Dept	Line Days	Room #
Unlabeled Catheter Lines 16	Label	10/02/2009	Active	Drain	2 SOUTH	0	2012
Unlabeled Catheter Lines 16	Label	09/30/2009	Active	Drain	2 SOUTH	2	2006
Unlabeled Catheter Lines 12	Label	09/29/2009	Active	Drain	2 SOUTH	3	2003
Unlabeled Catheter Lines 16	Label	10/01/2009	Active	Drain	2 SOUTH	1	2020

### Evaluation:

Since the EHR changes were implemented and initial education process began, we achieved a 23 percent increase in SCIP 9 core measure guideline compliance. The rate of CAUTI decreased by 41 percent from 1.65 (15 infections/9079 catheter days) in 2009 to 0.98 (2/2058 catheter days) in the first quarter of 2010.

### Rates of CA-UTI case rate per 1000 foley cath days



2009 = 15 infections/9079 foley days = 1.65 cases

1Q 2010 rate = 2 infections/2058 foley days = 0.98 cases

### Implications for Practice:

Using the EHR empowered nurses to be champions in reducing CAUTIs. With reporting mechanisms, other institutions can develop similar processes to decrease catheter days and UTI rates. This has a significant impact on core measure compliance, reimbursement and patient outcomes.

