# Urinary Catheter Surveillance at BIDMC: Can We Use the Electronic Medical Record to Track Catheter Use?

#### The Problem

Healthcare associated urinary tract infections make up the greatest share of nosocomial infections and use of urinary catheters are felt to be a proximal cause of these infections. In an effort to reduce nosocomial urinary tract infections, urinary catheter use should be limited to appropriate indications. The electronic medical record (EMR) may be a useful tool to help physicians keep track of the presence of urinary catheters, provide indications for use, and issue reminders or alerts for catheter discontinuation, when appropriate.

### Aim/Goal

The purpose of this pilot study was to validate the BIDMC EMR Provider Order Entry (POE) "Alternate View" notification screen of urinary catheter presence or absence. This screen provides a list of current inpatients and a data field for "FOLY," indicating that a urinary catheter has been ordered and is present in the patient. Pending an understanding of the accuracy of this notification screen, physicians and allied health care providers could have a daily update on the presence or absence of urinary catheters in their patients and could review indications for catheter use and continue or discontinue the catheter, as appropriate.

#### The Team

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### The Interventions

The study was conducted on 2 medical and 1 surgical inpatient units at the BIDMC. The POE "Alternate View" screen was printed upon arrival to the unit and bedside rounds were made to compare the presence of "FOLY" in the data field by the patient's name with actual presence of a urinary catheter in the patient and, importantly, presence of a urinary catheter in the patient but no indication of "FOLY" on the EMR POE screen.

## The Results/Progress to Date

The study was conducted in August 2008. A total of 930 patients were audited for urinary catheter presence.

Inpatient Unit	# days audited	Average # patients audited per day	Average # urinary catheters present in patients per day	Average % urinary catheters present but no "FOLY" indicated on POE screen
11 Reisman (Med)	14	31	2.7	58%*
CC7 (Med)	10	28	6.3	38%
Farr 9 (Surg)	8	26	5.5	27%

<sup>\*</sup> Note: Some patients on 11R had chronic suprapubic/indwelling catheters and this may be less likely to be reported on the EMR POE screen since admitting physicians would not need to "order" placement of these catheters.

#### Lessons Learned

The BIDMC EMR POE data field for "FOLY" is not an accurate way to track presence of urinary catheters, as this EMR is currently used. 27-58% of the time, a urinary catheter was present in the patient but not indicated on this EMR screen. There are several reasons for the discrepancy:

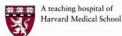
- A verbal order was given to place the catheter and no electronic order was placed (as such, "FOLY" would not be indicated on the EMR)
- A catheter was placed on a unit other than the unit to which the patient was now assigned. When patients transfer units, the catheter is not re-ordered in the EMR on the new unit so no "FOLY" would be indicated.
- The patient has a chronic indwelling/suprapubic catheter from home so the provider does not need to use the EMR to order placement of a catheter

## Next Steps/What Should Happen Next:

Improving awareness and tracking of urinary catheter presence is critical to reducing inappropriate catheter use. The EMR could prompt daily review of catheter presence, ongoing indications for use, and trigger discontinuation orders, if appropriate. For the EMR system to play this role at the BIDMC, initial action strategies might include:

- Include foley catheter status as a required "admission" orders to patients admitted or transferred to a new unit.
- Require nursing staff to enter physician verbal orders for catheter placement into the EMR so "FOLY" will be indicated in the data field.
- Specify the type of urinary catheter in the ordering system so chronic indwelling/suprapubic catheters are indicated.







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 Design an EMR alert system to remind physicians that a catheter is still present and to prompt re-order, if indicated.