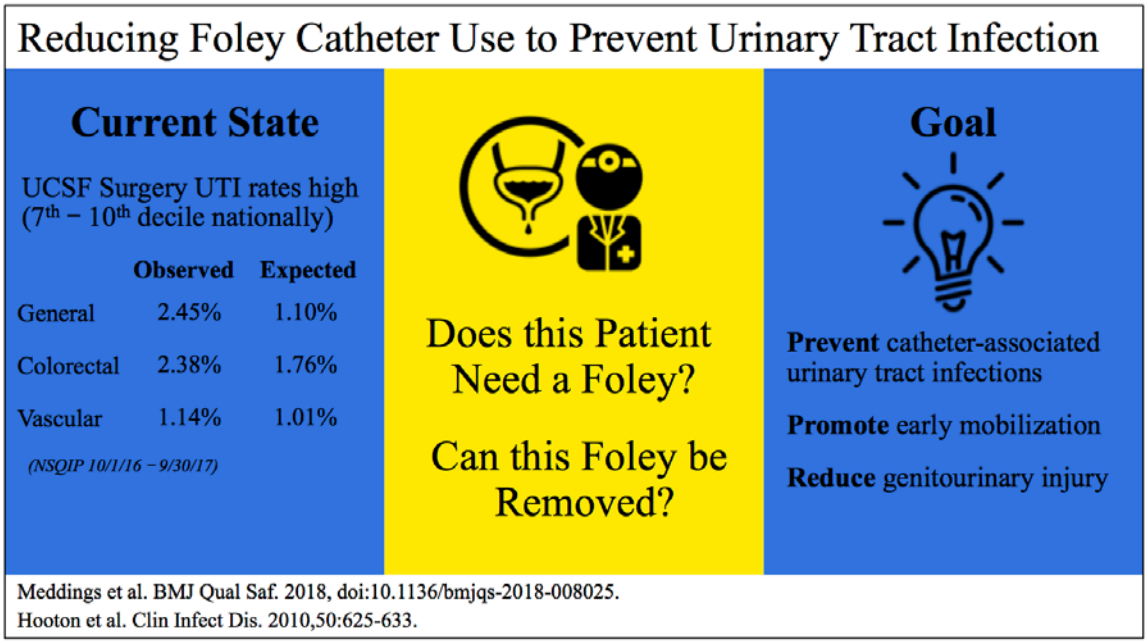
UCSF SPARK Notes (UCSF Surgery Presents: Aims, Reason, Knowledge)

Catheter-Associated UTI



Facts:

- Catheter use beyond 48 hours post-operatively is associated with an increase in UTIs, increased 30-day mortality, and decreased likelihood of discharge home.
- UCSF General Surgery, Colorectal Surgery, and Vascular Surgery are well above the national average for risk-adjusted UTI rates (Fig 2).
- For every catheter-associated UTI, there are many patients with catheter-associated asymptomatic bacteriuria, creating a reservoir of resistant organisms.
- The most effective way to reduce catheter-associated bacteriuria and UTIs is to limit the use of foley catheters and remove catheters when no longer needed.

When should foley catheters be placed?

- Routine cases that are expected to last >3h or when the patient is expected to receive >3L of fluid.
- In critically ill patients who require strict I/O monitoring.
- Should be considered in cases with a suprapubic laparoscopic port.
- See figure 1 for case-specific guidelines.

When should foley catheters be removed? All catheters should be removed as soon as possible, ideally in the OR. Avoid keeping a foley in place solely for limited mobility or urinary incontinence.

W*hat about patients with an epidural?* Patients with a thoracic epidural and without risk factors for urinary retention (h/o urinary dysfunction or prostatic hypertrophy) should have foley catheters removed on POD#1 rather than following removal of the epidural.

This strategy reduces UTI rates without significantly changing the rate of foley re-insertion.

What about patients who have undergone a low pelvic dissection? Patients who have undergone a low pelvic dissection are at increased risk of urinary retention. Foleys should be removed on POD#3 or #4.

Fig 1. Recommended Foley Catheter Use in Routine General Surgery Cases

Avoid Catheter	Consider Removing Foley in OR	Foley until POD #1
• Lap cholecystectomy • Open reducible inguinal, femoral, umbilical or epigastric hernia • Lap reducible umbilical or epigastric hernia • Lap reducible inguinal hernia (TAPP)	• Lap or open ileocecectomy, hemicolectomy or sigmoidectomy • Lap subtotal colectomy • Lap reducible inguinal hernia (TEP) • Lap RNY gastric bypass • Lap sleeve gastrectomy	• Open subtotal colectomy • Lap low anterior resection

Jennifer Meddings et al. BMJ Qual Saf doi:10.1136/bmjqs-2018-008025 Note: no consensus was reached on whether the placement of a suprapubic port justified use of a foley catheter.

Fig 2. NSQIP Semiannual Report for UCSF: Urinary Tract Infections

10/1/16 - 9/30/17	Observed Rate	Expected Rate	Observed Events	Expected Events	National Decile
All Cases (n = 1570)	2.10%	1.40%	33	22	9th
General Surgery (n = 978)	2.45%	1.10%	24	11	10th
Colorectal Surgery (n = 294)	2.38%	1.76%	7	5	9th
Vascular Surgery (n = 88)	1.14%	1.01%	1	1	7th

References:

1. Meddings J, Skolarus TA, Fowler KE, et al. Michigan Appropriate Perioperative (MAP) criteria for urinary catheter use in common general and orthopaedic surgeries: results obtained using the RAND/UCLA Appropriateness Method BMJ Qual Saf. 2018. doi: 10.1136/bmjqs-2018-008025.

2. Hooton, T, Bradley SF, Cardenas DD, et al. Diagnosis, Prevention, and Treatment of Catheter-Associated Urinary Tract Infection in Adults: 2009 International Clinical Practice Guidelines from the Infectious Diseases Society of America. Clinical Infectious Diseases. 2010, 50:625-663.

3. Zaouter C, Kaneva P, Carli F. Less urinary tract infection by earlier removal of bladder catheter in surgical patients receiving thoracic epidural analgesia. Reg Anesth Pain Med 2009 34(6):542-8.