

### **Table III. Mechanisms by Which a Urinary Catheter Increases Risk of UTI**

1. Introduces inoculum of bacteria into bladder at time of placement.
2. Facilitates ascension of uropathogens from periurethra to bladder via extraluminal (2/3 of episodes of bacteriuria) or intraluminal (1/3 of episodes) routes.
3. Compromises complete bladder emptying resulting in increased residual urine in bladder.
4. Provides a foreign body on which uropathogens are deposited via hands of personnel.
5. Drainage bags provide a reservoir of drug-resistant uropathogens readily spread to other patients.
6. Enhances microbial colonization by enhancing microbial adhesion on catheter surface.
7. Disrupts uroepithelial mucosa, exposing new binding sites for bacterial adhesions.
8. Microbial adhesion leads to biofilm formation and bacterial persistence.