Medication delivery via indwelling bowel access device plays critical role in critical care

**Problem**
Bowel access and fecal control are often essential adjuncts to patient care. Access is important diagnostically, for contrast radiographic studies, and therapeutically, for the administration of medications and bowel irrigation to prepare patients for surgery, remove fecal impactions and stimulate defecation. Control of fecal evacuation may assist in perineal and sacral wound healing and has safety implications for medical personnel. In our critical care setting, we have also noted an increasing need for the administration and retention of multiple classes of medications rectally for treatment of patients with illnesses such as liver failure, renal failure and gastrointestinal hemorrhage.

**Purpose**
To delineate the therapeutic uses of a bowel care system as well as the nature of complications associated with its use.

**Methods**
**Research Design**
- Descriptive, retrospective design

**Sample and Setting**
- The sample consisted of 111 consecutive patients admitted to Intensive Care Units (ICUs) within the outcome assessment period of September 2004 to November 2005 and in whom this system was utilized.
- The ICUs are located in two hospitals affiliated with an academic medical center in Atlanta, Georgia.
Demographics of Usage

Liver disease
- Post-transplant
- End-stage liver disease
- Acute hepatic failure

Sepsis and other infections

Respiratory failure and pneumonia

Cardiovascular disease
- Aortic valve replacement
- Acute myocardial infarction
- Thoracic aortic aneurysm
- Congestive heart failure

Results
The mean dwell time was 10.9 days, with a range of 1–58 days.

Reasons for use of the bowel management system:
- Control of diarrhea (n=66, 60%)
- Wound protection (n=29, 26%)
- Medication administration (n=25, 22%)

Diarrhea
Common diarrhea etiologies: Clostridium difficile colitis, gastrointestinal hemorrhage, and enteral tube feeding

Rationale for use in diarrhea
- Divert fecal drainage in patients with diarrhea as prophylaxis against tissue breakdown
- Facilitate nursing care and decrease risk involved when handling body fluids

Total exceeds 100% because nine patients had more than one reason for catheter insertion.

Reasons for Insertion

Medication Administration N = 25
two patients received both Lactulose & Kayexlate

Diarrhea as Primary Reason for Insertion
N= 66

As presented at The 20th Annual Symposium on Advanced Wound Care
“The use of this bowel care system provided a safe and effective means of medication delivery.”

**Wound Protection**
- Protect debrided tissue dressing (necrotizing fasciitis)
- Protect existing tissue skin ulcerations

**One Adverse Event**
Only one adverse event in 111 patients: An ulceration of the rectal vault with resultant hemorrhage which was later determined to be the result of over inflation of the retention cuff.

**Conclusion**
The use of this bowel care system provided a safe and effective means of medication delivery, control of fecal drainage and the protection of wound and skin in a wide variety of complex patients.

Although there are other systems available to passively drain and contain fecal content, this bowel care system provided the unique additional benefit of medication administration and retention to assist with improving patient outcomes.

Cross section showing bowel catheter in place.