

formed in the United States, and approximately two thirds of these procedures involved patients who had not spent the preoperative night in a hospital. The intent to save healthcare dollars by eliminating costly inpatient stays before operations has produced success. The hard work that now lies ahead is to examine very carefully whether negative outcome features have accompanied this economy. To date, the picture regarding SSI risk specific to the outpatient surgery venue is murky, because few airtight studies exist with a usefully narrowed focus, sufficient control, and data integrity. The article by Manian and Meyer is the kind of necessary first step of curiosity-based probing that must be taken by centers with large SSI surveillance enterprises. Clearly, two clichés are appropriate: Much work needs to be done in this area, and many questions persist.

Herwaldt and coworkers studied a well-recognized, and sometimes lethal, outcome flaw in cardiac surgical procedures during 1991 to 1992 at the University of Iowa.<sup>4</sup> Two elegant case-control studies were accomplished to identify risk factors for hemorrhage after cardiothoracic operations. The work was prompted by the surveillance finding that 93 of 511 cardiothoracic patients (18%) suffered a perioperative hemorrhage in fiscal year 1992. It was found that substitution of hetastarch for albumin solution as a bypass pump-priming agent was associated significantly with hemorrhage, as was patient age. The apparent cost-savings of eschewing albumin were dwarfed completely by the extra costs associated with the care of patients who bleed excessively.

This excellent article's results speak for themselves and illustrate crisply why we never can assume that some perfectly logical step taken in the interest of saving money will not add complications that initially are concealed. Most readers of this journal have never provided care to cardiothoracic patients in the early postoperative days, but may

have visited a relative in some cardiac surgery ICU. Chest tubes routinely drain blood from the mediastinum and pleural cavities in the first few postoperative days; this drainage is necessary, it usually ebbs steadily, and mercifully the tubes are removed as soon as practical. Sometimes—pretty rarely nowadays in most practices—patients bleed postoperatively in spectacular (and unnerving) fashion. Expensive blood-bank component therapy or a rush back to the operating room may be required. It bears retelling that the latter circumstance almost always places patients at increased risk for sternal wound infection, which can have its own extraordinary additional care costs and a nontrivial specific mortality. In sum, the Herwaldt study is first-class work that precisely illustrates the need to monitor carefully at least our high-risk, high-volume operations.<sup>4</sup> Surveillance led by knowledgeable professionals who are personally familiar with patient care will reveal those low-profile negative events that erode care value by adding net cost, impairing ultimate clinical outcome, or doing both simultaneously.

## REFERENCES

1. Nelson E, Splaine M, Batalden P, Plume S. Measuring clinical outcomes at the front line. In: Caldwell C, ed. *The Handbook for Managing Change in Health Care*. Milwaukee, WI: ASQ Quality Press; 1997.
2. Cookson ST, Ihrig M, O'Mara EM, Denny M, Volk H, Banerjee SN, et al. "Increased bloodstream infection rates in surgical patients associated with variation from recommended use and care following implementation of a needleless device. *Infect Control Hosp Epidemiol* 1998;19:23-27.
3. Manian F, Meyer L. Surgical-site infection rates in patients who undergo elective surgery on the same day as their hospital admission. *Infect Control Hosp Epidemiol* 1998;19:17-22.
4. Herwaldt LA, Swartzendruber SK, Edmond MB, Embrey RP, Wilkerson KR, Wenzel RP, et al. The epidemiology of hemorrhage related to cardiothoracic operations. *Infect Control Hosp Epidemiol* 1998;19:9-16.

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## Calendar

**March 25-27, 1998.** "Training in Basic Infection Control" is an intensive, three-day course oriented to new practitioners in long-term and acute care. The course will be held at

Miller-Dawn Medical Center in Duluth, Minnesota.

Participants will be given credit for 25 contact hours.

For additional information,

please contact Linda Kinnear, Education Coordinator, Miller-Dwan Foundation, 502 E Second St, Duluth, MN 55805, 800-766-8762, ext 1429, or 218-720-1429.