SSIs increase the overall cost of care and increase patient morbidity and suffering. A number of interventions can contribute to our quest for zero tolerance of postoperative infection.

Preoperative preparation of the patient is an important part of an overall preventive strategy. Whenever possible, identify and treat all infections remote to the surgical site, such as skin or urinary tract infections, before elective operation and postpone elective operations on patients with remote site infections until the infection has resolved. Bacterial vaginosis is a known risk factor for surgical site infection suggesting that women should be screened and treated if positive prior to surgery. If hair removal is necessary, remove immediately before the operation, preferably with electric clippers. Adequately control serum blood glucose in all patients with diabetes and particularly avoid hyperglycemia perioperatively. Require patients to shower or bathe using chlorhexidine on at least the night before and on the morning of the day of surgery. Recognition of those patients that are colonized with MRSA can also contribute to using an appropriate prophylactic antibiotic to cover this possibility.

Perform a preoperative surgical scrub using a chlorhexidine-alcohol skin preparation. Chlorhexidine gluconate scrub may be used to perform a vaginal preparation prior to hysterectomy and cesarean delivery. Normothermia protocols are in place in most institutions. It is time to dose our prophylactic antibiotics based on weight. Currently cefazolin is the most common antimicrobial used for prophylaxis and should be dosed as 1 gram for women <80 kg; 2 grams if 80 to 120 kg; 3 grams if >120 kg. It may be time to extend the spectrum of our antimicrobial regimens for prophylaxis. Wound seromas increase the risk of cellulitis and SSI. Limited study suggests that negative pressure wound therapy may be able to play a role in prevention of seroma in high risk patients. Little evidence is available to guide management of the postoperative incision. More study is needed to determine optimal times of dressing removal and the advisability of continued postoperative incisional care with antiseptics. Monitoring surgeons for their individual rate of preventable SSI with feedback is a meaningful way to improve overall SSI rates.