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## Code Flash: How an Interdisciplinary Team Eradicated Immediate-Use Steam Sterilization

**Previous Presentations:** This information was presented at the Arkansas Nurses Association with preliminary data in October of 2012.

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*To the Editor*—The 2014 Joint Commission National Patient Safety Goals include the prevention of infections following surgery. One potential cause of surgical site infection (SSI) is the use of reusable medical equipment that has undergone flash sterilization, also known as immediate-use steam sterilization (IUSS). This rapid means of sterilization facilitates replacement of an instrument that is unexpectedly required or contaminated during a surgical case. However, the literature associates IUSS with adverse events for patients. An internal review of IUSS at our facility revealed that we exceeded the Veterans' Health Administration benchmark of 1%.

The leadership at our facility chartered an interdisciplinary team tasked with decreasing the use of IUSS. The team proposed the development of a “fast track” method of sterilization to replace the perceived need to use the flash sterilizer in the operating room. This conceptualization encountered resistance from surgeons and surgery staff who believed IUSS of contaminated instruments provided the only option for avoiding unwanted delays during surgery. Following a crucial conversation, the Chief of Surgery concurred with the implementation of a new system provided that the entire process required less than 30 minutes.

The team named this innovative system “Code Flash,” building from the sense of urgency associated with the word “Code” (eg, “Code Blue” for cardiopulmonary arrest) and memories of flash sterilization associated with the word “Flash.” This word selection process emphasized the replacement of old processes with a new one. Code Flash is the process of emergently transporting the needed surgical equipment to Sterile Processing Services, where it is reprocessed and returned to the OR to eliminate the need for IUSS. The staff initiates a Code Flash process when an instrument is contaminated or if an unanticipated need for an instrument arises.

The OR staff notifies SPS immediately via the Code Flash pager or telephone, specifying the needed instrument and the transport method that is to be used. SPS sends a Code Flash

runner to the OR to obtain the instrument or the runner awaits the arrival of the instrument via a dedicated dumbwaiter. Meanwhile, a member of the SPS staff (with OR staff available for clarification) searches a database for the availability and location of a duplicate instrument available for use. If located, the Code Flash SPS staff member retrieves the instrument, delivers it directly to the OR suite, and places it in the hands of the OR scrub nurse or physician. If a replacement instrument is not available or is being reprocessed, SPS continues reprocessing the contaminated instrument as well. During a Code Flash, the dedicated SPS runner hand carries the instrument throughout the reprocessing area, eliminating the potential for a misplaced instrument, and continually communicates the emergent need for the instrument. With Code Flash, the reprocessing of the contaminated instrument and the search for a replacement instrument occur simultaneously.

To facilitate accurate communication, the team has standardized a list of more than 5,000 different instrument types and 1,000 instrument sets. Doing so has improved the efficiency of the search process significantly. Removing duplications, slang terminology, and misspelled entries has expedited the SPS staff's ability to determine whether a duplicate instrument is available. Rapid location of the instrument with the support of the revamped database facilitates delivery of a replacement instrument while the contaminated instrument continues the Code Flash sterilization process through the dedicated sterilizer. This clarity of communication has significantly improved the flow of Code Flash activities as well as physician, nurse, and staff satisfaction with the process.

Notably, the initial decrease in IUSS was encouraged by careful contemplation prior to using flash sterilization: we required staff to brief every IUSS to facility leadership. Prior to the implementation of Code Flash, IUSS rates varied from 1.5% to 5.5% (25 to 50 uses per month), and process implementation suffered from significant variance. Following the implementation of Code Flash, IUSS dropped immediately, and we have sustained the virtual elimination of IUSS for almost 3 years. Currently, our facility has not used IUSS since the second quarter of FY 2014 (Figure 1).

Code Flash has exerted multidisciplinary impact; it is discussed throughout all levels of the facility and has become a part of the culture of the organization. Our staff experiences the impact of Code Flash in the increased efficiency of reprocessing contaminated instruments resulting from this innovative standardized procedure for rapid replacement of urgently needed instruments.

With Code Flash, the redesign team has addressed the leading reasons for IUSS, specifically, communication issues and item contamination during a procedure, while increasing the efficiency of surgical instrument sterilization in our facility. By demonstrating that an instrument with superior decontamination can be returned to the OR more efficiently, surgical staff no longer perceive a *need* for flash sterilization. In conjunction with this procedural change, the team has addressed

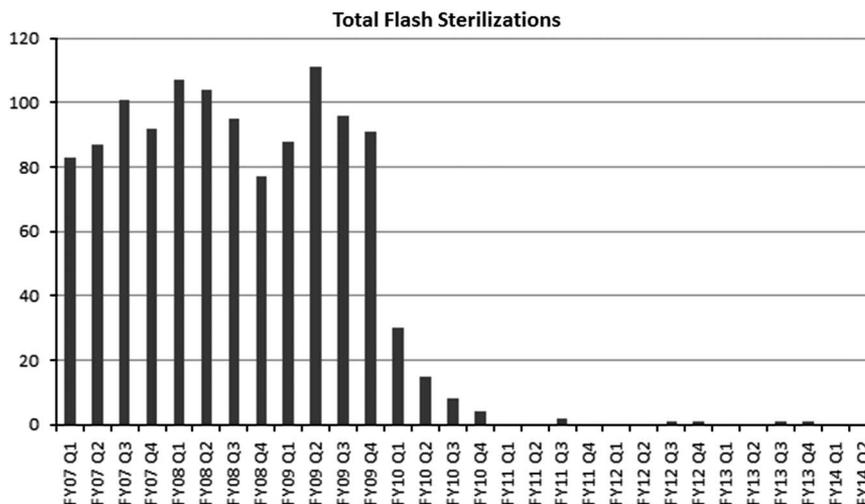


FIGURE 1. Reduction in the number of immediate use steam sterilizations (IUSS) performed per quarter (Q) from fiscal year (FY) 2007–2014 at Central Arkansas Veterans Healthcare System.

other variables to decrease the real need for flash: efficient quality assurance compliance, employee awareness/education, and collaborative OR/SPS teamwork.

The leadership of our facility supported a system redesign team to control one risk factor of SSL. The elimination of IUSS from our OR culture correlated with elimination of SSIs associated with IUSS for the past 3 years. The redesign team process promoted limitless thinking, and the intraprofessional collaboration increased respect for the role of each individual and/or department in ensuring the highest quality of care for our Veterans.

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## Parental Perceptions about Required Influenza Immunization

*To the Editor*—We would like to discuss the article “Parental Perceptions about Required Influenza Immunization.”<sup>1</sup> Linam et al. noted that “independent of their feelings regarding vaccine safety and efficacy, 76% of parents felt that annual influenza vaccination should be required for HCP [healthcare professionals].”<sup>1</sup> In fact, parents of pediatric patients usually require the best thing, best safety service, for their children. A vaccinated HCP is perceived to be a safe person to provide health care to the children with low risk for influenza transmission. In addition, the relationship between the status of “vaccinated or intending to be vaccinated against seasonal influenza” of an HCP is also directly related to the status