

What's New

A focus on process improvement

June 2016 - The following article by Shanna Wiechel, AIA, EDAC, LEED AP, principal and director of operations, Christner Inc.; and Diane Desmond, activation lead/project manager, BJC HealthCare, was published in the spring issue of InsideASHE, a trade publication of the American Society for Healthcare Engineers.

Putting the "process" into sterile processing departments

Lean process improvement is often used in emergency departments and inpatient units where it directly influences patient experience and nursing staff efficiency. Sterile processing departments (SPDs) are just as critical to patient care, but because of their behind-the-scenes profile are often overlooked for improvement projects. If sterile processing departments work well, they get very little attention. If they don't, they can put patients and the hospital at risk. The prescriptive flow and repetitive nature of sterile processing makes the SPD an ideal candidate for lean process improvement.

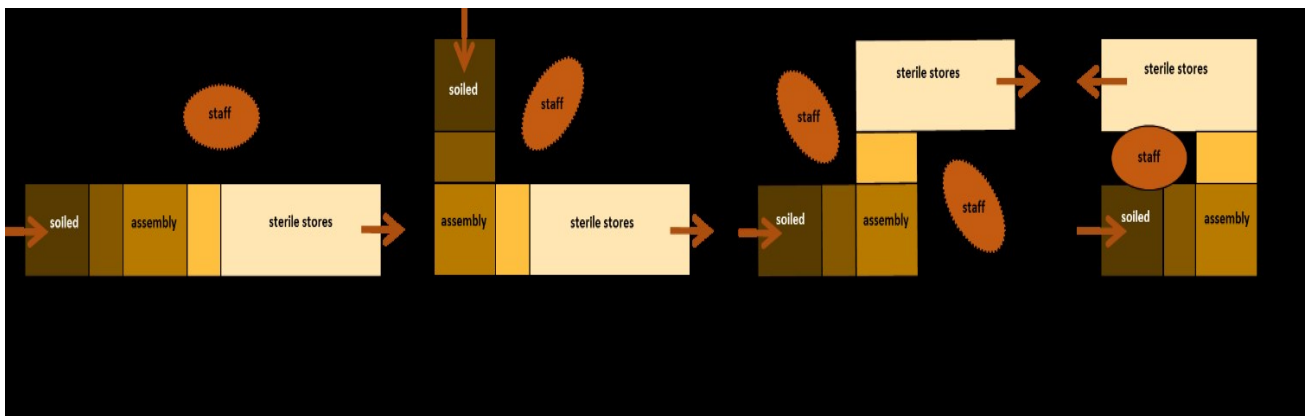
The following "symptoms" may indicate that your SPD is due for a process improvement initiative:

1. Flash sterilization is a regular occurrence.
2. Surgical nurses insist on cleaning their own instruments.
3. The SPD routinely runs out of supplies.
4. Supplies in SPD often expire.
5. Instruments are late or missing.

These indicators reflect a breakdown in one of the SPD's core work processes. Lean process improvement events get SPD staff together with representatives from surgery, materials management, and administration outside of their day-to-day routines to question how work is being done, why it is being done that way, and if there is a way to perform work better or more efficiently. Although the steps in sterile processing are standardized from a regulatory standpoint, aspects of the design will differ based on the specific needs of the hospital: number and type of surgical specialties reported, number of inpatient beds supported, experience level of SPD staff, and culture of the facility. A representative from each department that is a supplier or a customer of SPD should be included in the improvement process, including materials management, surgery, and of course leadership and technicians from the SPD.



Because the flow of the sterilization process is inherently prescribed, it might seem that the design of an SPD would be straightforward and identical from one facility to the next. The diagrams below show how a linear process flow can be carried out in a variety of plan configurations. The ideal layout is often one like the switchback where the flow is circular because it places the soiled drop-off and sterile pick-up in close proximity for ease of transport. This type of layout also creates the opportunity for visual management of SPD functions from within supervisor offices and makes these offices convenient to both the clean and sterile entrances for staff convenience.



However, these diagrams only illustrate the flow of the instrument sterilization process. A number of other processes can occur within an SPD such as scope processing, sterilization of surgical linens, cleaning of durable medical equipment, as well as storage, processing, and distribution of materials for surgical procedures or even for an entire hospital. Because the department is part of a larger process flow with surgery and the dock, its location, size, and configuration are often affected by its interaction with other departments. For instance, whether breakdown (removal of packaging materials) will occur within the department or at the dock, whether sterile instruments and supplies will be stored in SPD or surgery, and whether scopes will be cleaned at their point of use or centralized within the SPD are questions that should be answered with input from other departments.

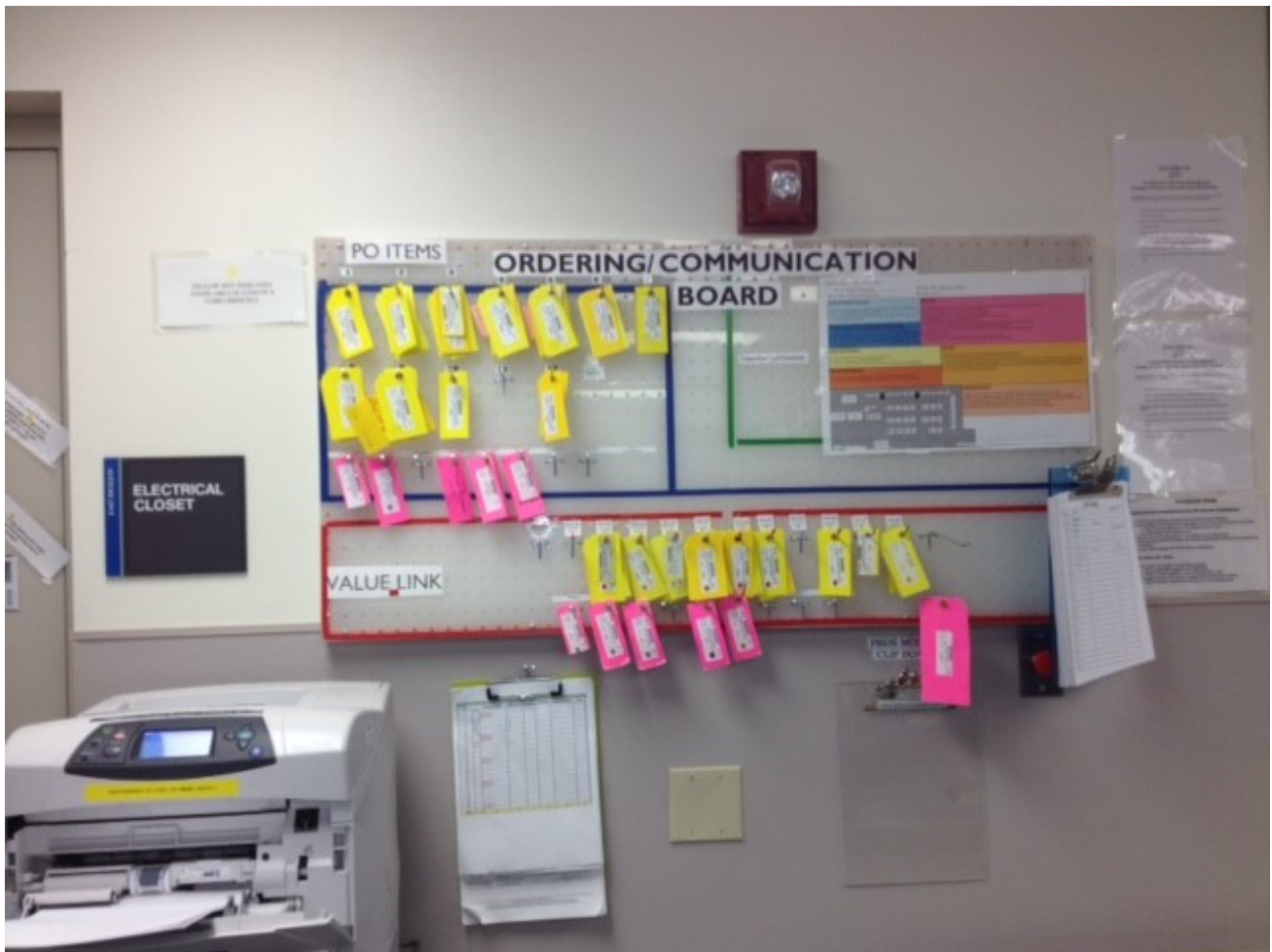
Case study

Based in St. Louis, BJC HealthCare is one of the largest health care providers in the United States. They were an early implementer of lean process improvement in design projects and operational improvement initiatives within existing construction.

BJC's Barnes-Jewish Hospital began lean process improvement initiatives shortly after moving into a new 18,600 square foot sterile processing department on South Campus. The staff held regular workshops to discuss organization of their space to better support work flow and then tried out solutions to test the results. High-density shelving in sterile storage was replaced with grocery-style aisles of shelving organized and labeled by service to allow case carts to be stocked in just one aisle.

Another improvement was to insert a card near the back of each supply bin with a specific quantity (par level) of the item remaining behind the card. As staff pull the last item before this card, they remove the card and hang it on the pegboard shown below so that the item can be reordered. Because each supply is intentionally stocked from the back and pulled from the front, the chance that goods will expire before use is greatly reduced. This process also reduces time spent inventorying supplies for reorder and reduces the chance that a supply will go out of stock.

By improving their efficiency, Barnes-Jewish hospital was able to redeploy over 2,000 hours of labor per year to productive functions.



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