Maximizing the Benefits of an Instrument Tracking System in the SPD

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Having the opportunity to manage several facilities as a regional director of Sterile Processing (SP), I have been fortunate to see how the discipline has positively evolved over the years. My SP experience both in the government (Veteran Affairs) and the private sector has given me the opportunity to write about this industry, which I am so passionate about.

Surgeries simply cannot occur without SP professionals' contributions; however, many SP departments (SPDs) still lack adequate support to serve the Operating Room (OR) and other departments most effectively. Surgical instruments and equipment inventory are an enormous part of every hospital's capital, and a large sum is needed each year for the acquisition and maintenance of this asset. Instrument tracking systems can help coordinate and manage the processing of surgical instruments and equipment in the SPDs in hospitals, surgery centers and clinics. This article highlights the importance of instrument tracking systems in the SP environment and also identifies how SP professionals can maximize these systems' benefits.

Data capture improves quality

Today, healthcare organizations and their various departments are beginning to maximize the use of information management systems. On the surgical services front, this is especially good news. The perioperative department (in which the SPD is part of) can be especially complex if all the departments under the perioperative umbrella are not integrated and data-driven. Any type of disconnect can result in jeopardized patient care.

The number of instruments processed through different sterilization methods (e.g., steam, hydrogen peroxide, ethylene oxide) can be effectively captured by an instrument tracking system. The number of instruments processed with immediate use steam sterilization (IUSS) and the number of early releases of implants (before a biological indicator is read) can also be identified by running a report from an instrument tracking system. Further, reporting SP-related data to accrediting agencies becomes much easier for SPDs that implement an instrument tracking system.

Some of the many benefits of using an instrument tracking system in the SPD include:

- Ability to track completed surgical trays, equipment, peel pack items and wrapped items
- Helps to track specific surgical instruments to trays
- The location of trays, equipment, peel packs, and wrapped items are known throughout the facility (via the "location scan" function)

The SPD's operational productivity can be determined by running productivity reports to track:

- Daily number of produced trays
- Missing instruments
- Departmental productivity
- Technician-level productivity

Ideally, the OR scheduling system should interface with the supply chain management system and the SP instrument tracking system to ensure the needed instruments, equipment and supplies will be available when needed (this also translates to having the right pick list and preference card). Through the use of these systems, quality deficiencies can also be identified and traced to SP and OR professionals, and customized education and training plan can be more easily created. Some examples of quality events that can be captured electronically include:

- Missing instrument(s)
- Missing biological indicator
- Missing count sheet
- Missing filter and locks
- Failure to perform point-of-use instrument treatment
- Presence of bioburden

Importance of instrument nomenclature

The use of standard nomenclature for instruments is very important when an instrument tracking system is used in the SPD. It is not uncommon for the OR and SP team members to use different names for a particular instrument, which can lead to trays being assembled with incorrect (or missing) instruments. Therefore, proper, formal instrument names should be used on count sheets; this becomes especially handy when looking up instructions for use (IFU) to aid instrument processing. There are now databases that house IFU, and these databases are being integrated with instrument tracking systems. This type of integration makes it easier for SP professionals to know the correct name of an instrument for inclusion on the count sheet.

If an instrument tracking system is integrated with the IFU database system but not with an electronic healthcare record (EHR) system, inefficiencies can still occur in the surgical process. For example, if the housed preference card within the EHR system is not integrated with the instrument tracking system, SP professionals might not know the needed surgical instruments and equipment. At the same time, the OR scheduler will not have visibility into the surgical tray and equipment inventory before scheduling a case, which can lead to cases being scheduled without enough surgical trays, instruments or equipment in the system. Obviously, when such situations occur, patient health and safety can be impacted due to procedural delays or cancellations.

Impact on education and training

Despite the benefits of using an instrument tracking system, many healthcare facilities are not using them to their fullest potential—including for data-driven staff education and training. Again, as healthcare technology continues to advance, it is nearly impossible for SP professionals to memorize the names of every instrument. Through the use of photos or videos uploaded in instrument tracking systems, it becomes easier for technicians to identify and learn a new instrument. More specifically, with the use of pop-up messages in the instrument management system, SP professionals are prompted and reminded on how to process a particular instrument or piece of equipment. The need for data-driven training and education cannot be overstated because quality education is directly related to the quality of work being produced.

Increase productivity and quality

With the help of an instrument tracking system and the running of a productivity report, the productivity of the department and each technician can be easily determined. Just some of the different types of productivity reports that can be run include instruments processed, sterilizer load runs, trays processed, and items processed via high-level disinfection. Additionally, these reports give visibility into the utilization rate of each sterilizer in the department. Some instrument tracking systems now enable sterilizer load lists and receipts to be scanned and saved directly into the system as well, which makes it easier for SP leaders to keep up with daily paperwork and sterilization record storage. This is also useful during state or accreditation body surveys.

Instrument tracking systems are beneficial for monitoring and tracking SP-related quality issues as well. This includes but is not limited to quality events in decontamination, preparation and packaging, assembly, and sterilization. Some systems have a built-in workflow process to help with processing of more challenging devices, such as flexible endoscopes, and ensure that technicians do not skip any processing steps. And because these quality events can be recorded electronically, tracking systems can assist the SPD or facility in setting up a root cause analysis.

Conclusion

Instrument tracking systems are essential tools for the SP environment, allowing sophisticated data capture to help coordinate and manage the processing of surgical instruments and equipment. When integrated with other information management systems, tracking systems can be linked to an IFU database, surgical cases can be scheduled with greater ease and accuracy (in accordance with instrument and equipment availability), preventive maintenance can be more easily scheduled on trays, equipment and instruments, and staff education and training can be improved.

RESOURCES

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