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LEARNING OBJECTIVES

1. *Identify electronic workflow abilities that aid technicians*
2. *List ways that electronic workflow systems improve quality assurance*
3. *Specify reporting that helps SPD managers*

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SELF-STUDY SERIES

Sterile Processing information systems help SPDs shine

by Amanda Prussing

Instrument tracking software has evolved over time, from early basic applications that allowed you to identify the sterile status of a set and its location, to the newer, more sophisticated programs that help SPD professionals manage many different aspects of their instrument processing workflow. Today's tracking systems still help you to document your sterilizer loads and print out set barcodes during assembly, but now they can also help inform and improve the work you and your staff do.

Not every sterile processing department is taking full advantage of all the features and data their sterile processing information system can provide, and this may be because they are unaware of its full potential. In this module we'll discuss instrument tracking platform features that can:

- Assist you and your staff in conforming to industry standards and help you develop greater Joint Commission audit readiness
- Support better resource allocation and management
- Enhance your current quality assurance program
- Give you greater insights into your department data with reporting and decision-support tools

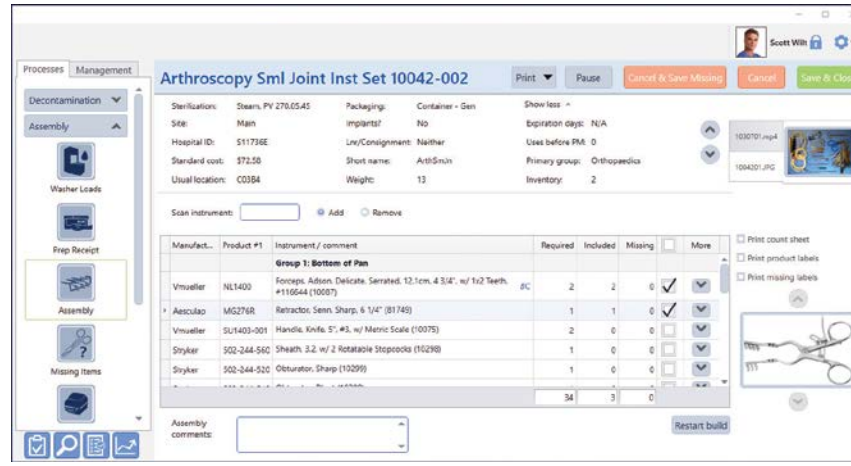
By utilizing these enhanced functions, departments can optimize their workflows and their reputations.

Tools for work conformance and documentation

Some of the most basic features of tracking systems involve allowing the conversion of former paper documentation into a digital format. You can document many processes in your department such as sterilizer load builds (including load contents and BI test results), the time a tray was decontaminated and assembled, and even when and how an endoscope was processed. However, many don't realize that a sterile processing information system not only documents the work you do; it can also help inform and guide your work.

Many systems include features that help to guide technicians through process steps and can be used to help a department maintain AAMI, AORN, and SGNA compliance. For example, many tracking systems give you the ability to document surgical case tray assemblies in an on-screen count sheet. These screens give users valuable information about the tray, like the primary sterilizer cycle used for that set and the total cost of the tray.

The software can also enable on-screen resources for staff such as attached device instructions for use, pictures of all included instruments in a specific surgical set, and videos and PowerPoint guides to demonstrate a specific assembly process.[1] Manual cleaning and decontamination can also be documented with the scan of a barcode, giv-



ing you an easy way to build this part of your sterility assurance documentation.

Some tracking systems also include guided sterilizer load building workflows, which lead staff through the process of building a load much like online retailers lead a customer through the steps needed to purchase an item (first enter your contact information, then your credit card, etc.). Guided workflows allow staff to see what they have completed and what they have left to do, which can eliminate guesswork.

Testing, weight and compatibility compliance

These types of systems also allow the user to create testing schedules so that staff are reminded and required to include biological tests and chemical indicator tests at certain times of the day. In the US, the software is designed to also require a biological test in every load containing implants.

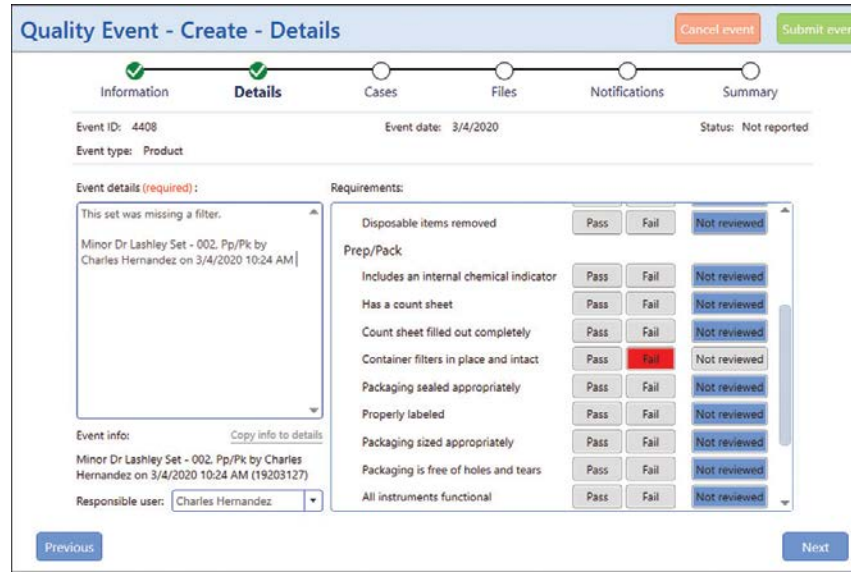
Some systems give you the ability to document tray weights for each set in your database, and the maximum weight for each sterilizer cycle. This feature gives you an easy way to tell if your sterilizer load is overweight.

Sterilizer compatibility checks can be added in, to alert staff if they are about to add a set to a load with a cycle or sterilization method that's incompatible with that tray. This helps assure that every tray is processed appropriately.

More advanced tracking systems include configurable or customizable workflows. These can be programmed to create a workflow for the requirements of specific sets and endoscopes. They can guide staff through more complex procedures like flexible endoscope reprocessing or intricate and detailed decontamination procedures for specific types of sets. Steps are configurable so that SPD and scope processing professionals can design workflows that conform to industry standards and facility-specific guidelines.

Some systems also allow you to configure each computer in your department for the work that is typically done at that computer. This workstation configuration allows a manager to specialize a computer for certain documentation, making the process of finding the appropriate documentation screen much more efficient.

As staff perform their guided work and progress through the screens, they are creating your sterility assurance documentation. When technicians build sterilizer loads, document loaner orders, and complete guided workflows, tracking systems are also capturing who is doing the work, the steps completed, test results and more. Tracking systems can help make the sterility assurance documentation process, which was historically a separate activity, into an integrated part of the completed work.



Quality assurance tools

Many of the same features of tracking systems that help to create conforming work and documentation also help with quality assurance. Guided workflows, features that document non-conforming quality, staff competency data, and sterility assurance documentation data provided by sterile processing systems all support continuous quality improvement efforts.

When a quality issue arises in your department, some sterile processing tracking systems allow you to identify the inferior event and which sets were affected. The program's guided workflows contain pieces of information about the event such as potentially affected cases, the ability to associate an image portraying the issue, and the ability to notify managers or IP professionals if needed. Managers can use these quality features to document follow-up tasks and support root cause investigations.

Some systems also include staff competency features that help ensure that only staff who are trained and competent to do work in certain areas of the software are able to complete that work. These features give managers the ability to create competency checklists they can use to review technician work. Tracking systems can require that, based on competency, a staff member is a) not allowed to perform the task (in the case of new staff still in training), b) supervised for a particular task, or c) free to perform that task without supervision. Competency features can help support the work requirements for quality outcomes.

Other quality assurance features include the ability to document a department's ambient temperature and humidity and to record the results of cleaning verification. Temperature and humidity monitoring provide environmental conditions data from various locations in the department. Managers can easily create reports of those readings to observe trends and perform corrective action before conditions move out of range. If readings are already out of range, some workflow software can help users identify which items in sterile storage are impacted and what actions to take. For example, if there is a humidity spike, your system might be able to tell you which trays might need to be processed again according to your HVAC and risk assessment requirements.

Cleaning verification testing, such as ATP tests and residual soil tests for instruments and endoscopes, can be documented in tracking systems as verification of the quality of cleaning processes. These types of tests could be added to a configurable workflow or be scanned into the database.

Resource management efficiency and effectiveness

Along with the quality of your processes and outcomes, sterile processing tracking systems can also help improve the efficiency and effectiveness of your staffing function. Departments are dealing with increasingly complex instrumentation, the demands of surgical case schedules, and maintaining efficient staffing, so it's important that sterile processing technicians be focused on the most urgently needed items. This can help prevent delays in the OR. As discussed in the *Healthcare Purchasing News* article, *Ready, set go: Staying on track with OR scheduling, turnover,*[2] products or services that can help

Self-Study Test Answers: 1. D, 2. D, 3. B, 4. A, 5. D, 6. B, 7. A, 8. D, 9. B, 10. D

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to shorten turnover times and lead to better OR efficiency can potentially help strengthen the surgical revenue stream.

Tracking systems often allow you to flag instrument trays and devices that need to be expedited for upcoming surgical cases. A list of priority trays for the day's cases can be viewed on computer workstations or large screen displays in your department. Messages can be configured to alert staff of priority sets as they are scanned throughout the department.

More advanced tracking systems give you the ability to interface your solution with your facility's electronic medical record (EMR) system so that your list of needed items is automatically populated at the beginning of each day. This gives your staff the ability to more proactively manage the work they need to do. Many systems also include loaner order features that give you the ability to document loaner trays as they come into your department and give you the tools to help you to treat loaners more like your own instrumentation.

Instrument inclusion and maintenance

In addition to facilitating the expedited movement of priority trays, tracking systems can also help to ensure complete case sets. If an instrument is missing, on-screen assembly features can be configured to show equivalent or substitute instruments. Staff can use these lists to find facility-approved substitutes if a desired instrument is not present in the tray.

A required instrument can be flagged in the system, and if it is missing from the build, the tray cannot be completed. In contrast, when non-required instruments are missing, labels can be printed that list each instrument that is not included on the outside of the tray. This helps reduce guesswork in the OR and deters staff from opening a sterile tray if it will not meet the case need. Missing instruments also appear on reports so that they can be found or replaced more easily by management.

Preventive maintenance tracking and documentation is also supported by many tracking systems. Preventive maintenance can be documented in the system, and some systems also allow you to create maintenance reminder messages based on usage or time. Usage-based reminders allow you to set the maximum number of times a set can be used before required maintenance, and the tracking system counts how many times a tray is used. Timely maintenance can help prolong the useful life of an instrument or device, and thus can help save money and preserve department resources. Trays that are used more frequently will be serviced more often, while trays that are used less often can be maintained less frequently – only when they need it. Managers can document completed maintenance in the software, and this data can be used to create a complete maintenance history for department sets.

The case cart building feature in tracking systems can be the final checkpoint to assure complete sets before they are delivered to the surgical department. When a case pick list is reviewed as part of this step and a needed item is missing from sterile storage, staff can easily add that item to the expedite list to help other staff know that it's a priority item needed to complete the set.

If an EMR interfaces with a tracking system, known case requirements are automatically populated, providing a head start with processing known case needs. This proactive feature can help move a department away from less efficient first-in, first-out processing.

As a technician adds sets to the case cart for a procedure and documents it in the system, those items are automatically linked with that case. The sets become associated with a specific case and patient on a specific day and time. This linking gives you the ability to more easily trace devices and trays during a root cause investigation and can provide evidence that your facility is conforming to industry set tracing standards.[3]

Reporting and decision-support features

A root cause investigation is one example of a process that can be supported by tracking system reporting and decision-support features. In addition, audit reports can provide immediate indications of overall compliance for internal or Joint Commission audits, and they can also be reviewed daily to help ensure completeness of sterility assurance documentation.

There are also reports that can show all data connected to a particular case. Instrument sets are tied to specific case IDs in the software, which allows users to more easily trace those sets to an individual patient. And if there is concern about a case cart or tray in the OR, this same traceability can allow managers to work backwards/upstream in the process to demonstrate that the items used on a case were processed properly and that they met standards and policy requirements at every point in the reprocessing chain.

Some tracking systems include dashboard reporting features that can be configured to show specific key performance indicators on computer workstation screens or large displays. These dashboards and KPIs can display trends in departmental data such as the total sterilizer loads run each day for the last week. They can also show information about what is currently happening, like the number of users logged in, or how many add-on cases have been documented in the last few hours.

There are also functions available that allow you to better determine the total cost of ownership of your surgical sets. For example, these value-of-production features let you see the cost of reprocessing each tray in your department. They can also highlight the cost of quality issues and can help you to better discuss the value of your department in financial terms. These features' reports can help you to see the total cost of cases and provide evidence for right-sizing your device inventory.

Productivity monitoring functions provide reports on staff competencies and quality events to help identify areas where staff may need additional training. Productivity reports can also inform your scheduling process by helping to identify where staff are most needed. When combined with information from processing volume reports, the data can be used to build the case for additional FTEs.

Making the most of instrument management software

Your sterile processing information system can support much more than basic track and trace functions. The additional features can provide the information to help optimize reprocessing consistency, quality, productivity and compliance. By investigating the unused or underused features available to you, you can put your information system to work to help you achieve a shining reputation among your infection prevention stakeholders and hospital 'customers.'

To learn more about any features you are not currently using in your instrument tracking solution, review your software documentation and guides and talk with your software representative. Their experts can help you identify features to implement with department staff and can help you present the benefits to key stakeholders within your facility to gain support and cooperation. **HPN**

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1. Ellis, Kris. 2005. Automating Central Sterile: Instrument Tracking Systems in Action. *Infection Control Today*. April 1, 2005.

2. Smith, Ebony. 2020. Ready, set, go: Staying on track with OR scheduling, turnover. *Healthcare Purchasing News*. January 23, 2020.

3. Waters-Davis, Lisa. 2009. Protect Your Patients and Facility with Instrument Tracking. *Infection Control Today*. February 27, 2009.

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CONTINUING EDUCATION TEST • MAY 2020

Sterile Processing information systems help SPDs shine

Circle the one correct answer:

1. **Reporting and decision-support tools:**
   A. Make decisions for you, so you don't have to.
   B. Can only handle simple things like how many trays you process.
   C. Cannot help you understand the total cost of your inventory.
   D. Can be helpful during an audit to demonstrate the completeness of your documentation.

2. **Sterile processing information systems:**
   A. Provide reporting and decision support tools.
   B. Help you and your staff develop greater audit readiness.
   C. Support your current quality assurance programs.
   D. All of the above.
   E. None of the above.

3. **What is a benefit of usage-based preventive maintenance?**
   A. It makes you maintain a tray each time it is used.
   B. It can help to save money and make sure all trays are in working order.
   C. It is very difficult to set up.
   D. All of the above.

4. **What is a dashboard?**
   A. A screen that allows you to see historical graphs and current stats about your department.
   B. The screen in the software where trays are assembled.
   C. A feature that is not included in sterile processing information systems.
   D. None of the above.

5. **Case cart building functions help with the following:**
   A. Link sets to a case ID.
   B. Provide a final checkpoint in delivering complete tray to the OR.
   C. Allow staff to more easily identify items that need to be expedited.
   D. All of the above.
   E. None of the above.

6. **Guided workflows cannot:**
   A. Include configurable steps that are decided upon by the facility.
   B. Physically stop a technician from including a set in a non-compatible load.
   C. Show images and resources like excerpts from your IFUs.
   D. Capture critical documentation while leading users through the process.

7. **On-screen assembly features do NOT do which of the following:**
   A. Prevent users from doing work without washing their hands.
   B. Provide technicians with images and video resources.
   C. Show lists of possible substitutes when an instrument is missing.
   D. All of the above.
   E. None of the above.

8. **How can sterile processing tracking systems help your process be more efficient?**
   A. Set expedite features and messages.
   B. Interface with EMR to proactively show all case needs.
   C. Provide additional on-screen resources to help with assembly.
   D. All of the above.
   E. None of the above.

9. **Quality issues:**
   A. Are much easier to track, document, and report in paper form.
   B. Can be documented and reported by many sterile processing information systems.
   C. Are not that important to document and track.
   D. All of the above.
   E. None of the above.

10. **Staff competency features can benefit your department in the following way(s):**
    A. They provide a check to support only competent staff performing certain workflows.
    B. They give supervisors an on-screen checklist to document a passed or failed review.
    C. They can be set up so that a new user cannot complete certain workflows without supervision.
    D. All of the above.

CONTINUING EDUCATION TEST SCORING

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