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Creating Workflow Efficiencies and Driving Compliance: UNIFIA Modernizes Endoscope Reprocessing

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Economic Effects of a Reprocessing Breach

The potential consequences of an endoscope reprocessing breach include not only damage to public perception of an institution's reputation, but also enormous expense.² According to one estimate, the cost of investigating a contamination incident alone ranges from \$25,000 to \$75,000.³ Other costs could include patient notifications and follow-up testing, legal defense fees, and loss of market share, with total potential business costs rapidly escalating.³ By automating endoscope reprocessing documentation procedures, UNIFIA may help reduce the chances that such a breach occurs.

UNIFIA: A Reprocessing Documentation, Workflow, And Asset Management System

The UNIFIA system, from Olympus America Inc, is an integrated software and hardware solution for collecting and retrieving endoscope information to minimize the possibility for human error.⁴ Wireless scanner technology captures data from automated endoscope reprocessors, storage cabinets, leak testers, and bioburden kits indicating last use of a scope, patients, and responsible staff; onscreen alerts drive compliance by indicating missed scanning steps.^{1,4} Although the UNIFIA system is compatible with virtually all automated endoscope reprocessors, users of the Olympus OER-Pro can obtain greater insight into their reprocessing times, scope serial numbers, and high-level disinfection temperatures.^{1,4}

UNIFIA features an advanced data analytics engine, with numerous prebuilt and customizable charts and graphs, that enables compliance monitoring and data-driven decision making. In addition, the Daily Dashboard view presents vital information about patient and endoscope interactions to facilitate communication across the GI department in real time (Figure 1).¹

Introduction

As the cleaning and disinfecting of endoscopes becomes more complex,¹ the analog method of documentation seems insufficient to the challenge of ensuring staff compliance with reprocessing procedures and best practices. In fact, achieving compliance is increasingly important as the ramifications of a reprocessing breach become apparent.

Physician's Perspective

Thomas Sepe, MD, a clinical professor of medicine at Brown University and president and medical director of University Gastroenterology in Providence, Rhode Island, said UNIFIA has significantly boosted the efficiency and accuracy of endoscope reprocessing at his primary location, and he plans to implement the system at all 4 of his centers by the end of 2018.

"We see north of 35,000 patients per year, and UNIFIA streamlines the documentation and tracking of endoscopes through use and reprocessing," said Dr Sepe. "Transitioning from paper logs, which are cumbersome and unwieldy, to the precision of computerized logging and cloud storage is remarkable, especially in regard to data retrieval. If I have concerns about an endoscope as it relates to a patient, I can determine the doctor, nurse, and technologist who processed the scope, and ascertain what was done during that procedure within minutes. In the past, tracking through old logs for that sort of information took a long time. We expect that this increase in efficiency—and the elimination of log books and their maintenance—will streamline staffing and add to our bottom line given the decrease in cost."

Dr Sepe was initially concerned that UNIFIA would be difficult

for staff to learn and thus slow reprocessing times. "In fact," he said, "the staff adapted easily, and because logging is so efficient, reprocessing times have improved."

According to Dr Sepe, the UNIFIA system tells you precisely what happens with every piece of equipment, so you know a scope will be clean and ready to go when you need it for a procedure. "We are reducing uncertainty, eliminating 35,000 paper loggings, and automating the whole process."

Dr Sepe described an accreditation visit during the latter phase of fine-tuning the UNIFIA system at his office, and said the inspector was impressed with the system. "Usually, an inspection is a learning experience where you fix some minor issues. But to have an inspector be enthusiastic about anything was really unusual, so we were pleased with that," he said.

Cost-Benefit Analysis

"Decreasing reimbursements and cost concerns mean GI practices have to be careful about their investments," Dr Sepe added. "At what point do you bring new technology into an endoscopy consortium? Is it worth the expense? Although we didn't initially have a feel for what UNIFIA would do for our bottom line and

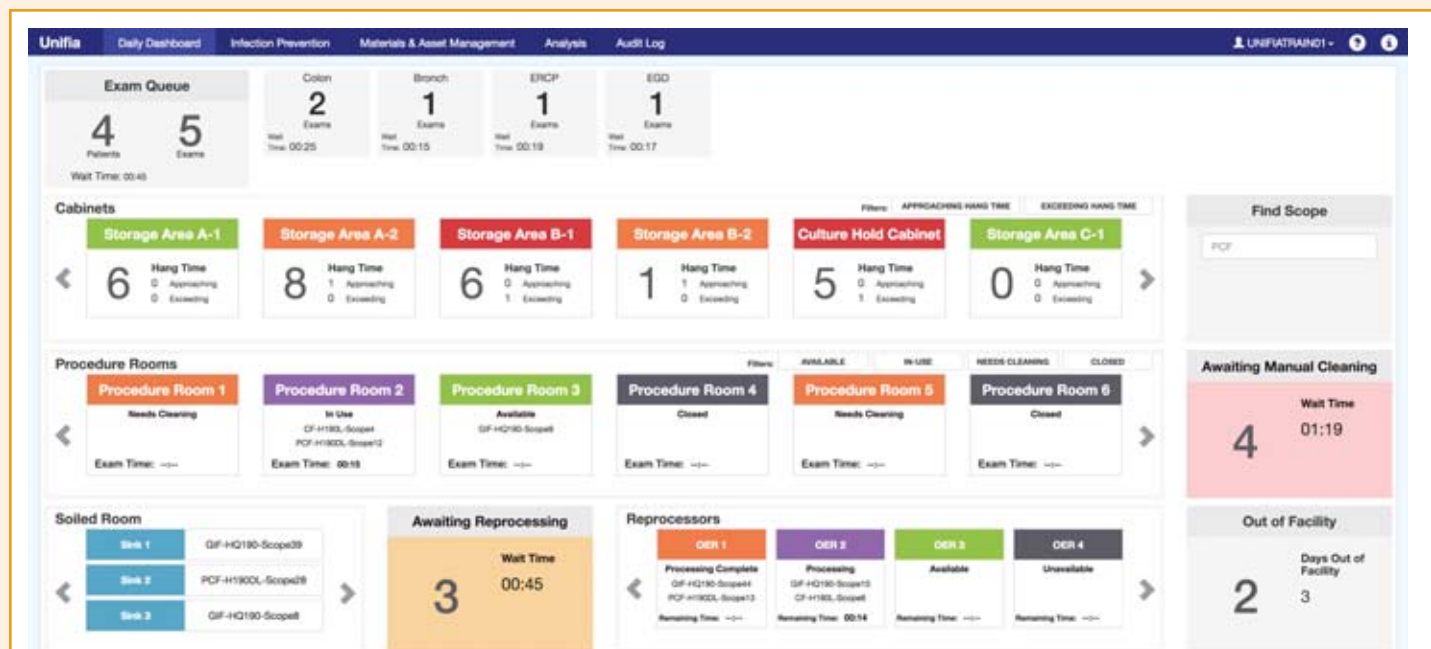


Figure 1. The UNIFIA Daily Dashboard provides critical information on patient and endoscope interactions as well as a real-time overview of the status of every endoscope in a facility's inventory. Courtesy of Olympus America Inc.

productivity, the advantages it provided for quality enhancement and simplifying procedures convinced us that it was worth the investment.”

Nurse Manager's Perspective

Nancy Schlossberg, BSN, RN, CGRN, CER, the president of the American Board of Certification for Gastroenterology Nurses, and past president (2000-2001) of the Society of Gastroenterology Nurses and Associates, believes that quality outcomes begin with quality data.

“Having information at one’s fingertips is invaluable; it helps manage asset flow and provides insight into processes, so you know that for any given procedure, there will be a clean scope that hasn’t been used too recently or been hanging in storage so long that it needs to be reprocessed again,” said Ms Schlossberg. “UNIFIA eliminates the error-prone documentation process, so your staff can focus on procedures and improve the quality of their work. From a basic efficiency point of view, it helps optimize both your staff and equipment. In a large center with multiple rooms, that is an immense benefit.”

Ms Schlossberg added that she appreciates the visual aspect of the system. “I like numbers and discovering trends, and improved tracking helps mitigate risk. The Scope Record Management dashboard is in real time, so one can instantly determine if staff are complying with all reprocessing steps and taking meticulous care of the scopes [Figure 2]. You don’t want to feel like Big Brother watching over your staff, but you have to ensure safety and quality. A wrong move or missed step, and one could lose an expensive piece of equipment or find their facility on the front page [of the news] for the wrong reasons,” she said. “UNIFIA allows one to do an effective audit.”

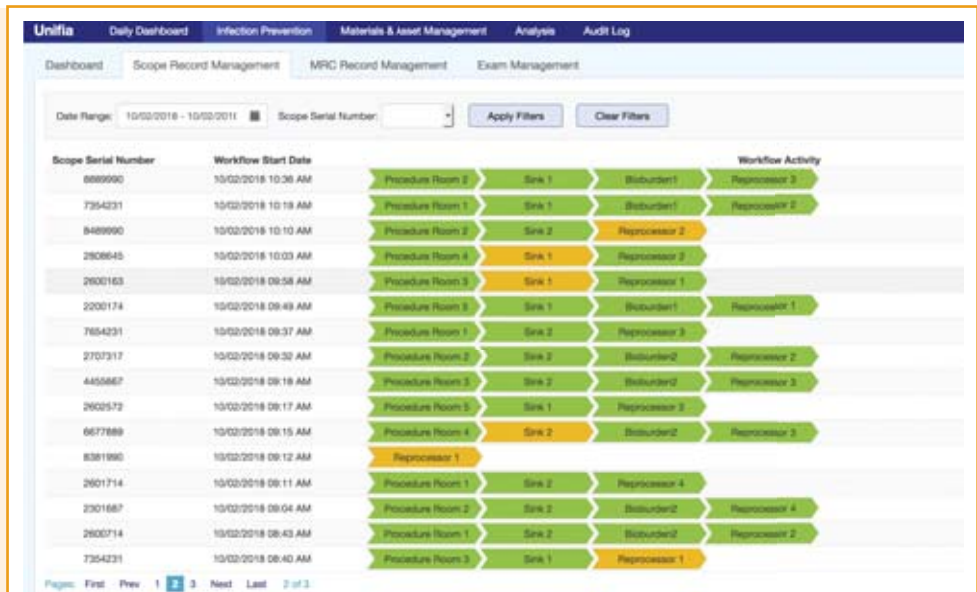


Figure 2. The UNIFIA Scope Record Management dashboard provides real-time visual indicators that alert users when missed steps are discovered in the reprocessing workflow. The green chevrons indicate that all steps in the workflow are complete. Orange chevrons indicate that technicians have missed steps in a workflow. Courtesy of Olympus America Inc.

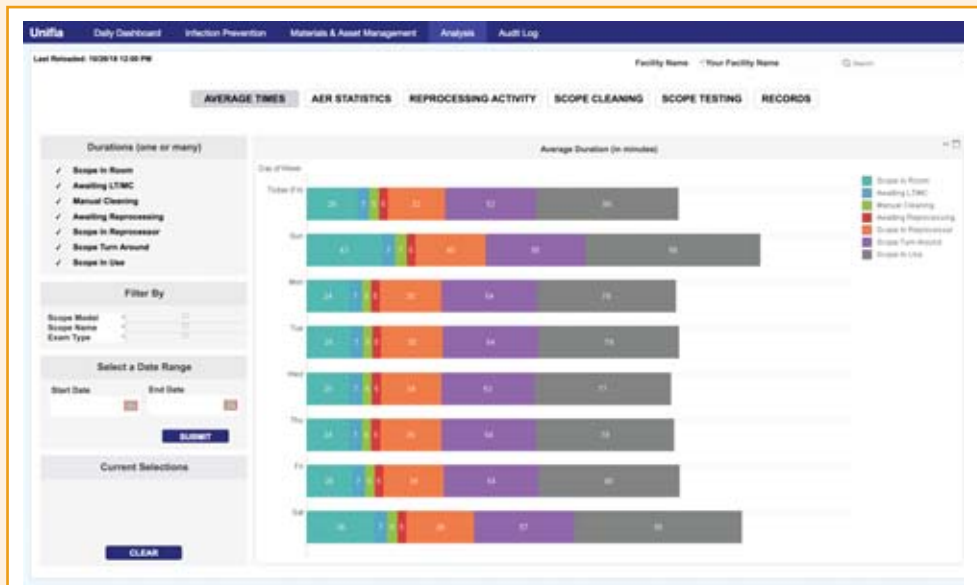


Figure 3. UNIFIA collects the time between scans during the handling and reprocessing workflows. UNIFIA puts these times into visual charts, helping supervisors see workflow slowdowns that may be caused by understaffed locations, too few automated endoscope reprocessors, or late procedure starts. Courtesy of Olympus America Inc.

Ms Schlossberg said UNIFIA's reporting features, including ease of access and visual display, help track patterns of data-driven endoscope usage, which can enable the identification of issues related to workflow (ie, are scopes efficiently moved from the procedure room to patient-ready status?) versus issues related to inventory (ie, does the endoscope inventory reflect the current procedure mix, new technology, and physician preference?). "These reporting tools facilitate clear communication to staff, physicians, and administrators, especially when building a business case for rightsizing endoscope inventory and improving endoscopy unit throughput," she noted (Figure 3).

"At the end of the day, an efficiently run center means that the patient wins," said Ms Schlossberg. "That's what we're all after—getting patients in and out in a reasonable amount of time while providing safe and quality care. Anything that helps with that is a welcome and important change," she said.

Technician Supervisor's Perspective

Michael Paiva, a reprocessing supervisor and lead endoscopy technologist at University Gastroenterology in Providence, Rhode Island, said the change between manual documentation and the UNIFIA system is like "night and day." According to Mr Paiva, "UNIFIA has allowed us to eliminate thousands of pages of annual paperwork and the associated difficulty with tracking down old records."

He added: "Before we changed systems, a doctor once asked me how often within a 3-month period a certain pediatric scope was used. It took me 4 or 5 days to go through the paperwork and add up the number of times it was used each week. Now, I can access that kind of information in 3 or 4 keystrokes. UNIFIA eliminates all that wasted time. As you become more familiar with the dashboards, information becomes easier to research and access. You learn new ways to seek out vital information."

Mr Paiva also noted, "It also eliminates human error. You scan a bracelet or an RFID [radiofrequency identification device] tag on your ID, and that's it—no writing down your name, no confusion over whether that number is a 7 or a 1, no second guessing. I know where the scope was last scanned, where it is right now, and how long it's been there."

The Daily Dashboard's reconciliation feature, with its quality control advantages, is appreciated by Mr Paiva. "I can track wash times and precleaning times; I can identify someone who is taking too long to wash a scope after procedures and step in with remedial training," he said. "I can see the whole chain of custody and know that all the proper steps have been taken. UNIFIA helps to impress upon the staff that every step of the cleaning process leading up to a procedure is as important as the procedure itself."

"After working with UNIFIA for a year, the decision to purchase was an easy one," said Mr Paiva. "It fosters accountability, helps with inventory tracking, and enables informed decision making regarding equipment acquisition. Endoscope utilization data provide timely information on equipment inventory, providing management the tools necessary for optimal purchasing decisions. The ability to cover yourself from a liability perspective was another major selling point."

Conclusion

UNIFIA brings endoscope reprocessing documentation into the modern age. With the ability to track endoscopes from cabinet to cabinet and ready access to precise information and high-level analytics, UNIFIA offers unparalleled efficiency and transparency with the power to transform GI practices.^{1,4} "With increasing government scrutiny, quality reporting is more essential than ever," Dr Sepe said. "People want to know what you're doing, and with the UNIFIA system, you can pull that information up in an instant."

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Disclosures: Mr Paiva is a paid speaker for the UNIFIA product. Ms Schlossberg reported that she serves on the speakers bureau for Healthmark Industries. Dr Sepe reported that he has received research support from Conatus Pharmaceuticals, Gilead, and Novartis. He is a consultant to and/or serves on the speakers bureau for AbbVie, Gilead, and Intercept Pharmaceuticals.

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