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(See attached information on recent survey.)



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Increased Temporal Scanner Hospital Use Increases Medicare Reimbursement

Temporal Artery Scanner Only Method Satisfying 100% of Patients in Overnight Hospital Stays Says Exergen Corporation

A new national survey was recently conducted to explore methods of thermometry used in hospitals, patients' thermometry preferences and a possible correlation between the way patients had their temperatures taken and satisfaction with their hospital experience. The survey indicates that findings among patients ages 65+ have strong implications for Medicare reimbursement and hospital reputation. The survey was conducted among adults who had spent one or more nights in the hospital over the past 24 months, and answers were based on their most recent stay.

A disproportionately large number of older patients are going to hospitals that use the TemporalScanner. Patients ages 65+ reported that TemporalScanner was the method used most frequently to take their temperature. Notably, 68% of that group said that they would recommend that hospital to family and friends.

"Today, virtually all (92%) adults who are 65 years of age or older are enrolled in Medicare," said Francesco Pompei, Ph.D., CEO of Exergen Corporation. "They have tremendous power in determining the outcomes of Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys that link directly to Medicare reimbursement for the hospital. With more than two thirds of patients 65+ saying they would recommend the hospital which used the TemporalScanner, hospitals should take note and make sure they are listening to those individuals."

Patients reported a variety of methods hospitals used to take temperatures, but TemporalScanner alone satisfied 100% of respondents of all ages. Every other method included individuals who were "not at all satisfied." No other method satisfied all the respondents.

"The 100% satisfaction with forehead thermometry (temporal artery thermometers) is not surprising, and it is significant," said Dr. Pompei. "The Temporal thermometer is preferred by medical professionals because its accuracy has been proven in more than 70 clinical studies. It's the patients' choice because it is noninvasive. Anything hospitals can do to improve the patient experience is crucial for the hospital to make a positive impression on the patient."

Of the 1,000 people surveyed, 23% had an overnight stay in the hospital within the past 24 months. Recall of how they had their temperature taken was very high, with 85% indicating that they recalled how it was taken.

"The fact that so many people remembered how their temperature was taken indicates that temperature taking has a great impact on them," added Dr. Pompei.

The online survey was fielded by Researchscape International from April 8 to 9, 2019 with 1,000 respondents and a modeled margin of error of +/- 4%. Results were weighted by age, gender, region, Hispanicity, ethnicity, and education.

Exergen manufactures and markets two series of the TemporalScanner thermometer: a professional version for hospitals and clinics, and a Consumer TemporalScanner version sold in major retailers nationwide. More than two billion temperatures are taken each year with TemporalScanners. Used in thousands of hospitals and clinics across the country as well as in millions of homes, TemporalScanners are the #1 preference of pediatricians, #1 preference of nurses and #1 selling retail thermometer.

The Exergen TemporalScanner's accuracy is supported by more than 70 peer-reviewed published studies covering all ages from preterm infants to geriatrics and care areas from hospitals to homes.

Dr. Francesco Pompei is founder and CEO of Exergen Corporation, and holds nearly 100 patents in non-invasive thermometry for medical and industrial applications. Earning BS and MS degrees from MIT, and SM and PhD degrees from Harvard, Pompei also served as Research Scholar in the Department of Physics at Harvard in cancer research for 15 years.



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HEALTHCARE PURCHASING NEWS[®]

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The Soaring 20s

One hundred years ago the Roaring 20s signified a post-World War I decade of economic prosperity and cultural unshackling.

Back then, hospitals were just learning to collaborate – particularly in the area of what then was known as cooperative buying and now known as group purchasing – but data sharing remained tethered to the distribution of printed materials and simple word of mouth.

Today, most data sharing has migrated to electronic distribution, accelerating and advancing to the point that machines are being programmed and taught to handle more esoteric decisions and duties typically performed by humans.

During the last two decades the healthcare industry established a virtual beachhead in the area of data sharing (e.g., electronic health/medical records, internet commerce, etc.) and data standards (e.g., GS1's GTINs, UDI, etc.) but have yet to storm the cliffs.

Looking forward, it's time to apply President John F. Kennedy's 1961 "Moonshot" address to healthcare with an ambitious prediction: *By the end of the decade – 2030 or 2031 for numerical "purists" – electronic data sharing and data standards will become normal operating procedure as the MDC (Medical Device Code) joins the NDC (National Drug Code) as two parts of the UPI (universal product identification) system.*

Artificial intelligence (AI) and machine interoperability, combined with augmented reality for logistics and teaching, blockchain for transaction histories and records, and robotics process automation (RPA) or "bots" will speed up transactions without sacrificing accuracy. Collecting the data, synthesizing the data and analyzing the data will become second nature as the real creativity – more science than art by now – emerges in demand forecasting and predictive processes. This will represent Supply Chain's blossoming into Fulfillment and Provision, as monumental a change as collective buying a century earlier.

Call this the Soaring 20s...of searing efficiencies.

During the Soaring 20s, Supply Chain will surpass Labor as the No. 1 cost center/expense stream in a healthcare organization. With increased scrutiny over large dollar amounts will come a sifting of the professional herd with forward-thinking top-flight executives overseeing products and purchased services from the C-suite.

Augmented intelligence of the Soaring 20s – humans bolstered and fortified by machines – will dissipate the fog that engulfs at least 50 percent of healthcare organization expenses controlled by Supply Chain. Some contend that 30 percent of organizational operating expenses (of that 50 percent perhaps?) represent areas easily encapsulated within the estimated \$160-billion purchased services segment, leaving the balance to comprise GPO and individual contracted commodities and "rogue" or shadow spending made directly by departments.

By decade's end, expect rogue purchasing diminished to the shadows.

Look for the third-party-dominated purchased services segment to expand beyond what we commonly find in the category today, but falling shy of a clinical, financial and operational gig economy. Now imagine if everyone in a healthcare facility "1099ed" themselves, removing their salaries and benefits from the labor bucket and adding their fees to the purchased services pools. Supply Chain just might be king or queen of the world. Of course, he or she shouldn't lean against the railing with outstretched arms. Leonardo DiCaprio and Kate Winslet may have looked pretty doing it in the moving pictures but we all know what happened to the big boat.

For Supply Chain in the Soaring 20s, don't expect any "steady as she goes" strategies but "Ford v. Ferrari" fire-in-the-belly.

SKU'd update...

No sooner had Popeyes slipped off the news cycle for its chicken sandwich supply chain debacle (See December 2019 SKU'd) than another stockout took its place – here in Illinois.

The Land of Lincoln legalized medical-turned-recreational (serious-to-loose nomenclature) marijuana as of January 1 which drew dispensary lines so long that pot retailers ran out of product after five days and \$10.8 million in sales, prompting them to close their doors until they replenished supply. (Granted, one dispensary admitted it still had product but closed anyway to give its five-day, overworked employees a breather... and they surely inhaled.)

But look on the bright side. Things could have been worse had pot sales become legal the day Popeyes ran out of chicken sandwiches.

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FAST STATS

NEWswire

January 2020 starts out with Mergers & Acquisitions

GHX acquires Lumere

Global Healthcare Exchange (GHX) announced it acquired Lumere. By combining the assets of GHX and Lumere, GHX seeks to create the gold standard in data governance, providing a single source of trusted information for the management of devices and drugs used in the delivery of care. The Lumere acquisition also significantly extends GHX's footprint in the pharmaceutical market, helping health systems more strategically manage the complex area of pharmacy cost.

"With health systems more accountable than ever for the results they deliver, the strategic imperatives of reducing cost and improving quality of care are more critical than ever," said Bruce Johnson, CEO and president of GHX. "We'll continue to support our customers in their evolution from reimbursement based on quantity to reimbursement based on quality. We will do this by combining the strength of the GHX platform and the industry's most comprehensive repository of item and transaction data, with Lumere's deep clinical data and machine learning powered analytics to deliver the critical evidence-based insights healthcare needs. Like GHX, Lumere is a company focused on innovation and customer-centricity, and we couldn't be more delighted to welcome them into our organization."

Financial terms of the deal were not disclosed. Key Lumere leaders, including CEO Hani Elias, CTO Will Danford and President/Chief Strategy Officer Eric Meizlish will remain with the combined organization.

HCA acquires Valify

HCA Healthcare announced it has acquired Valify. Valify's web-based technology platform provides healthcare systems with in-depth analysis and greater insights across a variety of service categories. The company's proprietary technology, analytics, benchmarking and professional advisory services enable hospitals to better manage resources in ancillary areas.

"Valify's advanced analytical platform will help us identify and pursue opportunities to decrease the overall cost to provide healthcare services," said HCA Healthcare's chief financial officer and executive vice president, Bill Rutherford. "We look forward to working with the Valify team to further develop their offerings to benefit all of their clients."

Terms of the agreement were not disclosed.

Definitive Healthcare makes data waves with PatientFinder acquisition

For the second consecutive year, Definitive Healthcare amped up its data intelligence arsenal with a strategic acquisition designed to play a key role in the company's ongoing growth with their acquisition of PatientFinder, a software analytics firm that concentrates on identifying patient clusters. Last year at this time, Definitive Healthcare scooped up the data services division of HIMSS Analytics.

In an exclusive interview, *Healthcare Purchasing News* Senior Editor, Rick Barlow, asked Jason Krantz, Founder and CEO, Definitive Healthcare, what makes his company's acquisition of PatientFinder so ... definitive ... and significant. Essentially, according to Krantz, the data and information gleaned from these two companies together will improve performance in the areas of population health, and personalized and precision medicine, and in the long run, procedural improvement and product evaluations and selection.

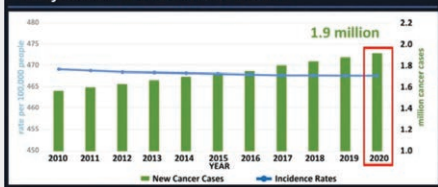
HPN: In layman's terms, what are the net outcomes or results from this acquisition? From Definitive Healthcare's perspective for clients? From the provider perspective in terms of administrative, clinical, financial and operational opportunities?

KRANTZ: The PatientFinder acquisition allows us to put a new analytical front-end on our best-in-class data surrounding providers and the claims with the patients that they serve. From a client perspective, this allows our clients to quickly analyze claims data and find very specific patient cohorts so that they're able to find patients with certain combinations of procedures, diagnoses, and drug histories. And, in a world of personalized medicine - where the subsegments of patients are becoming smaller and smaller and more specific - this is an incredibly powerful tool for our medical device, biotech, and pharmaceutical clients.

HPN: What will Definitive Healthcare and its extensive customer base be able to achieve in the future that they weren't able to achieve in the past?

This acquisition will now allow us to experiment with different sizes of different patient populations based on very specific criteria. In the past, our clients were required to do a tremendous amount of offline analysis, usually with consultants and technical research on their end. Now, they will be able to combine diagnoses together, or a diagnosis with a procedure, through our web-based front-end in real-time. So, what previously took months is now reduced to seconds.

Projected new cancer cases



The Centers for Disease Control and Prevention's (CDC's) Division of Cancer Prevention and Control presents an online summary overview and outlook of cancer over the past decade and into the future. Findings:

24%

new cancer cases, or more than one million cases per year, are expected for men in the U.S. between 2010 and 2020.

21%

new cancer cases, or more than 900,000 cases per year, are expected for women in the U.S. between 2010 and 2020.

18 MILLION

cancer survivors are expected by 2020, up from 11.7 million survivors in 2007, because cancer patients overall are living longer.

10,000+

new lung cancer cases are expected to be found in women each year by 2020.

40%

weight-related cancers (except for breast and colorectal cancers) are expected by 2020, up from 30%.

50%+

new cases of liver cancer are expected as an increase, likely the result of the increase in hepatitis infections, particularly people born between 1945 and 1965.

30%

increase in oral cancers are expected for white men, likely the result of more human papillomavirus (HPV) infections.

15.2%

deaths are expected for men between 2007 and 2020.

8.1%

deaths are expected for women between 2007 and 2020.

Source: Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, <http://www.cdc.gov/>

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1. Kapp S, Gerditz M, Gefen A, Prematunga R, Santamaria N. An observational study of the maintenance of the 30° side-lying lateral tilt position among aged care residents at risk of developing pressure injuries when using the standard care pillow and a purpose-designed positioning device. *Int Wound J.* 2019;1-7. 2. Brennan, M. and Laconti, D. Using Conformational Positioning to Reduce Hospital-Acquired Pressure Ulcers. *Journal of Nursing Quality*, 2013,11. 3. Barakat-Johnson M et al. Evaluation of a fluidised positioner to reduce occipital pressure injuries in intensive care patients: A pilot study. *Int Wound J.* 2018;1-9. 4. Kimsey, Diane. A Change in Focus: Shifting From Treatment to Prevention of Perioperative Pressure Injuries. *AORN Journal.* 2019: 379-393. doi.org/10.1002/aorn.12806.

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NEWswire

HPN: How will Definitive be able to use the data gleaned from the PatientFinder and HIMSS Analytics' Data Services division acquisitions to influence population health initiatives, clinical care pathways and payer-related issues?

We have a tremendous client base including 9 out of the top 10 pharma and 8 out of the top 10 medical device firms that will benefit significantly from this acquisition. Both the PatientFinder acquisition, as well as last year's HIMSS data acquisition, will help our clients with:

- Identifying underdiagnosed patients – In a world of sub-segmented and personalized types of medicine, it is increasingly difficult for physicians to (1) keep up to date on new drugs and (2) understand how they can help their vast populations of patients. Physicians are relying more heavily on representatives from pharmaceutical and medical device companies to educate them on new and innovative medicines, and which patients are most appropriate for these treatments.
- By using PatientFinder, clients can quickly identify where those patients exist and who are the providers that are both servicing and referring those patients. And, by knowing that information, our clients can be very targeted and focused on how they're educating those physicians – helping to deliver an improved level of care.

HPN: Definitive Healthcare's "connect-the-dots" platform is designed to help clients "solve their most critical revenue generating objectives." How will it tie in transactional decisions between providers and suppliers, incorporating value analysis techniques to determine the most optimal products and services to use with patients based on clinical evidence – either in the short-term or long-term future?

This acquisition will help Definitive Healthcare's pharmaceutical and medical device clients commercialize more effectively by helping them become a value-added partner – educating providers on where there may be opportunities to provide better care within their specific patient populations.

In addition, PatientFinder will be helpful to these life sciences organizations as they think about where to spend their valuable innovation resources. Clients can start very early in the commercial effort to identify exactly where they want to spend their valuable resources and determine (1) "Who are the providers we want to talk to?" and (2) "What do we want to talk to them about?"

So, if these life sciences companies have a new technology platform and are trying to identify which disease categories would be most effective and cost effective for them to serve, PatientFinder allows them to quickly size those markets, identify how many

patients potentially would benefit, where those patients are, and how to reach them.

2020 Healthcare Symposium on transparency, collaboration

The 2020 Healthcare Policy Symposium will bring together the wide range of organizations and perspectives that contribute to the provision of care and caregivers to better understand this important area for excellence in 21st century medicine. The event will be held at the Memorial Union, Arizona State University, Tempe on Thursday, February 27, 2020 from 1:00 p.m. to 4:00 p.m.

The symposium will include perspectives from a number of industries and how healthcare practices can learn and adopt some of these tried and effective operational policies. Sessions will be led by Jody Hatcher, President, SC Services, at Vizient. Additional participants include Sham Kunjur, CEO Purchasing, General Motors; Graeme Dykes, Managing Director, Resilinc; Ross Harvey, Director, Global Director, Customer Support, Cook Medical; Tom Harvieux, Chief Supply Officer, BJC Healthcare; Keith Frey, M.D., MBA, Divisional Chief Medical Officer, Dignity Health; and introductions by Eugene Schneller, Ph.D., Professor, Arizona State University.

The annual McKenna Foundation Lecture 2020 will follow at 5:30 p.m. at the Marston Exploration Theater. This year's featured speaker is Susan Dentzer. Her presentation is titled Healthcare Without Walls, Opportunities and Challenges for a distributed Health Care System. Dentzer is the President and CEO at The Network for Excellence in Health Innovation (NEHI) and a health policy journalist. Attendees will have the opportunity to meet with her at a reception from 7:00 p.m. to 8:30 p.m.

Dentzer is one of the nation's most respected health and health policy thought leaders and a frequent commentator on television and radio, including PBS and NPR. She is the lead author of the book *Health Care Without Walls: A Roadmap for Reinventing U.S. Health Care*. Her current work focuses on modernizing the health care system through the use of greater virtual care. She is an elected member of the National Academy of Medicine (formerly the Institute of Medicine) and also serves on the Board on Population Health and Public Health Practice of the National Academies of Science, Medicine, and Engineering. She is also an elected member of the Council on Foreign Relations.

Registration is free. Space is limited.

Symposium registration: <https://www.eventbrite.com/e/2020-symposium-on-health-sector-supply-chain-registration-88524871273>

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Purchased services: Boon or bane for Supply Chain?

by Rick Dana Barlow

From a supply chain perspective, the premise behind “purchased services” can be plopped into any of three buckets: The good, the bad and the ugly.

But this trendy term represents no spaghetti western.

The good: Varying purchased services are centralized under Supply Chain’s control, management or oversight in that the contractual dollar volume representing all purchased services is accounted to Supply Chain, thereby increasing its share of the expense pool. By shifting some staff-oriented functions to outsourced expertise (even if the staff themselves convert to 1099 status or a vendor contractually “acquires” them), the healthcare organization can decrease labor costs (e.g., eliminating benefits, etc.) and shift them to contracted services in another accounting bucket, which also may be centralized in Supply Chain. This likely would increase Supply Chain’s stature and status within the C-suite.

The bad: With Supply Chain in charge of a much larger percentage of the expense stream, the Amazing Spider-Man tenet takes effect. Adapting Spidey’s famous, “With great power comes great responsibility,” in a business realm, the tenet becomes,

“With great expense pool comes great accountability and scrutiny.” Who yearns for that kind of daily pressure but a relatively small number of enterprising entrepreneurial types? Of course, the flip side can be a challenge, too. If varying purchased services are decentralized and distributed throughout the contracting departments instead of centralized under Supply Chain’s control, management or oversight, then this may weaken Supply Chain’s influence, reputation and visibility. For a considerable segment of healthcare supply chain managers, this may offer a welcome sigh of relief, by and large, to fly under the radar.

The ugly: All told, either the good or the bad perspectives surrounding purchased services under Supply Chain’s purview leads to one ultimate destination: Deeper and more dedicated scrutiny of Supply Chain activities, outcomes and performance. Forward thinkers and top practitioners may see that as a positive development; the rest view it as a negative one, a hassle and a pallet-load of daily pressure.

So how should purchased services be viewed?

For more information on purchased services, visit HPN’s online archive. See “Making sense of a moonshot mindset,”

February 2016, HPN, <https://cdn.hpnonline.com/inside/2016-02/1602-PS-PurchasedServices.html> and see “New name for familiar contracting category?” January 2011 HPN, <https://cdn.hpnonline.com/inside/2011-01/1101-PS-PurchSvc.html>.

Should it just be classified as a contemporary and fancier name for “outsourcing,” which was an oh-so-late 20th century controversy? Or is it a “bookable” and more clever classification for “miscellaneous?” You know, the bucket, file or list of stuff that can’t be placed elsewhere?

For a number of years now, experts, observers and pundits have forecast that “supply chain” will overtake labor as the No. 1 expense category in an organization after languishing for decades as No. 2 behind labor. But that only works if purchased services, which arguably can be another name for outsourced expertise and labor, falls under Supply Chain’s oversight. Purchased services may encompass managed contracts for billing coders, locum tenens, maintenance and repair, sterile processing and other third-party clinical, financial and operational services.

But is it much ado about nothing more than an accounting shell game?

Clarifying blurred lines

Purchased services as a total spending category is significant and accounts for one of the “greatest possibilities for hospitals to deliver cost savings and margin improvement,” according to Lisa Miller, Healthcare Advisor and CEO, VIE Healthcare Consulting, but the category can suffer from myriad challenges.

In short, follow the report, Miller insists.

“The greatest misunderstanding comes from the root cause of purchased services spend, and that is supply chain can’t run a line-item report of every purchased services spend for their hospital,” Miller told *HPN*. “The entire purchased services spend is embedded in the invoices. If you were to run a 12-month report for your supply item spend, you would see data — from physician preference items to exam gloves to syringes — by line-item detail, by month, over a 12-month period. However, if you ran that same 12-month report for your purchased services spend, you would only see the total invoice amount with a monthly total of spend for each purchased services category and no other data points that would include the line-item details that is rolled into the total invoice amount. In order for a hospital to have a true detailed understanding of their line-item pricing and line-item utilization, they would need to go manually to the invoices to see the details, and then if they wanted to analyze the specific purchased services spend, they would need to input those line-item invoice details into a spreadsheet manually.”

The C-suite does not realize the enormity of the challenge that the invoice line-item details are not accessible in their organization’s materials management information system, Miller argues.

“To add to this challenge, the department leaders are receiving their purchased services invoices each month and are responsible for approving the invoice accuracy to the agreement terms, and in some cases this could mean hundreds of pages of invoices and thousands of line items they have to review manually,” she continued. “In most organizations, Supply Chain is not responsible for the management and invoice accuracy of the purchased services spend. Supply Chain may be involved in the contract negotiations and cost savings initiatives, but the ongoing monthly management to ensure contract compliance and spend management is performed by the departments.”

The manual process of trying to identify purchased services expense management and reduction opportunities complicates progress to the point of “hospitals thinking they are achieving maximum savings when there is more waiting to be achieved,” she added.

“Even when hospitals utilize categorization tools and technologies to gain insight into their purchased services spend and to competitively bid some purchased services, these strategies fall short of best practice because they don’t give Supply Chain and the C-Suite automation and access to every purchased services invoice line-item details into their solution,” Miller continued. “Any manual aspect of a technology will leave room for significant error and missed opportunities. Simply spot-checking purchased services invoices is an underperforming tactic.”

Jeff Little, Senior Director of Purchased Services, Premier Inc., recognizes and understands the confusion that can be rooted in decentralization.

“Historically, it’s been difficult for providers to wrap their arms around total purchased services spend because different groups within a healthcare organization have been responsible for acquiring



Jeff Little

outsourced services most relevant to them,” Little said. “While Supply Chain may manage several of the contracts, legal departments may contract for external counsel, IT departments may contract for technology vendors, and marketing teams may contract with PR firms and change management consultants.

Little points to decentralization problems within internal areas as well.

“There is also often a lack of centralization on both the value analysis and contracting processes in the purchased services areas,” he said. “In some cases, the value analysis process may be non-existent. This leads to low visibility into the spend across purchased service categories, loose management of the lifecycle of the contracts and no control over the process.

Little contends the C-suite needs to be more engaged in this emerging process.

“Some of these services have a large tie-in to the patient and affect outcomes, satisfaction and even acquisition, meaning the C-suite should not only be involved, they should be concerned,” he warned.

Andrew Motz, Assistant Vice President, Supply Chain Consulting and inSight Advisory Solutions for HealthTrust, points to process fragmentation as the culprit.

“Supply Chain professionals and the C-suite often have difficulty getting their heads wrapped around their entire services spend because the process is so fragmented,” he said. “Departments select vendors they are used to working with and may not consider that contracts should be required to hold vendors accountable for service levels and liabilities.

“Contracting should be centralized and overseen by Supply Chain professionals with expertise in negotiating price, terms and conditions,” he emphasized. “Also, when vendor selection is de-centralized, individual departments may use different vendors for the same service. If you ask a CFO which vendor is used for a particular service, they may name one vendor, but if you take a deeper dive into their accounts payable spend, multiple vendors tend to appear within the same category. This is the direct result of individual departments not communicating with each other on the services they procure.”

Chris Heckler, CEO & President, Valify, targets the decentralization of purchased services contracts coupled with a greater number of stakeholders across the health system for graying the area.

“This makes sustaining a consistent cost reduction process very difficult,” Heckler said. “There is rarely a ‘one throat to choke’ for all purchased services, which means there will be finger-pointing across the organization when it’s budget season. Also, many hospital directors from non-clinical departments are accustomed to making their own vendor and procurement decisions. That’s why executive support for moving services contracting to the Supply Chain is crucial to success.” [Editor’s Note: At press time in January, HealthTrust announced a full-service purchased services solution combining the technology and benchmarking capabilities of Valify with HealthTrust’s custom sourcing and operator expertise. The new offering, called Valify Solutions Group which is part of HealthTrust inSight Advisory, is available to hospitals and health systems on a non-exclusive basis and regardless of affiliation with any group purchasing organization.]



Andrew Motz



Chris Heckler

SPECIAL FOCUS

Data analysis can be a problem, too, according to Motz.

"Another factor contributing to missed opportunities in purchased services is that expenses are often managed by looking back at previous months or years and gauging whether costs are holding steady," he noted. "No real analysis is done to determine if hospitals are paying the right price from the beginning."

Heckler concurs: "Tracking cost savings for services is much more challenging than tracking savings of supplies since comparing products with manufacturer item codes is more tangible," he noted. "Therefore, your team might not get as much credit for their hard work because it takes longer to see the savings realized unless you have strong metrics from the beginning."

Chris Gormley, CEO, Medpricer Purchased Services Solutions, traces some of the key challenges surrounding this category to "vague directions" issued to Supply Chain by health system leaders looking for "better services that provide better business outcomes."



Chris Gormley

"In order to discover margin improvement opportunities through purchased services, Supply Chain must be able to clearly define the business requirements of the services that the health system needs, and how these needs should be prioritized in relation to available resources," Gormley noted. "This requires an investment in the supply chain — everything from personnel to infrastructure — from the C-suite."

Heckler blames the "lack of visibility into the entire scope of the purchased services category" for misunderstanding the category. He challenges healthcare executives to check their general ledgers to prove it.

"Basically, Supply Chain professionals rarely know how big of a category it really is," Heckler said. "This goes for the C-suite, too. Purchased services has been a catch-all, generic GL category for decades, so it's completely mismanaged internally. If you are a hospital executive reading this, an easy test to identify if purchased services are being mismanaged in your organization is to see if you have a GL account called 'Other Purchased Services,' 'Service Contracts' or 'Professional Fees.' If so, this means there's no way to know what is going in there. It's tough to expect your team to run an RFP to reduce costs in something generic like Professional Fees. If they're not using Valify or something similar, they will need to hire a consultant and spend more professional fees just to understand what is in their professional fees GL account."

Rooted in data

Because of slimming reimbursements and market pressures providers view purchased services savings with new potential, according to Gormley. But they need to rely on the right data and strategy to succeed, he added.

"The first step in managing a smart sourcing strategy requires that sourcing teams have insight into how competitive their purchased services contracts are," Gormley advised. "By understanding what's standard across various purchased services categories, they can begin to manage expectations on what a reasonable contract looks like in terms of rates and service level terms. From there, they can illuminate opportunities and report to their C-suite colleagues to determine the best plan of action and management."

"In addition to obtainable data metrics, it is essential to create a strategic and standardized approach to purchased service improvement via governance and stakeholder committees that

can balance clinical needs with favorable financial outcomes. Data transparency is the necessary foundation for committees to become successful and to empower supply chains to implement transformative sourcing strategies."

Premier's Little links purchased services progression to that of several other areas: Value analysis and workforce reduction.

"Over the course of the last few decades, hospitals have targeted expense reduction in products and supplies, and this has led to the prioritization of value analysis teams that weigh both cost and clinical efficacy and outcomes," Little noted. "Likewise, providers have tackled workforce costs through efficiency and utilization modeling to better understand and properly allocate their resources. Now hospitals are moving that focus and mindset toward purchased services because data shows us that tackling purchased services can easily yield between 5 percent and 15 percent in savings, with some categories yielding 30 percent or more — and this is indispensable in today's reimbursement climate."

Little calls for a holistic strategy that focuses on purchased services across an entire enterprise.

"This is best achieved with a spend management platform that offers robust data and insight into which vendors are on contract across the organization, their rates, and the services they provide," he said. "It's most advantageous to consolidate all insights into one platform as we've seen that disparate systems make it challenging to identify how much is being spent on services across an integrated delivery network. Often, this exercise reveals greater opportunity to track and measure spend, set competitive rates, and manage savings targets and contract compliance. The C-suite should be hand-in-hand with Supply Chain in sponsoring purchased services optimization as the C-suite can provide direction about which opportunity areas are open to negotiation."

Unfortunately, however, the purchased services category tends to include "a large area of traditionally unmanaged 'rogue' spend," Little continued.

"Part of what makes standardizing purchased services spend tricky is that these services are often customized to each department's or facility's needs, so Supply Chain can't easily assign an arbitrary number of what a specific service should cost entity-wide," he indicated. "To that end, many of the decisions in these areas *should* be elevated to the C-suite where a data-driven, best-practice decision can be made as the potential impact to the organization is huge. This helps to remove some of the emotion from the decisions and keeps the higher focus on the patients and financial health of the hospital."

VIE's Miller targets two major challenges that need to be overcome for healthcare organizations to realize considerable savings and high performance from purchased services programs.

"One is that all purchased spend needs to be under financial control, and the second is that there needs to be a fully automated process to access and analyze every purchased services line item spend on a monthly basis," Miller noted. "The good news is that hospitals are dedicating more resources to strategically sourcing some categories of their purchased services spend. However, this is only a fraction of the entire purchased services spend and only the front end of the management process — the contracting."

The lack of a disciplined approach to purchased services only leads to missed opportunities, Miller emphasizes.

"Cost management should be a strategic pillar for Supply Chain and the C suite," she noted. "Otherwise, if protecting the

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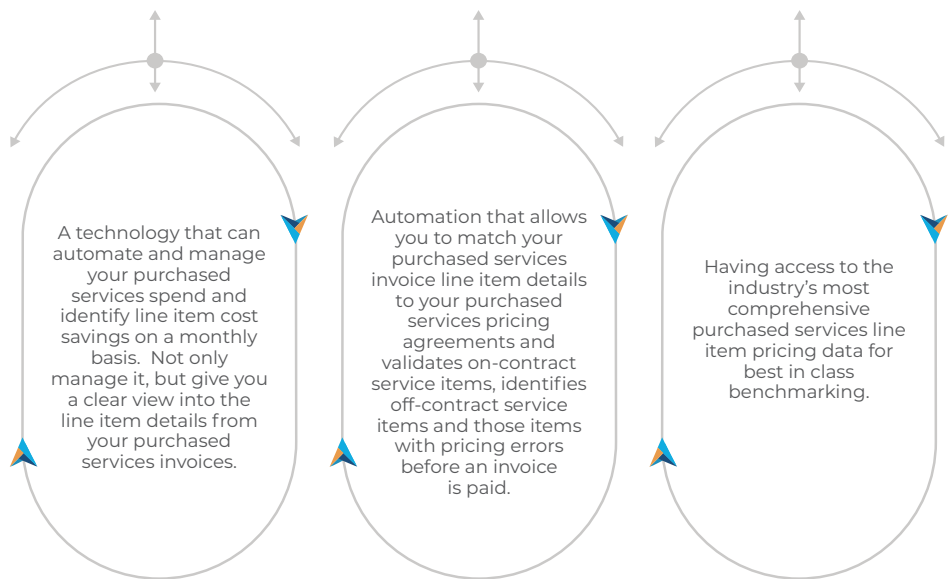
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valued cost savings which have achieved isn't a priority, then the costs creep back, and worse yet, they increase."

Valify's Heckler believes that Supply Chain and the C-suite need to make purchased services expense management as much of a priority as they do with physician preference item products and services.

"That means they need to invest in technology to understand where the opportunities are and most likely need to hire or assign someone to be responsible for the entire purchased services spend category," he noted. "There are huge savings opportunities in standardizing your contracting process to one department. The Supply Chain department will then use the subject matter experts (SMEs) from the departments as needed in the same

way they would use clinical experts for input in most medical and PPI product categories."

Heckler finds that many Supply Chain leaders handle contracting for many of the larger purchased service categories that are "easy to understand," such as medical gas and EVS distribution. But most categories require a completely different skill set or a unique process that is far removed from traditional materials management projects, he added.

He also sees that some departments that fall under the definition of purchased services (e.g., IT, HR, etc.) will self-contract for their needs or simply tell the Supply Chain department which vendor to put on contract. "This self-contracting process has led to massive amounts of waste, emotional attachments to

Providers pursue purchased services aplomb

For a growing number of healthcare provider organizations purchased services represents a relatively new — if not redefined — category of potential expense reduction opportunities. Some have accelerated right out of the gate; others have embarked more slowly on an incremental basis. Five experts in purchased services share some success stories they've recorded as examples to emulate.

"This is a successful process if the following are utilized:

1. Validate utilization and users. Many times right-sizing the agreement to actual utilization can achieve significant cost saving.
2. Perform a historical analysis to identify pricing errors or off-contract spend.
3. Benchmarking pricing for licenses, maintenance and especially IT professional services."

Lisa Miller, Healthcare Advisor and CEO, VIE Healthcare Consulting

"We've worked with Banner Health, a Phoenix-based healthcare system with 28 hospitals in six states, and its 10-person sourcing team for almost one year now. Using mSource Analytics to illuminate savings opportunities, Banner Health has gained control over its 36-month contract renewal calendar.

"Our team of experts identified medical coding and document storage purchased services as the top categories for savings for Banner Health, even naming the eight most competitive vendors for these services. In an initiative spanning no more than two weeks, Banner Health saved \$1.5 million on medical coding alone. This achievement enabled the organization to reallocate that savings back into the bottom line."

Chris Gormley, CEO, Medpricer Purchased Services Solutions

"In the short term, providers can target eliminating multiple vendors who provide the same service. This consolidation is often low-hanging fruit and can yield quick savings wins.

"Premier has had the privilege to work with several of our 4,000 hospital and health system members on purchased services projects, as well as a few hospitals from other member

GPOs as part of an aggregation group. One that comes to mind is a group of integrated delivery networks in the Midwest where Premier used its data analytics processes to identify multiple opportunities for cost savings. In the first phase, we chose three areas that aren't necessarily huge spend areas — waste, freight and shredding — but our work resulted in nearly \$1 million in savings in the first three-to-six months, mostly by simple aggregation of spend and consolidation of suppliers."

Jeff Little, Senior Director of Purchased Services, Premier Inc.

"One of our clients, a large hospital system in the Mid-Atlantic area, recently shared how they developed a dedicated purchased services team from the ground up. An advocate in the supply chain saw a greater need for purchased services expense management. She went to her chief financial officer and chief operations officer and made the case that the organization could significantly save on purchased services expenses if they were able to invest in technology and FTE resources. Leadership obliged, and the team was able to fulfill the return on investment they had outlined. They worked on some big categories, including courier services and language services — all while also going through an EHR conversion. So far, the team has implemented \$12.5 million in realized savings, and they are actively working through their opportunities roadmapped and expect to save even more."

Chris Heckler, CEO & President, Valify

"In early 2018, HealthTrust and an IDN with over 30 acute-care facilities partnered to develop a centralized focus on purchased services contracting. The process began with hiring a

full-time contract administrator dedicated to purchased services who reported directly to Supply Chain. The IDN took the basic tenets of contracting for supplies and applied them to their services. By reporting to Supply Chain, the administrator was held to their standards of contracting strategies, such as using formalized bidding processes and ensuring standard terms, conditions and quality control measures were part of each new contract. By centralizing the process, while gaining input and support from department stakeholders, the IDN was able to build volume-based purchased services contracts that led to millions of dollars in annual savings.

"Prior to developing a centralized approach, the IDN suffered from a disjointed process. It lacked the necessary tools to quickly analyze spend data and facilities were signing individual contracts based on their own immediate needs. By using Valify to 'group spend' under one roof and review all vendors used within one category, the IDN was able to identify contracting opportunities as one team. This led to the ability to group spend and develop more powerful RFPs. It became a win-win for the IDN and the vendors who won bids because they were guaranteed a larger amount of business.

"In the end, a winning purchased services strategy will include three critical components: Creating a centralized process, including a dedicated resource responsible for reviewing and proposing contracting opportunities, implementing an analytics platform to inform the decision-making process and communicating early and often with stakeholders to track results."

Andrew Motz, Assistant Vice President, Supply Chain Consulting and inSight Advisory Solutions for HealthTrust

vendors and long-term/no-bid contracts," he warned. "This is not an efficient way to manage a high-performing organization."

Dedicated leadership needed

Miller recommends centralizing the entire purchased services category under a single leader who reports directly to the C-suite.

"This leader would be responsible for all purchased services spend and to work collaboratively with Supply Chain, Finance, AP and the departments in the hospital for cost savings initiatives and the on-going cost management," Miller continued. "They would have a purchased services cost savings and cost management roadmap. Their role would be to identify cost savings, remove silos and sensitive areas of spend and ensure all spend is competitively benchmarked and analyzed for opportunities and no stone is left unturned for review and oversight. They would also be responsible for monthly invoice reconciliation to the agreements and supporting department leaders so these leaders can focus on strategically operating their departments and meeting their budget expectations."

HealthTrust's Motz agrees that centralizing purchased services management remains the lynchpin to cost savings and management.

"This doesn't take the decision-making and vendor selection out of the hands of the key stakeholders, but ensures all departments across the facility are aware of which vendors are being considered and chosen," Motz said. "A successful purchased services strategy begins with reviewing all of a facility's accounts payable spend. You must go beyond reviewing PO spend only since many services are not requested via purchase orders. A technology tool

such as Valify is a valuable asset in gaining a comprehensive view of a health system's purchased services spend. Valify categorizes purchased services into 1,200 individual categories."

Motz recommends honing the product and service categories and vendors as starting points.

"After categorizing vendors and reviewing top areas of spend, develop a pipeline of initiatives and focus on five to seven categories at a time," he said. "It is critical to engage stakeholders in each department for input on vendor selection and understand the specific service levels they require. Ask questions such as, 'Why are you outsourcing to this particular vendor?' 'What are the critical performance indicators you are measuring with the current vendor?' And 'How would you rate the quality of the service they provide?'"

Once Supply Chain interviews stakeholders and reviews existing contracts, then it should identify at least three vendors to include in a Request for Proposal (RFP) process or direct contract negotiations, according to Motz.

"This will help you better understand the market," he continued. "Speaking from the perspective of HealthTrust, be sure to identify what vendors are available through the contract portfolio. You can leverage pre-determined service-level requirements and other associated terms. When reviewing RFP responses, you should consider more than just the best proposed cost supplier. A successful long-term relationship often comes from the supplier that demonstrates a willingness and ability to be a partner and will support you through continuous improvement efforts." **HPN**

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Study supports value of certified nurses

Nurses with specialty certification may play an integral part in speeding translation of the latest research into everyday clinical practice, thereby ensuring that critically ill patients receive the highest quality of care, according to a study conducted at UPMC (University of Pittsburgh Medical Center). A survey of 268 critical care nurses in six UPMC hospitals found a strong association between nurses who were certified in critical care and their knowledge of and perceived value in specific evidence-based practices used to care for patients receiving mechanical ventilation. The results, "Factors Associated with Nurses' Knowledge of and Perceived Value in Evidence-Based Practices," are published in the *American Journal of Critical Care (AJCC)*.

Overall, respondents reported a high level of perceived knowledge of three specific evidence-based practices used in caring for patients receiving mechanical ventilation: spontaneous breathing trials, lung-protective ventilation and daily interruption of sedation. When compared with noncertified nurses, certified nurses reported greater perceived value of all three practices and significantly more perceived knowledge of spontaneous breathing trials and lung-protective ventilation. In addition, all respondents reported strong professional identity, self-efficacy and role clarity, all with mean scores greater than 4.0 on a 5-point scale. Nurses who held specialty certification reported higher levels of self-efficacy and role clarity than their noncertified colleagues.

An interdisciplinary research team with the Clinical Research, Investigation, and Systems Modeling of Acute Illness (CRISMA) Center at the University of Pittsburgh's Department of Critical Care Medicine conducted the study in 12 adult intensive care units (ICUs) within six UPMC hospitals. The 44-item survey was associated with a larger study examining ICU team function and the delivery of evidence-based practices, with funding from the U.S. National Institutes of Health and its National Heart, Lung, and Blood Institute.

"Many evidence-based practices remain underused, partly because of gaps between providers' attitudes toward practices and the delivery of care at the bedside. Our findings support the value of nurses with specialty certification, especially among institutions that aim to improve outcomes and increase the adoption of evidence-based practices," said co-author Kristin Hittle Gigli, PhD, RN, CPNP-AC, CCRN, a postdoctoral research fellow at the CRISMA Center.

The results did not indicate a strong relationship between nurses' education levels and evidence-based practices, and the researchers point to the high percentage of respondents with a bachelor's degree or higher (70.9%) as a potential factor in the lack of association. In addition, the survey did not ask about years of experience or certifications other than CCRN, which may be additional elements influencing nurses' individual perceptions.

OPERATING ROOM

Ready, set, go

Staying on track with OR scheduling, turnover

by Ebony Smith

The operating room (OR) is like a living center. It runs around the clock with several moving parts and people. Every detail matters at every point of service – from pre-operative procedures, surgery scheduling and supply planning to room set-up, equipment cleaning and patient discharges.

Despite its revolving activity and potential for errors, the OR is expected to perform and transition smoothly and expediently, in order to best meet the needs of patient care and hospital budgets.

"Studies show astronomical OR costs per minute. Any time you can shorten the turnover time turns that non-revenue generating time into revenue generating time; that adds value for everybody. Any product or service that supports the efficiency of the OR to meet the demand of scheduled starts has value directly to the bottom line of a hospital," explains Suzanne Champion RN, BSN, MBA, CNOR, Director Clinical Operations, U.S. Acute Sales, Cardinal Health.

In this article, industry representatives discuss the challenges of OR scheduling and turnover and the technology and supplies that help improve efficiency with communication, workflow and throughput, as well as help achieve better patient and staff satisfaction and financial standing.

Scheduling snafus and solutions

Many people, departments and circumstances may complicate scheduling and surgeries, explains Shayan Zadeh, Founder & CEO, Leap Rail. "Let's think about all the different elements required for scheduling a successful surgical case. You need to take into account patient and surgeon availability. This needs to be paired with operating room availability, including the business rules for accessing them (block schedule, priority access, etc.), special equipment requirements, anesthesia and nurses' availability, implants, supplies, preference cards, vendor rep

availability, and so forth. Once you consider the interdependencies between all these elements, the required coordination level for clinic staff or an OR scheduler is daunting."

Human error and physician availability can cause scheduling inaccuracies, acknowledges Ashley Walsh, Director, Client Services, LeanTaaS iQueue. "The physician notes that are sent to scheduling can be hard to read or interpret. Often a physician's description of a procedure does not perfectly match the procedure names in the EHR that an OR scheduler has to choose from. Frequently there are non-clinical individuals doing the OR scheduling, which gives them a disadvantage in that they have not worked in the OR on a surgical team and are not clinically trained. On top of that, there are other additional complexities such as understanding if the physician who is trying to schedule a procedure has block time, and if not, is there open time that the case can be put into? If there is no block time and no open time, the case has to be put into a queue, which means the physician, and more importantly the patient, cannot receive a confirmation until often the day before or day of regarding whether or not the procedure can take place for sure and what time."

Older processes may impede scheduling and turnover, Walsh noted. "Mostly there are broken processes that have simply been grandfathered in. Hospitals, and more specifically ORs, need more sophisticated tools than simply implementing EHRs. ORs need more efficient communication with physician offices, and they need to embed the institutional knowledge of the scheduling process into lean processes optimized with better math to ultimately yield increased efficiencies that include turnover, scheduling and total volume."

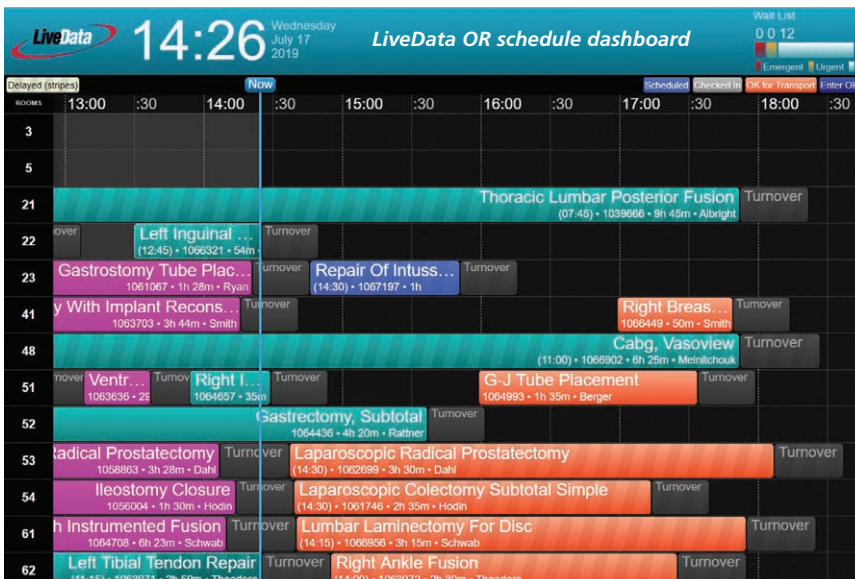
She pointed to the LeanTaaS iQueue for OR suite to timely communicate scheduling information to the team. "The iQueue aims at increasing access to ORs through



Ashley Walsh



Shayan Zadeh



better scheduling, increasing accountability with how block time is monitored and repurposed, as well as increasing visibility into what the data is telling us – pushing data automatically through mobile and web to all users (surgeons, administrators, etc.), so that everyone can have more data-driven conversations that are backed with trustworthy data. For those that want raw data and the ability to slice and dice on their own, that can be accomplished, but for the older surgeons who are not as mobile/internet savvy, we push information directly to them, which can be viewed through a simple text message with easy-to-understand visuals.”

The suite has saved both time and money, she added. “Our tools will allow physician offices to schedule surgeries sooner so that the patient wait time is less. There is tremendous value in increasing efficiencies and doing more in their business hours. The median prime time utilization increase for our customers that have been live for a year or greater is 6%. Doing even 1% more volume means a very significant financial return when it comes to revenue in the OR! In general, the most consistent feedback we hear is how much iQueue has enhanced the scheduling process for cases done outside of block time (this is roughly 35-50% of all cases) for the OR scheduling team as well as the physician offices’ scheduling team(s). In addition, we hear that iQueue helped create a single source of truth for reporting metrics.”

Multiple individuals with different responsibilities in different locations trying to coordinate the surgical journey can break down scheduling, states Jeff Robbins, LiveData Founder and CEO. “Surgical scheduling is inherently complex. It reaches beyond the simple surgi-

cal appointment slot to include patient pre-operative tasks, prepping the patient on the day of surgery, and often includes follow-up actions. Scheduling access is also not confined within the hospital walls. Patients with their family members, along with nurses, anesthesiologists and surgeons (who are often not employed by the hospital) need access and input to surgery schedules.”

An absence of up-to-date information can disrupt scheduling and attendance, Robbins affirmed. “The inability to share real-time information across the community of individuals involved in a patient’s entire surgical journey contributes to inefficiencies in surgical scheduling. Another challenge is that surgery requires patients to complete a list of pre-operative tasks to ensure surgical readiness. A lack of real-time status on progress against this list can cause last-minute cancellations. Giving everyone involved in the surgical process appropriate access to the information they need, no matter where they are, eliminates issues like patients arriving for surgery with incomplete pre-operative tasks, thus forcing the cancellation of surgery. For the OR team, being able to see the status of a patient in the perioperative process helps them move patients through the surgical preparation process and keep the surgeries moving on time.”

He recommended the LiveData PeriOp Manager suite to track activities in real time. “LiveData PeriOp Manager provides real-time situational awareness to optimize the perioperative experience for patients, their families, clinicians, and the OR support team. It simplifies scheduling, provides real-time data on patient progress through milestones, and gathers data to help streamline workflows. Interactive

tools enable a personalized pre-surgery workup to be created for patients. Clinics, schedulers, and family caregivers can track and coordinate patient surgical readiness. The same kind of tracking and visualization is available in the pre-op area, so clinicians can make sure the patients are progressing through their preparations on the day of surgery. Hospitals can also display HIPAA-compliant patient status through the surgical process to help families better understand where their loved ones are in the surgical journey.”

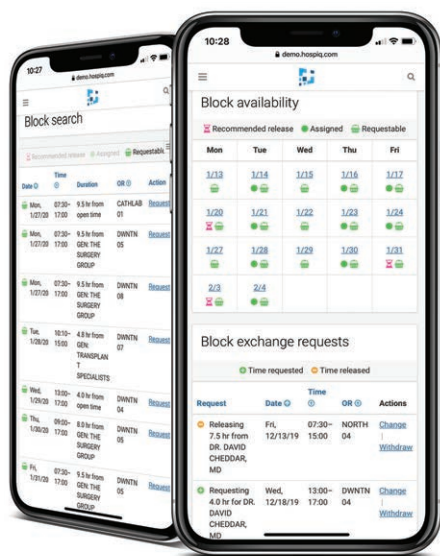
The tools have increased scheduling accuracy and number of surgeries, he shared. “Customers have reported more than a 70% improvement in First Case On-Time Starts, a 65% increase in case scheduling accuracy, and up to 27% decrease in cancellations all within the first six months of using LiveData’s tools. The actionable data provided by the system helps increase the number of cases that can be handled each day, allowing patients to get the surgery they need faster.”

Surgeon scheduling

Scheduling surgeon time can be difficult, expresses Jason Harber, SVP, Product Management and Marketing, Hospital IQ. “On average, 80% of OR time is allocated to specific surgeons, surgeon groups or service lines. For these surgeons, it is less of a challenge because they have great visibility to the times that they can book cases into. Conversely, for surgeons that do not have block time, or need time outside of their block, they lack visibility to the availability of times that are available for them to book into and the process of finding open OR time is manual and tedious.”

Slow updates of unused time may hinder planning, Harber added, “If a surgeon knows they won’t use a specific block of time, they should release that time early, which enables other surgeons to book into it. While surgeons have the best intentions, they don’t typically release their blocks early enough for other surgeons to utilize the newly created time. Perioperative departments have implemented auto-release policies for unused time, but these typically take place 24 to 72 hours before the block time, which is not sufficient for other surgeons to claim for their cases. Predicting OR time that will not be used, prompting surgeons to release it early, and making it available for other surgeons through a marketplace-like experience removes a lot of the cumbersome and manual processes that are currently required just to understand what OR time might be available to book a patient case into.”

OPERATING ROOM



Hospital IQ mobile app

He suggested Hospital IQ's Perioperative solution as a means to deliver current information and data. "Hospital IQ's Perioperative solution helps improve OR throughput, which includes turnover time, by giving real-time visibility to the current performance of the rooms running in the OR, as well as predicting which rooms will need to be run to accommodate each day's cases. In addition to these predictive and real-time capabilities, Hospital IQ automates the creation and distribution of tailored scorecards of key operational metrics that can be shared with all stakeholders to build consensus on the actions needed to make improvements. Our platform uses simple and clear emails to communicate actions, needs, performance, etc. Many users experience Hospital IQ via wall displays throughout the Perioperative department to understand the status of the current day's cases, as well as overall performance of the department. In addition, it predicts which surgical blocks are most likely to go unused, giving other surgeons

and schedulers the opportunity to book cases and fill those primetime slots."

Multilevel communication can cause a lag in scheduling, acknowledge Vicki Harrison and Mark Stega, MD, Optimum Health. "Inefficient communication between surgical offices, surgical posting, and the pre-anesthesia teams at the hospital or surgi-center is the primary problem area. Most communication occurs via FAX, which often has inherent legibility and timeliness issues. Phone communication is also an issue when messages are not picked up on message machines or passed on accurately or in a timely manner.

This may slow down or halt surgeries and impact patients and costs, Harrison and Dr. Stega explained. "There can be 75-150 information exchanges that occur between a surgeon's office, the perioperative department at the hospital or surgi-center and the patient at the primary level, and secondary information exchanges between finance/insurance, equipment, and device ordering and surgical supply and tray management. If any or several of these information exchanges is incorrect, untimely or omitted altogether, an on-time surgery is at risk. Case delays and cancellations are very stressful for patients. Reducing unnecessary changes and uncertainty will improve both patient and family caregiver satisfaction and goodwill. Staff will benefit because they will spend less time "putting out fires" due to communication errors, omissions, and untimely exchanges. Eliminating unnecessary clerical work will put staff focus on the clinical work to be done, which is what they enjoy, and what ultimately drives successful patient outcomes. And for the hospital or surgi-center, improved staff productivity will reduce the cost per patient and potentially provide incremental revenue due to improved patient throughput."

They presented the Optimum Health OPTIMISER application to support inte-

grated communication across the team. "Optimum Health's OPTIMISER is a workflow assistance package that is tailored to improve the entire perioperative process from the initial surgical consultation to patient discharge and follow-up. It serves to improve the efficiency and organization of the team members involved in the process and ultimately reduces delays and cancellations, creates high OR throughput, and improves patient safety. In general, all of the OPTIMISER products work by utilization of electronic checklists, dashboards, business rules, and real time reports. Each served business segment implements a different set of these components that are tailored to the institution's particular workflow."

The system has increased workflow transparency and reduced procedure delays and cancellations, they addressed. "After implementation of our OPTIMISER, nursing satisfaction went from 28% to 78%.

Operational obstacles and tools

Pre-operative procedures' completion, available staffing and supplies, multi-department communication, unexpected events and more can all affect OR timing, turnover and throughput.

ORs need to grasp a clear view of the surgical day and needs, guided Harber of Hospital IQ. "The full scope of the surgical day needs to be considered:

- The day needs to start as per the plan
- As the day progresses, the current state of operations needs to be well understood; what cases are on-track, what cases are delayed, which rooms will run longer than expected, which cases have special needs
- Having this information available in real time helps perioperative leaders ensure that they have the right resources in place when the room is ready."

Yet, a well-intentioned plan is vulnerable to unforeseen circumstances, notes Zadeh of Leap Rail. "There are few factors that make managing ORs in general, and turnover specifically, very challenging. An OR environment is very dynamic: surgeries might take longer than anticipated, the patient might be late or have complications before/after the procedure, and unexpected events such as trauma cases can cause drastic shifts in what was planned for the day. And all of these events, and much more, occur frequently, and when you combine them all together, it's no surprise why it's so hard to manage resources effectively in the operating suite."

These changes in the schedule can cause dissatisfaction among patients, families

Patient name	Patient DoB	Surgeon	OR	DoS	PT	PO	F	PC	I	S	C	Notes
ASC01	12/03/2013	0830	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC01	12/03/2013	0910	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC01	12/03/2013	0930	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC01	12/03/2013	0950	OP	NP-3	00	✓	✓	✓	✓	✓	✓	
ASC01	12/03/2013	1000	OP	?	00	✓	✓	✓	✓	✓	✓	
ASC02	12/03/2013	0730	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC02	12/03/2013	0830	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC02	12/03/2013	0845	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC02	12/03/2013	0845	OP	?	00	✓	✓	✓	✓	✓	✓	
ASC02	12/03/2013	1000	OP	?	00	✓	✓	✓	✓	✓	✓	
ASC04	12/03/2013	0730	OP	00	00	✓	✓	✓	✓	✓	✓	
ASC04	12/03/2013	1230	OP	00	00	✓	✓	✓	✓	✓	✓	

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and teams. “Dealing with delays and not knowing when your loved one will be able to leave the OR are big drivers of patient satisfaction. The same is true for staff dissatisfaction and burnout. Unanticipated late nights, delays, and miscommunication contribute to staff issues and Leap Rail has been shown to improve the OR on all of these fronts.”

Zadeh called out the LeapRail OR Scheduling Decision Support platform to manage scheduling and workflow. The platform has helped raise efficiency and decrease cancellations, he shared. “Our artificial intelligence enabled system can predict how long each surgery will take 70% more accurately than the best EMRs currently used in the market. This improvement allows for everybody, from surgeons, to anesthesiologists, nurses, sterile processing, housekeeping, and even patients’ family, to know much more reliably when to expect the patient to enter and leave the operating room. For hospitals, not only does adopting Leap Rail result in higher utilization and efficiency across the OR, it contributes to patient, surgeon and staff satisfaction.”

Inconsistent cleaning processes contribute to an unsanitary and unsafe work and care environment, says Linda Homan, RN, BSN, CIC, Sr. Manager of Clinical Affairs, Ecolab Healthcare. “Our experience has shown that cleaning and disinfection in the OR is not consistently or thoroughly done. The biggest challenge is the pressure to turn over the room quickly, coupled with a lack of clearly defined processes, roles and responsibilities for this task, which creates inefficiency and a situation where some surfaces are cleaned twice while others are not cleaned at all. The environment has long been considered a vector for the transmission of healthcare-associated infections. Improved processes for surface cleaning and disinfection not only improve turnover times, but also decrease environmental contamination and potential for transmission.”

Lack of training and communication among staff may cause a breakdown in turnover, Homan expressed. “Inefficiencies in the OR can be attributed to a lack of communication between department managers, clinical staff and OR turnover teams, a lack of training and standardized processes, and not having the right cleaning tools and chemistries at the point of use. Products alone don’t improve thoroughness of cleaning or significantly impact turnover time, and neither does monitoring or training. Think of this as a formula that combines product, process and practice. You need all three in order to deliver high quality, consistent performance.”

She proposed the Ecolab OR Program to improve process consistency and results. “The Ecolab OR Program delivers standard environmental hygiene to drive quality, consistency and efficiency through evidence-based practices, resulting in proven and sustainable results. In addition to chemistry, cleaning tools, training and consultative service, the digital dashboard with real-time reporting enables managers to track high-touch object cleanliness and turnover time in operating rooms so that targeted performance feedback can be shared with turnover teams. The Ecolab OR Program delivers faster OR turnover time, improved cleaning results, a reduced risk of HAIs, enhanced operational efficiency, process standardization and consistency, and ensured compliance with professional guidelines from organizations such as AORN and AHE, all of which contribute to measurable improvements in clinical, operational and financial metrics for the hospital.”

The program has generated better cleanliness, staff satisfaction, cost savings and turnover times, she reported. “A 576-bed quaternary care hospital with 27 ORs performing 23,000 surger-

ies a year implemented the OR Program. Within two months of implementation, they improved between-case high-touch object cleaning by 66%, decreased room turnover time by an average of 21 minutes and increased staff retention to 86-100%. These efficiencies helped the hospital achieve a significant cost savings with each room turnover.”¹

Change of staff can interfere with the turnover process and costs, says Champion of Cardinal Health. “Speed and efficiency are important, yet difficult to achieve. OR time is money. The biggest breakdown in an OR’s revenue generation is during room turnover and room setup; from patient out to patient in. Another huge challenge is that in every facility, the people turning over the room may be different. Environmental services departments and janitorial staffs can have high turnover rates, making it very difficult to maintain consistency. Balancing these can be quite the tap dance at times.”

Moving patients, procedure types and inconsistent cleaning processes may interrupt workflow, she added. “Transitioning patients from the OR to the PACU—if the patient is difficult to move safely for any reason, can slow down turnover. What shape was the room in last? Was the previous case a trauma or a carpal tunnel surgery? Some surgeries are definitely messier than others. Also, what procedure are you preparing for next? Based on the complexity of the next procedure, turnover could stall, as some procedures take longer to prepare for than others. A consistent process is the most important factor for successful turnover. One of the most important contributors to consistency is having the right supplies to effectively clean up; then having the right supplies to successfully prepare the room for the next procedure.”

She advises Cardinal Health’s Presource OR Turnover Kits and Presource Kitting Solutions for OR Setup to keep the OR clean and moving. “The products provide consistent supplies that support the particular processes of any facility. They promote efficiency and inspire confidence for the end user that the correct products to turn the room are available, and reliable.”



Cardinal Health's Presource OR Turnover Kit

The products have shortened setup timing, she affirmed. “We are an integral part of maintaining turnover and setup efficiency, allowing the OR to stay on schedule. Time is very important to patients and caregivers as well, and an efficient OR means that procedures start on time! In speaking with our customers, we often hear, “We don’t know what we’d do without Presource kits!” Having the confidence to do their jobs effectively means everything to the end user. When we can turn over the room effectively and let the clinicians move on to the next surgery, everyone’s just happier.” **HPN**

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Perspectives on partnership

Tips for a successful IP and EVS collaboration

by Susan Cantrell, ELS

In the hospital setting, there is perhaps no more important collaboration between departments than infection prevention (IP) and environmental services (EVS). They work in tandem for safer conditions for patient and staff alike.

The infection-prevention perspective

This partnership between IP and EVS has not always been in existence, and it still is a work in progress in some facilities. Speaking for the Association for Professionals in Infection Control and Epidemiology (APIC), Lorene Campbell, RN, BSN, CIC, Infection Preventionist, Kindred Hospitals, Madera, CA, reflected, "This [collaboration] is an essential step in decreasing infections and providing safe patient care. A strong working relationship between the two departments drives down infection rates."



Lorene Campbell

Campbell believes collaboration between IP and EVS is progressing well, "but it really is dependent on the efforts of both departments. When an equal partnership is formed, and both work together with the common goal of providing education and support to the EVS staff, it becomes an environment that decreases the risk of infection, with the patient's safety as its focus."

As for which department should take the lead, Campbell espouses an egalitarian viewpoint, saying, "It really doesn't matter who reaches out first, only that the effort is made."

The environmental-services perspective

No longer is the EVS worker on the periphery as only a janitor. As the importance of the role of EVS in preventing infection was recognized, the science behind their work bumped up their status to being important and valued members of the IP effort.

Although IP and EVS share common goals, their perspectives differ somewhat. Rock Jensen is Administrative Director Support Services, Yuma Regional Medical Center, and an Association for the Healthcare

Environment (AHE) At Large Board Member. From his perspective of being in the industry for more than 27 years, he commented, "I have witnessed a significant increase in the collaboration between EVS and IP in respect to cleaning processes and procedures. This has assisted in driving a number of advances in cleaning technology and processes."



Rock Jensen

Some of the advancements Jensen mentioned are ultraviolet (UV) disinfection, spray and misting technology, and chemical advancement for reduced kill times and improved efficacy. "Chemical providers have embraced utilizing IPs as a part of their development teams and sales force in providing insight into chemical efficacy and effectiveness against microorganisms," stated Jensen. "AHE has also championed this cause by inviting IPs into their organizational education process provided to their members, as well as in creation of their Certification for Mastery of Infection Prevention."

Any collaboration hits snags. Jensen believes the pitfalls are fewer than they once were in forming a partnership between IP and EVS. "However," he noted, "EVS and IP leaders having separate or varied lengths of time on the job, experience, and education can be a pitfall. If the two are not aligned in processes and outcomes, it can create different expectations for the scope of work and how those outcomes are measured. These differences can also lead to creating one-way conversations where communication about each department's perspective and focus are not aligned."

Jensen agrees with Campbell that efforts must be coordinated between the two departments, that it is a shared responsibility. He outlined each department's priorities. "IP often takes the lead on evaluation of the effectiveness of the overall process used for disinfecting and ensuring a safe environment. EVS takes the lead on establishing effective processes and protocols for eradicating microorganisms in a safe manner for patients and staff, as well as identifying effective products and technologies that

work safely in the environment and provide the needed efficacy."

A recent survey highlighted the differences in perception between IP and EVS. CONTEC conducted a survey, via *Healthcare Purchasing News*, in August 2019, to determine the perceptions IP and EVS have of one another's roles in the acute-care setting. Matt Schiering, Chief Marketing Officer, said they received 170 responses. Here is a rundown of what survey results revealed:

- Two-thirds (67 percent) of IPs characterized their relationship with EVS as highly collaborative and strategic, whereas four in five (80 percent) of EVS workers felt this way about their IP counterparts.
- Bigger differences emerged when asked which of the two departments put forth more of the effort to move the relationship in a positive direction. Here, 72.5 percent of EVS workers noted the relationship is 50/50, whereas only 10 percent felt that IP leads the way. In contrast, 58.5 percent of IPs noted it was a fifty-fifty partnership, with more than one third (38.5 percent) reporting that IP leads the way.
- When it comes to trusting one another in pursuit of a shared goal to prevent healthcare-acquired infections (HAIs), the parties aren't quite aligned: 77.5 percent of EVS respondents believe that IP has total trust in EVS efforts. However, only 44.6 percent of surveyed IPs reported that they trust EVS completely, with the balance (49.2 percent) sharing that they trust EVS somewhat.

"In short, while the relationship is strong and improving, there is work to be done to close the gap in perception between the two groups," observed Schiering.

The vendor perspective

Vendors have a role in the relationship between IP and EVS departments, because they work closely with both departments concerning products selected and used in the facility. Their interactions have led to their own observations on IP-EVS collaboration.

From his perspective as a vendor, Martin McGonagle, General Manager, Healthcare, SC Johnson Professional, said he has been "pleasantly surprised at the speed in which



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we're seeing IP and EVS departments partner to protect not only patients but also healthcare institutions' bottom lines. With entities such as Leapfrog and the Joint Commission bringing a greater focus on infection rates and environmental-cleaning practices, it's important that IP and EVS are finding innovative ways to avoid Hospital Acquired Condition (HAC) Reduction Program penalties. There's a broad recognition that the cost of HAC penalties and its impact on communities is going to require IP and EVS to innovate. Without innovation, goals such as lowering the amount of HAC penalties will take longer to achieve. Organizations that are open to change and trying new best practices will have greater and faster success."

Speaking about the positive change in status of EVS he has observed in working with IP and EVS, Schiering, CONTEC, described the ongoing elevation of the role of the EVS associate as "critical to the long-term relationship between front-line hygiene workers and infection preventionists." He said that, whereas the IP is tasked with tracking, reporting, and intervening in 'higher-order' infection challenges, such as central-line-associated bloodstream infection, catheter-associated urinary tract infection, and ventilator-associated pneumonia, "it has become increasingly clear that more rudimentary prevention protocols pertaining to hand hygiene and surface cleaning could be key to helping improve long-term reductions in secondary infections. Recognition that everyone—from patient and visitors to hospital staff and especially EVS workers—is part of a broader infection-prevention team is paramount to improving relationships and ensuring improved outcomes."

All healthcare workers share the same goals of good clinical outcomes and keeping patients safe, as well as providing a satisfactory patient experience, is the viewpoint of Caitlin Stowe, MPH, CPH, CIC, CPHQ, Clinical Affairs Research Manager, PDI. "IP and EVS have a unique bond in this endeavor; a clean clinical environment provides both protection from HAIs while also driving positive patient-experience scores." Stowe noted, "In many facilities, IP and EVS perform environmental rounds in tandem, share the same audit tools for performance evaluation, provide joint education, and report findings at the same quality metric meetings, to drive infection rates down and experience scores up."

The financial aspect of any endeavor is always a concern. Connecting the dots between IP and EVS collaboration and the bottom line, Michelle Olsen, Senior Manager-Rubbermaid Commercial Products, Cleaning, said this from her perspective as a vendor. "The Rubbermaid Commercial Products team continues to witness transformations in the relationship between IP and EVS departments. HAI reimbursement and continued focus on the role the environment plays in infection transmission have made this interdepartmental collaboration increasingly important."

"IP and EVS professionals recognize the best outcomes are achieved when the two departments work hand-in-hand to ensure patient safety," continued Olsen. She said this could mean personnel shadowing each other as they work. "For the IP team, this might mean cleaning alongside an EVS team member to understand their processes and challenges. For the EVS staff, this means reviewing HAI rates/data and new products/technologies with the IP team." Olsen believes of greatest importance is the need to collaborate in securing support from the C-suite for needed products and resources.

Tips for successful IP and EVS collaboration

Healthcare Purchasing News asked for tips to ensure a smooth, efficacious, and productive working relationship between IP and EVS. Good communication and weaving their activities are a common theme.

Education and observation:

- The EVS Director should be an active member of the infection control committee where cleaning audits and surveillance are reviewed. The IP should in turn, be an active member of the environment-of-care committee.
- The IP should be a large part of the orientation, annual training, and education of the EVS staff.
- EVS and IP should round frequently, noting the cleanliness of the hospital, focusing on patient rooms, common areas, and visitor waiting rooms, just to name a few. They should also take the time to interact with staff, discuss surveillance findings and cleaning efforts, offer just-in-time education, and provide positive feedback on a job well done.

— Lorene Campbell, Kindred Hospitals, Madera, CA, and APIC

Rounding, teamwork and review:

- Joint and regular rounding of the hospital facilities and departments with EVS and IP is essential. Minimal weekly rounding, so that each area of the facility is covered quarterly, is a best practice.
- Working together in unison is paramount, so that both departments see, hear, and understand the expectation required for successes and areas for opportunities.
- Regular ongoing reviews of policies and protocols having to do with IP and cleaning/disinfection of all aspects of the hospital and healthcare environments are necessary, to provide a safe and healing atmosphere.

— Rock Jensen, Yuma Regional Medical Center, and an AHE At Large Board Member

Communication and collaboration:

- A critical factor is ensuring clear and frequent communication exists between both departments. The IP and EVS teams can collaborate on ways to improve cleaning processes, share relevant industry information from professional organizations, and discuss new product technology.

— Michelle Olsen, Rubbermaid Commercial Products

Strategic goals:

- Within the most successful collaborations, IP and EVS work towards shared goals.
- Meeting frequently and communicating regularly is also important, as goals and strategies tend to change over time.

— Martin McGonagle, SC Johnson Professional

Responsibilities and relationships:

- Ensure there is clear responsibility for who cleans what, when, and how often. The policies should define who has responsibility for cleaning the patient-care surface or equipment. This helps ensure compliance and drive accountability.
- Use products that make it easy for the staff to do the right thing every time. IP should support and build relationships with EVS staff as the front-line defense for preventing HAIs. Being visible, positive (even when providing feedback), and quick to praise goes a long way to establishing a great working relationship.

— Caitlin Stowe, PDI

Cleaning and infection control best practices:

- IP and EVS departments are striving for the same thing: clean, safe environments where every patient can be free from HAIs. This alignment allows teams to collaborate on IP efforts not just when infections occur but proactively, before the infection risk exists. Implementing a standardized, programmatic approach provides common ground to achieve this mutual goal.



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- IP and EVS departments should work together to select the right disinfectant that is effective against the pathogens of concern and improves efficiency.
- They should use the right processes, based on best practices.
- Comprehensive training should be a priority.
- There should be an objective, accurate method to measure cleaning effectiveness, with results made available to both the IP and EVS departments, to foster collaboration and drive continuous improvement.

— Linda Homan, RN, BSN, CIC, Senior Manager of Clinical Affairs, Ecolab Healthcare

Training and validation:

- Establishing a program that includes training and validation is the key step to successful collaboration. Once there is agreement on the program, the rest falls into place.
- Since studies show that training is the number one issue in helping to prevent HAIs, it is important to establish routine, scheduled training for EVS staff.
- We recommend staff training be reinforced through verification and validation of cleaning procedures on a routine basis. These validation checks help identify areas where they can improve, creating an overall safer environment for both patients and cleaning staff.
- When training and processes are well documented, EVS staff have the required data to identify and collaborate on areas for improvement.

— Cali Sartor, Spartan Chemical Company, Inc.

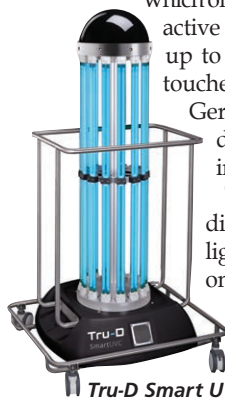
Tools that support IP and EVS common objectives

Cleaning products and tools, along with best practices, are part of the equation in a successful IP and EVS partnership. McGonagle, SC Johnson Professional, related their philosophy. “As manufacturers, we need to bring new solutions that help our customers protect our communities. SC Johnson Professional offers products that set a higher standard to reduce HACs, and a critical aspect is providing our customers the ability to use our products in an appropriate fashion.”

McGonagle referred to DebMed Electronic Hand Hygiene Monitoring system, which he said is the only clinical-research-based, badge-free system that increases hand-hygiene-compliance rates and decreases HAI rates. “The system achieves this by delivering an accurate compliance rate based on the WHO 5 Moments for Hand Hygiene and Centers for Disease Control and Prevention Guidelines. This sanitizer has also been tested and proven to be effective against enveloped and non-enveloped viruses and mycobacteria within 30 seconds. As manufacturers, it’s our responsibility to consistently create and test new products that can enhance collaboration between IP and EVS.”



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Tru-D Smart UVC

Explaining briefly how their product helps to support best practices in IP and environmental cleaning, Schiering, CONTEC, commented, “One of our more popular cleaning solutions is the Laundry-Free Premira microfiber mopping pad + Zero Gravity mopping system. Microfiber is only truly clean the first time it is used; so, unlike re-laundered mopping pads, Premira won’t bind to disinfecting chemistry. As such, it helps to ensure maximum floor coverage while limiting the potential for cross-contamination.”

Olsen described Rubbermaid Commercial Products’ HYGEN system as a combination of commercial-grade microfiber, handles, frames, and buckets, designed to work seamlessly with their high-security cleaning carts.



Rubbermaid Commercial Products’ HYGEN mop

The system was developed to help reduce the risk of environmental infection transmission,” noted Olsen. “HYGEN microfiber has undergone rigorous third-party testing to ensure products remove 99.9 percent of microbes, including *Clostridium difficile*, with water only. Staff compliance is critical to achieving cleaning and disinfection protocols. Our HYGEN products are light-weight, easy-to-use, and durable, providing an ergonomic and effective solution for properly cleaning healthcare facilities.”

“The environment is a primary, and often unexpected, source of infection,” said Alice Brewer, MPH, CIC, Clinical Affairs Director, Tru-D Smart UVC, a PDI Company. “Adopting a comprehensive, layered approach combining traditional hard-surface disinfection with total-room terminal disinfection is key.”

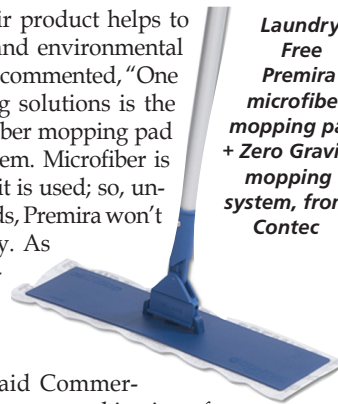
Brewer talked about Sani-Cloth, which she described as a clinically-advanced and fast-acting disinfection wipe. She also highlighted recent product innovations Sani-24 Germicidal Spray, which offers continuous active disinfection for up to 24 hours or against 96 touches, and Sani-HyPerCide Germicidal Spray, a single disinfectant protecting against HAI-causing pathogens, including *C. difficile* spores.

Tru-D SmartUVC, now a PDI company, offers a portable disinfection system that delivers a measured dose of UVC light to disinfect a room during one cycle. “Operating from one position in the room, Tru-D’s patented Sensor360 technology ensures significant pathogen reduction in direct and shadowed areas,” explained Brewer. “It is used after EVS cleans using traditional methods, wipes or sprays, acting as a complement to existing



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INFECTION PREVENTION

IP protocols.” The one-two punch of hard-surface disinfection and UVC light technology “produces results that make both IP and EVS happy: lower infection rates and higher patient satisfaction,” stated Brewer.

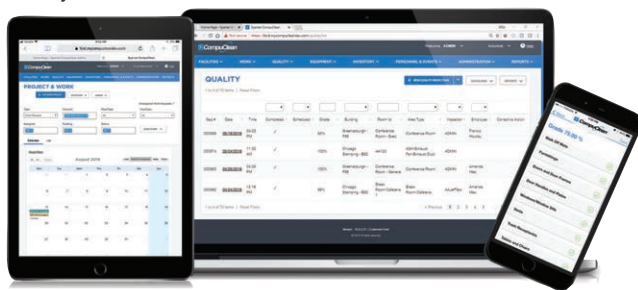
“As an EPA-registered one-step cleaner/disinfectant, OxyCide Daily Disinfectant Cleaner meets the needs of both IP and EVS,” said Homan, Ecolab Healthcare. “It is designed for use in hospitals and is an effective, proactive intervention against *Clostridioides difficile* spores, *Candida auris*, and a broad spectrum of other pathogens, making it an effective IP tool.”

Homan noted studies have shown that patient rooms previously occupied by a patient with *C. difficile* increase the risk of transmission to subsequent patients, and patients infected or colonized with *C. difficile* continue to shed spores into the environment even after their symptoms have subsided. “This makes daily cleaning of patient-care areas an important prevention strategy. Ecolab’s consultative service provides on-site training to staff on safe product use and efficient workflows so that hospitals can count on consistent, effective cleaning results.”

Sartor, Vice President of Marketing and Advertising, Spartan Chemical Company, Inc., talked about advantages of Spartan’s environmental infection-control program, HealthCheck, which employs a three-pronged approach of training, validation, and documentation, to ensure proper environmental cleaning is achieved. Spartan’s CleanCheck is a web-based, multilingual training system that educates staff on cleaning standards and methods. “CleanCheck procedure cards reinforce the training program and provide a framework for adherence to the standard,” explained Sartor. “This process is supported by Spartan’s CompuClean mobile-app quality-inspection tools, which enable EVS managers to train and assess staff cleaning operations. EVS managers can then document activity to track and verify program progress and identify areas of concern.” Sartor said when used in combination with Spartan’s cleaning and disinfecting chemicals, “the system provides an end-to-end solution for environmental cleaning for health. The program complies with Joint Commission requirements for a quality-assurance inspection program and helps to boost Hospital Consumer Assessment of Healthcare Providers and Systems scores.”



**Ecolab's OxyCide
Daily Disinfectant
Cleaner**



Spartan Chemical's HealthCheck combines education, training tools, documentation, and Spartan disinfectant and cleaning solutions

Conclusion

Homan, Ecolab Healthcare, observed that EVS is “increasingly recognized for its vital role in healthcare infection prevention. While there may be just a single person designated as the infection preventionist in a hospital, the work of preventing infections is a whole-hospital effort. The IP and EVS departments bring unique knowledge and skills to the table, and they are most effective when they work together as a team.” **HPN**

A CUT ABOVE

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FDA clears first duodenoscope with disposable elevator piece

The U.S. Food and Drug Administration (FDA) cleared for marketing in the U.S. the first duodenoscope with a sterile, disposable elevator component that will reduce the number of parts that need to be cleaned and disinfected (reprocessed) in between uses. The Pentax Medical Video ED34-i10T2 model duodenoscope is intended to provide visualization and access to the upper gastrointestinal (GI) tract to treat bile duct disorders and other upper GI problems.

"Duodenoscopes with a disposable elevator component represent another major step toward lowering the risk of infection among patients who undergo procedures with these devices," said Jeff Shuren, M.D., J.D., director of the FDA's Center for Devices and Radiological Health. "Improving the safety of duodenoscopes is a top priority for the FDA since such devices remain critical to life-saving care for many patients in the U.S."

Duodenoscopes are used in more than 500,000 procedures each year as a less invasive way than traditional surgery to drain fluids from pancreatic and biliary ducts blocked by cancerous tumors, gallstones or other GI conditions. The flexible lighted duodenoscope, which is threaded through the mouth into the top of the small intestine, is a complex medical device with many small working parts that can be difficult to clean. The device can trap contaminated tissue or fluid in its crevices, and if not thoroughly cleaned and disinfected, it can transmit infection-causing bacteria between patients.

The FDA has previously issued communications to healthcare facilities about following appropriate steps for cleaning and disinfecting these devices between use. Last August, the FDA released a safety communication recommending that duodenoscope manufacturers and healthcare facilities transition to duodenoscopes with disposable components. Disposable designs can simplify or eliminate the need for reprocessing of certain components, which may reduce between-patient duodenoscope contamination.

The FDA has previously cleared duodenoscopes with removable endcap components. This clearance is the first device with a disposable elevator component — a part that has been traditionally difficult to clean and reprocess. The elevator part of the duodenoscope facilitates access to the bile and pancreatic ducts and is used to position endoscopic instruments during the procedure.

The Pentax Medical Video Duodenoscope ED34-i10T2 is intended to be used with endoscopic devices, introduced in the patient's mouth, to provide visualization via a video monitor of and therapeutic access to the biliary tract (liver, gall bladder and bile ducts) through the upper GI tract. Risks of using the Pentax Medical Video Duodenoscope ED34-i10T2 include the potential for injuries, including, but not limited to, burns, electric shock, perforation, infection and bleeding.

CS CONNECTION

Worth a second look

Visual instrument inspection is a vital step in the sterilization process

by Kara Nadeau

Visual inspection of surgical instruments and medical devices for bio-burden or damage is a critical safety practice that both central sterile/sterile processing department (CS/SPD) professionals and end users of the equipment (e.g. OR, GI Lab, etc.) can perform when an item is in their hands. But the moment an item is cleaned and ready for subsequent processing steps (e.g. sterilization, HLD), is when the CS/SPD has a specific opportunity — and responsibility — to use visual inspection to verify the cleaning process, as indicated in ANSI/AAMI ST79.

"Although decontamination and manual cleaning are undeniably the most important step of medical device reprocessing, I would argue that visual inspection comes in a close second," said Brandon VanHee, CRCST, CER, CHL, GTS, Clinical Education Manager at Key Surgical. "Visual inspection is the final opportunity to identify damage/defects in medical devices and remove them from service before they are sterilized and prepared for clinical use. Unfortunately, this integral step in the medical device reprocessing cycle is often overlooked due to the lack of time, tools, education and resources in the sterile processing department."

While inspection with the naked eye can identify obvious problems (e.g. significant contamination or damage), a quick glance will not uncover imperceptible issues that can jeopardize patient care and safety, such as microscopic bio-burden that could lead to the spread of infection. The increasing complexity of medical devices has escalated this challenge.

"Until we find a way to automatically ensure cleanliness and sterility, visual inspection will remain a very important aspect of sterile processing's quality assurance program," said John Kimsey, National Director, Professional Services, STERIS. "The complexity of instrumentation, such as cannulated and lumen items, multi-part instruments, robotic instruments and vendor specific instruments, continue to increase the difficulty facing our sterile processing industry in providing quality products."

Therefore, CS/SPD professionals require adequate time, training and technology in order to sufficiently perform this critical step and thereby deliver to end users effective and safe instruments and devices for patient care.

"If instruments and devices are not thoroughly inspected for damage and debris, not only externally but internally as well, any subsequent process (e.g. sterilization, high-level disinfection) may not be effective," said Seth Hendee, CRCST, CIS, CHL, CER, CSPDT, CFER, IAHCMM Approved Instructor, Clinical Education Coordinator, SPD, Healthmark. "Device complexity affects inspection greatly. Requiring enhanced visual inspection using higher magnifications (e.g. 4X) and having the ability to visualize internal surfaces and channels that cannot be seen with the naked eye greatly helps to increase patient safety."

In this article, *HPN* explores how CS/SPDs can use visual inspection to contribute to high-quality cleaning, disinfection and sterilization performance. It includes insights from CS/SPD professionals and manufacturers, as well as a sampling of products in this area.

Start with the standards

Ron Banach, Ruhof's Director of Clinical Education, explains how the importance of visual inspection of instruments for both surfaces and lumens by using lighted magnification has been strongly emphasized by:

- Association for the Advancement of Medical Instrumentation (AAMI)
- Association of periOperative Registered Nurses (AORN)
- International Association of Healthcare Central Service Materiel Management (IAHCMM)
- Society of Gastroenterology Nurses and Associates (SGNA)
- U.S. Centers for Disease Control and Prevention (CDC)
- U.S. Food & Drug Administration (FDA)

"The ultimate goal is to provide a clean device for HLD or sterilization that is safe to use on a patient," said Banach. "Visual assessment has limitations because the human eye cannot detect micro-contamination



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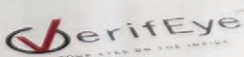
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CS CONNECTION

or bioburden thus other tools and processing steps need to be performed to confirm that the outside surface and inside channel of a medical device is clean. Recent studies have reported findings that the use of a borescope high definition camera to inspect endoscopes and instruments after cleaning identified both bioburden residue and device damage.”

Amanda H. Coss, BBA, CRCST, CIS, CER, CHL, National Education Coordinator, Mobile Instrument Service & Repair, points specifically to AAMI ST 79 7.6.4.5 Verification of the cleaning process, which states:

“After completing the cleaning process, personnel should visually inspect each item carefully to detect any visible soil. Inspection using enhanced visualization tools such as lighted magnification and video borescopes might identify residues not observable by the unaided eye. Visual inspection alone might not be sufficient for assessing the efficacy of cleaning processes; the use of methods that are able to measure or detect organic residues that are not detectable using visual inspection should be considered in facility cleaning policy and procedures.”

“The importance of visual inspection has grown through the years as devices have become more technical, advanced and multidimensional with the innovation of smaller devices for better patient outcomes,” said Coss. “With the development of more intricate instrumentation, we must adhere to the standards set forth for patient safety.”

Mary K. Lane, MHA, CSPDM, CSPDS, CSPDT, MK Lane SPD Consulting, notes how AAMI ST 79 Section 3.3.5.6 details the information related to lighting to ensure the CS/SPD has adequate lighting necessary during the inspection process.

“Inspection of instrumentation has always been a key function of all SPD technicians in the decontamination and assembly areas of SPD,” said Lane. “AAMI ST 79 also details the importance of the inspections process in Section 7.6.4.5 stating: ‘Inspection using enhanced visualization tools such as lighted magnification and video borescopes might identify residues not observable by the unaided eye. Visual inspection alone might not be sufficient for assessing the efficacy of cleaning processes...’ There is also additional information in Annex D of ST 79 related to inspection and its importance in the processing of surgical instrumentation.”

Specifically related to endoscope reprocessing, Coss references AORN’s Guideline for Processing Flexible Endoscopes, which states:

“Tools such as video borescopes of an appropriate dimension (length and diameter) may be used to visually inspect the internal channels. Internal channels of endoscopes may

be inspected using a borescope. Borescopes penetrate the lumen and allow for improved visual inspection.”

“With a common survey question such as, ‘How many of you have a flexible inspection scope (borescope) to inspect internal lumen devices (e.g. shavers, GI endoscopes),’ we need to be vigilant for the patient’s safety and use visual inspection on medical devices with lumens to ensure a clean and sterile product,” Coss added.

Give the CS/SPD what it needs: Time, training and technology

While the standards support use of visual inspection in the CS/SPD, the demands of the profession, department limitations (e.g. time, technology) and other pressures can present significant challenges to performing it.

“The heightened awareness of the importance of visual inspection in the sterile processing arena has greatly increased over the last few years,” said Loraine Durigan, ST, CRCST, CHL, CIS, CER, AGIS, Sterile Processing Manager at AdventHealth Altamonte Springs in Orlando, and Administrator of the Central Florida Association of Central Service Personnel (CFACSP). “The overall complexity of minimally invasive instrumentation, for example, cannot be properly inspected for possible cracks, damage or potential debris. Having the time to perform a proper inspection is critical. When there isn’t enough inventory and the demand to turn an item over for a same day procedure will lead to steps being missed and this is an easy one to skip.”

Lane explains how inadequate visual inspection has a snowball effect, impacting the CS/SPD’s relationship with OR and other clinical teams.

“Visual inspection is critical to instrumentation,” said Lane. “Two of the most critical aspects of inspection are related to cleanliness and functionality. If the instrumentation is not clean then it is rendered unsterile after the sterilization process, which is a huge patient safety issue. Further when the instrumentation is not functioning properly it creates a patient safety issue. Both of these scenarios inevitably create tension amongst the surgeons, OR staff and SPD staff due to potential case delays.”

Time and training

According to Kimsey, the most important best practice is to allow CS/SPD staff the time to visually inspect instruments and devices. He states:

“Staff shortages and pressure to push through as many instruments as possible often lead to inspection being the first thing staff stop doing. Once you’ve decided to

provide the time needed to inspect, we recommend three best practices of Standard Work, adequate lighting, and technology assistance. Standard Work details what inspection is needed for each instrument and how to perform and removes the staff’s personal decision on what to do.”

Banach urges healthcare organizations to invest in the education training of CS/SPD professionals to support safe and effective instrument and device processing.

“In an effort to enhance the ability to diagnose and treat patients, the design of medical devices, including endoscopes and instruments, has become more complex and thus more difficult to clean,” said Banach. “To remedy this situation, closer attention needs to be paid to the education and training of cleaning professionals. It is important for these individuals to understand and follow the manufacturers’ instructions for use (IFU), use proper cleaning techniques and document their results.”

Banach points out how responsibility for effective processing of instruments and devices is not solely on the shoulders of the CS/SPD. Clinical staff too must play their part in the process, specifically with the performance of point of use (POU) cleaning.

“Research has proven that preparation for decontamination must begin at the POU to help prevent bioburden from adhering to the surfaces of instruments and scopes,” said Banach. “If bioburden is not removed a biofilm, a matrix of various types of bacteria and extracellular material, can form which is most difficult to remove.”

“After POU cleaning, effective enzymatic cleaning chemistries need to be utilized for pre-cleaning at the sink, as well as an ATP Cleaning Verification Testing System and Visual Inspection Camera, which all contribute to safe and effective cleaning results.”

Technology – Human eye is not enough

Recognizing how visual inspection with the naked eye is not sufficient for effective cleaning verification, suppliers have developed a broad range of products and CS/SPDs have implemented numerous best practices to support this critical step.

Coss offers the following list of technologies to help in this area:

- Lighted magnification inspection
- Inspection scopes
- Borescopes
- ATP testing
- Automated cleaning testing devices
- Residual soil testing
- Detergent testing

Among those CS/SPD professionals and manufacturers interviewed for this article, most recommended lighted magnifiers and

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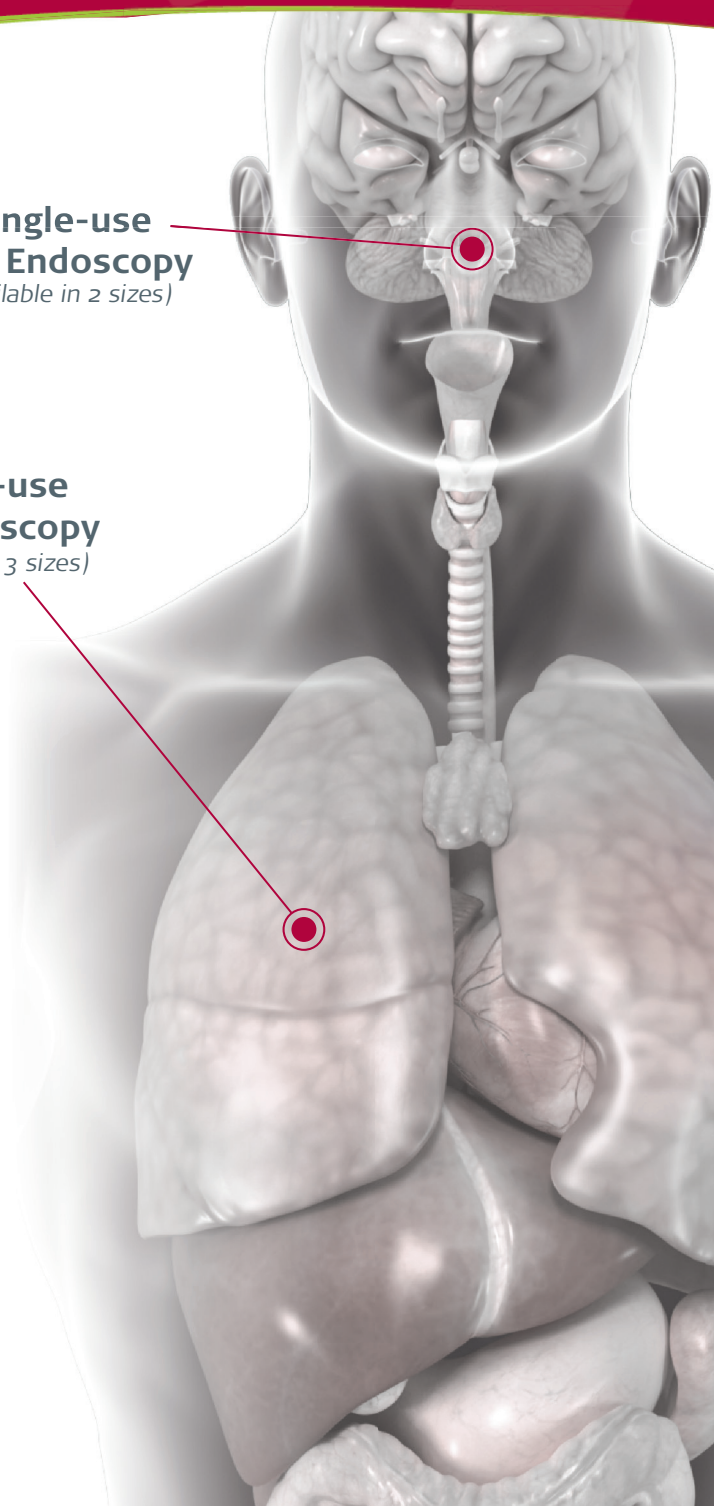
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borescopes as key technologies for visual inspection.

"A simple visual examination is not adequate for today's complex instruments and resistant organisms," said Jonathan A. Wilder, Ph.D., Managing Director, Quality Processing Resource Group. "Lighted magnifiers and borescopes are critical weapons in the battle against residual instrument soil/bioburden. At a minimum, a lighted magnifier should be used, with a borescope critical for examining the interior of lumened instruments or those with areas that are difficult to visualize."

"Having a borescope is a must for proper lumen inspection and having more than one size scope is beneficial," said Durigan. "Digital magnifiers have been a great help for my team versus the old lighted magnifier. The visualization on a digital magnifier is not only better, you are also able to capture images to verify your findings when there are cracks or damage on instrumentation."

"Adequate lighting is frequently undervalued but extremely important as

staff attempt to see microscopic traces of bioburden on instruments," said Kimsey. "Technology assistance using standard lighted magnifying glasses or electronic borescope viewers provide the ability to see where the human eye cannot."

"Technologies, such as flexible inspection scopes (borescopes), USB (digital) handheld microscopes, lighted magnifiers with interchangeable lenses and small magnifiers, will increase quality in any CS department's inspection practices," said Hendee. "Nearly all professional society organizations agree that internal inspection of flexible endoscopes will help to identify defects and inadequate cleaning giving an opportunity for removal or recleaning of endoscopes before they can cause issues for the patient. IFUs of other devices, such as arthroscopic shavers, are calling for internal inspection. Also other IFUs, such as for robotic instruments, call for a higher magnification of 4X."

"Although there are a wide range of visual inspection practices used around the world today, there are several that

I would consider best practices," said VanHee. "As with any other step in the reprocessing cycle, there is a tool for every job, and this rings true for visual inspection as well. For external surface visual inspection, utilize lighted magnification to get a closer look and identify small cracks, corrosion or retained debris. When inspecting cannulated instruments, a final passthrough with a verification tool or borescope can alert you to any residual soil, retained debris or damage to internal channels of devices."

"Proper overhead lighting and lighted magnifying at the workstations is absolutely essential to ensure that the SPD technicians are able to perform the inspection of surgical instrumentation adequately," said Lane. "In addition to these required items in SPD there are also new technologies in the industry that aid the SPD technicians in inspecting lumens and flexible scopes. The lighted borescope has increased in popularity especially since its inclusion in ST 91 as a recommend practice in the inspection of lumened instrumentation." **HPN**

Products in this area

Below is a sampling of products on the market today to help CS/SPD professionals effectively perform visual inspection and cleaning verification.

Key Surgical pipe cleaners

Key Surgical's pipe cleaners are designed to be used in cleaning verification of instruments prior to final sterilization. Available in either cotton, polyester or combination of materials.



STERIS IMS VerifEye Video Borescope

Bioburden build-up and damage can occur within the dark and difficult to reach spaces inside equipment. The STERIS IMS VerifEye Video Borescope allows the CS/SPD to examine the full length of each lumen inside equipment. High resolution visualization of

previously inaccessible areas allows for inspection of damage/residual bioburden and the ability to take necessary corrective action, if needed, before the next procedure.

Healthmark LED 4x Magnifier

Visual inspection of items can be challenging, which is why Healthmark has designed the LED 4x Magnifier. It is equipped with a 72mm diameter lens for up-close visual inspection for potential damage and residual soil after cleaning. The lightweight 85x85x60mm magnifier comes with four white LED lights featuring three levels of brightness, 4x the magnification for easy and thorough inspection of robotic instrumentation, as well as an on/off switch and a Micro-USB charging cable. The magnifier is available for individual purchase.



Ruhof's Visual Inspection Borescope (VIB)

The Ruhof's Visual Inspection Borescope (VIB) allows for



instant visual detection of internal debris and damage inside the channels of an endoscope, reducing the risk of device related infections. The Ruhof VIB's advanced visual inspection system includes a state-of-the-art camera system and intuitive software providing high resolution, knowledge-based images to help quickly determine the condition of medical devices and instruments.

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LEARNING OBJECTIVES

1. Describe the chain of infection and modes of disease transmission.
2. List and describe the steps in instrument reprocessing.
3. List the types of sterilizers typically used in the dental setting and which devices require sterilization.
4. List and describe the types of tests that monitor sterility assurance.

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SELF-STUDY SERIES

Device reprocessing in the dental setting

by Joyce Moore BSDH, RDH, CRCST

There is a significant risk of disease transmission within the dental setting that puts dental healthcare providers and patients at risk. To reduce this risk, government agencies and other professional associations have created recommendations, guidance and regulations. Device reprocessing has a number of necessary steps that must be done correctly in order to render devices non-infectious and ready for use on subsequent patients. Monitoring the sterilization process must be done and documented to show compliance with regulations.

Introduction

Device reprocessing is critical to patient and dental health care provider (DHCP) safety. Understanding the process of disease transmission and prevention methods helps ensure sterile devices and a safe work environment.

Chain of Infection

In order for disease to occur, a number of conditions must exist. This is referred to as the chain of infection and includes -

1. A portal that allows entry of a pathogen into a new host
2. A person that is not immune to the pathogen
3. A sufficient number of pathogens to cause infection
4. A reservoir for the pathogen to reside and multiply
5. A way for the pathogen to leave the reservoir and move to a new host

Modes of transmission

Disease can be transmitted between a patient and DHCP, patient and patient, DHCP and DHCP, and DHCP and patient.

Transmission often occurs through occupational exposure, via:

- Direct contact with blood, bodily fluids, body tissues or otherwise potentially infectious material (OPIM)
- Indirect contact with contaminated objects such as environmental surfaces, instruments or equipment
- Droplet contact to the eyes, nose or mouth with droplet of spray or spatter generated by an infected person
- Inhalation of suspended airborne microorganisms

Basic principles

There are four basic principles that significantly reduce microbial transmission and help break the chain of infection.¹

1. *Take action to stay healthy* by using good hand hygiene practices, being vaccinated and following the Centers for Disease Control and Prevention (CDC) guidelines⁴ for work restrictions when ill.
2. *Avoid contact with blood and body fluids.* The CDC offers guidance on the use of standard precautions, the use of personal protective equipment (PPE), use of engineering controls, use of work practice controls and postexposure management after an exposure incident.
3. *Limit the spread of contamination* by disinfecting environmental surfaces, the use of barriers and thorough housekeeping measures.
4. *Make objects safe for use* by correctly cleaning and sterilizing devices and instruments that will be reused with subsequent patients.

Recommendations, Guidance and Regulations

There are many sources of guidance, recommendations and regulations provided by different agencies and associations. Government agencies that are commonly linked to the dental setting are the U.S. Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the CDC.

The FDA is responsible for ensuring the safety and effectiveness of medical devices. They regulate the manufacturing and labeling claims of medical devices used in the dental setting, including dental handpieces and implants, sterilizers, ultrasonic cleaners, biological and chemical indicators, gloves, etc.

OSHA's charge is to protect U.S. workers from physical, chemical and infectious hazards in the workplace. They are known for their Bloodborne Pathogens Standards, which guide DHCP on how to handle contaminated instruments and waste. The use of PPE falls under these standards requirements. OSHA is a regulatory agency that can levy a fine for non-compliance with their standards.

The CDC is not a regulatory agency, but provides many recommendations that are followed in the field of dentistry. These recommendations are widely accepted by dental boards and incorporated into many state dental practice acts, thus becoming the standards of care.

The Association for the Advancement of Medical Instrumentation (AAMI) is an organization that develops sterilization standards, including those related to the use and monitoring of steam sterilization.

It is important to know what guidance, recommendations and regulations that your workplace follows.

Standard precautions

The aim of infection control measures is to prevent microbial contamination and disease transmission.² Standard Precautions are infection prevention practices which are followed to guard against exposure to all body fluids, except sweat. These apply when treating all patients and include hand hygiene; the use of PPE (including protective eyewear, face shields, surgical masks, gloves and barrier attire) and the safe handling of potentially contaminated equipment or surfaces in the patient environment.¹

During care, the treatment area is susceptible to microbial contamination produced by equipment and patients. Handpieces and ultrasonic scalers generate microbe contaminated aerosols, which land on surfaces, and when touched can be transferred to the DHCP's hands. If the DHCP then touches other items, surfaces, persons or themselves, the contamination can be transferred. The spreading of microbes between persons and environmental surfaces is referred to as cross contamination.²

Device reprocessing

Device reprocessing is a major component of safe care and involves many steps that must be performed correctly, in order to produce sterile devices.

In order to know how to properly reprocess devices, they must be divided into categories of use. These categories are critical, semi-critical and non-critical (See Table 1). Most items used in dentistry are either critical or semi-critical.

Handpieces

Dental handpieces are one of the most essential items used in practice. They are complex and costly devices with internal and external surfaces that become contaminated during use. If not properly cleaned and sterilized, microbial contamination can be expelled into a subsequent patient's oral cavity and transmit infection from patient to patient.⁴

The CDC 2003 Guidelines stated, although all handpieces (including high and low speed motors, contra/prophy angles and ultrasonics) are considered semi-critical items, they should always be heat sterilized between uses.⁴

In 2018, the "CDC Statement of Reprocessing Dental Handpieces" was published offering three recommendations.³

1. Clean and heat sterilize handpieces and other intraoral instruments that can be removed from air lines and water lines of dental units.
2. For handpieces that do not attach to air lines and water lines, use FDA-cleared devices and follow the validated manufacturer's instructions for reprocessing these devices.
3. If a dental handpiece cannot be heat sterilized and does not have FDA clearance with validated instructions for reprocessing, do not use that device.

Instrument preparation and transportation

Prior to touching contaminated items in the treatment area, all appropriate PPE needed for the task should be applied. This includes heavy-duty utility gloves, in order to prevent injury to the skin, mucous membranes or chemical exposure. Disposable sharps (e.g. dental burs, scalpel blades) should be disposed of in a sharps container located within the treatment room, as soon as treatment is completed.⁴ Non-sharp disposables and other waste should be disposed of according to state and local regulations.

Next, items should be pre-cleaned at the point-of-use to remove bioburden and gross debris. Based on the facility policy, accreditation standards, or if items cannot be cleaned soon after use, the use of a precleaning solution or spray may be warranted. These reduce proteins from drying on items and soil, which improves cleaning

effectiveness and protects instruments. Handpieces should be wiped externally to remove debris and burs removed before lubrication, packaging and sterilization. Per OSHA's Bloodborne Pathogens Standard, contaminated instruments and devices should be transported to the sterilization area in a closed, puncture-proof container with solid sides and bottom, labeled with a biohazard label.

Instrument Processing Area

The instrument processing area should be centrally located in the facility and have a one-way flow to reduce the possibility that contaminated and sterile items will be inadvertently mixed. The instrument processing area includes 4 distinct areas:

1. Receiving, Cleaning and Decontamination
2. Preparation and Packaging
3. Sterilization
4. Storage⁴

Receiving, cleaning, and decontamination

Contaminated items transported to this area will be sorted and cleaned. There are two vital cleaning methods. The first, and less preferred method due to risk of injury, is manual cleaning. This involves hand scrubbing items in a sink, using a long-handled brush and under a bath of water or solution to reduce aerosol production. Automated instrument cleaning methods are safer and more effective and include ultrasonic cleaners, washers or washer/disinfectors. If handwashing or using an ultrasonic, items should be rinsed with clean water to remove residual detergents and chemicals that can cause damage, and left to dry completely.

All items, regardless of what cleaning method was used, should be inspected for debris or damage and if necessary, be cleaned again. Any debris left behind will render sterilization ineffective. As with all FDA-cleared devices, the manufacturer's instructions for use (IFU) must be followed and will include guidance on regular maintenance and equipment testing.

Preparation and packaging

In this area, clean devices and supplies will be wrapped, packaged or placed into container systems for sterilization. Packaging

Table 1. Categories of medical devices⁹

Category	Definition	Dental Item	Reprocessing Method
Critical	Penetrates soft tissue and bone, enters into or contacts the bloodstream or other normally sterile tissues.	Dental burs, scalpel blades, chisels and periodontal instruments	Sterilization
Semicritical	Contacts mucosa or non-intact skin	Mirror, plugger	Sterilization or EPA high-level disinfection
Non-critical	Contacts intact skin	X-ray tube head blood pressure cuff	Low to intermediate-level disinfection

materials, including peel pouches, instrument wraps and chemical indicators made for the intended type of sterilization to be used will be stored in the area. Packaging materials are medical devices cleared by the FDA, and must allow sterilant penetration and maintain sterility after sterilization. The materials used should be the appropriate size for the items, so the package will not be strained. All ratcheted items should be sterilized in the unlatched position, and items disassembled to the smallest parts. The IFU should be followed for correct package sealing or wrapping. Packages should be labeled with the sterilization date, sterilizer number (if using more than one), cycle number, and the types of instrument if they cannot be seen. This will facilitate instrument retrieval in case of a sterilization failure.¹

Sterilization

Sterilization is the elimination of microbial life. Based on the type of instruments and the needs of the facility, three types of sterilization are typically used in the dental setting; steam under pressure (autoclave), dry heat, or unsaturated chemical vapor. It is important to follow instrument manufacturers' validated instructions for sterilization. Steam is the most common method. It is inexpensive, safe, quick, effective, and easy to use. Whichever method of sterilization is used, the sterilizer IFU should be followed for proper loading methods, monitoring and routine maintenance for equipment. The most common reason for sterilizer failure is operator error, including overloading, improper packaging, or an incorrect cycle chosen for the items being sterilized.

Efficacy monitoring

Steam sterilization monitoring involves the use of physical monitors, chemical indicators (CI) and biological indicators (BI) to verify if the sterilization process is working correctly. A high-level overview of the sterilization process monitoring recommendations contained in AAMI ST79:2017 is provided in Table 1, reprinted above.⁶ The table includes the familiar column headers: routine load release; routine sterilizer efficacy monitoring; qualification testing; and product quality assurance testing.

The use of physical monitors involves watching the equipment's time, temperature and pressure gauges to make sure cycle readings are correct or by the use of a print-out or recording device. AAMI ST79:2017, Section 13.5.1, states that "sterilizers that do not have recording devices should not be used, with the exception of sterilizers used together with accessory recording devices or printouts".

Table 1—Sterilization process monitoring recommendations

Routine load release (see 13.5 and 13.6)		Routine sterilizer efficacy monitoring (see 13.7)	Sterilizer qualification testing (after installation, relocation, malfunctions, major repairs, sterilization process failures) (see 13.8)	Periodic product quality assurance testing (see 13.9)
Nonimplants	Implants			
Physical monitoring of cycle	Physical monitoring of cycle	Physical monitoring of cycle	Physical monitoring of cycle	Physical monitoring of cycle
External and internal CI monitoring of packages	External and internal CI monitoring of packages	External and internal CI monitoring of packages	External and internal CI monitoring of packages	Placement of BIs and, CIs within product test samples
Optional monitoring of the load with a PCD containing one of the following: • a BI • a BI and a Type 5 integrating indicator • a Type 5 integrating indicator • a Type 6 emulating indicator	Monitoring of every load with a PCD containing a BI and a Type 5 integrating indicator	Weekly, preferably daily (each day the sterilizer is used), monitoring with a PCD containing a BI. (The PCD may also contain a CI.) For sterilizers larger than 2 cubic feet and for table-top sterilizers, monitoring is done in a fully loaded chamber. In IUSS cycles, monitoring may be done in an empty chamber. For dynamic-air-removal sterilizers, daily Bowie-Dick testing in an empty chamber, if applicable (see 13.7.6)	For sterilizers larger than 2 cubic feet and for IUSS cycles, monitoring of three consecutive cycles in an empty chamber with a PCD containing a BI. (The PCD may also contain a CI.) For table-top sterilizers, monitoring of three consecutive cycles in a fully loaded chamber with a PCD containing a BI. (The PCD may also contain a CI.) For dynamic-air-removal sterilizers, monitoring of three consecutive cycles in an empty chamber with a Bowie-Dick test pack, if applicable (see 13.7.6)	

NOTE—See Section 15 for general guidelines on how to assess the specific label claims of new products that become commercially available. Reprinted with permission from AAMI. Copyright 2017.

Chemical indicators (CI) can be external or internal and consist of heat or chemical sensitive ink impregnated to an indicator strip, tape or embedded on the surface of a peel pouch. CIs can determine that the sterilant reached that area and differentiate between processed and unprocessed load items, but not that sterilization was achieved.

The CDC recommends that external indicators be used along with internal indicators, unless the internal indicator is visible from the outside of the package. AAMI standards recommend use of CIs both the inside and outside of every pack. There are six indicator types. A Type 5 is an integrating indicator that reacts to all critical variables, giving the user more information, and is equal in performance to a BI, but does not replace routine biological monitoring.

A BI (or spore test) is used to test for routine sterilizer efficacy monitoring by using viable microorganisms that are resistant to the sterilization process. If BI spores are killed, it can be assumed that the microorganisms on the instruments and devices have also been killed. This test can either be performed in-office or mailed away for processing. The in-office version is simple to use and provides results quickly, which allows you to address a sterilization process failure right away.

The CDC guidelines state that biological monitoring must be conducted at least weekly as well as every time an implant is sterilized, while AAMI ST79:2017, Section 13.6.1 states "A BI process challenge device (PCD) should be used at least weekly and

preferably daily." Best practice would suggest the use of a BI with each load. The BI PCD should be representative of the package or tray routinely processed and the most difficult to be sterilized. It should be placed in a full load in the cold point of the sterilizer or located according to the IFU.

AAMI ST79:2017, Section 13.7.5 provides guidance about "actions to take when BIs, CIs or physical monitors indicate a sterilization process failure." If anything, including a positive BI, failed physical monitor, or a failed CI in a PCD, indicates a problem with a load, the facility should begin an investigation. If the cause of the failure is figured out right away, the issue is corrected and that load is reprocessed. But if the cause of failure is not immediately identified, the load should be quarantined, and all loads back to the last negative BI should be recalled.

Storage

Dry sterile items should be removed from the sterilizer with clean dry hands, or wicking may occur. Wicking is when microorganisms or other particles are drawn through a wet wrap or pouch, and contaminate the items inside.² Items should then be stored in a clean, dry location like a closed drawer or cabinet away from sinks and sterilizers. Packaging will maintain sterility unless it becomes wet or damaged and if so, items should be recleaned, repackaged and sterilized. Unwrapped items should not be considered sterile; therefore, it is best to package items individually or in a set, rather than in bulk and opening the pouch to

disperse items to each treatment room. A sterile package should not be opened until just prior to use.

Documentation

Each sterilizer that is used should have accompanying documentation to prove that sterilization procedures are being followed. Sterilization monitoring logs should include identifying information for the sterilizer used, date, and load number in order to help retrieve instruments from that load in case of a failure. Biological monitoring logs should have the date, load number, sterilization parameters, who placed the BI and the control BI and test BI results, at minimum. Lastly, an equipment and maintenance log should be kept to show that regular unit maintenance is being performed (including repairs) according to the IFU.

Conclusions

Dental device sterilization is a complex process that relies on human and equipment factors. All the steps involved in this process must be done correctly to ensure DHCP and patient safety. Having strong policies, procedures and thorough documentation of records is key. **HPN**

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CONTINUING EDUCATION TEST • FEBRUARY 2020

Device reprocessing in the dental setting

Circle the one correct answer:

1. What is the term to describe a series of conditions that must exist in order for disease to occur?
a. Chain of disease b. Chance of infection
c. Chain of infection d. None of the above
2. DHCP should wear this type of gloves when handling sharp items:
a. Exam b. Surgical
c. Utility d. Heat resistant
3. Instruments that penetrate soft tissue, contact bone, contact the blood stream or other normally sterile tissue of the mouth are classified as:
a. Critical instruments
b. Semi-critical instruments
c. Non-critical instruments
4. The CDC clarified the sterilization process for dental handpieces in 2018, when publishing the "CDC Statement on Reprocessing Dental Handpieces."
a. True b. False
5. The best way to clean instruments for reuse is hand scrubbing:
a. True b. False
6. Ratcheted instruments should be unlatched prior to sterilization:
a. True b. False
7. Sterilizers can be monitored with which methods:
a. Chemical indicators b. Physical monitoring
c. Biological indicators d. All of the above
8. What is the most common reason for sterilizer malfunction?
a. Operator error
b. Overloading
c. Excessive packaging
d. Improper packaging
9. AAMI ST79 states that sterilizers without recording devices or printouts should not be used.
a. True b. False
10. Sterile items should be stored in open cabinets and in a humid location.
a. True b. False

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Bringing It Home

2020 IAHCSMM Annual Conference aims to develop stronger SPD leaders, technicians

by Julie E. Williamson

Quality-focused Sterile Processing (SP) professionals who commit to staying abreast of continuing education and skill development — as well as industry standards, technologies and trends that impact the dynamic, ever-evolving discipline — play an essential role in the delivery of safe, high-quality patient care and customer service.

Fortunately, these vital professionals can meet each of those goals by attending the International Association of Healthcare Central Service Materiel Management's (IAHCSMM's) 2020 Annual Conference & Expo, taking place in Chicago (the hometown of IAHCSMM headquarters), IL, April 26-29. This annual event will deliver the widest range of educational and networking opportunities available to SP professionals to improve their leadership and technical skills and help their departments and facilities operate more effectively, efficiently and safely. Professionals from allied healthcare departments can also glean critical knowledge to facilitate improved interdisciplinary processes, communication and teamwork.

This year's Conference & Expo themed "Bringing It Home" will provide everything from knowledge-building hands-on labs and workshops to timely management and technical updates taught by some of the profession's most renowned and respected experts [attendees can earn up to 21 continuing education (CE) credits to apply toward their recertification, and additional CEs can be earned by participating in vendor-provided education during the Expo]. Poster sessions, discussion groups, and the largest vendor exposition for the SP profession will also be offered, along with valuable networking opportunities that allow attendees of various backgrounds, titles and tenures to share best practices and challenges, and engage in professional problem-solving discussions.

Those arriving in Chicago early can participate in pre-conference hands-on labs and workshops Saturday, April 25. Concurrent hands-on labs and workshops are offered to conference registrants at no extra charge. Other pre-conference workshops, including the Educators Forum, Sterile Processing Management Workshop and StrengthFinder Workshop, are offered for an additional registration fee and on a space-available basis. *Early registration is recommended for the paid pre-conference sessions.* In between all the learning and networking offerings, attendees will also be able to explore the beauty and excitement of Chicago, including its world-famous dining, shopping, entertainment, art and cultural establishments. Regardless of whether this Conference will be an attendee's first or twentieth, it's sure to be one of their most memorable. **HPN**

Abbreviated summary of the 2020 Conference & Expo schedule. Visit www.iahcsmm.org/BringingItHome to register/learn more.

Sunday, April 26

9-10 a.m. – Opening keynote speaker: Jon Dorenbos
10:15-11:15 a.m. – General Session: Medical Device IFU Validations: What's Going on behind the Scenes?
11:30 a.m.-12:45 p.m. – Welcome lunch
1-2 p.m. – Advocacy Program Updates
2:15-3:15 p.m. – Concurrent sessions (Protective Clothing: All Gowns Are Not Created Equal; Leaders Eat Last: Building a Strong Culture through 'Corp Values'; How Much? What Happened? Costs & Safety of Gastrointestinal Endoscopic Procedures)
3:30-4:30 p.m. – Concurrent sessions (Communicate! It's Service Excellence; Identification & Prevention of Surface Alterations on Surgical Instruments Caused by Waterborne Minerals; UDI Panel Presentation; Upping Your Game for Quality Control in SPD and Endoscopy)
7 p.m. – Opening reception

Monday, April 27

7-8 a.m. – Concurrent Sessions (10 Must-Have Skills for Frontline Central Service Colleagues; other topics TBD)
8:15-9:15 a.m. – A Guide to the Guidelines: Understanding the AORN Guidelines to periOperative Practice
9:30-10:30 a.m. – Concurrent sessions (Demystifying Standards: AAMI ST79 – A Journey into Newly Released AAMI Standards and TIRs; Washer-Disinfectors: What Goes into a Successful Cycle? Critical Facts: Vaporized H2O2 Low-Temperature Sterilization; Sunday concurrent session video replays)
10:45-11:45 a.m. – Concurrent sessions (What's New with AAMI ST91? Have You Heard of the Updates; Crash Course on Process Monitoring and Testing; Audit and Assess: How to Optimize Your SPD; Endoscope Drying: A Detailed Look at Method Effectiveness and Microbial Levels; Sunday concurrent session video replays)
11:45 a.m.-12:45 p.m. – Attendee lunch
1-5 p.m. – Vendor Exposition
6:30-7:30 p.m. – Reception

Tuesday, April 28

7-8 a.m. – Concurrent sessions (What Do I Do with These Dental Instruments?; Making the Decision to Go Off-Site)
8 a.m.-12 p.m. – Vendor Exposition
12:15-1:15 p.m. – Attendee Boxed Lunches
1:30-2:30 p.m. – Flexible Endoscope Safety: Evidence-based Advocacy for Quality Management
2:45-3:45 p.m. – Concurrent sessions (AAMI Roundtable: Chamberside Chat; How to Evaluate Strains after Steam Sterilization; The Inside View: Internal Endoscope Anatomy and Its Relationship to Effective Reprocessing; Good Germs Versus Bad Germs: Our Own Microbiome; Monday concurrent session video replays)
4-5 p.m. – Concurrent sessions (Partners in Prevention: Building the Bond with Infection Prevention; Is Work/Life Balance a Real Thing?; Biological Indicators: The Key to Uncompromised Patient Safety; The 'Why' behind What We Are Required to Do in SPD; Monday concurrent session video replays)

Wednesday, April 29

8:30-9:30 a.m. – The Optimal Sterile Processing Department: Blending Technology with Expertise
9:45-10:45 a.m. – The Joint Commission Update
11-11:15 a.m. – Closing remarks/Passing of the gavel
11:15 a.m.-12:15 p.m. – Closing keynote speaker: Steven Pemberton

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BI testing, disinfection; reusable scrub caps; peel pouch weight limits; ceiling enclosures in SPD

by Ray Taurasi, Principal, Healthcare CS Solutions.

QOur healthcare system is in the process of building a large physician office building that will include a urology practice and a gynecology practice, which both will use a tabletop steam sterilizer and chemical disinfectants. I am not that familiar with the requirements for disinfection in the physician office setting and do not feel that the Centers for Disease Control and Prevention (CDC) guidelines provide any clear answer. Does the room where instruments are being disinfected need to be a negative pressure room? Does that room require 10 air exchanges per hour? What are the minimum standards for biological indicator (BI) testing on tabletop autoclaves?

AThe requirements for the disinfection process in a physician office or surgery center are no different than those of a hospital. Since you are part of a large healthcare system, I suggest that you contact the hospital sterile processing director for assistance relative to policies and procedures for sterilization and disinfection. All healthcare facilities within a healthcare system should maintain the same standard operating procedures (SOP). That means that any facility performing any of the sterile reprocessing functions (cleaning, disinfection and or sterilization) abide by the established system policies and procedures.

When developing procedures for the use and handing of chemical disinfectants, the user should consult the safety data sheet (SDS) supplied by the disinfectant manufacturer, to determine if any personnel or environmental hazards exist, and note the recommended safety precautions. In general, the following factors should be considered:

- Engineering controls, as required, such as adequate ventilation and/or a vented hood in the disinfection area to evacuate the chemical vapors
- The use of covered containers for the disinfectant solution, when appropriate
- Appropriate procedures and personal protective equipment (PPE) for the user, such as gloves, eye protection, surgical

face masks, and liquid-resistant gowns or aprons, as required by Occupational Safety and Health Administration (OSHA) (29 CFR 1910.1030)

- Adequate rinsing of devices with sterile distilled water after disinfection
- Disposal of disinfectants

Regarding the air pressure to be maintained, it is recommended that the decontamination room where soiled medical devices are cleaned be a negative air pressure, and the preparation and sterilization room where cleaned items are inspected, assembled into kits, packaged and sterilized be a positive air pressure.

If the disinfection process is conducted in an area of the decontamination room, a clean workstation should be maintained for this function and personnel conducting the disinfection function should wear clean PPE.

The minimum standards for BI testing on tabletop autoclaves is the same as regular autoclaves, weekly preferably daily and with each load containing any implants.

QWe are currently using disposable bouffant caps, not the scrubs caps that you tie in the back of your head, but we want to try out the reusable/washable caps. I have found ones that are made of the same material as our scrubs (which we wash in-house), and we plan to do the same for the reusable caps. Does anyone use a reusable/washable cap?

AI have not seen many facilities that are using reusable/washable caps as you have described. I heard from many that have experienced a high loss rate of reusable washable caps lost in transit, thrown away or not returned from the laundry. Thus, the anticipated cost savings was not actualized, and the cost of caps increased.

I have also seen hospitals that allow staff to wear personally-owned novelty caps that they are responsible for washing. They are required to wear a disposable bouffant cap over their novelty cap when in the work area.

QI've recently been asked if peel pouches have a weight limit. I've never heard of a weight limit for peel pouches, only for

instrument trays (25 lbs.). Could you please clarify this statement?

APeel pouches are intended to be used on non-bulky items or a few items. The peel pouch manufacturer's instructions for use (IFUs) that I have reviewed have not specified a weight restriction. More commonly, they provide guidelines on the distance the packaged item must have from all the internal pouch seams, and state that the thickness of the item should not cause tightness or tension on the package seams or closure. Fragile items or unprotected sharps should not be placed in a peel pouch. The specific pouch IFU must be consulted and adhered to.

QOur hospital's very old. The sterile processing space is located in the sub-basement and consists of four separate rooms. I need additional space for sterile storage. The space that they are giving me is small (10' X 12') and has overhead pipes running through it. They are telling me there is no reason to enclose the pipes with a finished ceiling because they are going to be rewrapped in a new insulated material. Will that replace the need for a ceiling?

AA sterile storage area should be considered a restricted controlled area capable of providing and maintaining a clean environment for sterility maintenance. AAMI St79 3.3.5.3 states that ceilings in restricted areas should enclose pipes and duct work above clean work areas, including the sterile storage area. Ceiling areas must be constructed with materials that are not made of particulate or fiber shredding materials. A finished ceiling with enclosed pipes and other fixtures will minimize dust, condensate and other sources of potential contamination. **HPN**

Ray Taurasi is Principal, Healthcare CS Solutions. His healthcare career spans over three decades as an Administrator, Educator, Technologist and Consultant. He is a member of AORN, AHA, SGNA, AAMI and a past president of IAHCSMM. Taurasi has been a faculty member of numerous colleges teaching in the divisions of business administration and health sciences.

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Supply Chain & IT: Collaboration at first byte?

The pair must make departmental intervention compute – even via third parties

by Rick Dana Barlow

Supply Chain and Information Technology (the IT department) consistently have engendered a love-hate relationship. To succeed, Supply Chain needs IT expertise to manage and track the myriad transactions and products that flow through the department; at the same time, IT wants control over most, if not all, electronic connectivity within a healthcare organization for operational and security purposes.

For Supply Chain, IT is a tool; unfortunately for IT, Supply Chain can be a tool, too, in terms of attitude rather than function.

If Supply Chain, which also should oversee purchased services on behalf of IT and other departments, controls at least 50 percent of a healthcare organization's expense stream, it only makes sense that they should be IT-enabled and IT-savvy – whether by their own staff or by relying on IT assistance.

So how do – or should – these two departments amicably work together?

Form follows function

Some may argue against siloes or walls between departments and functions in the name of cooperation and transparency, but certain barriers exist for logical reasons.

Supply Chain and IT professionals historically have been known to be not very collaborative, according to Nicole Mazzei-Williams, CMRP, FAHRMM, National Enterprise Account Manager, TRIOSE Inc. She points to three key reasons.

The first may be linked to corporate hierarchy, positioning on the C-suite ladder.

"The two departments are not integrated," Mazzei-Williams told *Healthcare Purchasing News*. "I have found one IDN out of hundreds that I have worked with over the years where Supply Chain and IT exist in the same building and report to the same C-Suite position. Most organizations have Supply Chain report to the CFO, while IT reports to the CIO. This inherently creates a divide if the foundation and infrastructure is not aligned

appropriately from the top, down and then across the divisions as well."

The second may involve technological security and traffic copping conflicts.

"The IT department is responsible for keeping the IT infrastructure safe," Mazzei-Williams continued. "Supply Chain tends to have data coming in from various entities as well as being shared to various entities. This creates a potential IT hazard. Sometimes Supply Chain works around IT to not hit the red tape; other times they follow protocol and go through IT. But with many competing projects, collaborating with IT can indeed slow down the supply chain projects – again creating a rub between the two sides. Supply Chain is trying to save the organization money, but if projects are bogged down, this can slow down the productivity and savings."

The third may point to priorities and resource availability.

"There never seems to be enough resources on the IT side to get done what needs to get done," she indicated. "Between entire system upgrades that often take years to complete to everything else in between, bandwidth can be limited. I can't even begin to tell you how many times I've gone into a discussion on a savings opportunity, and the first thing out of Supply Chain is 'If this needs to go through IT, we can't look at it for X weeks, months, etc., because they are bogged down with X and short on resources. While this can be smoke and mirrors in some instances, in the majority of situations it has been true. When Supply Chain has savings goals and IT seems to be a potential roadblock, Supply Chain will work around it if they can find a way. While this may seem to be a short-term fix, it doesn't bode well for improving collaboration in the future."

Richard Mackey, Senior Vice President of Information Technology, Intalere, laments that this represents a partnership struggle that both face.

"If a business team in Supply Chain sees IT as a service provider or order taker and not as a true partner, there is a limit to what

can be achieved," Mackey noted. "I recall a situation earlier in my career, dealing with a constant complaint that our IT team within the organization was not delivering enough support or quickly enough. I wanted greater control of the tools in place to assist in contracting, procurement and to conduct spend analytics. I recall a heated discussion with our then-CIO where I demanded better service as his customer. He pounded his fist on the table asserting that I was not his customer – I was his partner. As Supply Chain struggles to get out of the basement, the same struggle for both service functions exists to best partner with functions across the organizations and not be limited."

Meanwhile, Melissa Amell, Industry & Solution Strategy Director, Infor Healthcare, observes that Supply Chain and IT remain somewhat behind where they should be today.

"As technology has changed and matured, the way Supply Chain and IT departments collaborate should have evolved," Amell indicated. "Gone are the days where technology drives business process. In today's world of modern functionality and ability to access data, technology should enable and support business process. Supply Chain tends to be resistant because most IT departments have not progressed to a service/support model and do not view Supply Chain as an internal customer."

Historically, the two departments have been at odds or have competed for time but Cameron McEwen, Senior Market Manager, Global Provider, GHX, maintains hope and sees a bright side within providers to their collaborating.

"Misunderstandings between supply chain and IT have come from the fact both departments are focused on meeting their respective goals and objectives," McEwen said. "It's understandable that Supply Chain professionals who are working to drive



Nicole Mazzei-Williams



Richard Mackey



Melissa Amell



Cameron McEwen

a major initiative that will greatly benefit an organization – like internal cost savings, for instance – believe their priorities should likewise be a No. 1 priority for IT. However, IT's list of internal customers in healthcare is often lengthy, and Supply Chain is just one more constituent on that list vying for their valuable time. Being just one IT ask among many can be frustrating for Supply Chain professionals."

McEwen recognizes, however, that in some cases Supply Chain continues to struggle for relevance.

"Part of this issue stems from the fact that the Supply Chain is still working to gain respect and support from senior hospital leaders," he said. "Oftentimes, hospital purchasing departments are located in the basement of a facility, literally the dungeon of a hospital. Sometimes, Supply Chain leaders are not consulted on big decisions being made in their organizations, even things that directly impact the supply chain, such as which ERP platform a hospital purchases.

"All this creates an environment where Supply Chain feels like the 'red-headed step child,' creating a constant battle between Supply Chain and IT," he continued. "Supply Chain perceives IT as a department that's impeding its ability to achieve key goals – and, in turn, IT feels put-upon with too many seemingly random requests that seem disconnected from its main business priorities. But as organizations increasingly understand the business value Supply Chain can deliver, and as Supply Chain gains respect as a critical organizational function, the partnership between Supply Chain and IT is improving."

Finding common ground

Supply Chain and IT professionals share common goals when it comes to keeping costs down and finding ways to improve workflows, according to John Freund, President and CEO, Jump Technologies Inc., yet they remain at loggerheads over foundational issues.

"These teams often find themselves at odds because they don't equally understand the capabilities – and limitations – of their current EMR or ERP systems," Freund said. "IT often discounts or doesn't even consider the needs of Supply Chain when selecting an ERP or EMR system. Thus, Supply Chain is often left with a system that does a great job of helping with the needs of purchasing, but lacks in the functionality of actually managing inventory once inside the hospital. It is important that Supply Chain educates IT on their inventory workflows, the challenges they face when trying to reduce



John Freund

inventory, and the labor associated with handling it. They need to help IT understand the challenges they have in managing physician preference items, tracking implants and the vendors that sell them to the hospital, and ensuring that chargeable items consumed are actually billed properly.

"We have found that when properly educated on supply chain challenges, IT can be a great partner to work with to help solve problems," he added.

Of course, when Supply Chain is educated properly on IT challenges then it can better understand the challenges IT faces routinely, according to Nancy Pakieser, Senior Director, Industry Development, TECSYS. They have to grasp the difference between operational and software processes.

"For many Supply Chain folks, the operational aspect of their jobs do not translate well into software processes, which can lead to confusion around the desired outputs," Pakieser said. "It is a scenario I have seen played out more often than not; what the Supply Chain professional defines as their desired end-state does not translate well into the solution delivered by their IT counterparts. By not working together to understand the challenges each department faces, solutions are siloed and disconnected, and lead to intradepartmental frustration."

Resource access and workload can affect the professional relationship, too, she indicated.

"If IT is centrally managed, they are dealing with all the software and technology support across the enterprise," she said. "This includes clinical, business, records, facilities, ERP, EHR and other operational needs. Now, let's expand that to include care delivery areas outside the acute care setting! In this scenario, Supply Chain may not feel they are getting the support they need from their IT colleagues for departmental initiatives. One way to mitigate this resource allocation challenge is to hire a person – or team – that is dedicated to Supply Chain, much like Supply Chain has embedded staff in procedural areas to provide dedicated support. This has been a successful resolution for some health systems." [Editor's Note: For a relevant, top-notch and workable example, see *Tower Health, HPN's 2019 Supply Chain Department of the Year*, by visiting <https://www.hpnonline.com/21087717>.]

IT oversees serious business and issues that should not be discounted or misinterpreted, insists Glenn Spriggs, Director, Product Management, TECSYS. Their focus needs to be on consistency and on compliance to the

organization's established norms and standards.

"The typical health system has hundreds of software products in their ecosystem," Spriggs said. "It is incumbent on the IT team to synergistically secure all that data, support the overall infrastructure and deliver on service level agreements. If prospective systems expose the organization to some type of risk, IT objections can sometimes be misinterpreted by the business as impediments to agility. In the end, this important due diligence serves to protect all parties from many nasty outcomes; think litigation, HIPAA violations, down-time, opportunity cost – and most importantly – risk to patients' safety. Collaboration, planning and communication at the senior leadership levels of both IT and Supply Chain can quickly break down any barriers that may exist, creating a powerful partnership for success."



Glenn Spriggs



Nancy Pakieser

Expanding influence

Experts alternatively express support for or misgivings about strategies and tactics to bridge the gap between Supply Chain and IT, while agreeing, however, that the gap is not insurmountable. Whether hiring dedicated staff members to manage and oversee supply chain IT – be they data analysts, data scientists or programmers – or using expertise from consulting firms, GPOs or other third-party product and service companies, reactions are mixed.

Think temp, according to TRIOSE's Mazzei-Williams.

"I do believe that for larger projects, adding some short-term help is probably beneficial, especially if the employees won't be needed long-term," she noted. "Better to add some consultants either from the organization you are buying services from, your GPO, or another provider, than to add head count only to be laid off at another time. Many IDNs are adding data scientists as data is becoming more important in decision making. These analysts assist Supply Chain in number crunching and can build credibility for savings opportunities and calling attention to the needs to get the projects pushed through more quickly."

Staffing for Supply Chain IT may solve a critical communication concern, GHX's McEwen suggested.

"Supply Chain and IT often don't speak the same language, which makes it hard for IT to appreciate the value or urgency of the 'ask' the Supply Chain is making to them," he said. "If Supply Chain can employ professionals on its teams who can 'talk the IT talk,' these individuals can play a critical role in imparting the value of what Supply Chain is trying

PRODUCTS & SERVICES

to achieve and help boost an ask higher on IT's priority list."

McEwen points to Supply Chain's increasing alignment with Value Analysis departments and professionals as a noteworthy example.

"Hospitals in the past were eliminating data analysts as part of cost cutting initiatives, but now the scale is tipping in the other direction as the value of this role becomes more critical and acknowledged," he noted. "In today's robust hospital M&A environment, providers are dedicating more resources and dollars to build out teams populated by analysts who can crunch data. Having analysts who can deliver data directly to the supply chain helps lessen some of IT's burden so IT teams can be leveraged for more strategic requests."

McEwen acknowledges that GPOs are helping, too, by striving to add value to their membership and customer bases by offering services that address data issues typically submitted to IT and easing the burdens and

expectations placed on them. Further, third-party organizations, including consultants and product and service companies, contribute by supporting [key performance indicator] reporting through reviewing, mining and sharing relevant data findings, he added.

For Infor's Amell, Supply Chain simply needs to assert some control.

"Supply Chain should own the business operations and relationships of core Supply Chain functions in [the] healthcare organization," she said. "Many organizations have progressed to this model where data analyst and scientist reside in the Supply Chain department. In a smaller organization those economies of scale might not be available and resources might need to be shared. As cloud software continues to grow and become more prevalent, many IT departments are going to be challenged to redefine their roles in a healthcare organization. A different skill set will be needed. An example would be a transition to data science, AI and machine learning."

JumpTech's Freund, however, doesn't believe providers must stock up on data analysts or scientists because a number of software companies already are fortified with these pros and have created useful applications to develop and fortify clinically integrated supply chains.

"Leveraging third parties, like GPOs or other consulting organizations, can help Supply Chain make informed decisions based on the data their software applications provide," he said. "IT has to recognize that ERP and EMR systems are very good at their core functionality, but like every enterprise system, they leave gaps that can be filled by other software providers in the market. Being open to integrating these solutions into the existing hospital infrastructure is key to driving savings and improving patient care; although IT understandably wants to minimize the number of systems that require integration.

"However, when you consider studies that have shown a typical hospital misses up

Supply Chain-IT alignment strategies offer more byte than bark

When encouraging and navigating Supply Chain to collaborate with Information Technology and vice versa, what strategies and tactics make for long-term vs. short-term improvements? Seven experts share their recommendations.

"Collaboration and trust are the key to long-term improvement from both departments. The two departments are integral to the operations of any health system and thus need to play in the same sandbox often. Short-term improvements can often be made by tweaking processes or identifying challenges and working together for solutions; but long-term collaboration will be reliant on trust and a positive culture."

Nicole Mazzei-Williams, CMRP, FAHRMM, National Enterprise Account Manager, TRIOSE

"Most hospitals we talk to have short-term goals of reducing inventory and the labor associated with managing supplies. This can be done by integrating solutions that provide data to help manage how much inventory should be on shelves; this is a typical gap found in most ERP systems. For long-term improvements, Supply Chain should look to automate systemic problems in the hospital. This would include implementing solutions that help systematically manage physician preference item or drive standardization by eliminating both clinical and operational variances or reducing the amount of time nurses spend documenting cases so they can spend more time with patients."

John Freund, President and CEO, Jump Technologies Inc.

"Short-term improvements relate to defined processes for support and service delivery with specific key performance indicators (KPIs) and defined service level agreements (SLAs). In

this way, service delivery can be measured and understood in the short run to make sure what's needed is provided. In the longer term, a strong and healthy partnership between the two functions is most valuable with shared objectives so that both functions hold a shared goal and figure out the best way to integrate their work together."

Richard Mackey, Senior Vice President of Information Technology, Intalere

"The supply chain is working to play a larger role in C-suite initiatives where it can lend tremendous insights in the support of key trends, such as the shift to value-based care, along with the movement to better integrate the supply chain with a hospital's clinical staff. Aligning with initiatives that matter to C-level leaders is helping Supply Chain get more time at the table and elevate its business presence. It's only natural that as Supply Chain gains more strategic visibility and lives higher up in the hospital operational chain than previously, it will get more attention from IT. No longer is Supply Chain just viewed as the department where you 'go to get a widget.'"

Cameron McEwen, Senior Market Manager, Global Provider, GHX

"Clearly defined roles/scope, establishing business process ownership, and reallocation of resources. Many organizations will work differently in the cloud, and the skill set required will be unlike what was required in the past."

Melissa Amell, Industry & Solution Strategy Director, Infor Healthcare

"There is no silver bullet, of course. But like most complex situations, communication and a desire for collaboration go a long way in addressing both short- and long-term improvements. An example of success is the move to a clinically integrated supply chain that we see happening across the market. It extends well beyond just Supply Chain and IT, including clinical, finance, leadership, and so on. By bringing appropriate representation to the table, providing clear direction and allowing them to create the process and flow that works for their organization, health systems are making significant strides in this area."

Nancy Pakieser, Senior Director, Industry Development, TECSYS

"Aligning goals at the corporate level, at the team level, and on the individual level creates amazing results. To foster this kind of alignment, I suggest looking into the Objectives and Key Results (OKR) goal setting methodology. Many successful corporations, including TECSYS, use this methodology to create common goals throughout the organization. Starting an OKR program sounds easy, and can result in immediate gains, but it does take time and some know-how to refine the process in order to get maximum results. There are myriad other tools to help in the discipline of keeping everyone focused and on track – just ask Google – but the key is to do it right. Even the best tactic will fail if stakeholders are not bought in on the strategy."

Glenn Spriggs, Director, Product Management, TECSYS

to 30 percent of charge capture due to complicated workflows and lack of system integrations, it becomes clear that these additional solutions that can help fix those problems should be considered," he continued. "We have found that when properly educated, IT can be a great partner to help identify and bring those solutions in house."

Flexibility and speed should drive decisions on potential solutions, Intalere's Mackey insists.

"The best approach is to deliver a strong partnership model where processes are well defined and needs clearly articulated," he said. "The need to best analyze spend and detailed data for better category strategies and value capture is more important now than it was five years ago. Data lives in distinct systems and applications across the organization. There can also be a trap that nobody knows the organizational need or the requirement as well as Supply Chain, so they can sometimes not realize, or discount the true value third-party expertise from a consulting firm or a GPO can bring. The trap

is that while no one knows your organization better than you, it is a complete mistake to think that best practices from a third-party aren't critically valuable. Best practices from suppliers, partners, and other providers are an important part of partnering with organizations to deliver value."

TECSYS' Spriggs emphasizes a more holistic approach that unites thinking.

"Without a doubt, conflicting priorities and misalignment of goals and objectives plague many organizations," he noted. "Busywork needs to be filtered from important work through value-based analysis. By prioritizing the work that drives the most value for the business and by agreeing on common objectives, these teams will work toward more successful outcomes. This 'good-business-practice' of creating alignment within the organization applies to all teams, both inside and outside of the organization." **HPN**

When Supply Chain-IT collaborate, organizations elevate

Six Supply Chain IT experts recount successful team-ups between the two departments.

"In one IDN, Supply Chain and IT worked well together from the start of our project there, and the health system almost doubled their projected savings within the first year. This is because the two departments were used to working side-by-side on initiatives and were on the same page from the very beginning. This collaboration allowed our organization to process the data we needed to process more quickly as we weren't chasing the data."

Nicole Mazzei-Williams, CMRP, FAHRMM, National Enterprise Account Manager, TRIOSE

"Children's Mercy Hospital in Kansas City, MO, is a good example of an effective Supply Chain-IT relationship. Jump Technologies began working with Children's in 2016, when supply chain leadership realized they needed a solution that would help reduce inventory without adding tasks to nursing. After conducting a thorough supply chain review process that was part of the organization's overall Lean initiative, Children's chose to implement a kanban approach with Jump Technologies, and we have worked closely with their IT team to integrate JumpStock into their Lawson platform to create a seamless, demand-driven supply chain. As a result of their internal collaboration and the integration of JumpStock, Children's has realized several important outcomes, including:

- Time savings – Time to restock the hospital's PAR walls has been reduced to less than 15 minutes;
- Improved workflows – Aligning supply chain with clinical workflows reduced the time it takes for nurses to find their first item by nearly 85 percent, while reducing order time for Supply Chain staff by 80 percent and reducing the time it takes to reorder PAR wall to approximately 5 minutes;
- Lower supply spend – Reorganization in supply rooms has allowed Children's Mercy to reduce inventory by an average of \$15,000 in each of the first five rooms where the flipper bin system was implemented;

- Fewer stockouts – As the data delivered by the reporting capabilities of JumpStock paints a clearer picture of actual supply use, the hospital has increased ordering frequency from every two or three days, to daily orders of smaller quantities. Stockouts are also down significantly under the new system;
- Less inventory sitting on shelves – JumpStock has allowed Children's to reduce on-hand inventory by 12 percent and reduce inventory on PAR walls by 9 percent.

John Freund, President and CEO, Jump Technologies Inc.

"We were looking to redesign our procurement tools to better integrate with our ERP. We found that services procurement and electronic invoicing could help us to transform our procure-to-pay cycle within the company. There was a breakdown initially between Supply Chain and IT where blocks and obstacles were being identified by both parties. Ultimately, the lack of a partnership between the two teams was addressed by bringing both groups together for a period of frequent facilitated off-sites over several months. Being able to reframe the need and the priorities between both teams allowed for a breakthrough to occur where common ground could be found and identified through a better understanding of the teams' goals. Ultimately, the project was implemented and allowed the company to transform its procure-to-pay capabilities."

Richard Mackey, Senior Vice President of Information Technology, Intalere

"Early on in my career I was fortunate enough to work with a great team of IT professionals where operations were approached as a true collaboration. IT owned the technical aspects of the business systems, and I as a former Director of MMIS owned the data and functional aspects of the system as a department and business owner. Both departments had clearly defined roles and objectives and we were able to work

together to execute, which resulted in customer satisfaction to the departments we supported in the overall healthcare organization. Based on newer functionality that is available today, I likely would be structured and work very differently with IT than I did in the past."

Melissa Amell, Industry & Solution Strategy Director, Infor Healthcare

"One prime example of this kind of collaboration is the team at Mercy in St. Louis. As Betty Jo Rocchio [Chief Nursing Optimization Officer] began to address preference card management, she had an 'Aha!' moment with her colleague Matt Mentel [System Executive Director, Business Integration] when she realized what she was managing was a supply chain problem. From that point forward, she engaged with Supply Chain and other departmental stakeholders in IT and finance to design and implement processes that supported clinical care delivery by leveraging the strength of each functional area. It has been a terrific, clinically-driven, operationally-led success!"

Nancy Pakieser, Senior Director, Industry Development, TECSYS

"A marker of success for us as a supply chain software provider is when these two departments work in perfect lockstep. For example, IT and Supply Chain collaboration is paramount in integrating the EMR with supply chain software to retain a common workflow for clinicians while supporting supply chain inventory management processes. We work on complex projects like implementation of self-distribution projects and in-hospital supply chain solutions that extend into perioperative areas like the OR and cath lab; on a regular basis, we witness and foster collaboration between Supply Chain and IT and see positive business outcomes like cost containment, new revenue capture, reduced expiry and safeguards for patient safety."

Glenn Spriggs, Director, Product Management, TECSYS

"Studies show astronomical OR costs per minute. Any time you can shorten the [OR] turnover time turns that non-revenue generating time into revenue generating time; that adds value for everybody. Any product or service that supports the efficiency of the OR to meet the demand of scheduled starts has value directly to the bottom line of a hospital."

Suzanne Champion RN, BSN, MBA, CNOR, Director Clinical Operations, U.S. Acute Sales, Cardinal Health

"Misunderstandings between supply chain and IT have come from the fact both departments are focused on meeting their respective goals and objectives. ... However, IT's list of internal customers in healthcare is often lengthy, and Supply Chain is just one more constituent on that list vying for their valuable time. Being just one IT ask among many can be frustrating for Supply Chain professionals."

Cameron McEwen, Senior Market Manager, Global Provider, GHX

"If instruments and devices are not thoroughly inspected for damage and debris, not only externally but internally as well, any subsequent process (e.g. sterilization, high-level disinfection) may not be effective. Device complexity affects inspection greatly. Requiring enhanced visual inspection using higher magnifications (e.g. 4X) and having the ability to visualize internal surfaces and channels that cannot be seen with the naked eye greatly helps to increase patient safety."

Seth Hendee, CRCST, CIS, CHL, CER, CSPDT, CFER, Healthmark

"This [collaboration between IP and EVS] is an essential step in decreasing infections and providing safe patient care. A strong working relationship between the two departments drives down infection rates, but it really is dependent on the efforts of both departments. When an equal partnership is formed, and both work together with the common goal of providing education and support to the EVS staff, it becomes an environment that decreases the risk of infection, with the patient's safety as its focus."

Lorene Campbell, RN, BSN, CIC, Infection Preventionist, Kindred Hospitals, Madera, CA

PEOPLE & OPINIONS

Why CS/SPD struggles to provide consistent high quality

by Gregg Agoston M.B.A.

When we talk about quality and sterility assurance, we are really talking about patient safety and the impact CS/SPD has on the ultimate quality measurement; surgical site infections (SSI). CS/SPD directly affects a patient's risk of SSI in two ways as defined by American College of Surgeons and Surgical Infection Society.¹ These are "operative time" and "sterilization of surgical equipment". CS/SPD can extend operative time if the instruments are not available or functional. Additionally, the instruments must be clean and properly sterilized or high-level disinfected to be safe for patient use.

Failure to pre-clean in the OR, delays in processing, not using cleaning accessories or cleaning solutions correctly, poor technique, and failure to follow the manufacturer's instructions for use (IFU) can mean that the instrument was not properly cleaned. Just because you cannot see the debris, does not mean that the instrument was properly processed. Each step in the IFU must be followed. Extending OR exposure time and/or not properly cleaning/sterilizing the instruments increases patient risks of SSI.

Knowing the need

For these reasons, the most important job of CS/SPD is to ensure that the instruments are available, functional and safe for every patient.

Unfortunately this goal is often not met as there is a silent epidemic of non-sterile and/or non-functional instruments that make their way to the OR every day across the country. If it were not for antibiotics and other steps to minimize SSI, we would likely see this epidemic in the news daily. The reality is that our population is aging and more people will require surgery, bacteria is becoming more virulent and time to antibiotic resistance now is being measured in weeks and months vs. years. This equates to a perfect storm that could result in many more SSI and patient deaths. For these reasons, CS/SPD must do all it can

to meet its goals of instrument availability, functionality and safety for every patient.

Causes and contributors

For CS/SPD the root cause of the epidemic is a fundamental flaw in CS/SPD operations/organization structure and a lack of recognition by executive leadership of the importance of CS/SPD for safe patient care. In most CS/SPD every technician is trained and expected to perform all duties with every instrument that comes to the department. The lack of specialization leads to lower quality/safety. The lack of executive recognition of the importance of CS/SPD, leads to low pay, high turnover and low morale amongst technicians. These two root causes go back to the inception of CS/SPD and need to be corrected to end the silent epidemic. Factors exacerbating the problem are:

1. Increases in the numbers and types of surgical procedures and the accompanying complex instruments,
2. Knowledge of the instrument, its IFU and the application of that knowledge to the cleaning and inspection process,
3. Challenging instrument design (lumens, insulation, dead ends).

Evolution outpaces efficacy

Prior to the creation of CS/SPD, nurses who assisted in surgery processed and sterilized the instruments. Thus, the processors had a good-to-excellent understanding of the instruments and their function. At the time, instrumentation was primarily general stainless steel instruments and much less complex than instrumentation today. To standardize instrument processes and to minimize the time that contaminated instruments were in patient treatment areas, CS/SPD were created. Since CS/SPD's creation, advanced surgical procedures and instrumentation required for the procedures expanded exponentially. With the advent of complex instruments (MIS instruments, endoscopes, video, power and robotic equipment, etc.) came complex instruc-

PEOPLE & OPINIONS

tions for processing e.g., there are over 40 pages of instruction to clean a Di Vinci robot arm. Many of the instruments have complex geometry and in addition to lengthy processing steps, much of the instrument cannot be visualized easily to see if cleaning processes were adequate. Instrument repair companies commonly see debris under insulation, inside channels and lumens when they disassemble instruments. This debris can harbor dangerous microorganisms that can cause infection and even death in susceptible patients.

The importance imperative

Lastly and most importantly, moving instrument processing to CS/SPD meant the loss of the nurses' knowledge and specialization with the instrumentation. It also relegated cleaning instruments to a similar level of importance as cleaning dishes in food services. Low pay, shift work, non-glamorous work and working conditions combined with constant pressure by the OR, make the SPD technician job very challenging. Additionally, most CS/SPD's require every technician to rotate through different phases of the CS/SPD processes. The expectation is that every technician must know every instrument in the hospital, and how to disassemble, clean, reassemble, inspect, test and sterilize them. Considering that there are thousands of different instruments in the hospital and hundreds if not thousands of instrument sets, combined with high turnover and subsequent low knowledge levels; the job of the CS/SPD technician is virtually impossible to master resulting in increased patient risks.

The specialization solution

The lack of specialization in CS/SPD results in the average quality of work being well below 100%. The majority of CS/SPD require every technician to perform all duties in the department rotating daily or weekly (disassembly, hand washing, automated washing, reassembly, inspection, testing, packaging sterilization and case cart building for every instrument). The best technicians and less proficient technicians performing all duties lead to safety/quality average of less than 100%. This variation in quality (safety) is a significant point of contention between the OR and CS/SPD and can put patients at risk of SSI. In facilities where there is significant variation in set quality/safety, surgeons' and nurses' frustration are high, which can have a negative impact on patient care.

Change for the better

CS/SPD must transition away from the wasteful and inefficient current model and move to an organization structure that allows for specialization. At the same time, engagement with executive leadership is needed to promote the value and benefits of recognizing CS/SPD for its critical role in patient safety and to get the recognition and resources needed to end the silent epidemic of non-sterile, non-functional instruments in the OR. Numerous cost savings opportunities will result from this transformation. SpecialtyCare and some other companies can help you on this journey. **HPN**

Reference:

1. "Surgical Site Infection Guidelines, 2016 Update January 2017, Volume 224, Issue 1, Pages 59-74".

Gregg Agoston is Vice President, Minimally Invasive Surgical Support at SpecialtyCare, which provides allied high and outsourced operating room services.



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Nomination details:

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Sterile processing leaders and their staffs are recognized for the dedicated team effort required to make central service successful and ever improving.

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Nomination details:

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Deadline: May 18

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What makes a supply chain team worth watching? What they're doing and why they matter in the areas of cost-cutting, efficiency-driven, clinically motivated and patient-centric concepts, ideas, activities and outcomes.

Nomination details:

<https://www.hpnonline.com/21074381>

Deadline: September 28

BUILDing the UDI Roadmap

by Karen Conway, Vice President, Healthcare Value, GHX



The road to adoption of unique device identifiers (UDIs) remains a bumpy one for many hospitals and healthcare systems, even those who have been among the most ardent supporters of the U.S. Food and Drug Administration (FDA) regulation. Some of the biggest obstacles include internal resistance to change, limited resources, and lack of engagement and collaboration with manufacturers who are now inundated with additional UDI regulations from Europe to China and beyond. But bumps in the road are not necessarily bad, if the lessons learned by those willing to lead the way can clear the path for those who follow. That's why it's important to take notice of the work of the Building UDI into Longitudinal Data for Medical Device Evaluation (BUILD) Initiative, which just published a roadmap for point of care capture of UDIs for implantable devices.

The BUILD journey began in 2015, at the Medical Device Epidemiological Network (MDEpiNet) SMART Informatics Think Tank. I had the pleasure of co-facilitating the think tank with Mitch Krucoff, MD and former FDA Senior Advisor for UDI Adoption Terrie Reed, both of whom were at the Duke Clinical Research Institute at the time. The goal of the Think Tank was to gather a diverse group of stakeholders who were actively engaged in work around structured product and patient data, in hopes that they would identify opportunities to collaboratively advance the capture and sharing of such data to improve medical device safety and effectiveness. To be honest, as we were planning the Think Tank, we were unsure if we would meet our objective. The formation of the BUILD Initiative, along with several other FDA-funded initiatives, allayed those fears.

The roadmap is publicly available on the BUILD section of the MDEpiNet website (<http://mdepinet.org/build/>) and is worth a visit by anyone interested in the history, value and implementation of UDI. The roadmap itself, and the associated research, has generated a wealth of knowledge about how and why providers can and should implement UDIs for both clinical and operational purposes. In compiling the report,

the BUILD research team studied provider organizations ranging in size from less than five hospitals to more than 100, and with revenue from less than \$5 billion to more than \$50 billion. Twenty-four clinical, supply chain and IT leaders were interviewed about their experience capturing UDIs for implantable devices in Cath labs and/or operating suites. The focus on implantables is important given regulations from the Office of the National Coordinator for Health IT (ONC) and the Centers for Medicare and Medicaid Services (CMS), respectively, requiring certified electronic health records (EHRs) to be able to parse and store UDIs and associated data from the FDA Global UDI Database (GUDID) and for providers to be able to share that data as part of the U.S. Core Data Set (the proposed new name for the Common Clinical Data Set). Both requirements have reimbursement implications for providers.

Beyond protecting compliance-dependent reimbursement, the roadmap outlines multiple uses for UDIs to improve clinical practice, analytics and research, and operational performance. Lead researcher Natalia Wilson, MD noted that UDI adoption and use is far more robust at the operational level compared to clinical applications. That may be because supply chain professionals, especially those involved in the Healthcare Transformation Group, were among the first to recognize the value of GS1 Global Trade Item Numbers (GTINs), one of the UDI-compliant codes, for contracting, procurement, inventory and recall management, and clinical supply documentation at the point of care.

While supply chain may be the first to move, Dr. Wilson stresses that supply chain cannot do this alone. Clinicians are critical to UDI adoption. Capturing UDIs at the point of care often falls to nurses, while physicians are key to utilizing UDI-related data when making decisions about how best to treat specific patients. Garnering clinician support takes a concerted effort, which the report says must be led by other clinicians, not supply chain management, although supply chain can help provide data to support the business and clinical case for UDI.

For busy physicians, Dr. Wilson says, it's often just a matter of getting their attention. "Once they understand how UDIs can enhance clinical practice, they become supportive and want to share their perspective with their peers."

For nurses, it's another story. Dr. Wilson was the lead author for another paper studying nursing acceptance of a new implant barcode scanning system. The study found that nurses are often not told why such systems are being implemented, the anticipated impacts on workflow and patient care and the importance of data quality. One nurse was quoted as saying the system "just showed up one day," while another "didn't really know what it was all about or what it was for." On the other hand, nurses had positive perceptions of how scanning vs. manually capturing implant data improves accuracy and their ability to focus on the patient. The roadmap emphasizes meeting with stakeholders to "discuss the 'why,' the benefit add and how it will be done."

At nearly 70 pages, the final report and roadmap contains far more information than can be covered in just one column. In subsequent issues of Standard Practices we will delve deeper into the work of the BUILD Initiative, including recommended next steps to address challenges faced by early adopters.

As we explore the path to realizing the full array of benefits of UDI for multiple stakeholders (patients, clinicians, hospital administrators, regulators and manufacturers, among others), it's important to remember that a transformation of this magnitude does not happen overnight. I applaud the BUILD Initiative for focusing on where the greatest value can be achieved, at the point of care and around implantable devices that have the greatest potential to enhance, if not save, lives, but also by their very nature pose the greatest risk.

Let's take the journey together. Let me know if you have started down the UDI path, and if so, how's the trip going? If not, let me know why not. Your input can help inform ongoing research, while making a difference for your peers and your patients. **HPN**

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Predict your supply chain future by creating it

The best way is to start with an assessment

by Fred W. Crans, Healthcare Business Development Executive, St. Onge Co.

As every new year begins, many folks take stock of their lives, their careers and the state of the world in which they live. This act of taking stock often leads to the making of what has become the tradition of the New Year's Resolution – commitments to action that will lead to one's self-improvement (most of which never come to fruition).

While the principle of the New Year's assessment and ensuing resolutions may not always bear fruit, the premise behind it is both strong and prudent, and can be applied directly to today's healthcare supply chain.

In today's rapidly changing healthcare environment, the only thing that is certain is uncertainty. Standalone community hospitals are continually being eaten up by Integrated Delivery Networks (IDNs). Small IDNs are being acquired by bigger IDNs and mega-IDNs often merge to form even bigger organizations.

At every managerial level in every healthcare organization in the U.S. people are reasonably concerned that their personal future, as well as the future of the organization they work for is apt to be impacted by the sweep of organizational change. Both people and organizations find themselves asking the same question: What should we be doing to give ourselves and our organization the best chance to survive and prosper?

The first step applies to both people and organizations: Assess yourself.

Supply Chain assessments are usually imposed on people, if they are done at all. They have a punitive air about them, and the Supply Chain leaders that have such exercises imposed upon them tend to be not long for their present jobs.

But what about taking the initiative and *requesting* a review of your current operation? What is the benefit to you and your organization?

The answer: A detailed Supply Chain assessment will prepare both you and your organization to deal with whatever the future brings. It will lead to performance improvement, operational savings and position your organization for optimal performance in a highly-disruptive environment.

Supply Chain assessments can go from high-level to granular (See chart above).

At the macro level, a structured review of operations can begin at the system level to assess overall operating efficiency and identify opportunities, along with an estimated Return on Investment, and work its way down to the individual entity level and even make its way into the activities within a single department or function. Such an exercise, as performed by people experienced in such work and utilizing multi-site data and industry-proven Key Performance Indicators (KPI), will often reveal opportunities that you, being so close to the operation and so taken up in day-to-day demands, may not have seen.

A structured Supply Chain Assessment performed by an experienced firm will provide you with information that can become the

Structured Supply Chain Assessment

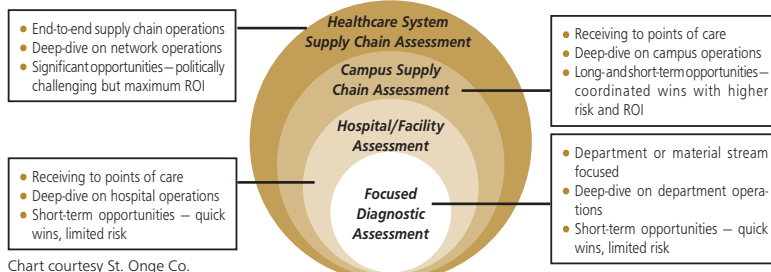


Chart courtesy St. Onge Co.

basis of a long-term Supply Chain Master Plan – one that will help your organization develop a planned approach to the challenges of both today and tomorrow. If you are a standalone community hospital trying to keep your head above water, a small IDN trying to compete with bigger IDNs in your market or even a mammoth IDN faced with making clear the complexities of several disparate systems existing simultaneously, such an initiative will help you see what you need to do to move forward successfully.

The results of such an exercise (pictured below) will identify gaps between your current state and the highly-proficient operations and will allow you to work with your team to develop a plan for both short- and long-term opportunities for your organization at micro and macro levels:

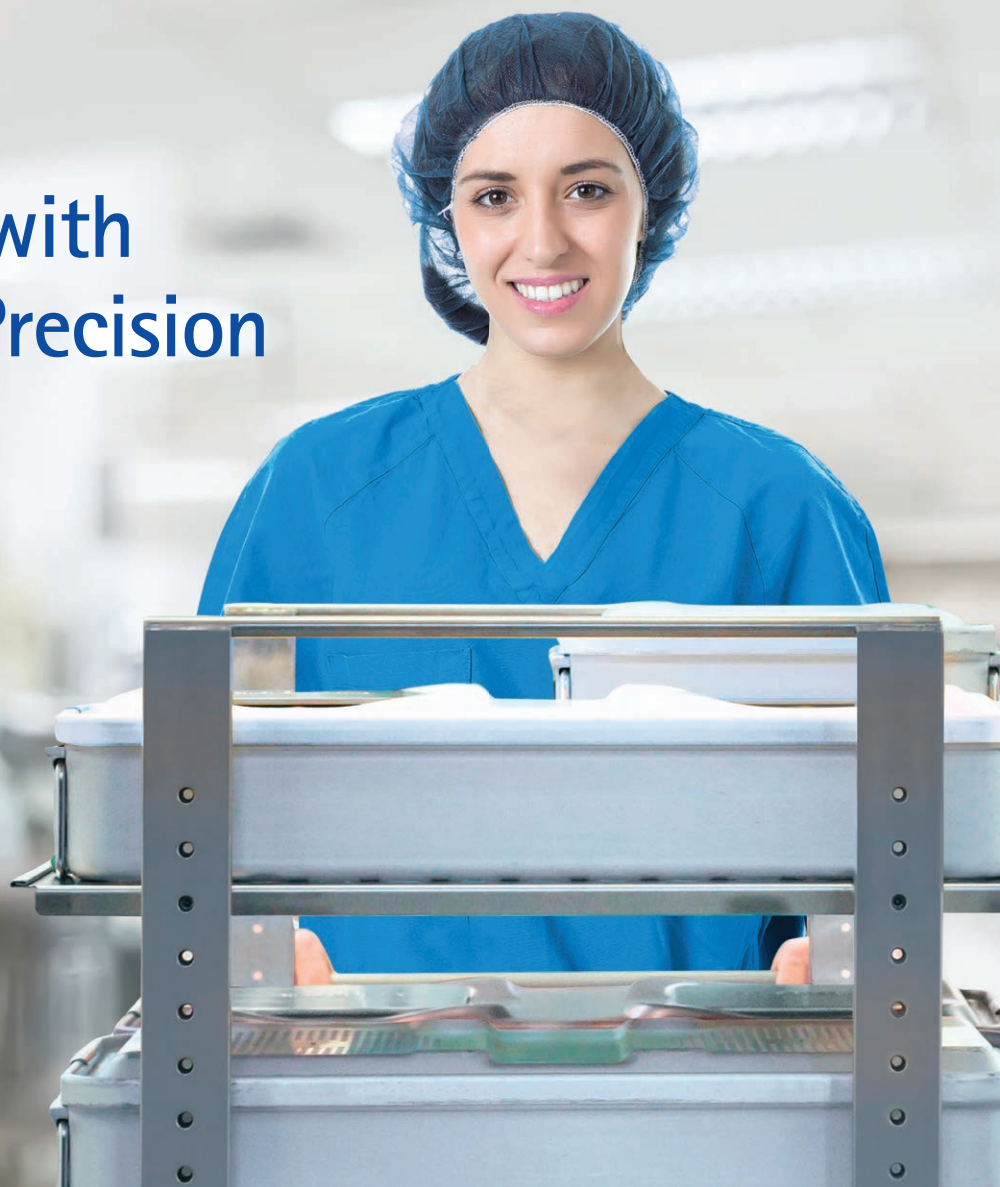
Short- and Long-Term Opportunities

	Operation - Hospital	Foundational - System Level
Short Term	<ol style="list-style-type: none"> 1. Resource Alignment 2. Technology Deployment 3. Material Flow 4. Activity Sequencing 5. Clinical Alignment 6. Vendor Alignment 7. Leadership Accountability 	<ol style="list-style-type: none"> 1. Data Management/Integrity 2. Role Alignment 3. Process Standardization 4. Process SOPs 5. ERP Training Program 6. Inventory Management Practices 7. Metrics/Dashboard 8. Vendor Performance Indicators/Partnership
Long Term	<ol style="list-style-type: none"> 1. Inventory Deployment Strategy 2. Staff Engagement 3. Customer Satisfaction <ul style="list-style-type: none"> • Warehouse • Dock • Dept. Supply Rooms • Storage Equipment 	<ol style="list-style-type: none"> 1. Contact Management 2. Spend Analysis 3. Rebate Tracking 4. Distribution Strategy 5. Supply Chain Alignment 6. Technology Evaluation <ul style="list-style-type: none"> • Mgmt. of Perpetual Inventory • Point-of-Use Inventory System

Table courtesy St. Onge Co.

Commissioned with the support of senior leadership, and conducted by an experienced professional organization with the input of key stakeholders in your organization, the result of a Strategic Supply Chain Assessment will be the building blocks for developing a formal, living roadmap to lead you into the future. As a Supply Chain leader, you will be armed with better information with which to develop operating budgets and operational strategies. As an organization, your system or hospital will be poised to survive and thrive in today's shark-infested waters and your organization will see you as a visionary leader who has brought evidence-based planning to a complicated environment. **HPN**

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