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# HEALTHCARE PURCHASING NEWS®

CLINICAL INTELLIGENCE FOR SUPPLY CHAIN LEADERSHIP

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## 2023 Supply Chain Department of the Year



**Surgical Technologies, IT, Robots  
IP-Supply Chain Partnerships  
Freight/Shipping & Drones  
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BY RUHOF

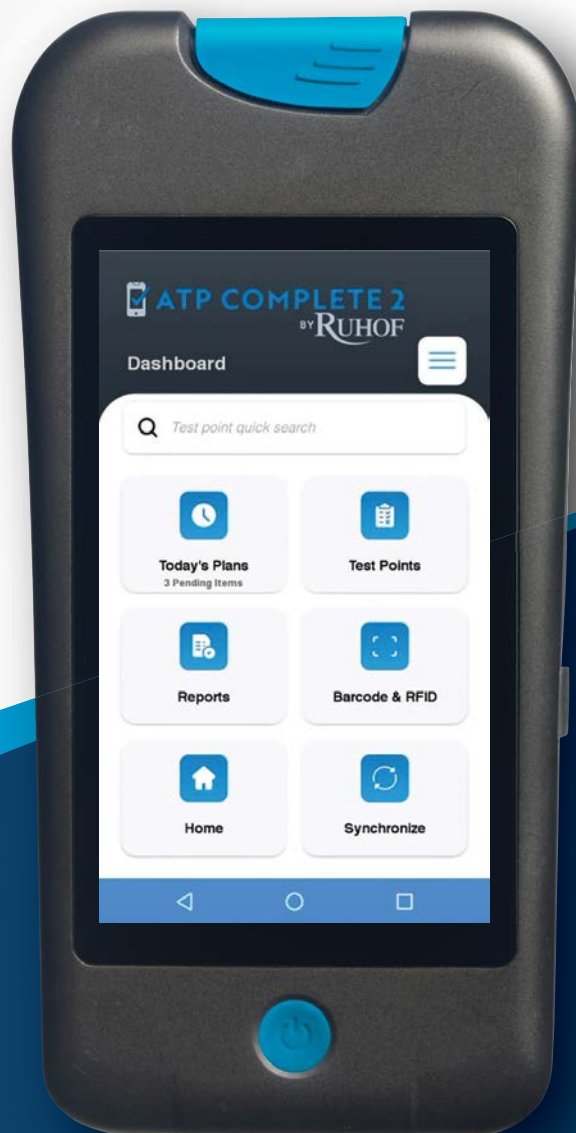
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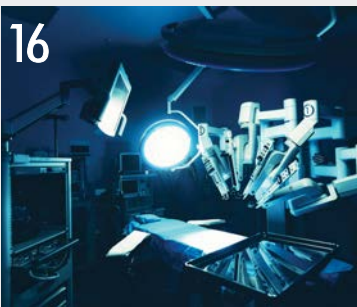
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# Innovation trek

by Janette Wider



**Janette Wider**  
Editor-in-Chief

Every time I attend a session at a conference or a webinar on artificial intelligence technologies in healthcare, a journalist or two will ask, "Are robots going to replace humans?" This generally gets a chuckle from attendees and/or presenters and is followed by a response that says technology is there to assist clinicians and hospital staff, not replace them.

These conversations usually get me thinking about how far the healthcare industry has come in the past 100 years, and how some advancements that we take for granted today were truly groundbreaking at the time.

Before 1923, scarlet fever was decimating the health of individuals of all ages—those who contracted the disease could suffer blindness, deafness, heart and kidney conditions, and permanent paralysis. A yellow flag and printed notice were usually posted outside the home of an afflicted individual to warn visitors of the danger. Yet, in 1924, a serum that battled the disease was introduced by husband-and-wife researchers George and Gladys Dick, but there still was no cure.<sup>1</sup>

On February 12, 1941, Albert Alexander, became the first recipient of the Oxford penicillin. (In 1928, Dr. Alexander Fleming of London noticed mold growing on a Petri dish of *Staphylococcus* bacteria and the mold was preventing bacteria around it from growing.) Alexander was a 43-year-old policeman who scratched his mouth while pruning roses and developed an infection affecting his eyes, face, and lungs. Howard Florey, Ernst Chain, and their colleagues at the Sir William Dunn School of Pathology at Oxford University turned penicillin into a life-saving drug. Their work on the purification and chemistry of penicillin began in 1939. Unfortunately, Alexander died a few days later, as supplies of the drug ran short.<sup>2</sup>

Fast forward 20 years later, and the pharmaceutical industry has essentially taken off. In the 1960s, new drugs like the contraceptive pill, Valium, Librium, blood-pressure drugs, and other heart-helping medications were marketed. Additionally, people, particularly in the U.S., were demanding more access to healthcare and protection against unsafe medications.<sup>3</sup>

Another 20 years later, in 1982, physicians at the University of Utah Medical Center in Salt Lake City successfully implanted a permanent artificial heart in a 61-year-old patient.<sup>4</sup>

As for a more recent development that seems commonplace today, we have the electronic health record (EHR). In 2009, the Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, was signed into law on Feb. 17, 2009. The act essentially motivated healthcare organizations to implement EHR systems to improve the accuracy of health records and accessibility to patients. The HITECH Act included incentives to purchase certified EHR systems as well as authorizing Medicare and Medicaid to provide payments to hospitals and physicians who demonstrate "meaningful use" of EHRs.<sup>5</sup>

Finally, in 2023, *Healthcare Purchasing News* named a new Editor-in-Chief, which is just one reason why I am writing to you. I've spent most of my career in healthcare journalism and have become incredibly passionate about all things related to our industry. My promise to you, our readers, is to keep an eye on the ever-evolving healthcare landscape and continue delivering the high-quality content you have come to expect from *HPN*.

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## STERIS acquires surgical instrumentation assets from BD for \$540 million

STERIS plc (NYSE: STE) ("STERIS" or the "Company") announced on June 20 that the Company has signed a definitive agreement to purchase the surgical instrumentation, laparoscopic instrumentation and sterilization container assets from Becton, Dickinson and Company (NYSE:BDX) ("BD") for \$540 million ("the Transaction"). STERIS anticipates that the acquisition will qualify for a tax benefit related to tax deductible goodwill, with a present value of approximately \$60 million. The acquisition includes V. Mueller, Snowden-Pencer and Genesis branded products, which are well-known providers of surgical instruments and sterilization containers to Healthcare Customers. Annual revenue for these businesses collectively for BD's fiscal year ended September 30, 2023, is projected to be approximately \$170 million, with adjusted earnings before interest and taxes of approximately \$45 million.

"We are pleased to announce the signing of this agreement today, as the brands we are adding will strengthen, complement and expand STERIS's product offerings within our Healthcare segment. In particular, the focus on the operating room and sterile processing department fits perfectly with our Healthcare Customers," said Dan Carestio, President and Chief Executive Officer of STERIS. "We welcome these teams to STERIS and look forward to working together to enhance our value to our Customers."

Under the terms of the agreement, STERIS will purchase surgical instrumentation, laparoscopic instrumentation and sterilization container assets from BD at closing. The Transaction will be financed through a combination of debt and cash on hand and is anticipated to close by September 30, 2023, pending customary closing conditions and regulatory approval. Management will update the fiscal year 2024 outlook to reflect this Transaction after closing. It is expected to be accretive to adjusted earnings per diluted share in fiscal year 2024.

Read on: <https://hpnonline.com/53064069>

## Gentle cleansers kill viruses as effectively as harsh soaps, study finds

Healthcare professionals often substitute harsh soaps or alcohol-based hand sanitizers with skin-friendly cleansers in order to treat or prevent irritant contact dermatitis - a common skin disease which causes

red and swollen skin with a dry and damaged surface.

During the COVID-19 pandemic, incidence and severity of the disease amongst healthcare professionals increased from 20% to 80%.

Despite the widespread use of gentle cleansing products for handwashing, there has been limited evidence to show the antiviral efficacy of the products to prevent the spread of viruses such as human coronavirus, herpes simplex virus, norovirus and influenza.

Scientists from the University of Sheffield's Sheffield Dermatology Research (SDR) group tested multiple handwash products as part of the study. These included antibacterial soap, natural soap, foam cleansers and bath wash products, with the team investigating their ability to kill both enveloped viruses; such as human coronavirus and influenza, which have an additional layer of structural protection; compared to non-enveloped viruses, such as norovirus and adenovirus.

The findings, published in the journal *Frontiers Virology*, show gentle cleansers were effective in killing enveloped viruses, but non-enveloped viruses displayed resistance against skin-friendly cleansers, as well as harsh soaps.

Read on: <https://hpnonline.com/53063471>

## Study provides new details about Long COVID symptoms

Initial findings from a study of nearly 10,000 Americans, many of whom had COVID-19, have uncovered new details about long COVID, the post-infection set of conditions that can affect nearly every tissue and organ in the body. Clinical symptoms can vary and include fatigue, brain fog, and dizziness, and last for months or years after a person has COVID-19. The research team, funded by the National Institutes of Health, also found that long COVID was more common and severe in study participants infected before the 2021 Omicron variant.

The study, published in *JAMA* is coordinated through the NIH's Researching COVID to Enhance Recovery (RECOVER) initiative, a nationwide effort dedicated to understanding why some people develop long-term symptoms following COVID-19, and most importantly, how to detect, treat, and prevent long COVID. The researchers hope this study is the next step toward potential treatments for long COVID, which affects the health and wellbeing of millions of Americans.

Read on: <https://hpnonline.com/53061887>

## U.S. Lung Cancer Statistics



### In the U.S. in 2020:

**197,453** new lung cancers were reported

**136,084** people died from lung cancer

Males had higher rates of getting and dying from lung cancer than females

From 2016-2020, **45%** of all lung cancers were diagnosed at a distant stage

**27%** were found at the localized stage

**23%** were found at the regional stage

**5%** were identified as unknown

**26%** of lung cancer patients who were diagnosed from 2013 to 2019 had not died from their cancer 5 years later

Among people diagnosed with lung cancer from 2015 to 2019, **425,015** were still alive on January 1, 2020

**2020** cancer incidence was lower than in 2019, and this may have been because of the effect the COVID-19 pandemic had on cancer screening, diagnosis, and reporting to some central cancer registries in 2020

Source: <https://www.cdc.gov/cancer/uscs/about/stat-bites/stat-bite-lung.htm>

Photo credit: SciePro | stock.adobe.com



**1st Row** – Tierra Goldston, Keith Kissinger, Robert Snowden, Jackson Leo, Danielle Bermea, Christina Villarreal  
**2nd Row** – Cathy Thorne, Sheena Williams, Fran Newsome, Enrique Lizama, Emily Wren  
**3rd Row** – Alberto Rocha, Edward Anderson, Annie Arnold, Abigail Kinzel, Cara Eason  
**4th Row** – Terry Pitts, Gabriel Toledo, Brooke Lenderink, Hussam Bachour, Tim Garret  
**5th Row** – Ryan Senesac, Jake Morgan Alan Holmgren



**Supply Chain is the Best**  
 cake that clinical partners gave to team as a thank you for all the work in mitigating supply disruptions

## UChicago Medicine supply chain team always on the go

*People, processes, planning, propelled success pre-, peri- and now post-pandemic*

by Rick Dana Barlow

When a healthcare organization nurtures myriad plans and processes fortified by teams of people, outfitted with relevant technology, rooted in customer service, and defined performance measurement parameters, then that organization can navigate around and negotiate through even the most challenging clinical, financial, and operational storms.

Like a global pandemic, for example, which rattled the healthcare industry from 2020 through earlier this year, disrupting supply chains made evident among the burgeoning reports of backorders and stockouts, dealing a crippling (but not fatal) blow to just-in-time distribution.

Some facilities were able to bob and weave, dodge and weather the aftershocks

of the pandemic using creative foresight, prudent demand planning, and relationships with alternative and auxiliary suppliers that may have seemed a bit unorthodox.

Through years of pre-pandemic development, the Supply Chain & Support Services team at UChicago Medicine, nestled in the Hyde Park neighborhood on the south side of the city, has solidified their infrastructure based on a keenly balanced equation. Meeting or exceeding key performance indicators and other financial and operational benchmarks and measurements, plus teamwork ingenuity and technological implementation, have generated clinical respect and trust, as well as notable financial and operational outcomes. Such

efforts and achievements not only earned them a festive cake (topped with University of Chicago Maroon red strawberries) but also the 2023 Supply Chain Department of the Year by *Healthcare Purchasing News*. UChicago Medicine (UCM) becomes the 20th healthcare provider to be honored with this prestigious designation.

### All about accountability

UCM's Supply Chain team recognizes accountability as one of the elementary underpinnings of improving performance and maintaining trust with customers.

All sub-teams within the group consistently monitor a number of key metrics and performance indicators across departments, including open orders, orders per day, packages received against purchase orders, fill rates, stockouts, inventory dollars on hand, internal backorders, invoice discrepancies, and days sales outstanding (DSO) for cash flow.

"I do believe these are fundamental KPIs that all supply chains should measure," said Eric Tritch, UCM's vice president, Supply Chain & Support Services. "There could be some slight tweaks, but you need measures of your performance to your stakeholders. You need to be laser-focused on how you can make the lives of your patients and end users better and



Women in supply chain operations leadership and inventory planning



Photo by Jordan Porter-Woodruff



**1st Row** – Lizbeth Estrada, Nancy Olmos, Raekwon Castillo, Gisselle Morales and Dan Schumacher  
**2nd Row** – Carmen Mendoza, Vella Stevanovic, John Pena, Arpan Pradhan, Matt Gacek, Kwelan Kato, Damian Hatchett, and Greg Skelly  
**3rd Row** – Allison Ross, Deona Hasimllari, Atanas Ilchev, Grace Sperr, Anurag Jaiswal, and Dinesh Gopalakrishnan  
**4th Row** – Jordan Schleyer, Robbie Brown, John Mayer, Michael Kim, Osvaldo Torres, and Silas Fulcher  
**5th Row** – Adrian Skrzypek, Matt Miguest, Eric Tritch and Ian O'Malley

easier. The metrics shared [for HPN's annual award] were really around clinical supply stocking and inventory management, and the aggressive pursuit of 100% fill rates. However, we have similar metrics around contract cycle time, item add/supplier add cycle time, and value analysis requests. We need to be able to effectively execute our processes and get answers back to requestors to move initiatives forward to lower cost and improve outcomes."

One of UCM Supply Chain's notable accomplishments showed declining overall stockout rates (slashed by 50%) while expanding service locations in the two years leading up to the pandemic. How did they do it? By identifying root causes and implementing basic but detailed countermeasures, according to Atanas Ilchev, system director, Supply Chain Operations & Logistics.

"Most of our KPI information is obtained from our inventory management system, including stockout rate, stocking locations, and SKUs in each location," Ilchev said. "KPIs are fundamental for understanding your performance and charting a course to achieve a target. Countermeasures are established daily [during] our huddle, and through root-causing we perform when we encounter issues. Thorough, fast, and effective root-causing is key to continuous improvement, and we are working with all Supply Chain members daily to be better at this."

## Attainable innovation

A healthcare organization striving to improve efficiency and performance may at first mobilize people before ultimately throwing as much technology into the mix as possible, particularly as budgets permit. Not UCM.

Being part of a sizeable urban academic institution that may afford the ability to adopt and implement as many high-tech tools as possible, Tritch's team

approached this option with discretion and due diligence.

Rather than fully embrace the latest tech for everything, UCM applies three different tech types to three specific service line areas spanning more than 65,100 item locations supported by 59 full-time equivalents (FTEs) – Med/Surg, which encompass traditional inpatient supply room locations; OR, which involve operating room support for med/surg-type items, such as case picking for preference cards; and Procedural, which support in-patient and outpatient procedures calling for high-dollar, specialized and case-specific materials. Each area uses some combination of tech type, ranging from barcoding on the low-tech side, radiofrequency identification (RFID)-enabled Kanban on the mid-tech side, and individual RFID tagging on the high-tech side, augmented by Tableau dashboards to enable comprehensive and compartmentalized visual analysis.

UCM tracks and measures the bulk of med/surg inventory via Kanban with RFID tags for the majority and barcoding for the rest, accounting for nearly 70% of total inventory. They use Kanban with RFID for OR products, which accounts for 15% of total inventory, and for procedural products, a blend of Kanban with RFID and full-on RFID tagging for the remainder.

RFID-tagged Kanban locations involve systematically reordering of high-moving, low-dollar items by scanning bin cards via RFID readers. Barcode scanners are used for point-of-use and other slower-moving consumption areas. RFID is used to track consumption of owned or consigned high-dollar and specialty items at a case level by lot and item number and expiration date.

UCM determines what type of inventory technology to use based on cost/benefit analysis, according to Ilchev.

"Although it provides item-level visibility to inventory levels and expiration detail, individually tagged RFID is very expensive to implement and maintain," he said. "Therefore, it's reserved for high-dollar items and items that require chain of custody information. For example, cardiac implants and tissues are managed this way. RFID-enabled two-bin Kanban is our preferred technology in all other cases. This system provides some visibility into inventory availability (full par/half par/stockout) and is employed in most of our supply rooms. This system is relatively cheaper to implement and maintain. Barcoding provides little to no visibility and is the cheapest to implement and maintain. This is used mostly in point-of-use locations – like nurse servers or in-room OR cabinets."



Operations team getting to know the new Moxi delivery robot by Diligent Robotics

Even though case picking for preference cards represents the OR service line supply, UCM preferred RFID-enabled two-bin Kanban over barcoding and RFID alone, according to Ilchev.

"It's a question of ROI," he insisted. "We don't see value in individually tagging consumable items. Our requirement here is to trigger an order when we hit the reorder

point and the 2-bin RFID-enabled Kanban is much more efficient and cost-effective at doing that relative to RFID. Most barcode areas are also space-constrained and cannot accommodate the RFID technology in any form."

UCM's Supply Chain team also employs the use of Tableau dashboards to gather and analyze data from a variety of automated

tools in a nod to generative artificial intelligence. The dashboards visually illustrate such areas as stockout trends, frequent orders, distributor unfills, and bin optimization.

"The Tableau dashboards are helpful because they provide actionable insights to all levels in the supply chain department and are designed to support analytical and operational/transactional needs," indicated Hussam Bachour, manager, Supply Chain Systems. "The users can easily interact with (slice and dice data), dive deeper in (view aggregated and more granular data and download underlying data), and distribute (push dashboards to stakeholders using subscriptions) the Tableau dashboards without the need for technical expertise." This means limited need for extensive training.

"Moreover, the supply chain Tableau platform supports self-service analytics," Bachour continued. "It hosts over 50 data sources that combine data from the [enterprise resource planning] system, the Helios Requisitioning and Inventory system, GHX's electronic data interchange (EDI) platform, Epic's electronic medical record (EMR) system, and many other information systems. Users who had Tableau training can connect to the data sources and create dashboards and ad-hoc analytics. Tableau dashboards and data sources provide more information than the reports in the ERP because they combine data from almost all supply chain information systems. However, the reports and analytics in the ERP are helpful for specific operational/transactional needs that require timely and 100% accurate procure-to-pay data."

UCM Supply Chain also is setting up a Web PRS point-of-use scanning system to enable clinicians in the OR to record all supplies used during a procedure to improve traceability and charging accuracy.

"This initiative is an effort to improve accuracy of supply documentation in the OR and procedural space and enhance workflow for clinicians," noted Dinesh Gopalakrishnan, manager, Process Systems Engineering. "This project has been on our transformation map, and it is highly supported by the Periop administration, as they are looking to have better capturing of supplies and ultimately charges and revenue. We can tie the information at the point of use with preference cards and manage inventory better throughout the whole cycle. The application was developed in cooperation with our inventory management system provider - ARC. We chose web browser over Epic to simplify the implant/supply documentation interface."

Currently, supply/implant scanning is limited to RFID-labeled items and documentation requires switching between EPIC

## UChicago Medicine **Fast Facts**

**Headquarters:** Chicago, IL

**Facilities:** Four acute care hospitals, including Comer Children's Hospital, Level 1 Adult and

Statistics			
Licensed beds	1,296	Outpatient encounters	1,220,908
Staffed beds	1,004	Emergency Room visits	191,391
Inpatient admissions	45,746	Clinic visits	1,220,908
Surgical cases	174,779	Babies delivered	3,097

Peds Trauma centers, 48 operating rooms across five locations, and more than 50 physician offices, urgent care centers, and family clinics. Other facilities include urgent care centers, clinic sites across the Chicagoland area and northwest Indiana, outpatient imaging centers, retail pharmacies, and outpatient infusion centers, pilot Hospital-At-Home program, home health program, and behavioral health program. hospitals, 33 ambulatory surgery centers, 8 cardiac centers, 9 cancer centers, 4 acute rehabilitation centers, 6 mental health and addiction centers, 5 trauma centers

### Leadership

- CEO – Tom Jackiewicz
- CFO – Ivan Samstein
- COO – Jason Keeler

### Supply Chain

#### Vice President, Supply Chain & Support

**Services:** Eric Tritch (*Future Farmers Class of 2015, Bellwether League Foundation*)

**Joined organization:** 2011

**Previous position:** Started as Assistant Director, Strategic Sourcing at UChicago Medicine, rose to Executive Director Strategic Sourcing, then took over as Vice President, Supply Chain, in 2018, adding Support Services in 2021.

**Started supply chain career:** 2005 – Commodity Manager at Graco, Inc.

#### Managers (at UChicago Medicine):

Vice President has seven direct reports: Executive Director, Business Diversity & Compliance (Joan Archie); System Director, Support Services (Dennis Casey); Executive Director, Supply Chain Systems & Analytics (Anurag Jaiswal); Director, Strategic Sourcing Clinical (Ian O'Malley); Director, Strategic Sourcing Non-Clinical (Osvaldo Torres); System Director, Supply Chain Operations (Atanas Ilchev); Administrative Assistant (Lizbeth Estrada).

#### Employees/FTEs

(at UChicago Medicine): more than 11,000 for UChicago Medicine, 200 FTEs for Supply Chain Operations

**Conduit to CEO:** Supply Chain reports to COO, who reports to CEO, but serves directly on Systems Council and other key executive councils directly.

#### GPO affiliation(s): Vizient

**Annual purchasing volume/supply expense (FY2022 vs. FY2023):** \$250M supply & implant, \$370M drugs, \$250M purchased services = \$870M total

**Annual purchase order volume (FY2022 vs. FY2023):** 287,157

**Percentage of purchase orders transmitted electronically:** 100% (86% EDI, 14% Email)

**Percentage of requisitions processed electronically:** 100%

**Division functions:** Inventory Management, Receiving, Purchasing, Supply Chain Systems & Analytics, Contracting, Sourcing, Value Analysis, Process Improvement/Project Management, Linen, Mailroom, Copy Services, Mobile Medical Gas

**Purchasing and contract management:** Centralized

**Total annual operating expenses: (FY2022 vs. FY2023):** \$2.66B

**Total net revenue:** \$2.7B



# Congratulations to UChicago Medicine

for being recognized as the **2023 Supply Chain Department of the Year!**



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**Clinical Strategic Sourcing Team**

and implant screens that takes up to three minutes per item. Under the new system, supply and implant scanning will include manufacturer barcode and 2-D RFID tags, one screen to document products with an easier item search and higher documentation rate, according to Gopalakrishnan. The system also will automate bill-only requisition, leading to an estimated \$150,000 in annual savings for price accuracy, future procedure card maintenance for product changes, and increased documentation and charging accuracy for items below \$150, as well as expired product alerts.

Creating, configuring and integrating this technology has seen its share of speed-bumps, Gopalakrishnan indicates.

"The biggest challenge continues to be data cleanup," he said. "Good scan rates require good back-end data on [GS1 US] GTIN and product information. Getting that information right has been difficult, and the recent disruptions and the item substitutes they brought about haven't helped. Another challenge was getting

clinical buy-in on the new workflow. We had to demonstrate that the change will yield better documentation accuracy, and also reduce documentation time in the long run to get them to agree."

Still, Gopalakrishnan anticipates a bright future.

"Long term, we expect the function to be provided by and live within Epic, given that a lot of hospitals are starting to focus on this, but we continue to innovate and evolve our solution focused on what makes things as easy and allows for the best data integrity," he added.

## Thriving teamwork

UCM's Supply Chain team attributes its product conversion success to cross-functional, process-interlaced sub-teams that resemble a DNA strand. Sourcing teams produce and share background information with clinical teams to approve before working with the distributor to "bleed out" old inventory to minimize waste. The Business Process team manages system data

changes and updates, while the Process Transformation teams establish operational modeling for the Inventory Planning team to execute and update stock levels. Every sub-team works together to develop and carry out an end-to-end conversion checklist, according to Gopalakrishnan.

"Participating teams all have a role to play in the conversion process," he said. "The current-state checklist was developed as a result of learnings from a past failure. The checklist itself was the product of brainstorming across different functions to determine who is involved, what steps need to be accomplished, and in what order. Then, using Smartsheet, we created a template which allows us to assign tasks to team members, send them reminders, and bring visibility to all stakeholders. The checklist is just a tool though, and the project manager assigned to the conversion essentially uses it to execute the conversion. Also, we can have the same individual work on multiple projects across different teams."

## UChicago Medicine Supply Chain team salutes supplier partners

Who supports an award-winning healthcare supply chain organization? UChicago Medicine's Supply Chain & Support Services team appreciates the product and service companies that have helped them develop and improve their operations and performance. The team shines a spotlight on 10 below (in alphabetical order by company name) that have motivated and fortified them to make a difference and succeed.

**AbbVie** has served as a key research and collaboration partner of UChicago Medicine, and it was able to share essential PPE and N95 supplies during the height of the pandemic.

**ARC Healthcare Technologies** has served as a key inventory management technology partner at the center for much of our replenishment technology. They have been an innovative design partner helping us co-design new solutions in the inventory management space.

**Cardinal Health** has served as a strategic partner on medical/surgical supply distribution, freight and logistics management, as well as procedure packs and various branded products. Cardinal Health has been a true integrated supply chain partner through thick and thin, and has helped us drive out cost across our operations and provide critical supplies and services.

**Concordance Healthcare Solutions** has provided essential local disruption warehousing and distribution services during the pandemic, as well as local job growth and investment in the communities that we serve.

**GHX** has served as a key technology-oriented trading partner that has helped us innovate in the procure-to-pay (P2P) space and has been critical in helping us implement the Oracle cloud solution and automating manual transactions.

**Medline Industries** has served as a great supplier partner for med/surg supplies, service and support, and has provided critical support for hard-to-find products during the pandemic.

**Stryker** has helped us drive costs out of critical implant categories, and has provided great service and support for our busy Level 1 trauma center.

**Supply Logistics & Procurement (SLP)** has served as a local diverse provider of supply chain staffing that has been a true partner in supplying great talent to allow us to extend our supply chain services to various nonacute and affiliate sites. They've also been a key staff augmentation partner in critical times.

**TriMedx** has served as a strategic partner of healthcare technology management solutions, helping us evolve our clinical engineering processes, and capital planning and execution, along with cybersecurity of medical devices.

**Vizient** has served as much more than a group purchasing organization (GPO). They have been a trusted partner and connection to key networks of supply chain leaders and government advocacy. They have helped us navigate difficult times in healthcare supply chain, and provided critical analytics tools and resources, along with a strong contracting portfolio, and a foundation for our supply chain affiliate program.





**Hyde Park Procedural Inventory Planner Team with leadership**

The Process Transformation (PT) team primarily serves as internal consultants that bridge Supply Chain and Support Services, according to Bob Boyden, director, Supply Chain Operations & Transformation. PT team members function as liaisons between different teams, such as clinical and facilities, and lead cross-functional initiatives as project managers to carry out service line initiatives, such as a laboratory supply chain transformation that includes product and equipment sourcing, designing product flow, and building the supply space, he adds.

One of the hallmarks of UCM's Supply Chain team process incorporates its Managing for Daily Improvement (MDI) infrastructure that started at the hospital and extended throughout the organization.

"The MDI process is foundational for the entire UCM organization," Ilchev said. "Structure and process initially was driven by the Operational Excellence department; however, development of metrics, utilization, and sustainment is managed at a departmental level. For Supply Chain, MDI is part of daily operations, and we have not only sustained but also improved the process over time. As we continue to grow, the process has been replicated at each new site/group. The real challenge is recruiting, developing, and retaining the right people that could understand and embrace the way of work, and implement all Supply Chain processes effectively."

MDI serves to identify trends and implement countermeasures through

communication, accountability, and continuous performance improvement covering such issues as daily readiness, real-time management, performance management, and long-term improvement, according to Tritch. Eight areas conduct daily huddles that share insights during Tritch's weekly management huddles. They include Business Process, Strategic Sourcing and Operations Management, which encompasses the OR Team, Process Transformation, Stat Store, Dock A Receiving, and Dock B Receiving.

"MDI is a methodology we employ across UChicago Medicine to align our teams around daily execution of key objectives," Tritch indicated. "It starts at the front-line shift daily huddles and rolls up to manager level and ultimately the VP board. It is a way that we ensure alignment across the organization around organizational priorities and escalate problems and barriers at the front lines that can't be addressed to higher levels until we can find a resolution. The frequency is a set cadence, but the metrics evolve based on need. If things are stable and meeting targets, then we look to new areas where there is room for improvement."

As UCM continues to grow, Tritch's team strives to incorporate new facilities into the mix.

"The non-acute space initially was developed as a separate division outside of Operations, which led to certain differences in process execution," said Ron Fanning, director, Supply Chain Operations

& Logistics, Ingalls/Ambulatory. "Since then, we have been working toward creating 'One Supply Chain' – physical locations, processes, and system are standard and provide seamless experience for the clinicians regardless of their location. The method of interaction is based on the size and type of facility – full-time presence versus on-demand versus self-managed, while still following Supply Chain-established processes and standards.

"All areas, acute or non-acute, are following the same method of measuring performance – through KPIs that are standard for all areas, specific to service satisfaction and product availability," Fanning added.

This process also helps build trust with clinicians, according to Gabe Toledo, manager, Supply Chain Operations, Ambulatory.

"Clinicians are involved in the initial phase of on-boarding new ambulatory sites," Toledo said. "Based on size and scope, their involvement later in the process could be very limited, based on fully Supply Chain-managed sites to self-managed with minimal Supply Chain support."

## Getting ahead of costs

To manage expenses, an organization must follow the money applied to procedures and processes. But managing expenses, as well as crises, hinges on timing. Within the last decade, UCM's Supply Chain not only raced against time to reduce non-labor expense savings in drugs, services, and supplies, but did it without any



**Hyde Park OR Stock Clerk Team celebrating a team birthday**

## Chain reactions

### GOLD CHAIN:

#### UChicago Medicine, Chicago, IL

**Highlights:** Modeling demonstrates a thorough understanding of customer service, clinical alignment and integration, financial and operational actions and strategic planning, successful relationships with suppliers, and comprehensive support of employees through career channels, engagement, and professional development. They craftily manage the delicate balance between people, process, and technology with an emphasis on human assets over anything else. Using data, dashboards, LEAN, and other methodologies, keep a finger on the pulse of all things supply chain to continually improve. Direct line-of-sight goals with departmental leadership benefits their organizational goals. Their Process Transformation Team concept represents an innovative approach that enables others to do specific tasks while leaders in the control tower send signals based on assessments to assure optimal service levels.

### SILVER CHAIN:

#### Hartford HealthCare, Hartford, CT

**Highlights:** Leveraging clinical integration to provide a key foundation for their innovative practices while establishing a Supply Chain Concierge Team to elevate customer service represents an intriguing strategy and an effective tactic. Demand planning and their synchronized working with suppliers around the globe have contributed to their resiliency as a leading supply chain operation. Their intense efforts and focus on serving their community, and concentrating on diversity spend and support, have yielded much-deserved recognition and renown.

### BRONZE CHAIN:

#### MultiCare Health, Tacoma, WA

**Highlights:** Implementing higher-end technology, including robotics and automation, only demonstrate and reinforce that this organization is on the move in a trajectory that will firmly place them among the industry's elite and progressive leaders. Their continuing progress in generating eight-digit annual savings, as well as making workflow improvements through an articulated and well-rounded strategic plan and a visually appealing and comprehensive workstream approach, positions them to contend for different-colored award chains within the next several years.

foreshadowing of the global crisis that would erupt in 2020.

In the 10-year period between fiscal 2012 and fiscal 2020, UCM's Supply Chain team quadrupled its annualized savings to nearly \$20 million from less than \$5 million, according to Tritch.

They were particularly proud of a continuous improvement project centered on bin optimization. The team sought to minimize the impact of a distributor line fee cost increase that was nearly double, decrease the total cost of ownership by increasing minimum order quantities to control labor requirements, and increase labor efficiency by reducing the number of lines ordered daily.

The team collected data to best optimize bin space in each supply room, targeting the fastest-moving items in selected supply rooms. They also created a cloud-based system to collect data and validate bin sizes per supply room. Using the data, they proved their business case, phased in process changes system-wide, and they continue to audit to monitor progress, Boyden notes.

Supply Chain's Process Transformation team designed and implemented the project, which lasted eight months, including proof of concept, pilot, and implementation, followed by a sustainment period.

"The distributor provided product dimensions that we used to model what the future state would look like and the projected cost savings," Boyden recalled. "This was very important in the proof-of-concept phase of the project." He further clarified, "This is not a system-based project, but a change in our inventory model/holding pattern based on the total cost of ownership (TCO), and this process can be replicated using the TCO principle in any facility."

Supply Chain was measuring the specific outcome over a period of intervention around moving from a "lowest unit of measure" and "minimal inventory" mindset to an "optimal" unit of measure and inventory mindset, according to Tritch.

"We didn't want to have high turns just for the sake of high turns, but really look at when and why we need to order and create extra touches within the supply chain, balancing the trade-offs of extra inventory with labor costs and stockout risks," he continued. The project phase was completed in the spring of 2019, roughly seven months before the COVID-19 pandemic emerged.

"We are lucky to have executed this initiative prior to the pandemic or we would have been in a much worse



**Non-Clinical Strategic Sourcing Team - Robbie Brown - Asst Director, Allison Ross - Sourcing Category Leader, Deona Hasimllari - Sourcing Category Leader, Osvaldo Torres - Director Strategic Sourcing**

position, as we generally are a low-unit-of-measure/just-in-time [JIT] operation, so we have less safety stock inventory than a lot of operations," Tritch said. "However, we've pivoted our strategy around both on-site and off-site safety stock and disruption management, and have partnered with Cardinal Health to be thoughtful and strategic about how and where we keep critical inventory to manage through supply disruptions. We've seen steady improvement in fill rates, but there are still hundreds of items on disruption daily that the team works on better managing to reduce impact and cost on our operations."

Tritch acknowledges their efforts remain a success-in-progress.

"Osvaldo [Torres, director, Strategic Sourcing Non-Clinical] and Robbie [Brown, assistant director, Strategic Sourcing Non-Clinical] have done a tremendous job in the last two-to-three years building trust with all areas of non-labor expense to help continue the positive trajectory of annual savings. IT, Revenue Cycle, Legal, Facilities, HR, Strategy, you name it, we are a trusted partner working with them on supplier strategy and spend management. These partnerships have helped lead to creative approaches towards contracting and value creation that have driven savings in key purchased services categories."

Brown looks ahead with promise.

"When we think about future opportunities within the services expenses, our team is focused on continuing to work with key department leaders to leverage recent consolidations of major enterprise applications as an opportunity for us to look at ancillary applications that were either redundant or can be decommissioned, along with our projected system growth as an opportunity for partners to deliver value propositions that can provide sustained value over time," he noted. "Our team has also recently implemented more rigor around purchased services governance that, combined with the strong partnerships that we have established with our department stakeholders, will help identify new savings opportunities." **HPN**



**Congratulations**  
**UChicago Medicine**  
on your much deserved recognition as  
2023 Supply Chain Department of the Year!



**Job Well  
Done!**

We appreciate the opportunity to be a small part  
of your amazing team and look forward to celebrating this  
success and all those to follow!

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## UChicago Medicine Supply Chain team thrives when aligning with clinicians

by Rick Dana Barlow

UChicago Medicine's Supply Chain team demonstrates their support of and inherent value to clinicians through strategic sourcing, value analysis, inventory planning teams, and the "ACD" process.

Strategic sourcing brings clinicians together with Supply Chain to leverage targeted product and service areas with selected suppliers in the areas of capital equipment, service, consumables, clinical trials and value analysis, contract management and negotiation, spend analytics, category management, supplier relationship management, and supplier scorecarding that evaluates supplier performance.

"At our organization, the Strategic Sourcing team also owns the Value Analysis and Contracting process, and each Sourcing Category Leader is responsible for leading the VA team in their categories," explained Ian O'Malley, director, Strategic Sourcing Clinical. "This enables Strategic Sourcing to have both that macro view of how a device conversion may impact a category of spend or a multi-divisional contract, but also the micro view tied to how that device is impacting patient care, quality, and clinician satisfaction. This enables our team to quickly put together business cases for various scenarios, and establish strategic negotiation plans that align with clinical needs."

The VA Executive Steering Committee comprises a majority of clinical specialties with executive and operational leadership to empower and encourage local teams to make decisions based on UCM standards using appropriate metrics to track and ensure ROI, according to Eric Tritch, Vice President, Supply Chain & Support Services.

"In our VA meeting, we present a product comparison page to give a 'head-to-head' view of what we are currently using, versus what the presenting clinicians want us to convert to or add to our inventory," described John Mayer, assistant director, Strategic Sourcing Clinical. "The primary data points are annual or monthly usage, which is pulled from Tableau, cost per use, and some feedback around proposed clinical benefits or operational improvements.

"Clinicians appreciate the simplicity of this view, and how it breaks down the financials to help understand the organizational impact tied to this decision," Mayer continued. "Many are completely unaware of the costs of these devices so many times, this data can be new to them. We have found that our clinicians are extremely practical in evaluating these, and unless there is a significant and tangible/measurable metric that can be tracked, a negative

financial impact is usually enough for them to withdraw support for converting or trialing a product."

Cara Eason, manager, Strategic Sourcing Clinical, notes that the Strategic Sourcing team has access to cost-per-case reporting via an internal dashboard created by using Epic data fed into Tableau, and also a cost-per-case tool developed by their GPO Vizient, which gives them some benchmark data against other organizations along with outcome measurements.

"There is a hunger for visibility into this data from our surgeons, but our team is selective about how we present and communicate these opportunities as the largest effort on our end is validating the accuracy of the data," Eason indicated. "We have found that pushing out canned reports can create a lack of trust if there are any errors in the data, which can establish a barrier to future projects with those surgeons. Our team selects and targets specialties and surgeons, partnering with the Chair/Chief of the department to kick off these projects, and identifying a clinical project champion before working with the individual surgeons."

Supply Chain's Inventory Planning team represents a specialized team of inventory planners that support surgeons by specialty. In fact, each specialty (14 in total) has an on-site FTE that collectively support more than 80 cases per day to ensure all clinicians have the materials they need to operate safely and successfully, Tritch says.

"The Inventory Planning team is viewed as critical part of our operation to manage the most complex supplies, implants, special requests," noted Vella Stevanovic, director, Supply Chain Operations, Hyde Park. "We view each inventory planner as an inventory manager of the assigned area where they manage flow of material, flow of information, flow of money, relationship with customer and vendor for the respective area. Having this group has allowed us to optimize the areas with the highest amount of inventory dollar-wise, and



**Eric Tritch picking up a package from Amazon Locker on campus**

achieve very high levels of service, reliability, cost-effectiveness, and trust with our customers/clinicians. The level of staff for all areas is determined based on a labor model that includes inventory planners. Thus, the size of the organization would determine the size of the inventory planner team."

Supply Chain's "ACD" process represents a formal mechanism for clinicals to "Add/Change/Delete" items from their respective areas. Clinicians simply complete the ACD form and send it to the inventory planner responsible for the specific location to complete the requested action rather than submitting an email, says Atanas Ilchev, System Director, Supply Chain Operations & Logistics.

"Going from email to an official form/process across the entire organization took some time," he admitted. "I could say I was nicely surprised by the level of acceptance in most areas as clinicians followed the process/steps asked of them. I think clinicians learned to appreciate the consistency of the process, which helped with further adoption and now is second nature when it comes to changes to supply locations. Clinicians use the process to remove items as well, but 'removes' are much more rare than 'adds.'"

Ilchev notes that the process also provides visibility into requests and helps keep both parties accountable – clinicians and Supply Chain.

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# Industry leaders say innovation is here to stay

by Janette Wider



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*Several industry experts discussed advancements in surgical technologies with Healthcare Purchasing News, and shared their thoughts for the future*

**T**he COVID-19 pandemic threw a wrench into healthcare delivery, to say the least. Yet, innovators in this space did not slow down their push to move the industry forward with surgical technological advancements. This space is full of technologies that assist busy clinical professionals, making their day-to-day lives a little bit easier.

As to what's hot right now, Tom Meevis, vice president, commercial strategy & communications, North America, Getinge, said, "Technology has been changing the delivery of healthcare around the world for years. Any technology that can simplify and streamline a working environment is in demand right now. In today's world, it's not just about working hard, it's also about working smarter and more efficiently to help healthcare institutions and professionals provide the best possible care to their patients. Technologies such as robotics, three-dimensional visualization, and digital solutions are dominating right now, and it's because they come with a wide array of benefits for healthcare workers and their patients."



**Tom Meevis**

Dustin Vaughan, vice president, R&D, robotics, Asensus Surgical, largely agreed. He said, "Technologies that empower

physicians with real-time data insights are progressing toward the norm across medicine, however, there remains room for growth in that area in surgery. By incorporating the advanced capabilities of AI, machine learning, and computer vision into surgical procedures, we can augment the physician's skill to create a new category of intelligence-backed treatment that we refer to as 'Performance-Guided Surgery' Leveraging real-time data in the operating room has the power to drive more consistently positive health outcomes for patients and reduce healthcare costs."



**Dustin Vaughan**

He added, "The goal of any new technology should focus on making surgeries more repeatable and optimizing positive outcomes. As digital intelligence tools continue to evolve and enter the market, we will see less variability across surgical procedures and reduced rates of complication."

Jaime Wong, MD, senior vice president and senior medical officer, Intuitive Surgical, commented, "Intuitive has been deeply connected to our customers for more than two decades, helping determine how our advanced technologies can bring value in their real-world experience. (A robotic surgical system that



collects dust is not useful, even though it may represent advanced technology.) We consistently focus on certain goals, which our customers share: technology that supports improved patient outcomes, that supports better experiences for patients and care teams, and, of course, technology that can lower the total cost to treat.”

“So, the value may come from a reduced hospital stay after a certain da Vinci surgery, for example,” Wong added. “Or an earlier lung cancer diagnosis with the help of an Ion-enabled biopsy—or more surgical volume from 24/7 access to robotic surgery. It’s the value of all those goals that our customers demand.”



**Jaime Wong**

## Technology assists, doesn’t replace

The staffing crisis facing hospitals right now is a serious pain-point for most, if not all, organizations across the U.S. Asensus Surgical’s Vaughan said, “By focusing innovation on augmenting the work of clinicians—not replacing them—emerging technologies can help to reduce some of the burdens of practicing medicine that have contributed to burnout. In surgery, for instance, we may prolong the careers of some physicians through robotic platforms that minimize the cognitive and orthopedic strain of performing numerous surgeries every day. Career longevity is an increasingly important factor in the healthcare system, as nearly half of all active physicians in the U.S. will be 65 or older by 2030. In addition, by lowering the demands of the entire surgical team day-to-day, physicians and OR staff may see an increase in their overall work satisfaction and feel less burned out at the end of each day.”

Intuitive Surgical’s Wong commented, “Staffing issues are in the top areas of concern for the surgical suite—and probably all areas of healthcare. Health systems are leveraging modern robotic surgery platforms and implementing alternative staffing approaches to help optimize OR performance and alleviate staff burden. In many cases, Intuitive has worked closely with hospitals to analyze their data, training, and workflow protocols to utilize fewer staff per procedure—often from four to three.”

Wong continued, “Advanced technology in the da Vinci system is designed to improve operational efficiency, enabling a quick start, and streamlining essential tasks. The design and structure of the da Vinci XI system, for example, is based on efficiency. The arms are mounted to a boom, which can rotate to many angles over the patients—without having to move the base. This enables effective four-quadrant access, and, when using Integrated Table Motion, surgeons can reposition the patient to optimize access, exposure, and reach without stopping a procedure. The da Vinci XI system also contains a fully integrated endoscope, which requires no set-up, and surgeons can flip the endoscope view 30 degrees up and down with the press of a button. This gives the surgeon complete control over the camera.”

“In addition, a digitally connected ecosystem may support enhanced capabilities, intraoperative collaboration, and personalized learning that supports efficiency. Integrated intelligence can illuminate insights within OR data to potentially streamline instrument usage, OR efficiency, and staffing models,” Wong added. “As one example, data can help users analyze and understand the demand for robotic procedures—everything from the number and length of cases, to the instruments used during procedures to help align staffing resources.”

## Cyber concerns

Stories of medical devices getting hacked are released almost every day in the news. Luckily, industry experts are prepared. Asensus Surgical’s Vaughan said, “Our team is dedicated to

ensuring that the deployment of these technologies is done in a manner that addresses the concerns of clinicians, hospital administration, as well as the patients. Our process takes all of these stakeholders into account, and we use independent third-party reviews and testing to ensure that we are not putting data or devices at risk.”

As for cybersecurity concerns, Getinge’s Meevis commented, “Having a quality cybersecurity incident-response plan can unquestionably offset any worry. It comes down to product design and being prepared for moments like that. At Getinge, we take cybersecurity and privacy very seriously—for our company and our clients. Since last year, we’ve implemented more mandatory training for employees, to reiterate the importance of privacy and cybersecurity. The goal is to help familiarize them with the various tools and resources in place to assist them in handling cyber-related scenarios with customers and our digital solutions. So, while there is always going to be some worry with advanced technologies, it comes down to the education and resources available, as well as planning ahead to help reassure any customer on their concerns.”

## The future is bright

“The future is unpredictable, but if there is anything the healthcare industry has learned over the last few years, it is always changing and evolving,” noted Getinge’s Meevis. “I think the future in this space will always focus on prioritizing and improving patient care and optimizing workflows to make that possible. That’s consistent across any specialty or area in healthcare. While unpredictable, the future is bright in this space because there is certainly no shortage of innovation and the need for life-changing technologies to help save people’s lives. At Getinge, we pride ourselves on the people within our organization that have forward-thinking attitudes that assist in the development of these innovative ideas that will surely change the game of healthcare in this space for years to come.”

Intuitive Surgical’s Wong said, “For hospitals, the data is already revealing the strengths and opportunities of their respective robotic-assisted practices because they can compare it to non-robotic options to see the value areas. Even the operating room choreography can get mapped and optimized with data analysis, and that could lead toward smoother and more efficient operative workflows. It’s one thing to understand which sets of procedure data are relevant; it’s another to take what’s meaningful and build predictive tools that are truly useful in the OR and help support better patient care.”

He continued, “The impactful application is aimed at building tools that surround the surgeon with information that gives them real-time feedback to support their surgery, their teams, and their patients. AI and machine learning will drive real-time insights based on video-analysis technologies. For example, the system could see how a surgeon sutures two vessels together and advise the surgeon of the probability of an anastomotic leak by comparing what it saw in thousands of other similar procedures. That kind of real-time guidance could help translate into better outcomes. AI won’t displace clinical decision-making, but could better inform it.”

Asensus Surgical’s Vaughan concluded, “Intelligence-backed surgery, or Performance-Guided Surgery, is the future of surgery. Innovation in robotics has long focused on the robot itself, but a shift toward the software powering the robot—including, AI, machine learning, etc.—is opening new pathways to reducing the cognitive and physical burden on surgeons. Against the backdrop of a physician shortage that is only growing more severe, we must continue to develop solutions that support career longevity for our surgeons.” **HPN**

# Maintaining an Equal Partnership between IP and Supply Chain

*Communication and collaboration remain keys to successful healthcare*

by Brenda Silva

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Within any hospital or healthcare facility, the relationship between the Infection Prevention (IP) and Supply Chain departments is arguably one of the most important daily interactions, designed to ensure the safety of patients and healthcare workers alike. When these two departments work successfully together, the result can be seen in the level of infection prevention and care provided throughout the facility, as well as in the cost-savings to the patients and facility. However, like any relationship, a successful partnership between IP and Supply Chain requires communication and collaboration to ensure the pairing achieves its goal of best healthcare practices.

According to Larinda Becker, Executive Director of Marketing - Infection Prevention at Diversy, maintaining a healthy balance between IP and Supply Chain comes down to five steps. She said, "Maintaining a healthy balance between infection prevention and the supply chain is key to helping ensure the safety and wellbeing of patients and healthcare workers."



**Larinda Becker**

The five key components Becker cited are:

1. Collaboration: "Encourage open communication and collaboration between infection control teams, supply chain managers, and healthcare professionals. This will allow for the identification of potential risks and the development of effective strategies to address them. We have seen that having frequent meetings

and discussing challenges, along with working together to help create effective solutions can help. Having cross-functional training for teams can also improve the understanding of each other's roles and responsibilities and foster better decision-making."

2. Education and Training: "Provide comprehensive education and training to healthcare staff regarding infection prevention measures and the proper use of supplies and equipment. This will help ensure that everyone understands their roles and responsibilities in preventing infections and using resources efficiently."
3. Regular Assessments: "Conduct regular assessments of infection prevention practices and supply chain management. This includes monitoring compliance with protocols, evaluating the effectiveness of current practices, and identifying areas for improvement."
4. Data Analysis: "Utilize data analysis and surveillance systems to track infection rates, supply utilization, and trends. This information can help identify patterns and potential risks that require attention and intervention. By analyzing data together, they can identify trends, areas of improvement, and potential risks to patient safety."
5. Continuous Improvement: "Foster a culture of continuous improvement by encouraging feedback from healthcare professionals and fostering a positive learning environment. Regularly evaluate and update infection prevention protocols and supply chain processes based on new

evidence and best practices. Also, it may help to establish common goals and objectives that align with both infection prevention and supply chain management. This can help in promoting a shared sense of responsibility and accountability."

In agreement with Becker is Cory Turner, Senior Director Healthcare Strategy at Tecsyst, who added, "Collaboration between teams is crucial as it helps identify common goals and leads to the development of a shared language, ultimately supporting more effective problem-solving. Once a collaborative mindset is established,



**Cory Turner**

your best strategy is to leverage automation and standardize processes. Integrating automation and automated workflows within the supply chain minimizes manual handling of products, thereby reducing the risk of infections by limiting opportunities for contamination."

He continued, "One example of using technology to streamline inventory management and reduce manual handling is the implementation of barcode scanning or RFID tagging. These technologies enable healthcare professionals in both IP and Supply Chain departments to focus on their primary responsibilities while ensuring adherence to infection prevention practices."

Citing efficiency through automation, Turner noted, "Many of our customers have deployed automation at the clinical point of use as part of supply chain transformation projects. Through the implementation of



automated workflows and systems, the number of manual touches is significantly reduced. For instance, automated and optimized preference cards lead to a reduction in picks and returns, consequently minimizing the risk of contamination. This successful supply chain effort not only enhanced operational efficiency but also makes a tangible impact on infection prevention, waste reduction, and financial stewardship."

Alice Brewer, Senior Director, Clinical Affairs at Tru-D, asserted, "It's imperative for infection prevention and supply chain to collaborate in order to meet the needs of a healthcare facility and maintain low levels of infection risks. The relationship is a two-way street—both departments need to communicate effectively and deliver on their goals and objectives."



**Alice Brewer**

She suggested strategies such as communicating product needs, setting expectations, and managing inventory outlooks to help both departments work successfully within any facility.

Brewer added, "IP should approach supply chain early and often. Although not always recognized as such, supply chain is often the first link in the infection prevention chain. If IP leads the charge and takes ownership of the relationship, then supply chain can be better prepared to meet their needs."

She summed up, "If infection and prevention and supply chain cannot work together and maintain a balanced relationship, patient outcomes could potentially become compromised. Regardless of which department initiates the relationship, it is imperative that the two work together to ensure the highest levels of cleanliness and disinfection to help curb the spread of infections."

## Most Important Part of Partnership

Among the many contributing factors in the relationship between IP and Supply Chain, industry professionals tend to agree that communication and shared information are the most important to success across both departments.

Neal Buchalter, President of Parker Laboratories, said, "In the rapidly expanding realm of procedures making use of ultrasound technologies, both infection preventionists and supply chain specialists can become confused because of the many factors that must be considered when selecting appropriate cleaners



**Neal Buchalter**

and disinfectants. Building a shared and evidence-based understanding of how clinical procedures, infection prevention, and supply selection can be coordinated is an important way to ensure ultrasound equipment can be properly cleaned and maintained."

He added, "Suppliers have an important role to play, by responding to the needs of healthcare facilities with equipment and supplies that make procedures faster, easier, and safer to accomplish. Suppliers also need to take into consideration the effectiveness of products within the workflow of the clinicians. For example, does the product require expensive equipment and maintenance, ventilation, or plumbing? Does the product allow for true point of care processing? If suppliers respond appropriately to the needs of the marketplace, clinicians and supply chain specialists shouldn't have to work hard to find the supplies they need to do their jobs."

Diversey's Becker said, "The most important element in the relationship between supply chain and infection prevention is communication and collaboration. It is crucial for healthcare facilities to have open lines of communication between their supply chain team and infection prevention team. This allows for shared information and coordination to ensure that the necessary supplies, such as personal protective equipment (PPE), disinfectants, and pharmaceuticals, are readily available to prevent and control infections. Additionally, collaboration helps in identifying potential risks and challenges in the supply chain and implementing appropriate measures to address them."

Becker continued, "Providing cross-functional training sessions for infection control teams, supply chain managers, and healthcare professionals can help in improving their understanding of each other's roles and responsibilities. This can also foster better collaboration and decision-making."

Turner from Tecsys pointed out the benefits of effective communication. He said, "The most important element in the relationship between infection prevention and supply chain is effective communication and feedback. This empowers both teams to carry out their tasks efficiently, while enabling swift adjustments to meet the ever-evolving clinical needs and ensure optimal patient safety. Whether it involves establishing standardized practices or pivoting to contingencies because of a disruptive event, having a foundation built around information sharing becomes the cornerstone for achieving successful outcomes. That relationship also sets the stage for impactful joint efforts, like those that focus on standardization and automation, to help

reduce the chance of errors and support better infection prevention practices."

Acknowledging the balance that must be maintained between the IP and Supply Chain departments, Tru-D's Brewer explained, "Communication and sharing of information are incredibly important to the relationship between infection prevention and supply chain. Each department has access to, or knowledge of, things that the other may not, which can significantly impact both purchasing and implementation of products. The exchange of this information can help to reduce issues like shortages or incorrect product placement or usage."

She added, "Supply chain is often the first link in the infection prevention chain, and IP and supply chain should acknowledge that they are operating under the same goals and purpose, and communicate clearly and often to successfully achieve those goals."

## Bottom-line Benefits

A well-balanced partnership between IP and Supply Chain not only produces daily benefits to patients and healthcare workers, but it also provides bottom-line cost savings within the facility, which serves to benefit the healthcare industry as a whole. But is there any more that departments and healthcare facilities can be doing to increase the cost savings to everyone?

According to Richard Hayes, President at UVDI, "As it relates to UV room disinfection technologies, healthcare professionals already are taxed with a wide range of product claims and support. Because Supply Chain professionals and Infection Preventionists must carefully vet all potential devices to ensure they meet all institutional efficacy and safety needs, it is key for manufacturers to provide clear, independently supported product claims that are representative of use in practice. Providing clear, evidence-based product performance is often the first box to check in value-analysis-based decision-making and can unlock greater cost efficiencies and better outcomes."



**Richard Hayes**

Tru-D's Brewer pointed out how creative purchasing can help increase cost savings for facilities.

"Healthcare facilities can look for ways to improve cost-effectiveness by being creative with purchasing, such as buying items as a bundle with other approved products or in bulk to save on price. Facilities can also consider being part of a group purchasing organization to leverage lower prices. Also, consider the techniques and products used for infection prevention—is what you're using effective? Is there a better alternative?



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## INFECTION PREVENTION

Perhaps paying a higher price for one item could save money in other areas. As we saw during the pandemic, supply chain and IP both play a critical role in ensuring the best possible patient outcomes, and a collaborative relationship will go a long way in reaching both departments' goals."

Becker from Diversey listed four ways to improve cost-effectiveness and patient care.

"There are ways to improve cost-effectiveness and patient care through continued collaboration between infection prevention and the supply chain.

1. Inventory Management: Collaboration can help in implementing effective inventory management systems that ensure optimal stock levels of essential supplies, reducing the risk of shortages or overstocking. Suppliers can play a role in this and help manage product inventories to baseline and other needs.
2. Assessment and simplification of product selection: By analyzing data on product effectiveness and cost, infection prevention and the supply chain can work together to identify the best products to help achieve goals without compromising patient care.
3. Capacity planning and forecasting: Collaborative efforts can help in assessing future demand for supplies and planning accordingly, ensuring adequate stock levels during peak periods and reducing unnecessary expenses during low-demand periods.
4. Evaluate supplier partnerships: Continual evaluation of supplier partnerships can help in identifying opportunities for cost savings and improved patient care. This could involve negotiating better pricing, exploring alternative suppliers, or consolidating purchasing power."

She summed up, "By leveraging the expertise and insights of both infection prevention and the supply chain, healthcare organizations can find innovative solutions to optimize cost effectiveness and enhance patient care in the context of infection prevention."

Parker Laboratories' Buchalter added, "Medical device manufacturers and commodity suppliers know that healthcare is a rapidly changing field, where discoveries about human disease and advancing technologies often come together to generate significant improvements for patients."

He continued, "Many new products are specifically designed to build value for the healthcare system, sometimes by reducing direct costs, but also by reducing procedure time, increasing patient throughput, and minimizing the need for repeat procedures. When infection preventionists work closely with supply chain experts and outside suppliers, they can often find ways to build greater value for their institutions by selecting products offering outstanding value while also ensuring that patients are protected."

Summing up the question of how to improve cost savings through the partnership between IP and Supply Chain departments, Turner from Tecsys noted the benefits of reviewing workflow and automation processes.

"Different health systems are at completely different points in their journey, but embracing a continuous improvement mindset unlocks a world of possibilities for both cost-effectiveness and patient care. The collaboration between infection prevention and supply chain departments plays a vital role in achieving these goals."

He added, "By removing unnecessary steps and touches, through workflow, process or automation, we can minimize waste, promote more sustainable workflows, and enhance infection prevention practices. This results in better patient care outcomes and reduced healthcare-associated infections. Continued efforts in standardization, automation, and accurate preference cards are key. Additionally, evaluating and engaging with suppliers who prioritize quality, cost-effectiveness, and innovation in infection prevention products can further drive improvements." **HPN**



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## STERILE PROCESSING

# Navigating case carts, kits and trays in the surgical services setting

by Kara Nadeau



Photo courtesy Turbett Surgical

**C**ase carts, kits, and trays are fundamental to supporting surgical services. Because they flow between the sterile processing department (SPD) and the operating room (OR), both teams play a role in their effective and safe use.

SPD and OR professionals, along with product and service suppliers, comment on why case carts, kits, and trays should be a focus area of improvement in today's healthcare environment, and how SPD and OR teams can work together to enhance the design and workflow of stocking and transporting this trio of tools between the two departments.

### A focus on efficiency and waste reduction

Managing surgical instruments and supplies can be a time- and labor-intensive process – from storage, picking and packing, transport to the OR, and back to the SPD department – but as Ian Loper, Vice President, DSI pointed out, it is usually not a target area for improvement.

"The internal workflow within both the SPD and OR is one of the most underappreciated aspects of the hospital," said Loper. "The workflow for a patient seems to always be the focus for the hospital but not so much for these two departments."

Loper and other experts say there is significant opportunity to optimize these processes for greater efficiency and less waste.

"There is an urgent need to address today's operational challenges in healthcare," said Chris Chrzanowski, Manager, Healthcare Consulting Services, Asset Management, Aesculap. "Many other industries have already adopted lean processes to tackle similar issues. By adopting manufacturing practices similar to a factory concept, we could enhance many processes, including retrieval from the OR, decontamination, automated washing, instrument inspection, and delivery to the OR. This approach could automate certain operations, aiding in managing previously uncontrolled variables, such as staffing issues and procedural inefficiencies. It can contribute significantly to achieving greater efficiency while reducing costs and waste – a crucial focus area in today's demanding healthcare environment."

"Healthcare facilities have a tremendous need to become more efficient," said Robert Turbett, co-founder, Turbett Surgical. "The pressures of operating costs rising put a significant strain on hospital and ambulatory surgery center (ASC) budgets. If a healthcare facility is going to thrive in today's market, it needs to examine its daily operating processes. Steps need to be taken to not only reduce operating costs but explore how to best utilize its operating room to generate revenue. Utilizing the employees in the most efficient manner is a critical component, as staff is often the largest expense. Looking at ways to work smarter, not harder, is a key component to team satisfaction and retention."

"Having a complete procedural supply pick (kits, trays, single sterile supplies, etc.) that is properly and safely delivered to the OR from the SPD will improve workflow, efficiency and utilization of staffing resources," said Cory Ezell, North America Sales Director for Belintra, partnering with O&M Halyard. "If this became a focus area in today's healthcare environment, we'd see undeniable results – such as a decreased amount of time that the OR nurse has to pick additional supplies; reduced number of times the OR nurse has to go in and out of the OR suite for product picking; improved OR turnover time; and reduced product waste."

"Recognizing the need for more efficiency in healthcare settings, it is important to look at the process and ensure that the needs are clearly defined," said Marcia Frieze, CEO Case Medical. "At Case Medical, we look to reduce inventory by avoiding unnecessary SKUs and standardizing products that can be used for multiple purposes. Our containers are universal, durable and designed for all current sterilization modalities. Our component parts are interchangeable, and our instrument chemistries are highly concentrated to reduce stock, avoid waste, and go safely into the wastewater stream."

### Six tips for SP/OR supply success

George Daetz, Director of Sales, Blickman Industries, Turbett, Ezell, Chrzanowski, Frieze and Loper offered the following tips





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# STERILE PROCESSING

for building efficiency and waste reduction into the case cart, kit-, and tray-management process.

## 1. Streamline surgical trays

Turbett commented on how minimizing instrument volume is an important process improvement to help eliminate waste. He stated:

“Communication between the OR and the SPD is paramount. It’s critical to patient safety that the surgeon has the instruments he needs (and desires) to have available in surgery. At the same time, keeping preference cards updated to eliminate any unneeded tools streamlines the workflow and maintains the highest level of efficiency. Utilizing reprocessing products that reduce repetitive chores is key to keeping teams satisfied.”

## 2. Standardize on sterile supplies and their storage

Ezell noted how sterile supplies and trays are often stored in both the SPD and the OR, making it imperative to consider the right equipment to service combined needs.

“Productivity and consistency are key for a seamless working structure between an SPD and OR. Perioperative teams should ensure their storage allows for maximum trays/supplies, transportation that can incorporate both sterile packs and loose supplies, and case carts match the growth of procedure demands. Additionally, standardizing storage capabilities and emphasizing labeling creates consistency for staff to locate items and helps them be as productive as possible.”

## 3. Take a system-based approach

Frieze said Case Medical takes a holistic, 360-degree approach with products that are durable, long lasting, and complementary with universal application. The company developed software with real-time data to manage operations and logistics. Work instructions identify the steps in sequence, so that all procedures are well defined. She stated:

“As a manufacturer of products for instrument processing and sterilization, we understand that each product is part of a system. The containers used for sterilization and instrument protection must be designed to fit into the various sterilizers and accommodate the devices within. Our instrument chemistries were developed to be fast-acting and free-rinsing to avoid residue and reduce waste, and be compatible with the devices to be cleaned, as well as the equipment. Our case carts used for transport have the appropriate signage, even a barcode for tracking, so that only the correct items are selected and transported to the intended destination.”

## 4. Consider your case cart design and path

Daetz said the emerging healthcare industry trend toward off-site sterilization and multi-facility distribution centers will make case cart optimization a focus area, particularly with regards to how case carts are transported between sites.

“It is important to understand the cart path from stocking to OR to decontamination/cart wash to restocking. Agree on one size of cart that can work in each OR.”

## 5. Map SP and OR workflows

To facilitate collaboration between the OR and the SPD for improved stocking and transport design of case carts, kits, and trays, Chrzanowski recommends a hospital start by digitally mapping the workspace and workflow of both departments together. He stated:

“Once both teams have a clear understanding of the workspace, prioritize and streamline the assembly of kits and trays to optimize for both areas. Incorporate accurate case cart assembly, factoring in SPD staffing schedules, surgical case mix, start times, and block scheduling. Conducting a comprehensive process and flow analysis

within the OR and the SPD can help enable the implementation of a lean, efficient workflow design, benefiting both departments.”

## 6. Invest in the big three: people, process and products

“People are involved in pulling inventory from the shelves, loading up the case carts, then pushing the carts from the SPD to the OR,” said Loper. “Time, people, inventory, and equipment are involved in this part of the process. The sterile instruments and supplies are used in the OR, then loaded back up and rolled back down into decontamination and the SPD for processing. A process is in place and that process involves time, people, equipment, inventory, and software. So where should the hospital focus its resources: the people, the process, and the products used in every step of the way.”

“Let’s envision the SPD as being an Amazon fulfillment center and the OR being someone’s house,” Loper continued. “Amazon is incredibly proficient with order accuracy, speed with which they fill the order, delivering the order on schedule, and with close to zero damage to the contents and packaging. That’s what makes Amazon...Amazon. How?”

- Step 1: Easy-to-use end-user interface with their website for order entry.
- Step 2: The software program or enterprise resource planning (ERP) system used for inventory management.
- Step 3: An automated storage and retrieval system used for storing and retrieving products.
- Step 4: The delivery system (drivers) to the end-user.

“There are very successful healthcare-focused vendors for all four steps of this proven path but it’s up to the hospital system to earmark and make the appropriate investments to improve these processes every step of the way,” Loper concluded.

## Nemours Children’s Hospital navigates case carts routes for new SPD build

Nemours Children’s Hospital Delaware Valley, based in Wilmington, Del., is an impactful example of how investments in people, products and processes paid off in terms of efficiency, quality, and safety when transitioning to a new sterile processing department.

### A major move

Like most SPDs, Nemours Children’s Hospital’s previous space was in the basement, while the ORs were on the hospital’s second floor. The new SPD was moved up to the third floor, one floor above the ORs. This meant they had to establish completely new case-cart routes from the SPD on the third floor down to the OR on the second floor and then back up to decontamination. They also had to establish a safe route for dirty carts coming from outside clinics into the SPD.

“In our previous SPD on the ground floor, we had an elevator right up to the OR and into the clean core,” the hospital’s Interim



The Nemours SPD team



# STERILE PROCESSING

SPD Manager, Jodie Lockwood, explained. "We would not have that with the new space. We had to think about how were going to get clean case carts down to OR and get dirty ones back up to decontamination. We also had to find a way to provide outside clinics access to decontamination without clinic staff having to gown up."

## The supporting structure for success

Before the move, Lockwood and Edna Gilliam, DNP, MBA, RN, CNOR, Assistant VP, Perioperative Services & SPD, DV, Nemours Children's Hospital, worked to build a collaborative supporting structure for success that includes weekly huddles between the SPD and OR teams, accountable action plans to address issues as they arise, tracking and reporting of quality metrics, and the application of these metrics to drive continuous improvements.

"Our last Joint Commission survey and mock survey produced no findings in SPD. That speaks to the quality that we have invested in our department, our teams, and their efforts," said Lockwood.

## A coordinated, collaborative approach pays off

Lockwood and Gilliam partnered with other members of the SPD and OR teams to facilitate a seamless transition for the SPD move.

"A lot of coordination needed to happen between both teams to make sure we could seamlessly transition from the old SPD going offline to the new one going online," said Gilliam.

They established a multidisciplinary incident command structure and held multiple meetings each week leading up to the transition where leaders from the SPD, OR, IT, infection prevention (IP), environmental services (EVS), construction, and regulatory teams collaborated on designing the new space and related workflows around it.

"These meetings provided the opportunity for immediate discussion and resolution of issues because everyone was in the room, as opposed to a disjointed approach where different stakeholders were individually attempting to work through action items," said Gilliam. "For example, with the help of IP and regulatory, we established dirty and clean sides of the hallways through which case carts would travel and visibly marked that distinction, so it was clear to people walking the halls."

"We performed a 'walk in the life' where our frontline staff members simulated moving case carts from point A to point B," Lockwood explained. "This allowed us as a team to identify issues and concerns before we went live in the new space."

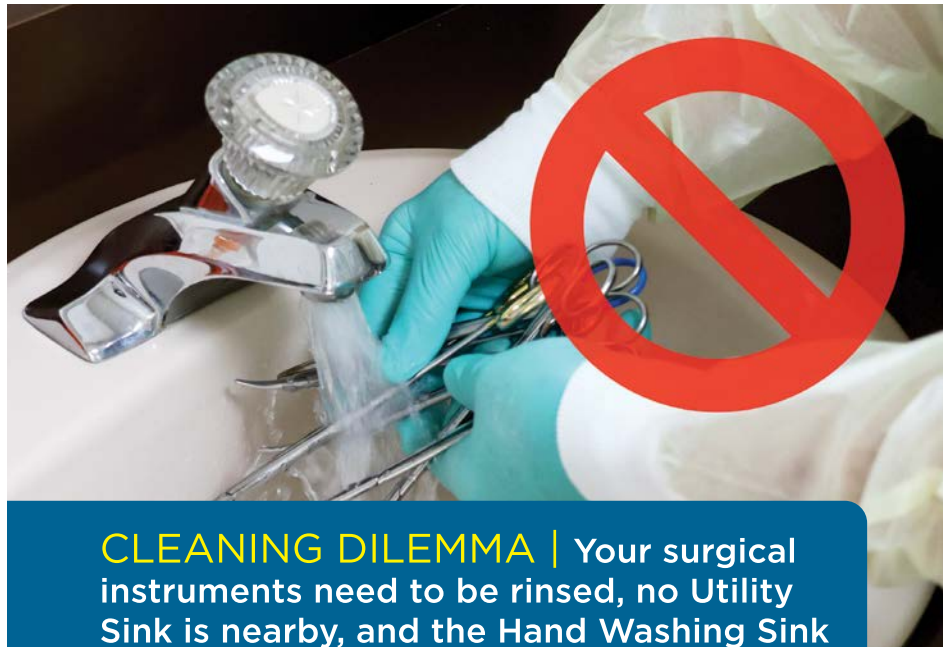
According to Lockwood and Gilliam, the preplanning, communication, and collaboration paid off. "The SPD was able to move with no interruption to the OR. It was seamless," said Gilliam.

## Recognition from the top

Executive leaders for Nemours Children's Hospital Delaware Valley understand the critical importance of the SPD to effective and safe perioperative services. This was evidenced by the hospital's investment in its new SP department.

"We know the SPD is the heart of the hospital, but I think people lose sight of that sometimes," said Lockwood. "Building a new SPD with state-of-the-art equipment – it has about everything we could ever want – spoke volumes about how much we are valued. Alongside the financial investment, my team was there at the table helping make decisions on the new space. I think the SPD team for the first time really felt they had a voice in what was happening." **HPN**

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# STERILE PROCESSING

## Products and solutions to support case cart, kit and tray optimization

### Aesculap surgical asset management consulting services

Aesculap offers an innovative portfolio of surgical instruments and services designed to enhance efficiency in today's OR and SPD. One program, its surgical asset management consulting services, is a Process Ready Analysis, which evaluates the effectiveness of a facility's current operational paceline.

This detailed process allows Aesculap's consultants to assess department flow, capital equipment efficiencies, asset optimization, data cleanse/alignment for tracking systems, backstock inventory, and thorough water testing.

"This can help health systems ensure timely availability of surgical assets, reduce wasted time and costs from unnecessary instrument reprocessing, and streamline sterile processing workflows to help alleviate staff burden," Chrzanowski explained.



*Aesculap's surgical asset management consulting services*

### Blickman Over the Road case cart line

With a growing healthcare industry trend toward off-site sterile processing and multi facility distribution centers, Blickman developed its "Over the Road" case cart line. As Daetz explained, off-site sterilization requires case carts to be used to transport kits and trays to and from the facilities.

Blickman's Over the Road carts incorporate robust casters that absorb bumps during transport, a second, bottom latch to ensure secure closure, and doors sealed with gasketing material to prevent dust/dirt from entry during transport. Customized tow-hitching options are available upon request. While designed for external transport, this line can also perform its normal internal duties as well.



*Blickman's Over the Road case carts*

### DSI storage systems and case carts

DSI has a range of different products that can help an SPD and an OR improve their processes that will enable the hospital to save time throughout the order fulfillment and replenishment process.

DSI's storage systems and case carts are an integrated



*DSI's No-Tear Triton case cart*

system where the internal shelves can be used in both systems to help standardize the process. Loper said they are designed to optimize every cubic inch of storage to help maximize workflow flexibility. He added how the company's case carts have the optionality to "trailer together and be pulled like a train."

### HALYARD and Belintra SMART-FOLD STERISYSTEM

It is designed to tackle complex cases that require more sterile supplies, instrument trays and custom packs. The unique design of the SMART-FOLD STERISYSTEM combines high-density modular storage with a best-in-class case cart to handle a variety of cases, providing a high-quality solution to SPD and OR teams who need an efficiency boost. In addition to the STERISYSTEM, the Belintra installation team has first-hand experience in the SPD and OR and can swiftly transform the workflow and storage of a facility without disrupting surgical cases.



*O&M Halyard and Belintra SMART-FOLD STERISYSTEM*

### Turbett Surgical Instrument Pod

The Pod is "the biggest step forward in efficiency an operating room can take," according to Turbett. SPD and OR teams work together to determine the instruments needed, creating streamlined surgical kits. The Pod reduces room turnover time by taking the traditional two-person, 20-minute room set up time up time and making it a one person, one-minute process.

A recent retrospective study where a hospital used the Turbett Surgical Instrument Pod found the OR was able to perform 124 more surgeries within an already full block time during a comparative six-month time frame. The hospital generated an additional \$1.3 million in revenue while reducing its operating costs and waste.<sup>1</sup>

"The Pods did this while reducing the steps to reprocess the instruments and reducing the physical workload, resulting in satisfied team members," said Turbett, commenting on the study. "The Instrument Pod is the perfect combination of generating revenue for a facility while dramatically improving procedural efficiency."

More information on this can be found at [www.TurbettSurgical.com](http://www.TurbettSurgical.com), or [info@turbettsurgical.com](mailto:info@turbettsurgical.com).



*Turbett Surgical's Instrument Pod*

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# SPD and OR Leaders: Don't Muddle the Huddle

by David L. Taylor, MSN, RN, CNOR  
Kristina Pirollo-Ketchum, AA, CRCST, CHL  
Albert Huether, MBA, CRCST

**H**ealthcare workers are often faced with high-stress situations that can contribute to negative patient outcomes and costly monetary impact for the healthcare organization. Sterile Processing departments (SPDs) and Operating Rooms (ORs) are two areas that commonly experience these types of situations; therefore, establishing strong interdisciplinary relationships is critical.

Although the SPD and OR are unique in the services they provide, they share the same goals for patient safety, infection prevention, and successful outcomes. When one department struggles or suffers, the other does as well. Despite the close working relationship and shared goals, friction and tension are common between the two departments—and SPD and OR leaders must work together to build a strong interdisciplinary alliance that meets the organization's goals and mission and benefits employees, as well as the patients they serve. Leaders who ensure the right staff are involved—with the right skills and processes—are essential when building effective teams.<sup>1</sup>

Departmental rounding and staff huddles are two highly effective tactics leaders can implement to ensure all SPD and OR team members are informed of pertinent information that will keep procedures safe and on schedule.

## Collaborating for quality

Huddles are important because they allow the two departments to share key information that will help avoid issues that could cause delays or other negative situations. Information shared during huddles should be two-way, relevant, and objective. When issues arise, pertinent details should be shared, and solutions should be sought together.

SPDs that play a large role in surgery should ideally have the SP leader (or another professional appointed by the

SP leader) meet with surgery at least once daily to review the surgical needs for the day and address any issues or concerns regarding instrumentation or equipment provided by the SPD.<sup>2</sup> That information should then be shared with the rest of the SP professionals to ensure everyone understands the needs and priorities.

Rounding is another powerful tool that, when used properly, builds trust and improved understanding between the departments. When SP team members round in surgical suites before the day's first case and periodically throughout the day, for example, they see firsthand the issues the surgical team must overcome to keep their day moving and troubleshoot issues in real time. Rounding in the OR is a proactive approach to identifying and resolving potential problems that may arise during procedures. Having SP team members present in the OR makes it possible to quickly address any concerns related to instrument sterilization, supply availability or equipment functionality. They can see firsthand how their work impacts patient care, and how their role ensures that surgical instruments are properly cleaned, assembled, sterilized, stored, and available when needed.

In addition to troubleshooting, rounding in the OR allows both departmental teams to communicate effectively and build better relationships. By working closely together, employees from both departments can develop a deeper mutual understanding of roles and responsibilities, which can lead to better collaboration. Rounding also helps ensure all necessary resources are available, which reduces stress for both teams, and improves patient care and surgeon satisfaction.

Likewise, when OR staff spend time in the SPD and become immersed in the complex processes of instrument reprocessing, they gain a clearer perspective of the time and resources needed for each step and,



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often, and greater respect and appreciation for those who perform the job.

Being present and listening to concerns firsthand allows SP and OR professionals to ask clarifying questions and respond more proactively instead of reactively. This heightened collaboration strengthens bonds and helps leaders from both departments to identify process issues, solutions, and opportunities for improvement that will positively affect both departments. When healthcare professionals work together, they share their expertise and knowledge, leading to better decision-making.

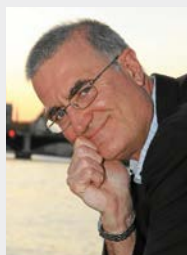
## Conclusion

Effective collaboration between the OR and SP teams is essential for quality patient service. Open and honest communication is vital in any healthcare setting, especially in these two departments, where time is of the essence and patient safety is a top priority.

Ensuring effective interdisciplinary teamwork and collaboration can be a complex process; therefore, leaders who ensure the right staff are involved—with the right skills and processes—are essential for building effective teams. By fostering collaboration through cross-departmental staff huddles and rounding, healthcare organizations can improve patient outcomes, reduce errors, and enhance operational efficiency. **HPN**

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# Cleaning Solutions

by Stephen M. Kovach

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**Q** “I recently attended a seminar where the speaker discussed cleaning solutions. They talked about “surface tension,” of cleaning solutions, and I had not heard of that term before. Can you explain why it is important?”

**A** I need to start with a simple concept. No matter the type of cleaning solution you are using, cleaning takes a lot of energy. Cleaning requires both friction and fluid to get anything clean.

There are three different kinds of energy needed for cleaning:

- **Chemical energy:** provided by the cleaning solution.
- **Mechanical energy:** provided by a machine or by hand.
- **Thermal energy:** provided by heating water.

Surface tension falls under chemical energy because it is part of the cleaning solution. When I think of surface tension, I think of a drop of water (what I call “beads up”) on my kitchen counter. The drop will hold its shape and will not spread. As tension is reduced, the “bead” will spread out reaching more of the kitchen countertop surface.

Thus, when you clean, you want your cleaning solution’s surface tension reduced. In other words, less is more with surface tension. To do this, cleaning solutions’ companies use a group of chemicals called surface active agents or surfactants, which change how water behaves. When added, the surface tension is reduced, and water can spread out and wet the surface (like the kitchen countertop example) better than using just plain water.

This simple principle applies to cleaning anything; so, when cleaning your medical devices, you want a cleaning solution having surfactants that lower the surface tension.

It should be noted that some cleaning solutions are specifically formulated for use in an ultrasonic cleaner. Cleaning solutions that reduce surface tension within the

bath/tank will increase cavitation intensity and enhance cleaning. Make sure you read the label to ensure it can be used in an ultrasonic.

We also understand that cleaning solutions are formulated with more than just surfactants. You also can have any combination of the following additives: a) builders, b) solvents, c) enzymes, d) preservatives, e) pH adjusters, f) fragrances, and g) dyes. These are just some of what can be added to cleaning solutions. Various combinations of these and other ingredients create all the unique cleaning solutions you can pick from to use in your department.

Comparing the many types of cleaning solutions that a medical device reprocessing department can use can be both difficult and confusing. As I pointed out in my insights article in *HPN*’s September 2021 publication, ASTM has published standards that I feel users should ask for when comparing or changing cleaning chemistries. It is objective testing methods that should help differentiate the various cleaning solution products.

As in the movie *Indiana Jones and the Last Crusade* (Spielberg, 1989), Indy needed to “... choose wisely,” the right chalice to obtain life, so you also need to “choose wisely” the cleaning solution to get those medical devices clean.

**Q** “I was informed we need to use a multi-enzyme cleaning solution with our washer because it is on contract. Is that true?”

**A** As with any cleaning solution, you want to pick the right one for the task at hand. Although I cannot address the issue with your contract situation, my hope is that there was a committee made up of a variety of professionals who have a good understanding of cleaning solutions when they chose this multi-enzyme cleaning solution.

When it comes to enzymes, they are produced by living organisms; however, they

are not living substances. Enzymes act as a catalyst to speed up chemical reactions. They are highly specialized proteins classified by the type of reaction they catalyze. Medical device reprocessing departments basically use these three types of enzymes (or any combination of them):

- **Lipase** - breaks down fats and greases.
- **Protease** - breaks down protein.
- **Amylase** - breaks down carbohydrates and starches.

Lastly, I think we all can agree that blood is probably the number one soil we try to clean off medical devices. Whatever solution you use, you want to make sure it is a proteolytic type of cleaning solution, which means it can break down protein by means of proteolysis. “Proteolysis is a hydrolysis reaction of peptide bonds in which proteins breakdown into smaller peptides and/or into individual amino acid residues. The proteolytic cleavage reactions are usually catalyzed by either chemicals or enzymes.” (Raju, 2019).

Cleaning solution companies have their own proprietary formulas, and some combine enzymes and some do not use any enzymes. Again, depending on your process, you need to “choose wisely,” which cleaning solution with/without enzymes works best in your department to make sure it gets your medical devices clean. **HPN**

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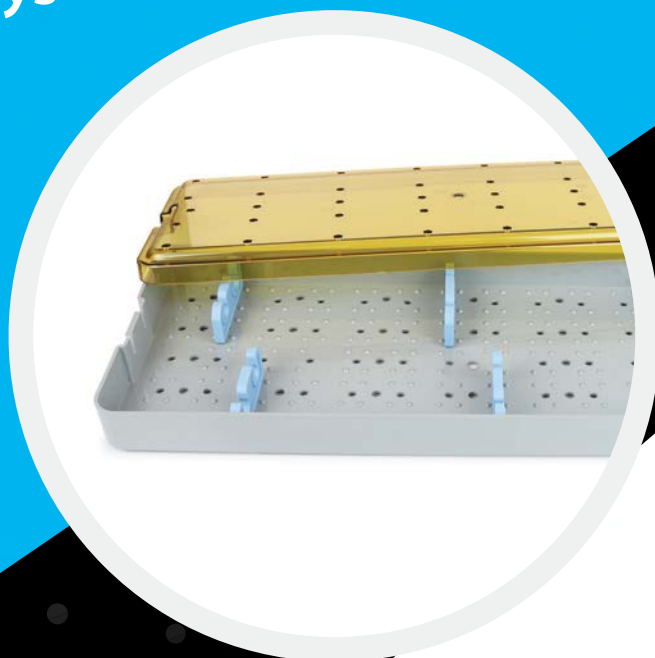




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## LEARNING OBJECTIVES

1. Interpret and describe required educational competencies in Sterile Processing departments.
2. Document, track, and review learning activities and learning gaps, and address needs and deficiencies.
3. Create educational experiences and opportunities that will allow staff to apply and master learned knowledge.

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# Sterile Processing Education

## *The balancing act between documentation and application*

by Anna Castillo-Gutierrez

In recent years, education in the Sterile Processing department has been placed in the forefront of every audit and surveyor. So much so, that healthcare facilities around the country have started to realize how vital a Sterile Processing Educator can be to the department and often, a hospital system. The concepts of infection control, quality control, and process improvement, all defined in one role; but it all starts with the quality of education and training that our Sterile Processing technicians receive.

Learning the ins and outs of Sterile Processing education can be a daunting task. There are numerous standards, regulatory agencies, and hospital-based policies and procedures that technicians must learn and apply. It can be difficult to keep up with all the processes that need to take place, let alone find ways to teach trainees who learn differently. So how do we bridge the gap between the required procedures

in our industries and helping our Sterile Processing staff apply them effectively?

### Criteria and compliance

Let's start by looking at required learning activities and documentation that need to take place. Each auditing agency, state, and even countries will have slightly different criteria facilities need to fulfill to stay compliant, but you may notice these professional organizations often share similar concepts. The goal is to keep our patients and staff safe using industry-proven concepts derived from scientific research. Each facility must understand and follow state-required criteria to maintain their deemed status. As an example, I will use the recommended standards and practices from the ANSI/AAMI ST79: 2017 Comprehensive guide to steam sterilization and sterility assurance in healthcare facilities. Staff considerations described in this guideline provide a glimpse into what some auditing



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agencies may be looking for in staff education files. Sterile Processing staff should demonstrate documented competency in all areas of the department they serve, such as the following:

- Biohazard transport
- Decontamination
- Preparation and packaging
- Sterilization
- Sterile storage
- Distribution of sterile supplies
- Manual and mechanical cleaning methods
- Equipment operations, such as the various modes or methods of steam sterilization within one sterilizer (this should include equipment testing and validation)
- Infection prevention control and
- Worker safety protocols (such as donning and doffing PPE)

The previously mentioned competencies are recommended to be maintained and documented on a yearly basis. Should deficiencies be identified, staff should be reassessed to maintain knowledge of the process or evaluated to determine if a deficiency is due to behavioral concerns which requires leadership intervention.

Additionally, each staff member should receive initial training that is documented. In other words; level set the playing field for all onboarding staff, no matter the experience level or title. This initial orientation should be completed with the use of a tool such as a training pathway or checklist for each task staff is to complete or perform.

These pathways or checklists can be as simple as naming the criteria to be observed, listing the behaviors or tasks that must be observed, and identifying successful completion of the task. Additionally, some instrument-tracking software may provide ways to capture competencies as well. Here is a simplified example of a pathway any educator can create:

Using this format, staff should not be checked-off or validated until they are

competent to perform the activity. It should go without saying that staff should not be allowed to perform those activities alone without being appropriately documented in a format such as this. As you would expect, an initial pathway for staff who are onboarding will take a few weeks to document, as it should. During onboarding, it is crucial to keep up with new hire activities, and document them on a weekly basis to ensure progress is being made. Notes should also be documented on pathways to be reviewed midway through the orientation schedule and at the conclusion of orientation; you will want to review these with your preceptee as you document them as well.

### Continuing education and competency

Yearly and continuing education should reflect the same processes plus any additional vital competencies that may be high-risk, low frequency such as Immediate Use Steam Sterilization. These high-risk, low frequency competencies will ensure your staff maintains proficiency in tasks that may not be performed every day. In this case, Immediate Use Steam Sterilization should be identified as high-risk due to its nature. Staff seldom perform this activity, but competent staff should be able to perform it in emergent situations appropriately and accurately. Consequently, it is highly recommended to educate, validate, and review these processes minimally on a yearly basis if not, more often.

Tracking and reviewing educational competencies should be a continuous process that educators and leaders assess together routinely. When competencies are documented, there should be space for documenting process failures, learning gaps and deficiencies. Documenting learning gaps does not have to be a negative subject. In fact, tracking these gaps help

leaders and educators address staff limitations. Think of them as learning plateaus; they show you where your staff is currently and where to build from. In previous experiences, this is where great educators are created; it is easy to teach amazing staff that do not have issues learning. Here is where you discover the educator who can step out of the herd and create new learning atmospheres for staff who may have different learning styles from other technicians.

As competencies are completed, look for common trends such as areas within checklists and pathways that confuse staff. You may need to update the way the checklist is written to allow staff to easily understand the task, or you may find that the task is a common learning gap that staff could use a refresher on with the use of an in-service or hands-on demonstration. Either way, trending performance gaps will help the department as a whole, and help you differentiate competency-based performance issues with behavioral issues.

### Best practices for learning styles

Sterile Processing technicians have a plethora of tasks that can be broken down in this manner, but how do educators and leaders prevent the monotonous task of “checking the box” on each of these critical processes? How can educators and leaders teach, coach, and educate the various styles of learners when they in fact may not have attended courses to teach them how to navigate through the various learning styles? In my previous experience, as an elementary teacher, I had the amazing pleasure of learning how to develop young minds. In the academic courses I attended, I learned how to create learning experiences that allowed students to grasp new concepts and ideas that stretched their minds to not only understand processes, but also conceptualize theories that helped

Criteria	Task Description	Validation Method: Direct Observation/ Simulation/Verbal	Date	Preceptee Initials
<b>Decontamination</b>	Looks up manufacturer's instructions for use	DO/S/V		
	Dons and Doffs PPE appropriately	DO/S/V		
	Demonstrates testing of washer	DO/S/V		

students build and connect to other areas of their learning. There are numerous ways educators can help staff master learning pathways and processes in the Sterile Processing department, but before I can recommend ideas or activities, we must first go over learning styles, so we have a good understanding of how our staff learns intellectually. There are four main learning styles:

1. **Visual Learners-** They learn through sight. Visual aids such as diagrams, charts, videos and pictures are helpful. When taking notes, visual learners often rewrite words with symbols or initials. Try using spacing on presentations, underline and use different colors as well. They need visual stimulation.
2. **Auditory Learners-** They listen well. Lectures and discussions are important to these learners. Use tools such as discussion questions. See one, do one, teach one will help these learners. Use different tones in your speech when presenting. They may want to record and review later. Leave space at the end of presentations for these learners to ask questions. Attending lectures and presentations is very important to these learners.
3. **Read/Write Learners-** They love books, glossaries, notes, and using written words in general. These learners rewrite and reread textbooks and notes into different words. They make lists and rearrange these lists into multiple-choice questions. It is important for these learners to understand words to keep a running glossary of new or unfamiliar terms for future reference.
4. **Kinesthetic Learners-** They do. These learners use their sense of touch, sight, taste, hearing, and smell. You must incorporate body movement, labs, simulations, and hands-on practice. They use real-life examples when taking notes to make learning personal to them.

It is important to recognize that all of us may have a blend of each type, with one type of learning style more predominant than the others. So, although you may know that most learners are kinesthetic, you may still want to provide all types of learning styles to your group to capture the attention of all learners.

One process I use continuously, is creating education that comes in three parts:

1. PowerPoint or poster presentation (*provide the answers*); it does not have to be complicated. A simple 2-3 slide deck or poster with major learning points can be used to speak on. The presenter can elaborate on the how-to's or importance of...
2. Tip sheet (*provide resources for the test*); I create these one-page resources and

laminate them to be placed in areas where they are easily accessible or seen where processes need to be performed, such as how to perform insulation testing with pictures and step-by-step instructions from connecting the tester accessories to performing the test.

3. Pathway or checklist (*the test*); creating and using these tools will allow you to see staff shine. The goal is to have staff who are comfortable using the resources you provided and asked questions during the presentation, once they get to the checklist the staff should be able to reference the tip sheet and often fly solo through the process they are asked to perform.

Hopefully, you have recognized that I have included all the learning styles I previously spoke on; visual, auditory, read/write, and kinesthetic learners. For the visual and auditory learner, I build my presentation and keep them at 15-20 minutes for the lecture part, I use images, videos, music, and most importantly, I provide answers, even though the majority of the staff may know how to perform the processes I am introducing. I purposefully leave 10 minutes at the end of the presentation for questions and conversations on the topic. As I present the information on the screen or poster, I also introduce the tip sheet or resource that will be displayed in the department. I make enough copies to be shared or taken for study or to write notes on. Many will think this is a waste of resources or paper, but it makes the difference for those visual and read/write learners. Soon after the information is presented, I make my way into the department and begin to check staff off with the use of the pathway or checklist. By this time, staff have instructions on what I'd like to see when I check them off. There are times when staff have stumbled through a process or need additional help, but much of the staff will swiftly perform the activity which allows me to spend extra time with those who truly need it.

### Successful results and staff achievements

I'd like to admit that this process has worked well with our staff and leaders, but it can take some organization and time to put together. In all, I allow myself one, sometimes two, weeks to put together the presentation and tip sheet, making sure to run through the processes myself and with leaders to ensure they work and provide the results we need staff to achieve. Once I present the information and resources, I then allow myself and leaders about

three weeks to complete the check-off on each staff (depending on the process, we check off minimum 55 and up to 75 staff within this timeframe). For large facilities or healthcare systems, I check off super users or preceptors who can in turn help me check off staff who I miss, such as overnight staff.

For quick turnaround tasks, I have also used "rodeo"-style learning fairs where staff can quickly hop from one preceptor to another. I check off a small group of super users to assist me in sections of the in-service and check-off process. One super user will introduce the topic, the next will perform the demonstration, and the last preceptor checks-off staff. I use these rodeo fairs for simple concepts that are not high risk.

The work of a Sterile Processing educator is neverending, and often filled with issues and processes that are challenging to find ways to put into practice, especially in this ever-evolving industry of standards and policies. We all aim to bring agency and manufacturer best practices to a group of staff who often go unrecognized for the amazing work they do every day, but until we marry intention with thoughtful, educational processes, our staff will be left on their own to decipher processes that, if not done correctly, can place patients at risk. Our teams are ready to learn, is your current education process ready to help them succeed? **HPN**

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**CONTINUING EDUCATION TEST • AUGUST 2023****Sterile Processing Education***The balancing act between documentation and application***Circle the one correct answer:**

- Evidence-based guidelines and standards suggest Sterile Processing staff should have documented education on safety procedures such as OSHA's blood-borne pathogens standard?**  
A. True  
B. False
- Every person on your team has similar learning styles and can be taught using the same formats?**  
A. True  
B. False
- Completing in-services and having a sign-in sheet from staff to verbally acknowledge competency is enough for surveying agencies.**  
A. True  
B. False
- Tip sheets are resources that can be used to replace manufacturer's instructions for use.**  
A. True  
B. False
- The majority of learners are kinesthetic, but may have other various types of learning styles they are compatible with.**  
A. True  
B. False
- Pathways and checklists are tools listing criteria and behaviors that need to be performed in front of competent leaders or staff who have themselves been checked off.**  
A. True  
B. False
- You should not document additional information in pathways and checklists for future review with preceptees.**  
A. True  
B. False
- Processes that are low frequency do not need competency checklists documented since staff do not perform them all the time.**  
A. True  
B. False
- Only regulatory agencies will provide educational recommended practices for healthcare facilities to follow and document.**  
A. True  
B. False
- Sterile Processing staff can perform all activities without having documented competencies, as long as they have years of experience in the Sterile Processing field.**  
A. True  
B. False

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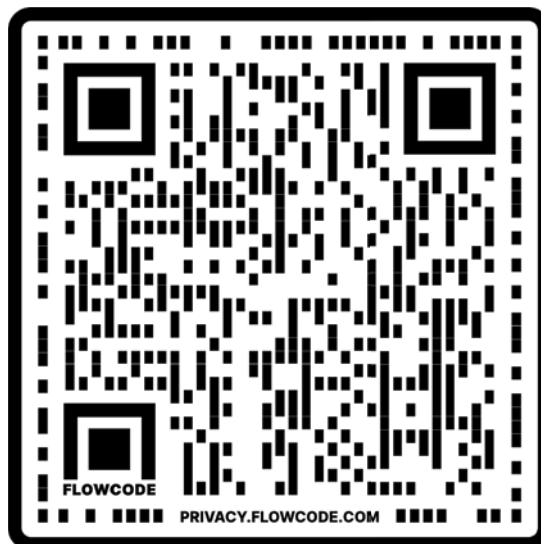
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## Freight, shipping issues regroup as post-pandemic logistics strives to drone on, recoup

by Rick Dana Barlow

If anything, the pandemic reshaped and shifted our demands and expectations for freight and shipping services – including the use of automated technologies, such as drones – and showed the strain on distribution, logistics and transportation, areas that most people took for granted until eyes were opened.

Now that we've emerged – theoretically – from the pandemic, healthcare organizations – Supply Chain specifically – may want to determine what they've learned from the ordeal and how it impacted freight and shipping operations. These generally are overlooked as a granular financial annoyance that can evoke considerable fiscal pain when least desired or expected if routinely left unchecked.

Even as the pandemic subsides, financial and operational aftershocks continue within a global supply chain. Among the bevy of maladies are fuel costs, cargo/container ship reliability, cybersecurity, port access, international tariffs, labor issues, and rail and trucking challenges. Healthcare organizations must be ready to handle and douse them, whether internally or externally through a contracted supplier or service provider.

### Counting down

Emily Gallo, general manager and senior vice president, Cardinal Health OptiFreight Logistics, identifies two pain points that cross her company's radar, which are labor costs and program visibility.

"If a healthcare provider is feeling the impact of labor costs and shortages, consider looking for a freight management partner who can act as an extension of your team, as well as bring technological capabilities to help find efficiencies across your program," Gallo said. "Technology also plays directly into needing visibility into your supply chain. Without having close to a real-time line of sight of shipments, healthcare providers don't have the visibility they need into their freight management program, holistically. By leveraging technology to combat the lack of visibility, healthcare providers can proactively plan for any disruptions."

Some of the basic supply chain issues linger, according to Mike DeSimpelaere, vice president, Network Operations, Cardinal Health at-Home Solutions. He oversees the company's warehouse operations.

"Overall, in this post-pandemic environment, lead times are still a bit longer than they were pre-pandemic," he observed. "Ensuring there is additional inventory on hand – either on-site or at the health system – or requiring distribution partners to house more inventory are two ways that can improve lead times. Currently, most systems are pushing for 60-to-90 days of



Emily Gallo



Mike DeSimpelaere

stock for necessity items, such as gowns, gloves, masks, etc."

Derrek Seif, Chief Strategy and Product Officer, VPL, raises several challenges that the pandemic brought to the forefront, such as cost inflation, labor issues, and even cybersecurity risks, which he emphasizes is essential to address immediately.

"The healthcare industry is a prime target for cyberattacks," Seif warned.

"This is because healthcare organizations collect and store a large amount of sensitive patient data, which can be used for financial gain or to disrupt healthcare operations. Two of the most common cybersecurity challenges for healthcare organizations include outdated technology that is vulnerable to cyberattacks, and third-party vendors who may not have the same level of cybersecurity as the healthcare organization itself. To address these challenges, healthcare organizations need to implement a comprehensive cybersecurity program that includes conducting regular security assessments to identify and address vulnerabilities, and carefully vetting third-party vendors to ensure that they have adequate cybersecurity measures in place. By addressing these challenges, healthcare organizations can help to protect themselves from cyberattacks and keep patient data safe."

Seif targets fuel costs as particularly problematic, too. In fact, to better understand



Derek Seif



the impact of inflation, VPL analyzed more than 20 million healthcare shipments across multiple carriers using its Data Analytics and Visualization software, he notes. "Since 2019, national carriers have seen an increase in fuel costs between 167% and 241%. Overall, the average fuel surcharge cost has risen by 160% in the last five years. Furthermore, our data shows the average cost of shipment has increased up to 89%. These insights highlight the substantial effects of inflation on fuel costs and average shipment expenses, emphasizing the importance of using data-driven solutions to help get visibility into these charges to optimize cost efficiency and improve budget decision making," he added.

Seif also lists burgeoning workforce challenges, including staff shortages, issues related to employee retention and turnover, skill gaps, and the prevalence of workforce burnout.

"A study we conducted a few years ago revealed that a simple phone call from a buyer to a supplier, inquiring about shipment status, took an average of over 20 minutes," he indicated. "We found that buyers may spend 50% or more of their day tracking down shipment statuses, while clinical staff may allocate 10% or more of their day to the same task. One of our customers conducted an internal study that found it costs \$45 to track and trace a shipment for a purchase order. The cost impact is high. A health system that processes 120,000 purchase orders (POs) per year could be spending \$5.4 million worth of time chasing down the status of the order. These pain points highlight the urgent need for improved processes and solutions in healthcare logistics – such as real-time visibility into order status and automating mundane tasks."

## Addressing the Achilles heel

Mark Speight, COO and partner, Caduceus Medical Logistics, quotes British World War II Gen. Omar Bradley as having the proper mindset. "Amateurs talk strategy. Professionals talk logistics," he reiterated and also declares that "fuel and labor costs are skyrocketing."

Consequently, healthcare organizations should refocus internally.

"Healthcare providers should consider performing periodic system-wide assessments of same-day delivery needs and then optimize the requirements using computerized multi-constraint optimization," Speight advised. "Candidly, the initial assessment can be a time-consuming and daunting task, as each delivery requirement

must be thoroughly understood and documented to ensure effective optimization. Minutes matter, doors lock, overtime accumulates. However, when executed correctly, we have observed savings of up to 10% through consolidation and reduced resource utilization. Subsequent quarterly or biannual optimization is indicated to combat bloat increase operational efficiency and, in collaboration with providers, seek creative solutions."

Tom Redding, senior managing director, Healthcare Services, St. Onge Co., warns about what healthcare providers and supply chain don't see.

"Healthcare providers have many blind spots (e.g., shipping visibility, track and trace, regulatory compliance, temperature monitoring, etc.) when it comes to the ever-complex web of moving materials from the manufacturer to the point of use," Redding indicated. "As we all experience on a daily basis, shipping is the Achilles heel to effectively running an operation. Healthcare providers are no different and are spending considerable resources to address disruptions in deliveries. For example, some healthcare providers are building stronger relationships with their suppliers to drive better visibility to lead times and where products are manufacturers to anticipate potential shipping disruptions. Until healthcare providers shift from being a customer to being a partner, shipping visibility will be limited."

Relying on third-party shipping companies has its pros and cons when it comes to buffering demand variability and minimizing disruption for the supply chain, according to Redding. "In short, it could increase costs and create more complexity, but it does offer significant benefits for organizations that don't have the scale to 'buffer' inventory on their own to minimize disruptions in manufacturing and/or transportation."

Even in a "post-pandemic" environment, healthcare providers will continue to encounter freight/shipping challenges that may jeopardize access to goods and services and will need to be thoughtful about building in contingencies where they can, insists Cory Turner, CMRP, senior director, Healthcare Strategy & Product Marketing, Tecsys. "In our work with health systems, establishing a consolidated service center (CSC) is an important part of solving for that, as it provides a greater degree of flexibility needed to

navigate disruptions in the flow of goods," he indicated. "By centralizing resource allocation, optimizing the network and enabling real-time visibility, a CSC empowers healthcare providers to adapt and respond efficiently, accommodating spot shortages to essential goods and services, even under challenging circumstances."

## Making haste against waste

While the pandemic may officially be over, Jake Crampton, CEO, MedSpeed, still sees its lasting impact reverberating through the industry, leaving behind profound aftershocks.

"In the face of ongoing supply chain shortages and constrained budgets, healthcare executives have prioritized waste reduction more than ever before," he observed. "Nothing can afford to go to waste. The significance of logistics has always been paramount for maintaining agility, but in these critical times, it has become absolutely imperative to facilitate the sharing of limited resources among facilities, encompassing supplies, pharmaceuticals, and equipment."

Labor shortages remain problematic, too, especially among the clinical set, according to Crampton.

"With nurses in short supply, and more leaving the profession every day, helping clinicians to operate at the top of their license is critical," he said. "According to a recent *American Nurse* survey, 87% said that medical courier deliveries – or lack thereof – impacted their work weekly. Those findings were echoed in another recent survey from *CAP Today*, which found 86% of lab professionals were unable to provide timely and accurate results for patients at least once a month due to courier issues. An efficient and reliable logistics infrastructure is necessary to weather the labor shortage storm."

Three preventable or mitigable challenges facing healthcare organizations come to the mind of Norman Brouillette, senior vice president, Supply Chain Solutions, Retail, Tech & Health, Ryder System. They are "the lack of visibility across the supply chain, the need for guaranteed truck capacity with professional drivers with track records for dependable, on-time deliveries, and impacts of the worsening warehouse labor shortage," he said.

Ron Devitt, founding partner, DeSpir, singles out the transportation sector as key, particularly among haulers.



**Tom Redding**



**Jake Crampton**



**Mark Speight**



**Norman Brouillette**



**Cory Turner**

# PRODUCTS & SERVICES

"In the trucking space, in-transit risks to the safety and integrity of pharmaceutical and other products that impact the lives and well-being of patients remain the highest priority," he said. "Healthcare providers must be absolutely certain that the medicines and therapies they administer have not been compromised in any way. They count on pharmaceutical shippers to have processes in place that enable real-time reporting and monitoring to confirm that the product's integrity has remained in compliance throughout its journey. They need to be informed of potential in-transit issues in real-time. This enables shippers to



**Ron Devitt**

immediately respond to loss or delays in a proactive versus reactive way."

Devitt contends that in-transit monitoring and Real-Time Transportation Visibility (RTTV) provide critical and actionable information in several key areas:

1. Alerts about seals or locks that have been broken and tampered with, as these breaches can compromise the product and patient safety.
2. Real-time alerts about temperature excursions, drivers veering off pre-planned transit routes and other triggering events, and arming shippers and receivers alike to put their back-up plan into action. This could include when and how to offer alternative expedited shipping modes and plans for immediately shipping replacements for compromised

product(s) through qualified carriers and drivers that follow stringent protocols and provide real-time updates. Having plans for immediate access to expedited services for lifesaving medicine also applies to highly demanded products that are pushed through as quickly as possible, and expediting ground shipments for life science products that have been delayed due to ocean ship delays, which have continued to be problematic in the post-pandemic era.

"Healthcare logistics professionals will benefit by taking advantage of real-time technologies that enhance accountability, monitor and protect product integrity, and enable faster, more proactive responses when things go wrong," he concluded. **HPN**

## Freight, shipping costs can be embedded, hidden, needlessly high

*What may motivate transparency, visibility within supply chain?*

by Rick Dana Barlow

When it comes to freight and shipping costs, healthcare organizations may suspect or even know they're high, if not excessive, but some lack the urgency to fix until the C-suite pushes Supply Chain to cut labor costs and non-salary expenses to accommodate slashed budgets or determine on their own that freight and shipping charges have been needlessly excessive.

Others, however, maintain nonchalance until poked and prodded to action. So how might Supply Chain take the lead in managing and reducing healthcare organizational freight and shipping expenses more seriously? What positive and proactive incentives exist? Nine distribution, logistics and supply chain services executives provide possibilities.

### **Emily Gallo, Cardinal Health OptiFreight Logistics**

"It's inspiring to see how freight management has become an increasingly important facet of global supply chain. There are a few best practices that come to mind for how healthcare organizations can be more effective and efficient when it comes to freight management. A third-party freight management provider can help health systems follow these best practices. The first is mode optimization and determining which service level is the most cost-effective and efficient way to ship a package and ensure it arrives on time. User compliance is also extremely important – are your employees considering mode optimization

with each shipment? There's often a lot of opportunity for training and education – a third-party freight management provider can act as an extension of your team, in this case acting to drive positive change from within.

"Additionally, healthcare organizations can prioritize supplier connections and compliance – and a third-party freight management provider can help you effectively manage action and value with external stakeholders like suppliers. Working with suppliers involves many steps, including establishing an initial connection with all suppliers, educating them on your program, getting the suppliers to participate and then monitoring to ensure they're adhering to the contract and charges correctly. A third-party freight management provider can manage suppliers on behalf of the healthcare provider, resulting in significant lift being taken off the supply chain team. We've found that when these best practices are demonstrated and value is derived, it's a motivator for health systems to adopt."

### **Mike DeSimpelaere, Cardinal Health at-Home Solutions**

"Focus is the easiest way to define this – treat freight and shipping management just as you would patient care. Prioritize creating strong teams and strategies around supply chain, particularly freight, and take more control and ownership of your freight. Historically, many organizations have allowed suppliers to own

freight management, which has not allowed for the flexibility needed during disruptions. You can partner with 3PL or freight management solutions to help prioritize deliveries and get ahead of delays."

### **Derrek Seif, VPL**

"Supply chains need data to understand what's happening and where they can improve, but they don't always have the budget for a significant investment in vendor solutions. What our customers have appreciated is that we're able to guarantee them savings, but also give them access to that data without an additional charge. They're able to find savings now, but also get on a path to become more resilient.

"Healthcare organizations can enhance their operations by partnering with industry experts who can guide them through the complexities of the freight management process and provide guidance to reduce one-day shipments, reduce unnecessary fees, and ensure more suppliers comply with the program based on industry benchmarks. VPL, for instance, provides a comprehensive suite of products designed to optimize inbound freight management, outbound shipping and tracking, real-time inbound visibility, as well as analytics and data visualization.

"VPL's inbound freight management solution offers a carrier-agnostic, full-service approach to manage inbound parcels and less-than-truckload (LTL) shipments. This allows health



systems to break free from being tied to a single carrier and instead choose the carrier that offers the best rates and delivery times. The solution provides real-time visibility into the status of shipments, allowing for proactive decision-making and reduced disruption risks. By leveraging freight data and analytics, hospitals and health systems can identify opportunities for cost savings, improve supplier compliance, and optimize freight expenses. The automation of allocation, seamless invoicing, and supplier relations support further streamline operations and save time.

"In terms of outbound shipping and tracking, VPL provides a carrier-agnostic solution that grants them the flexibility to select from multiple carriers and couriers. Again, ensuring access to the best rates and delivery options available. The solution is designed with tailored workflows to address the specific needs of outpatient pharmacy operations to enhance efficiency and compliance. With VPL's solution, healthcare organizations gain greater control, choice, and tracking capabilities for their outbound shipments, facilitating improved management of growing requirements in specialty pharmacy, pathology, and healthcare-at-home settings.

"Real-time inbound visibility is another critical aspect of VPL's offerings. The track-and-trace functionality provides visibility into inbound shipments, allowing health systems to monitor the status of orders and anticipate the volume of packages arriving at their receiving dock. This information helps optimize staffing and space planning, thus enhancing operational efficiency. Proactive notifications and search functionalities enable effective communication and coordination between buyers and clinicians, reducing procedure delays, and improving overall patient care.

"Last but not least, VPL equips healthcare organizations with powerful analytics and data visualization capabilities, providing actionable insights for cost savings and performance improvement. Real-time access to comprehensive dashboards allows organizations to identify areas of improvement across various aspects of the supply chain. These insights encompass inbound freight management savings, outbound shipping and shipper performance, supplier compliance and fees, medication distribution compliance, and carrier surcharges and performance. By leveraging these insights, health systems can pinpoint areas for optimization, track their progress, and make informed decisions to drive ongoing cost efficiency and performance improvement."

**Tom Redding, St. Onge Co.**

"Healthcare providers will need to think beyond the price of the product and understand the total of cost purchasing a product. Unfortunately, the freight/shipping costs are not always known to the healthcare provider

since they are many times embedded in the cost of the product. Too often, healthcare providers do not proactively manage their operation and it leads to expedited freight costs, including shipping costs associated with product returns for product recalls, product damage, and product expiration. Healthcare providers will need to drive their suppliers to bring more visibility to the shipping costs when it comes to the frequency of delivery, shipping mode, and any specific packaging requirements to truly impact their freight/shipping costs."

**Mark Speight, Caduceus Medical Logistics**

"While direct cost savings are undoubtedly important, based on my 20+ years of experience, I firmly believe that same-day logistics can significantly impact both system operations and patient outcomes, for better or worse. Same-day logistics plays a critical role, acting as the circulatory system of a hospital. Just as blood is vital to an organ, timely cargo delivery is crucial, as any delays can have severe consequences, costing both tears and treasure.

"Conversely, delivering excellent same-day service can empower the healthcare system with new opportunities and enhanced patient care options. In various systems, we have supported hospital-to-home operations by ensuring patients receive timely lab results from visiting nurses, home infusion supplies, and pharmaceuticals. This kind of capillary perfusion, so to speak, enables efficient and effective care beyond the hospital walls.

"Additionally, speed is of the essence in our operations. We frequently handle urgent deliveries of life-saving pharmaceuticals, critical supplies, and medical devices. These deliveries may be of the utmost urgency, such as when a patient is on the operating table or when they have only 45 minutes' worth of respiratory medicine remaining. By offering healthcare providers the capability to meet such time-sensitive demands, we provide them with valuable options that I believe have a substantial and positive impact on patient outcomes."

**Norman Brouillette, Ryder System**

"The pandemic isn't the first major supply chain disruption for the healthcare industry, nor will it be the last. So with many healthcare organizations still vulnerable to disruption, I tell them, 'The time to transform your supply chain for future resilience is now.' We can help other healthcare networks gain control of their supply chains, while also lowering costs and improving patient care. It's really about leveraging what Ryder already does best, like our proprietary visibility and collaboration technology, analytics and business intelligence, our data scientists, logistics engineers, and our expertise and scale.

"For healthcare organizations looking for advice on where to start, I'd say start by breaking down the issues contributing to the vulnerability of your supply chain to uncover the root causes. Ensure you have the support of top leaders of the organization. And, then partner with a reliable third-party logistics provider like Ryder that can provide you with a fully integrated solution that includes expertise, technology, engineering and design, warehousing management, transportation solutions, labor, and continuous improvement."

**Ron Devitt, DeSpir**

"Incentives for following the protocols and contingency plans with known carriers include better and more consistent patient outcomes, reduced loss and risk, and faster (real-time) responses for products that have been compromised in transit."

**Cory Turner, Tecsys**

"To encourage healthcare organizations to prioritize freight/shipping management and improve efficiency, a Consolidated Services Center (CSC) theme can be implemented. Key strategies include centralizing freight management, fostering collaborative partnerships, integrating technology, providing performance-based incentives, offering education and training programs, promoting sustainability, and utilizing data analytics for continuous improvement. These approaches aim to streamline processes, optimize routes, reduce costs, enhance visibility, and align with environmental goals. By adopting this theme, healthcare organizations can make effective and efficient use of freight/shipping services and improve their overall supply chain."

**Jake Crampton, MedSpeed**

"Health systems make investments every day in technology and tools to make their teams more effective and to elevate patient outcomes. Viewing logistics as a cost center inhibits innovation. Conversely, an organization that views same-day logistics as an investment that (done well) can yield tangible returns in the form of quality improvements, patient experience enhancements, and clinical enablement, will be poised for the future. This visionary perspective positions healthcare entities at the vanguard of progress, enabling them to seize opportunities, overcome challenges, and establish a sustainable foundation for long-term success." **HPN**

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## C-suite should embrace value analysis to improve healthcare

by J. Hudson Garrett Jr. and Karen Niven

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In the ever-evolving landscape of healthcare, organizations face numerous challenges, from rising costs and complex regulatory requirements to the constant pursuit of improving patient outcomes. To navigate these challenges successfully, healthcare organizations must embrace strategic approaches that optimize resources, reduce costs and enhance the overall value delivered to patients. One powerful tool that can drive these goals is value analysis.

Traditionally, value-analysis conversations have primarily taken place within supply chain and operational teams. However, there is immense value in elevating these discussions to the C-suite level. The C-suite, comprised of top-level executives, holds the responsibility of setting strategic direction, allocating resources, and making crucial decisions that shape the future of healthcare organizations.

By involving the C-suite in value-analysis conversations, organizations can unlock strategic insights that inform decision-making and drive impactful changes. Executives gain a deeper understanding of the intricacies involved in the healthcare supply chain, operational processes, and the interdependencies among various departments. This comprehensive understanding allows them to make more informed decisions that consider the broader implications and align with the organization's strategic goals.

Moreover, incorporating value-analysis conversations into the C-suite fosters a culture of collaboration within healthcare organizations. By bringing executives from different departments together, a multidisciplinary approach to problem-solving and decision-making emerges. There are five strategic intersection points where value analysis and C-suite leaders must collaborate to foster optimal outcomes:

- 1. Enhancing strategic decision-making:** When value-analysis conversations are elevated to the C-suite, executives gain a deeper understanding of the intricacies involved in the healthcare supply chain and operational processes. This understanding allows them to make more informed strategic decisions. By actively participating in value-analysis discussions, C-suite leaders can identify areas for improvement, evaluate the effectiveness of current practices, and align value-analysis initiatives with the organization's strategic goals. This alignment enables executives to prioritize investments, allocate resources effectively, and drive long-term sustainable growth.
- 2. Driving a culture of collaboration:** Incorporating value-analysis conversations into the C-suite fosters a culture of collaboration within healthcare organizations. When executives from various departments come together to discuss value-analysis initiatives, they bring their unique perspectives and expertise to

the table. This cross-functional collaboration enables a holistic approach to problem-solving and decision-making. Executives can leverage their diverse knowledge to identify synergies, implement innovative solutions, and break down silos that may hinder organizational efficiency.

- 3. Aligning value analysis with strategic priorities:** The C-suite plays a pivotal role in setting strategic priorities for healthcare organizations. When value-analysis conversations are integrated into the decision-making process at this level, it ensures that value-analysis initiatives align with the organization's overarching goals and priorities. Executives can provide guidance on strategic direction, emphasize the importance of value-based decision-making, and champion the integration of value-analysis principles throughout the organization. This alignment ensures that value analysis is not viewed as a stand-alone process but rather as an integral part of the organization's culture and operations.

- 4. Promoting cost reduction and efficiency:** Value-analysis conversations in the C-suite can drive significant cost reductions, and enhance operational efficiency. Executives have the authority to allocate resources, approve investments, and implement changes that can streamline processes, reduce waste, and optimize the utilization of resources. By actively engaging in value-analysis discussions, the C-suite can identify cost-saving opportunities, evaluate the total cost of ownership, and make informed decisions that balance quality and cost-effectiveness. These efforts not only lead to financial savings but also enhance the overall efficiency of healthcare operations, ultimately benefiting patients and improving outcomes.

- 5. Embracing a patient-centric approach:** At the heart of healthcare organizations, the ultimate focus should always be on the patients. By incorporating value-analysis conversations into the C-suite, executives can champion a patient-centric approach to decision-making. They can advocate for value-analysis initiatives that prioritize patient safety, quality of care, and positive outcomes.

Incorporating value-analysis conversations into the C-suite of healthcare organizations has the potential to drive transformative changes that ripple across the entire healthcare ecosystem. By enhancing strategic decision-making with a focus on value-based care, aligning value analysis with strategic priorities, reducing costs and embracing a patient-centric approach, healthcare organizations can unlock the full potential of value analysis. The value of incorporating value-analysis conversations into the C-suite cannot be overstated as it propels organizations toward a future of value-based, patient-centered healthcare. [HPN](#)



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# What is ESG?

## Why Should Healthcare and Supply Chain Leaders Care?

by Karen Conway, Vice President, Healthcare Value, GHX

**T**he terms “ESG” and “sustainability” are showing up more frequently in the healthcare trade press and on conference agendas. This is a natural evolution of the growing recognition that socioeconomic and environmental factors often have more to do with someone’s health status than the clinical care received. These are important issues for supply chain professionals, as they are increasingly being asked to help direct the power of procurement to address both health equity and the environmental impact of healthcare operations. This month’s column will offer a foundational understanding of what these various terms mean, given that they, like so many others used in healthcare, are often defined differently by various stakeholders. In future issues of *Value. Delivered*, we will dig deeper into why and how healthcare system executives are prioritizing ESG and how supply chain professionals are advancing ESG objectives for both their own institutions and the communities they serve. Let me know if you have specific questions or if you want to share examples of ESG-related initiatives, especially involving the supply chain.

### First, what is ESG?

The term ESG, which stands for environment, social and governance, was first used in the 2005 landmark report, “Who Cares Wins,” which documented the financial value of managing risks related to all three factors. ESG ratings are used by investment firms, bond-rating agencies, and others to help evaluate how well an organization manages risks by protecting the environment and supporting stakeholders, including investors, customers, employees, and the community in which it operates. In contrast to older terms like corporate social responsibility that often associated “doing the right thing” with higher costs, ESG ratings stress how addressing social and environmental issues improves an organization’s long-term viability and resiliency.

ESG and sustainability are sometimes used interchangeably, although some view sustainability narrowly as primarily an environmental issue. ESG takes a broader view,

including the sustainability of the organization itself, its ability to function, and that of the ecosystem in which it operates.

Let’s explore each of the aspects of ESG:

### Environment

For years, healthcare supply chain leaders focused their environmental sustainability efforts at reducing the use of products containing chemicals of concern, such as plasticizers used in intravenous (IV) tubing and bags and flame-retardants in furniture. Recently, climate change has garnered more attention, given its particular relevance for healthcare delivery. Forty-six million healthcare workers told government leaders attending the 2021 COP 26 climate conference that they are “already responding to the health harms caused by climate change,” such as respiratory ailments caused by smoke from wildfires and longer pollen seasons.

At the same time, healthcare is part of the problem. A U.S. House Ways and Means Committee study recently found that healthcare operations contribute 8.5 percent of the nation’s carbon footprint, with hospital operations the largest contributor to greenhouse gas (GHG) emissions. As part of that study, 85 percent of healthcare systems reported having suffered at least one climate change-related extreme weather event, resulting in millions of dollars in repairs for many. For this reason, the Centers for Medicare and Medicaid Services (CMS) has called on health systems to measure their own GHG emissions, and to provide feedback on how to maintain operations during such events, something health systems signing the White House Climate pledge have already committed to do voluntarily.

### Social

The environmental impacts of healthcare operations also have relevance for the S or social aspects of ESG. First, relationships with suppliers are important, given that the products and services they provide account for a significant portion of a hospital or healthcare system’s total carbon footprint.

Second, climate change-related events, from hurricanes in the southeast to wildfires

in the west, often take the biggest toll on those living in disadvantaged communities because they have less means to mitigate the impacts. For example, residents may not have transportation to evacuate in the event of a hurricane, or air conditioning to escape extreme heat events.

Historically, supply chain leaders have been called upon to improve health equity by increasing spend with certified diverse suppliers. More recently, the focus has shifted to using the purchasing and hiring power of hospitals and health systems to support economic development and job creation in economically challenged communities.

A healthcare provider’s commitment to environmental and social issues is also important for workforce recruitment and retention, a key challenge for many health systems in the wake of the pandemic. According to the global professional services firm Marsh McLennan, there is a positive correlation between an organization’s performance on ESG-related matters and employee recruitment and satisfaction. This will only increase as millennials and Gen Z workers become nearly three-quarters of the labor market by 2029.

### Governance

The G, or governance, aspect of ESG is broad in nature, covering a range of factors, from board and executive diversity to corporate transparency. For healthcare institutions, the latter can include how well an organization protects patient data, complies with price transparency regulations, and minimizes unnecessary or duplicative care.

### The Bottom Line

Perhaps the most compelling argument for healthcare executives is the increasing focus on ESG by bond issuers and credit-rating agencies. The Securities and Exchange Commission (SEC) already includes ESG factors in its oversight of publicly traded companies, and it has floated the idea of requiring such organizations to report on their direct and indirect (e.g., electricity use) GHG emissions, as well as those generated by the supply chains for the products and services procured. These are referred to as Scope 1, 2, and 3 emissions, respectively.

This kind of scrutiny is beginning to encompass not-for-profit hospitals. Fitch Ratings recently introduced a set of ESG relevancy scores that it says investors can use to interpret how an organization’s ESG practices impact financial performance. In the end, the Fitch Ratings lead for the not-for-profit healthcare sector, Kevin Holloran, says failure to address ESG-related risks could impact both access to, and the cost of, capital. **HPN**



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