INSIDE THE MEDICAL EQUIPMENT PARTS SECTOR


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Since COVID-19 first struck, the healthcare sector has been fraught with supply chain issues. Nowhere is this more evident than the medical equipment parts sector, some say. But are such issues improving? Three individuals with a vested stake in the parts market—David Brennan, senior vice president and chief product officer at PartsSource Inc.; Guido Stoeckmann, regional sales manager at Dunlee; Ira Lapides, president of Replacement Parts Industries, Inc., (RPI) a Healthcare Components Group company—share their thoughts on the matter and reveal what HTM professionals should know before they procure medical equipment parts.

***24×7 Magazine*: How have supply chain shortages impacted the medical equipment parts market? And how is your company working to mitigate them?**

Guido Stoeckmann: Like many companies, we were particularly impacted early in the pandemic. We worked hard to secure alternate channels when necessary, so that disruptions in getting the materials we needed didn't lead to an inability for us to manufacture parts. One advantage that Dunlee has is our worldwide distribution centers, so a disruption in one area of the globe didn't bring all our distribution to a halt.

Today, the sources of supply chain disruptions are no longer related solely to the pandemic. Port congestion, worker shortages in many parts of the world, weather events, and geopolitics are all impacting supply chains worldwide. We are fortunate to have good relationships with our suppliers and customers, and nimble processes that enable us to adapt.

We are also looking into reusing parts of our components, both to boost sustainability and to mitigate short-term material shortages. By following strict requirements, we can harvest parts to stabilize the supply chain in volatile times without impacting the quality of our components.

Ira Lapides: Supply chain issues have become a significant problem in just about all industries, including the medical equipment parts market. Delays in shipping due to issues at ports and freight companies, delays caused by worker shortages at parts manufacturers, and raw material shortages are the primary causes of this problem. We have seen some parts orders delayed by as little as a few weeks, while others delayed by six months or longer.

We have taken steps to mitigate these issues including increasing our safety stock on many of our parts, as well as increasing overall inventory levels. In addition, we are working very closely with our suppliers to keep up to date with them on manufacturing and delivery lead times. A good working relationship with our suppliers is one of the keys to helping us ensure on-time delivery of our parts. Keeping up with supply chain issues is a daily challenge and requires more resources and planning than in the past.

Also related to supply chain issues are the rising costs of raw materials and transportation, as well as wage increases. We are seeing significant cost increases on a regular basis from many of our suppliers. We work very hard to negotiate with our suppliers to minimize these increases to keep our prices low for our customers.

David Brennan: All major OEMs have experienced major disruptions, as COVID rippled through global networks previously optimized for cashflow-maximizing, "just-in-time" inventories. Very few cogs in the machine were spared as the system lost its balance in April 2020, and it's been inefficient ever since. The news has been filled with examples of raw material extraction, labor lockdowns, shipping backlogs, port closures, bankruptcies, and labor shortages, but what may be less apparent to many HTM teams is that backlogged demand has not materially improved until recently.

In the fall of 2021 as U.S. ports posted record-breaking labor shortages and container ships lined the horizon off major docks, backlogged orders hit another inflection point, significantly worse than the summer of 2020. It was a negative trend that then continued through the winter and spring of 2022. The good news is that this trend has plateaued since late May, but unfortunately, in some cases, specific OEM backlogs remain 15 times their historical norms.

The whole mess shines a light on our business model as a provider of evidence-based insights to secure mission-critical supplies and ensure clinical availability. We have focused on helping members of our PartsSource Pro Community in three distinctive ways.

We focus on reducing the impact of disruptions. Our Precision Procurement algorithms allow us to utilize secondary buying options, stocking strategies, and formulary rules to mitigate risks and manage tradeoffs.

1. We help members gain macro and micro visibility into risk. We share relative supplier performance trends, benchmarks from peer hospitals across the country, and evidence-based data necessary to adequately plan and mitigate impact.

2. We identify proactive strategies collaboratively within and across our community. We use our proprietary data in planning conversations with HTM leadership to explore opportunities, such as expanded use of our Guaranteed Stock Program and strategic preventative maintenance adjustments.

***24×7*: Is the advent of 3D printing revolutionizing the medical equipment parts sector? Why or why not?**

Brennan: 3D printing, or "additive manufacturing," has incredible applications across many industries, and the pace of development and innovation is impressive. So it's important to watch as this market evolves. We are particularly excited about medical applications where anatomical accuracy can be a game-changer, such as with prosthetics or implants.

Within the medical equipment markets, my understanding is that there are clear limitations we all need to monitor in the near term. Specifically, we follow the current cost/efficiency equation, the debates over intellectual property rights, quality control/clinical validation practices, and the limits to the materials one can currently "print" with readily available industrial quality printers. If you, like most HTM teams, are struggling to keep expenses down, traditional manufacturing techniques will likely remain the most practical for now.

Stoeckmann: It certainly has the potential to make a great impact. We are seeing a growing understanding among manufacturers of how 3D printing can be used for mass production. But change never happens overnight. Manufacturing anything requires determining the right combination of material, application, and technique. For example, we manufacture anti-scatter grids using the material tungsten because tungsten's high density allows more x-ray scatter to be absorbed, enabling us to manufacture grids that increase image quality. The production technique—additive manufacturing—allows us to create grids with very high material efficiency, which is cost-effective and environmentally friendly.

Lapides: The continuous progression of 3D printing is having a tremendous impact on the medical equipment parts sector in a couple of ways. First, faster 3D printers with the ability to use better materials allow for the quick production of many parts that are of higher quality than could be achieved by 3D printing only a few years ago. Secondly, 3D printing also allows for faster development of parts through prototyping of designs prior to large-scale parts manufacturing. Form, fit, and function of parts can be tested, and designs verified much quicker than in the past. This leads to quicker turnaround and production.

***24×7*: What are the top dos and don'ts healthcare professionals should keep in mind when investing in equipment parts?**

Brennan: Do: Consider quality, efficiency, and cost. When investing in medical equipment parts, we know that the best-performing clinical engineering programs are built on quality, efficiency, and cost-savings. While saving money is important, it is not the only consideration as quality and efficiency cannot be sacrificed. Quality and efficiency must be considered to maximize equipment uptime and minimize the need for repairs.

Do: Make data-driven decisions. Too often, hospitals/integrated delivery networks spend 10% to 30% more than necessary on medical devices, replacement parts, and services due to cost controls and compliance. Fortunately, many of their peers have shifted to a data-driven operating model. Ongoing access to peer-based benchmarks and a supply chain built on historical evidence-based pattern recognition creates a platform for continuous improvement. When done well, and coupled with tech-enabled compliance controls, using evidence-based data to manage mission-critical parts, services, and supplies becomes essential to streamlining the procurement process, improving supply chain reliability, and reducing cost variance.

Don't: Take risks with mission-critical imaging parts. Keeping diagnostic imaging equipment running is essential. Providers need to find comprehensive and cost-effective solutions for glassware and imaging components across all condition types. High-quality alternative options should also be considered to increase workflow efficiency and can be key to saving money without [compromising] quality.

Don't: Go it alone. Maintaining medical equipment is a huge undertaking. Developing the right partnership is essential, both in parts procurement and accessibility to the right service talent, internal and external. The right partnership gives staff time back in their day and eliminates wasteful spending.

Stoeckmann: I'll focus on the dos.

- **Do: Focus on uptime.** By purchasing reliable parts from trusted partners, healthcare professionals decrease the risk of downtime. Downtime not only harms their ability to serve patients, it can also disrupt workflow and decrease income.
- **Do: Ask your parts suppliers for advice about options and upkeep.** Take advantage of their expertise to stay ahead of the curve.
- **Do: Share your needs and any trends you foresee with your suppliers.** Doing so allows the medical equipment market to innovate in line with your needs.

Lapides: Before purchasing equipment parts, HTM professionals should know everything they can about the parts as well as who is supplying them. How long has the supplier been in business? Are they ISO-certified and/or FDA-registered? What is their warranty and do they back it? Do they offer technical support, free or for a cost? Do they stock their parts? What kind of customer service do they offer? What is their shipping policy? Are the parts manufactured new or are they refurbished or salvaged? Are the parts packaged properly to protect them from damage? Does the supplier provide needed accessories such as hardware, labels, or installation instructions with their parts?

Knowing these answers will allow HTM professionals to minimize their inventory carrying costs and order parts as needed versus having to keep a large inventory on hand. In other words, does the parts vendor not only offer the part needed but also provide full support to service their customers?

24×7: What best practices should HTM professionals adhere to when maintaining and handling medical equipment parts?

Lapides: HTM professionals should follow all proper protocols when handling medical equipment parts. Never cut corners. Following set guidelines and common sense relating to safety should always come first. Adhering to regulations pertaining to reducing environmental impact is a must especially when disposing of used parts, as many could contain or have biohazardous waste, as well as oil or other fluids.

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Also, keep in mind that routine and preventive maintenance is required for many parts. Cleaning, lubricating, replacing worn items on parts—something as simple as replacing an O-ring—is crucial to the proper function of many medical equipment parts. Proper maintenance of medical equipment parts can help keep equipment up and running, saving HTM professionals time and money in both the short- and long-term.

Stoeckmann: It's worth looking for alternatives to OEM part supplies. Consider sourcing replacement parts that are fully compatible and approved from independent service companies. In many cases, these independent service companies are faster and more flexible. In addition, spare parts, such as x-ray tubes, can be cheaper while offering the same or better quality than those from the OEM. This has a positive effect over the entire service life of systems.

Also, choose parts suppliers that are constantly working on product quality improvements and investigate sustainability aspects of your parts, including long life, reuse of material, and packaging. It's also important that your suppliers have a local presence, so that you'll have [easy] access to engineers and support.

Brennan: Top HTM teams understand that medical parts management is not about sourcing or purchasing excellence. Parts management is about systemic, data-driven approaches to quality, reliability, redundancy, and resilience in your support of mission-critical equipment and improved patient outcomes.

Parts management requires active supplier management across hundreds of key vendors; ongoing quality assurance activities, including supplier audit and corrective response management; intense focus on contingency planning; alternative source intelligence; and returns/exchanges. This balance of critical activities drives high-performing HTM teams to choose partners to assure the right balance of team efficiency, parts quality management, and the reduction of parts expense as a percentage of their cost-to-serve metrics.

This may be preaching to the choir, but it's also important to communicate the value of your team to your organization's leaders. That way, they're not only fully aware of your team's importance, but they also provide the necessary growth and funding to ensure clear career paths and optimize the resources required to maintain medical equipment.

24×7: What else should *24×7* readers know about the medical equipment parts sector?

Stoeckmann: Medical parts is a highly regulated sector, just like the healthcare industry overall. It is a growth market characterized by long-term stability, although in the short-term the pandemic caused disruptions. Four trends that influence its future include:

1. The aging population and the increase in chronic diseases, which lead to the need for efficient ways to detect and treat multiple morbidities.
2. Economic development in emerging countries, which has increased the demand for healthcare products and services.
3. An increasing focus on care accessibility
4. Digitization and artificial intelligence, which is transforming how healthcare is delivered.

Lapides: Managing medical equipment parts is key to success as an HTM department or service organization. Utilization of the many reliable suppliers can help keep costs down and, more importantly, minimize equipment downtime. There are many excellent aftermarket parts suppliers in the healthcare industry, and HTM professionals should use them to maximize the results of their programs.

In many cases, aftermarket parts companies supply the exact same part as the OEM—sourcing the part from the same manufacturer that the OEM does. This can be the case with many components, such as solenoid and safety valves, switches and other electrical components, as well as filters.

Brennan: Today, the HTM ecosystem is still extraordinarily complex and highly variable, for sure, but I'm convinced there is a smarter way. A focus on evidence-based decision making, standardized workflows, and systems integrations will improve the productivity of HTM teams, adding more human capacity to organizations. I'm also convinced that systemic risk reduction and compliance controls can return significant operating capital to your business, improving the financial capacity of organizations. Finally, high quality combined with highly resilient supply chains can improve availability of mission-critical assets, creating greater clinical capacity.

There are few who can claim to have this breadth and this vision, coupled with digital workflows and formulaic control mechanisms to drive real ROI. That said, when done "right," you can free up human capacity, financial capacity, and clinical capacity, which, together, drive the only metric that matters: patient outcomes. ●



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