The Health Care Supply Chain's Response to COVID-19
Post-COVID-19 Supply Chain Provider Leading Practices Panel Discussion Summary and Q&A

AHRMM works closely with federal government agencies, providers, suppliers, and distributors to help coordinate a response to the COVID-19 crisis to find creative solutions to supply chain issues, and share the most up-to-date information with the community.

On Friday, May 15, the AHRMM Learning Community hosted a panel discussion with supply chain executives focused on leading practices providers are taking as they prepare to re-open their facilities to elective surgeries and an increase in typical emergency room visits.

Three panelists joined the discussion:

- Matt Putman, MBA, CMRP, Director of Supply Chain Operations, UCHealth
- Dr. Colleen Cusick, DNP, MBA, RN, CVAHP, FAHRMM, Director, Materials Management Department, The Johns Hopkins Hospital
- Dr. Gloria Graham, DNP, RN, CVAHP, Clinical Value Analyst, Cincinnati Children's Hospital Medical Center

The speakers were prompted by questions submitted prior to the event, which was moderated by Dee Donatelli, AHRMM Board Chair and Vice President of Professional Services at TractManager, and Mary Beth Briscoe, AHRMM Board Member and Consultant. Following is a summary of the conversation including answers to questions the panel was unable to respond during the webinar due to time constraints.

Provider and Supplier Relationships

What should organizations focus on when considering the importance of distributor and manufacturer relationships relating to surge inventories, contract language, and capacity?

The panelists foresee important changes coming to health care supply chain due to the entire health care field being unprepared for the COVID-19 surges. Central issues include the emphasized cultivation of effective communication and teamwork required in endeavors between providers and supplier partners in addition to discussions with clinical staff to begin considering how to move forward and prepare for future crises. There may also be important changes to the supply chain paradigm as it becomes clearer that the focus on optimization and lean inventory was in fact detrimental to crisis response. Standardization is also key in light of balancing efficiency as well as diversified suppliers. New approaches will have to better balance the opposing goals of low costs and preparedness. A huge area where we can better collaborate with our vendor partners is in our degradation and reactivation plans.

Where are supplier's warehouses, how many months of supply do suppliers keep in (US) warehouse, and does supplier protect the customer inventory?

The ability to understand full transparency with vendors and distributors is paramount to not only pandemic supply chain but also overall supply chain. Strategic partnerships are a must to be able to provide, supply, control costs, and service health care system. The more organizations know about the vendor, emergency plans, and partner with them, the better opportunity to supply health care with the right product at the right time.

AHRMM Note: Presenters on this webinar are health care providers and may not be able to answer supplier-focused questions.

How can non-traditional vendors establish relationships with hospital supply chain staff if they do not have a GPO contract and cannot get an appointment?

New business models will emerge as hospital supply chain continues to navigate these newly developed relationships. Each facility is working to develop standards on a case-by-case basis until an innovative solution is developed and best practices established across the field. There is the possibility of building the needed flexibility into contracts with special clauses.

Do you foresee surgical representatives' role supporting cases in the operating room changing post COVID-19?

Yes, I see the surgical representative's role in the operating changing as a result of the COVID19 pandemic. I believe that health care organizations will begin to review what cases will require a representative and develop new guidelines for representatives. This will be a cultural shift among the surgeons and will require discussions with them at the table to determine the true need.

Incredulously, one manufacturer has already reached out this week to state we've not met our contracted purchase commitment YTD and are subsequently dropping us to lowest tier - with their concurrent lost revenue, I suspect we'll see more; will you please comment?

This is interesting that a manufacturer would choose to do this and disappointing at this unprecedented time for this to happen. Unfortunately, I agree that we are likely to see more of this as time goes on. However, if there are other manufacturers that make a similar item, it could be a time to look at these other manufacturers and move to a competitor if possible. If it is not possible, discuss with the vendor on how you both can mitigate the issues since there is a loss in both hospital and the manufacturer's revenue. Carefully, consider at your contract at renewal time and be prepared to negotiate so there is a win-win proposition.

Have you had any conversations with your med/surge distributor to address/redefine your JIT program? If so, what does it look like?

Much of the conversations with med/surg distributors have revolved around the need to understand allocations, when those allocations reset, and how to capitalize the product supply flow. When the pandemic began, our organization immediately got in contact with the distributor to understand what products were going on allocation and how to forward purchase any allocations. This move is completely scalable for any size of entity, as a conversation can be had to understand what is coming and how to optimize this.

Data Standards and Analytics

How can systems engage with advanced analytics help guide decisions, especially regarding resource planning? What technology is lacking that you feel supply chain would have benefitted from in this crisis, both internally and externally?

The key resources mentioned by the panelists revolved around inventory visibility and analysis. Tracking products, identifying critical items, calculating burn-rates, and forecasting stockpile endurance are all essential capabilities to help supply chain adapt its usage policies to rapidly changing circumstances. The panelists look forward to the increased availability of sophisticated software that will provide automatic accurate reporting.

Where do you feel improved data visibility and sharing will play into the new supply chain?

Data visibility is needed internally with your supply chain organization and shared with staff and internal key stakeholders. Those key stakeholders however must understand what the data shows. They will need to understand what the numbers mean. For example, if you have 100,000 masks. This sounds like many masks until you factor in and you understand the utilization and burn rate based on number of staff and how they are used clinically. 100,000 masks in some situations will only last 1-2 weeks. The data presented is only as good as the information put in the equation and is unique to each of your entities.

One of the innovations that will come out of this current situation is the development of new software programs. These programs will be able to more accurately predict utilization based on the scenarios we are in the midst of. Many of the programs are now homegrown but will be made more sophisticated. This in turn will spur new commercially available software offerings.

Do you see the industry potentially mandating suppliers to publish to the GDSN [Global Data Synchronization Network]?

Absolutely. The need to understand GDSN allows for clear communication of standardized product. The global supply economy will continue to change throughout this pandemic for clarity of product, country of origin, and equivalent products.
AHRMM Note: For more information about the GDSN, click here: https://www.gs1.org/services/gdsn and here: https://www.ahrmm.org/resource-repository-ahrmm/udi-101-podcast-1

Products and Sourcing

We had to source things from overseas. Dealing with customs, shipping, air travel is not normally a skill for a hospital supply chain person. Do you think this is a skill we need to retain in the future?

While sourcing from overseas has not been a traditional skillset for most supply chain hospital personnel, I see this as an addition, if not already part of the strategic sourcing done by supply chain. We recognize that optimally it would be great to have more domestic manufacturers within the health care arena; however, this will not happen overnight and will not be all-inclusive, as some products will need to remain overseas.

How do you see what you have learned through this affecting specifically surgeon preference items?

The surgeon preference debate will remain during COVID and beyond. Much of this truly revolves around the question, "if product A doesn't work, is product B clinically acceptable?" While many clinicians have preferences, when faced with this type of situation many can adapt if possible. Additionally, since many institutions reduced elective procedures, the understanding of what is nice to have versus what is must has become very evident.

Does anyone see the use of disposables reducing in favor of reusable item like gowns, caps, masks etc.?

Yes, I believe there will be a shift back to the use of the reusable PPE items as many health care organizations have already bringing these items on board. I see the future will be a mix of both disposable and reusable as to prevent a similar situation we are in now where disposables are at close to 100%. I also think reusable items aligns itself with environmental impact that remains a high priority for many health care organizations.

How do you see the field reducing the risk of counterfeit products and fraudulent practices that occurred during this crisis?

The process of reducing the risk of counterfeit products and fraudulent practices is a huge undertaking, which needs to be accomplished through collaboration with many different agencies. Unfortunately, I do not think there is one thing that will help reduce the risk but a myriad of different regulations aimed to address the issues. Both Federal and State level government agencies will need to collaborate with Health care organizations and medical manufacturers in developing processes to reduce this risk.

How have you scaled up to deal with the new sourcing concerns (customs, air and sea shipping, etc.)? Do you see a willingness at your organization to pay more for supplies sourced domestically?

Panelists indicated that it is necessary to be humble and to admit what one does not know such as the lack of knowledge around vetting non-traditional vendors and handling the potential for fraud. Many organizations used outside sourcing experts to guide them through the process.

It has been agreed that not all of the same type of goods should be manufactured within the same country. There is a possibility of continuing the collaboration with other countries that can both scale up and provide the necessary assurances of reduced product backlog. In addition, organizations will look to suppliers to begin manufacturing more health care products within the U.S.
Panelists agreed that there is a willingness to pay more, especially for domestically sourced products, but we will more likely have to pay more.

Inventory

Are you going to be moving to a low unit of measure or are you going to be bulking up? How will you consider par levels in the future?

UCHealth has both a LUM and a bulk environment, as well as hybrid environments, which has allowed them to toggle between modalities in response to the changing context of the crisis. This hybrid form may be something that is relied more going forward given the flexibility that it provides. It is also possible for systems with multiple facilities to utilize environment types across locations in order to create a functionally hybrid environment.

Lean has been something that health care entities have been implementing since the ACA passed. This pandemic seems to have shown the negative side of Lean. Do you feel that hospitals will have to change their Lean approach moving forward?

Lean is more than just a slimming of inventory. It is a way to promote continuous process improvement by involving stakeholders. In my opinion, the pandemic has only heightened the need for a Lean methodology in which organizations need to be nimble, engage stakeholders, and continuously review processes for opportunities for improvement. Kanban inventory control, movement from LUM to bulk and vice versa, advanced analytics, etc. all are part of the Lean methodologies so utilizing Lean as a guiding principle is particularly beneficial in a pandemic situation.

Can you elaborate on what you are specifically doing to right size your supply base in terms of standardization and rationalization?

The strategy utilized by the panelists was to centralize many distribution processes to track and control inventory and set-up an incident command structure to take nimble action, particularly when selecting non-traditional suppliers. The ability to first understand consumption, and then rationalize the truly needed conservation of consumption allows for organizations to then project need. Since most items went on allocation, entities needed to fully rationalize what the true consumption was and then determine how to work within the allocation or if alternative solutions would be needed.

Consider bleach wipes... Since much of the production of bleach wipes was behind due to product being driven to hot spots, entities needed to understand their allocation, and determine if an alternative approach (squirt bottles and micro-fiber wipes) would work and when to implement.

Partnerships

Is there more networking among regional health systems or other community groups? Does supply chain have more of a role in the hospital and viewed differently?

A great deal of collaboration has gone on across organizations within a given locale. Many larger systems have taken it upon themselves to provide resources and knowledge to smaller organizations or community groups. Johns Hopkins has been working with nursing homes to provide testing. Large academic facilities can provide guidance locally and nationally to educate smaller providers and communities. Supply chain has an increased visibility related to its value and role in patient outcomes. Senior leaders and clinicians are more aware of the process than ever before.

Thoughts on cooperation to develop regional emergency reserves of products. Who and how could this be developed and how would it affect pricing?

In order to be successful in developing a regional emergency reserve of products, the federal and state governments should work together in determining what supplies, quantities, procurement of supplies, and the overall management of the supplies. The supplies must support safe care and the safety of the health care worker.
There could be a collaborative forum with the states' key health care organization stakeholders (i.e., health systems, hospitals, ambulatory centers, long-term care facilities, etc.). The stakeholders would/should have a voice on the dissemination of supplies when needed (during an event). There needs to be a system of how to utilize the supplies before they expire and a system of automatic replenishment immediately to preserve the reserves. Pricing would be at the market rate based on quantities purchased.

Do you see this situation causing "competing" health systems collaborating in an ongoing basis to develop joint supply stockpiles and more integrated emergency response plans?

While the traditional "less is more" mentality within supply chain operations due low margins and lean operating structures has been the norm, this left many organizations in very precarious situations during this crisis. In my opinion, I think this has brought to the light the need for collaboration among competing health systems especially around pandemic stockpiles. This crisis showed how at the end of the day every health care organization needs the resources to provide patient care and joint efforts could help each organization achieve that goal.

General Questions

What is the most important thing you have learned as a result of this crisis and how are you going to pivot or change your strategies as a result?

Preparing for future crises and a smoother supply chain process in general, several programs must be worked on continually. Supply chain and clinicians must have increased integration and alignment around degradation planning for key supply chain items. Clinicians need a basic education and understanding of the supply chain process, sourcing and cost control relating to product value. Supply chain needs to develop well-rounded work groups combining focus and input from value analysis, clinical reporting, procurement, purchase services teams, capital teams, and vendor relationships. All of the information that is afforded from these perspectives is essential to ensuring the best patient care and that has to be the goal moving forward.

How has this situation affected the long-term relationship between supply chain and the C suite?

The COVID19 pandemic has definitely brought health care organizations supply chain from "the basement to C-suite" as stated by Matt Putman. Supply chains across the world have risen to the challenge at hand demonstrating their resiliency and abilities. This pandemic, unfortunate as it is, has shed light on the enormous load supply chain and value analysis has been carrying for years especially around backorders and product discontinuations. As a result not only the C-Suite but also clinicians now realize the vital role supply chain has in health care organizations achieving optimal patient outcomes.

What are your plans to return to normal? (Testing, PPE usage, metrics, etc.)

For my organization we are returning to normal in a phased approach so we do not overwhelm the resources e.g. supplies, personnel, etc. For example, our ambulatory services visits are now increasing to 60% of typical volume with 50% in person and 50% using telehealth. We are slowly increasing our OR volumes with a certain number of rooms in use during certain times of the day and on weekends. We are tracking usage of PPE items overall and at the unit level to help identify surge in utilizations to ensure increase is warranted. This information is shared daily with the COVID19 Leadership Team. This information allows the team to prioritize changes in practices or products when there is the possibility of us running out of an item. We are testing all patients going to the OR and testing other patients based on presentation and symptoms.

As a student interning in supply chain, how can we add value during these times?

If you are currently interning, it is a great time to learn since events like this may occur only once in a lifetime. Ask your preceptor for a meaningful project that will be used during or after this event. It is a good time to sharpen your analytical skills. Look for opportunities and make suggestions. As a new person with fresh eyes, you may see something, think of an innovation, or ask a question that provokes thought or review. And sometimes, we just need that extra person, so take on any role as you can learn from it.

Another thought for those in supply chain leadership positions, we as a profession, must continue to provide opportunities for students to learn about supply chain. Having students intern helps the profession pique the interest of promising future staff. The mission at Johns Hopkins Medicine includes "Patient Care, Research, and Education." To meet that goal, we have administrative residents, non-clinical interns, and community learners who come to supply chain to learn our craft. These students are our future. We need to be speaking at undergrad and graduate schools to share our experience. Students need to know how big the supply chain world and it is not just health care supply chain. Supply chain actually allows you to reinvent yourself within the profession. A person can move from

warehousing, to IT, to operations, to procurement, to manufacturing, etc…..there are near endless possibilities for the students.

Has the "surge" in your areas been what you expected and what has your organization response been to accommodate it or to minimize its affect? Many of our numbers suggest the impact is not as great, as we expected.

The State of Maryland has had our share of patients but we have not had the surge that was expected. We have had several "hot spots" around the Washington, DC area, on our Eastern Short and in several zip codes in Baltimore. In Baltimore City, our Latino population has been the most affected. Our convention center has been made into a field hospital and is a collaboration with Johns Hopkins Medicine, the University of Maryland and the State. Several hotels are being used as respite care and additional non-hospital clinical care areas for our homeless population who have been affected or patients that have no one to care for them at home. Johns Hopkins Medicine has also collaborated with helping to do COVID-19 testing in several area nursing homes.

However, we are still planning for a surge today or in the fall. Internally, we have multiple units that have been changed or readied to change to negative pressure spaces and training staff to manage patients. From a supply chain perspective, we are reviewing on-hand supplies daily, considering alternatives (like reusable isolation gowns), and reviewing genuine supply replenishment opportunities. Part of planning is ensuring that you are ready, whether it is for today or in a few years. This situation is helping us for future events by further developing our business continuity plans.

Please touch upon the impact of hurricane season and other "natural disasters".

The impact of hurricanes and other disasters, natural or otherwise, can and have been devastating to the supply chain. If you think about recent hurricanes Katrina, Sandy and Maria, these are examples of disruptions to the chain. Some have local and regional effects like Katrina (Gulf area) and Sandy (Northeast area). These disruptions caused a need for supplies to be sent to these area but many of us were not affected professionally.

On the other hand, Hurricane Maria, affected most of the hospitals in the US. It brought to light that major health care manufacturers produced their products in Puerto Rico. Within days, the reduction of IV mini-bags in the supply chain was felt. Nursing, Pharmacy and Supply Chain needed to communicate and collaborate on alternative methods for medication administration.

This in turn caused supply shortage of various IV tubing and other accessories. EPIC and other medication orders needed to be rewritten to accommodate changes. Thousands of nurses had to be trained to administer medication differently. Concerns for patient safety needed to be addressed. Alternative products from Europe had different bar codes so scanning for medication safety processes had to be considered.

These events illustrate how interconnected the supply chain is. One product problem can cause an undesirable ripple effect for all concerned. Supply chain professionals do have to be nimble enough to react quickly with our clinical colleagues.