

Getting ahead of drug supply challenges

University of Virginia Health transformed its drug shortage management with OrbitalRX with Micromedex



University of Virginia Health (UVA Health), based in Charlottesville, Va., is a nationally renowned academic medical center.

The nation's 10th medical school that was founded in 1825 by Thomas Jefferson, UVA Health includes a 612-bed hospital, level I trauma center, children's hospital, and primary and specialty clinics throughout Central Virginia. Among its accolades, UVA Medical Center was rated as "high performing" in six specialties and 15 conditions/procedures in the 2021-2022 U.S. News & World Report "Best Hospitals" guide and UVA Children's was ranked as the No. 1 children's hospital in Virginia by U.S. News & World Report in the publication's 2021-22 "Best Children's Hospitals" guide.

As one of the top teaching hospitals in the country, UVA Health employs healthcare professionals who are recognized as leaders in their fields and make every effort to push the envelope of medicine. To do so, the organization looks for opportunities to add solutions that will allow its team to deliver the safest, most optimized care to its patient population.

That's one of the reasons why the organization set out to improve how it was managing drug shortages. Staff were relying on internally developed spreadsheets to manage, monitor, and respond to drug shortages. Such an approach is inefficient, says Brian Spoelhof, PharmD, BCPS, BCCCP, UVA Health's assistant manager of medication utilization strategy, who has spent close to a decade managing shortages.

With UVA Health experiencing such frustrations, the organization set out to determine if there was a better way to improve its drug shortage management.



Micromedex was ranked as Best in KLAS 2023 for clinical decision support: point-of-care clinical reference. Micromedex is a market-leading solution that can help the entire care team be more confident in their decisions, supporting the highest level of patient care.

“Most organizations use some combination of spreadsheets and databases for shortage management. All the information must be manually placed into those solutions. That can force you to make decisions without the most current, complete information.”

Brian Spoelhof
Assist. Mngr of Medication Utilization Strategy

The solution

UVA Health selected OrbitalRX with Micromedex, an innovative drug shortage management platform for hospital pharmacies. This data-unifying solution proactively manages drug shortages through predictive analysis and real-time situational awareness in a pharmacy-focused workflow.

OrbitalRX is primarily used internally by UVA Health's medication utilization strategy team for shortage management, says Spoelhof.

“We have lots of team members coming in and out of UVA Health who get access. Our drug purchasers have some access to the information. At the end of our ‘shortage day’ we compile all the information from OrbitalRX and share it with the UVA Health community.”

Brian Spoelhof
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Achieving improvements big & small

UVA Health officially went live on OrbitalRX in early 2019, making the organization one of the earliest adopters. Spoelhof appreciates how effectively OrbitalRX addresses the shortcomings of the manual processes and solutions typically relied upon by healthcare organizations. “With OrbitalRX, I have everything I need in front of me to make much more objective decisions. I can see the product, the inventory, and our known utilization. I can log into the platform in the morning and immediately see the status of our most severe products. I’m able to make decisions much more quickly and informed than I would with spreadsheets and disparate systems.”

OrbitalRX has also helped UVA Health make more efficient decisions concerning its shortage management. “We don’t need to make as many action plans and execute as many changes,” says Spoelhof. “Before, if I knew there was an issue with a drug, we would just implement a change to account for it. This might be setting up an alert in our EHR, centralizing inventory, or considering full-blown alternative solutions. It didn’t matter if we had four weeks, two weeks,

or half a week of a drug on hand. If we knew a shortage was eventually going to be a problem—even if we didn’t know when—we would make a change.”

Now, he says, changes are only made when the data supports them.

“OrbitalRX lets me know where we stand with a product without having to gather and then analyze multiple reports. I can make small adjustments if I know product is coming soon. I don’t need to go through all the effort and work of making systemwide changes when they’re unnecessary.”

Brian Spoelhof
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Features that make a tangible impact

Some of the smaller features of the platform are making a big difference for UVA Health. One has proven particularly valuable as the organization has worked to navigate the COVID-19 pandemic: the ability to tag individual shortages.

Another simple label that Spoelhof appreciates is the indicator that a drug is on backorder. “We used to need to download lists from our wholesaler and perform cross-referencing with our shortage list to see which drugs on backorder might soon affect us. It was a process involving multiple people and systems. OrbitalRX pulls that information directly from our wholesaler. There’s a nice little icon that tells us if a particular drug is on backorder. This has helped keep us better informed and reduced our workload.”

Even something as seemingly small as email notifications makes a difference for Spoelhof. “It’s nice to receive an email informing me of the availability of a medication. I have it set up right now to notify me about our critical medications. I plan to optimize this even further.”

OrbitalRX has provided UVA Health with a central resource for shortage management. That’s made a significant difference in Spoelhof’s ability to complete his responsibilities and help ensure the organization is not caught off guard by shortage developments.

“We’re typically tracking a few hundred shortages. There are some I don’t need to look at every day, but that’s not the case for COVID-related drugs. I was able to add a COVID tag with a quick click of a button. Now I can easily see the status of all our COVID products. The tags help shape our mindset and better ensure we identify when we’re facing a potential issue in this area.”

Brian Spoelhof
Assist. Mngr of Medication Utilization Strategy

“If I didn’t have OrbitalRX and we were faced with a shortage, I would need to run several reports—at a minimum—each week and reanalyze them,” he says. “To get our inventory, for example, I would need to run three separate systems. They could take around 5-10 minutes each. Then I would need to compile the reports and hope they had the right connection points so I could look at our total inventory without needing to perform more manual tasks. Then I’d need to find where we were tracking our utilization data and run those reports. We’re talking hours of work. Having all this information in the OrbitalRX platform makes everything we do more efficient.”

During his time using OrbitalRX, Spoelhof has appreciated how the platform has evolved and how the OrbitalRX team has taken the feedback he’s provided into consideration. “I’ve really enjoyed working with the team,” he says. “I feel like my voice is heard whenever I share ideas and feedback. There’s always a dialog that follows, and I am kept informed about what happens with my suggestions. I can see where OrbitalRX has progressed and now reflects some of my ideas. I feel like it’s not only a platform I use, but one I’ve helped grow, which I appreciate.”

“I see tremendous potential for OrbitalRX to help us in many more ways in the future—and not just from a shortage perspective. I see opportunities from an overall utilization perspective because it pulls in so much good data.”

Brian Spoelhof
Assist. Mngr of Medication Utilization Strategy

Spoelhof looks forward to seeing where OrbitalRX goes next and what he and UVA health will be able to do with the platform over the long term. “There’s a future where I think we can leverage this kind of information to identify areas of inappropriate use and other applications not just concerning shortages,” he says. “I’m really excited for those potentials and finding novel ways and growing through OrbitalRX.”

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About UVA Health

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Solution Used

OrbitalRX with IBM Micromedex® combines real-time inventory awareness and clinical decision support capabilities to help hospital pharmacies proactively manage drug shortages and efficiently identify effective alternatives.



About Merative

Merative is a data, analytics and technology partner for the health industry, including providers, payers, life sciences companies and governments. With trusted technology and human expertise, Merative works with clients to drive real progress. Merative helps clients reassemble information and insights around the people they serve to improve healthcare delivery, decision making and performance. Merative, formerly IBM Watson Health, became a new standalone company as part of Francisco Partners in 2022. Learn more at www.merative.com

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Ann Arbor, MI 48108

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