Episode 34: Responding to the IV Shortage

Jolene Francis: Enloe's Senior Team Message is presented in this caregiver-centric podcast, providing an update on what's new and exciting across the campuses of Enloe Health. Hello, everyone. I'm Jolene Francis, Vice President of Philanthropy and Communications. Welcome to the November 2024 episode of Enloe's Message. Today, we welcome Dr. Sean Maiorano, Enloe's Chief Medical Officer and Chris Marking, Senior Director of Pharmacy.

So, gentlemen, no surprise what we're talking about today. We want to share with our audience how we are responding to the nationwide shortage of IV fluids. But first, let's explain how it happened. Let's start with you, Chris. Please explain what caused this situation.

Chris Marking: Hurricane Helene went right through North Carolina in a spot it had never gone through before for a hurricane, historically, and it caused so much flooding that it damaged the production plant – Baxter's production plant – in North Cove, which produces 60% of the United States fluids. 60% of fluids sold in the United States.

JF: Wow.

CM: A hurricane. Yep.

JF: Wow. Amazing that they can change so much, so quickly. So 60% of the nation's supply of IV fluids run by Baxter?

CM: At that facility – correct.

JF: Wow. They must have suffered a lot of damage.

CM: Yeah, the pictures are pretty horrific. They're on the Internet and you can go see just the damage around there. Not only that, but the infrastructure in and out of that whole area – the roads, the bridges – just how much work is taking to repair and replace that. It's tremendous what they're doing right now.

JF: Not to mention, their staff was probably affected as well.

CM: Yeah, they took about a week and a half to find all their staff and make sure they were accounted for. Fortunately, they are. They're all okay, and they have all their staff accounted for for that facility, which is great to hear. So, but yeah, that must have been kind of a scary time.

JF: Yeah, amazing. We know what it's like to be in a disaster like that.

CM: Yes, we do.

JF: So, Baxter must have been our primary supplier for IV fluids, then?

CM: Correct. They are our primary contract holder. Yes.

JF: OK. Interesting. So, Dr. Maiorano, I know that you have been very involved in how leadership and medical staff are responding to this latest crisis. Can you tell us a little bit about what we're doing, and why?

Sean Maiorano: Yeah, I think we're following what a lot of organizations are having to deal with right now. And that's really having a look at the types of care that we provide in adjusting what we normally do. I will say that all the folks, from Pharmacy to our purchasing folks and the medical staff, were on this very quickly.

We were meeting within days of news of all this to really assess what could happen. We're not obviously the largest hospital on the West Coast, and have access to all the things that every other hospital has, so we need to make sure we had a plan in place. So, our medical staff quickly adjusted. Our anesthesiologists were first to it to look at how they administer IV fluids for patients who need IVs.

We started looking at how we use IV fluids on the floors, for those patients in the hospital, and what alternatives we could do for that. So it's been a concerted effort and one that we kind of re-evaluate really twice, three times a week at times, depending on the news that's coming forth about what's coming down the pipeline.

I think what's important to know is we talk about IV fluids. It's a little bit more than IV fluids. It's certainly IV fluids that we administer. But there's also the types of fluids that we administer for procedures that don't necessarily go in your veins, but might go in a joint space or other part of the body that are important. And all of these fluids – I think intuitively we all say, "Why can't we just get fluids elsewhere?" These are sterile – these are pharmaceutical-grade fluids that have to be obviously clean and appropriate for the type of procedure that's being done. So, it's a pretty devastating event for not just our hospital, but around the country with the shortage.

So, these factors are in place to sort of adjust our usage. We've done a tremendous job of being able to sort of keep things pretty much running as usual, with some adjustments, but we have had to pare down elective surgical procedures – things that maybe we can hold off on, that aren't emergent or urgent needs for patients.

JF: I know that there were some procedural changes that were made. Can you tell us one or two of those? Do you know what those are?

SM: Well, the big procedural changes were, as I spoke to, how we address things with patients. First of all, we started to look at timing of how – typically when you have a surgery, let's say, there's a period of time where you can't have anything by mouth. And so we started to look at the literature and what supports that. So we came up with guidelines that allowed us to sort of push that window a little bit so we keep patients well-hydrated without having to use IV solutions.

The other things that are put in place are restricting the types of procedures that some of our surgeons can do, particularly in the orthopedic, urologic and gynecological areas, that are have procedures that require a lot of irrigation. So, they may involve liters of fluid at a time for a particular case. We just simply don't have it.

JF: Interesting. Chris, I read in Becker's Hospital Review this morning that the FDA has approved an extension on the expiration date for Baxter IV fluids from 12 months to 24 months. Is that correct?

CM: Correct. Until last week, anything that was produced had a one-year expiration date, so once it was opened, that was it. Now, they added another year, which is great. I don't think for us it will help that much. We're in pretty tight control with what we have and we don't have a lot on hand in surplus, unfortunately.

But I think they're still looking at other things, too, like Baxter's importing fluids from other facilities around the world and the FDA has approved that. So, they're hoping to kind of beef up our allocation by doing that and bringing more product in. So, there are manufacturing plants in Canada, the U.K. and Mexico – they're getting those approved and were brought in.

They are starting production next week at the North Cove facility. Unfortunately, the final product will be leaving the facility probably until end of November, but that's a good start to see that facility up and running again. They were able to move about – I think it was like 8,000 pallets of fluids out of the facility, that was tested and deemed to be okay after the hurricane went through.

So that's helped a little bit, but it's going to be very piecemeal, I think, until the end of the year, until we have a better idea of what actually is going to be out of that plant and when that plant can be full-scale running again.

JF: We know it's disruptive for patients who have to have their elective procedures postponed a little bit. How are we managing this going forward? I mean, what's our plan to make sure that we get those back on the schedules as soon as we can? And when do we think this might be over? Do we have a guess?

SM: I think it's a great question. Chris and I were just talking about this before we started the podcast. You know, obviously it's very dependent on when things start opening up from the fluid availability standpoint. From medical staff standpoint, we've looked at how we can try and work with the surgeons and those patients to try to get them back in the schedule once we see things open up. That may be extending some hours options – maybe doing some things on the weekends so that we can get people in sooner – so that we're not delaying that care as much as possible.

But a lot of it is not up to us. It's up to sort of where things are. I think our best estimate from what Baxter is as putting out in their media releases is probably around the first of the year, possibly back to normal production. But they're also playing catch-up, right? And you know, we are getting allocated less than what we're requesting.

We all know everybody's being rationed, so we're kind of at the whim of that. But we are trying other things – looking at other vendors, trying to get fluids from different sources – as much as we can, so time will tell. But it's something that we're continually looking at. I think, realistically, we can only go by with what we know from the producers, so we're probably looking at by the end of this year, start of the next year, until it'll really be back to normal, that maybe we start to see a somewhat normal in-between there and then we could start to move people through the system again.

JF: Chris, I've heard that question a number of times and more than anything seen it on social media: "Why don't we just go buy from someone else?" So what's that? Tell us the challenge behind that.

CM: When you have one producer making 60% of the whole market sales in the United States, that means the other customers who are using what they were sent are just going to lock on tight and keep their allocations. And that's what's happening is. There's two other really big manufacturers – there's B. Braun, there's Fresenius Kabi, and there's a third smaller one, ICU Medical. And they locked down their accounts with their main contractors already, and there's

anything left over, then they put it out in the market to sell, what isn't being used on those allocations. And I would say our purchasing team's do a good job trying to bring those bags in. We're seeing bags from Fresenius and from B. Braun that are extra, to help out our some of our shortages, which is great. But yeah, it's one of those things once you have your contract set up, you get penalized if you go somewhere else to go do it. It's kind of like if you're at a Sam's Club and then of course, your Costco card – you get a benefit of going to one or the other. And then, contractually, they don't like it if you're sharing your business with somebody else. They want you all with them.

Hopefully, what we see from this is that Baxter's learned from Hurricane Maria years ago in Puerto Rico, where we had the same thing happen with the plants over there – that they have a bit of a backup, and a bit more expandability through their plants, which they say they do, to bring more product in faster.

Time will tell, but they are making a good commitment, saying they know what's short and what the biggest need is, and they're focusing on producing those first and then trying to get that back into the supply chain. Then, slowly, that will help catch us up.

JF: What's the most critical supply issue we have right now? Because I heard a number of different types of IV fluids, so which is the most critical right now?

CM: I think that depends on your perspective. If you're a surgeon, it'd be one thing; if you're in Pharmacy, maybe another; and if you're a nurse on the floor, it might be a third type, honestly. So I think for surgeons, I think it's the irrigation solutions, honestly, that we're really struggling with that to get them back to where we are. We're not close. I don't want to give a percentage yet, but we're definitely not close.

For Pharmacy, it's what we're compounding our medications, especially for the Cancer Ccenter. We're making sure that we're keeping our medium-sized bags. And even though our allocations are coming in, it's less than what we project to use. We have a decent amount on hand that we can kind of move things around.

We can switch from normal saline to dextrose and back and forth, and kind of adapt to what where we have the most on hand that day, and kind of game-plan that way. And then I think for on the floor, for a nurse, it's just like, what's in stock and what my order is. We've done some good jobs, I think, from surgery being creative on how they can go to, "Well, we have this supply of this and so let's change our behavior and use this up, because we have a better supply."

And then also we've made some changes in EPIC in DHR system. It used to be when a doctor ordered IV fluid, you got a liter bag and that was it. Well, if we have 500 ml bags or 250 bags, now the nurse can grab one of those and use those and still meet the order of the provider gave them, and still we can shepherd what resources we have more available to us, with less waste. That's the biggest thing on conservation is – how do we minimize waste as much as possible?

JF: Are prices spiking because of this, or are we contracted for those prices?

CM: Yes and no. For Baxter, no, because we're contracted for those prices. But everything we're getting not from Baxter, that we weren't getting before, yes – prices are going up.

JF: Interesting. From a pharmaceutical standpoint, wasn't it Baxter that had the same issue in Puerto Rico?

CM: Yeah.

JF: The last hurricane.

CM: And two others – B. Braun had it over there, too. The good news is they broke it up where instead of Hurricane Maria, all the fluids were coming out of those one or two plants in Puerto Rico. Now they've broken up where the larger sizes are coming out of North Cove, while the smaller sizes are still coming from Puerto Rico. So we've kind of diversified a bit more, which is a little bit helpful, I think, for supplies. But of course, as soon as you see those, the larger volumes, dwindle down our numbers, everybody picks up their buying for the small volumes. So we're seeing a pinch on the small volume bags now also.

JF: So we've been through a number of crises over the last couple of years and it seems like we learn something new every time, right? Something that relates to improving quality while keeping patients safe. And what are we learning this time? A lot of lessons?

SM: Yeah, I think there's going to be a lot of lessons and I wouldn't be surprised if we see literature that comes out to support that. Every disaster we've had, there's things that we've learned from that, whether it's in retrospect to how we dealt with something. And I think it's very interesting – we've always been pretty strict about this NPO status with patients, and now we're realizing we can push that time limit a little bit more. Maybe patients don't need as much fluids.

JF: And it's still safe.

SM: And it's still safe. Our anesthesiologists, I've said before – they've done an amazing job of really looking at what they're giving. I think there was sort of a luxury – you can hang a 250cc bag or 500cc bag and not really think much about it. Doesn't seem like that much, but maybe we can get away with not doing those sort of things and still be safe and patients still do well and feel well. So I think there'll be a lot of lessons learned. We might find that we don't need to use as much fluid in the future and in certain kind of cases.

CM: I think on the nursing floors we're pushing oral hydration a lot more, too – your Pedialyte, Gatorade – that we never really did before. So this is a big change. Instead of an IV put into for hydration now, you're doing it orally, which might be a patient satisfier, honestly. Now, I can drink my electrolytes instead of having it run through a vein in my arm.

SM: I was just going to say that the biggest thing, if anybody's ever had surgery, is that sitting around overnight and not quite maybe knowing an exact time your surgery is going to be in the morning and feeling thirsty. And so there might be an unintended upside – for the patient experience, anyway – from getting fluids available.

JF: Chris, from a pharmaceutical standpoint – this is kind of a loaded question – but, what keeps you up at night when you think about our supply chain?

CM: What this is showing again and again is that we have these specialized plants, but we don't have a lot of them. And I think this is very reminiscent of the shortages that we had in COVID. I think it's why we had such a quick action from Purchasing and Pharmacy, knowing we just lived this a few years ago. We know what this does and we made changes faster, I thought, than our regional area did.

And we were talking to people who didn't even know there was a shortage or a potential shortage going to happen, so I think that puts us in a good boat now. But really I think it's surgery and it's cancer treatment. Those are the two I worry about, and those are the two that we're working the hardest to shepherd the resources for the most, because those are the two that I think being black and white from a patient care standpoint, and also to keep us financially viable, we have to keep up and running and can't stop.

JF: Dr. Maiorano, what do you think is the most proud moment for you as we've navigated this? With the meetings that I've had the privilege of sitting in on, and hearing all the discussions and the negotiations going back and forth about how we're going to move forward, what are you most proud of?

SM: Well, I think how selfless everybody's really been and how quickly we've approached this. You know, it's obviously an inconvenience for some people. And we can talk about this at sort of a larger level, of how we are delaying certain kinds of procedures, and then talk about it in generalities. But that's people. That's patients' experiences in their lives and that that procedure, although it may not be an emergency, is important to them to get done. So to see everybody realizing that in the room and doing what we have to do because we need to take care of those patients who do have that emergency. And, you know, everybody's really been quite easy to work with and come to consensus, pretty quickly, and are flexible.

You know, we recognized that first week, those first couple of weeks, the decisions we make maybe are not the perfect decisions in those first few days, but we need to sort of see the landscape of what's happening. And everybody was really malleable and willing to work with one another. So I'm proud of the medical staff, how the medical staff reacted to it, proud of all the rest of the staff in the hospital and how quickly they jumped on their concerns and understanding of the situation.

Once again, we all worked well together. That's always good to see.

JF: Anything else that we would want to let everybody know about what we're going through right now, and how we're going to be managing it, going forward?

CM: I think this is a continuous situation, and we're meeting at least weekly to go over what we expect to come in, what we have on hand, and then what we can tweak to keep on improving and dialing in to be more consistent with the care we give, and what types we can open up more procedures what we can we can scale down on this week.

I think if it's not what is happening this week, it's going to be happening next week. We're hoping it improves, but also that we're still fine-tuning those dials and just taking care of our patients as best we can.

SM: I think it's recognizing there's a lot behind the scenes. I think when you have something that's as drawn out as this is, you just sort of get used to that moment of we're dealing with a shortage of this issue. There's a lot of people who are hyperfocused to this still, and it may not maybe see that because we're business as usual on the outside, but spending a lot of time trying to re-evaluate things constantly to make sure that we're doing the best that we can.

JF: Well, gentlemen, I can't tell you how proud we all are to work with leaders like you who can step up and make necessary change very quickly and keep the organization running in

really, really tough times. So, thanks for all that you do and thanks for joining us today. That's about all the time we have. I appreciate you both being here.

A special "thanks" to all our caregivers for spending time with us and sharing this program with your colleagues and friends. We'll talk again in December when we're joined by another member of our senior team to discuss what's new and exciting around our campuses. Thank you for all your hard work and for choosing to be part of the Enloe Health team.

Take care, everyone.