Podcast Transcript

School Nurse Emergencies

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Guest: Sandra Moritz, MEd BS RN CSN-Pa NCSN-E
Sandra Moritz has over 30 years of experience in school nursing and coordinating health services. Throughout her career, she has been passionate about promoting student health and well-being. From the moment she was hired to cover five schools early in her career, she embraced the challenges and rewards of school nursing, finding joy in daily student interactions and teaching children how to be their healthiest selves. Whether demonstrating proper flossing techniques with yarn and an egg carton or organizing engaging school events like "Walk at School," "Eat Your Greens," and health fairs, Sandra has always sought to make health education meaningful and fun.

Today, Sandra continues to support school nurses and school health professionals through workshops, seminars, conferences, and podcasts. She remains dedicated to listening, learning, and fostering a strong professional community, celebrating the unique and vital role of school nurses in education and student wellness.

Host: Candace Pierce: DNP, MSN, RN, CNE , COI
Dr. Candace Pierce is a nurse leader committed to ensuring nurses are well prepared and offered abundant opportunities and resources to enhance their skills acquisition and confidence at the bedside. With 15 years in nursing, she has worked at the bedside, in management, and in nursing education. She has demonstrated expertise and scholarship in innovation and design thinking in healthcare and education, and collaborative efforts within and outside of healthcare. Scholarship endeavors include funded grants, publications, and presentations. As a leader, Dr. Pierce strives to empower others to create and deploy ideas and embrace their professional roles as leaders, change agents, and problem solvers. In her position as the Sr. Course Development Manager for Elite, she works as a project engineer with subject matter experts to develop evidence-based best practices in continuing education for nurses and other healthcare professionals.

Episode 1: School Nurse Emergencies

Transcript

Candace Pierce: Hello listeners, I am so glad that you are joining us for this series on school nurse emergencies. I'm Dr. Candace Pierce with Elite Learning by Colibri Healthcare, and you are listening to our Elite Learning podcast, where we share the most up-to-date education for healthcare professionals. Now, this series is broken up into two

episodes with two distinct goals. For the first episode, what we're going to focus on is some of the most common emergencies that school nurses encounter, their causes, and those initial response strategies. And then in the second episode, we're going to focus more on strategies for managing school emergencies and what that collaboration is going to look like with school staff. Joining us for this discussion is Sandy Moritz, a very experienced school nurse. Sandy, thank you so much for joining me for this discussion.

Sandra Moritz: Thank you, Candace, and welcome, everyone. And thank you for attending my presentation today on school medical emergencies. It's my—yeah, Candace, jump right in.

PIERCE: And I was just going to say, like, I'm just excited to hear about your expertise and your insight in this area.

MORITZ: Well, it comes with education and experience. And I will tell you, 30-plus years in school nursing, but who's counting, right? And today, I do a lot of professional education for school nurses. So, it's my professional pleasure to be spending it with my school nurse colleagues, my school nurse buddies, as only one school nurse to another can really understand what happens in the school health office.

Because I have so many people that have this myth in their mind, thinking school nurses are sitting there waiting for our patients to come in, waiting for the next student to need us, having our time for lunch and breaks. No, that's not school nursing. We are extremely busy, and school nursing is getting even busier as our school health offices start to look like a miniature emergency room.

PIERCE: Wow, and see, I'm not well-versed in school nursing coming from the hospital, you know, the intensive care unit. It's so different. So, I'm really going to be learning a lot from you today, especially around some of these more common emergencies that you're going to be discussing.

But I know for myself, I don't face things like asthma attacks and seizures and diabetes outside of the hospital doors, and you and other school nurses, those are things that you face. So being a school nurse seems like you would have different protocols and expectations and needs that I don't fully understand. Am I interpreting that correctly?

MORITZ: Yes, you hit it on the head, Candace, because school nurses are solo acts. We're the only medically trained people in the school. We might, if we're lucky in a large environment—say we have a whole lot of high school students with a big population—we might have an extra nurse working. But basically, we work on our own, and that means anything that walks through that door, whether it's a student, a staff member, or a visitor—any age group—we have got to respond to appropriately in our role as a school nurse.

So, we can't call in the doctor in the emergency room or the respiratory therapist or the pharmacist or even another nurse or an aide to help us move a patient, move a staff

member, or treat an emergency. We must know what to do when the time comes—on our own.

PIERCE: And I haven't even thought about all of the different age groups that you would have to take care of. You know, I think about the age groups in different schools—you schools, middle school—but you're right. You would be responsible for so many different ages that might walk through your door and so many different people, even visitors. That was something—thank you for pointing that out.

And what I want to point out before we really jump into some of the questions that we have today is the complexity of care for so many students. It just seems like it's continuing to increase.

MORITZ: Yes, you know when I first became a school nurse, it was very interesting. I had very few medications to deliver regularly. Students didn't really have any emergency medications, we didn't have an AED, and CPR was just becoming a thing. Things have evolved where sometimes the school nurse is the only nurse.

For instance, a student came into my office one day, and she already had a very high temperature, was vomiting, had vomited on the bus, and was obviously very ill. She needed to be picked up and go home before she even started her school day. I asked the silliest question I could have ever asked her, which I no longer ask a student: Why did you come to school today? You're so sick. She looked at me, puzzled, and she said, "We don't have a nurse at home." I realized—and it's continuing to be evident—that sometimes parents send students to us to get that first set of eyes to evaluate that child.

PIERCE: That's a good point. I haven't even thought about that. But what insight—that little girl was a little girl, right? —that that little girl had to even just say, "My mom didn't know. She didn't realize."

Well, I wanted to highlight some statistics too, just to show the complexity of the care that is being provided to our students. Approximately one in 12 children—and these are U.S. statistics—have asthma, making it one of the most common chronic conditions in school-aged children.

Food allergies affect one in 13 children in the U.S., meaning that, if you break that down to classrooms, that's roughly two students per classroom. Approximately 10% of students in the U.S. experience an injury at school that requires medical attention. Playground-related injuries account for more than 200,000 emergency room visits annually for children under the age of 14.

Additionally, 193,000 Americans under age 20 are estimated to have diagnosed diabetes, with type 1 being the most common form in children and adolescents. However, we are seeing a rise in type 2, which requires a completely different approach. There are also 470,000 children who have epilepsy, meaning schools need to be equipped to handle seizure emergencies.

What I found even more alarming was that only 40% of schools have a full-time nurse on staff, which really impacts the ability to respond effectively to these medical emergencies. So, what are your thoughts on these statistics?

MORITZ: It's alarming, and if you read them too often, you might need a mental health day and decide not to go to school.

Really, school nurses approach their day knowing anything can happen, and we know that we have to be flexible. If we had screenings scheduled that day—say, vision screenings—and we had an emergency first thing in the morning, we're probably going to have to cancel or delay whatever else we had planned.

A school nurse's day—and I actually enjoy this about the job—is very different every day. It's full of excitement for everyone sometimes, and we want to be prepared to deal with anything that walks into the school health office. Absolutely.

PIERCE: Yes. Now, when kicking off this podcast, I listed a couple of common medical emergencies that I think of, but what are the common medical emergencies that you face often?

MORITZ: Well, you mentioned the statistics on asthma and allergies. Those are two big respiratory emergencies that are commonly seen by the school nurse in students and staff members. Common causes include acute bronchospasm, usually due to asthma; anaphylaxis due to severe allergies; overdoses, which are also a respiratory emergency; and choking. Status epilepticus in a student with seizures is another concern. These are some of the most common reasons ambulances are called to schools, in addition to injuries. Choking is the fourth leading cause of death, especially in young children. In addition, sudden cardiac arrest is the number one cause of death in student athletes in the U.S. today. Students with diabetes may also present with emergent situations due to severe hypoglycemia.

PIERCE: You know, when we were talking about the increasing complexity of care, it took me back. Every year, most years, I try to donate some time to a camp—a kid's camp—for a week. I am not a pediatric nurse. I'm more like, "Here's some popsicles, here's some water, here's some Tylenol."

But I have noticed the complexity in care over time—that I'm seeing these children come in with more medications. There are a lot more ADHD meds now, way more than when I first started nursing and first started going to this camp. So, it's been about, my goodness, 20 years now. The amount of medications and injections that I am now giving to children—are you seeing this complexity at school as well?

MORITZ: Well, absolutely. And I'm glad you mentioned camp nursing because any school nurse has probably had a little bit of a stint here or there in camp nursing. Camp nursing is very similar to school nursing, but even more remote. That makes it even more of a concern, depending on whether the situation becomes a true emergency. Then you, as

the camp nurse, have to keep that person stable until the ambulance arrives, which could be an extended period of time.

So, camp nursing is very similar to school nursing in that way. I would also encourage anyone listening to this who is a nurse to consider being a substitute school nurse—to find out if school nursing might be your second career or a pathway you take after you're done in intensive care or med-surg or whatever it might be. Call your local school. We need substitute school nurses.

Yes, the complexity of care is increasing, and we have to continue to keep our education up to date as school nurses. We actually have to find training outside of the school nurse bubble, meaning that we're not in a hospital where they say, "Okay, attend this in-service, it's mandatory."

No one is telling us to attend mandatory in-services on topics related to school nursing. We may need to keep up a certain number of credits to keep our licensure, but there's really no requirement that we take school-nurse-specific training. But you really do have to do it because if you don't keep up to date as a school nurse, you may find yourself in a situation where you're not quite sure what to do. And that is not a situation any nurse wants to find himself or herself in.

PIERCE: Absolutely not. Yes. I've had to dig braces out of lips. You know, there's things that I never thought that I would have ever seen. And it's just really through experience and critical thinking that you're able to really figure out what to do on your own. And speaking of that, how do you prioritize and assess these emergencies when they occur, when they come to you?

MORITZ: Exactly. Well, basically, we are nurses first. And so, we will look at the airway, breathing, circulation, and then add the D on the end for disability. What is the reason they're having a problem with their airway? And then, of course, there's the CAB—circulation, airway, breathing. And now, commonly, some of the organizations we receive our training from are calling it circulation, airway, breathing, defibrillation. So, we have a lot of acronyms out there that can assist us in trying to focus on what we need to do when an emergency occurs.

In every emergency, school nurses have to decide one of three things. Is this emergent? Call 911, get the AED, and get your team in place to assist the school nurse. Or it's urgent—the school nurse does his or her assessment, decides what to do as an intervention, and then observes: Is this intervention working, or do I need to keep them longer and observe them for a while or do a recheck? Or yes, I know I can call the parent to take them to emergency care or to the orthopedic doc. Or does it develop into that emergency, and now you do need 911?

So, you may have the emergencies, and then the non-urgent that come in. Typically, I would see about 60 students every day towards the end of my full-time career. And even

though some may disagree with me, pediculosis is not an emergency. Some have in the past, but let's not get into that.

Another assessment tool in emergencies, specifically for children, is called the Pediatric Assessment Triangle, commonly known as the PAT. This is a tool that the NIH recognizes as a great tool for quick assessment. The American Academy of Pediatrics encourages those that take care of children outside of the hospital setting, which includes school nurses, to take their course, which introduces the Pediatric Assessment Triangle.

What is that? So, it looks at three parts of emergency care. One is, first of all, the appearance. And I think school nurses are really good at this. We hear someone coming down the hallway to our office. We pop out to see what's happening. Do we need to glove up, or are we going to go greet them, or get a splint, or whatever we think we might need?

So, how are they appearing to us? And we see students many times for successive years. So, we sort of know what their normal behaviors are some of the time. Are they crying? Are they able to make eye contact with us? Are they able to be comforted? Do they throw themselves down on the cot and curl up into a fetal position and not want to speak? Are they being social with their neighbor on the next cot?

So, we look at their appearance from head to toe, and we decide, okay, here's what I'm seeing. Here's what I'm going to do based on appearance. And then the second part of the triangle is the work of breathing. Are they having to work to breathe? Do they come in and grab ahold of your desk and lean over to try and get more airflow into the lungs? They may be cyanotic. They may have a rapid respiratory rate or a low respiratory rate. So, you take a look at their work of breathing. Are there retractions that you can see through their shirt? Do you see neck retractions and hear stridor, which is a red flag, especially in children? It could indicate choking or anaphylaxis or some other disorders. So, we're looking at the work of breathing.

And then finally, circulation. A two-second capillary refill in children is normal unless their hands are very cold because they've come in from outside recess. Are they cyanotic? Are their nail beds blue? What else do we see? Tachycardia is a cardinal symptom in an emergency in children. So, we're going to probably check their pulse. Maybe eventually we'll get to vital signs, depending on what the emergency requires from us hands-on and how much help we have.

Vital signs are vital, but they're not as vital as when I went to nursing school and they said, "Take vital signs every 15 minutes, no matter what." Everybody got vital signs every 15 minutes. And now, you'll notice when the emergency crew comes in with the ambulance, normally the first thing they do is put oxygen on the patient to decrease that work of breathing and increase the oxygen going out into the circulation.

So those are some of the assessment tools I think that are really important for school nurses to think about—the Pediatric Assessment Triangle, the ABCs, the CABs. Is it urgent, emergent, or non-urgent?

PIERCE: Yes, that was really good. Thank you for sharing those tools and really breaking down that triangle. I'm not sure. I don't have a lot of experience with pediatrics other than my one week at camp as a nurse. But it's really good just to hear you break this down and to put it in the terms of pediatrics. So, thank you for being so detailed with that. You mentioned a couple of things. You mentioned allergic reactions, anaphylaxis. You mentioned asthma. So, I want to first break down asthma. When you see a student having an asthma attack, I have a couple of questions just about this. And my first question is going to be, how do you know who has an inhaler? Do they always have their inhaler with them? Does the inhaler live with the school nurse? So how do you manage an active asthma attack and ensure that that's what's going on? Does somebody just run to get you? Do you use a radio at camp? Yeah, so how does that work?

MORITZ: Yeah, so students with asthma, known asthma, school nurses will request and sometimes demand an asthma action plan from the parents and the physicians. And normally these are presented at the very beginning of the school year or at the beginning of someone's new diagnosis for asthma. And on the plan, it will say, you know, administer albuterol typically, two puffs with a spacer every four to six hours. And we're now asking for doctors many times to add two more puffs to that. If in five to 10 minutes, albuterol is not effective, administer two more puffs of albuterol to check for effectiveness. Because maybe they didn't prime their albuterol, maybe they didn't inhale it properly, hold it for 10 seconds, or use their spacer properly. But we also want to give the albuterol a chance to work. It does take at least five to 10 minutes to be effective. So, we want to follow the asthma action plan if they have one.

If they have one, they will be presented with albuterol either in nebulizer form or as a multi-dose inhaler to the school nurse. Depending on the age of the child, we encourage that they self-carry their inhalers to school and that they have them available at all times wherever they go, because not everybody has a full-time school nurse. Maybe the teacher has to be involved with administering or observing that albuterol being administered. So, we try to have a plan in place if possible.

We keep albuterol in place either with the child or with the school nurse in the office if there's a full-time school nurse there or, if our physician, school physician authorizes stock albuterol, we even have that alternative if a student forgets their inhaler at home, if they self-carry. If it is a first event, we can administer treatment while waiting for the ambulance. If the inhaler isn't working or is empty for whatever reason, we have a backup plan with stock albuterol. Okay, so we really like to encourage getting stock albuterol for an acute asthma attack.

PIERCE: Okay. And if someone is having an asthma attack but maybe they haven't been diagnosed with asthma, how do you treat that?

MORITZ: Yeah, so I've had some situations with cold urticaria where students develop hives after being in the cold, especially if they're running, and then also develop wheezing and present to the school nurse. So, you know, at first, I was puzzled why this child is coming in off the playground? It's cold out there. They're not eating food. Why do they

have hives? And now I'm hearing wheezing in their lungs. So, I had stock albuterol. And after realizing that the wheezing wasn't just a minor wheeze, but something significant, I was able to administer that under our school physician's order as stock medication. And then that student did go to the hospital by ambulance because it was a first event, and we wanted to know what was really causing this. So, stock medications can sort of fill the gap. But the other thing to remember during an emergency with asthma is that it's very unpredictable. There are about 200 or 300 deaths in children with asthma every year. And it isn't just students that aren't getting adequate healthcare or aren't having a long-acting bronchodilator in addition to their rescue inhaler. It can happen to any child with asthma. Very quickly, the airway can close. And once that happens, it's very unlikely that the albuterol will be able to be inhaled into the lungs to open the airway. And then you're in an emergent situation, a race against time so that the child doesn't go into hypoxia.

PIERCE: Right, that's scary. It's a very scary time.

MORITZ: The only thing I want to add about asthma before we move on is that don't just administer the medication and send the child back. If they're having wheezing, even if it's minor, have them sit and wait a while you're doing other things in the office as well. And then in five to 10 minutes, listen to their lungs again. You want to auscultate. So, one of your really important tools to know how to handle and use is a stethoscope when it comes to children and wheezing. So, if your skills aren't up to date on that or you're a new nurse and your background didn't involve that, then go online, take a course on auscultation, and pick up your stethoscope and start listening to children's lungs as they present with asthma. You will become an expert in wheezing in no time at all. So, you want to monitor and observe. You want to monitor them before you send them back to class so they don't think, "Okay, she sent me back, so I'm all right." Especially young children will think that and maybe they're not.

PIERCE: That's really good.

MORITZ: And you need to watch them for a while.

PIERCE: That's a really good point. Now, can we talk about the same thing with allergic reactions and anaphylaxis?

MORITZ: Absolutely. Anaphylaxis is very scary. I have witnessed it in schools maybe 15 times and have had to give the epinephrine auto-injector. And a couple of times, it was a rebound effect and had to give it a second time while hoping the ambulance would get there very, very soon. So yes, we have to know that the only treatment for anaphylaxis is epinephrine. Benadryl does not stop anaphylaxis, none of the other meds, steroids, etc.—not that we would have steroids in schools—but frequently, it has happened in the past more than recently that the first medication given during anaphylaxis has been Benadryl, and that's a mistake because epinephrine has to be given first and fast so that we don't have organ failure and organ death in anaphylaxis. So, we've got to be experts in anaphylaxis, and I think most school nurses are pretty up to date on those skills. They know that they need trainers for all of their epinephrine delivery devices.

Now we have a new epinephrine delivery device that children and parents are going to love even more called Neffy, which is an intranasal device. So, I would say, you know, go to Neffy before Neffy comes into your office on your first student and learn how to use it. It's very simple. There's no needle. So again, there will be no accidental needle sticks. There will be no lacerations because the student moved, and the needle gave them a laceration instead of an injection. And it's much simpler for training your staff during anaphylaxis.

PIERCE: Yeah. Yes, very good points.

MORITZ: So, staff training on the symptoms of anaphylaxis is very important because they may eat something in the classroom and have their first symptoms in front of a staff member or a teacher. If they don't recognize that they're having anaphylaxis early on, and the student doesn't either, there's going to be a delay in the child getting to the nurse. If they eat something on the bus or have an allergic reaction on the bus, not all bus drivers are going to be trained or be required to give first aid.

Some will just be required to pull over and call 911. And then again, there's another delay in the epinephrine being given. So again, we also see about the same number of deaths in children from anaphylaxis as we did from asthma—200 to 300 deaths per year. And these are avoidable deaths by knowing what the symptoms are and having your auto-injector or your intranasal device with you at all times. These can be carried very easily. The new Neffy can be carried like this—it can hold two intranasal devices. Yep, it has a little clip for the belt versus the auto-injectors, which are a little bit larger, a little bit more difficult to have maybe when you're out on the sports field, doing some sports after school, or during PE class. And there are many types of auto-injectors. So, the nurse needs to know about each one of those. And then, of course, we also have the Auvi-Q, which tells you what to do when you open it up, which is really nice.

PIERCE: So, it has a clip? Yes.

MORITZ: And it's the first auto-injector for infants up to 33 pounds. Okay, so we have an infant device now too.

PIERCE: Yeah, very nice. There are a lot of injectors that come in. During my week at camp, I get a ton of different ones, and then I have to make sure that every counselor, if they go off campus with their students, that they have their inhalers and that they have their injectors—not just their medications. So, all of that is really important as well for camp nursing and anytime you're around pediatric patients, even if you're not a pediatric nurse, even if you're not a school nurse, just knowing what to do when something happens. Something will happen at some point, and if you are there, being able to be the person to respond is crucial.

MORITZ: It will absolutely happen. I would also say this to school nurses and those who do training for staff members that need to learn how to use the auto-injector. I'm a Pennsylvania school nurse, and the laws differ from one state to another, but many of our states say the school nurse has to do the training on how to use the auto-injector and

teach staff members what the emergency signs are so that they know what to do and when to use it. And keep in mind, if you're not sure if it's anaphylaxis, especially if you're not a health professional—and you do give the epinephrine, it's not going to harm the person. They won't be harmed from the epinephrine. They may have some minor side effects, but they're not going to be harmed. So, if you think it's anaphylaxis, give it. And as the school nurse trainer, never take your real epinephrine injector to the training.

You can imagine why. Sometimes things get mixed up during training, and somebody will pick up the real EpiPen, give themselves a shot in their thumb accidentally, not knowing they have the real one instead of the trainer.

PIERCE: You sound like this has happened before.

MORITZ: It has happened before. This happened to some of my staff that I worked with. I said, "Did you remember that I said not to take that to the training?" And they didn't. After that, they did for sure.

PIERCE: Yes, my goodness. Now, I want to touch on fractures and sprains on school grounds because being outside on the playground, especially with elementary students or even school athletes, I'm sure you see this.

MORITZ: Yes. So, we want to make sure that when we do an evaluation, let's just say upper and lower extremities, for instance, that if we release them to go get an x-ray and we don't have x-ray eyes in the school health office, that they can get there safely. So that means some sort of splinting because we don't really know if it's broken. You know, I have seen injuries that I thought, that's probably just a sprain or a strain and sent them out. And the next day they come in in a cast, or I'm sure it's fractured, and they come back, and they say, no, it's not, it's just a bad sprain. Especially ankles are very difficult to analyze. So, we have to assume that we're going to treat them like it's a fracture until we know otherwise if there are those cardinal signs of edema and lack of mobility or tingling in the fingers or the toes, extreme swelling.

You can sometimes look at, for instance, a Colles' fracture on the wrist. It will be like in the shape of an S and you're like, no, that's probably fractured, but I can't really say it's fractured. I can say I suspect it. So, what sort of things do we have? Well, your ambulance crew is really great for training, and they said, look, just have large and small pillows on hand. Say someone comes in with an upper extremity injury. They can put their arm on it. It's already in a position of comfort, and it's providing some splinting just by using that pillow. And then the nurse can examine: is there edema? Do I need to get an ice pack with a paper towel barrier? Look at their fingers. Do we need to take a ring off our fingers? Because I do see a lot of swelling. What if a part of their arm is broken, maybe? So, okay, we're going to keep them on this pillow and secure it with an ACE wrap or large wide gauze, and the child can go off very safely from A to B to get a simple x-ray of their upper extremity if there are no underlying disturbing symptoms like tingling, cardiac or neurological symptoms, or if you aren't sure and the parent, first of all, might not be able

to come in and transfer them. You might have to call the ambulance to do that. So, they're in a position of comfort.

You can also use a pillow for suspected ankle fractures. And again, you do the same thing, give it some comfort, some support, and secure it with the ACE wrap or the wide gauze and send them off by wheelchair from your office to the parent's car. Again, A to B safely. We're not going to allow weight-bearing on any possibility of a severe strain, sprain, or a fracture in the lower extremity, especially the ankle. And any suspected injuries that could be a fracture in the tibia, fibula, or femur—the large bones of our bodies—should go out by ambulance. It's just very difficult to securely splint those large bones.

And we can also keep on hand something called SAM Splinting, which is available on a roll. You cut it to the length of, let's say, the arm, and you bend a piece over for comfort for the arm to hold onto like this, and it goes up to the elbow. And you secure this also with an ACE wrap or some wide gauze, and you can put a barrier and ice right on it, and off they go. You can put them in a sling from A to B safely if you're going to splint and send them out by a parent's car, for instance. So, I would say having those supplies on hand is very, very important, and yes, a lot of injuries do happen at school, and we don't always know if they are fractured. Parents will ask you all the time. A parent came in one day and asked me, "Is my child's arm fractured? They fell at the roller rink on Friday night." And I said, "Well, let me take a look at it. I looked at it and all I said was, "It's in the shape of an S." And the parent said, "Oh, they need an x-ray, don't they?" And I said, yes. And we got them splinted and on their way using wheelchairs for all transfers of lower extremity injuries—you know, below the knee—is very, very important. We don't know if it's fractured. We're not going to have further injury happen by allowing them to weight-bear. That's really, really important.

PIERCE: Yes, very. And I do want to point out to our listeners, we do have our podcasts on our YouTube channel that you can watch for free as well. So, if you want to see some of the things that she is showing, you can check out our YouTube channel for that. I do want to touch on diabetes, diabetic emergencies like hypoglycemia, and hyperglycemia, because I know that is something we see a lot as well in schools.

MORITZ: Yeah, so a lot of our students with diabetes will come from their diagnosis at the diabetes clinic, medical center, pediatrician's office, or what have you, with something we call the Diabetes Medical Management Plan. And it will specify, for instance, what insulin they're getting. Maybe they'll have a pump, and it will talk about, you know, the amount of insulin they're supposed to use based on how many carbs they're eating or if they're exercising before and after lunch or what have you. And also, they may have a glucose monitoring device on, you know, their upper arm typically, or abdomen. For instance, one of the Dexcom devices, and there are many types of those glucose monitoring devices.

And those devices typically are connected to the school nurse's iPad in the school nurse's office and sometimes to the teacher's phone or iPad. And we will get alerts if they're dangerously low. Hypoglycemia is the more dangerous part of diabetes. Hyperglycemia, yes, we don't want to see students with consistently or very, very high blood sugars, and it

can become an emergency, but it is typically caught over a period of time with the diabetes managers saying, "Okay, we need to increase their insulin, we need to look at their diet again, and so on."

But acute hypoglycemia can happen very abruptly and very quickly. And we need to treat it right away with at least 15 grams of carbs. And for those, you can use, you know, glucose tablets, Smarties, Skittles, or juice packs, but you need to have everyone that may have contact with a student with diabetes have the availability of glucose.

So, if we have an evacuation or a lockdown and a student with diabetes is walking through the hallway and they hear lockdown, a different teacher, not their own, may pull them into their classroom saying, "You need to get in here now," and the student's glucose supply is back in their desk. So, staff members need to have at least 15 grams of carbs available for anyone that might present with symptoms. You know, they go to a different teacher for math. They go to art class. They're out in the playground. We need to make sure we can manage severe hypoglycemia—really important.

PIERCE: Yes, that's really good information. The last thing I really want to hit on is seizures, managing seizures.

MORITZ: Yes. So, seizures are more common than we think. And we have generalized seizures, which affect the whole part of the body, which used to be called tonic clonic. And we have focal seizures, which are in a more specific part of the brain. And physicians will typically try in the student's seizure action plan to manage these seizures with medications first, the least invasive. They try to manage them with that. If that doesn't work, they'll typically go into things like a vagal nerve stimulator, which is implanted under the clavicle and communicates sometimes to a magnet to activate it when a student or person feels like they're going to have a seizure, that prodromal period, or the new ones will activate themselves when they notice a spike in the heart rate and they will automatically activate it, which stimulates the vagus nerve to shorten the seizure or stop the seizure, hopefully not going into the emergency state of status epilepticus where the seizure continues and doesn't stop for at least five minutes. And that's a true emergency. So, we have meds to give them in school also. An intranasal med is Valtoco. It looks just like Narcan and uses the same sort of applicator intranasally. If a student has a seizure in a classroom, staff need to know how to prevent injury when that student may fall, collapse, or what have you, onto the ground and be thrashing and could hit their head or other parts of their body during the seizure.

A lot of education is needed for our staff in knowing what the doctor and the parents want the nurse to do during an emergency. Emergencies during a seizure include those that don't stop, status epilepticus, those that occur to individuals who are pregnant, seizures that occur in water. Those are all true emergencies. Seizures that occur in individuals with diabetes. That's an emergency where you should be calling 911 because they may need further care than we can actually give them. So knowing what those exact emergencies are and when we need further care is really important. And if it's a first event, where a child has never had a seizure before, we're going to call 911. We don't

know what's happening in the brain or what the underlying cause is. But Valtoco is a real lifesaver because it's diazepam intranasally instead of the old form of diazepam for students with seizures, which was a rectal gel. So, you can imagine choosing between a rectal gel or an intranasal spray. What would you like for your child? I'll let you decide. It's much simpler to deliver.

PIERCE: Right. Yes, and I also can think of when you were listing emergencies a student who's running on the playground and hits their head and has a seizure. Yes. So, these are all really great. Just breaking down these emergencies that you see and looking at them from that school nurse perspective rather than that hospital setting where I have everything at my hands and everybody at my hands in the hospital setting. So, this has just been really a great refresher for me to rethink how I care for these emergencies outside of a hospital setting. So, thank you so much for being here with us today for this first episode, Sandra.

MORITZ: Thank you, Candace, and to all the school nurses and those who are thinking about becoming school nurses and camp nurses included. Have a wonderful school nurse's day on May 7th. Thank you for being a school nurse or considering being a school nurse because we really do need you. Thank you.

PIERCE: Absolutely. Yes. Well, that is the end of our first episode for our school nurse emergency series. So, to our listeners, please take time to join us for episode two, where we will be back to discuss strategies for managing school emergencies and what true collaboration is going to look like in that school setting. So please, please join us.

MORITZ: Thank you.

Episode 2: School Nurse Emergencies

Transcript

Candace Pierce: Welcome back to the second episode of our School Nurse Emergency Series. Sandy is here. She is back to share more of that insight with us to equip us with actionable insights and tools to help in preparing for emergency responses and situations that could happen. We could say this about pretty much any setting at all, but in a school nurse setting, the nurse has to be ready to respond and prepared for pretty much anything, right?

Sandra Moritz: Exactly, Candace. Yes, if it can happen in school, it will.

PIERCE: It will happen, especially because you're going to be the only healthcare professional on campus. So, you've got to be ready to respond to whatever comes your way. And I do have, before we really jump into our strategies, a personal question for you. So for someone who may be thinking about this role, going into school nursing, when you first moved into that school nurse role, did knowing you were the only healthcare

provider for that population at the time scare you at all versus being in a hospital or clinical setting where you have multiple providers that you can call at any given time?

MORITZ: Well, surprisingly, it didn't scare me, but it should have. I had worked in Med Surg, and then I worked for about eight years in a family practice where I learned a lot of things that really were helpful to me when transitioning into school nursing. And I had two children in school at the time. And so, like a lot of nurses, we think, OK, maybe I'm ready for something with better hours—fewer holidays and no Saturdays or weekends. And I said, you know, I'm going to go back and get my certification in school nursing and see if anything pops up. And sure enough, my child's school nurse retired at their elementary building, and I became a school nurse for a district. And they said, "The good news is you're hired. The bad news is you have five schools." I said, "How does that work?" They said, "Well, you'll go to a different school every day, except when you're at one school and get a call to go back to another."** And so I did that for about five years until I was fortunate enough to get a full-time position at one school, my elementary school. I love elementary school nursing more than any other. I'm more comfortable there. But as the coordinator, I would travel to our other buildings also, our middle school and our high school. And to anyone who is a middle school or high school nurse, you are amazing because I do not know how you do it. I would need an anxiety care plan to go into the high school or middle school every day. (Laughs) Yes, prepare yourself.

PIERCE: You would need it for yourself. My goodness. Yes, I totally understand. All right. Well, in episode one, we really focused more on those common medical emergencies that you see in school knowing what they are, knowing how to respond to them. But what about the strategies? What strategies can a school nurse use to prepare and really be ready to manage these complex medical emergencies when they happen?

MORITZ: Well, first of all, keep your licensure up to date by taking courses in school nursing. Seek them out. You'll have to go to agencies like the Epilepsy Foundation, the Allergy and Asthma Network, or Parent HeartWatch. They all have wonderful webinars that are hands-on for the things that you're going to be looking for and doing during your school nursing career, which is going to be different from the hospital setting or intensive care and a doctor's office practice. And so, give yourself patience as you navigate your first year of school nursing. Mine was a blur. It was a blur going from one school to another, trying to learn who the teachers, the staff, and the parents were in five different schools. So eventually, you become comfortable with that and just become used to it. But I was also younger then too, so that did help. As for strategies to manage emergencies, first of all, we should have a nurse, right? You wouldn't expect someone who's not a teacher to go in all day and teach. You wouldn't expect someone to manage a health care office who's not a nurse or who isn't exactly trained in school nursing protocols and so on to handle that office. We should have a school nurse, an RN, or someone in charge of that position if the school district hasn't hired a full-time school nurse for every building all day. Right now, only about 40% of schools have a full-time school nurse. And then the lead school nurse has to know how to manage those who are not nurses. So, I would just say, yeah, we need a full-time school nurse in every school.

PIERCE: Yeah, healthcare techs, healthcare aides. I absolutely agree with you. At the school where one of my daughters attends, I actually picked her up from school yesterday with a fever, and it was a healthcare tech who assisted. So, I picked her up, and less than an hour later, I got a phone call and was told she didn't have a fever—that her temp was 98. And then, in less than 30 minutes after getting her home, she was 101.

MORITZ: Hmm, yeah. Yeah, parents will ask that question.

PIERCE: So, I'm glad I asked the right questions. I was like, "How does she look to you?" And that's when they said, "Well, she looks like she doesn't feel good." And so that clued me in that I should probably just go ahead and get her to be on the safe side and then check her out myself. And I'm not saying that health techs are not needed. I'm glad that they have somebody there to lay eyes on her and on any of my children. But I do agree that we should have a school nurse, especially with the complexity of the disease processes that we are seeing in our children.

MORITZ: Well, and you brought up something really important when thinking about a temperature check. That could be an indicator of an emergency—say, sepsis or pneumonia or bacterial meningitis or something else serious. So, we need a protocol. For example, the protocol might say if the temperature is 100 or above, students need to go home and stay home for 24 hours without an antipyretic before returning to school. That's a very common protocol.

So now, how do you know if the temperature is really accurate? I've always suggested that we have two ways of measuring temperatures in the office. First, we have a sublingual thermometer, which was my favorite—you put a sheath on it, and it measures the temperature orally. But sometimes kids move it around. You might not get an accurate temperature reading if you can't get them to hold it in place for a couple of seconds. Then we have the temporal scanners that read the forehead temperature in a lot of different ways, but they're not well known for being highly accurate. They're very fast, but sometimes the readings are off. So, if you're looking at the child and they don't seem well but you're getting a temperature reading that's totally normal, and you feel their forehead and think, "Wow, they feel hot," you might want to have a second way of checking the temperature. And then of course, we have the tympanic (ear) thermometer, which has its own positives and negatives.

PIERCE: That's what they used, yeah. So, if you don't know how to use it.

MORITZ: So have two ways, I would say, for nurses in schools to monitor temperatures and also look at the child. If they can't go back to class and learn, I mean, I'm not sure why we're going to send them back to class, although we don't like to send them home unless it's really necessary. You have a little dilemma when you're doing your assessment. Maybe have them rest for a while and hydrate them. That sometimes will get rid of a temp elevation of 99, which will come down to normal with hydration because students are not getting enough fluids during the day.

PIERCE: Right, absolutely. Yes, so there's, right.

MORITZ: So that's one strategy, you know, to monitor them. But one other advanced strategy, which is really important, is getting bystander CPR instruction to everyone in the school. So, if you don't have a full-time school nurse that knows when you have an unresponsive victim, we aren't teaching those individuals that aren't nurses to check for a carotid pulse because they take too much time. They can't find the pulse. They don't know if it's a pulse. They're very insecure doing that.

So, we say, you know, unresponsive victims start CPR. Well, to take a CPR course is costly for the district. It's time-consuming. You can have your local ambulance or heart association come in, go into the gym, throw mannequins down, turn on some music. They have an EMT, paramedic, or an instructor by the mannequin, and they can teach you bystander CPR in a few minutes. So, bystander CPR is becoming very, very popular.

We have it in our own small community here where I live for community members because many cardiac arrests happen in the home or at the grocery store or sitting on your porch. So, it's a good thing, not just for the school, but for your own personal life to learn, call, push, shock, those three things, okay, for sudden cardiac arrest.

PIERCE: And I will say I have actually gone into schools and taught CPR, and I did actually have a teacher who had to do CPR on her own granddaughter. The granddaughter didn't make it, but it actually was hard for her to come back to the class to do the recertification because it just brought back a lot of memories. But you never know when you're going to need that training, when you're going to need to use it, and for who you're going to need to use it on. So, it's such a great push for all educators and anybody to go through the classes.

MORITZ: And teaching the Heimlich maneuver, abdominal thrusts, and back blows are also incorporated in the Red Cross training. But just so you know, choking is the fourth leading cause of death in children, so everybody would know the Heimlich maneuver, how to do that effectively. And your school nurse can arrange training to come in at the same time while bystander CPR is happening. You could do it on a back-to-school night for everyone, not just your staff. But the parents are coming in to meet the teacher, okay, on your way out or your way in, stop in the gym and learn these life-saving techniques. Because we've got the building, and we've got the ability for the nurse to bring in the staff to do this like instructors like yourself. Because you do need to be an instructor to actually teach these techniques officially. So those are two things I would say are really important in the schools to manage. And also adding stock medications with your school physicians. Epinephrine is pretty common now. Stock albuterol is getting more common. Stock glucagon is a push after an Illinois school nurse had to use another student's glucagon during severe hypoglycemia because that student hadn't presented their glucagon in the school health office. So now we have Baximi, which is an intranasal device to deliver it. So, it's pretty easy to teach someone to do that. So, stock your medications, the bleed kits with your tourniquets and your dressings so that we're ready to go. And now you know why I call it the mini emergency room.

PIERCE: Yes, stock medications did. I'm assuming, you know, being a nurse, we have a physician who is going to be over that school nurse. So, you're going to have a physician who is over the school district that you would, I guess, report to, call with questions that would give you the orders for the medications that you need in your facility.

MORITZ: Yes, we have school physicians or school medical directors who will sign our orders and give us a prescription to pick up these medications as we need them. So that school physician helps the nurse write the protocol, signs off on it, just like if you had an order in a hospital signed by a doctor, we need an order from the school physician or medical director in order for us to deliver those stock medications and get those stock medications. Now, the individual student orders come from their own individual physicians.

PIERCE: Right. Now, I know you talked a little bit about this as far as coordinating CPR classes, bystander classes, but how do you collaborate with the teachers and staff to ensure a coordinated response to emergencies?

MORITZ: So typically, as we're getting ready to go back in the fall, we start to see what our list is of students with chronic health conditions. And we start to gather their emergency care plans from their doctors that are signed with their orders and signed by the parent. And the emergency care plan, the ECP, is the plan that we make copies of for our staff. And we give them a copy of that. And we say, here is Suzy's emergency care plan for anaphylaxis.

This is what you're going to see. This is what you're going to do. And you'll come to a training. Maybe here's the link for the auto-injector she's going to have. I want you to watch that. And then you come to me, and I reinforce how to give the auto-injector. So that would be a typical emergency care plan for that disorder. So, we have the emergency care plan for staff. And then the nurse will call the teacher, send an email, stop in, and see me. I'll be in my office, whatever, before school starts.

Typically, one of the first days of school is this teacher training day, and the school nurse will have some time provided by the principal to do the training, to talk to the staff, and then also to reach out to staff by email and also, you know, here's a copy of what you need to know to keep that child safe in the classroom. And then continue to do it during the school year as new students present to us and get admitted to the school building.

So that is pretty much how we collaborate with staff. And then we collaborate with them every day. Typically, a staff member sends someone down and sometimes they'll say, send them home. I'm like, well, I have to do my assessment first. I can't just send them home because maybe you're having a bad day. I sympathize with the teacher. She is, or he has 20 some students or more in their classroom. That's a lot. And sometimes you just need a little bit of a break from a particular student, and you might send them to the nurse with not even anything medical about them. And they might come in and say things like, well, she sent me down here, but I don't know why I'm here. And then you'll realize, okay, have a seat. Why don't you read one of my books or what have you. But we have to

collaborate with the staff and do the training for the staff throughout the school year as things emerge in students.

PIERCE: Right. Now, emergency action plans are things that you typically would see in a hospital. What do those look like in a school nurse setting and how do you use those and how do you effectively implement them?

MORITZ: So, the nurse creates from the orders that come in and the emergency orders and maybe the emergency care plan and individual health plan and IHP, which I think you're talking about in hospitals, and we have a care plan for each patient. And so that IHP, say for instance on a student that may have a seizure disorder, they're at risk for decreased perfusion of oxygen. Okay, so we use the NANDA process on how to come up with and then how we're going to prevent that from happening. We're going to train our staff. If a student has a seizure in these different things, provide a medication rescue medication, call the ambulance in these circumstances, and make a big, detailed plan and how are they going to be safe on the bus? When you're sitting down with the parent to create these plans, the nurse will ask a question that's very important. What do I need?

To keep your student safe at school. Okay, then they'll answer and tell you, okay, they need ValtoCo. Okay, what do I need if we have a lockdown, and your child can't get home until six or seven o'clock at night because there's an intruder roaming around or there was a big multi-vehicle crash, and the buses can't get through? Do I need anything special because of a lockdown? Then the parents will usually think about it and say, yeah, you know what, four o'clock they get this. I can go to the pharmacy with the doctor's order saying, just put two tablets of this rescue medication in this bottle for the school nurse and here's the order and the nurse will keep that on hand if there's a lockdown and the student can't get home. So, we look at the whole picture and then how are they going to arrive on the bus safely? Sometimes according to the IHP and the legal document called a 504 plan with a student with a medical concern. We're going to need to provide a staff member on that bus to keep them safe on the bus because they're so medically fragile for whatever the reason is. And sometimes nurses ride the bus to and from school.

PIERCE: Yes, so your emergency action plans are really per child. So, it's not one big emergency plan. It is you who sit down with each child, look at every scenario that could potentially come up and figure out what to do in case of a personal emergency.

MORITZ: Yes, but let me be more specific. The care plans are for the child. But what do we do for an emergency to support the nurse? So, we have a sort of a generic plan called a medical emergency response plan, an MERP, and a medical emergency response team called a MERT. Or you can dumb it down just to be for cardiac emergencies, a cardiac emergency plan, a CERP. And that might be for schools that don't have a school nurse, but they want to make sure everybody knows what to do during such a significant emergency like a cardiac arrest. But generally, we have this medical emergency response plan, and the nurse puts it together and says, okay, I'm looking for volunteers. Either you have CPR, or we'll get you bystander CPR and you're going to be on my team. And when there's an emergency, the secretary will say the MERP team should respond to the emergency on

the playground. Typically, in the past, they were called code blues. But there's so many codes now in schools, code yellow, code blue, code red, code security, you know, that maybe the nurse knows what a code blue is, but that parent walking down the hallway won't know why the ambulance is showing up because they don't know what a code blue is. But if they know it's a medical emergency, medical emergency on the playground, everybody knows what that is. And so, they'll know why some of the teachers are leaving their classroom. And then on that plan, we need to know who's going to cover Mr. Smith and Mrs. Jones's class.

PIERCE: That's how the hospital is too. So many colors.

MORITZ: When they come and help the nurse. So, then it will list who the team members are and who their coverage is to start it off. And then the school nurse will do trainings in her school office, before and after school, to train those individuals on how to respond, sudden cardiac arrest, anaphylaxis, acute bronchospasm, seizure, severe bleeding, and do the major medical emergencies right there using one of the victims as one of the members on a blanket.

In their office and they'll say, what are we going to do now? And they can save their old AED pads, you know, to use as a simulation. They can use pool noodles like I showed earlier for stop the bleed training, put a hole and a laceration in here, and then they can practice their packing and plugging and applying a tourniquet. School nurses should stop the bleed training. And then they are an instructor for a one to 10 ratio. And then they can train their staff members how to stop the bleed themselves and they don't have to leave the campus. Have their school nurse as the instructor. So, I would say those are some of the real highlights of collaboration. So, we have the individual care plans, but then we also have the school's plan. Who's going to help the school nurse? The medical expert is with the student or staff or visitor who needs hands-on care.

So, the staff members are going to greet the ambulance when they come in and take them where the emergency is. They're going to go get the splinting bag. They're going to go bring the AED, if necessary, go get the stock auto injectors, and then the nurse supports the actual patient with the help of the team members. That's the MERP.

PIERCE: Yes, that's so important. Yes. Now when it comes to communication with parents and guardians during these school emergencies, what are best practices there?

MORITZ: Well, parents are very important. They bring to us the information. So many times, we're like, you know, we need to know if your student has a health condition and they'll fill out a questionnaire or an emergency form at the beginning of the school year, any new medical conditions. And sometimes parents just don't, they don't think they're busy. They're trying to get their kids ready for school. And in the meantime, that summer, the child had a severe allergy to nuts and they just found it out and they have epinephrine injectors at home, but they're like,

You know what, guess the school does need that. And so, you might stimulate that thought to them, hey, alright, I see that. Okay, let's get those auto injectors in that order in here so that student can carry them. And we know what exactly is going on with that child. So, parent communication is really important, and it's initiated usually by the parent coming in and telling us something or putting it on a questionnaire or the school nurse calling and saying, well, your child came in and they had an inhaler, but I didn't know they had asthma. Do they have asthma? Yeah, I forgot to tell you and getting the order initiated after that. Because children will tell you anything and everything that you ask them. They'll tell you what you need to know.

PIERCE: They will even make up things. Well, my cousin had this, so I guess I have it too. Had that happen.

MORITZ: Yes, that frequent the school health office, know, they were in the past called frequent flyers. I like to call them rotating regulars. I think these are future nurses. These future nurses are so interested in nursing that they want to be in the nurse's office as much as possible. And some of them by the end of the year, you could actually give them an official certificate like you are a pre-nurse at this point, go into nursing.

PIERCE: Mm-hmm, that's good. Yes, welcome to nursing school right here.

MORITZ: Because you know a lot, you really do know a lot.

PIERCE: Yes. How can school nurses advocate for better resources and support for emergency preparedness in schools?

MORITZ: Gosh, that's a tough one, you know, so our immediate boss for a school nurse, let's put it this way, is the school principal. We may also have a coordinator of school health, especially in a larger district where one school nurse provides for the in-service training, makes sure substitutes are present and other things like that for the whole school nurse population. So, for instance, I did that for 10 nurses in my previous life. And that way those nurse trainers, so to speak, are also our first line of what should we do if this happens and I'm not getting this paperwork back or I still didn't get the inhaler back, what am I going to do? In addition to the principal. The principal, on a daily basis, say they get a phone call from a parent saying I didn't get a phone call yesterday from Mrs. Moritz, she didn't notify me that my student stubbed his finger on a basketball and now it's all swollen. What am I supposed to do? It came home with a little buddy tape on it and some ice. I wish she had notified me. So that's something that can happen and has happened to me in the past. And why would that happen? Well, with 60 children coming in, some emergencies during the day, 20 or 30 medications, lots of charting to do. You might just buddy tape the finger, ice it. You might give them a note. The note might never come out of the book bag. You might leave a voicemail, or you might think the parent will see that, they'll see my note, but parents need to be notified more and more for anything above the neck and anything below the neck. So, we're notifying parents more and more because they want that communication from us. They don't want any surprises when they get home. The last thing you want to do as a parent, now I have to go into urgent care and

it's 630 and we haven't even had dinner yet, you know. So, I understand that, and I think nurses are being more and more aware of, yes, we need to do that.

PIERCE: Absolutely. Do you have any examples of successful emergency management programs in schools that you could share that we could learn from?

MORITZ: Well, the one I mentioned to you was the MERP, but I also think that school nurses need to take some sort of training because we are in there by ourselves. And usually one emergency is one person, but not always. So, I'll give an example. Some time ago in Pennsylvania, there was a high school with a high school nurse and a 16-year-old came into the building with a large knife and started stabbing people in the main office and went down the hallway stabbing people randomly in classrooms for a total of about 20 people were stabbed. The school nurse heard the initial screaming, looked out, saw that there was a perpetrator, called 911 and the police came quickly and then she started following the police. It's called the gray zone behind the police in emergency drills. And you're following the police, it's not totally secure yet, but you do believe behind the police you can go in and start treating victims and that's what she did. So, she treated a total of 20 some victims, six were critical from bleeding. They all survived. And this was before Stop the Bleed kits or tourniquet kits. She had to use people's T-shirts, towels that people could grab from somewhere to stop the bleeding and initiated her staff in following up with the care while she went to the next victim. And I asked her, I said, "What can you teach us about school nursing, school nurses about what happened to you and how you responded that day? And she said, one thing I'll tell you to do is have the right supplies. I have a trauma dressing. She said, all I had were gauze squares and I ran out of them after the first couple of victims. Gauze squares do not stop emergency bleeding. So, she said, "have trauma dressing. So that's one thing I recommend to anybody that takes any of my seminars to have those available because what you get when you open that up is this. So, this can become more than one dressing if you need it or it can become a compression dressing. Okay. And it works much better than gauze squares. The other thing I will recommend relative to supplies and managing emergencies is if you've taken a Stop the Bleed Kit course and you have a kit, you probably have at a minimum one or two tourniquets, some trauma dressings, some quick clot dressings probably. You might have a hyphen vent, which is for traumatic pneumothorax to stop the air from leaking out of the lungs dressing. Your tourniquets that you have in your bags or in your emergency kits, get it out of there and take the cellophane wrapper off of it now and make sure the tourniquet is visible to anyone's naked eye when they grab the kit. So double duct tape it to the outside of the bag or outside of the kit so you can get to it because these bags are huge and they have all kinds of supplies and you don't want to be digging around in there when what you really need is to tourniquet and it's still spurting over there. So have your supplies visible and handy. Also have scissors, heavy-duty scissors, visible and handy because many times you'll have to cut clothing off whether it's for applying AED pads or to find the source of bleeding or the source of leg pain or whatever it might be. So having it handy and available. Your first aid bags may be hanging on a hook right inside the door and your AED cases are becoming very full because they're now having the AED, maybe stock albuterol, maybe the stock auto injector, maybe a small canister of oxygen. About 20% of our nurses in schools have oxygen. And oxygen decreases the work of breathing.

And so being able to give oxygen until the EMS arrives is very helpful in almost any kind of medical emergency. And I was fortunate enough to have a small canister of oxygen in every one of our buildings and it was monitored by our EMS, and they would refill them. They would swap them out at the time of the emergency. They would check our gauges every fall to make sure they were full, working, and safe.

And they would many times supply us with non-rebreather mask setups too. So, thinking about your supplies as you're managing emergencies is going to be like the nurse needing trauma dressings in the future. That's going to make the outcome better and it's going to make your process of responding much smoother where you're not having to look for things during those critical moments. So, I would say that to me it is really, really important.

PIERCE: Yes, I can agree with that. Well, Sandi, as we close out the series, is there something you want to share that maybe we didn't get to discuss or maybe some wisdom you want to toss out to anyone who may be interested in pursuing school nursing?

MORITZ: Well, I'll share with you what happened to me in one of my first days as a school nurse way back when. And I'm emphasizing this because stock does save lives if I can only emphasize that enough. And I know stock costs money and you have to get the protocol and the order from your school physician. And there are some school nurses that are having difficulty getting a school physician due to liability risks and so on. And there are strategies that you can use to get a school physician, like asking a parent who's a physician to be your school physician because they have a definite interest in making sure you have what you need since you're taking care of their children. So, the story is I'm in my office one of the very first days as a school nurse. I'm really happy because I'm thinking, I'm going to be teaching these kids how to brush their teeth. I'm going to have nutrition fairs. I'm going to have all these fun things because health education is, I wanted to be a teacher till I was seven and I got a first aid Fisher-Price kit and then I decided to be a nurse, but I've always loved teaching nursing. So, in my office, a teacher comes in and says I got stung by a bee and I'm allergic. Now, this was before auto-injectors okay but there were things called Ana kits. It's a little kit in a plastic box with a pre-filled syringe of epinephrine with a needle attached. She said I left my Ana kit at home. Oh my gosh, what am I going to do? I'm a new school nurse, she's having anaphylaxis. 911 and then I remembered in this closet, which we frequently dealt with working out of a closet, was an Ana kit with an order from the doctor that said, give to any staff member if they're having an allergic reaction to the flu shot, which we gave flu shots back then to our staff members in school. I'm like, I have an Ana kit. I'm showing this to her. She said, give it to me, give it to me. And she's in respiratory distress, right? So, I open it up, my first exposure to an Ana kit. There's an alcohol swab. There's a syringe. She said, give it to me and my leg. I go over and I said, "You want me to give this to you? Yes. She said, what else am I going to do? So, I give it to her. She goes out by ambulance. She's okay. She never forgets her Ana kit again. But at the end of the day, I had to go into my principal and say, I just want you to know, this is what happened. I had to use this Ana kit, and I didn't have an order to give it for anaphylaxis. And my principal is nodding her head. Okay, okay. She said, well, okay, she's okay, right? I said yes, but I didn't have an order. So, my point is it's

very difficult to explain the Nurse Practice Act to someone that's not a nurse. And that was my first realization that I was going to have this difficulty for my whole school nursing career, because not only did she not understand that, you know, I gave something that I shouldn't have that I could lose my nurse licensure for. I didn't because nobody else understands the Nurse Practice Act either. She was okay, so she was okay with what I did, but that was my first experience with knowing your Nurse Practice Act as a nurse, what you can and cannot do. And if your state says you need an order from the doctor and the parent's signature to give a Tylenol to a student, then that's what you need. You can't circumvent that and say, it's over the counter. I'm going to do this because these parents can't come and pick them up and it would help them out. No, you have the protocol, and everybody needs to know that in advance and get a medication form off to every parent at the beginning of the year so they can get it signed. And then you can administer Tylenol or ibuprofen and over-the-counter medication to their child for whatever the doctor says and everybody's happier. But the most unhappy parent is usually the one that comes in and says, would you please give my child some Sudafed at noon for their cold?

You said, well, I can't do that. And they're like, well, here's the Sudafed. I said, yeah, but I have a nursing license. I can't do it without a doctor's order. Then the parent gets upset. Here's what you do. You sit them down. You give them the phone. They call their doctor's office. They say here's the fax number of the school. Fax that orders in for Sudafed. And everybody's happy. So, you try to problem solve for some of these solutions for staff members and parents and our student population to keep them in school, keep them as healthy as possible, and prevent a never event. We don't ever want to see a never event happen to a student or staff member or visitor in our care, of course.

PIERCE: Mm-hmm. Absolutely. Well, we are at the end of our time for this series. To our listeners, maybe you are volunteering in your kiddos' classroom or on a field trip or an emergency just happens. Maybe you are the school nurse on duty. Hopefully, you've been able to find some pearls that will be helpful if and when you find yourself providing care to students. Thank you, Sandy, for taking time to educate us about school nursing.

MORITZ: Thank you. Thank you, Candace, and happy school nurses day to everyone on May 7th. Please celebrate. You deserve it.

PIERCE: Yes, it was such a joy to chat with you and to learn from you through this series. So, thank you. To our listeners, I encourage you to explore many of the courses that we have available on EliteLearning.com to help you continue to grow in your careers and earn CEs.