

Podcast Transcript

Positioned for Healing: Comprehensive Care in Prone Positioning

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Guest: Kathleen M. Vollman MSN, RN, CCNS, FCCM, FCNS, FAAN

Ms. Vollman is a Critical Care Clinical Nurse Specialist and Consultant. She has published & lectured nationally and internationally on a variety of pulmonary, critical care, prevention of health care acquired injuries including pressure injury and CAUTI/CLABSI's and other HAI's, work culture and sepsis recognition & management. She serves as a subject matter expert on these topics for the American Hospital Association and Michigan Hospital Association. From 1989 to 2003 she functioned in the role of Clinical Nurse Specialist for the Medical ICU's at Henry Ford Hospital in Detroit Michigan. Currently her company, ADVANCING NURSING LLC, is focused on creating empowered work environments for healthcare practitioners through the acquisition of better skills, attainment of greater knowledge, and implementation of process improvement.

Host: Candace Pierce: DNP, MSN, RN, CNE

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.

Transcript

Candace Pierce: Hello, 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. Prone positioning. We know that it really emerged as a vital intervention in the management of patients with acute respiratory distress syndrome, as well as other respiratory conditions, and we really saw this especially during the COVID-19 pandemic.

So this technique, which involves placing patients face down, and research has shown it can significantly improve oxygenation and ventilation, leading to better patient outcomes. Now,

historically, what I saw was prone positioning was first documented in the 1970s, but it gave prominence in the 1990s. And studies have shown a 50 % improvement in oxygenation for ARDS patients.

So today, it is a standard practice in many of the intensive care units worldwide. Now why is this important? Well, with respiratory conditions being a leading cause of hospitalization, understanding and implementing prone positioning really can be a game changer in patient care. And studies have shown that prone positioning can reduce mortality rates by up to 16 % in severe ARDS cases.

In this episode, we're going to delve into the why's behind prone positioning and why it's beneficial. And also the challenges of prone positioning. And this is to hopefully equip you with the knowledge and strategies to effectively use this technique in clinical practice. Now joining me for this podcast is Kathleen Vollman. Kathleen, thank you so much for being here.

Kathleen Vollman: Candace, I'm excited to talk about this topic. It's been near and dear to my heart since the first time I proned the patient in 1982.

PIERCE: Well, do you want to tell our listeners a little bit about your background and areas of expertise? 1982. Wow.

VOLLMAN: I am a critical care clinical nurse specialist. I've been a critical care nurse for 45 years, 10 directly at the bedside, 13 at the bedside as a clinical nurse specialist for the medical ICUs at Henry Ford Hospital in Detroit, Michigan. And since 2003, I've had my own company, which is called Advancing Nursing, which is focused on creating empowered work environments for nurses and other healthcare clinicians based on skill, knowledge and process improvement.

So I have focused on critical care related topics, ARDS, prone positioning, sepsis management, early recognition, and then also fundamental nursing care to prevent infections. So that our patients that are in the intensive care unit and elsewhere in the hospital don't get an infection that increases their risk of dying. So I am currently the president of the World Federation of Critical Care Nurses, and I'm also on the board of the National Pressure Injury Advisory Panel.

PIERCE: Wow, such a diverse background. I am so excited to learn from you today. You have so much knowledge that I need. I'm so grateful that you're here.

VOLLMAN: I like to share that knowledge.

PIERCE: That's so good. Well, can you start us off with what is prone positioning and how does it benefit patients with respiratory distress?

VOLLMAN: Well, as you stated, prone positioning is oftentimes our patients are on their back or what is called the supine position with the head of the bed up and hopefully from pressure injury reduction, we're turning them from side to side if they can't move. But this is a face down position or on their belly from a lay perspective. And most of the time there is a slight elevation in the chest and the pelvic region to allow the belly to be free of restriction and part of that is for improving full lung volume. Yeah, yeah, those pregnant pillows.

PIERCE: Right. Reminds me of pregnancy. Kind of that same thought process there. Yeah.

VOLLMAN: An interesting point, I don't know if you're aware, but I actually invented a device to prone critically ill patients.

PIERCE: No, I did not.

VOLLMAN: Yes, I did that for my thesis in 1986. I patented it in 89 and Hill-Rom picked it up in 1997. So it was sold around the world. I was ahead of my time because the seminal research really didn't hit till about 2013. So what happens physiologically? Because I think it's important for them to understand. When you're lying in a supine position, you have your cardiac structures and pressure against a rigid spine. So that creates your pleural pressure to be more positive, making your lower lung sacs in the dependent position tend to be closed. So it takes more pressure to open them up. And so that could, if you're ill, affect your oxygenation. So in ARDS, one of the challenges is there are pockets in the lungs that are not working. The lung sacs are not working. They're either completely shut down, it's called shunted, or they are partially full of fluid. And so the goal is to have whatever we can of those lung sacs open to match the perfusion. So what happens when we turn prone is the pressure of the cardiac structures is only against a breastbone.

So it's not as severe and it causes the pleural pressure to be more negative, which is our normal pleural pressure and actually opens alveolar sacs. That's why you see an increase in oxygenation. The largest I ever saw was we had a patient whose PaO₂ was 54 and it went up to 340 on a single prone turn. You can only do that if you're recruiting alveoli to match the perfusion.

PIERCE: Listening to you describing this and what is happening, I find it interesting because my background is critical care as well. And I've worked in some critical care units throughout the US, and we added not, I was not a part of prone positioning until COVID.

VOLLMAN: And the challenge with that was the fact that it does take a coordinated effort. It does take education. There are newer tools to be able to assist in the process and make it easier. But it requires a cultural change to incorporate it into your practice. As I said, the seminal research came out in 2013 that was Garen out of France. They had 466 patients. This is the one where you talked about the reduction in mortality. That's where it showed it. And to help understand what a 16 % reduction in mortality is like, there's a statistic called number needed to treat in order to save a life. Six. The number needed to treat is six in order to save a life. That's what 16 % reduction in mortality means. And for nurses that have been practicing a long time, just to give you a reference, do you remember when we used to use streptokinase for acute myocardial infarction? That was a number needed to treat of 25 in order to save a life. That became standard practice. Prone positioning is six.

PIERCE: I don't know what to say to that.

VOLLMAN: Yeah, it's it and part of it is because it's challenging. The science is there. The science has been building, as you said, it started in the 70s. Those patients were turned with either for those that are old enough in the audience to remember this and the circle electric bed or the striker frame. Those were the two things that were used. We manually turned in 1982 and I recognized the likelihood that nurses would want to do this if they had to use a circle electric bed or a striker frame was going to be zero to none. So I wanted to find an easy way. And so the device I created actually

got placed on top of the patient supported their forehead, chin, upper chest and pelvic region. And they seat belted in and it made it easy to turn but it also made it easy to turn him back in case of a cardiac arrest.

PIERCE: Right. Now, I know we're talking about some of that historical background, but can you give us that some, is there some historical background of how did we even figure out that prone positioning would help with, you know, respiratory issues and then, how has that evolved over time? Because again, knowing it came out in 1970s, but then realizing that in the, in the units that I've worked in since 2007, I didn't actually see prone positioning until 2021.

VOLLMAN: you know, I'm not sure if you're aware of this statistic, but it takes 17 years to move evidence into practice. And yeah, and if it's bundled, you know, like the bundles, the VAP bundle, the CLABSI bundle, then that reduces to about 13. So it shaves off, shaves off some years. We have a lot of bundles, but this wasn't bundled.

PIERCE: Yeah, we have a lot of bundles.

VOLLMAN: So the seminal research on low tidal volume ventilation was published in the early 2000s. So we finally figured out how to appropriately ventilate the ARDS patient. So people weren't necessarily wanting to jump on to using a positioning thing that people would complain that it's too hard to do, even though it's rather easy once you figure out and you've been trained. So from the 70s, the next published research was actually 1988 but it was European. It was Dr. Gattinone who recently passed, but he was Mr. ARDS. And so he studied the physiology of what was going on in the lung and put theories out as to why. And those theories have then been studied in labs and pretty much verified that those are how we make a difference. The other piece that happens when you turn and prone, because you are opening and closing the alveoli and creating sheer stress you are actually reducing ventilator induced lung injury while prone. So the concept that this is non-invasive doesn't cost any money.

PIERCE: There's so much great research.

VOLLMAN: I treat six people with it; I save their life. In 2017, so 2013 was the seminal research, in 2017, the Society of Critical Care Medicine and the American Thoracic Society, ATS, came out with guidelines for ARDS patients. And those guidelines had a strong recommendation for proning as frontline therapy.

But as you said, it was COVID that got every, because basically severe COVID is a viral ARDS, viral initiated acute respiratory distress syndrome.

PIERCE: And just for our listeners, I want to make sure that they know what we mean when we're talking about seminal research. And that means that we are referring to, say, research that is groundbreaking or highly influential in an academic setting. It lays the foundation for us to be able to move towards recommending something or it becoming a standard practice. And so that's what we mean when we talk about seminal research. How did we start to see prone positioning become a standard practice for our ARDS patients?

VOLLMAN: Well, there was slower uptake from the 2013 research, but there was uptake. There was greater uptake in 2017 because of the guidelines, but it actually started with H1N1 because they recognized and SARs that we didn't get a lot of SARS. It was heavy in Canada, but proning was identified as a beneficial therapy for the ARDS patients. So when COVID happened and these people, I mean, the mortality rate in the beginning, because we didn't know what the heck it was.

PIERCE: I did not know that.

VOLLMAN: Everybody was pretty much throwing the kitchen sink at them in terms of the level of science. So low tidal volume ventilation, PEEP therapy, if they're not syncing with the ventilator, heavy sedation, potentially paralysis. And the next thing is proning, and what follows that is ECMO. And so people were going along the science recommendations for arts, basically. But because so many people were dying, people were willing to try things. There was also extra staff in the beginning of proning because they stopped doing elective surgery or in the beginning of COVID. And so OR techs assisted the ICUs with proning because OR techs are familiar with proning and was pretty busy on doing webinars or individual consults with hospitals on policies and procedures. It's the fastest policy and procedure I've ever seen done in the intensive care unit. It literally was built in a month and passed so that they could initiate it. So a little fun fact, the policy and procedure that everybody is using is off my original research.

PIERCE: Wow. Congratulations. That's amazing. That's a really, yeah, that's a really big accomplishment. You should be very proud of your work in that area, and it saved a lot of lives. So research on this started in the 1970s. You programmed your first patient in 1982, you said, and I didn't probe my first patient until 2021. So I'm curious about how the perception of prone positioning has changed over that span of time.

VOLLMAN: Oh, it so I will be 100 % honest with you. It was COVID that changed the perception because everybody thought it was so hard, they didn't even dip their toe. Even though they'll put somebody on high frequency ventilation that has not good data but that's a machine. This requires an interdisciplinary team and a group of people. And if you do it right and you have assistive tools, it's literally five people. One at the head, two at each side, and one to watch the lines. So really, I think it was fear of doing it.

PIERCE: Yeah, required people or the lights.

VOLLMAN: I've been proning as you said since 1982, never lost a line, never lost an endotracheal tube. So for me, the it was the fear of the unknown.

PIERCE: Absolutely. Now some of the historical challenges that you've mentioned, of course, is just fear, not understanding. It's new and we like to do things the way we've always done things, especially if we know that those things work. So are there other historical challenges that have been faced in trying to implement prone positioning?

VOLLMAN: So getting everybody on board. So sometimes what I would discover when I would consult or go into a place specifically when I was launching my proner, either the docs were the ones that wanted to do it because they had read the latest science and the nurses are like, you're crazy. Or the nurses had heard me talk and said, we need to do this. And the docs are like, you're crazy.

So, respiratory therapy is in between. So it was really trying to get everybody on the same page. And I truly believe that's what COVID did, got everybody on the same page. I would have to say if you're looking at countries that have been proven consistently for quite a long time, France, Spain, and Italy. That's where a lot of the research came from.

PIERCE: Right. And it's just interesting to me that it took such a negative impact of something like COVID for us to be like, okay, let's try this. Let's do this.

VOLLMAN: Well, and I was excited. I spoke at the National Teaching Institute, AACN's conference, the American Association of Critical Care Nurses. And I had an ARDS case study, and I got a chance to ask the audience, were about 500 nurses there. How many are still including proning as part of their ARDS management? And more than 80 % of the audience raised their hand. So I was like, I was like Finally, finally it took a long time, but it's happening. Yes, so that was exciting.

PIERCE: see in progress. Now let's bring us back to today and let's bring us back to actual discussing prone positioning. What are the key indicators and contraindications for using prone positioning in clinical practice?

VOLLMAN: Well, this is where I think nursing can play a big role. And that is by incorporating PAO₂, FIO₂ assessment into their routine practice every four hours on an ARDS patient, because that's one of the major indicators when that is moving less than 150 and the patient is on low tidal volume ventilation and or at the PEEP level that the doc is planning. And usually that takes in an ARDS patient, if it's done well, it takes 24 hours, 24 to 36 hours. That's when the decision should be made, roughly. So that's the indication. So ARDS, PF ratio, so they're already on low tidal volume, they're on a sufficient amount of PEEP. Their plateau pressures are still elevated greater than 35 or greater than 30 and Their PF ratio PAO₂ to FIO₂ ratio and by the way, it's pretty easy. All you got to do is have a calculator so you can divide the PAO₂ into the FIO₂ because it takes an It's a decimal division. So in my world, it takes a calculator and that is less than 150.

PIERCE: I use a calculator for you. Drug calculations, I can do those all day long. Don't ask me to do any other type of math. My kids ask me to do algebra with them and I'm like, that's laughable.

VOLLMAN: I need help. Yeah, I hear you. It wasn't my favorite subject. In terms of contraindications, there's really only two absolute contraindications. And one is goals of care. If the goals of care has changed, and the other is patients with face or facial neck trauma or spine instability. Everything else is a relative contraindication. So what does that mean? A relative contraindication basically means we need to have an interdisciplinary discussion to weigh the risk benefit ratio of doing it to not doing it. That's what that means.

PIERCE: Can you talk a little about how we will position and things we need to look at and think about when we are proning patients?

VOLLMAN: Sure, there's like a pre-proning procedure kind of concept that you should do. One, it includes patient and family education, absolutely. Especially if the patient is, well, whether they're awake or not, I always explain what it is, what we're going to do, what's the reason, and share with

the family as well. What I've also found with patients is that if they are belly sleepers, they don't require as much sedation because it's a position of comfort for them.

PIERCE: Right. That's really, that's a good thought.

VOLLMAN: Yeah, and then you need to make sure you have your supplies and what supplies are we talking about? I recommend and so does the National Pressure Injury Advisory Panel on their infographic that you remove the prefabbed ET tube holders because there's a fair amount of plastic there that could contribute to pressure injuries and has been shown to contribute to pressure injuries and move back to either twill or tape. So that takes learning because people have lost that skill. Our respiratory therapist colleagues, because they don't do it anymore, they use the ET tube holders. So that needs to be switched. You want to, and some organizations, and this has been published as well, they have a pre-prone packet, and it has protective skin dressings in it. It has the twill or the tape. It has extra EKG leads, because you're going to switch those when they go on the back as a part of that. And so you want to place protective dressings here, here, scapula, area, and the hip bones.

PIERCE: Yes, and the here and here was the forehead and the chin. Now it's okay, I just want to make sure.

VOLLMAN: sorry, the forehead, chin, scapula area, iliac crests, and you want to take a look how their knees are going to be positioned because you may want to put something depending on if things are lifted, where the pressure is likely going to be as a part of that.

I don't recommend disconnecting IVs because that's a risk for A-lines, any of that, because it's a risk for infection. I am fine with NG tube disconnection, feeding tube disconnection, you know, those things that are simple that aren't going to cause challenges. And then you really want to position your tubes. when I teach this, I talk about cutting the body in half not literally Anything that is inserted. Yeah, anything that's inserted from the belly up goes over the shoulder Anything inserted from the belly down goes at the base of the bed because you're turning somebody in a hundred and eighty degree Over so things will just cross and live with it because as long as they're lined up along the body. Now the only difference to that are what I affectionately call the horse tubes, chest tubes. If your ECMO is running out of the fem or your CRRT is running out of the femoral, then you run it down there. If it's running at the top of the, you know, IJ and the machines at the top of the bed, then you run it that way.

PIERCE: It's a lot to think about when you are prepping your patient to be able to flip.

VOLLMAN: Well, and you also want to make sure that you're performing eye care. And I recommend taping horizontally across the eyelid, not vertically, because if the patient wakes, the eyelashes will scratch the cornea, which you don't want to have happened. Simple things like if they have an ileostomy or a colostomy, you want to empty that before you do that as a part of it. So those are some of the pre-prep activities besides getting the people. And if you're using, which I would recommend that you do, a breathable slide sheet underneath the patient and then on top of the patient so that when you're doing the turning, you're actually creating what they affectionately call a burrito. Did you use the burrito method? How did you guys do it?

PIERCE: Uh-uh, no. We just had a bunch of people at the bedside, and we were flipping them. I mean, as a team, everybody had their limb and you know, it wasn't, I think if we had not had COVID, People may have been more inclined to, you know, do all the right things and figure out what the actual process was. But I feel like in COVID-19, in the middle of it, everybody was just doing the best they could as quickly as they could. So all of the education and things that you're talking about were not necessarily things that were at the top of our list. It was really just; we don't want to lose our lines. We want to make sure that they don't have any type of injury from us moving them and basically flipping them onto their stomachs. There wasn't the education and the training that we probably should have had. It was all just kind of learning by the seat of your pants. Just like all of COVID-19 felt like learning at the bedside by the seat of your pants together as a team, which I think was really great in the fact that it did bring all of us together as a team and we were all trying to work towards the same outcome of saving patients' lives and doing what was best for the patient. But there's so much you're talking about that was not.

VOLLMAN: Well, when you, I know, when you set this up, literally the best thing to do is then slide the patient away from the ventilator because you're going to turn them towards the vent. Makes it easier. So you have the tube back, the ventilator tubing back around the head so that it just lands in the correct spot when you turn them and you tuck the arm under the butt and you actually cross the legs going towards the direction you're turning so you have forward momentum when you're actually doing the turning. And if you're placing pillows or wedges or whatever, yes, you can, if you burrito them, so you literally can place the pillows ahead of time, put the other turn sheet on top.

PIERCE: We had a lot of pillows.

VOLLMAN: and then roll it so it's tight and you flip them like a pancake. And you can also do it with a lift. So there's a wonderful article that goes through all the different methods to safely be able to prune a patient. The author is, and if you need me to send it, here's the, the author is Wiggerman. W-I-G-G-E-R-M-A-N-N, first initial N, and it's in Human Factors, 2020 November.

PIERCE: Okay, now we've talked about the checklist, we've talked about the pre. Now can you walk us through the during, during the prone, you know, what is the recommended amount of time that they're in that prone positioning? How do we monitor them in that prone positioning? What are things we need to be looking at in that prone positioning?

VOLLMAN: So when they're prone, they should be in the swimmer's position. That's one arm up, one arm down. And that swimmer's position should be shifted every two hours. And the recommended time in the prone positioning is 16 hours. I know in COVID, there was long proning. There's a fair amount of consequences associated with long proning, specifically on the pressure injury side of things. Because it's really hard when somebody's, whether they're lying supine or in the prone position, you keep them in the same position for a period of time. I don't care what you do. That extended period of time is going to cause challenges. And I recommend you literally are turning the head every hour. And I don't mean a large turn of the head. I mean you're doing slight shifts in movement so that you're taking pressure off of one particular area and just shifting it a little to relieve it. So it doesn't have to be a big turn.

PIERCE: Now where, where do you normally, I wouldn't say normally, that's not what I mean, but where, when you're looking at pressure injuries from prone positioning, where are you usually seeing those? I would think forehead and cheekbone and.

VOLLMAN: forehead, cheek, and chin because specifically if you're using a foam thing like the OR does where it cements the head in there, it's not good because nobody moves the patient. Nobody moves their head then. It stays in this stationary position for way too long. So I do not recommend the use of those for that reason. A circular where you can shift the head work into a solid block like pillows or a foam wedge where you can again shift things is important. Don't see it as much in the scapula because that's protected pretty well and really don't see it in the iliac crest because a lot of that ultimately shifts when you do the swimmer's position. You also see some depending on if people align their feet well, you know, with the toes dropping. So what I recommend for nurses is that after they've done their turn and got the patient where they think everything should be, then they need to step back and look at those pressure points. And the infographic from the National Pressure Injury Advisory Panel literally has where those points are. So you step back, and you take a look, and you take a look for alignment, because the other injury that takes place that we don't see till later is brachial plexus. If their arm is stretched, and you've got pressure on that nerve, then you're going to have problems. The other is ocular. You want to make sure that the eyelids are down, that you're putting juice in there, Lacri lube or whatever, and that the pressure isn't directly on the eyeball. So there's a lot of nursing, good nursing care associated with reducing the risks. Those are the risks. Pressure injury, well, tube loss, but pressure injury is number one. Brachial plexus, ocular, and tube loss. And tube loss is minimal.

PIERCE: And I was just thinking when you were describing some of the things that we need to continue doing is also oral care. We need to continue with their oral care, even though they're prone, we're not seeing their mouth like, you know, when they're supine. We need to make sure that we're continuing oral care.

VOLLMAN: Yes, because prone supine they're at risk for ventilator associated pneumonia. There were some studies that were done that showed when they were prone, they had less than pneumonia, probably related to drainage and also not the micro aspiration because it's the micro aspiration of the oral microbiome, which converts from gram positive to gram negative within 24 hours of being in an institution. That was one of the reasons why I created the prone positioner, the Volman prone positioner, was to be able to still do nursing care because the circle electric and striker frame, the nurse would have to get on the floor to be able to deliver care in the prone position. And yeah, yeah. So.

PIERCE: Now I see why it took so long for us to start using prone positioning. Now at least we can raise the bed up high enough that we're able to still do nursing care.

VOLLMAN: And provide the nursing care. Yeah, so everything that I do supine, do prone. They can even do defibrillation and CPR in the prone position. That's been studied. And if your listeners are interested, I believe the guidelines for BCLS and ACLS in COVID-19 patients when that came out. was published in 2022. It's the American Heart Association's guidance on how to do it if needed, if you can't get them back, if you're unable to transition.

PIERCE: Great. Now, how can a healthcare team safely implement prone positioning? How do we use our team? Who do we need on our team? And what do we need to use? In a perfect world. Right?

VOLLMAN: Well, in my perfect world, that's where I live and I work really hard to get everybody else to hang out in my perfect world, my perfect world, ICUs would have a multidisciplinary quality committee or practice improvement committee that would have all the disciplines present. It would have the medical director, it would have the manager, it would have the clinical nurse specialist, the educator, it would have respiratory therapy representation, it would have pharmacy representation, physical therapy, so the entire team, and that's where protocol should be built because it's every discipline participating in making sure the right thing happens for the patient. So you get that on paper, and then as a team, you figure out how you're going to do the education. And then from there, how am I going to put that education into orientation for both physicians, respiratory therapists, and nurses? Because those are your main people on the team.

How am I going to put it into their routine education? And I would also recommend that this go in your yearly skill. If you're not doing it frequent enough, I would recommend you put it in your yearly skill.

PIERCE: So what I hear you say is that this should not fall solely on the shoulders of the nurse.

VOLLMAN: No, no, it's a partnership. Now, in that perfect world, the nurse may be the nurse, or the respiratory therapist may be the first one to suggest it on the patient. If they're evaluating those PF ratios and they know their patient's got ARDS and all the other stuff in rounds, hey, it's time to prone. Or if you have an ARDS protocol that literally lays out the science so that you know when the time is to recommend it. And that is really how it should be done so that we deliver all the evidence-based care to the ARDS patient.

PIERCE: we have a rapid response team, in essence we could have a prone positioning team as well so that when the decision is made and we need to prone someone, then we're able to call that team, those members of that team to come help with transitioning this patient into a prone position.

VOLLMAN: Well, I'm of the mind that everybody needs to know how to do this. That I don't necessarily need a special prone team, because how am I going to do that on midnights? How am I going to... everybody, yes, everybody owns, yes. The docs there, the nurses, yes. Yes, yeah.

PIERCE: No, just need respiratory therapy comes up and they're assisting the physician is there and in helping Yes, so that you know that you have everybody on that that needs to be there

VOLLMAN: And you can do that with a checklist as well. One of my colleagues, Maureen Seckel, with her colleague published a really good article on how they did that, how they implemented their process, their multidisciplinary process or interdisciplinary, and how they had a checklist to make sure.

All the right people were there as a part of it. Because on average, one out of every 10 patients in an ICU will develop ARDS. That's the global data. So if that's happening, then if we're doing it correctly, we need to be ready. Yes, you're absolutely correct.

PIERCE: We need to be ready. Now, how has the use of prone positioning really evolved, you know, going with the COVID-19 pandemic and what lesson, did we learn any lessons through the COVID-19 pandemic where people or I guess units really started to lean into prone positioning?

VOLLMAN: Well, one, and hopefully after the survival component of COVID, that they built interdisciplinary protocols and they actually train them correctly on the process. Cause you really don't need more than five people. I mean, when you get up, on significant weight and if you have ceiling lifts, yeah, well no, if you have ceiling lifts, you can literally do it by a ceiling lift. So there's a process that article that I mentioned has the process for the ceiling lift. So that's part of it. But as I said to you, I was so excited to see in that audience, 80 % of the staff raising their hand that proning is part of the ARDS care. It came out again when the guidelines were updated in Europe in 2023 as a strong recommendation that it be a frontline therapy. So the science is there. now have an AACN's procedure manual. I was author on that. The updated one is in there. So the burrito method is in there. So you don't have to reinvent the wheel. You can take that evidence-based protocol, bring it to your multidisciplinary or interdisciplinary group and say, if we don't have one, here it is. Let's use this to start with and make any changes as we need to.

PIERCE: Right. Now when it comes to potential complications, I know we talked about skin injuries, but what other complications should we be aware of with prone positioning besides skin breakdown?

VOLLMAN: Well, you also have, I mentioned the brachial plexus. So how you do the swimmer's position is really important. That you don't move the arm up too much, too high above the head so that you're creating pressure challenges on the brachial plexus. The ocular we talked about. The other is at the ankle because normally the foot should hang. And so how you position the knees and the shins. And if the person's tall enough, the feet can actually go off the bed, you know, in a correct alignment position. But we need to be mindful of that because 16 hours in that position, contractures can start.

PIERCE: That's a long time to be out of alignment.

VOLLMAN: Yeah, so that's another area. And then we talked about the lines. I would say more than loss of endotracheal tube, endotracheal tube obstruction. In other words, because it's you know, and not in good alignment, that is probably more of an issue because one of the things that we specifically recommend in the protocol is that the respiratory therapist's hands are actually on the endotracheal tube and they don't leave it until there's an all clear.

PIERCE: Right. This patient is where they need to be. We've got them in correct alignment. Now we can move forward with making sure that the ET tube is where it needs to be and that it is in place, locked in place.

VOLLMAN: And because of the 16 hours, one of my colleagues, and I recommend this as well, is they actually run the proning at night. So they turn them around four o'clock and when there's still enough resources around and they make sure the patient is tolerating it and all of that. And then they'll turn them back around nine so that they can get chest x-rays at nine in next morning. More resources.

PIERCE: Right. That's what I was going to say. Your resources are back. They're there. That's very smart. It does. Absolutely. And that was going to be one of my other questions is that interdisciplinary collaboration and how it plays a part in that successful implementation of prone positioning. And I love what you just recommended about doing it so that, it goes overnight for ease of monitoring.

VOLLMAN: Yeah, yeah, and it makes sense. It makes total sense. Yeah.

PIERCE: but also using your tools, knowing, doing this at a time when you know you're going to have the resources that you need to be able to do this successfully.

VOLLMAN: Yes, because your greater number of physicians are there, greater number of respiratory therapists. You also have nursing leadership if they need to jump in, depending on how busy, yes, depending on how busy the unit is. So it's just like the A through F bundle.

PIERCE: Right? So you have more nurses that can jump in and help.

VOLLMAN: For the listeners, the ICU liberation bundle, management of pain, spontaneous awakening, breathing, choice of sedation, delirium management, early mobility and family. How you have that sequenced as standard of care, this should be as well.

PIERCE: Right. Now, when it comes to, I know earlier we talked about education of even the patient as well as the family. What are some of the best ways you have found in your practice as far as being able to appropriately educate the families? Because it is kind of scary to walk in and see your loved one in this pruning position. What's the best way to educate them and make sure that they're prepared and ready?

VOLLMAN: Well, one, I try to do it before it actually happens. If that's possible. Secondly, surprisingly, a lot of people are getting online, and you know looking it up and seeing pictures. For me I share with them at first I ask you know is your if the patient's not awake if they're sedated I'll ask the family is your loved one a belly sleeper or a back sleeper and then I'll explain why we're turning them on the belly that it's going to open up their lung sacs to make it easier for them to breathe and have less lung injury. And so the sciences told us that this makes a big difference and that's why we're doing it. And we're going to do everything to prevent any kind of injury taking place while we're doing it and keep your loved one as comfortable as possible.

PIERCE: There's a lot of medical terminology in why we do this and what this does for the body and so my advice would be just to make sure that you're speaking and your what you're saying is in a way that they can understand it So that there it's Right. Yeah. Yeah. Yes, like prone versus supine, lungs, helping your lungs be able to breathe versus, you know, the all the terminology and going into those details, helping the lungs be able to expand so that they can take in more oxygen and oxygenate their body. But I do I think that's so important to make sure that we are speaking in a way that the audience that we're talking to, the family that we're talking to can really take it in. Also, it's a really stressful time. If we're having to do this for a patient, then this is very, right, yes, they are very sick. This is moving into that life-or-death situation. And so a lot of times they have trouble taking that information in at that time.

VOLLMAN: Yeah, you know they're sick. So you've got to repeat it multiple times as well. It's not a one and done because of that anxiety. Right.

PIERCE: Right, yes. Right. They're not processing it as quickly as you they might process things. I know and it's so hard because a lot of times you're like I don't understand I've told them 15 different times. What are they not understanding? Right, you just keep telling them because they are having trouble processing. They're trying to process the fact that their loved one could pass away and now I'm giving them all of this information. They're trying to process that. So patience I think is so important.

VOLLMAN: You just tell them all the time because they're not hearing it. Yep.

PIERCE: When it comes to educating family members.

VOLLMAN: Well, you're probably familiar, Candace, with the research on how much you don't hear if you're anxious. Yeah. It's just like you go into a doctor's office and, you know, you get a diagnosis and then they start talking about the plan and it's like,

PIERCE: And you're like, huh? What? I don't understand. You're talking to me, but it's like, it's in a different language. Yes. It's Charlie Brown's teacher. Yes. And that's, that's exactly what's happening. And we need to remember that, as, you know, healthcare providers, what that family is going through, because even though we have the knowledge, we could be in their shoes one day and we hear Charlie Brown's teacher too. And you have the knowledge, but you're like, I can't process what you're saying to me. mm-hmm. Now, what are the challenges that you're seeing of integrating prone positioning into routine clinical practice?

VOLLMAN: Well, just the willingness, because it does take effort. No, and so, routinizing it as much as possible, that this is the way we provide the care, like the A through F bundle, routinizing it. Get yourself an ARDS protocol, where everybody knows that once we've reached the peep that we're going to,

PIERCE: It's not something we've always done.

VOLLMAN: and they're sinking with the vent and we're still having oxygenation problems; it's time to prone. So it just becomes the new routine. And that takes a bit to get there, but it's doable. And the fact that it's a non-invasive therapy that I can treat six people with and save a life. That's why we went into this and then use some of the new tools. Some of those turn and position systems actually have air that make it even easier to move. So from a safe patient handling perspective, the patient's safe, you're safe, it's easier to do. So some of that innovation helps.

PIERCE: That was my next question. What technology is out there? What innovation is out there to enhance their effectiveness but also the safety of being able to put them into the prone position?

VOLLMAN: So there are prone beds and the challenge for me is they have to be put into the prone bed. And I recommend clearly using those for people with head and unstable spine or spine issues that develop ARDS. It's very effective, safe strategy in terms of routine ARDS patients, think utilizing either a lift system or the turn in position, not just sheets. Make it easy on yourself. A lot of places

are adopting that to reduce shear and friction of the skin. So it's not just an easy, it actually is helpful for the patient's skin in preventing shear and friction as well as safe patient handling for you when they're supine or when they're prone. So those are the things that I really, and we did recommend that in the proning procedure in the AACN because we don't have to, when there's innovation, use it.

PIERCE: Absolutely. You're right. If there was a healthcare provider in a hospital who is not currently using prone positioning, what advice would you have for them if they wanted to try to be the champion to get this procedure in their facility?

VOLLMAN: Well, I would definitely say listen to the podcast. I also probably have a prone positioning presentation on my website because if I give that talk, I then put the handout. So you would have that handout. It's just Vollman.com that you could get the references. And then if you're a staff nurse, I would take it to my educator or my nurse manager. and ask them to advocate to meet with respiratory physicians to talk about this practice. That's, well, and literally that's exactly what I did in 1982.

PIERCE: How did you handle the pushback?

VOLLMAN: interesting enough, there were a group of us, we did it on the night shift. There were a group of us and there were residents, and fellows. So they were fairly easy to convince. and we flipped them and then we showed them the data, and they were like, my heavens, really? That's all you did was turn them on their belly and this is what their oxygenation is now. And so that helped. That concept, what I discovered as a nurse, I found even though there's a ton of research out there supporting a practice, if I viscerally experience it, if I turn somebody and I literally see the benefit,

I'm going to be an advocate. So all it takes is a couple of people to say, hey, let's try this to begin to change the culture.

PIERCE: Just out of curiosity, do know if there's any research on using prone positioning for patients who are not as critically ill as our ARDS patients, but those who are struggling with some respiratory distress and issues?

VOLLMAN: There were two small studies done in the 2014 and 15 that hinted that it may help. We do know it does delay or reduce intubation in COVID, awake proning does in COVID, but we don't have enough studies to recommend it for a therapy outside of a COVID lung.

PIERCE: Gotcha. All right. Well, Kathleen, as we conclude this episode, is there anything you want to recap or anything maybe we didn't touch on that you just want to make sure is shared?

VOLLMAN: I for me it's just the final statement. Take the chance. You can save a life. Prone them.

PIERCE: Prone them.

VOLLMAN: And if you need help, you can get a hold of me.

PIERCE: I love how you said just prone them. If you don't know it just prone them. Well to just do a quick recap, prone positioning has proven to be a powerful tool in improving oxygenation and

reducing mortality rates in patients with respiratory conditions like ARDS and COVID. And we need to understand the principles behind why it works and implementing the best practices because we do play a huge role in techniques such as this that really enhance patient outcomes and recovery. And we can lead the way in getting these techniques to the bedside and to our patients. But we also need to remember that prone positioning is not just a technique. It is a collaborative effort that requires careful monitoring and interdisciplinary teamwork. And as we see this technique continuing to be integrated into more clinical settings, it's going to be very important to stay informed about the latest research and innovations to optimize its effectiveness.

VOLLMAN: And have them think, Candace, have them think of it as a treatment, because it is a treatment.

PIERCE: Yes. Kathleen, thank you so much for joining me for this discussion and for sharing so much insight into the why behind this intervention.

VOLLMAN: It was fun. Thanks, Candace.

PIERCE: Such a pleasure to have you. To our listeners, thank you for joining us and I encourage you to explore many of the courses that we have available on [EliteLearning.com](https://www.EliteLearning.com) to help you continue to grow in your careers and earn CEs.