Bob St. Peter: Hello, I'm Bob St. Peter. I'm a pediatrician and the former president of the Kansas Health Institute. Today is April 10th, 2026, and I'm here to interview Cindy Hornberger. Cindy is a nurse, an educator, an academic administrator, and also a master gardener. Thank you for joining us today.

Cindy Hornberger: You're welcome.

BSP: This interview is part of the Kansas Oral History Project, exploring health issues in Kansas. The Kansas Oral History Project is a nonprofit organization that conducts and preserves interviews of histories of Kansans. This series is supported by donations from generous individuals and a grant from the United Methodist Health Ministry Fund. Our videographer is Dave Heinemann, former Kansas State representative. Cindy, thanks again for being here.

CH: Glad to be here.

BSP: I'm looking forward to our conversation. Tell me a little bit about yourself and your background and your early start of getting to where you are.

CH: Right. I want to start with it's a pleasure to be with you as well.

BSP: Thank you.

CH: I am a lifelong Kansan. I moved here when I was three months old, and I grew up in Lawrence. My adult life, I've had a career in which I've been helping Kansans with their health and their education. When I was in college at KU, I was interested in infant and child development, and I actually worked in an infant research lab for four years as a work study student.

BSP: Near and dear to my heart as a pediatrician.

CH: Yes. But when my grandfather got sick when I was a senior in college, he went to a very early version of a cardiac care unit at Bethany Hospital in Kansas City, and I was very impressed with the nurses and what they did. So, when I finished that degree, I went straight over to Washburn, and I began my nursing degree. It took me two-and-a-half years, and I was mentored by someone who's still very near and dear to my heart. That's Dr. Alice Adam Young.

My first ten years in my career, I worked as an ER nurse. I would say that was really one of the most rewarding and challenging times of my career. I learned so much. But I will say after ten years, I was pretty frustrated. I was so aware of the inequities and the disparity of care, and all the people that had to come to the ER to receive care. So, I decided to go back to graduate school.

I started with a master's in nursing, and then I decided I had to get an MBA. Then I eventually went on and got a PhD in nursing research, all of these things really to help me develop my skills and abilities as a nurse leader to make systems level change. But the surprise in my career was

 

that I got an opportunity to apply for a position at Washburn University. That was my alma mater.

I went for my interview. My interviewees were all my former teachers, which was very unsettling. About three days later, they offered me the job. So, in 1989, I went to Washburn to start teaching, and I continue to teach there. So, this is my 37th year being associated with Washburn University.

Over the years, I became a professor and dean of the school. There are some things that I did in those years that I was very proud of. First, I developed our graduate programs. We first developed master's programs and then a Doctor of Nursing Practice (DNP) degree.

BSP: You didn't have the master's program? Wow, I assumed it had always been there.

CH: No. Those were evolutions. Then I also co-wrote a grant, a United States grant that was a FIPSE grant we called the TransAtlantic dual degree (TADD) program where we developed dual degree programs with universities in Finland, Hungary, and Northern Ireland. We were really studying how we could equalize, globalize nursing education so nurses educated in the United States could work in other countries. It was a really, really positive experience.

BSP: I want to ask one thing about that. You said nurses educated in the US to go work in other countries. I know recently from conversations we've had in outside business that now we're looking for nurses trained in other countries to come to the US.

CH: That's correct.

BSP: That's an interesting change.

CH: And the countries we choose are countries that developed nursing education in what I call the United States model. There's two primary models, the United States model and what I call the UK model, which is still more of an apprenticeship model with much more clinical hour requirements than what we require in the US. It's very interesting to study. It was a very positive experience for all of the students involved.

BSP: What years was this? That was a while ago.

CH: This was about 2010 to about 2016.

BSP: So, not as long as I was thinking. Sorry, go ahead.

CH: My last fulltime job at Washburn was I was special assistant to the president. There I had a totally different set of responsibilities. I had university relations, alumnae relations, and strategic analysis and reporting, different hats for me. One other thing I did while I was in that role was I developed the Leadership Institute for staff and faculty. We had 125 graduates of that program in the years that I was in that position.

 

Now, I'm retired. I still teach just a little bit. I co-chair doctoral students' final projects. I'm also currently serving as president of the board of directors at Stormont Vail Health, and recently as part of that responsibility set, I've joined the Region 6 Policy Committee for the American Hospital Association. I'm excited about that, to learn about national trends.

BSP: It's interesting to me for people who have the intellectual curiosity and the leadership capacity that you do. You have your primary career in nursing, but you find yourself doing a lot of other things in leadership and administration and those sorts of things. Certainly that has been a part of your career for a long time.

CH: It is, and it may be a thread of today's conversation. As a baccalaureate graduate, I was prepared as a professional nurse who was comfortable with leadership. I'll speak to that a few more times today.

BSP: Yes, this whole concept of nursing and medicine becoming a team sport and the role of the nurses—yes, I look forward to getting into some of those things. That's great.

You touched on a lot of your different stops along the way. Tell me a little bit just for the average person listening to this, what kind of training and education does a nurse go through in terms of classroom exposure—you mentioned before the UK model. Maybe it had more apprenticeship types. Tell me a little bit about how a nurse becomes a nurse.

CH: This was one of the most interesting questions you were proposing to me because it's complicated. My educational path was five degrees over twenty-seven years. While that may sound very odd, interestingly, it wasn't atypical for my generation of nurses. We often got our basic education, went to work, and then many years later, in my case ten years later, go back for graduate degrees. So, that always required us to work full time and go to school often full time. It was really a very challenging thing to do.

But now, training for nursing is initially—it can be in different steps. We call it a multi-step process. Nursing is licensed at several levels—practical, registered, and advanced. The practical nursing program is usually twelve to eighteen months. Registered nursing education, there's actually two pathways now for licensure: the associate degree, which is two to three years, and the baccalaureate degree, which is four years. In 2025, I looked this up, 53.7 percent of registered nurses in Kansas entered the field after completing a baccalaureate degree. So, it is still true that the majority of registered nurses have a baccalaureate degree.

Both of those pre-baccalaureate degrees, both practical and registered nursing, require them to graduate from an accredited program and pass the national exam. We call it NCLEX. So, practical nurses take the PN version, and registered nurses take the RN version. And in all pathways, nurses take some basic courses in arts and sciences, obviously less in the PN. English, for example, would be a basic requirement because we do a lot of communication. Basic sciences are required.

And then there is focused core work and course work in nursing, and then a lot of hands-on and simulated clinical experiences for all of those degrees. Generally, we take a course that focuses

on a particular age period like pediatrics, and we take didactic coursework, and then we have clinicals to reinforce the knowledge and the skills required to do that work.

BSP: Obviously a very complex, extensive set of educational experiences and the licensing you were talking about. Tell me a little bit about the clinical training, clinical exposure that you get as a nursing student, and when does that begin?

CH: From the very beginning. In fact really, quite honestly, nurses were seen historically as handmaidens, and their entire focus was clinical work. We really spent our time—hospitals were the first places we had practical programs for nurses, and it was skills based. So, that's always been a key component. It's hundreds and hundreds of hours sometimes spent in clinical settings.

BSP: You mentioned this UK model. I'm intrigued by that. You do a contrast and said the UK model seemed to be more of an apprenticeship but maybe more clinical experience?

CH: Absolutely. Two to three times the amount of clinical time.

BSP: Less didactic, less classroom time, I'm assuming.

CH: Historically, and I haven't spoken about this yet, but our history is diploma programs for our preparation, which were hospital based and highly clinically focused. Nursing students often lived on site in a dormitory. They had strict rules about where they could be, etc., when they could be home. They could not be married. They had to live these very austere lives as they trained to become nurses, and they spent many, many, many hours in the hospital. I was going to say that later, but I'll say it now, and that is when I started nursing school in 1976, it still was the most common pathway to get a diploma, a three-year diploma, hospital based, to get your required nursing education to be able to sit for your examination.

BSP: I know a lot of hospitals continue to have nursing education programs. Do they actually offer the certification, the degrees, or do they have to be in partnership with the university?

CH: They have to be in partnership with the university.

BSP: Did that change?

CH: Yes, there are fewer and fewer hospital-based programs. Diploma programs are no longer an acceptable pathway to get the preparatory training to be a nurse.

BSP: So, it's evolved more towards—

CH: Affiliation with some type of educational institution. I do want to speak about much more recently nurses have extended their education to receive advanced degrees that specialize them into a wide variety of trainings—midwifery and anesthesia being the classic ones, nurse practitioner, but clinical research, leadership, clinical informatics, geriatrics, and clinical nurse leader are some of the areas that people can specialize in. And as of 2015, that requires a Doctor of Nursing practice degree, which is a five-year post-baccalaureate education..

BSP: So, after college.

CH: That's right. After college. And this educational pathway matches those of other post-baccalaureate practice doctorates such as the MD or the JD or the PharmD.

BSP: Yes.

CH: It puts us on par with peers in the health care team.

BSP: How many of the nurses if you're in the hospital and thinking of all the nurses that are working in hospital, how many of them have that higher level of training versus maybe in an academic setting where I'm guessing it's more common?

CH: How many nurses have that?

BSP: Do most nurses that are working on the hospital wards have that kind of training?

CH: No.

BSP: That's more in the—

CH: Generally, it would be common to have several nurse practitioners working in the hospital, not generally true that there would be one per unit, but there would be more than one in the hospital. Where most advanced practice nurse practitioners work is in the clinic setting, not in the hospital. So, the question is a little bit complicated, and you need to understand the context of that. Later I will tell you that we have about 9,200 advanced practice nurses in Kansas right now as compared to about 9,000 LPNs and 54,000 or so registered nurses. So, it gives you a sense of how many we have.

BSP: Tell me from thinking of the clinical nurses, the nurses working with patients in the clinic and at the bedside, what do you think is the characteristic that makes someone successful in their role as a nurse?

CH: There was a study done now twenty years ago when they asked what the core values of nursing are, and those are caring and competency. So, a really good nurse at the clinical setting has empathy and strong communication skills. They were also highly competent. They attend to detail. They're efficient. They manage time well, but they manage systems well. I'll speak quite a bit about the value of care coordination of the nurse.

BSP: Good. You mentioned the sort of trend towards specialization more focused training.

CH: At the advanced level.

BSP: At the advanced level. That parallels in many ways maybe what's happened in medicine also.

 

CH: Yes.

BSP: Where this hyper specialization tends to be taking place just as the knowledge base and the scientific tools, technology becomes more advanced and more specialized.

CH: Yes and no. The majority of advanced practice nurses are nurse practitioners who traditionally follow a general practice model. Think of nurse practitioners as most often focused in primary care. So, that is a specialty, but it is a general specialty. You don't see as many nurse practitioners going into neurology, for example. They really do focus on whole systems, whole families is where you'll see the most advanced practice. Clearly, there's midwives and nurse anesthetists and those types of things, too, but the majority of them really are working as nurse practitioners.

BSP: One of the big questions that comes up all the time across the street in the legislature is that issue of "How do we meet the need for primary care providers in our state?" particularly in rural parts of our state. Maybe you can jump in a little bit now. What is the role of nurses and nurse practitioners in particular in meeting that need?

CH: I see nurse practitioners as a critical component of the health care team. I would want to say now and I'll say again later, they understand very clearly their scope of practice. There's been much research done to say they do that safely and reliably. I think they're a critical factor in delivering care in rural settings.

BSP: And the numbers you mention are interesting—9,000 and some, I think you said, advanced practice nurses in the state.

CH: Yes.

BSP: That's a significant amount of primary care horsepower there.

CH: And that's largely happened in the last fifteen years.

BSP: Wow, okay. Are there any significant things, thinking back on nursing education in the state, that have changed over the last fifty or one hundred years or so, really important changes?

CH: What do you think?

BSP: I'm guessing there's been a few.

CH: Yes.

CH: I was reflecting. I've been a nurse forty-seven years. How can that be? But when I began nursing school, as I said before, nurses were mostly trained in diploma programs. When I told my family I was going to a baccalaureate nursing program, I had to explain over and over what that was because that wasn't typical. These diploma programs, as I said before, were styled similarly to programs in the UK where nurses were trained through apprenticeship-style

programs that emphasized long hours in the clinical setting and less emphasis on arts and sciences. When I chose Washburn University, I basically went in for an interview with Dr. Alice Young, and I didn't know much about a baccalaureate program. By the time I walked out, I said, "I'm going to go to school here."

We were taught, as I said, to be professional nurses, that we were well versed in arts and sciences. We understood what we did, and we were also really very well trained as leaders. And the other thing I think that will resonate with you is that we had a strong grounding in public health.

BSP: Yes.

CH: Which really was the hallmark in the baccalaureate education was this emphasis. One of our first awards that we gave to graduate students was the Alice Jensen Award. He was the director of Public Health here in Shawnee County.

But since then, nursing education has had a lot of challenges. As the profession grew in knowledge and abilities, our salaries increased, and so therefore, pressure mounted for us to do more with less. We had a lot of MBAs come to the hospitals in the eighties and nineties, telling us that we needed to change our models of care.

And now education is very expensive. Many students are choosing shorter pathways, and educational institutions are condensing education in my opinion too far to make it cheaper and more attractive to more potential candidates. And then it just takes a lot of commitment and sacrifice to get to those advanced levels because, as I mentioned before, they're often working full time, raising a family, and trying to go to school.

BSP: Yes.

CH: So, at the same time the entry to go into nursing practice changed, there's been a big growth, which we've already talked about, in advanced practice nursing. The medical and health care of a large health care system is now often equally provided by physicians and advanced practice nurses, and we know that to be true. That includes both physician assistants and advanced practice nurses. I think this is going to continue and really accelerate as we augment care with AI.

BSP: I want to get into talking about AI more. We can talk about it a little bit later.

CH: As you know, I'm very interested in that. There is currently forty-five nursing programs in Kansas. I looked it up to see how many we had, and there is also an excellent document that was developed by the University of Kansas. They did Volume 1 and 2. It's called *"The State of Nursing Work Force in Kansas: Work Force Trends 2015-2025"* and they exhaustively look at the issue of nursing education and nurses.

BSP: How are we going to do? Are we going to be able to meet the demand for nurses in Kansas?

CH: It's still a question, very much so.

BSP: I hear it talked about all the time.

CH: I have some bad news for you, but I'm not going to tell it to you yet.

BSP: Okay. So, we're sitting just inside the building here, and outside is the statue of Samuel Crumbine who was a big figure in public health and health in Kansas in the late 1800s, early 1900s. He really built his reputation around this concept of public health and education and surrounded himself with a lot of nurses who were doing public health. When most people think of nurses, they probably think of somebody at the bedside, or they see at the clinic. But there's a whole other realm of nursing, this area of public health nursing. Tell me a little bit about that and why it's important.

CH: Well, can I start somewhere just a little bit earlier?

BSP: Sure.

CH: I want to tell you because I found this interesting to study the history of health care and nursing in Kansas. I want to credit a resource that I found that I have had possession of in the past. It's called "Lamps on the Prairie: [A History of Nursing in Kansas]". It was published in 1942 by the Kansas State Nurses Association, and it's a 300-page description of the origins of nursing in Kansas. I'm grateful to have found this.

But before I talk about Kansas territory, I want to just mention that the first hospital was developed in 1752 by Benjamin Franklin.

BSP: The hospital at the University of Pennsylvania.

CH: He basically convinced the legislature to fund the hospital. Yes, you would probably know this. But medical reform didn't begin in the US until more than a century later in the 1890s.

So, as the Kansas territory was engaged in the pre-Civil War skirmishes right here, the women served as nurses as they had to care for in their homes the people that were injured and dying. This was the protocol. But at the same time that this was happening here in Kansas, Florence Nightengale was an English noblewoman who wanted to do something, and she decided to serve in the Crimean War. She classically is identified as the mother of modern nursing. That's 1851.

Then we have our Civil War, which accelerated the need for care, as war always does. Innovation always comes through those types of events, and it provided educated women the opportunity to serve. So, what happened was these educated women worked in the Civil War, and then they had a hunger to continue that work that they had the opportunity to do after the war.

At the same time, Florence Nightengale's principles were accepted in the US, and the first school of nursing was established in 1872 at Bellevue Hospital in New York City. It's all happening at about the same time.

Then as far as Kansas, the beginnings of early nursing in Kansas, I didn't find a lot, but I do appreciate that we had waves of adventurers that came through Kansas, and they brought with them in the 19th century disease waves: cholera, smallpox, malaria, measles, and these groups often like [Zebulon] Pike group, often brought a physician, and nursing care was provided by the existing missionaries or the women present on the trip. And a lot of times, the treatments were borrowed from the indigenous tribes in the area. It's very fascinating.

As settlements became established, one or two women in any community became the practical nurse. She was a smart person who had more insight about how to treat disease, and she became the nurse of the community. One of those that's well documented is a gal named Mary Stuart, and she lived near Fort Leavenworth. As it turns out, the first hospital that we had in Kansas was at Fort Leavenworth. The second was at Fort Scott, and the third was at Fort Riley. So, it was the military outposts that established to care for the injured folk and their population.

The first nursing school in Kansas was Axtell Hospital, Axtell, Kansas, and the suitable candidates were trained by Dr. Axtell, and it happened in 1888. Others that followed were St. John's in Leavenworth and Grace Hospital in Hutchinson. But interestingly, Jane C. Stormont right here opened its nursing training in 1895, and KU didn't open theirs until 1906.

BSP: Wow.

CH: So, those are just some contexts. I do want to say that this background set context for the question of Samuel Crumbine, I want to tell you that we believe the most famous public health nurse was Lillian Wald, and she started in 1893, the Henry Street Visiting Nurses Society in New York City.

And as you've mentioned and clearly admire, Samuel Crumbine is well known in Kansas for eradicating the public drinking cup, and he also combated several really bad epidemics in that first decade of the 20th century. In 1904, he was combating tuberculosis.

BSP: "Don't spit on the sidewalk."

CH: And "Don't spit on the sidewalk." Yes.

BSP: TB isn't spread by spitting.

CH: Yes, I almost put that in here, but I stuck to the drinking cup. But he got advice from Lillian Wald. He combined the efforts from the Topeka Anti-Tuberculosis Association with the newly formed Kansas branch of the American Red Cross to provide visiting nursing services to fight disease in rural areas. So, that's my nurse story with Samuel Crumbine, a very famous nurse.

 

BSP: Crumbine was originally in rural parts of the state, out in the Dodge City area, around there before he got recruited to come to Topeka and start the Department of Health.

CH: That's right.

BSP: You mentioned a lot of the infectious disease issues that were being addressed at the time that Crumbine was very big on. A large part of that was educating the public about what the risks were, how you could prevent things. My understanding is he engaged and relied heavily on public health nurses at that time to do that work.

CH: Historically, nurses were hired by wealthy families. Before we had nursing programs, we had people called nurses that were hired by wealthy families, and they took care of individuals within the home. And then this construct of community nursing, which became public health nursing, was this idea that we could impact systems of care with Lillian Wald providing that first Henry Street opportunity.

So, public health nursing historically was always part of nursing. It was later into the 20th century that hospitals saw nurses as a ready source of manpower to care for the ill in their institutions, and it changed the focus of nursing for a period of time.

BSP: While we're on this concept of community health and thinking about groups of people, can we switch gears a little bit?

CH: Yes.

BSP: One of the things that we're exploring in this series is the fact that the ranking of Kansas compared to other states in terms of a broad set of measures of how healthy we are, Kansas has slipped quite a bit. Back in 1991, we hit a high point of being ranked the 8th healthiest state in the country. We fell to a low point of 31st just a couple of years ago.

CH: I know.

BSP: 31st in 2022. We've crept up a couple of spots now. The last ranking, we were at 27 in 2025. From your perspective of being a nurse and a leader and an educator, how do you think about how that has happened. How has a state like Kansas fallen farther than any other state in the country in terms of relative health ranking? What are the things you think about when you hear that?

CH: I'm going to preface this with this would be my opinion because I do not have access currently to precision data, and I would prefer to have a databased answer here, but I don't have that data. My feeling is Kansas lacks from access to services to prevent, monitor, and treat illness. Lack of access is a broad term. It's a very complex topic. It has financial—it certainly has political. It has inequity, social determinants. Another cause of lack of access is a shortage of health care professionals.

BSP: Yes.

CH: I have mentioned—this is a paragraph out of this document that I said—it says the number of registered nurses and licensed practical nurses in Kansas has declined since 2019. This does not account for all this drop. The number of RNs dropped 9.6 percent from 2019 to 2025, while the LPNs dropped 12.7 percent in that same time period. The decline in the number of licensers is likely related to an aging work force as well as the precipitous drop we saw with the COVID pandemic.

BSP: Yes.

CH: One thing is the manpower, a manpower issue. Another is the lack of trust in our healthcare systems. We are getting so much conflicting messaging about public health issues, and it's just tragic to have that happen. Much has been done, rightly or wrongly, to disparage elements of health care, and examples would be the insurance and pharmaceutical industries. No one trusts what they hear from those.

Public health in general gets a bad rap. Especially it took a strong hit during the COVID epidemic. Bless their hearts, they did a yeoman's work during those years, and yet they got disparaged.

BSP: Yes. You've been involved in national organizations. You've seen how other states operate. Are there anything in particular that you think makes Kansas stand out that could maybe be an insight into why we're not keeping up and doing as well, making as many gains as other states in how healthy we are in these broad measures that are in this report?

CH: A couple of things. Public health education is not emphasized as strongly now in the nursing curriculum as it was when I went through school. Secondly, in Kansas, we have political ramifications to health care. In every political season, there are priorities and things that are not. I feel so strongly that we do not emphasize the health and well-being of infants and children, for example, as we should. I don't think Kansas is unique in that, but I feel that very strongly that particularly for people who are socioeconomically challenged, it's very difficult at times to access the care that is needed.

BSP: Yes. I love those two points that you hit on, the access issue, and for states with our geography and population distribution, it's a challenge in some areas more than others, but also it varies by socioeconomic status in your ability to pay and get insurance. We're one of the few states, just a handful of states left in the country that hasn't expanded Medicaid yet.

CH: Correct.

BSP: And then the other thing you brought up is sort of our lack of emphasis on public health and public health education. I agree. I think when you look at these kinds of metrics that are very broad-based measures of how healthy we are as a society; it really is often related to those two issues that you talked about.

CH: One of my other foci in my career was quality improvement. Obviously, if you live in health care, you become well versed in that. But what that trains you to do is to think more about

systems of care created here instead of people. I still see us do a lot of finger pointing on people not doing what they need to do, but I encourage others to think about what is not working in the system of delivery of services.

My PhD dissertation was on heart failure readmission rates, which was a huge issue in 1997, and it still is. I brought that up to the board. Some of these things are really resistant to improvement.

BSP: Yes.

CH: But the ones that break my heart are the ones related to infants and children.

BSP: Yes. You mentioned in those comments that period of time from 2019 to the current time and the drop in the number of nurses at different licensing levels in Kansas. Obviously, that was the point in time that COVID, the pandemic, hit. Step aside from those statistics and those dry numbers about the numbers. Tell me about what was it like for frontline nurses during that pandemic. You and I both served on the board of a hospital here in Topeka. We heard the stories. We saw the examples. Tell me again from your perspective as a nurse, what was that time like for nurses in our state?

CH: Terrifying. Exhausting. Emotionally and physically challenging work to come in every day and just watch people struggle to breathe and make hard decisions in families that now is the time to stop attempting to save them. It was physically demanding because nurses worked extra shifts. They worked long days. They were in head-to-toe PPE.

BSP: PPE [Personal Protective Equipment] being all the garb, the masks, the gowns, all that.

CH: Yes, all the steps to get in and out of spaces. And then all of the decisions that those nurses had to make in terms of exposure for their families. I know many families who lived separately during that time. The nurse lived one place, and the family lived another place. It's just all of that personal crisis that was going on in that time, questioning whether they had the stamina and the ability, the empathy to continue doing that work.

BSP: It was one of these feedback loops because, of course, people that were providing care got sick. So, the number of available nurses went down.

CH: Absolutely, it was real.

BSP: At the same time that the number of patients needing care was going up and the intensity of the care they needed was going up. It really was a very negative feedback loop on the capacity of the system.

CH: Absolutely.

BSP: Everybody in the health care system was affected by that. But I think that the most dramatic impact to me seemed to be on those nurses that were sitting at the bedside.

CH: And hospitalists.

BSP: Walking the halls, working with those patients on an hour-by-hour basis. I didn't do the math, but it sounds like the number of nurses went down 10 to 15 percent.

CH: Ten percent for RNs and about 13 percents for LPNs.

BSP: Over a five-year period of time.

CH: Yes, it was dramatic.

BSP: That is added to what we already knew about the shortage of nurses and other health care providers in our state. That's significant.

CH: I think the sort of PTSD effects of that is, I mean, they're proud of the work they did. They hope they never have to experience that again, but there was a camaraderie that got established in that time frame, and I do have friends that talk about that just like you would talk about your time in war, a very similar type of experience for them.

It was very, very, very difficult, and for schools of nursing, they had interesting challenges, too. We were very challenged to have clinicals. There was limited ways we could provide clinicals because in the early months before vaccines, we really weren't meeting that much with the students. It was a very difficult time to educate a nurse as well.

BSP: My understanding is that a lot of the students were kept off the wards during that period of time.

CH: Some hospitals really did just basically shut down the clinicals. Local hospitals did not do that. They allowed the clinicals to happen to their credit but assumed a certain amount of risk to do that. It was absolutely the most unique time of my career.

BSP: We touched on this a little bit earlier as well. Tell me about the health professional shortage and the role that nurses can play there. You talked about the new kinds of training in degree programs that have cropped up over the years. Let's spend a little bit of time just talking about that and what role you think that csn play going forward.

CH: Yes. I'm going to give you a little preface on this. You've caused me to reflect on a lot of stuff today. I think this is a really interesting question. A lot of people wonder, "How did this happen?" I will tell you that when I first became a nurse, Stormont was building a new hospital that had pods because of a concept of nursing called primary care nursing. Prior to that time, nurses were technicians. They delivered meds. They did the treatments. They basically did what the physician orders said to do, and they had really become automated, I guess I would say on the units.

But in primary care nursing, the concept was, you as the nurse leader and care coordinator would deliver all of the care to the patient. You were very connected to them during their

hospitalization. You had the same patients every day. You gave them their bath. You gave them all their treatments, and you really understood that person, and you understand what the risks were associated with their care.

So, you developed this persona of care coordinator and care leader, and I think that as those nurses pursued their career, they were interested in expanding that responsibility. It was a real shift in the way nurses were used, and how nurses themselves saw themselves. And then I think there was a hunger to do more. With advanced education opportunities being developed, that's where we evolved into the nurse practiooner, and  nurse educator and clinician.

At that same time, [in my first years of nursing], basically a doctor walked on a unit, I stood up when he came into the unit and offered him my chair, and he wrote his orders, and I did them. And over time, decades, we became team members.  Dr. Atul Gawande wrote his great works, and he talked about team-based care and communication, and we came to understand that team-based care was safer and probably more efficient as we listened to each other talk about our perceptions about the patient. So, it's no longer really a hierarchical system. That is not to discredit physicians, which I think sometimes gets felt by physicians. It's to say "You have a body of knowledge. I have a body of knowledge. The physical therapist has a body of knowledge. The PharmD has a body of knowledge. If we work together as a team, we're going to do the best we can do for that patient.

BSP: We used to love having the pharmacologists round with us.

CH: They knew the meds.

BSP: Their knowledge on meds was much more extensive than we were able to gain.

CH: I don't know why it took us this period of time. My personal feeling is it had a lot to do with gender.

BSP: I was going to say when you said the doctor walked into the room, you gave him your chair.

CH: Oh, yes.

BSP: Tell me a little bit about that. The gender dynamics have changed dramatically in both med school and to some extent, maybe a lesser extent, in nursing. Tell me a little bit about that. You don't have to give me specific numbers.

CH: I have stories, but I won't share them.

BSP: That's okay. Stories are good.

CH: There was a lot of abuse, mostly verbal, but forms of abuse, gender related. It was tough to be a young nurse in the ER. I learned a lot young on how to manage that. I didn't get a class in it when I was in nursing school. I had zero tolerance for it. As a unit manager, I got challenged

more than once by older physicians when I wouldn't respond to wolf whistles and pats on inappropriate parts. That was a reality. That was part of what I needed to work on to change the system to a team-based care.

BSP: My understanding now is that more than half of medical students in our country are female.

CH: And probably a third of nurses are male.

BSP: And a third of nurses are male. So, very different than when you started.

CH: Very different.

BSP: Very different than when you started your career in nursing.

CH: Yes, very different.

BSP: My guess is you think that's a good thing.

CH: It's a great thing.

BSP: Both of those.

CH: It's a great thing because we think differently. I study complexity science, and I believe in emergence, and I believe the best things come from the space between. When I want to learn something, I want to learn it with you because you're going to add things to that discussion that I don't understand or perceive, and you're going to help me understand the phenomenon so much better. I know sometimes that takes more time, but just when we do a root cause analysis, for example, and we sit, and we actually talk about what we saw in that experience, we come to have a depth of dimension of understanding we wouldn't have if it was just us.

BSP: I think another thing that's changed a lot in the last fifty years is the role of the patient as part of the team.

CH: That's right.

BSP: Again, I think the nurses have always been closer to the patient in care settings. The physician, maybe has a more limited interaction with them. Talk to me a little bit about how nursing has helped empower patients in the role that they play in their health care.

CH: That's core to all nursing care models is the patient is the center of the model. That's just ingrained into our nurses. Every nursing model has patients in the middle. We're there to facilitate what they are comfortable with. We got very good with that with, say, hospice care, for example. But when we go to the clinic sometimes, we still don't quite have that going. We're a little bit too automated in those environments.

BSP: Time pressures, yes.

CH: Yes. I get ornery sometimes when I go, and they made me wait an hour and a half. I always give them feedback on that because I actually have things to do, too. It's just important that we fully communicate with each other what that experience is.

I want to bring up one more thing that I missed saying before. There's a wonderful nursing researcher. Her name is Linda Aiken, and she studied—

BSP: I know her. She's wonderful.

CH: I really admire her.

BSP: Yes.

CH: She studied, "What do nurses bring to the value equation?" She coined a term called "failure to rescue.' Are you familiar with that?

BSP: Not that concept.

CH: Okay, I'll tell you what that is. Failure to rescue, what nurses do is they can do instantaneous assessment of somebody just walking by the door. But basically what they do is they watch for risk factors that say you're going to develop pneumonia. They keep you from developing preventable complications. They recognize patterns.

Now, AI is starting to do this us, but what we do is we prevent bad things from happening. In a hospital setting, a lot of bad things can happen.

BSP: When you've seen a patient up close and personal for a few days, you notice changes in their condition.

CH: One hundred percent.

BSP: Someone may not notice if they're just popping into the room.

CH: I used to try to teach this to nurses. It's really interesting to try to teach that to somebody who is not yet a nurse. We really practice it. A nurse will say, intuition-wise, "Hey, he doesn't look good." It takes some real thinking to say, "What is it that I'm seeing that makes me say he's not the same?" But failure to rescue, I think that's a really amazing factor that nurses have that they contribute to the team.

BSP: Linda Aiken actually, she was at the University of Pennsylvania where you said the first hospital was.

CH: Right.

BSP: She was involved in working with the Kansas Health Foundation in some of the formative work for the Institute, actually.

CH: There you go. I think that's probably when I met her because she came to Kansas, and I think she presented at KU or somewhere, and I came to listen to her. But then I read her work, and I have used it my entire practice life.

BSP: That's a great shout-out to Linda. You started to touch on this just now—the use of technology and AI. Tell me a little bit about how you see technology—I've heard you in meetings talk about this—the potential and the potential harm of this. Talk about technology and AI and nursing and health care.

CH: When I got your question I thought, I'm going to say I'm optimistic. I've practiced for almost fifty years now, and I really see that nursing education, physician education has risen to the challenge. They've been very creative in the way they deliver education, and they're very creative in the ways they're providing care, and I think that's essential particularly in a rural state that we have all of these creativities. I think scope of practice discussions have settled down a little bit. They were very threatening in the initial stages.

BSP: For people who may not know, what do you mean when you say, "scope of practice discussions"?

CH: What they can do under their license. Practice to the maximum ability of their license.

BSP: For nurse practitioners or PAs, nurses, physicians, podiatrists?

CH: Anybody actually in health care. Pharmacists. Right. Pharmacists now, doing a lot of different things.

BSP: And each state regulates what different health care practitioners are allowed to do.

CH: Which runs through the legislature. That's a big question mark many times about how they will receive that. So, I think we've done an admirable job of adapting the work force to meet the needs, not sufficiently yet, but there's been a lot of adaptation. AI's a totally different animal, and you know my opinion on this. It's upon us. I think we are scrambling to develop the policy and ethical and even the financial parameters for safe and ethical use of AI. I personally feel that many of the current roles in health care will be replaced by AI and very quickly. Many of the diagnostics will not be done by humans. It may be for a while be verified by humans because we'll want to keep our jobs. I think it's coming so quickly, and I do not think that the system is working fast enough for this dramatic set of changes about to occur.

BSP: What about the very personal interactive aspect that's so much a part of nursing? Will AI change that? I don't know if you told me the story or if I read it somewhere. You mentioned noticing changes in patients. There are now robots that roam patients' rooms and hospital hallways that can go in and make assessments like that as well, taking in all sorts of data including visual clues.

CH: Yes, I'm replaceable. You're replaceable. We're replaceable. I have this vision of sticking our arm in a thing that looks a lot like an ATM, and it will scan our blood and do all of our

parameters. It will diagnose us and issue us a treatment protocol. It will be flown in by drones to our home. I honestly believe it. I think surgery for a while will continue. We have robots, but they're assistive. There's certain things that can't be replaced by AI, but diagnostics? That's easily replaced by AI.

BSP: Is this going to help the provider shortage, lots of different practicing levels of providers around the country, the state?

CH: Yes, I think so. The challenges come with the ethical, financial, political, the bad people getting a hold of AI and doing the wrong things with it.

BSP: Is it going to save money or cost money?

CH: It's going to cost a lot of money initially, just like our EMR systems.

BSP: The electronic medical records.

CH: Yes.

BSP: But the pay-off down the road in better care, better access, better outcomes?

CH: What we haven't overlaid is our genetic mapping that we're going to get at birth. It's a difficult question to give a yes or no answer because we're not talking about layers of it.

BSP: It's provocative to think about.

CH: Yes, it is. It is. Especially when hospitals are considering large capital outlays for existing ways of doing.

BSP: Before I switch to a non-health care-related topic?

CH: Yes.

BSP: I can only imagine that you talk to young aspiring men and women who are thinking about nursing as a career. What's your fifty-year retrospective and advice and elevator speech to someone about nursing as a career.

CH: I'd say I've had a blast. I have done so many different, interesting things. I've been all over the world. In the last ten years, I've gone and delivered primary care in the Mayan highlands. I've taught nurse practitioner students how to deliver services in that setting. I have helped globalize nursing education. I have provided a hand when someone was dying in their home. [And in the ER] I worked a train derailment and saw seventy-five people in four hours. I've just done so many interesting things.

And the skills I learned as a nurse then allowed me to do all kinds of leadership things. It just grounded me for a really rich career. So, I'm very encouraging of people to think about nursing.

 

BSP: Awesome. That's a great elevator speech.

CH: That's how I feel.

BSP: Let me turn to something not related to this issue. I learned not too long ago that you're a master gardener and involved with a group of gardeners in your community.

CH: Right.

BSP: What does that involve?

CH: The history of that is that in their foresight, the United States government established land grant universities of which in Kansas is Kansas State University, and that was to provide a pivot point for research on agriculture. They saw the need to help farmers be efficient in growing food for the United States. What they found quickly is they didn't have a mechanism to disseminate that information to the farmers and to the community. So, they established extension services in every county. In Kansas, we had historically an extension service in every county. And they were to disseminate the research that was discovered at the land grant universities. Well, that overwhelmed the people who worked in extension offices. In 1973, a very smart horticultural agent in Washington State invented master gardeners, which basically he trained volunteers to answer the questions that came into the office regarding horticulture.

BSP: Just for laypersons wanting a home garden or something?

CH: Like right now, that question is "My daffodils died. What should I do? And next month, it's going to be, "I have bag worms on my junipers, and my tomatoes don't look well."

BSP: I need to sign up for some of these.

CH: Yes, you do. It took off like wildfire. We've had a master gardener program for a long time in Kansas. In the county that I reside, we have 180 master gardeners at this time, which is really wonderful because it's a very eclectic group of people from A-to-Z careers that provide all different kinds of insight. It takes 40 hours of training, and then you are required to give 30 or 40 hours of service. You have to also have 10 hours of annual additional training, so you keep up to speed. I happen to coordinate the hotline services for my county. So, I, and my volunteer team answer all those questions. In our county, we work 3 days a week in the afternoons, and we answer people's questions because we feel very strongly that we are the stewards of our environment, and we want to help people. I also believe it's really helpful if people grow some of their own food.

BSP: So you're describing a large community service education role. I assumed somehow, it's like they would come out and look at your garden and if it looked really good, you'd get designated—

CH: A+.

BSP: A master gardener.

CH: Oh, no, no. There's a lot of angst in master gardeners about their own gardens. It's like when you have your friends over, you're like, "Oh, well, I'm still working on that. This is what I'm planning to do over here."

BSP: "Don't judge me."

CH: "Don't judge me." That's right. Although I have 150 baby tomatoes in the garage right now, if you need any.

BSP: Okay. You mentioned the extension service. One of the things, I think an underexplored opportunity because you mentioned extension has a presence in every county in the state of Kansas.

CH: Right.

BSP: In the country. And working in public health, we often lacked a good credible community-based resource around community health, public health. We did do in Kansas and some other states some preliminary work around linking the work of extension with public health. When I go to the extension service website nowadays, it looks like public health. It looks like community health. A huge amount of what they do is related to community health.

CH: I was on the board of Extension, and my board member colleague was one of the mid-level managers of the local health departments. So, we make that connection. Extension, you think of this piece of them which is agriculture and horticulture, but a lot of what they do is community wellness. And a lot of that is nutrition based and parenting skills. To be quite honest , because I didn't grow up in a rural environment, I didn't understand all the things that Extension did until I became involved with them. I'm very impressed with them as an organization. I think you're absolutely right. We do so much education on nutrition with young families. It is very important, very, very important.

BSP: That's great. One of my favorite public health nurses, Kay Kent in Lawrence, she had an amazing career.

CH: She did. She made a lot of impact in the community. I agree.

BSP: She was big on that concept.

CH: Yes.

BSP: Well, what else? Anything else we should cover?

CH: You can see I'm still excited about nursing. Thank you for the opportunity to talk about it.

BSP: Thank you very much for joining us.

 

CH: You're welcome.

[End of File]

 