

CPI *Unrestrained* Transcription

Episode 14: Dr. Sally Gillam

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Host: Terry Vittone

Terry: Welcome to *Unrestrained*, the CPI podcast series. This is your host, Terry Vittone. And today my guest is Dr. Sally Gillam. Hello, and welcome, Sally.

Dr. Gillam: Hello.

Terry: Dr. Sally Gillam is the Chief Nursing Officer at St. David's South Austin Medical Center in Texas where she has been in her role for more than 25 years, managing all aspects of nursing care at the 328-bed tertiary acute care facility.

She recently earned her doctorate from the Texas Tech University Health Sciences Center. Dr. Gillam has served on the Board of the Texas Organization of Nurse Executives, the Concordia University Austin Nursing Advisory Board, and the Nursing Legislative Action Coalition.

She has received an HCA Leadership award and a gubernatorial appointment to the Texas Department of Insurance Board. She is highly regarded as a national and international speaker.

Dr. Gillam recently authored a journal publication examining the cost and extent and timing of beneficial effects for employees in large hospital emergency departments who are provided *Nonviolent Crisis Intervention*[®] training. The study comprised an industry milestone, as it's the first quality improvement study published on workplace violence in the health care sector. That study will be the primary focus of our interview today. So then, Sally, shall we begin?

Dr. Gillam: Yes.

Terry: Okay. Great. First, in the article written for *Advanced Emergency Nursing Journal*, "Nonviolent Crisis Intervention Training and the Incidence of Violent Events in a Large Hospital Emergency Department," you describe a local problem where patient care in the ED was interrupted by agitated patients, family members, or other ER visitors. Could you describe the setting overall in mid-2011 when concerns

about employee morale and personal safety had spurred investment in the CPI *Nonviolent Crisis Intervention*® training program?

Dr. Gillam: Sure. Thank you, Terry. It's really a pleasure to be on the podcast today.

Terry: Thank you.

Dr. Gillam: So I'd like to just define a little bit about where we were in 2011. Our emergency department activity was increasing. During that time frame, we were growing greatly. Many of you may be familiar with the population of Austin, Texas. It's increasing. We have about 150 visitors moving here per day, so that currently increases our primary and secondary service areas and the complexity of what we see in our emergency departments. So this was very much a growth mode for our ED, which is a very large ED in central Texas anyway.

So at the same time that we saw growth like that, we also had some changes with our local law enforcement. We saw local law enforcement actually introducing their efforts to increase their drop off of psychiatric cases at our facility, when a lot of these patients were, believe it or not, deemed too unpredictable for a standard incarceration environment such as jail or some type of holding cell. And we see that happening more and more. So these patients are actually dropped off in an emergency department environment, which you can imagine—

Terry: How is that selected as an appropriate treatment center for them?

Dr. Gillam: I know. I wouldn't believe that until I actually spoke with these officers myself and was actually told, "Dr. Gillam, these patients are too violent to go to jail. So therefore, we need them to either decompress, or we need them to rehab themselves long enough in your emergency department prior to us returning to see if we are going to take them to jail or not." So that is actually a true statement, and we still deal with that today. So you can see how these kinds of things continue to escalate my interest in how safe our staff were, actually, in this environment.

And I really don't think it's just limited to us. I kind of see that happening more and more when I speak to my colleagues about that, as well. So very difficult.

But anyway, as you can imagine, all of these factors are leading up to lots of patients in an area that's somewhat contained. In our emergency department, we actually have multiple free-standing EDs that report into this ED, and the part that I selected for the study was one that I could actually contain, which is the primary ED. So that primary ED sees about 70,000 to 75,000 visits a year. And I felt that was a large enough population that I could utilize for measuring our training.

Also, we had, definitely, enough code purples. And a code purple, that's what we use as our call for an emergency need of security assistance. We use that, and when that code is called, we have security run to that area. It's very similar to a code blue or any kind of cardiology code, those types of things. So this is for, strictly, an emergency call for security assistance. Anyone can call it. Anyone who feels fearful that they're in an environment that they need additional support, they can call it. It's not limited. It's a little subjective, but it's subjective for good reasons.

Terry: I see. So an urgent situation, to be sure?

Dr. Gillam: Exactly. It's really a call for backup, and this situation is escalating, and I need more help than just me.

Terry: So you've got law enforcement dropping off an increasingly large number of people who may be agitated or violent in the ER. So this makes you investigate, as an administrator, training options. Is that accurate?

Dr. Gillam: That's absolutely correct. What we found in talking with some of our staff, and I think what you may also know as well, is there's a lot of new staff we are actually hiring into our workforce now. Our millennials are now coming out of the school, and they're being hired into the workplace, ages 18 to 35 years old. And many of these nurses have not really been well-trained in their core classes for dealing with crisis intervention. So we see them trying to manage the clinical needs of these patients, but we do not see that they are adequately trained at all for managing escalating behaviors.

Terry: I see. So then you brought in CPI training, when exactly?

Dr. Gillam: We brought in our CPI training about two and a half years ago. We did not make it mandatory. It's still not mandatory. About 75% of our ED staff are now trained in CPI, and that's actually a result of this study. We're actually expanding that into other places in our organization.

Terry: So you take a look in later 2013, in a statistical way, about what the results of this training have been. Can you describe how you decided to author this research?

Dr. Gillam: Absolutely. We had some very serious issues occur in our organization regarding workplace violence. That was actually initiated by a patient who was unable to, I think, contain themselves and control themselves. It generated some very serious issues in our organization. And I'm extremely passionate about our staff. I work from a legislative standpoint, as well, to have our staff be trained. I believe that they are sitting ducks if they're not trained to de-escalate these problems.

It's my belief that if they have the ability to de-escalate situations, and number one, even identify that they're even in a situation, and then have the opportunity to have a few tools that are nonviolent. We're not talking about stun guns and these types of things. We're talking about nonviolent intervention that anybody can learn and they can control. So when I saw some of the very aggravated situations that were going on, one of the things that we identified was we need to have our staff be trained. That's when we actually decided to do that.

That's when I decided, "Well, it's great to do that, but I need to study this. I need to know some truth. I need some facts. I need to back this up, so that I can prove to anyone that's questioning the return on investment, that our CPI training is actually effective," and I was able to do that with this study.

Terry: Also, I understand that it is new in the field, what you published.

Dr. Gillam: Yes.

Terry: Could you talk about that just a little bit?

Dr. Gillam: Yes. Absolutely. When I was doing my research on this, I assumed that I would be able to go and just look at prior research and then take studies that were already available in scholarly format and then move on and continue my study. Well, to my amazement and surprise, what I found out is, when I began to look at the research literature that went before me, it was 100% research. It was quantitative efforts. It was done based on people's perception, "How did I feel? How did that make me feel? What was happening when this occurred?"

There was nothing that was a process improvement or quality-improvement-related study in existence. So there was nothing out there that actually said, "By implementing this, I made a difference in this way, in this problem," and that's what the study was initiated for.

Terry: So you have no statistical precedent to say, "Well, is this going to agree with my study or not?" sort of a benchmark to precede you?

Dr. Gillam: That's right. This is the first scholarly, published quality improvement study regarding *Nonviolent Crisis Intervention*[®] training and its impact on violence in the ED.

Terry: Because we're talking about a single-phase, observational, quantitative, quality improvement study, I know that can be intimidating. It certainly is for me. If you could acquaint our listeners with the basics of a model like that and why it's appropriate to measure the impact of *Nonviolent Crisis Intervention*[®] training on violent events, or code purples rather, in your ER?

Dr. Gillam: Sure. As with any research study or peer-reviewed publication, you have to get a little into the details, if you will. So that's kind of what this is. It's a little dry, but while the topic is incredibly fascinating, some of the research is a little dry, just because we have to follow certain criteria.

So for this study, it kind of began in late 2012, I began with some productivity analysis, and I had people questioning the cost or the effectiveness of *Nonviolent Crisis Intervention*® training or CPI at our particular facility. And they were actually questioning whether or not we needed to continue this cost. Of course, again, like I said, I'm extremely passionate about this, and it's like, "Well, yes we need to continue this, but why?" So the "why" was very hard to connect to why I thought, you know, other than just my suggestion.

So again, industry metrics were not available, no previous studies. We've already talked about that. The existing studies were largely survey-based. We already talked about that. So the scenario was further complicated because 40% of our emergency staff were already trained. So I'm having to prove something with 40% of our emergency staff already trained. That turned out not to be a problem because we were able to manage that mathematically.

But, essentially, I had to accommodate the fact that they were previously trained staff, and then our need to collect concrete metrics in terms of the incident counts, meaning code purples, because while we looked at code purples as a senior leader team and executive team, we never quantified them. We never knew how many occurred. We never really looked at that. We just knew that we managed them monthly, and I think a lot of organizations tend to do that.

Then lastly I needed to definitely come up with a cost versus benefit analysis. Again, there was not a study that I could turn to and pull up for my CFO to state, "Look at this. This is the return on investment." So I felt a pretty significant need to create that.

So a quantitative quality improvement study, I felt, could best address these factors. And a qualitative study wouldn't have been able to validate the need for a continued investment in training, and this one would have. So that was really what stimulated my interest.

Terry: I see. Well, that certainly puts it in a very clear light, bringing this study into focus for our listeners. There's something in your article called, "The Study Question" and "Intended Improvement" section. Could you discuss those?

Dr. Gillam: Certainly. This really is going to sound extremely simple, but I need to validate the effectiveness of training in an easy-to-understand manner. Sometimes you can get study questions that are a little complicated, and that's never good. So I wanted to

come up with a simple question. And my question essentially was, "What benefits are derived from providing *Nonviolent Crisis Intervention*® training to ED personnel to reduce violent events that are manifested as code purples?" So essentially, "What are the benefits to this organization for providing the *Nonviolent Crisis Intervention*® training from CPI?" Again, I just studied ED personnel to reduce those violent events. And I'm going to measure that through, "Does it have an impact on reducing the code purples or the cries for help?" if you will.

So the intended improvement was to determine if this actually resulted in a decrease in code purples. Once I could determine that, then you can determine its benefits and its cost-effectiveness, and again, like we mentioned earlier, that was very important, particularly for the investment the hospital was making in this.

Terry: You mentioned earlier that *Nonviolent Crisis Intervention*® training was optional, but who was it offered to? Who's included in that?

Dr. Gillam: Actually, in our organization it's optional to our ED staff, but what we have done since this study, is we have made sure that it's included in every emergency department employee's first 90 days of education. So after the study, it was not optional. Before the study, it was. That's the change we made.

Who it's offered to as a complementary in our organization is any staff member. Okay?

Terry: Okay.

Dr. Gillam: Because one of the things that I also learned in the study was that we had several areas that are very much in potential problematic areas as well, telemetry units and, believe it or not, even labor and delivery. We have had some very highly, highly emotional issues in labor and delivery when people get a little emotional when there's, perhaps, a conflict with who's the father, families that are arguing, various things. That all goes on. So labor and delivery in women's areas are not excluded.

Terry: Anytime there's a chance for that sort of stress, I could see how it could be a fertile ground for crisis behavior.

Dr. Gillam: Absolutely.

Terry: I think I understand the "Planning the Intervention" section, and I think you've touched on it a little bit, but for our listeners, could you talk about that section to give us a little more setup?

Dr. Gillam: Sure. I'd be happy to. I had several factors that were at play, and they really complicated an intervention-based approach. Number one, I had to find a way to isolate the training impacts after the study began, because, as I mentioned, when I started, 40% of the staff had already undergone the training. So I needed to make sure that I isolated that, to make sure we had a clean study, because I wanted to make sure, since this was going to be the first published study in this area for a quality improvement study, it's got to be correct, because I think it's going to be referenced a lot. So a clean study is important.

I needed to have a repeatable process that relied on an impersonal third party to report those code purples. So I had to negotiate with our Security and Engineering departments, so that whenever a code purple was called, they were actually logging in the number of code purples that were happening. Meaning, it wasn't going through somebody who knew what I was doing. They had no idea that I was actually utilizing that data for a study. So it was very clean, from that aspect.

Terry: Was that to avoid something called, is it the "Hawthorne effect"?

Dr. Gillam: You are absolutely . . . you get an A. That's absolutely correct. The Hawthorne effect, that was first documented in 1933, and that essentially states that individual behaviors can be unintentionally impacted just by someone being aware that their behaviors are being monitored.

We made sure that that didn't happen. No staff knew anything about this. There was no engagement in speaking to the staff directly. We kept everything above board in coming from a third party.

Terry: In the article, you talk about something called "confounding factors." You write, "If skills for identifying and de-escalating crisis-related behaviors were applied successfully by trainees, NCI training was expected to result in fewer code purples per ED visit. Anticipated confounding factors were identified to be addressed, if confounding was confirmed." Could you give our listeners a general definition of confounding factors in a study like this, and describe the ones specific to it, and tell us why they might matter?

Dr. Gillam: Sure. In people who do research, they understand that confounding factors are items that essentially can affect an analysis of a series of events. They tend to share attributes with the events being isolated for the study. For example, in health care violence, we had several potential confounding factors. How you usually look at these is you study prior studies that came before yours. So like we've mentioned before, all I had to look at were qualitative studies. So there was really no data with which I could automatically isolate these confounding factors.

I'll give you some examples of what a confounding factor that I had to deal with was, the ones that I anticipated. Again, I had to anticipate these, because there were no other [inaudible 00:18:02].

Terry: Right.

Dr. Gillam: When you think about what might be a problem or what could mess up your data, what the confounding factor is, the percentage of psychiatric patient mix being held in the emergency department. For example, if I hold a lot of psychiatric patients, generally people are not happy being held in an ED situation anyway, much less somebody who is aggravated or not fully thinking through what they're doing. So that was one of the confounding factors.

Another one was an emergency department staff turnover and experience level. So as I was trying to measure all of this new education, staff kept turning over. So I had to make sure that my 40% that eventually became my 75% wasn't confused with somebody who already turned over. So department turnover and experience was really important to manage.

Staff gender mix. There's research out there that states that there's some perceptions that males tend to generate higher levels and escalate crisis issues, and females tend not to. So that was one of the confounding factors that needed to be looked at. By the way, for my study, that became a moot point, because remember, all of my information is coming from a third-party. So when that happens, I don't know if someone's male, female. I don't know who called the code purple, and it's irrelevant for this study.

Terry: I see.

Dr. Gillam: Then one of the fourth ones, the fourth confounding factor that I had to deal with, was wait times, not just holds but wait times. So it's someone who hasn't even been seen yet, that's sitting in the waiting room. And if they have a hold time that's longer than what they expected, and they're getting upset because someone may be going up in front of them, as you well know, there are triaged events in emergency departments, and first-come first-served is not exactly the way it goes.

The biggest challenge that I had was I didn't know if the confoundings would really matter or not. So I had to make sure I put medical studies in place to make sure I had the adjustments for their impact, that we would have an, indeed, clean study.

Terry: So would it be accurate to say, doctor, that in looking at these confounding factors, especially in primary research like this, this is a way to bring statistical rigor, to make sure that your conclusions are more valid?

Dr. Gillam: Absolutely. You're absolutely correct on that. You kind of want to weed out perceptions and things that could cause your data to not give you the exact results or the exact . . . You can't determine what the results are going to be just yet, but you want to make sure whatever results you get are results that are valid and statistically significant.

Terry: I think that precision will be interesting to our listeners, certainly to us. I think we kind of set this scene. You've got a study analysis. I have my question here, so I'm going to sound really smart reading it. "Study analysis used a simple two-variable model with one independent variable, one dependent variable." Could you define those for our listeners and how they are placed on a linear regression plot?

Dr. Gillam: Absolutely. I know that's a lot of words, and again, like I mentioned, some of this gets a little dry when it comes to the mathematics. Now, for some people, they love it.

Terry: Right.

Dr. Gillam: I, fortunately, had a great statistician. So that makes me look smart too. So that's good, and that's my suggestion for anybody. But essentially I had to go through this exercise twice. Midway through my first set of data, I found that my initial assumptions about the interaction between dependent and independent variables weren't true.

I thought that the independent variable was the cumulative percentage of individuals in the emergency department who had undergone this training, and the dependent variable was the monthly frequency of code purples declared in the ED. And I just assumed that if the interaction between these variables held true, that would have shown in the linear regression plot with the monthly code purples decreasing as the percentage of trained personnel increase. So pretty simple. So if I teach people our CPI training, and the monthly code purples, they should decrease as people are educated. That didn't occur at all. And for a researcher, that's not a good day for you.

Terry: Well, your trendline behaved opposite of what you anticipated on an intuitive level.

Dr. Gillam: That's exactly right. So I sat looking at that data thinking, "This study is for no purpose. This is crazy." Not to mention, I had several other things. Remember? Because I was trying to prove why my passion for scholastic intervention, like something as great as CPI, would help. I just proved, from this first review, and I want to say, it's a first blush, I had just proven that not only was I wrong, I was very wrong.

Okay. So I knew that wasn't right, because that's not even logical. So that could not be the case. It's not even logical. But that's what the first numbers actually showed for me.

The data was very dense, and these are huge spreadsheets, huge numbers for a one-year study. Essentially, what eventually happened was we were able to unearth what was actually happening. For the independent variable, I substituted the percentage of emergency department personnel who had undergone training in the previous 90 days.

Terry: Let me make sure I get this. So you substituted the independent value. You said, "Well, I'm going to look at 90 days training rather than cumulative training." That's accurate?

Dr. Gillam: That's right. Rather than monthly and rather than cumulative.

Terry: Okay. So you're saying, "I'm just going to look at 90 days."

Dr. Gillam: Mm-hmm.

Terry: Okay.

Dr. Gillam: Yes. So I started looking at 90 days, because I had it monthly, and it was just kind of not telling the story. Then cumulatively it didn't tell the story at all. But then, if you massage and look at your numbers enough, numbers really do tell a story. You just have to have the patience to listen to them. So what emerged from this was that, in 90 day blocks, you could really see what was going on.

What was happening was, people who were trained, it really took the first 90 days for them to actually see some tremendous decreases in code purples after their training. Now, there needs to be further study on why that happens. That's another study. But what my study shows is that at 90 days, the benefit of education began to really pay off, and that yielded some very interesting results over the next few cumulative looks as well.

Terry: Well, can you talk about those?

Dr. Gillam: Sure. And again, for someone who's working on a doctorate and they're a researcher, this was exciting news. I know for some people that's not exciting, but for everyone who listens to this that's interested in study outcomes, that's when you actually get up from the table and dance around for a minute, just that you think you've actually found something.

Terry: Oh, I bet! Also, on the practical level, to know that it's going to have beneficial effect, a statistically-proven effect to go forward with training in the hospital.

Dr. Gillam: Exactly. So it was really great.

Again, we saw about 75,000 patients. The study covered a full year. The code purples varied widely from month to month. We averaged about 1.5 events per 1000 patients. So what you like to do with these studies is you look back on the research studies and say, "Well, what were their numbers? Did they come up with about 1.5 per thousand too?" because you'd like to just see, "Am I working in the zone of what's normal? Or is something wrong with my math?" That really matched what's happening in the other research studies.

So what that told me was, other health care treatment areas, where that happened out there in the world of research, they're seeing about the same amount of code purples as we were, or whatever their definition was. People use different definitions for these events. Ours, again, is "code purple."

So we looked at things. I knew the busiest months, the ones that we had the most code purples in. While it's irrelevant, it's just interesting for trivia. It's April and June. And the least busiest month was January. So I guess tax season and summer in Texas causes more code purples.

Terry: It gets stressful all over the country.

Dr. Gillam: Yes. Absolutely. But anyway, our range actually was studied, and it was really consistent with other quantitative studies as well. So I felt like I was still in the zone. The study was still able to somewhat validate that other organizations were seeing some of the same problems.

There was never a quantitative study that had focused on quality improvement. So again, looking at this one, Certified Instructor training through *Nonviolent Crisis Intervention*[®] was delivered to our ED staff over the study period. Again, I had to work in that 40% of the staff that had been trained. Then the number, actually, by the time I got to the end of the study, which was about a one-year period, it had grown to 75%. And that 25% in there was still due to, maybe we hadn't had an instructor yet, or someone was still waiting in class. That's the remaining 25% and why they were not trained. Again, at this time, it was not mandatory for the ED, highly encouraged, but not mandatory. It was after this study that we made it mandatory.

Terry: So what sort of results did you start to see in the correlation between training and the decrease in code purples when you looked at it with the 90-day?

Dr. Gillam: I looked at it at the 60, 90, 120, 150 days, and again, the most frustrating part of the study ended up being the most rewarding aspect of the study. Again, my initial assumptions didn't hold true, and it was really interesting that when I examined the numbers differently, I found that if I used that cumulative percent in the past 90 days, the independent variable, a strong negative correlation appeared when it was compared against a monthly incidence for code purples. So the same held true at 120 days and 150 days.

So what that's telling you, in essence, is, from three months, or 90 days, through 150 days, or five months, staff are at their peak performance after training from CPI on *Nonviolent Crisis Intervention*[®] training. So that is the peak performance time where they're actually doing their best.

There's a ramp-up in that first 90 days, and then after 150 days there's not a drop off, but there is a slow edging off. So what that essentially has told me was that, really, further study needs to occur at six-month intervals. And we've actually looked at that. That's telling me that annual, every six-month, training is really advantageous. I know the certification is for two years, and at our hospital, and even for our company, we are definitely pursuing much more education than every two years.

Terry: So then I guess, in the estimates, from an ROI perspective, you saw a significant negative correlation. Let me say it more simply. With more *Nonviolent Crisis Intervention*[®] training at 60, 90, 120, and 150 days, you saw a significant reduction in code purples. Is that accurate?

Dr. Gillam: Absolutely. Essentially what we saw is, for each 1% increase in staff *Nonviolent Crisis Intervention*[®]-trained in the previous 90 days, it resulted in a linear reduction of .045 code purples for 1000 ED visits. So it doesn't sound like a lot when we see it like that. I mean, that sounds like not very large numbers. But these numbers add up, and as the staff are trained, and you pick an emergency department that sees about 75,000 patients, it adds up. In our case, it resulted in a 23% reduction in code purples over the study period.

Terry: Wow.

Dr. Gillam: So I was able to prove that implementing this education, as it existed then, meaning the every-two-year training, I was able to reduce 23% of code purples over the study period, and that was a whole year.

Terry: That's significant.

Dr. Gillam: Yes.

Terry: Striking.

Dr. Gillam: It was very significant. Then when you get into understanding the interpretation and cost, what's out there that's really difficult, because now you try to do the ROI, the return on investment for this—

Terry: Can we dig into that a little bit?

Dr. Gillam: Yes, absolutely.

Terry: All right.

Dr. Gillam: One of the things you've got to look at, and you go back and you look at the research that comes before you, and what happens there is you study the areas where these costs come from. The costs come from employee impacts, and that's everything from emotional to physical. So many people out there think, and nurses are the worst at this, they think, "If I don't have a fractured bone in my body or a concussion or a finger sticking from one of my orbits, I have not really been assaulted. I have not received some type of violent act." The sad part of that is there's an emotional component to that, and there is a physical component. What is difficult to measure, to get your ROI, is attaching a cost associated with that.

Terry: May I ask, why would the trauma have to be so extreme before a nurse would report it?

Dr. Gillam: Because, in general, usually, the type that works in an emergency environment, there is kind of an unspoken expectation, if you will, that these patients just come with these kinds of problems, that "I'm expected to take this." We interviewed some nurses, and many of them stated, working in the ED, "You should've known that when you worked in the ED." Now, I do not condone that. I want to go on record. I do not condone that, nor does our leadership team, but when you interview nurses, that is actually what they say.

When I was an expert witness on House Bill 705 for the Texas Legislature, which was escalating penalties to a felony if health care personnel were harmed in the ED, which we successfully passed, several of the nurses interviewed there were discussing what they believed violent activity to be. And you saw the gauntlet span from "I have posttraumatic stress," all the way to "I actually had my finger bitten off." I mean, that was actually true. So when you try to put, like for my study, a cost on that, it's really difficult to put a cost on it.

Patient impacts, again, care-related issues, the disruption in ED when a code purple is happening and you've got, in our case, it's the Austin Police Department or it's our internal security, and there's an issue going on, let me tell you, the whole ED

kind of stops and pauses for a moment, maybe not for long, but you can bet your other guests, visitors, and other patients, it is very disruptive. There is a cost to that.

There's also a long-term cost to that where perception of hospitals occur. Meaning, "I took my young, three-year-old daughter to the ED with strep throat, and next to me was somebody out of control that I had a code purple called on them. Maybe I don't want to go to that place anymore."

Terry: Well, you could see that that would certainly be an experience that would make somebody choose another provider.

Dr. Gillam: Exactly.

Terry: While, I guess, these conflating factors, so far as the cost of what a code purple would be, make it sort of, maybe, difficult to get an exact number, but you do, in your journal article, report some numbers.

Dr. Gillam: I do. What I essentially did was I adopted a 180-day window as the maximum period of time for the effectiveness of initial *Nonviolent Crisis Intervention*[®] training to remain force. I wanted to do what my study said. So at six months, I felt like that was the right time to utilize, because I would like to see every-six-month training, based on this study. Okay? And I assumed that there would be two 8-hour sessions per year.

I assigned 16 hours of employee time at their salary cost, and then I also looked at instructor time and their cost, and I arrived at a figure that was essentially 2% of payroll per year. That's what the cost was. That's very low. So we used percents. I didn't use gross numbers, because that changes, depending on what your average salary costs are, and that doesn't change a lot. So I arrived at a figure that was 2% of payroll per year is used to achieve a benefit that was able to mitigate 23% of violence-related risk.

Terry: That's statistically significant, I believe.

Dr. Gillam: Yes, extremely! Yes, that's quite a high P-value. In the other thing, too, it was so rewarding, because people want to come to work in these very sensitive areas like EDs and labor delivery areas. And the way health care is changing, anyplace, I mean, violence in our world, our world is changing. And I've heard some stories, now these are anecdotal too, of course, the study, but I've heard stories from our CPI classes, and these stories that our staff tell me are so rewarding, because they actually tell me how these courses have actually not only benefited them in the work environment, but they've also transcended to their home life, or being aware

of a conflict occurring in a store that they may be in. So I'm just very proud that these staff were actually observing this and carrying it with them personally.

Terry: We hear about how the concepts taught in *Nonviolent Crisis Intervention*[®] do reorient people in a basic way to how they view conflict and just basically the task of getting along day to day.

Dr. Gillam: That's really true.

Terry: You have written here that each code purple reduction in your hospital, your ER, was achieved at a cost of about \$600, or \$593, I think, was the exact number. So that's what it costs to have one code purple not happen. Did you have a general sense for what one code purple would cost the hospital in a realistic sort of a number? I mean, I know there was some wild, that someone, I believe a study by Murray had it like \$250,000 per incident. So that's certainly way sort of like, "Well, that seems like a lot," but in contrast to this, about 600 bucks to have one not happen, how much money do you think that saves?

Dr. Gillam: That's truly the billion-dollar question. That's where I go back to; putting a finite number on that, I think, would be somewhat unfair. That's actually what we have at our hospital. And why is because I think it could be very underestimated, because, again, we see the impact to these nurses. For example, some of the things that have happened in our organization, now these are extreme cases, granted, but they do happen, we've actually had people, nursing staff, leave the profession of nursing. Now, we can certainly calculate a turnover in a position, but what we can't calculate is the loss of an experienced nurse leaving the profession of nursing.

We've had experiences where a very, very bad situation occurred, where four nurses left the profession of nursing because of it. So when I start trying to add the cost of these things, it's very difficult to add.

That's why I am saying, I think we're going to underestimate it when we look at just small numbers, because there's tremendous costs associated with some of this. For example, some people who have had some issues mentally, they've had years of counseling that go with this. There's no way that I can actually get in and find that number, because it's very private.

Terry: I understand, but certainly from what you're saying, one can, in a normative sort of financial sense, see that \$600 to not have a code purple happen is modest and acceptable, and that's not a conclusion that I suppose you can scientifically draw. But when you say investing 2% of annual payroll is going to mitigate 23% of workplace violence risk, that seems like a significant ROI.

Dr. Gillam: And that is what the study proves! So if someone needed to utilize or reflect on a study to help ascertain whether or not they wanted to invest in *Nonviolent Crisis Intervention*® training for their staff, this study is actually what can prove that 2% of payroll reduces 23% of violence.

Terry: Sally, did you want to tell our listeners where they can maybe find this report online?

Dr. Gillam: Sure. It's in the [*Advanced Emergency Nursing Journal*](#).

Terry: Okay.

Dr. Gillam: I think that anybody who subscribes to that is able to look at it.

Terry: Great. Okay. Do you have any further conclusions, observations, or things you want to say about the study or about *Nonviolent Crisis Intervention*® training at St. David's?

Dr. Gillam: Well, I'm so pleased and happy to be on the podcast today. Obviously, I'm extremely passionate about training, particularly to reduce violence. Again, like I said, the world we live in today, I don't think this is ever a bad thing to do. I'm so pleased that we were able to do this at our organization. I can't wait. I actually have a colleague who's looking at following my lead. What I want to see is a study at six-month intervals, and I would love to see, if we implemented this training every six months, could we even reduce the need for code purples, to reduce even further, if we had further education.

Then I think there's also opportunity for study on the complexities of various code purples. Meaning, how many code purples were really not that big of a deal versus how many code purples were tremendous. And we have seen code purples that include someone trying to commit suicide, all the way to a father is upset with his son for doing something that sons do.

Terry: Sure. Right.

Dr. Gillam: Youthful indiscretion, you know?

So again, I think there's tremendous need for further studies. Again, this is the only one that I'm aware of. And I just appreciate all of you at CPI for letting me utilize your training program to support this study. And I am always available, if anybody wants to call me or get in contact with me. I'm Sally.Gillam@StDavids.com, and I would be happy to discuss this with anybody further.

Terry: Thank you for that. That was very generous of you. May I ask you to conclude? Being a passionate academic doctor and a committed nurse, and administrator, who inspired you?

Dr. Gillam: Who inspires me in my career? I know this is going to sound a little, a risk of sounding cliché, but I am a fourth-generation Texan, and I am a fourth-generation nurse. And my mother was actually a Chief Nursing Officer herself, for many years, and when she delivered me in the labor and delivery rooms, she actually was the administrator on-call. So she signed my birth certificate.

Terry: Oh. That's a great story. There is nothing obvious or rote about that at all. That's great.

Dr. Gillam: It's funny, and it's funny that you asked, because some of the articles that she's actually published in her day, we still have the same problems today. So it's interesting to look at.

But yeah, I would give claim to her. Also I would give claim to the men in my life. I have two sons and husband and one boxer dog, and they're all male. And honestly, I think that my dog received as much education from Texas Tech as I did, because he had to listen to me.

Terry: Hear, hear! Well, I'm a dog lover, so that resonates with me.

Well, my guest today on *Unrestrained* has been Dr. Sally Gillam. She's the Chief Nursing Officer at St. David's South Austin Medical Center in Texas, and she has published a scholarly article that we had the great fortune to talk with her about. Thank you, Sally.

Dr. Gillam: You bet. Thank you so much. I really appreciate the opportunity.

Terry: You're welcome.