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PATIENT SAFETY NETWORK

In Conversation With... Poonam Sharma, MD, MPH, the Senior Clinical Data Analyst at Atrium Health, and Rhonda Dickman, MSN, RN, CPHQ, the Director of the Tennessee Hospital Association PSO

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Editor's Note: Patient Safety Organizations (PSOs) are organizations dedicated to improving patient safety and healthcare quality that serve to collect and analyze data voluntarily reported by healthcare providers to promote learning. Federal confidentiality and privilege protections apply to certain information (defined as "patient safety work product") developed when a healthcare provider works with a federally listed PSO under the Patient Safety and Quality Improvement Act of 2005 and its implementing regulation. AHRQ is responsible for the administration and enforcement of the PSO listing process. Based on their presentations at an AHRQ annual meeting, we spoke with representatives from two PSOs, Poonam Sharma, MD, MPH, the Senior Clinical Data Analyst at Atrium Health, and Rhonda Dickman, MSN, RN, CPHQ, the Director of the Tennessee Hospital Association PSO about how the unique circumstances surrounding care during the COVID-19 pandemic impacted patient safety risks in both COVID-19 and non-COVID-19 patients.

Kendall Hall (KH): Let's go ahead and start off with having you each tell us a bit about yourselves and your current roles with your PSOs.

Poonam Sharma (PS): I'm Poonam Sharma, and I'm a medical doctor with a master's degree in public health. I've been with Atrium Health for nearly five years now and serve as a senior clinical data analyst for the Atrium Health PSO. Our PSO participants are limited to Atrium Health and include 40 hospitals, over 500 physician practices/urgent cares, 25 home care/HME [home medical equipment] programs, seven hospices, five skilled nursing facilities, and 49 cross-enterprise quality committees. The PSO team conducts reviews of incident reports as well as cause analysis investigations.

Rhonda Dickman (RD): And I'm Rhonda Dickman. I'm a master's-level registered nurse and certified professional in healthcare quality [CPHQ]. I have been working in the field of quality and patient safety since 2007 and serve as the Director of the Tennessee Hospital Association PSO. It serves 58 providers, most of which are acute care hospitals. We also have critical access hospitals, specialty hospitals, and hospital-owned skilled nursing facilities, rehab facilities, and physician practices.

KH: I'd like to start at a high level. Would you please tell us about the approach to analysis that you've been taking to better understand patient safety events during the COVID-19 pandemic?

PS: So, our cause analysis review process begins with a team of individuals who review the details surrounding quality-of-care concerns. A timeline is created for the review process, executive committees review the cases, and then the screening process is initiated. If the generally accepted performance standards are not met, then actions are required to improve patient care. Copies of the de-identified cases are sent to our Atrium Health PSO for quality improvement and learning opportunities. Now, our PSO specifically collects COVID-19-related event data for all our participating organizations. We added the question "was this event related to COVID-19," which enabled us to identify specific COVID-19 trends related to harm events. This question helps identify events, such as a process change because of COVID-19, which resulted in the delay in care of the patient. Other examples include pending COVID-19 test results, again, causing a delay and so on.

KH: Just to clarify—you are able to capture whether the event was related to COVID-19, but that doesn't necessarily mean that the patient had COVID-19, right?

PS: Right!

KH: Okay, so you put that lens on every report that you were receiving—was this COVID-19 related, whether it was communication, changes in staffing, or some other issue?

PS: Correct. Staffing, PPE [personal protective equipment], or when the event occurs, such as during the period of time when we're waiting for the patient's test results, etc. We also added a COVID-19-specific safety event review team at our largest academic medical center to fast-track identification of COVID-19-related events. This was a physician-driven initiative in the emergency department where physicians wanted to make sure that the care for patients was free of harm due to the pandemic. Potential action plans were already starting to be put into place when they thought events might be related to COVID-19. Our PSO also hosted Safe Table discussions, where members of the PSO share COVID-19-related safety issues and lessons learned in a protected, safe environment.

KH: I think that it would help our audience to know what a Safe Table discussion is. Can you please describe that?

PS: Absolutely! So, the Safe Table discussions were only open to staff of our PSO members who came together to have discussions about COVID-19 events that were occurring or situations that were occurring with COVID-19. This was a PSO protected, trusted environment where they felt safe that information shared was confidential and non-discoverable. They could have discussions about events that occurred and discussions around situations that they faced during the early days of the pandemic. Safe Tables

provide that safe environment for discussion.

RD: On our end, there was significant variation among our providers on what their event reporting systems would allow for adding a flag or other indicator that the event was related to COVID-19. When we looked at events submitted to the PSO, we reviewed narrative data, but it may or may not have indicated whether this was a COVID-19-related event. And so, rather than an event analysis, we held Safe Table discussions and invited providers to come with what they had learned from their own local investigations and event reviews. It was only through this Safe Table approach that we were able to delve into COVID-19-specific issues.

KH: What have you learned about the impact of COVID-19 on patient safety?

RD: For me, this is too big a question for one single answer because the pandemic has been hugely impactful on healthcare in every way, for both COVID-19 and non-COVID-19 patients, for the staff, for families, and for our community. At a high level, it is clear patient safety has remained a primary concern among healthcare workers throughout the pandemic and it requires significant innovation and boots-on-the-ground problem solving, and strong leadership support in these very unusual circumstances.

KH: Do you think that having something like this pandemic to rally around pushed leadership when it came to thinking about patient safety?

RD: I can only speak for the providers that I represent, but I know their leadership absolutely cares about patient safety and did before the pandemic and maybe that's why it has remained a priority throughout the pandemic. We saw leadership rise to the occasion in an incredible way. They cut through red tape. They made things happen. They found workarounds, they found solutions, and they were present and visible and concerned. Every provider I've spoken with about their experience through the pandemic spoke positively about leadership and the importance of their role in steering the ship through this storm.

KH: And Poonam, did you find the same at your organizations?

PS: Absolutely. I believe our leadership—even before COVID-19—has been very focused on patient safety and avoiding patient harm, but they've stepped up and made sure that they've continued to carry the patient safety torch during this pandemic. They encouraged us to keep moving forward. They have been on every call, whether it be 5 a.m. or 11 p.m. They have been boots on the ground, providing the greatest support during this time period.

KH: So true leadership, right?

RD: Absolutely.

KH: So, let's then move on and talk about some of the ways that the influx of COVID-19 patients and protocols has posed a challenge for compliance with other more established patient safety-related efforts.

PS: I'll go first. Atrium Health quickly realized many clinical guidelines needed to change and needed to change fast, and as a result, an expedited medical and technical review process was put into place as part of the emergency management of the pandemic. A clinical guidance team template, formal approval

process, and standardized location for the documents, which was accessible to all providers and staff, was implemented. This was related to the policies and guidelines that were being changed on a daily basis from the CDC [Centers for Disease Control and Prevention] guidelines. Creative PPE conservation strategies also had to be implemented. For example, we used baby monitors in some patients' rooms so nursing could be responsive and monitor patients from outside of the patient's room. We also placed some intravenous (IV) pumps outside of the patient's room to effectively maintain the IVs without necessarily having to go into the patient's room multiple times, which reduced potential staff exposure to COVID-19 and helped conserve PPE.

RD: I agree with what Poonam said. With the influx of patients, there were definitely challenges around the physical environment and how to separate the COVID-19-positive, or those with pending tests, from non-COVID-19 patients. There were also issues with equipment. At the peak surges, were there enough IV pumps, were there enough patient beds, and monitors, and ventilators? Creativity was needed to optimize use of existing equipment and rent or purchase extra equipment when available. The influx of patients also challenged staffing, which is another area [where] we saw innovation. Documentation systems were challenged throughout by setting up new departments or changing area functions. For example, if a post-op area was changed to a temporary step-down unit, the documentation system that's normally used in post-op had to also change. And then, as Poonam mentioned, conserving PPE. Another challenge around supplies was that a replacement product may be used if the standard product was unavailable. So, staff that were used to a certain type of central line care kit, for example, now had to use something completely different. Or they were used to a certain type of protective foam to prevent pressure injuries and now they must become familiar with something completely different. Staff were having to learn on the fly to ensure that they were following patient safety protocols amid many changes.

With the COVID-19 protocols themselves, I think that visitor restrictions were a huge challenge. Staff had to learn how to offer support remotely, do Skype calls, and integrate other ways of connecting into their practice. They didn't have the families there to help provide history or call for help or notice a change in the patient's status. There were also challenges around providing patient care in a way that limited staff exposure to the virus, like Poonam was saying. It was all so disruptive—moving the IV pumps to the hall, trying to monitor remotely. We learned that PPE hinders communication. When you're in full PPE, your voice is muffled, your facial expressions are not seen, others can't see your mouth moving as you speak, and so methods for effective communication had to be creatively addressed. Then lastly, the impact of COVID-19 protocols on staff exposures to the virus were challenging. If staff had to stay home because they had been exposed or had a child who was exposed, their departments had to bring in less experienced staff or people not used to working in that department, creating a challenge.

KH: And I think that fits in nicely with the next question. Thinking about established patient safety practices that you found that were misaligned, or where you had to introduce different processes and equipment, what risks were introduced and how did you address those?

RD: We saw that different processes were needed related to sepsis care. Providers were appropriately reluctant to give fluids or an antibiotic if the infectious source was COVID-19 and it took time, particularly prior to rapid testing, to get COVID-19 test results. As a result, standard sepsis protocols were disrupted by

the introduction of COVID-19, as people presented very similarly to sepsis, but may or may not benefit from that treatment. Another example relates to prone positioning. Our hospitals have great protocols in place for pressure injury prevention, but prone positioning brought new challenges. Proned patients are not turned every two hours, so staff had to think about how to regularly redistribute pressure, how to use the equipment they had for prevention in the best way. And even standard care, like catheter care and central line care, was changed dramatically for a person who's now spending 16 hours on their stomach. How do you access the catheter site? How do you monitor the central line site? Many aspects of patient safety had to be adapted. A third example is that bed alarms became somewhat ineffective. They had been a common strategy for fall prevention, but with the requirement to put on PPE, there was a delay before a staff person could respond to the alarm and prevent a fall.

KH: And what did you experience at Atrium, Poonam?

PS: Teammate health and safety became a critical issue, and some of the established patient safety practices needed to be enhanced with the onset of COVID-19 to also protect teammates and respond to the fluctuations in the supply chain. For example, our anesthesia team needed additional protections to decrease risk of exposure as those responsible for intubating patients. Our medication safety team had to use barcode scanning outside of the patient room and then use baby monitors to verify the patient that we're using the barcode on and providing that medication to. When, typically, staff would just use one N95 mask per patient, per time, now they had to decontaminate the mask for reuse. We also experienced, as Rhonda mentioned, difficulties with pressure ulcer prevention and timely response to bed alarms.

KH: All of these challenges, how have they impacted the healthcare personnel at your organization?

PS: I think there has been a big impact on mental health, fatigue, and burnout. Shifting staff to a different department, where they haven't worked before, definitely added more stress. Visitor restrictions increased the burden on staff related to communication of patient status, as well as providing additional emotional support for patients and their families. Then, of course, we saw COVID-19 illnesses within our own teammates or their family members. That led to other staff members having to take the increased workload, further adding to staff fatigue.

KH: Thank you. Rhonda?

RD: There were many contributors to staff strain during this pandemic. Many of their automatic behaviors no longer applied, which is very fatiguing. The guidelines changed frequently, and sometimes extensively, so someone might come to work and learn that the way they performed a task may be different from how they did it the day prior and could change again the next day. There was a need to be flexible and not let that create angst. There was an ongoing need for increased vigilance in patient monitoring. Some of the new protocols were difficult; people had to learn new tasks, new ways of documenting, new technologies. And as Poonam mentioned, the workload. The workload during the surges was tremendous.

On top of all of this, there were their own personal concerns about risk of exposure, bringing COVID-19 home to their families, concern for their colleagues who got sick. There were many patient deaths in younger individuals who came in walking, talking, and then deteriorated and, despite everyone's best effort, died. And sometimes there were multiple deaths in a day, which really took its toll. The distress of family

members who couldn't be with their loved ones also weighed on staff. I think the pandemic strained a lot of people's personal lives, their interpersonal relationships, their financial situations, and how their children were educated and cared for. I know in Tennessee, there has been public controversy about COVID-19 precautions and COVID-19 vaccination. Healthcare workers who were initially lauded as heroes sometimes then were considered contributors to vaccine-related conspiracy, and they faced pressure on every side. They were no longer coming in and doing work as usual. It has been tremendously straining mentally and very fatiguing. The providers who weren't doing shift work often worked day after day with no break. Leadership, chief medical officers, continued working through weekends and nights without a break trying to keep things going and give staff what they needed to deliver patient care.

KH: How are these challenges reflected in the data analyses that you've been performing? What are the trends that you have been seeing?

RD: We did not see the impact of staff strain and fatigue in data, but from conversations with them. There was concern that staff were so busy, there could be errors of omission, so the use of visual prompts and reminders took on more significance. There was an influx of less experienced workers to meet staffing demands, so some hospitals increased the care oversight responsibilities of nurse managers. Others brought quality professionals or nurse educators into patient care areas to provide real-time surveillance and help ensure that patient safety protocols were performed.

KH: I mean, that goes hand in hand, right? There is a link between errors of omission and fatigue, whether mental or physical.

RD: True. But the recognition of their vulnerability to error bred creativity in developing safety systems. For example, to make IV tubing long enough that pumps could be moved to hallways, staff had to find innovative ways to suspend the tubing so it didn’t touch the floor or other surfaces that might contribute to an infection.

With regard to pressure injuries for patients in the prone position, staff had to think about how to protect this area of the body. There is little padding on bony prominences of the front of the body—the sternum, the knees, the shins, the rib cage, the clavicles, and the face, and how ET [endotracheal] tubes and lines were stabilized, all had to be considered. We saw pressure injuries and as soon as these events occurred, we saw staff problem-solving and doing small tests of change around solutions. Tremendous innovation happened with good results but sometimes it would take a trial of two or three things to figure out the best solution. The other thing that we saw related to pressure injuries was a type of skin lesion the National Pressure Injury Advisory Panel has called “COVID skin.” COVID skin looks very much like deep tissue injury, or other types of pressure injury, but is actually skin infarction and skin death from COVID-19-related microthrombi.

We're looking at event data now through the first part of 2021 and we still had quite high COVID-19 patient volumes through the first quarter. I'm interested to see what occurs over the next two quarters and [in] which areas staff resume standard work and the successful patient safety protocols they had been using in the past and [in] which [areas they] integrate new components that were learned through the pandemic.

I've seen with the Surviving Sepsis Campaign and their recent consensus statement that the COVID-19 research was incredibly helpful in advancing knowledge about sepsis. So, I do think there will be some changes in time over how sepsis is treated, identified, and managed, because of knowledge that came from COVID-19. Some of the physiology, such as the significant systemic inflammatory responses for instance, were similar.

KH: I think that is a good place for us to end. Is there anything that either of you would like to add that we haven't discussed?

RD: I guess my final thought would be that I am humbled and impressed by the actions of healthcare professionals through this pandemic. Honestly. They set up incredible systems, very quickly, and provided excellent patient care. And when there was a challenge to patient safety, there was action to resolve it, and no idea was a bad idea. Teamwork was tremendously heightened through this pandemic, and the perspectives of each member of the care team had value, were heard, and were respected. Everything was in the interest of helping patients survive and continuing to provide great care to everyone who came through their doors, COVID-19 or not. When I would see those Healthcare Heroes signs, they really touched my heart because they are very true.