

PATIENT SAFETY

December 2022 | Vol. 4, No.4

Emergency Delirium Initiative

Nursing Education 2.0

Onboarding New-to-Practice Nurses

Hospital to Skilled Nursing Hand-Offs: How Can We Do Better?



LETTER

From the Editor



Regina Hoffman,
Editor-in-Chief
Patient Safety

First, I would like to wish all our readers, authors, reviewers, and staff a happy holiday season!

Here at *Patient Safety*, we have many reasons to celebrate. Did you know that *Patient Safety* articles have been viewed and or downloaded over 285,000 times since we launched in September 2019? Or that we are read in 175 countries?! While being read around the world is in itself an amazing accomplishment, knowing that our collective work and passion for patient safety is impacting real lives around the world leaves me without words.

In the following pages, don't miss a safety alert issued by the Patient Safety Authority and ECRI. This short but critical piece describes an event where a patient experienced an air embolism (life-threatening emergency) during a cardiac ablation procedure. Michelle Bell and Bruce Hansel describe the issue and steps healthcare providers can take to mitigate this risk.

Poor communication is a well-recognized cause for many disconnects in healthcare, and because it is so well recognized, many hospitals have programs for improvement—though most don't focus on the continuum from one point of care to the next. Abigail Baluyot et al. looked beyond their institution and identified vulnerabilities within hospital and skilled nursing facility hand-offs. The team implemented an improvement program that resulted in significantly reduced wait times for important treatments, such as intravenous medications, in the post-acute setting.

You may remember the article on perioperative delirium and agitation published in our December 2021 issue that brought to light the patient and staff safety issues surrounding delirium in the perioperative setting. In a follow-up manuscript, Taylor et al. outline a patient safety initiative that one Veterans Affairs hospital implemented to minimize its occurrence. Their manuscript invites the opportunity for further study on this important safety topic.

Our future depends on the next generation of healthcare providers. This issue includes a small but crucial study by Toothaker et al. that describes the transition of our next generations of nurses into the workforce and the safety challenges they face, and an interview by managing editor, Caitlyn Allen, with longtime nursing professor Eileen Fruchtl, who discusses what the future of nursing education may hold.

Other features in this issue include an update to acute care reporting rates in Pennsylvania by data editor and data scientist Shawn Kepner; a discussion with Erica Benning, Bureau of Healthcare director, Pennsylvania Department of Corrections, for an inside look of healthcare in the prison system; and an interview with John Olsen, et al. that tells us how a team from Jefferson Health implemented RISE: a formal peer support program that has only become more valuable following the pandemic.

This journal was designed for our authors to freely share the important work they do to improve patient safety, and for our readers to freely receive the information, strategies, and lessons learned to make the care they provide and receive safer. Thank you to our authors, reviewers, staff, editorial board, and readers for your continued contributions.

Stay safe and stay well!

A handwritten signature of Regina Hoffman in black ink. The signature is written in a cursive style and reads "Regina".

ABOUT PATIENT SAFETY

As the journal of the Patient Safety Authority, committed to the vision of “safe healthcare for all patients,” *Patient Safety* (ISSN 2689-0143) is fully open access and highlights original research, advanced analytics, and hot topics in healthcare.

The mission of this publication is to inform and advise clinicians, administrators, and patients on preventing harm and improving safety, by providing evidence-based, original research; editorials addressing current and sometimes controversial topics; and analyses from one of the world's largest adverse event reporting databases.

We invite you to submit manuscripts that align with our mission. We're particularly looking for well-written original research articles, reviews, commentaries, case studies, data analyses, quality improvement studies, or other manuscripts that will advance patient safety.

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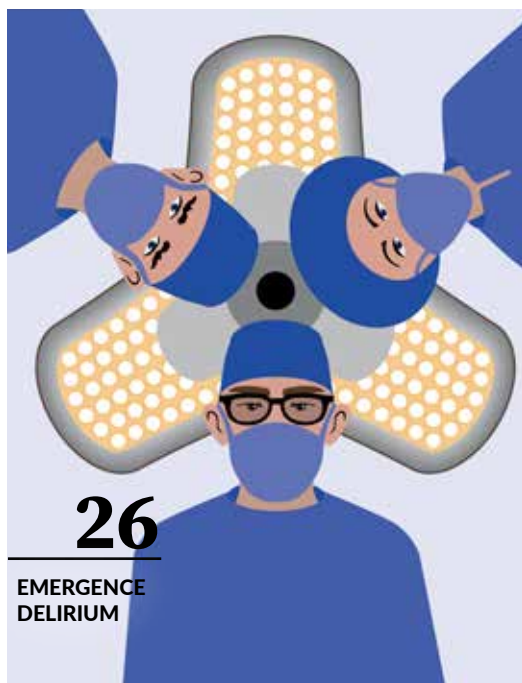
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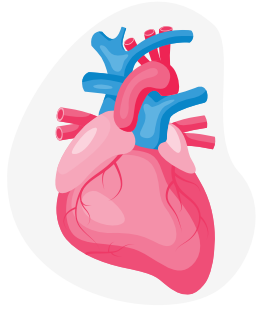
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A research team developed and implemented a tool that may help prevent emergence delirium.





Patient Safety Alert: Air Embolism During Cardiac Ablation

By **Michelle Bell, BSN, RN*** & **Bruce C. Hansel, PhD[†]**

During a cardiac ablation procedure, the catheter irrigation fluid bag emptied and was replaced by staff. While priming the tubing, air was noted in the tube, and the catheter was immediately removed from the patient. The patient experienced a decrease of heart rate and blood pressure requiring a code response.

Radiofrequency cardiac ablation requires the use of heparinized irrigation fluid to cool and anticoagulate the ablation site. If the procedure requires more fluid than originally hung, it requires the bag to be replaced. This introduces an opportunity for air to enter the irrigation tubing. Air emboli can then be infused into the patient, causing cardiac arrhythmia, myocardial infarction, respiratory symptoms, and/or neurologic symptoms, and, potentially, total cardiovascular collapse.

Solutions

- During cardiac ablation procedures, air should be removed from any bags and the pump (or any other pressurized delivery device) tubing should be primed before being connected to a patient.
- Do not bypass alarms that detect air in the pump or tubing systems.
- Do not prime the irrigation line without first disconnecting the tubing set from the patient, regardless of whether a stopcock is in use.
- Review the manufacturer's instructions for how to change fluid bags to ensure safe operations.
- Be aware of potential access points for air to enter the system and mitigate the risk.

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♦Patient Safety Authority

†ECRI

Disclosure: The authors declare that they have no relevant or material financial interests.



In Other Words...

If you've been diagnosed with a **heart arrhythmia**, a condition in which your heart beats too fast, too slow, or irregularly (skipping a beat),^a one of your treatment options may be cardiac ablation.

Cardiac ablation is recommended when the arrhythmia doesn't respond to medication or involves certain areas of the heart. This is a minimally invasive procedure, performed under anesthesia, in which catheters (thin tubes) are inserted through a tiny cut in your skin and guided inside blood vessels to your heart. There, electrodes on the ends of the catheters are used to locate the source of the arrhythmia, which averages around one-fifth of an inch in size.^b

In **radiofrequency ablation**, the doctor targets this small area with mild heat energy (radiofrequency) to destroy (ablate) the problem tissue that was sending abnormal electrical signals to your heart.^b The catheters in your blood vessels also carry **heparinized irrigation fluid**; this solution helps cool down the ablation site and contains the drug heparin to prevent blood clotting (anticoagulation).

If more fluid is needed, the empty bag is changed for a new one. During fluid bag replacement, air in the bag, pump, or tubing may enter the patient's blood vessels (**air embolism**), potentially resulting in catastrophic harm. This safety alert highlights the risk of air embolism during cardiac ablation procedures, as well as prevention strategies.

About the Authors

Michelle Bell (michbell@pa.gov) is the director of Outreach and Education with the Patient Safety Authority (PSA). Bell began working with the PSA in 2010 as a patient safety liaison for the Southeast region. She joined the PSA after completing a yearlong fellowship with the Institute for Safe Medication Practices, a world-renowned expert organization on medication safety.

Bruce Hansel joined ECRI in 1984 as a project engineer, bringing extensive experience in science and engineering. His career with ECRI has been focused on managing and investigating accidents involving medical technology of all descriptions—including numerous gas embolism incidents—as well as lecturing on investigative methodology and patient safety.

^aMayo Clinic. Heart Arrhythmia. Mayo Clinic website. <https://www.mayoclinic.org/diseases-conditions/heart-arrhythmia/symptoms-causes/syc-20350668>. Updated April 30, 2022. Accessed October 12, 2022.

^bJohns Hopkins Medicine. Catheter Ablation. Hopkins website. <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/catheter-ablation>. Accessed October 12, 2022.

HEALTHCARE IN PRISON: AN INSIDE LOOK

By **Erica Benning**, MBA♦ & **Caitlyn Allen**, MPH*†

Often depicted in films and television, much of what the general population knows about prison—particularly the infirmaries—comes from Hollywood. *Patient Safety* managing editor, **Caitlyn Allen**, sat down with **Erica Benning**, Bureau of Healthcare director for the Pennsylvania Department of Corrections (PA DOC), to discuss healthcare delivery for almost 40,000 incarcerated individuals: what can be done in-house, how her team handles inmates with mental illness, their COVID response, and more.

*Corresponding author ♦PA Department of Corrections †Patient Safety Authority
Disclosure: The authors declare that they have no relevant or material financial interests.



Caitlyn Allen: What does healthcare typically look like in prison? What kind of services do you routinely provide in-house?

Erica Benning: Healthcare inside a prison looks much like healthcare in the community. Incarcerated individuals have access to primary care providers, dentists, some specialty care providers, and hospital level of care (infirmaries) at the prison. The services routinely offered in-house are primary care (chronic care) clinics, sick visits, yearly physicals, dentistry, physical therapy, dialysis, X-rays, ultrasounds, wound care, ophthalmology, oral surgery, and hospital (infirmery) care.

What about in a jail setting?

County jails are not operated by the state DOC. You will need to contact each county jail for comment.

When might a prisoner be transported to a healthcare facility?

Outside healthcare facilities are utilized for specialist consults and care such as cardiology, orthopedics, urology, ophthalmology for eye surgery, and any needed surgeries. Incarcerated individuals are also transported to healthcare facilities when there is an emergency where the individual's life may be in danger, such as heart attack, head trauma, stroke, and lacerations.

What does the health of a typical prisoner look like? Are there common comorbidities?

Approximately 50% of all incarcerated individuals are considered vulnerable with comorbidities. The most common comorbidities inside our institutions are those typically seen in the community and consist of diabetes, hypertension, heart and lung diseases, HIV, and hepatitis C.

Are health clinics in prisons different than traditional health clinics? Does this setting influence how care is delivered safely?

The healthcare departments/clinics inside a facility are much like a traditional health clinic. For routine appointments, schedules are completed and a daily call out is created so the incarcerated individual is aware of their appointment and can be sent from their housing unit to healthcare for their appointment. Sick visits are requested each day and, again, a schedule and call out are created for the individual to be sent for their appointment. Within a prison setting and within the healthcare department, we do have correctional officers present for safety.

After the mental health institutions were largely all closed in the 1980s, there's a presumption that without many viable alternatives, most of those patients wound up in the prison system. Do you think that's accurate?

Currently our mental health roster is approximately 36% of our population. It is not clear what percentage of individuals would have been inpatient at a mental health facility prior to incarceration. It is safe to say that an individual who has severe mental illness, if not able to be at an inpatient mental health facility, does have a higher chance of entering the correctional system.

Along those lines, according to the FY22-23 budget, more than a third of prisoners are being treated for a mental illness, 21% for a serious mental illness. That must be tremendously challenging for your staff. What does mental health treatment look like? And what are some of the inherent challenges to delivering mental health services safely?

Mental health treatment is a large mission and focus of the PA DOC. We have a large team of psychologist, psychiatrist, and mental health workers that focus on the care of all incarcerated individuals that are on the mental health roster.

Most Common Comorbidities



Diabetes



Hypertension



Heart and lung diseases



HIV

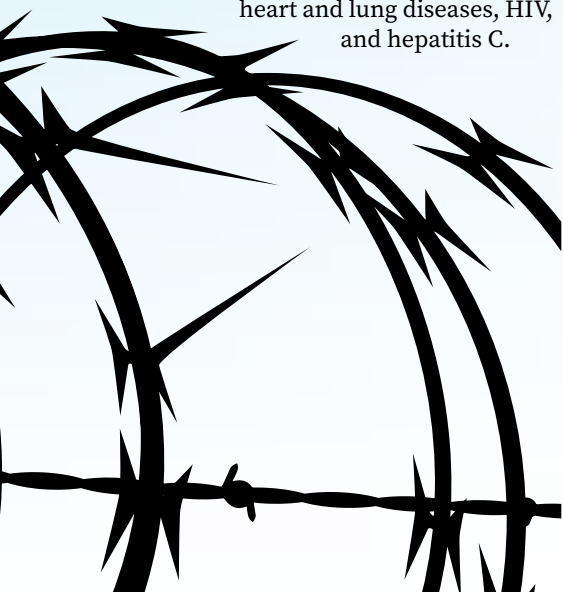


Hepatitis C

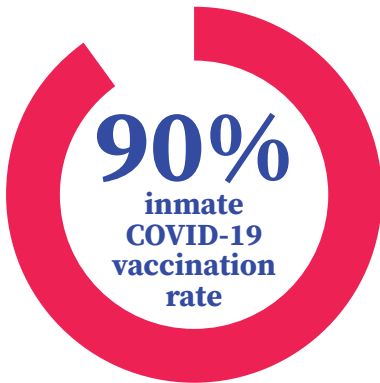


In-House Services:

- Primary care
- Clinics
- Sick visits
- Yearly physicals
- Dentistry
- Physical therapy
- Dialysis
- X-rays
- Ultrasounds
- Wound care
- Ophthalmology
- Oral surgery
- Hospital care



“It is safe to say that an individual who has **severe mental illness**, if not able to be at an inpatient mental health facility, does have a **higher chance of entering the correctional system.**”



MAT 101

Medication-assisted treatment is an evidence-based program to treat substance use disorders (SUD)—but what exactly is it?

Medication

Medications—including methadone, naltrexone, and buprenorphine—are given to inmates with opioid use disorder.

Assisted

The medication **assists** by curbing cravings, allowing inmates to focus on reentry and rehabilitation.

Treatment

Like with anxiety, cholesterol, or high blood pressure, the medication is a part of an overall **treatment** plan to help manage symptoms.

Source: Pennsylvania Department of Corrections

What about substance abuse? How many patients enter prison with an addiction who then need to go through detox?

Substance abuse, as in the community, is a growing concern within the PA DOC. The amount of self-reported substance use disorders has increased recently. We are seeing more and more new commitments and parole violators who have a substance use disorder. PA DOC is currently offering medication-assisted treatment (MAT). While I do not have the number of patients who enter prison needing detox, all individuals who are coming in from the streets undergo an intense screening for substance abuse and the need to detox.

According to Johns Hopkins, the overall case-fatality ratio (CFR) for COVID in the United States is 1.11%. According to the FY22–23 budget, the CFR for Pennsylvania prisons is 1.08% (slightly lower than the national average). That's not a story that's often told. What was your approach to handling the pandemic throughout the correctional system?

The department's mission throughout the pandemic was to keep all incarcerated individuals healthy while continuing with their care, custody, and control. This approach was successful by following CDC [Centers for Disease Control and Prevention] guidelines, minimizing contacts by decreasing cohort size, masking, handwashing, social distancing, facility cleanings, vaccinations when they became available, and use of antiviral medications when they became available. Communication was critical throughout the pandemic, and especially in the early days. Facility staff did an excellent job keeping the inmate population updated, engaged, and involved during uncertain times.

An exemplary 90% inmate vaccination rate has helped the department's COVID-19 mitigation continue to be largely successful systemwide. Inmates who received a COVID-19 vaccine were given a \$25 incentive in their commissary account from the Inmate General Welfare Fund (IGWF). The IGWF is self-supporting and not taxpayer-funded.

What are some of the long-term health effects from being in prison? For instance, patients who have spent long periods in solitary confinement may develop myopia.

Studies have shown that incarcerated individuals age more quickly than individuals in the community. Long-term incarceration also affects mental health and developing a mental health illness.

About the Authors

Erica Benning serves as the director of Healthcare for the Pennsylvania Department of Corrections. She is responsible for the administration of daily and long-term health and wellness services for almost 40,000 incarcerated individuals in Pennsylvania. Benning earned her Bachelor of Science degree in finance from Penn State University and a Master of Business Administration with a focus on healthcare administration from the Jack Welch Management Institute.

Caitlyn Allen (caiallen@pa.gov) is director of Engagement for the Patient Safety Authority and managing editor for *Patient Safety*, the PSA's peer-reviewed journal. Before joining the PSA, she was the project manager for Patient Safety at Jefferson Health, where she also was the only nonphysician elected to serve on the House Staff Quality and Safety Leadership Council. Previously, Allen also was a project manager and patient safety officer for Wills Eye Hospital.

The Challenges of Transition to Practice Expressed Through the Lived Experience of New-to-Practice Nurses

By **Rebecca Toothaker**, PhD, RN*[♦], **Marijo A. Rommelfaenger**, PhD, RN[†], **Randi Sue Flexner**, DNP, FNP-BC, RN[‡] & **Lora K. Hromadik**, PhD, RN[§]

DOI: 10.33940/culture/2022.12.1

Abstract

Background: The nurse's transition into practice is challenging. The need to facilitate a safe transition into practice and retain nurses is crucial in today's healthcare.

Objective and Design: The qualitative study aim was to describe the lived experiences of new nurses' safe transition into practice and their perceptions of functioning as safe practitioners.

Method: This descriptive, phenomenological arm of a larger, mixed methods study (Safety Transition Education to Practice study) interviewed 11 nurses with varied clinical backgrounds regarding their first six months as licensed nurses. Semistructured, one-to-one interviews with nurses representing geographical locations across the nation were conducted. Colaizzi's method of analysis was used to extract themes.

Results: The data revealed five themes with subthemes. The most universal theme was lack of practical knowledge (skills dexterity, real-world knowledge), followed by impostor syndrome, safety culture (unsafe environment, lack of supplies, lack of mentoring/management), internalized fear, and seeking the sage.

Conclusion: The experiences support the understanding that transition to practice is overwhelming and uncertain. Academic faculty and practice nurses' cooperative efforts can aid novice nurses in safe transition to practice through academic curriculum enhancement, preceptors, and nurse residency programs working toward narrowing the academic practice gap.

Keywords: *transition to practice, lived experience of new nurses, patient safety*

Introduction

Novice nurses often struggle with the transition from the ideal preparation of academia to the realities of patient care in the hospital. This role conflict can lead to stress, uncertainty of work expectations, or confusion of work execution that may lead to unsafe practices putting patients and nurses at risk. Concerns over new nurses' transition to practice are well documented globally and are suggested to influence the retention of new nurses in the workforce and profession.¹ Professional socialization of a nurse begins during education and continues throughout their career as they acquire new roles and responsibilities. Nurses need to enter the workforce with knowledge, skills, and attitudes to provide safe, quality patient care for the best possible patient outcomes.

The process of transitioning from student to professional nurse is complex. The transition into practice brings new responsibility and accountability. New nurses can experience high levels of stress as they attempt to provide safe, quality care.² Studies reflect socialization into the organizational culture as a factor crucial to transitional success^{3,4} that leads to potentially altered safety perceptions over time. Novice nurses often struggle with the transition to practice as employers seek safe nurses who can meet the urgent needs of the practice settings. Knowing the experiences of newly transitioning nurses will aid educators and employers with the development of experiential learning to enhance confidence.

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Methods

The Safety Transition Education to Practice (STEP) study—a within-subject, mixed methods study which conducted safety surveys of ready-to-graduate nursing students and new-to-practice nurses—was followed by interviews of a subset of the new-to-practice nurses. The specific aim of the qualitative arm was to explore the individual lived experience of first-year registered nurses on their individual level of preparation to function as safe practitioners and their experiences as new-to-practice registered nurses with a minimum of six months of experience related to safety. Semistructured, one-to-one interviews with 11 new nurses from across the United States were conducted. The participants were selected from a sample pool of registered nurses (RNs) participating in the longitudinal mixed methods STEP study. The interviewed nurses represented varied practice settings, including outpatient and inpatient settings, comprising a myriad of clinical specialties.

Eleven interviews were collected from first-year RNs who were currently transitioning into practice. Purposive sampling was used to recruit participants from a sample of nurses who participated in the quantitative portion of the STEP study. The sample for this study was predominantly female (91%). All participants were within their first six months of nursing practice and practiced in a variety of healthcare settings. The study was approved by the Indiana University of Pennsylvania Institutional Review Board. Informed consent was obtained for each participant, as well as for each interview video recorded via Zoom.

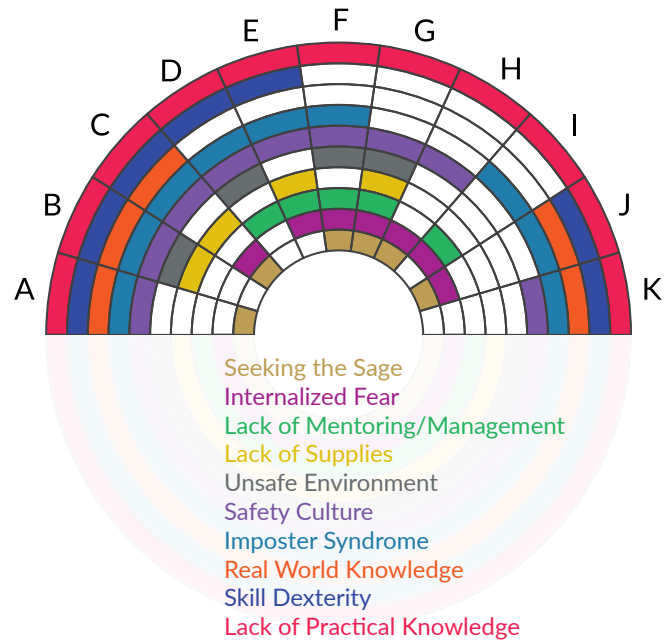
Lincoln and Guba⁵ denote the four steps inclusive of trustworthiness in qualitative research as credibility, transferability, confirmability, and dependability. One researcher with a doctorate in philosophy and experienced in qualitative interviewing conducted the interviews, guiding participants through the semistructured process, meeting credibility standards. The interviews were recorded and transcribed verbatim, which speaks to the integrity and transferability of the interviews. Member checking ensured dependability.

Data collection and analysis

Semistructured interviews that were video recorded via Zoom were used to obtain qualitative data. Interviews continued until data saturation was achieved during the last few interviews. Data collection concluded when analysis of the interviews revealed no new information. All interviews were transcribed verbatim as close to the timing of the interviews as possible and analyzed using Colaizzi's⁶ seven-step method. Each recording was listened to five times and compared to the transcription to ensure accuracy. The data from the interviews were analyzed and occurred simultaneously with data collection. Key phrases among the participants' descriptions were then placed in a Word document and color-coded into themes. The quotes from the participants grouped (A–K) were displayed while continual immersion and understanding of the data were analyzed. The grouping of nodes continued until the themes clearly emerged from the data. After an exhaustive review of the 11 interviews, five main themes and five subthemes emerged from the data that illustrate the essence of their lived experience (**Figure 1**).

Figure 1. Emerging Themes as Expressed by Each Study Participant

In their first year of practice, all the STEP study RNs interviewed expressed a lack of practical knowledge as a barrier to the smooth transition to practice. Most suffered from imposter syndrome and expressed concern about safety culture.



Theme 1: Lack of Practical Knowledge

The first theme to emerge was the lack of practical knowledge. All 11 participants reported, to varying degrees, the impact of lacking knowledge on their experience as new nurses. Key phrases included “I didn’t know,” “I needed to catch up,” and “there’s so much that I don’t know.” The nurses gave examples of a wide variety of events in the clinical setting that reveal a lack of skill sets and practical knowledge. Participant I’s comment describes the consensus among the participants:

I’ve graduated, I passed the NCLEX [NCLEX-RN, National Council Licensure Exam for Registered Nurses]... like feeling okay ... and then that kind of goes downhill from there and you’re like okay there’s so much that I don’t know, there’s so much that I need to learn in order to be an effective nurse that transitioned well into practice.

The nurses openly gave credence to wanting to perform safe practice; however, they felt unprepared to meet the demands of the practice setting. Following analysis of the main theme, two subthemes emerged: skill dexterity and real-world knowledge.

Subtheme One: Skill Dexterity: The subtheme skill dexterity emerged from the interviews when the participants said, “need for experience,” “fundamental catch-up,” “not knowing how to perform a skill.” The need to have more hands-on skill and dexterity resounded in the interviews. For example, Participant A describes an experience: “I’ve been doing pretty well and then

you are handed someone in a Posey bed with four-point leather restraints and you're like ... OK ...um. ...I didn't know that I needed to know how to do this, but here we are." Participant C shared, "And it became evident early on in my position and I had to kind of be very vocal about it and ask for things that I needed like extra time practicing learning how to prime fluids. ... Things like that that I didn't really get a ton of practice within my clinical experience."

The overwhelming majority of the participants felt that they needed more time to practice skills before graduation. Their lack of live clinical experience in their nursing program and effective mentoring left these new graduates yearning for additional hands-on skills and practical application.

Subtheme Two: Real-World Knowledge: This subtheme developed when participants stated the following phrases: "need more hands-on experience," "base knowledge," "needing more." The shared narratives reflected the need for real-world knowledge. Knowing is developed through nurses' experiences and reflections. The participants felt unprepared for application to the practice setting. For example, Participant B explained her transition in practice as lacking real-world knowledge to provide comprehensive and effective nursing care. She shared:

As a new-grad nurse you are taught that a disease process follows a continuum, so it was difficult not being able to be one step ahead of the game or feeling that you were not ready to take on these critical patients because you were unsure how to practice safely as well as be your patients' advocate.

Participant C echoes the sentiment: "... Like foundational catch-up and it caused a lot of stress and anxiety for the first few months." Each of the participants felt prepared to take the NCLEX but lacked the complete ability to interlink knowledge to practice. They described a feeling of a shift, a displaced pattern of knowing, and a passion for needing applicable knowledge to practice.

Theme 2: Impostor Syndrome

As the nurses progressed from students to staff nurses, their knowledge and skills expanded. At the beginning of their transition and orientation, nine of the participants highlighted feeling unprepared to practice in their assigned clinical setting. This theme captured sentiments of not being ready for independent nursing practice, feeling inept compared to their peers, and an overwhelming lack of confidence in their abilities to perform their duties. New nurses desire to fit into a team. They often concealed feelings of inadequacy and hid their questions to align with their peers. While all participants felt their program prepared them for the NCLEX, many reported feeling stressed and unprepared for their transition to clinical nursing.

Participant C describes: "But I think that, like the beginning months, were really stressful and I remember feeling like oh my gosh can I do this? Like I might not be capable of this. Like I feel capable, I thought I was... And constantly questioning myself and feeling like that frauds syndrome."

Participant F echoes: "... Was like wow, I think that I'm like doing something wrong all the time, like ... I think there was a couple of times when I went home and I had like a massive panic attack. Because I was like they all hate me ... they all think that I'm incompetent ... like I can't do it."

The nurses within this study felt that they needed more time in the transition of practice. Participants expressed a lack of confidence and uncertainty in their abilities despite completing their training. Their inability to feel prepared for their new role and meet the expectations of patients, colleagues, and themselves yielded feelings of insecurity.

Theme 3: Safety Culture

Nine out of the 11 participants were able to describe a just culture. The lessons in the educational programs formed the cornerstone of safety culture knowledge in all participants. The nurses gave accounts of knowing what a safety culture is and how this type of culture can benefit expeditious reporting without penalty. Each participant was conscious of oneself vocalizing their perception of safe practice as an internal aspect of safety culture.

Participant A states: "... Safety culture to me requires, first of all, there being, you know, protocols and practices in place to ensure the safety of patients and safety of staff. But then also having that just culture of being able to speak freely about safety issues without fear of immediate consequence."

Likewise, Participant K explained: "A lot is that safety is a priority, not putting blame on anybody, but kind of seeing how the system failed and how to better the system so that those types of safety issues don't happen again."

Most of the nurses identified no fear of punitive judgments from reporting an error. However, near misses explained by the participants appeared to not be picked up by the novice nurses largely related to their lack of depth in understanding the role of near misses in patient safety culture. The following example reflects this:

Participant I highlights: "I scanned in two pills, but it was supposed to just be one. And thankfully this patient had taken this medication a very long time, but like 'Oh, I know I only take one of these,' but I felt horrible that I almost scanned in their own wrong medication. So, I am not sure that I was supposed to [in reference to filling out an incident report on a near miss]."

Subtheme One: Workplace Environment: This subtheme emerged when the participants used phrases such as safe environment. The majority of shared examples overwhelmingly reflect an environment of safety within their workplace.

Participant B notes: "For me, luckily I had someone who I was consistently with that person, so they were able to see me grow and I was also very lucky that he was an experienced nurse."

However, four participants shared stories where the environment was unsafe due to staffing shortages. The below highlights give insight into unsafe practices which reflect unsafe workplace environments. The new nurses forge forward in the delivery of care, but not without trepidation.

Participant C states: "So when I came in, I noticed that 'she' was like very flustered but she gave me to report it went fine ... but when I was checking those against my MAR [medication administration record] and just checking the lines and all that and I noticed that the one syringe was already expired like hours ago."

The nurses openly gave credence to wanting to perform safe practice; however, they felt unprepared to meet the demands of the practice setting.

Participant F reflects on their practice on a medical surgical floor:

I was some of us are up to six... seven... eight patients a night. If we didn't have the staff like they frequently call it like call-ins. Short staffing for the entire hospital, so I was kind of able to kind of figure out like my most stable people are....What they needed at that point in time, like who I needed to go see right then in there, like, I feel like I've just been able to kind of ... Like as bad as it sounds like, oh yeah one person's taking eight people like it kind of helped me to learn like time management skills.

Subtheme Two: Workaround/Environmental/Supplies: Several participants noted not having the supplies needed to perform procedures on patients. The added stress to the nurses' daily routine left them feeling unsafe as the need to deviate from established policies and procedures was warranted.

Participant C notes: "I was shown to do it this way and then, also with supply issues was difficult for learning things as a new nurse, because our policies were based on the supplies and equipment that we normally have. But with all the supply chain issues during COVID we were using different replacement products."

Participant E echoes: "Like how am I supposed to do these things the way I was taught them, without the supplies that I was given when I was being educated?"

Some nurses expressed frustration in professional skill development linked with the lack of available supplies. The students valued direct patient care experiences which afforded hands-on training with equipment/supplies in their educational program. However, the transference of learned skills needed in practice left the participants unsure of how to apply the same principles safely. The variations of available equipment were seen as challenges in providing safe care.

Subtheme Three: Lack of Mentoring/Management: Lastly, the nurses highlighted poor unit management and lack of available mentoring which led to frustration and greater awareness of safety issues. The nurses were left feeling the need for self-preservation. Participant D shared: "The practice manager who hired me departed a few weeks later, and another departed a few weeks later, and there's been another two clinical supervisors [that left] in the same period of time."

Participant D notes that due to a lack of management and staff it was difficult to locate an individual to answer questions. Additionally, Participant G resounded the need to "protect my license" and further stated, "I've just thrown on the floor with a preceptor who was not a great preceptor, bless their heart. And I was just kind of thrown to the wolves and it was awful but the school, I went to is a really good school and I just trusted in my training."

Participant I noted feeling "being alone" and loosely supervised as a transitioning nurse. Despite an orientation period in the work setting, the participants felt the need for longer orientation, more consistent preceptors, and a more prescriptive transitional program. The variations in orientation periods, residency programs, and preceptor assignments left the participants feeling alone and not ready for individual practice.

Theme 4: Internalized Fear

The fourth emergent theme became apparent when seven of the participants expressed a lack of confidence, which stifled their performances. Key phrases included "practicing safely," "don't want to hurt anybody," and "being nervous." The participants desired to render safe patient care but felt hindered by internalized fear about making a mistake.

Participant J noted: "I try to be as safe as possible, just because I really don't want to hurt anybody and that's my biggest fear is that somebody gets hurt because of something that I do ... yeah just not wanting to look dumb by asking."

Likewise, Participant E stated: "And I think that this is the biggest learning curve, because how do I practice safely when I don't have enough people surrounding me to give the care that I need?"

Additionally, Participant H said: "I think that was the biggest one is just being able to make sure that you understand, and you are able to put what you learned into practice. And that, first, that first initial job kind of putting it into practice makes you a little nervous."

The exposure to new surroundings, the pandemic's effect on the nurses' education with diminished live clinical experience, and the high acuity of the hospital environment left the participants feeling nervous and unsure of their knowledge and skills.

Theme 5: Seeking the Sage

The nurses provided accounts of needing and wanting more out of orientation and assigned preceptors. Seeking the sage renders the identification of an experienced nurse to guide them in their transition to practice. While the nurses indicated being behind the learning curve due to impeded educational experiences, they expressed the expectation to "hit the ground running" (Participant C) in the chaotic pandemic healthcare environment. For example, some reported shortened orientations, unfulfilled residency programs, and their perspective of current nursing staff burnout.

Participant G shares: "The nurse residency program was not really a nurse residency program. I was just thrown on the floor with a preceptor who was not a great preceptor."

Participant A stated: "So, it was really difficult for me, I think, to have my nursing judgment right away because all I wanted was the input of all of the other nurses who are around me."

The successful transition is heightened by a desire for a strong preceptor relationship which enhances the positive perception of new nurses. The desire for an engaged preceptor throughout the initial transition was described as being beneficial for the learning experience.

Discussion

The thematic analysis of the qualitative arm of the mixed methods STEP study supports the vital need to improve nursing graduates' transition to practice, narrowing the academic practice gap between a student nurse and licensed nurse. The thematic analysis of the STEP study qualitative participants' comments related to perceived benefits and barriers to a safe transition mirrored the findings in the literature.^{7,8} In 2011, the Institute of Medicine noted the need for nurse residency programs to aid in the transition to practice for nurses.⁹ Eleven years later, in 2022, the need for transition support remains evident as indicated by the interviews with the nurses in this study (n=11).

All 11 participants expressed a *lack of practical knowledge* as a significant barrier to their transition to the RN role with sub-themes of a need for more *skill dexterity*, and *real-world knowledge* emerging. While feeling well prepared to pass the NCLEX-RN licensure exam, the nurses quickly recognized that the healthcare realities of their new jobs were vastly different from their more structured academic experiences. The American Association of Colleges of Nursing¹⁰ recently published *The Essentials: Core Competencies for Professional Nursing Education*, which charges nursing education to move to a competency-based model. This move toward competency-based education for nurses will potentially narrow the skill dexterity gap; however, the socialization to the realities of the "real world" of healthcare and moving the new nurses along the novice-to-expert continuum remain for the most part unaddressed. The nurse participants all expressed a need for more direct-patient-contact clinical time with less "busy work," such as case studies and academic exercises, during their pre-licensure education. As noted by Benner,¹¹ graduate nurses cannot be expected to function at an experienced level as the new nurse is considered a novice in practice. However, the study participants expressed a need to move quickly to a more experienced practice level to meet the needs of the patients, their units, and the perceived expectations of their colleagues. The resources were not available to make this move toward experienced clinical practice which they perceived was necessary.

The second most frequent theme emerging from the data was impostor syndrome "characterized by persistent doubt concerning one's abilities or accomplishments accompanied by the fear of being exposed as a fraud despite evidence of one's ongoing success."¹² As stated above, the study participants expressed preparedness for the licensure exam. Passing the licensure exam demonstrates to society that a registered nurse is cleared to practice as an entry-level generalist. The study participants were prepared to enter practice according to the licensure standards; however, they were saddled with self-doubt regarding their clinical abilities. Despite continuing to perform in their new roles, some of the nurses expressed self-doubt that lingered for months, as reported during the interviews. A cohort of the study participants started their careers in specialty units that required knowledge and skills beyond their training. This led to the next theme of safety culture, which included subthemes of unsafe environments, lack of supplies, and lack of mentoring.

Lack of confidence in their own abilities flows naturally from assignments in high acuity units that exceed their academic training and job orientation, leading to the emergence of safety culture as a theme. The association of unsafe patient care due to poor work environments and lack of supplies has been documented

in the literature across multiple healthcare settings.^{13,14} In a large pre-pandemic national study, Aiken et al.¹² reported the majority of nurses surveyed indicated a fair-to-poor work environment. The study noted that organizations with a healthy work environment resulted in nurses reporting greater patient safety, increased job satisfaction, and lower burnout rates. The STEP study participants validated the impact of poor work environments on their own transition as novice nurses and their ability to sustain safe patient care and quality outcomes.

Along with poor work environments and lack of supplies, nine study participants indicated a lack of mentoring or leadership from management which led to patient safety concerns. Two of the study participants reported supportive mentorship which promoted an overwhelmingly positive experience in their transition to practice. With one-fourth of new graduate nurses resigning from their positions in their first year of practice,¹⁵ the impact of the relationship between mentor and new-graduate-nurse should not be overlooked. The study participants indicated disappointment in their orientation process, with or without a residency program, which did not meet their expectations of what was described to them when they were hired. Amid the nursing shortage, the challenge for hospitals to recruit and train preceptors within their organizations has been documented alongside the new graduates' expectations of being provided a qualified preceptor.^{7,16} The quality of support provided by the preceptor was highlighted by the study participants as a major influencer on their transition to practice and more specifically their self-confidence, role acquisition, and job satisfaction.



Two of the study participants reported supportive mentorship which promoted an overwhelmingly positive experience in their transition to practice. With one-fourth of new graduate nurses resigning from their positions in their first year of practice, the impact of the relationship between mentor and new-graduate-nurse should not be overlooked.

The final two themes of internalized fear and seeking the sage were expressed by the study participants to reflect their desire to *do no harm* and to not jeopardize their licenses, so they were being extra careful. This included seeking out the wiser and more experienced nurse available at the time. In several incidents, they reported having no one to ask and no one to validate their action, thus the fear of committing an error loomed large. This fear is justified as Pillai et al. showed that new-to-practice nurses reported more errors than their more experienced counterparts.⁸

In summary, lacking real-world knowledge to navigate the complexities of their healthcare systems overshadowed all the other emerging themes. The study participants manifested impostor syndrome with feelings of inadequacy and uncertainty. The fear of making a mistake was often internalized when there was a lack of support from a mentor or more senior nurse to promote their critical reasoning. All these themes impacted patient safety or

their perception of a safe culture in their workplaces. The majority of the study participants were able to identify the concept of just culture; however not all lived the gold standard of a blame-free culture of safety they were taught in school. Entering healthcare during a global pandemic perhaps set these new nurses up for greater challenges than their predecessors, nonetheless, their experiences are consistent with those previously documented in the literature. The experiences of the study participants shed light on the pre-licensure and post-licensure needs of graduate nurses transitioning to clinical practice.

Limitations

This study had multiple limitations. The first limitation relates to sampling: sample size and sampling method. Participants' self-selection followed their completion of the quantitative arm of the study and interest in participating in an interview. This purposive sampling strategy did not account for maximum variation in the participants' first work settings. As interviews were analyzed, participants ultimately did work in a variety of settings, thus achieving variation for the study. The final sample of 11 participants reached theme saturation. The second limitation was the use of self-reporting for data collection and the participants' motivation for sharing their transition experiences. The information shared was generally heavier weighted toward sharing of negative experiences, which could attribute to the desire for participation in the interviews. Lastly, the effects of the COVID pandemic impacted both their nursing school clinical experiences and their transition to their work settings, which may have affected the results of this study. Many participants experienced less-than-optimal clinical preparation with limited direct patient care. The pandemic also affected the work settings where the participants were faced with greater nursing shortages, burnout, and high patient acuity at the time of their entry into practice.

Conclusions and Recommendations

This study focused on the lived experiences of nursing students as they transitioned into practice. The overarching theme emerging from this study is the participants' realization that they lacked the practical knowledge of working within the chaotic healthcare system. While the participants stated they were prepared in safety practices and able to explain the concepts of just culture when in the midst of unsafe situations, the participants did not always recognize the nuances of unsafe situations nor the need to respond to unsafe practices. McDonald and Waring described the benefit of considering errors and unsafe behaviors resulting from larger systems-related issues: "This is important for challenging the 'blame culture' so that clinicians feel confident that, in reporting their experiences of unsafe care, these will engender learning and improvement, rather than disciplinary actions."¹⁷ Enhanced education and training in just culture during formal nursing education could improve the judicious reporting of errors and therefore improve organizational safety culture.¹⁸

As novice nurses transition to their new identity as a practicing nurse, they may adhere to perceived professional norms of collegiality and the notion of personal and professional self-regulation at the expense of patient safety.¹⁷ The current study supports the notion that the need to assimilate into the professional culture imposes a strong

influence on patient safety practices of the new nurses. The lived experience of the new nurses revealed some safety practices were directly opposed to those they were taught in academia.

The study's themes support the need for greater availability of quality nurse residency programs aiding in the transition to practice for novice nurses.¹² American Nurses Credentialing Center (ANCC) and Commission on Collegiate Nursing Education (CCNE) provide standards of best practice that accredit nurse residency programs.^{19,20} The study demonstrated preceptors had a huge impact, either negative or positive, on the participants' experiences. The majority of the participants expressed dissatisfaction in their orientation or mentoring experiences and some were disillusioned by promises unkept by their employers. Inconsistency in assigning and ever-changing preceptors led to a lack of consistency and feeling overwhelmed with challenges locating experts on the nursing units for the transitioning nurses. Ulmen et al. reported the number of primary preceptors for transitioning to practice nurses ranged from one to 15, with a mean of 3.41.²¹ Therefore, seeking to develop or improve a residency program, or at a minimum following and utilizing known best practices, would greatly improve the transition to practice for the new nurses.²²

In summary, this qualitative arm of the STEP study sought to explore the lived experience of first-year registered nurses on their individual level of preparation to function as safe practitioners and their experiences as new-to-practice registered nurses with a minimum of six months of experience related to safety. The thematic analysis revealed the new nurses were prepared with the basics of safety knowledge and safety culture but lacked the practical clinical experience needed to navigate the realities of healthcare in which they were expected to practice. The nurses lacked confidence in their role, questioning their abilities to safely care for patients while expressing disillusionment in organizations' commitment to their success and disappointment with the lack of consistent preceptor support.

The result of this study should implore both academic faculty and practice nurses to work together in aiding the novice nurse. This study supports the implication that transition to practice is often overwhelming and uncertain for many new nurses, as expressed by the study participants. The nurses' lived experiences may inform academic curriculum enhancement and nurse residency program improvement to better facilitate the transition to practice of newly licensed nurses as safe, effective practitioners.

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Improving Communication From Hospital to Skilled Nursing Facility Through Standardized Hand-Off: A Quality Improvement Project

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Abstract

Background: Inadequate hand-off communication from hospital to skilled nursing facility (SNF) hinders SNF nurses' ability to prepare for specific patient needs, including prescriptions for critical medications, such as controlled medications and intravenous (IV) antibiotics, resulting in delayed medication administration. This project aims to improve hand-off communication from hospital to SNF by utilizing a standardized hand-off tool. This project was conducted in an inpatient, 50-bed, post-hospital skilled nursing care unit of a local SNF. The participants included all 32 staff nurses employed by the SNF.

Methods: Lewin's change management theory (CMT) guided this quality improvement (QI) project. Baseline assessment included a one-month chart review of 76 patient charts that was conducted to assess the disparities related to ineffective hand-off and medication delays in the SNF before intervention. The wait time for the availability of prescriptions for controlled medications and IV antibiotics, and delays in medication administration were assessed.

Intervention: Multiple randomly selected hospital-to-SNF hand-offs were observed. Semistructured interviews with all staff nurses were conducted using open-ended questions about hand-off structure and process matters. Data gathered from observation and interviews were used to create the standardized hand-off tool used in this project. In-service training on hand-off tool utilization for SNF nurses was conducted. Champions for each shift were cultivated to assist with project implementation.

Results: After six weeks of implementation, a chart review of 101 patient charts was conducted to evaluate the effects of the hand-off tool on the wait time on the availability of prescriptions for controlled medications and IV antibiotics, and medication administration. The wait time of prescriptions availability during the hospital-to-SNF transition was decreased by 79% for controlled medications, with an associated 52.9% reduction in late administration, and decreased by 94% for IV antibiotics, with a 77.8% reduction in late administration.

Conclusion: The use of standardized hand-off resulted in improved communication during the hospital-to-SNF hand-off and significantly decreased the wait time for the availability of prescriptions for controlled medications and IV antibiotics. Integrating standardized hand-off into the SNF policies can help sustain improved communication, medication management, and patient transition from hospital to SNF.

Keywords: *communication, medication administration, standardized hand-off, quality improvement, skilled nursing facility*

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Introduction

One out of 5 hospitalized patients is discharged to a skilled nursing facility (SNF).¹ The transition of patients from hospital to an SNF is often associated with communication failures, resulting in treatment delays, medication errors, patient harm, patient death, and increased healthcare cost.²⁻⁴ In the United States, healthcare institutions spend over \$12.4 billion annually due to communication inefficiencies, with \$4.9 billion accounting for ineffective communication in nursing practices and \$6.6 billion for poor communication resulting in patient overstay.⁵ Improved communication is needed to ensure proper transfer of crucial patient health information, better care management, and increased patient safety.

Impact of the Problem

Patients admitted to SNFs are vulnerable and at high risk for functional and clinical decline,⁶ making the transition from hospital to SNF, including patient hand-off, critical. Communication failures and delays in care often occur during the patient transition from the hospital to SNF due to the incomplete or inaccurate transfer of patient information.⁷ Failures in communication are the primary root cause of approximately 80% of sentinel events, including patient harm and medical errors.⁸ In 2016, communication failures were associated with 30% of malpractice claims in the United States, causing 1,744 deaths and \$1.7 billion in malpractice costs over five years.³ Incomplete patient information creates additional work for nurses clarifying orders; delaying pharmacy delivery of critical medication, such as intravenous (IV) antibiotics and controlled substances; and ultimately delaying administration. Delayed medication administration is a medication error that costs an additional \$1,277–\$9,062 per event⁹ and can cause prolonged recovery times, severe patient harm, and death.^{10,11}

Available Knowledge

Hand-Off Communication

Hand-off communication conveys patient information and transfers the responsibility of care from one nurse to another or from one setting to another.¹² The communication between healthcare settings should pass on important patient information that the receiving facility will utilize to seamlessly continue the patient's care. Effective communication should be complete, clear, brief, and timely.¹³ Interventions to improve nurse-to-nurse communication in different hand-offs, such as during shift exchange and unit transfer, have been carried out in many healthcare settings. However, efforts to improve communication during the nurse-to-nurse hand-off from hospital to SNF have not been widely implemented. Improved communication in patient hand-offs between hospitals to SNFs is critical to maintaining continuity of care and enhancing patient outcomes.

Hand-Off and Medication Management

Studies showed that SNFs often receive mismatched, missing, inconsistent, and inaccurate information, including patient histories, allergies, instructions for care, and medication lists on patients' transfer forms and discharge summaries from hospitals.^{2,4,14} Researchers have found that 22% of the hospital-to-SNF hand-offs needed clarification about antibiotic prescriptions

and 42% of prescriptions for narcotic medications were missing.⁴ Patients transferred to SNFs had to wait at least 24 hours to receive critical medications.¹⁴ Medication discrepancies increase nurses' workload and cultivate a sense of mistrust of the information received from the hospital.² The literature supports the importance of standardizing hand-off to ensure clear and accurate information exchange during the transition process.^{2,4,14,15}

Effective Hand-Off Tools

The SBAR (situation, background, assessment, and recommendation), I-PASS (illness severity, patient information, action list, situational awareness and contingency plans, and synthesis by receiver), and checklists methods have successfully improved hand-off during the shift-to-shift and unit-to-unit report. These structured communication tools have demonstrated effectiveness in ensuring complete, accurate, and organized patient information is discussed, avoiding confusion and delays, reducing preventable adverse events and medical errors, and encouraging seamless nursing workflow.¹⁶⁻²⁴ Still, standardized hand-off tools should incorporate other components, such as staff education, training, and organizational change,³ and be developed based on the unit's needs.²⁵

Rationale

Lewin's change management theory (CMT) guided this project because of its utility in changing group behavior.²⁶ CMT has three major concepts: driving forces, restraining forces, and equilibrium. Driving forces facilitate change and push the person or group in the desired direction while restraining forces hinder change and move the person or group in the opposite direction. CMT suggests that recognizing, plotting, and establishing the potency of forces can help the change agent understand why individuals or groups behave as they do and determine what forces need to be weakened or strengthened to achieve change or new equilibrium.

CMT has three stages: unfreezing, movement, and refreezing. Unfreezing refers to getting ready for change and involves acknowledging a problem, distinguishing the need for change, and encouraging others to see the need for change. Movement is when the proposed change is implemented; clear communication of specific action plans to achieve desired results are crucial for this stage. Refreezing occurs when change is stabilized and becomes the new habit or equilibrium.²⁶

Specific Aims

This quality improvement (QI) project was conducted to improve communication from the hospital to SNF using a standardized hand-off tool. The specific objectives of this project were:

1. 90% of SNF nurses attend in-service on the standardized hand-off tool utilization
2. 90% of SNF nurses utilize the standardized hand-off tool during verbal reports
3. 90% of all controlled medications and IV antibiotics orders reconcile promptly

- 3a. 90% of necessary controlled medication prescriptions were available (written or called in) and sent to the pharmacy within two hours of the patient's arrival at the SNF
- 3b. 90% of necessary IV antibiotic orders prescriptions were available and sent to the pharmacy within two hours of the patient's arrival at the SNF

Methods

This project evaluated the effectiveness of the standardized hand-off tool in improving nurse-to-nurse communication and wait time on medication management during the transition of patient care from the hospital to SNF. This project was conducted in an inpatient, 50-bed, post-hospital SNF unit in a suburban area in Michigan. Patients are typically admitted from several local hospitals after receiving acute care interventions. The SNF unit had a mean patient-to-nurse ratio of 12:1, with three nurses assigned on each 12-hour shift. The participants included all 32 staff nurses employed by the SNF. This QI project employed a mixed-methods design using observations, semistructured interviews, and a retrospective review of patients' charts. The baseline wait times on the availability of prescriptions and delays in medication administration were assessed. Data were collected at pre-intervention using the three data collection methods mentioned. Data were again collected post-intervention using the same data collection methods used pre-intervention. This project was implemented from October 2021 through December 2021.

Baseline Data

Before the intervention, a one-month chart review was conducted to assess the disparities related to ineffective hand-off and medication delays. Seventy-six SNF patient charts were reviewed and revealed 56 events of delayed controlled medications and IV antibiotics administration in that month because prescriptions for controlled medications and IV antibiotics were not promptly sent or called into the pharmacy. Based on Agency for Healthcare Research and Quality's estimates for medication errors,⁹ the SNF's 56 medication error events translate to an additional \$71,512–\$507,472 for that month alone. The average medication administration delay in the hospital-to-SNF transition was 26.9 hours for controlled medications and 35.4 hours for IV antibiotics. Fifty-five percent of controlled medications and 77.8% of IV antibiotics were given past the permitted administration window due to the unavailability of medications. State of Michigan regulations require healthcare facilities to supply and administer medications to the right patient at the right time.^{27,28} The SNF policies specify that controlled medications on an as-needed basis should be immediately available when the patient arrives in the unit, and controlled medications on a scheduled basis and IV antibiotics should be administered within two hours. Thus, the two-hour time frames specified in the project objectives were included to reflect compliance with the SNF policies on medication administration.

Hand-Off Process in the Project Setting

Without specific guidelines for hand-off in the chosen project setting, the SNF nurses typically use scrap paper to write notes during verbal reports with the hospital nurse. Information from the nurse-to-nurse report is inconsistently passed on to the next shift or documented and is often lost in the unit. Some of the

hospital information becomes inaccessible due to changes in nursing staff with shift changes. This leads to nurses spending valuable time locating critical information for patient care, decreasing their time on actual patient care. When hand-off communication fails, patient harm and other adverse effects on patient care occur, including inappropriate treatment, delays in care, medicine errors, and prolonged patient stay.³

Medication Management Process During Transition in the Project Setting

Upon the patient's arrival from the hospital, the SNF nurse enters the orders into the patient's medication profile after verification with the SNF provider. The SNF's pharmacy, located out-of-state, processes prescriptions and sends medications on the next available delivery day. Meanwhile, SNF nurses can obtain controlled medications from the medication dispenser machine if authorized by the pharmacy. Authorization is given to the nurse after prescriptions are received and processed by the pharmacy and usually takes about an hour. Prescriptions for controlled medications can be sent to the SNF by the hospital discharging the patient or written or called in by an SNF provider. Frequently, patients arrive from the hospital without written prescriptions. When prescriptions for patients' controlled medications are not available, patients typically have to wait long periods or end up missing a dose, resulting in patients' suffering and compromised health and safety. Nurses can also retrieve IV antibiotics from the medication dispenser machine; however, this rarely occurs due to lack of nurses' time to prepare and mix IV antibiotics by hand and the unavailability of other necessary IV supplies. The antibiotic prescription must be promptly sent to the pharmacy so the patient's readily prepared IV antibiotic supply is received and administered on time.

Intervention

Before introducing the project intervention, multiple randomly selected hospital-to-SNF hand-offs were observed. Four aspects were assessed: the current hand-off process in the SNF unit, the type of information included in the hand-off, the location where gathered information from hand-off is stored and documented, and barriers to hand-off. Semistructured interviews with all SNF staff nurses were conducted using open-ended questions developed by the project leader about hand-off structure and process matters. Data gathered from observation and interviews were used to create the standardized hand-off tool used in this project. The existing hand-off tools were not adopted because they did not comprehensively address the specific hand-off content that the SNF needs. In-service training on hand-off tool utilization for SNF nurses was conducted. Champions for each shift were cultivated to assist with project implementation.

Application of Change Management Theory

Unfreezing Stage

The current communication practice in the SNF was unfrozen by strengthening driving forces and reducing restraining forces.²⁶ The potential driving forces identified were the director of nursing, unit manager, informal leaders, and project leader. Driving forces were strengthened by acquiring the support of the director of nursing, unit manager, and informal leaders early on through

Figure 1. Standardized Hand-Off Tool Utilized During Implementation

Date: _____ Patient's Room No.: _____

Mental Status: Alert Not alert Oriented Disoriented

Diagnosis: _____

Allergies: _____

Isolation: Contact Airborne Droplet _____

Functional Status/Mobility: Independent Assist x1 Assist x2 Full mechanical lift Sit-to-stand lift

Diet: _____ Texture: _____ Liquids: _____

Tube feeding: Formula _____ Rate _____ Water Flush rate _____ PEG JPEG NG
 TPN

Take medications: Whole With applesauce/pudding Crushed

Controlled Medication order/s: _____
 Coming in with prescription/s Need prescriptions
 Date & Time prescription/s were written/called in: _____

IV antibiotics order/s: _____
 Coming in with prescription/s Need prescriptions
 Date & Time IV order sent to pharmacy: _____

Equipment/Specific Needs:

IV/PICC line/Midline: Site _____ Pacemaker CPAP/Bi-PAP Oxygen Trach

Lifevest Internal defibrillator Other _____

Foley Catheter Suprapubic Colostomy Urostomy

Wound vac: Site _____

External fixator Sling Cast Brace Amputation: Site _____ Weight bearing status _____

Drain tube Chest tube Site _____

Peritoneal Dialysis Chemo Radiation Hemodialysis

Sched/Time _____ Transportation _____ via Stretcher Wheelchair

Need set up? Yes No

Vital Signs: Time Taken _____ Wt _____ Ht _____ BP _____ RR _____ Pulse ox _____ on _____
 HR _____ T _____ Blood Sugar _____

Completed by (Nurse's Initials): _____ Date/Time: _____

thoughtful discussion of the identified problem, dangers of the status quo, proposed solution, and expected intervention results during scheduled meetings. The potential restraining forces identified were staff nurses' lack of motivation and reluctance to change. Restraining forces were weakened by creating a sense of urgency by enunciating how the current hand-off practice is hindering effective communication and transfer of patient care, and presentation of evidence-based practice information during scheduled meetings. The process, barriers, and facilitators of

the current hand-off practice in the SNF were assessed through observation, and staff's perspectives about the existing hand-off practice and concerns about the proposed change were gathered through interviews which generated trust, helped distinguish barriers, and brought about solutions before implementation. CMT is most successful when it employs a top-down approach and when staff engagement is present.²⁶ Understanding the change will increase the individual's acceptance to change.²⁹

Movement Stage

The movement stage focused on implementing the standardized hand-off tool. A timeline with specific dates was set up and followed. The staff nurses were educated on utilizing standardized hand-off through scheduled in-services, and handouts were given. Posters and reminders were displayed in the nursing station. Champions or informal nurse leaders for each shift were cultivated to remind staff nurses that only the new way should be followed and to serve as resource persons to whom staff nurses can go for assistance. Champions' participation was formally requested, and their support was achieved by highlighting how their dedication and influence in the SNF will inspire others to adapt to change that will improve nurses' workflow and patient outcomes. Champions are needed to guarantee that the group operates effectively and fulfills its duties for the organization.³⁰ Staff members were encouraged to share their experiences and concerns during the implementation. Continuous feedback distinguishes issues as they occur so that alterations can be made.²⁹ Individual completion of the standardized hand-off tool form was acknowledged and praised throughout this stage to strengthen the positive performance of staff nurses.²⁹

Refreezing Stage

The new communication practice using a standardized hand-off tool was refrozen. Refreezing was accomplished through clinical supervision, regular monitoring, audit on the utilization of standardized hand-off tool, and open meetings, which prevented the staff from falling back into the former hand-off practice. The project leader, champions, and the manager motivated the team and demonstrated that the new practice is worthwhile by being role models and keeping positive attitudes throughout the change process. Results of the new hand-off process were evaluated, analyzed, and shared with the team members, and team members were thanked for their hard work and dedication to the project. Sharing the positive outcomes with team members will help them appreciate their participation and efforts, increasing their acceptance and strengthening the integration of change into the SNF policy.³¹

Study of Intervention

This project focused on three primary outcomes: attendance of staff nurses in in-services regarding standardized hand-off, utilization of standardized hand-off tool by SNF nurses, and improved medication management during the transition from hospital to SNF. Medication management was in two parts, specifically decreased wait time on the availability of prescriptions for controlled medications and reduced wait time on the availability of prescriptions for IV antibiotics. This project used the mean method to measure nurses' attendance in in-services, nurses' utilization of the hand-off tool, and the wait time for the availability of prescriptions for controlled medications and IV antibiotics. The mean method is an effective tool when comparing different sets of data and can be applied when comparing the performance of the same group during different periods.³²

Measures

The percentage of nurses who attended in-service on utilizing the hand-off tool was evaluated by comparing the number of nurses employed in the SNF and the number of nurses who participated in the in-services. The nurses' utilization of the hand-off tool was analyzed by comparing the number of patients admitted in the unit and the number of hand-off tool forms completed. The wait time on the availability of prescriptions for controlled medications was analyzed by comparing the patient's arrival time in the unit and when prescriptions for controlled medications were sent to the pharmacy. The wait time on IV antibiotic prescriptions was evaluated by comparing the patient's arrival time in the unit and when prescriptions for IV antibiotics were sent to the pharmacy. The pre-intervention and post-intervention mean scores of wait times for the availability of prescriptions for controlled medications and IV antibiotics were compared to identify any improvements in medication administration.

Results

During the project implementation, 101 patients were transferred from the hospital to the SNF with 89 controlled medications and five IV antibiotics orders. One hundred percent of the staff nurses employed by the SNF attended the in-service on utilizing the hand-off tool, and 93% of them used the standardized hand-off tool. Ninety-one percent of necessary controlled medications prescriptions were available within two hours of the patient's arrival at the SNF, and 100% of needed prescriptions for IV antibiotics were sent to the pharmacy within two hours of the patient's arrival at the SNF. Use of the communication tool was associated with a reduction in the percentage of medications administered late by 52.9% for controlled medications and 77.8% for IV antibiotics. Only 2.2% of controlled medications and 0% of IV antibiotics were administered past the permitted administration window due to the unavailability of medications. The refreezing of the standardized hand-off resulted in improved communication during the hospital to SNF hand-off and significantly decreased the wait time for the availability of prescriptions for controlled medications and IV antibiotics.

After project implementation, the average wait time for prescriptions availability during hospital-to-SNF transition was 5.7 hours for controlled medications and two hours for IV antibiotics. The average wait time of prescriptions availability during hospital-to-SNF transition was decreased by 21.2 hours or 79% for controlled medications and 33.4 hours or 94% for IV antibiotics.

Discussion

Several SNF nurses reported that the calls between hospital nurses and SNF nurses were valuable, especially when discussing patients who required critical medication regimens. The standardized hand-off increased nurses' awareness of patients' specific needs. It helped SNF nurses anticipate patients' medications by reminding them to inquire about any controlled medications and IV antibiotics, which prompted them to request the hospital send prescriptions for patients or inform the assigned SNF provider of the needed prescriptions in advance. The SNF does not mandate the hospitals to send prescriptions but requesting hospitals to send prescriptions helps speed up receiving medication

Figure 2. Percentage of Medications Administered Late

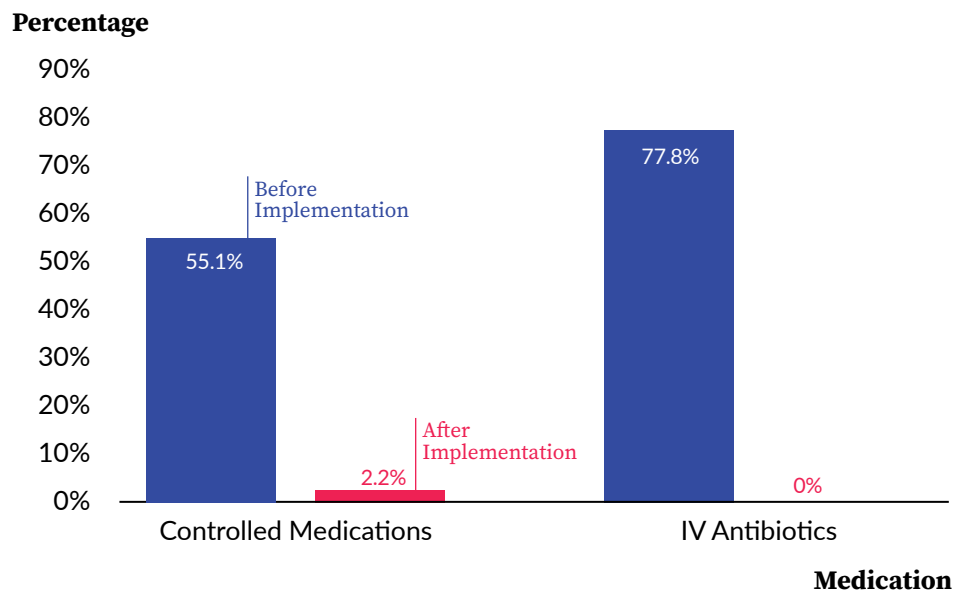
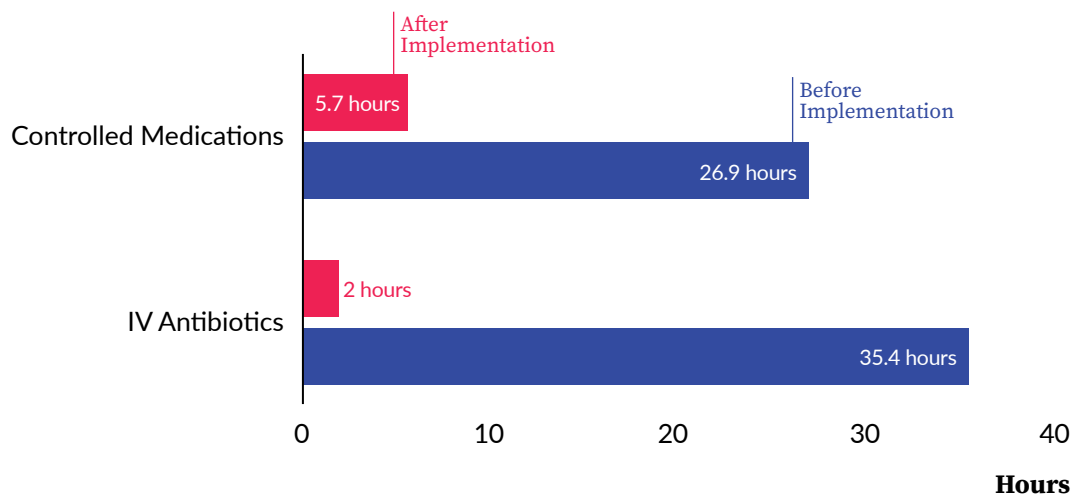


Figure 3. Wait Time for Availability of Prescriptions



supply. Nurses reported that the wait times for authorization and supply of controlled medications and IV antibiotics were noticeably decreased, resulting in a smoother workflow and medication administration process. Many nurses disclosed that the standardized hand-off ensured consistency and safety and encouraged nurses' accountability, as it created a structure for all nurses to follow. It helped nurses avoid spending unnecessary time clarifying orders and fixing issues from the previous shift. The responses of SNF nurses demonstrated that the standardized hand-off successfully overcame some of the common problems with the hospital-to-SNF transfers.

Some nurses were concerned about patients already arriving in the SNF unit when the hospital nurse had not called or the SNF nurse had been unavailable to receive the call. SNF nurses revealed that they spend too much time reaching or calling back

hospital nurses for hand-off reports. To address this concern, admission staff assisted SNF nurses by giving them the direct contact information of the hospital unit to call for hand-off. Faxing a blank copy of the hand-off tool to the hospital discharge planner and having the form filled out, shared with the assigned hospital nurse to give report, and sent back to the SNF before the patient's admission to the SNF was a step initially included in the project plan. This step forewarns nurses of what type of information may be needed by the SNF nurses and is a backup in case of lack of or missed call for hand-off. However, the SNF did not allow this, because the hand-off tool form was not yet an official document of the SNF. Some nurses expressed frustration about prescriptions not being sent or called in on time due to the inability to reach the provider or the provider failing to send or call in prescriptions despite being informed about the needed prescriptions, which was out of the nurses' control.

Implementing a standardized hand-off demanded a thoughtful use of theory, such as Lewin's CMT, and time and commitment from the project leader and SNF staff. The concepts of CMT imparted a better grasp of how to organize a detailed plan of action and account for resistance to change.²⁶ Time and commitment enabled the change agent to be aware of and respond to barriers and helped manage the staff's response to the new practice. Being supportive of the team helped the staff understand and accept the change. The SNF nurses' recognition of the efficiency of using a standardized hand-off tool and how it reduces unnecessary waste of their time drove the new behavior to become the new status quo.

Limitations

The limitation of this project was nursing adherence. The constant presence of project leader and champions may have given staff more inclination to adhere with the utilization of the standardized hand-off tool and could have affected the results of this project.

Conclusion

Hand-off during the transition of patient care from the hospital to SNF is a critical process. When hand-off communication is inadequate, delayed patient care and medication administration occur, resulting in threats to patient safety. This project implemented a standardized hand-off tool and analyzed its impact on improving communication from the hospital nurse to SNF nurse during the transition of care and its effect on decreasing the wait time for availability of urgent medications, specifically controlled medications and IV antibiotics. Standardized hand-off promoted adequate communication between the hospital and SNF during patient transfer. It significantly reduced the wait time for patients' controlled medications and IV antibiotics in the SNF. The application of CMT to this project, combined with the project leader and SNF management team's commitment and support, played an essential role in achieving the desired results of this project. Further integration of the standardized hand-off into the SNF policy can help sustain the change in this setting.

Suggested Next Steps

Exploring different strategies is essential in improving the implementation of standardized hand-off. A pocket-size form of the hand-off tool can be clipped with the nurse's badge to serve as a quick reference. It can help nurses familiarize themselves and obtain hand-off tool content anywhere in the unit. Pocket handouts are an effective hand-off tool because they are accessible and do not require computer use.³³ Integrating the standardized hand-off into the electronic health record can provide the most up-to-date hand-off communication. The Joint Commission recommends the integration of standardized hand-offs into the electronic health record application to improve hand-offs between the senders and receivers.³ Establishing and maintaining a partnership with various hospitals to mandate nursing hand-offs and require prescriptions to be provided to the SNF before patients transfer to the SNF unit can improve the transition process between the hospital and SNF, and decrease the wait time for medications to be available.

Ethical Considerations

Acknowledgements

The authors acknowledge the cooperation of the management team and nursing staff of the project site.

Ethics Approval

This project does not meet criteria for human subjects' research per Wayne State University Human Participant Research determination tool and does not require Institutional Review Board submission and review.

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A Perioperative Intervention to Prevent and Treat Emergence Delirium at a Veterans Affairs Medical Center

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Emergence delirium (ED) is a temporary condition associated with a patient awakening from an anesthetic and/or adjunct agent (e.g., sedatives and analgesics). During the condition, patients risk harming themselves or staff by engaging in dangerous behavior, which may include thrashing, kicking, punching, and attempting to exit the bed/table.

A multidisciplinary team at Veterans Affairs Pittsburgh Healthcare System (VAPHS) developed and implemented a multicomponent intervention to reduce the severity and occurrence of ED. The intervention consists of a training component and 21 clinical components. The 21 clinical components are implemented on a patient-by-patient basis and include routine screening for risk factors, enhanced communication among staff, adjusting the environment, following a specific medication strategy, and application of manual restraint (hands-on). The authors provide 15 online

Supplemental Materials (S1–S15) to promote replication of the intervention.

To our knowledge, this is the first manuscript that describes this type of multicomponent intervention in sufficient detail to allow others to replicate it. Following implementation of the intervention at VAPHS, perioperative staff reported that they observed a substantial reduction in the occurrence and severity of ED, ED-related patient and staff injuries, and ED-related loss of intravenous access and airway patency. Despite staff's reported success of the intervention, rigorous research is needed to evaluate the efficacy of the intervention.

Keywords: *general anesthesia, monitored anesthesia care, MAC, post-traumatic stress disorder, PTSD, trauma, military veteran, agitation, aggression, PACU, propofol, dexmedetomidine, ketamine, midazolam, volatile anesthetic*

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Introduction

Emergence delirium (i.e., agitation or excitation) is a temporary behavioral condition associated with a patient awakening from an anesthetic and/or adjunct agent (e.g., sedatives and analgesics).¹⁻⁶ The condition is characterized by a wide range of patient behaviors and may include hallucinations, thrashing, kicking, punching, and attempting to exit the bed/table.^{1,2,4-6}

At Veterans Affairs Pittsburgh Healthcare System (VAPHS), occurrences of emergence delirium (ED) have resulted in patients' loss of intravenous (IV) access and/or airway patency and have contributed to patient and staff injuries. Among the veteran patients at VAPHS, like at most VA healthcare facilities, many have a history of post-traumatic stress disorder (PTSD), which is a risk factor for ED.^{6,7} As a result, ED was a considerable challenge at VAPHS and further intervention was needed to prevent and treat ED.

Previous literature proposed an outline of a multicomponent intervention to prevent and treat ED;^{1,6,8} however, to our knowledge, none have published a detailed description of their intervention and supporting materials. Staff at VAPHS developed and implemented a multicomponent intervention to reduce the occurrence and severity of ED. The purpose of this manuscript is to describe the intervention in sufficient detail to allow others to replicate it.

Patients, Staff, and Setting

The Veterans Health Administration (VHA) is the largest integrated healthcare system in the United States, with 171 medical centers and serving approximately 9 million veterans each year.^{9,10} Based on a patient sample from a recent national study, VHA patients were an average age of 57.5 years, 88.5% were male, 46.8% had a substance use disorder, 40.2% received mental health treatment, 31% had chronic pain, 30.1% had a sleep disorder, 21.8% had PTSD, and 0.7% had a traumatic brain injury.¹¹ Based on these rates of

diagnoses/conditions among veteran patients and findings from previous studies of risk factors for ED,^{1,5-8,12-16} the veteran population is at higher risk for ED compared to the general population.

This project was conducted at VAPHS's Level I medical center, which has 146 acute care beds and in 2020 served 72,647 patients.¹⁷ During that same year, more than 9,078 procedures involved anesthesia (e.g., operating rooms, gastrointestinal, electrophysiology). The anesthesia department at VAPHS consists of 43 anesthesia providers, including 11 physician anesthesiologists and 32 certified registered nurse anesthetists (CRNAs), and each year approximately 10 student registered nurse anesthetists (SRNAs) and 48 physician anesthesia residents are trained. The anesthesia department practices a physician and CRNA team model; the attending physicians are assigned to one to three sites with one CRNA in attendance per site. During a surgical case in an operating room, the non-anesthesia staff vary depending on the case and patient acuity, but typically the following are present: one surgical technician, one surgical scrub registered nurse (RN), one circulating RN, and an attending surgeon.

Timeline of the Intervention

As shown in **Figure 1**, a multidisciplinary team began development of the multicomponent intervention in May 2017 and implementation began in June 2018. Implementation was kicked off at an anesthesia staff meeting and, during a five-month period, 17 training sessions were conducted that involved a total of 175 perioperative staff members (anesthesia providers, operating room nurses, gastrointestinal nurses, surgical technicians, preoperative and post-anesthesia care unit [PACU] nurses, medical residents, and SRNAs). By October 2018, nearly all required staff completed the training; thereafter, training continued to be offered to unrequired staff, all current staff as a "refresher," and to new staff.

Figure 1. Timeline of the Intervention

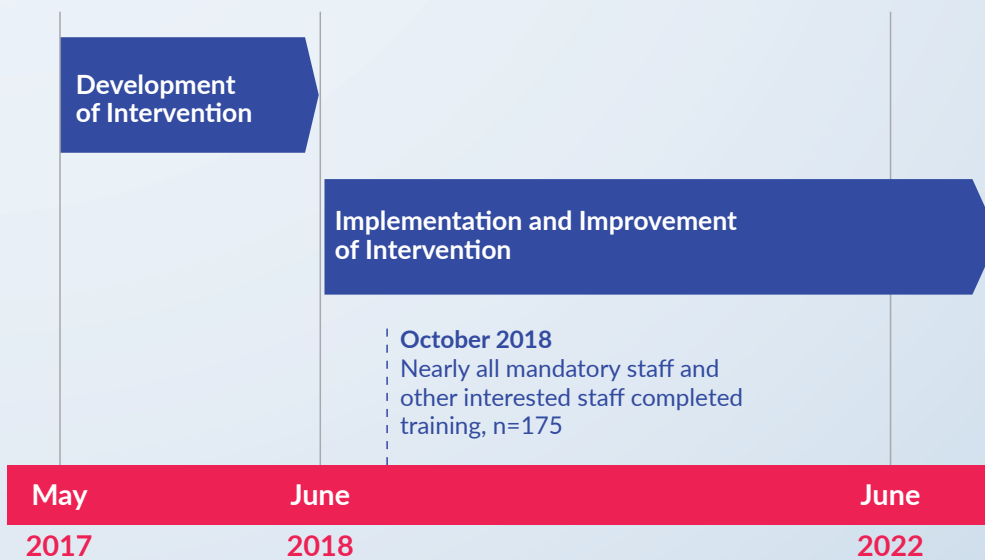


Table 1. Materials Supporting Staff Training and the Intervention

Title of Material	How Material is Used	Supplemental Material #
Essentials of the Intervention	Clinical Reference	S1
Clinical Components of the Perioperative Intervention to Prevent and Treat Emergence Delirium	Clinical Reference	S2 (duplicate of Table 2)
PAASO Form: Preoperative Anesthesia Assessment, Medication Strategy, and Outcome	Clinical Documentation	S3
Timeline of Anesthesia Activities and Perioperative Care	Clinical Reference	S4
Medication Strategy for Emergence Delirium	Clinical Reference	S5
Literature Review in Support of the Medication Strategy	Clinical Reference	S6
General Information	Training (Lecture and Hands-On)	S7
Agenda	Training (Lecture and Hands-On)	S8
Perioperative Intervention To Prevent and Treat Emergence Delirium (PowerPoint, 19 slides plus talking points)	Training (Lecture)	S9
Outline of Phases, Roles, and Materials	Training (Hands-On)	S10
Prebrief	Training (Hands-On)	S11
Guided Practice	Training (Hands-On)	S12
Simulation Pre- and Post-Scenario Talking Points	Training (Hands-On)	S13
Simulation Scenarios 1 and 2	Training (Hands-On)	S14
Simulation Checklist	Training (Hands-On)	S15

Note: Training ranges in duration from 60 to 120 minutes, depending on time constraints. **Supplemental Materials S1-S15** are available as editable Word and PowerPoint files on the webpage for this article (Vol. 4, No. 4 at PatientSafetyJ.com). We encourage readers to download and customize the files to meet their clinical needs.

Description of the Multicomponent Intervention

The intervention, consisting of a training component and 21 clinical components, was revised and enhanced throughout the project. All online **Supplemental Materials (S1-S15)** were developed by the authors of this manuscript. In this section we describe the most current version of the intervention in detail to promote replication and to reduce effort, time, cost, and other barriers to implementation.

The training component involves a lecture and hands-on training of staff, which entails guided practice and simulation with a patient actor (e.g., standardized patient). Each training session covers all clinical components of the intervention and ranges in duration from 60–120 minutes. Each training is conducted by two

or more instructors who collectively have expertise in all areas of the intervention. For more information about the training, see **Table 1** and online **Supplemental Materials S7-S15**.

Following the staff training, the clinical components of the intervention are implemented on a patient-by-patient basis (**Table 2**). Anesthesia providers at VAPHS, like at most healthcare facilities, have a high degree of autonomy in their practice, including choice and timing of medications. Nevertheless, many of the providers and staff at VAPHS chose to implement the 21 clinical components. For more information about the clinical components of the intervention, see **Table 2**, online **Supplemental Materials S1-S6** and **S9-S15**, and the following subsections.

Table 2. Clinical Components of the Perioperative Intervention to Prevent and Treat Emergence Delirium

Phases	Clinical Components	Supplemental Material #
Patient evaluation with individualized plan ^{1,6,8}	1. Use the PAASO Form to conduct a preoperative anesthesia assessment <ul style="list-style-type: none"> A. Review patient's record and interview patient to assess (screen) for emergence delirium risk factors B. Meet with the high-risk patient and family to gather information to facilitate wake-up 	S1–S3, S9
	2. Communication; call ahead to procedure room to initiate intervention protocol	S1, S2, S9
Preoperative actions ^{1,6,8}	3. Communication; patient wears a unique colored surgical cap and bracelet to help staff recognize them as high-risk for ED	S1, S2, S9
	4. Adjust environment <ul style="list-style-type: none"> A. Low stimulation B. Prepare equipment/apparatuses to mitigate risk in the event of dangerous behavior 	S1, S2, S9
	5. Follow medication strategy and document in the PAASO Form	S1–S6, S9
	6. Communication during time-out <ul style="list-style-type: none"> A. Remind staff of patient's high risk for ED B. Inform staff of IV location and type of airway (e.g., O2 mask, endotracheal tube) 	S1, S2, S9
	7. Follow medication strategy and document in the PAASO Form	S1–S6, S9
	8. Communication; as case concludes, call the recovery room/post-anesthesia care unit to initiate intervention protocol	S1, S2, S9
Intraoperative actions ^{1,6,8}	9. Adjust environment <ul style="list-style-type: none"> A. Low stimulation B. Prepare equipment/apparatuses to mitigate risk in the event of dangerous behavior 	S1, S2, S9
	10. Communication; consider proactively requesting additional staff due to anticipated risk for ED	S1, S2, S9
	11. Staff should be prepared to protect IV access and maintain the airway	S1, S2, S9, S10, S12, S13, S15
	12. Follow medication strategy and document on the PAASO Form	S1–S6, S9
	13. Use the PAASO Form to document the patient's outcome and note in patient's record	S1–S3, S9
	14. Communication; if needed, call for immediate staff support by using a standardized code (e.g., Anesthesia stat!)	S1, S2, S9, S10, S13, S15
Actions in response to an episode of emergence delirium ^{1,6,8}	15. If needed, staff should apply manual restraint (hands-on) to the patient to mitigate risk of harm to the patient and staff (note: special training and technique are required to ensure safety)	S1, S2, S9–S15
	16. If needed, follow medication strategy	S1, S2, S4–S6, S9, S10, S13, S15
	17. Attempt to orient the patient by stating familiar people and places (e.g., patient name, partner name, location of hospital)	S1–S3, S9, S11, S13–S15
	18. Debrief meeting with patient and family, which includes providing them with a prepared brochure about emergence delirium and a referral to behavioral health, if desired	S1, S2, S9
Actions following an episode of emergence delirium ^{1,6,8}	19. Debrief meeting among staff to discuss alternative explanations for the ED and the effectiveness of their intervention	S1, S2, S9
	20. If applicable, in the PAASO Form document any medications administered in response to emergence delirium	S1–S3, S9
	21. If applicable, file an event report with the patient safety office or risk management, and add a detailed note to the patient's record	S1–S3, S9

Note: The supplemental materials consist of information that either directly pertains to staff skill development (training or clinical reference) or are a tool integral to the clinical component.

Preoperative Anesthesia Assessment, Medication Strategy, and Outcome (PAASO) Form. Anesthesia providers and PACU nurses use the PAASO Form with the following objectives: identify (screen) patients who are at an elevated risk for ED, gather information to orient the patient upon emergence, facilitate patient hand-offs between staff, guide and document the medication strategy, and facilitate collection of information for the patient's record. Additionally, the form was designed to improve continuity of care, track and trend the intervention integrity (i.e., implementation fidelity) across staff, and monitor the overall effectiveness of the intervention. Without routine screening for risk factors, anesthesia providers may not adjust their individualized anesthesia care plan to account for the patient's risk status. VAPHS providers reported that patients who were identified as high risk for ED frequently had a history of the following risk factors: ED, PTSD, traumatic brain injury, and/or had been sexually assaulted. We urge those who adopt this intervention to reliably use the PAASO Form and create a dashboard to monitor the intervention. For more information about the PAASO Form and instructions for use, see **Table 2** and online **Supplemental Materials S1–S3** and **S9**.

Communication Between Staff. Communication is an important part of the intervention and is used in each of the phases identified in **Table 2**. Most of the communication between staff related to the intervention occurred during transitions from one phase to another and in response to ED. For additional information about the communication strategy, see online **Supplemental Materials S1, S2, S9, S10, S13, and S15**.

Adjust Environment. Preoperatively and postoperatively, staff attempt to create a low stimulation environment by moving the patient to a lower traffic area (e.g., private bay), dimming the lights, reducing noise, and consolidating/limiting unnecessary staff interactions (e.g., avoid interactions with trainees). Additionally, staff attempt to reduce the risk of patient harm by proactively adjusting the table or bed (e.g., reducing height to increase staff leverage, locking wheels, padding side rails, securing arm boards and/or stirrups) and securing the IV (e.g., extra tape and gauze). See **Table 2** and online **Supplemental Materials S1, S2, and S9** for more information.

Medication Strategy for Patients at Elevated Risk for Emergence Delirium. For patients identified as moderate to high risk for ED, providers are urged to use a specific medication strategy, which is avoidance of midazolam and volatile anesthetics, and, as an alternative, administration of propofol, dexmedetomidine, and ketamine. For additional information about the medication strategy, including sequence of medications, rates, and doses by perioperative phase, see **Table 2** and online **Supplemental Materials S1, S2, S4, S5, and S9**. Development of this medication strategy was guided by previous literature, which is summarized in online **Supplemental Material S6**.

Manual Restraint (Hands-On) of Patient. The purpose of manual restraint is to prevent a patient who is engaging in dangerous behavior from harming themselves and staff. Manual restraint refers to staff placing their hands directly on the patient to secure a limb or area of the body. Staff are taught to use specific techniques that focus on the management of the patient's arms, legs, head, oxygen apparatus, and IV location, as well as recommended

positioning (e.g., supine, side, standing). Staff are also educated on the risks associated with use of manual restraint, including positional asphyxiation, aspiration, orthopedic injuries, and skin integrity. For additional information about the use of manual restraint, see **Table 2** and online **Supplemental Materials S1, S2, and S9–S15**.

Supplemental Materials S1–S15 are available as editable Word and PowerPoint files on the webpage for this article (Vol. 4, No. 4 at PatientSafetyJ.com). We encourage readers to download and customize the files to meet their clinical needs.

Findings and Conclusions

To our knowledge, this is the first manuscript that describes this type of multicomponent intervention in sufficient detail to allow others to replicate and adopt the intervention. Following implementation of the intervention at VAPHS, perioperative staff reported that they observed a substantial reduction in the occurrence and severity of ED, ED-related patient and staff injuries, and ED-related loss of IV access and airway patency. Despite staff's reported success of the intervention, rigorous research is needed to evaluate the efficacy of the intervention and identify which components are necessary to achieve the desired quality of care and safety. Future projects and studies should consider refining the choice and weight of risk factors, which may result in greater validity and reliability of routine screening for risk of ED. As a note to others who replicate this intervention, VAPHS staff identified the following challenges with implementation and maintenance: 1) buy-in among anesthesia providers, 2) consistent use of the medication strategy across all providers, 3) staff's reliable use of the PAASO Form, and 4) staff's time to develop and maintain the intervention.

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Note: References 18–105 are cited across the 15 online **Supplemental Materials (S1–S15)** that support the intervention.

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RISE and Shine: How Jefferson Health's Peer Support Program Improves Care for All

By John Olsen, MDiv[♦], Scott Cowan, MD^{*†} & Caitlyn Allen, MPH[‡]

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*Evidence suggests that providing psychological support to caregivers can make care safer. Such is the basis for Jefferson Health's RISE program: peer-to-peer mentoring for providers involved in patient harm. Program leads, **John Olsen** and **Dr. Scott Cowan**, sat down with Patient Safety managing editor, **Caitlyn Allen**, to discuss the program's genesis, the positive impact it's had on staff, and how the program can be replicated in other institutions.*

Caitlyn Allen: John, tell me about the RISE program.

John Olsen: RISE stands for Resilience in Stressful Events, and it's a psychological first-aid, peer support team for distressed healthcare workers and providers. Based on the Johns Hopkins and The National Child Traumatic Stress Network models, RISE incorporates trained responders from various roles who offer peer support in the immediate wake of a stressful or traumatic workplace event. This may include events such as death or code, loss of a child or infant, workplace violence, medical error, or other adverse events. Since the implementation of the RISE program across the Jefferson Health enterprise, more than 400 healthcare staff and providers have received peer support that has helped them return to resiliency following a distressing event.

CA: What led the team to think there was a need for it?

JO: Prior to the initiation of the RISE program, traumatic workplace events often left providers and staff feeling isolated and unable to adequately cope. This resulted

in a significant emotional or psychological impact on these employees. In some cases, we could refer affected staff to the Employee Assistance Program (EAP) or offer other services through human resources or psychiatry, but we did not have a dedicated peer support program in place.

In 2014, two nursing leaders, Danielle Giovanniello and Lisa Kirby, noticed the need for a peer support program for distressed healthcare workers. They formed a steering committee, researched best practices, and conducted an in-depth literature review. I came on board as the program manager in 2017, and we went live with the program hospitalwide in the spring of 2018.

As a chaplain, I participated in many calls involving distressed staff over the years. Initially, we had more of an informal approach, where we would piece together the EAP and coordinate with leadership to offer supportive services. Before RISE, we did not have a dedicated peer support team that could respond in the immediate wake of a traumatic adverse event. Since the inception of the RISE program at Jefferson Abington Hospital in 2017, more than 100 distressed healthcare staff

and providers have received peer support that has helped them return to resiliency following such events.

CA: John, while you were instrumental in getting this off the ground at Abington, Dr. Cowan, your role was really to take this and then implement it enterprisewide.

Scott Cowan: Two of our senior leaders had worked in a hospital system outside of Jefferson and implemented a program that provided psychological first aid. They loved the concept and how the program evolved at their institution, and they asked that a similar program be implemented at all our Jefferson Health hospitals. We were fortunate to learn that John and his team had a successful program that was already up and running.

We started to expand the program across the Jefferson Health enterprise in September 2020. We began by creating local and enterprise steering committees to oversee the implementation of the program in all our hospitals. Within three years, 17 of our 18 hospitals are now live with a RISE peer support program.

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CA: That's incredible. When you mentioned that you began to roll this out in September 2020, how much of an impact did COVID-19 have on that decision?

SC: We started the expansion of the RISE program in the middle of the pandemic. At first, we were concerned with how stretched our frontline providers were and what they were going through. Would they have the time and the energy to do something like this, and should we be pushing this forward right now? We were so glad to see the overwhelming response from our colleagues who signed up to be trained and helped. In retrospect, it couldn't have started at a better time.

JO: When the COVID-19 pandemic hit, the Abington RISE program was in place and already well utilized. While no one could have foreseen the scope and impact of the pandemic, we had an effective peer support program to help meet the need for emotional support. Initially, some providers and staff feared COVID exposure. During the pandemic, we also had many people, understandably, who were deeply affected emotionally by what they witnessed as providers. Our team of responders rose to the need and offered timely peer sessions with the support of management and senior leadership. In the early weeks of the pandemic, one of my colleagues, the Abington psychiatry chair, Dr. Diane Custer, developed the Proactive Support Team, through which healthcare staff rounded on units throughout the hospital.

CA: Tell me more about the Proactive Support Team.

JO: The Proactive Support Team involves rounding by staff volunteers on nursing, units, and other support departments several times a week. Volunteers go in pairs to provide hospitality, positive psychology, and a listening ear to the staff at the unit level. Rather than waiting for staff to come to us, we meet the healthcare teams where they are. Several RISE team members participate and as needed, make referrals for additional support.

Traditionally, RISE was designed as more of a responsive service in the immediate wake of an event in that one-to-24-hour period. The Proactive Support Team complements that approach by going to the units that are stressed and affected, and providing moral support and those resources.

SC: We've expanded upon the great proactive rounding process that John and his team created by reaching out to individuals who are involved in events that are challenging. We call this approach a "soft touch," which consists of a brief phone call and a discussion about available coping resources if needed. If they need a referral to another resource, or if they want to undergo a formal RISE session, we offer our own support and other support available within our hospitals to help them through this difficult time. Of the 400 encounters that have occurred across the enterprise, the majority involved a proactive reach-out.

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It is difficult for caregivers to reach out and ask for help so the team has developed a proactive approach.

CA: Healthcare workers have a reputation for not taking great care of themselves. Their focus is taking care of patients. With that, have you found any challenges trying to implement this throughout the enterprise?

SC: A RISE hotline is in place at all our hospitals where support is available 24/7. Employees can call a number and have immediate access to a peer. We receive, on average, between two to four phone calls a month through that line. It is difficult for caregivers to reach out and ask for help so the team has developed a proactive approach. This tactic is based on published literature from experts in psychological first aid who have built peer support programs for distressed healthcare workers at other institutions.

CA: What tactics have you taken to try and overcome any initial hesitation?

JO: When we started RISE at Abington, we did a lot of recruitment and promotion to raise awareness. In-servicing with new employees and residents, both medical and nursing, is also offered. These opportunities help to develop a sense of trust. As the program has grown, staff who received help and had a positive experience have

shared that with others. We do not actively gather feedback from the recipients due to confidentiality. To maintain trust with providers and staff, the program is completely confidential, and we relate on a peer-to-peer, first-name basis.

We have also encountered some barriers to implementation. Some medical providers were initially somewhat reluctant to use the program. However, through word-of-mouth an increased awareness of the program occurred; not only have these providers participated, but many have also joined our team. This has built interprofessional trust and connections. Our Abington team includes a wide variety of roles, from our administrative quality associates to a senior vice president of the hospital, with many nurses and social workers, and me as a chaplain.

CA: You mentioned two nursing leaders who initially started the program at Abington. How did it expand to include such a diversity of roles?

JO: They searched best practices, visited some other programs in the region, and developed a steering committee with key stakeholders from several departments, such as medical leadership, nursing leadership, social work, legal, security, and even our communication staff. By getting those core constituencies involved and invested from the start in our steering committee, they spread the word to their departments and colleagues, and helped raise awareness about using the program.

CA: One of our goals for conducting interviews with experts in the field is to provide a roadmap for others to implement successful programs in their institutions. What other advice besides having a multidisciplinary approach would you offer to somebody if they want to implement a RISE program at their hospital?

SC: There are a lot of great programs that you can use as a model. Johns Hopkins University hospitals have an excellent program; the University of Missouri has a wonderful program. We found the Hopkins program worked not only at Abington but also across all Jefferson Health hospitals. The goal is always the same: to provide peer support. Sometimes you have to modify operations and workflows in the individual hospitals instead of trying to force a cookie-cutter approach.

CA: So, not trying to force a square peg into the round hole?

SC: Exactly.

JO: Psychological first aid by its very nature is a toolkit approach. We provide several resources for our responders that they can readily use and adapt in a variety of situations. Our trainer, Steve Crimando, is masterful with what has been described as an “every person” approach in which responders from all roles can be part of the team.

In other words, a volunteer doesn’t need to be a trained psychiatric nurse or crisis responder. People from a variety of roles and walks of life in the healthcare community can help. That makes this program replicable, cost-effective, and able to be readily implemented at a variety of organizations.

SC: Leadership support at each of the hospitals has been critical for the program’s success. Strong local RISE leads are also critically important to the success of the program. John has an amazing team at Abington. There are typically two individuals who serve as leads at each of our hospitals and are dedicated to supporting their peers through difficult times. All our enterprise hospitals have exceptional leaders who are truly dedicated to the well-being of their colleagues.

CA: Has anyone you’ve known ever participated in a medical error and if so, can you walk me through what that feels like from the clinician’s perspective?

SC: It’s challenging, and these errors can be incredibly difficult to process. Even though we are all trying to do our best for the patient, we are all human, and errors occur. We try to do everything we can to eliminate the potential for errors by improving our systems, but we can never eliminate them completely. There has been a positive response from people involved in medical errors, and sometimes these providers and staff members do need further support. We help them connect with their EAP or psychiatry if necessary.

CA: Has the RISE program impacted interactions between patients and clinicians and if so, how?

SC: We know that these adverse events can impact our providers and subsequently may have an impact on patient care. Moving on from that can be a challenge. There is evidence in the literature

that peer support programs can help individuals cope with traumatic healthcare events. There is also some evidence that psychological first aid may help mitigate or prevent medical errors or other issues that occur while the caregiver is trying to cope with this event emotionally and psychologically.

JO: Absolutely, and staff know they can call the RISE team for support when they have a stressful or traumatic encounter with a patient or family. While we don’t ask for feedback directly for confidentiality reasons, we have heard anecdotally from several providers that it’s been helpful in the wake of such overwhelming events.

Fortunately, there’s a growing body of evidence in the literature that initiating such sessions in the immediate wake of an event can be helpful. Sessions contribute to staff resilience in the long term and achieve significant cost savings for the organization by helping to prevent burnout and attrition.



There is also some evidence that psychological first aid may help mitigate or prevent medical errors or other issues that occur while the caregiver is trying to cope with this event emotionally and psychologically.

CA: What’s next for the RISE program?

JO: We are continuing to expand our reach, and we’re in discussion with the one remaining hospital within the system that has not yet gone live with RISE. We plan to bring them on board in early 2023. We also want to look for ways that these skills can be shared more broadly, both within the medical community and the community at large.

We would like to thank all the leaders and volunteers who participate in the Jefferson Health RISE program. It is a privilege to work with this amazing group of caring and dedicated individuals.

If anyone is considering starting a peer support program, please feel free to reach out, and we would be glad to meet to discuss the evolution of our program.

Thank you, Caitlyn, for the kind invitation to discuss the Jefferson RISE program.

About the Authors

John Olsen (john.olsen@jefferson.edu) is a chaplain at Jefferson Abington Hospital, where he also manages Resilience in Stressful Events (RISE), a peer support team for distressed healthcare workers, which launched in 2018. Since the COVID-19 pandemic, he has worked closely with other staff wellness leaders to implement the RISE program throughout the Jefferson Health enterprise. The Rev. Olsen has an abiding commitment to building stronger communities through caring for the caregiver; in addition to his roles at Jefferson, he facilitates a bereavement support group for community members and has participated as a guest panelist in the Schwartz Rounds and seminars on clergy wellness.

Scott Cowan (scott.cowan@jefferson.edu) is the medical director for Enterprise Risk, interim chief quality officer for Jefferson Health, and the Jefferson enterprise lead for Surgery Quality and Safety. He received his doctor of medicine degree at Thomas Jefferson Medical College in 1997 and then completed a seven-year surgery residency at Thomas Jefferson University Hospital. Dr. Cowan completed his cardiothoracic surgery fellowship at Massachusetts General Hospital in 2007 and worked for three years in the University of Pennsylvania Health System as a general thoracic surgeon. He has been a faculty member at Thomas Jefferson Health system for over 10 years and holds the rank of associate professor of Surgery. Dr. Cowan is a frequent speaker and has more than 70 peer-reviewed publications in surgery and quality and safety-related journals.

Caitlyn Allen is director of Engagement for the Patient Safety Authority and managing editor for *Patient Safety*, the PSA’s peer-reviewed journal. Before joining the PSA, she was the project manager for Patient Safety at Jefferson Health, where she also was the only nonphysician elected to serve on the House Staff Quality and Safety Leadership Council. Previously, Allen also was a project manager and patient safety officer for Wills Eye Hospital.

2021 Pennsylvania Patient Safety Reporting

Updated Rates for Acute Care Event Reports

By Shawn Kepner, MS[♦]
DOI: 10.33940/data/2022.12.4

Introduction

In the article we published in June 2022 on patient safety trends in 2021,¹ reporting rates and fall rates for 2021 were calculated based on Q1 and Q2 only, as denominator data for Q3 and Q4 were not yet available. Given that the COVID-19 pandemic has disrupted reliable forecasting in healthcare,² we did not forecast rates for Q3 and Q4 in our June 2022 article. This data snapshot provides the complete rates for 2021 now that we have obtained all relevant data.

Keywords: acute care, patient safety, reporting rates, fall rates, hospitals, ambulatory surgical facilities

Methods

This analysis was performed using data extracted from the Pennsylvania Patient Safety Reporting System (PA-PSRS)^a on July 15, 2022, and data obtained from the Pennsylvania Health Care Cost Containment Council (PHC4)^b. Rates are based on the event occurrence date and

calculated per 1,000 patient days for hospitals and per 1,000 surgical encounters for ambulatory surgical facilities (ASFs) for each respective year. Fall rates are calculated in similar fashion but with patient safety reports categorized by the reporter in PA-PSRS as event type “Fall.” Also, fall rates are displayed to the hundredths digit to aid in differentiating among numbers that are closer in value. Since rates are based on the event occurrence date, and not submission date, some rates in this data snapshot are slightly different than previously published rates. This is due to reports of events from prior periods being submitted after the associated data extraction dates.

Results

The 2021 rate of 29.5 for hospitals is below 30 reports per 1,000 patient days for the first time since 2017 and represents an 8.7% reduction compared to 2020. The 2021 rate for ASFs is 8.9 reports per 1,000 surgical encounters, which is consistent with recent years, as the rates for 2019 and 2020 were 8.9 and 8.8, respectively.

Figure 1 shows rates by year from 2012 through 2021. With the addition of Q3 and Q4 data, the final hospital rate for 2021 dropped 1.4 points from the partial rate (Q1 and Q2 only) published previously. For ASFs, the 2021 rate of 8.9 is an increase of 0.3 points from the rate of 8.6 for Q1 and Q2 only. The bar charts in **Figure 1** show rates for each of the four quarters of 2021 for hospitals and ASFs.

Figure 2 shows the fall rates for hospitals and ASFs by quarter from 2019 through 2021. Following a fall rate of 4.01 in Q4 2020—the highest quarterly rate in the past three years—hospital fall rates decreased in Q1, Q2, and Q3 of 2021, with a subsequent increase in Q4. For ASFs, the highest fall rate in the past three years occurred in Q2 2020; since that time, four of the six quarters had an ASF fall rate of 0.2 or greater.

Note

This analysis was exempted from review by the Advarra Institutional Review Board.

^aPA-PSRS is a secure, web-based system through which Pennsylvania hospitals, ambulatory surgical facilities, abortion facilities, and birthing centers submit reports of patient safety-related incidents and serious events in accordance with mandatory reporting laws outlined in the Medical Care Availability and Reduction of Error (MCARE) Act (Act 13 of 2002).³ All reports submitted through PA-PSRS are confidential and no information about individual facilities or providers is made public.

^bPHC4 is an independent state agency responsible for addressing the problem of escalating health costs, ensuring the quality of healthcare, and increasing access to healthcare for all citizens regardless of ability to pay. PHC4 has provided data to this entity in an effort to further PHC4's mission of educating the public and containing healthcare costs in Pennsylvania. PHC4, its agents, and its staff have made no representation, guarantee, or warranty, express or implied, that the data—financial-, patient-, payor-, and physician-specific information—provided to this entity are error-free, or that the use of the data will avoid differences of opinion or interpretation. This analysis was not prepared by PHC4. This analysis was done by the Patient Safety Authority. PHC4, its agents, and its staff bear no responsibility or liability for the results of the analysis, which are solely the opinion of this entity.

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Disclosure: The author declares that they have no relevant or material financial interests.

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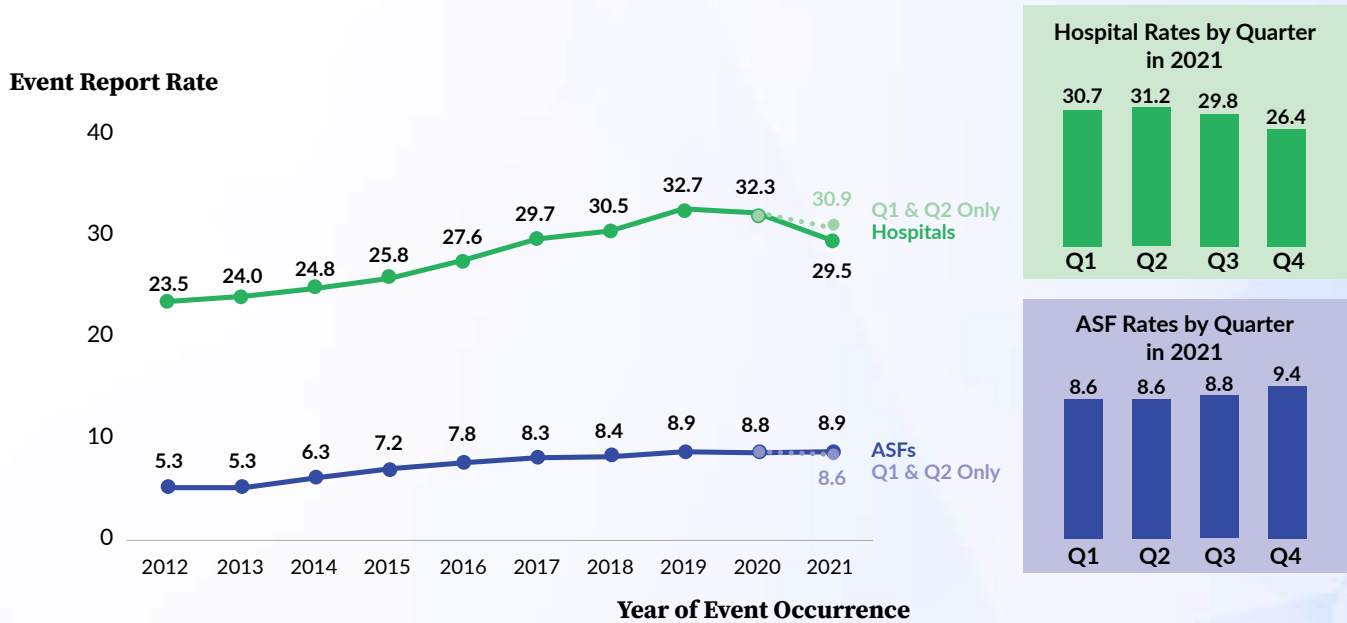
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Figure 1. PA-PSRS Event Report Rates for Hospitals and ASFs From 2012 Through 2021



Note: The dotted sections of the line chart lead to the partial 2021 rates based on Q1 and Q2, and the solid sections of the lines lead to the final 2021 rates based on all four quarters.

Figure 2. PA-PSRS Fall Rates for Hospitals and ASFs From Q1 2019 Through Q4 2021



Onward and Upward: The Future of Nursing Education

By **Eileen Fruchtl**, MSN[♦] & **Caitlyn Allen**, MPH^{*†}

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As nurses around the globe battled COVID, one inconvenient truth became glaring: There were not enough nurses to provide care. And those shortages will only get worse. Now that we have emerged from the pandemic, nurse educators have become more important than ever. What does future curricula look like? How can technology augment training and staffing? How can we ensure the next generation of nurses is dynamic enough for whatever might come their way? *Patient Safety* managing editor, **Caitlyn Allen**, sat down with Cedar Crest College senior instructor **Eileen Fruchtl** to learn more.

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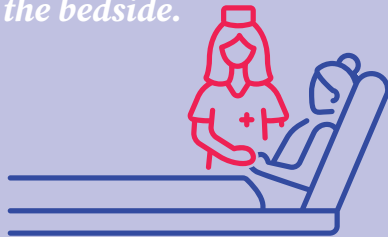
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Disclosure: The authors declare that they have no relevant or material financial interests.



We need to prepare our nurses to learn in a new way and adapt how they make decisions, *even at the bedside.*



Caitlyn Allen: How long have you been a nurse?

Eileen Fruchtl: I have been a nurse since 1990. My mother was a nurse, so it's kind of been handed down in the family. I have siblings who are nurses, and we see this as part of the service to the community, service to other people.

What was your area of specialty?

I started out in cardiac critical care, the surgical areas. I stayed in cardiology for many years, first in surgery, but then doing medical interventional cardiology. I transitioned into bedside education and organized new-staff orientation. I also did management, quality assurance, research, and professional development for a while. Eventually, I ended up in trauma but decided my long-term passion was always education; I saw myself going into academia. I came to Cedar Crest College for my master's in nursing education and decided to stay on to teach. Initially, I ran our simulation lab. Now I'm on faculty.

How has simulation training evolved? I imagine with new technology, it's an ever-changing field.

It's huge. So much of how we make sure that our nurses are safe at the bedside is giving them the opportunity to practice nursing scenarios, especially high-risk-low-volume-type situations in a safe environment where they're not going to hurt a patient because they did it wrong the first time at the bedside. We give them a safe place to learn. We've used simulation for a long time in nursing, even just with the basics of turning a doll in bed back in the '50s. It's evolved over time.

Simulation could be as simple as practicing injections or running through situations with a standardized patient: maybe just allowing students a chance to practice taking a good health history, letting students think through doing assessments properly. What are the interventions, what are my priorities? The quality of the educational experience in simulation is not just in doing it, but then debriefing. "Well, why did you do this before that? Help me understand how you made that decision." Maybe that's where we can identify how somebody is thinking incorrectly and we can then identify, "OK, so you made the decision, but you had the wrong understanding. Let's fix the way you're thinking about that because you need to make these decisions differently in the future."

Once they can start to put those pieces together correctly, they can be successful in the second run-through. That's the way it should happen. And that's what they hold on to when they go to the clinical setting. Maybe they see a patient who's complaining about chest pain and now they know how to do it right, or a patient who's having difficulty breathing where every second counts; simulation can make a big impact in those areas.

During that debriefing phase, do you often find there are patterns where students might not be thinking correctly? Or does it seem like it's very specific to the individual?

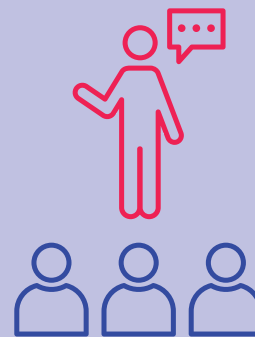
You can usually identify some patterns where they've incorrectly connected previous information. Back to chest pain, when they come across their first patient who's experiencing chest pain, they often consider pain after surgery or chronic pain that people have, but their focus is wrong from the beginning. And once we explain, "Well, this patient is managed differently because their pain is dying cardiac muscle. It must be treated differently." They can make better decisions.

So yes, there are some commonalities. Good debriefing safely allows students to reevaluate their incorrect decisions, incorrect interventions, whatever might be tripping them up, so they feel like they have learned something without being demeaned or hurting somebody or looking bad in front of their colleagues. They need to have a safe way to learn.

Absolutely. Simulations aside, how else has the field of nursing education changed since you got into practice?

There is so much in technology. When I was in school, everything was based on going to lecture, taking notes, and studying from the textbook. We didn't have the online components that we have now. Yes, we still have textbooks, but for those people who love the online platforms, we have those components to mix with it. With simulation technology, we strike a different balance between practical learning, teaching nursing in the clinical setting, with the academic piece of what they need to know for good decision-making—the science prerequisites and nursing fundamentals: anatomy and physiology, chemistry, nutrition, and microbiology. Those are foundational and have expanded exponentially compared to what we had 50 years ago.

We have so much knowledge. The profession of nursing has grown as our knowledge has grown. We have more responsibilities, we have more authority. We're working under a lot of different environmental factors too. So definitely huge changes. There's a lot of rigor and testing in nursing to constantly be setting and checking the benchmark of whether these students are moving along through the curriculum. We can't just wait until the end and measure with boards or NCLEX



The quality of the educational experience in simulation is not just in doing it, but then debriefing. "Well, why did you do this before that? Help me understand how you made that decision."

[National Council Licensure Examination] testing. That's minimum competency. We know that we need to be constantly checking that knowledge level along the way to make sure that students are safe in clinical practice because they're in the hospitals working with patients from very early on in their education.

Where do you think nursing education will be, say 10 years from now or 20 years from now?

Well, we're seeing a huge step coming out of our accrediting bodies that are setting new standards to broaden what's considered the "core curriculum" of nursing and integrate things that didn't even exist 50 years ago—things like informatics, how nurses use technology to make decisions. We need to prepare our nurses to learn in a new way and adapt how they make decisions, even at the bedside. We see a lot more in politics and advocacy, in what nurses need to know about leadership and management and communities. This COVID pandemic taught us that nurses are critical in keeping people safe and moving forward.

We see our boards, NCLEX, changing into this next generation. Starting in April, we will see new question formats to assess whether our nurses can make safe clinical judgments. Looking at a scenario at patient chart meds, lab work, their story, their assessments, all of that. It's not as simple as a multiple-choice question. This revised style will draw a new line to say, "Where is our minimum competency for safety in nursing?"

So, we're getting ready for that. Over the past several years already we've known that this is coming. It was briefly delayed during COVID, but it's back on track.

Change usually results from something. Was this new format in response to something like a knowledge gap?

It's part of the greater evolution of how and what do we test. We want "minimum competency" to prove that a new nurse can make decisions. That's what the nurse does at the bedside. With a basic multiple-choice question, we can only test certain aspects of decision-making. Different formats force them to think through things like what information is relevant or irrelevant in that chart? What

is important? What the nurse extracts from the chart feeds into how they make clinical judgments. The old board style is good in what it does, but the focus now is to assess whether nurses are making these judgments correctly.

Then as we look forward, our education and our profession continue to evolve with new opportunities. What are we moving towards? How do we prepare nurses for a broader scope? When I graduated, nurses worked at the hospital, in a school, or did a bit of public health. Now we're seeing that nurses really drive the healthcare system in a lot of different ways: insurance, government, all sorts of other places that weren't opportunities before. So how do we keep educating a broad range of nurses to keep the public safe and promote the health and wellness of our population?

How has nursing education evolved after COVID?

Before the pandemic, we adapted our curriculum and the way we teach to reflect the needs of the community. This was just an eye-opening experience on a huge scale. It wasn't, "Well, we're seeing more patients with diabetes, so we need to teach diabetes differently." This was, "There's a new problem on the horizon, so we've got to teach this new diagnosis, this new issue." But then it was the shutdown of the way we teach.

We could continue the academic piece when that shutdown happened. Other courses were already online, but students couldn't go to the hospitals and missed the hands-on piece, which was critical because nursing is relationship-based. It's about the experience and care of the patient as a person. In March 2020, our early students in that semester did get some experience out in the clinical arena, but some of the later students missed the end of their clinical development. So, we adapted how we teach clinical judgments remotely.

We set up online group work. My family became my standardized patients because they were locked in with me. I said, "Hey, would you role-play being a patient online so that my students can practice on you?" We used different strategies to fill those gaps. Learning platforms that provided virtual simulations exploded. We were lucky that our school already used some online tools so we were versed in them.

Not all nursing programs were using online teaching platforms and virtual clinical options.

Most programs have some tracks that run part time, whether it is summer, evenings, or weekends. So we saw some of that impact not just on the second half of that spring semester, but it ran into the summer semester too. We had to continue with some of those strategies. But in the process of doing that, we were learning as we went. We figured out from one group to the next, "OK, this works well. We need to try this." Out of necessity, we found ways to provide the clinical education.

We started to open up the next fall and get our students back into clinicals, but we needed to play catch-up because of the semester and half that they were out. For example, some people needed to learn how to take a blood pressure. Online strategies can teach the basics, but not provide the hands-on piece. That practical component was key before we went back into the hospital setting. It made us look at our curriculum for both the academic side and the practical side and say, "Hey, what are they missing? Where are the gaps? And how do we fill that quickly to make sure that they stay on track for that end goal of graduation completion and taking their boards?"

As someone who's not a nurse, I had no idea how dynamic nursing programs are, COVID aside.

Yes, I am not sure that the general population understands what nursing or nursing education really is, because we tend to see the nurses working in the hospital. We take our family to the hospital, we take our kids to the hospital. We see the nurse in that setting. The media also portrays nurses in a very specific way—usually as the handmaiden to the doctor or as the angel that sweeps in and sweeps out. Or as *Nurse Jackie*, the manager that has all these life problems.

Most people don't see the complexity of what a nurse does at the bedside, what they have to have in their knowledge base to keep patients safe: what medication to give, when to give it, when not to give it, when to say, "Whoa, we've got medications that are going to interact here. Maybe we need to call the provider and ask, 'Is this the best thing to do for this patient?'"

How do we keep educating a broad range of nurses to keep the public safe and promote the health and wellness of our population?



It's about good decision-making. But we know that good decisions take a strong foundation from those prerequisites—chemistry, anatomy and physiology, nutrition, microbiology—and then builds on it until you have somebody who can look at a problem and say, “OK, this is what we need to do. This is what you need to do to be safe when you go home from the hospital or what you do for your insulin and how you figure out when to take it and how to take it and your carbohydrate count.” There's just so much and the public only sees a tiny piece.

During the pandemic, I understand a lot of nonclinical nurses left their administrative positions to help fill some of the bedside staffing shortages. But consequently, that left fewer instructors to teach more nursing students that would create a long-term solution to alleviate the existing staffing shortages. How do you strike a balance between having some instructors move to the bedside and training more nurses to have a long-term solution?

There are a few challenging pieces here. When you say “administrators,” I think of acute care managers at the hospital who needed to help take care of patients. They were many of them who tried to backfill vacant positions. During the pandemic, we saw nurses leave the bedside for multiple reasons. A lot of nurses close to retirement age said, “I'm going to step out now.” And they left the bedside earlier than what they originally planned to.

On the academic side, we saw some of our faculty step away from education to go back to the bedside or to just step away from nursing altogether. The reality is, whether you're at the bedside, in the community, or in education, nursing is a stressful profession. Some nurses decided

to walk away. Concurrently, fewer people are going into nursing, and nurses leave our institutions and go into other areas like risk, patient safety, or public health.

We also see a critical issue with the nurses at the bedside being newer. They're younger nurses with less experience who are now being asked to orient even newer nurses coming in. That affects us across the whole educational process because we also see fewer experienced bedside nurses who want to teach clinical for the academic agencies.

So, we're looking at how we can address that issue. What are some of the new partnerships that we need to build between academic and care institutions? Nurses who might work at the hospital one day a week alongside clinical teaching, or nurses who allow a student to shadow them. We know that we need out-of-the-box ideas because of this critical nursing shortage. It's not going to end in a day, it's not going to end in a semester, or in a year. So how do we continue to graduate quality, safe nurses?

I live in Philadelphia where several new healthcare high-rises are under construction. I keep wondering whether there are enough clinicians to fill them or whether they're just going to be really beautiful empty spaces.

We're always concerned about that piece. We can find nurses, but we need to provide care safely. So there comes a point when there might not be enough nurses to open a unit or to take care of all those patients. Then we have to say, “What is the ratio for safe practice for our nurses? How many patients can a nurse safely take care of before they're overwhelmed with the needs of the patients and can't meet those basic safety requirements?”

I just look at nursing education and I say, “How do we attract people into nursing?” Because it's an amazing profession. You have so many opportunities, there are so many things you can do with it. But we are in a critical shortage.

What would you say to someone who's considering whether to become a nurse?

We have this conversation a lot with students. Maybe they're coming from their high school because they're doing tours or they're in a technical program and they already know that they want to do something with helping people. People often choose nursing as a profession because they want to help people. They like being with other people. I often advise students to choose a career that brings them happiness and joy. If you love working with people and helping people, there are lots of options. Nursing is one way. Investigate what nursing is before you decide. Nursing is people's experiences: how people respond to life events, to illnesses, to growing their families.

It could deal with the things you typically see at the hospital, and I'll talk with them about giving medications or taking care of wounds, getting people up, moving around, helping them get better to go home. But nursing is also about a lot of education. We teach our students to be teachers of the general population. We conduct health promotion in the hospital and in the community. It's hard to define what a nurse is and what we do, because every day could be different. I think it's exciting for some of our young people to think of nursing, not just at the hospital, but all the places where they've encountered nurses or could.

Nurses work in prisons, in the community like hospice or home-care. Nurses work out in Harrisburg writing policy and impacting our laws. Nurses work in insurance and in computers, building platforms for documentation or for education, for teaching nurses, but also for teaching patients. There are some really great strategies out there that nurses are a part of in many different levels. A lot of students don't realize the extent of the opportunities they'll have.

Most people don't see the complexity of what a nurse does at the bedside, what they have to have in their knowledge base to keep patients safe:



what medication to give,



*when to give it,
when not to give it,*



when to say, "Whoa, we've got medications that are going to interact here. Maybe we need to call the provider and ask, 'Is this what you want? Is this the best thing to do for this patient?'"

Sounds like when you have your nursing degree, you can make it anything that you want it to be, because there are so many different opportunities where a nurse could be valuable.

Correct. Most programs focus on training nurses in general practice. We want to give them opportunities to see what's out there in a very broad way so that they might choose to work in the hospital setting, but that doesn't mean they need to stay there. Later on, they could decide that they want a different opportunity or go into nursing education or administration, or become a nurse practitioner and license at a higher level where they can then manage care of the patients in writing those prescriptions, in making decisions about medication and interventions, and providing primary care to those patient populations.

We also see a lot of people who choose nursing as a second career after they've worked in another area for years but say, "You know what? I need to do something meaningful with my life, with my time, with my career."

Tell me about a favorite teaching moment.

I could talk about favorite teaching moments for hours. My favorite teaching moments are probably after working side by side with students and you can see that "aha" moment. All of a sudden, all of the pieces came together and it made sense. Maybe they finally understood something that we taught in the classroom. They knew the content, but they didn't understand how it applied when you're in front of a patient. It is so rewarding to see students come in not knowing what nursing is, not understanding any of the interventions, the medications, the process of providing care to get a patient to an outcome. They don't understand any of that.

But it's so rewarding to take them from A to Z and then maybe to see them a year later at the hospital functioning and taking care of people I know. That to me indicates I did a good job. All their hard work paid off. They aren't just safe, but they're an expert in what they do. They're building a foundation for a career that could take them anywhere. Being a nursing educator is a rewarding job. It's not just one moment, it's many moments strung together, one after the next.

About the Authors

Eileen Fruchtl (ejfrucht@cedarcrest.edu) is a senior instructor and director of the Accelerated BSN track at Cedar Crest College. She worked in critical care and medical-surgical units for over 20 years and now teaches in the medical-surgical specialty. She enjoys spending time with her family and pets, backyard bird-watching, and section hiking the Appalachian Trail.

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