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Editorial

I Am Sorry I Did Not Spend More Time at Work!

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I Am Sorry I Did Not Spend More Time at Work!

It is no secret that there is a nursing shortage and, often, working nurses are left putting in more time than they want (American Association of Colleges of Nursing [AACN], 2024; Scott-Marshall, 2024). How often have you chosen or felt forced to work and compromise your personal life? In the Fall 2024 editorial, I focused on the importance of learning to ***let things go*** (Fay-Hillier, 2024). For this editorial, I want to explore taking that proactive, self-care approach one step further: specifically, addressing the balance of your professional and personal lives.

Using the same approach that I did with my Fall 2024 editorial, I asked my grandson, and this time, added one of my granddaughters, to share their thoughts and sage childhood wisdom, on the following statement: ***I am sorry I did not spend more time at work***. My six-year-old grandson's response to the statement was, "That's awful, people should spend more time with their children." And my three-year-old granddaughter chirped in, "People should have more fun." Somehow as we get more entrenched in our forensic nursing careers, we often forget how important it is to spend time with family and the people we love; in all fairness, have we lost our ability to have fun on a regular (and healthy) basis? For example, included in the overarching definition of having fun is to laugh. Yet, somehow as we age, we seem to laugh less and, sadly, lose the healing power of laughter (Heggie, 2019). We need to re-learn that having fun and developing a healthy personal life result in making us better employees (and, happier people) (Arruda, 2024).

In addition to dealing with the general stress encountered by many nurses, a systematic review conducted by Lombardo et al. (2024) found that forensic professionals are at greater risk for burnout and stress. In this issue there is a qualitative study by Bevilacqua and Copeman that

explores and describes the challenges and stigma surrounding forensic and mental health nurses that further supports the identified challenges forensic nurses encounter in their profession. As addressed in another article in this issue, by Clements and Matthews, forensic nurses engage in leadership and advocacy roles when providing trauma-informed care to their patients. The challenges many encounter with both uninformed healthcare providers and lack of resources in their attempts to support their patients can require significant effort, and result in impacting the forensic nurse at the physical, emotional, and spiritual levels. Ultimately, working in the field of forensic healthcare is stressful and can easily consume time away from family and friends.

Although the *AACN Essentials* (2021) document includes self-care as an essential core competency for professional nurses, it is often not addressed in either our education or professional practice. Self-care is the foundation for developing a healthy professional and personal life (Torres-Soto et al, 2022). Work-life balance is not always addressed in our profession but can easily shift toward work much more than one intends if it is not consciously managed. Our profession provides us with the opportunity to make a positive difference in other people's lives, but how often does that time invested negatively impact our personal lives? Gragnano et al. (2020) identified that balancing family life and health with work can improve overall job satisfaction. Additionally, hospitals that specifically include policies that support a healthy work and life balance are associated with enhancing healthcare-provided services (Widayana et al., 2025).

As we approach the end of one year and the start of a new one, it is a perfect time to reflect on the following question: ***Are you living to work or working to live?*** It sounds simple, but it can support your approach to how you decide to proceed in addressing your work and life balance (Bhattarai et al., 2024). I often hear people say that they are irreplaceable, and they do not have time to take care of themselves or spend time with family. Although it may feel noble to consistently sacrifice your personal life for work, the reality is that as the market changes so can any position. Being irreplaceable means that your work is not sustainable for the targeted population in your care, which although may seem flattering is not the best for the people in your care (Grensing-Prophal, 2019). Always waiting until you finish a project to spend time with your personal endeavors can be a slippery slope where the time taken from your personal life is never replaced. There will always be another project, so please do not forget the importance of carving out time to take care of yourself and your personal life.

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Journal of the Academy of Forensic Nursing

Original Research

Behind the Stigma: A Narrative Inquiry into the Perception and Experiences of Mental Health, Addictions, and Forensic Nurses

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Abstract

Mental health and forensic nurses work at the intersection of healthcare, law, and social justice, yet their roles remain undervalued within the nursing profession. This study explored how these nurses construct professional identity and resilience while navigating stigma and systemic inequity. A qualitative narrative inquiry design was used to gather written reflections from 14 nurses in Ontario and British Columbia, including registered nurses, registered practical nurses, and nurse practitioners. Participants responded to open-ended prompts through a secure online platform, describing experiences of stigma, workplace hostility, advocacy, and meaning in their work. Data were analyzed thematically and through a composite narrative approach to capture both individual and collective perspectives. Six major themes emerged: stigma and systemic misrepresentation, stigma toward patients, advocacy and emotional labor, workplace hostility, purpose and resilience, and systemic barriers. Findings demonstrate that nurses experience both external and internalized stigma that diminishes professional legitimacy, yet they construct identities grounded in empathy, advocacy, and relational expertise. The study applies Goffman's concept of courtesy stigma and social identity theory to interpret how hierarchies shape belonging within healthcare. These results stress the need for stigma-reduction education, mentorship programs, and policy investment in community mental health services. Centering nurses' voices

through narrative inquiry reframes mental health and forensic nursing as advanced, relational, and justice-oriented practice.

Keywords: forensic nursing, mental health nursing, stigma, narrative inquiry, lateral violence

Behind the Stigma: A Narrative Inquiry into the Perception and Experiences of Mental Health, Addictions, and Forensic Nurses

Mental health, addictions, and forensic nurses require advanced relational, assessment, and crisis-management skills (Tulloch et al., 2025). Despite this expertise, these specialties remain marginalized within nursing, often perceived as less technical or prestigious than acute care domains (Sercu et al., 2015). Media portrayals frequently depict forensic environments as violent and mental illness as synonymous with danger, reinforcing fear and misunderstanding (Stuart, 2006). These portrayals contribute to stigma toward both patients and the nurses who care for them (Halter, 2008). Although stigma toward people with mental illness is well documented, limited attention has been given to the associative stigma and professional identity challenges faced by mental health and forensic nurses (Martin et al., 2020; O'Brien et al., 2025). Few studies center the voices of forensic nurses, leaving a gap in understanding how they navigate diagnostic overshadowing, workplace hostility, and moral distress within complex institutional contexts (Marshall & Adams, 2018). Within healthcare teams, lateral violence, including bullying and subtle exclusion, undermines collaboration, identity, and nurse retention (Marshall & Adams, 2018). This study addresses these gaps by foregrounding the experiences of mental health and forensic nurses and exploring how they make sense of stigma, identity, and resilience within systemic and interpersonal environments.

To ensure conceptual clarity for the analysis that follows, key terms used in this study are defined here. Forensic nursing is defined as the integration of nursing practice with the criminal justice and mental health systems, focusing on the care of individuals at the intersection of health and law. The term lateral violence refers to hostile, aggressive, or harmful behavior among colleagues within the same profession, including bullying, exclusion, or demeaning remarks (Embree & White, 2010). The phrase workplace hostility is used interchangeably to encompass these behaviors. To explore how these nurses understand and experience their professional roles within these intersecting systems, a qualitative narrative inquiry design was employed.

Methods

A qualitative narrative inquiry design captured the lived experiences of nurses in their own words (Clandinin & Connelly, 2000; Riessman, 2008). Narrative inquiry privileges storytelling and meaning-making, emphasizing how professionals construct identity and interpret experience. This design aligns with a constructivist and interpretivist paradigm, recognizing that knowledge is co-constructed through the sharing and interpretation of lived experiences (Dahal et al., 2024). Participants provided written reflections guided by open-ended prompts, enabling deep, self-paced storytelling, a respectful approach to sensitive topics such as stigma and workplace conflict (Halter, 2008).

Composite Narrative Design

In addition to thematic and holistic narrative analysis, a composite narrative design was used to synthesize shared experiences into a cohesive interpretive story. Composite narratives integrate multiple participant voices into a single, representative narrative while maintaining the integrity and emotional tone of individual accounts (Clandinin & Connelly, 2000). This approach honors participant anonymity while providing a coherent depiction of collective experiences, allowing readers to engage with the findings as lived realities rather than abstracted themes (Clandinin & Connelly, 2000).

Participants and Recruitment

Nineteen nurses initially consented to participate in the study; however, five did not progress beyond the initial consent question and were excluded. The final sample included 14 participants: 10 Registered Nurses (RNs), 2 Nurse Practitioners (NPs), and 4 Registered Practical Nurses (RPNs). NPs were categorized separately from RNs for clarity. Participants represented both Ontario (n = 13, 93%) and British Columbia (n = 1, 7%), with 11 identifying as women (79%) and 3 as men (21%). Years of experience ranged from 2 to 25, with the largest group (n = 6) reporting between 6 and 10 years in mental health or forensic nursing. Practice settings included forensic psychiatric hospitals, correctional institutions, community mental health programs, and inpatient psychiatric units.

Recruitment employed purposive and snowball sampling through professional networks, academic contacts, and social media platforms. Invitations were distributed through the Canadian Forensic Nurses Association, the Registered Nurses' Association of Ontario Mental Health Nursing Interest Group, LinkedIn, and closed Facebook nursing groups. Inclusion criteria required current or recent (within five years) experience in mental health or forensic practice, professional registration (RPN, RN, or NP), and English fluency. Exclusion criteria included nursing students and individuals without direct patient care responsibilities. The target sample size of 10 to 15 participants was established a priori, consistent with narrative inquiry conventions emphasizing depth of data over breadth (Clandinin & Connelly, 2000).

Data Collection

Data were collected through written narrative submissions in response to open-ended prompts designed to elicit detailed reflection on participants' professional experiences. Participants were asked to describe how they understood their professional identity within mental health or forensic practice, to recount experiences of stigma or misunderstanding from colleagues, the public, or media, and to share examples of advocacy, resilience, or workplace hostility. They were also encouraged to reflect on what aspects of their work they most valued and how these shaped their sense of purpose as nurses.

Narratives were submitted electronically through a secure Qualtrics platform to ensure confidentiality. Participants were encouraged to write freely and at their own pace; most narratives ranged from 500 to 1,500 words. The data collection period remained open for six weeks. Data saturation was reached after 12 submissions, when no new themes or codes emerged, and was confirmed after analysis of the final two. Member checking was completed by 12 of 14 participants to validate interpretations and strengthen credibility.

Ethical Considerations and Analysis

Ethics approval was granted by the researchers' institutional Research Ethics Board (REB #127), and all participants provided informed consent prior to contributing their narratives. To

protect confidentiality, identifying information was removed, and pseudonyms were used in reporting.

To ensure rigor and trustworthiness, a triangulated approach to data analysis was employed. Both researchers independently coded the entire set of transcripts, identifying patterns and emergent themes across the narratives. Each participant's full response was first analyzed in its entirety to preserve narrative integrity and contextual meaning. Subsequently, responses were analyzed by prompt so that all answers to the same guiding question could be compared across participants. This layered process allowed for both within-case depth and cross-case consistency, ensuring that individual perspectives were honored while collective experiences were clearly represented.

Following coding, transcripts and summaries were returned to participants for member checking. Twelve of the 14 participants confirmed the accuracy of their narratives and interpretations, enhancing the credibility and dependability of the findings.

As a final analytic step, the research team used ChatGPT Pro as a supplementary validation tool to ensure that no patterns or themes were inadvertently overlooked. This step was intentionally conducted after the manual coding and synthesis were complete to prevent bias and to preserve the primacy of human interpretation. ChatGPT Pro was used to cross-check word frequencies, conceptual groupings, and semantic relationships within the anonymized dataset. Participants were informed that only de-identified data would be reviewed by AI software, and ethical compliance was verified according to Canadian privacy regulations. Privacy and deletion features were activated to maintain data protection standards. This multi-layered strategy, integrating researcher coding, participant validation, and AI-assisted comparison, provided a robust framework for triangulation and enhanced the trustworthiness of the study's findings.

Results

Six central themes were identified (Table 1), reflecting the intersecting experiences of stigma, systemic constraint, professional identity, and resilience among forensic and mental health nurses. To preserve participants' voices and narrative texture, excerpts from individual narratives are presented alongside a composite account.

Table 1
Theme Chart

Main Theme	Subthemes	Illustrative Quote
Stigma and Systemic Misrepresentation	• "Not real nurses" and professional devaluation • Media stereotypes and public fear • Structural and organizational stigma	People assume we don't do real nursing; they think our work isn't as technical or important.
Stigma Toward Patients and Diagnostic Overshadowing	• Labeling and prejudice in healthcare • Neglect of physical health needs • Internalized stigma and self-protection	The patient only got transferred so they could pass with dignity, not in our psychiatric intensive care unit.
Advocacy and Emotional Labor	• Burnout and moral distress • Constant defense of patient legitimacy	I find myself becoming burned out from having to constantly advocate and defend my patients.

Main Theme	Subthemes	Illustrative Quote
	• Emotional fatigue and compassion strain	
Resilience, Purpose, and Professional Identity	• Pride in relational expertise • Meaning-making through advocacy • Personal connections to the work	As the nurse, you are the therapeutic tool; not a dressing tray, not a machine.
Workplace Hostility and Hierarchical Devaluation	• Lateral violence and exclusion • "Loss of skills" stereotype • Institutional silence and undervaluation	When I chose this field as a new graduate, I was told I'd lose my nursing skills.
Systemic Barriers and the Quest for Change	• Fragmented services and resource gaps • Cycles of relapse and patient marginalization • Commitment to advocacy and reform	Patients seeking treatment for addiction often can't get sufficient support, leading to cycles of relapse.
Composite Narrative: "Finding Meaning in the Margins"	• Integrates shared experiences of stigma, resilience, and moral purpose. Serves as a synthesized representation of the collective voice, illustrating how nurses sustain professional identity amid marginalization.	It's hard work, but it's honest work, and it's ours.

Composite Narrative: Finding Meaning in the Margins

> *When I first told my peers I was moving into forensic mental health, someone laughed and said, "So, you'll just talk to criminals all day?" At first, I tried to explain, then I stopped trying. In this work, you learn to listen differently, to stories that aren't easy to hear. I've sat across from patients judged by society long before they spoke a word. Some days, the system feels like it's failing both of us. But there are moments, small ones, when trust builds, when someone says, "You treated me like a person." Those are the moments that keep me here. It's hard work, but it's honest work, and it's ours.*

Stigma and Systemic Misrepresentation

Participants described being perceived as "not real nurses," reflecting both professional and societal misunderstanding.

> *"People assume we don't do real nursing—they think our work isn't as technical or important."*

These misconceptions were reinforced by media portrayals that depicted forensic environments as violent or unsafe.

> *"The public associates forensics with scary movies they see on TV."*

Stigma also extended to the health system itself. Nurses described colleagues dismissing their expertise, assuming forensic care required less skill or intellect.

"Friends on other units made jokes about me being able to 'just talk to people,' as if that's all I do."

These narratives revealed how media stereotypes and professional hierarchies combined to marginalize forensic and mental health nursing within the broader discipline.

Stigma Toward Patients and Diagnostic Overshadowing

Participants expressed deep concern about the stigma their patients encountered.

"They're often treated as non-urgent, yet other frequent flyers like diabetics are treated urgently."

Others described instances where psychiatric labels led to fatal neglect.

"The patient only got transferred so they could pass with dignity, not in our psychiatric intensive care unit."

This pattern of diagnostic overshadowing reflected systemic inequities that devalued psychiatric patients' physical needs. Participants linked these experiences to broader patterns of healthcare discrimination, reinforcing their commitment to advocacy and holistic care.

Advocacy, Emotional Labor, and Professional Pride

Advocacy was central to participants' professional identity but also a source of emotional exhaustion.

"I find myself becoming burned out due to constantly having to advocate and defend my patients to other units and the ER."

Yet this emotional labor coexisted with profound pride in their work.

"As the nurse, you are the therapeutic tool—not a dressing tray, not a machine."

"I've developed into a confident advocate for our vulnerable population."

Nurses viewed relational skill, empathy, and patience as forms of advanced clinical practice. This balance between advocacy fatigue and professional pride emerged as a defining tension in their narratives.

Workplace Hostility and Professional Devaluation

Experiences of lateral violence and exclusion were common. Participants described being undermined by colleagues who questioned their competence.

"When I chose to go into this field as a new graduate, I was told I'd made a bad choice because I would lose my nursing skills."

Dismissive remarks and exclusionary behavior reinforced hierarchies within nursing, leaving many feeling isolated. Despite these challenges, participants also described supportive teams that valued emotional intelligence and de-escalation skills. These positive relationships sustained nurses in environments where hostility and misunderstanding were otherwise pervasive.

Purpose, Motivation, and Resilience

Participants' motivations to work in forensic and mental health nursing were often deeply personal.

"My father was incarcerated when I was a child. He had liver cancer that wasn't found until he was released."

Such experiences inspired empathy and determination to provide humane care. Others emphasized the meaning they found in small victories.

"Being able to help someone when they are in arguably the worst time of their life and teach them that they can still have a fulfilling life."

These moments of connection, though often fleeting, anchored their professional purpose and resilience.

Education, Awareness, and Systemic Barriers

Participants voiced a strong desire to educate others about the realities of their practice.

"I wish others knew that correctional nursing is absolutely a specialty. Our patients are some of the sickest in our population."

They called for greater representation of forensic and mental health content in nursing curricula to challenge persistent misconceptions. Nurses also highlighted systemic failures that hindered both patient care and professional fulfillment.

"Patients seeking treatment for addiction often can't get sufficient support, leading to cycles of relapse."

"We're patching holes in a sinking ship."

Long waitlists, underfunded programs, and societal stigma perpetuated these cycles, leaving nurses feeling frustrated and powerless.

Integrative Summary

The narratives revealed a profession simultaneously marginalized and deeply meaningful. Participants navigated a landscape shaped by stigma and systemic constraint yet found identity and purpose in relational care, advocacy, and resilience. The composite narrative and thematic findings together illuminate the tension between invisibility and pride that defines forensic and mental health nursing.

Discussion

This discussion explores how the narratives reveal the complex interplay of stigma, professional identity, and systemic inequity in mental health and forensic nursing, situating these findings within broader theoretical, educational, and policy contexts.

Interpreting Stigma and Professional Identity

This study illuminates how forensic and mental health nurses construct professional identity in the context of pervasive stigma and systemic inequity. The findings reveal how social labeling, professional hierarchies, and public misunderstanding collectively erode legitimacy, reflecting what Goffman (1963) termed *courtesy stigma*, the secondary stigma experienced by those associated with a stigmatized group. Participants' accounts of being seen as "not real nurses" demonstrate how stigma transfers from patients to providers, diminishing perceived professional value. This phenomenon aligns with Tajfel and Turner's (1986) social identity theory, in which group boundaries and hierarchies shape belonging and self-concept. Within

nursing, forensic and mental health practitioners occupy a "peripheral identity," often viewed as less technical or prestigious than acute care. This identity positioning fosters marginalization within both professional and public domains.

The findings further illustrate that stigma is not limited to external perception but is internalized and reproduced through workplace culture. Experiences of lateral violence exemplify how professional hierarchies manifest within the nursing collective, reinforcing divisions that mirror broader societal devaluation of mental health work. Goffman's framework helps explain this process: as nurses manage stigma, they engage in "information control," concealing aspects of their role to maintain professional legitimacy. Simultaneously, social identity theory clarifies the tension between belonging and differentiation—nurses express pride in their relational expertise even as they resist exclusion by dominant clinical groups.

Systemic and Emotional Dimensions of Care

Advocacy and emotional labor were central to participants' narratives. Nurses described the constant need to defend their patients' legitimacy within a healthcare system that privileges physical over psychiatric conditions. Diagnostic overshadowing and systemic neglect reaffirm O'Brien's (2025) observation that psychiatric labeling continues to distort clinical judgment. Yet these narratives also reveal resilience and meaning-making: nurses locate pride and professional identity in their ability to provide relational, human-centered care despite institutional constraints. This echoes the constructivist premise of narrative inquiry; meaning is co-created through lived experience and reflection.

Professional Identity Construction

The themes collectively suggest that forensic and mental health nursing is an act of identity negotiation. Participants situate themselves at the intersection of care and custody, humanity and control, empathy and safety. They construct professional meaning through what Riessman (2008) calls "restorying", transforming experience into purpose. Nurses' narratives resist deficit-based views by asserting that emotional intelligence and de-escalation are sophisticated clinical competencies. In doing so, they challenge biomedical hierarchies that equate technical skill with professional value.

Strengths and Limitations

This study demonstrates methodological rigor through triangulated analysis, combining whole-transcript and cross-question coding, member checking, and composite narrative synthesis. The narrative inquiry design generated authentic, nuanced accounts that illuminate complex emotional and structural dimensions of practice.

However, several limitations warrant consideration. The sample was geographically concentrated in Ontario, which may limit transferability to other jurisdictions. Recruitment through professional networks may have introduced self-selection bias, attracting participants with strong views on stigma or advocacy. Data were collected through written narratives, which allowed for reflection but limited opportunities for probing clarification. Attrition also occurred, with five participants not completing narrative submissions after providing demographic data. Additionally, while eight initial themes were identified, consolidation into six broader categories strengthened conceptual coherence but may have obscured some nuanced subthemes.

Implications for Education, Practice, and Policy

Nursing education should embed structured stigma-reduction modules that address both patient and provider stigma. Programs can incorporate simulation-based learning that challenges stereotypes about forensic and mental health populations, alongside reflective exercises that explore implicit bias and professional identity. Evaluation metrics could include pre- and post-training assessments of empathy, confidence, and stigma awareness.

Healthcare organizations should implement formal mentorship and structured debriefing programs in forensic and mental health settings. Mentorship success could be measured through retention rates, reduced burnout, and self-reported professional confidence. Debriefing sessions after critical incidents or ethical dilemmas would foster collective resilience and mitigate the emotional toll of advocacy fatigue.

At the systems level, policy reform should prioritize equitable funding for community-based mental health and addiction services to reduce crisis-driven admissions. Inclusion of forensic and mental health nurses in policy advisory and leadership roles would ensure that lived expertise informs workforce planning, scope of practice decisions, and intersectoral collaboration. The frameworks developed by the Canadian Nurses Association (CNA), the Canadian Mental Health Association (CMHA) and the Centre for Addictions and Mental Health CAMH) can guide implementation and evaluation of anti-stigma initiatives but must be operationalized through measurable outcomes such as improved access, staff training completion, and patient satisfaction.

Overall, the findings suggest that forensic and mental health nursing embodies both vulnerability and resilience. Nurses navigate stigma, systemic inequity, and emotional strain, yet derive meaning and strength from relational care. Their narratives challenge prevailing hierarchies and invite a reimagining of professional identity, one rooted in compassion, complexity, and justice-oriented practice.

Conclusion

Mental health and forensic nurses face persistent challenges of stigma, systemic neglect, and professional devaluation. Yet their stories also reveal resilience, ethical commitment, and a deep sense of purpose. Using a composite narrative, this study shows how these nurses collectively construct a counter-story that redefines their work as essential to compassionate and just healthcare. Stigma is shown to operate not only at the individual level but also within the structures and hierarchies of healthcare systems. Meaningful change therefore requires coordinated efforts across society, organizations, and policy to challenge stereotypes, promote inclusion, and provide adequate resources for both nurses and the patients they serve.

Reclaiming their professional voice allows these nurses to define their expertise on their own terms. Advocacy, empathy, and relational skill emerge as advanced forms of practice that sustain patient-centered care in difficult environments. Recognizing mental health and forensic nursing as vital specialties affirms their contribution to health equity and social justice. As one participant stated, *"We are not less because we choose to work in this field."* Their collective testimony reminds us that dignity, compassion, and commitment remain at the heart of nursing practice.

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Original Research

Post-Traumatic Growth After Sexual Assault Using Rodgers' Evolutionary Concept Analysis

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Abstract

Caring for someone after a sexual assault requires specialized knowledge that aligns with nursing practice, which focuses on a person's overall physical, mental, and spiritual health, well-being, psychosocial needs, and disease prevention. *Sexual assault* is a common personal trauma requiring time for recovery that varies from person to person. *Post-traumatic growth*, or life changes that may occur following sexual assault, is an understudied phenomenon. Defining, conceptualizing, and analyzing post-traumatic growth among women following sexual assault informs nursing practice and the patient's expected recovery. The purpose of conceptualizing post-traumatic growth is to assist in understanding this phenomenon. Using the Rodgers' Method to provide a structured concept analysis helps to define post-traumatic growth after experiencing a sexual assault by facilitating an application of the assault experience to trauma-informed person-centered care in nursing. Rodgers' framework for concept analysis resulted in discoveries that inform nursing practices about essential interventions, which include the establishment of safety, voice, choice, and transparency when working with persons who are experiencing post-traumatic

growth in the aftermath of a sexual assault. The analysis of existing literature revealed attributes of *coping* and *processing* and related concepts of *resilience* and *optimism*. Antecedents include personal lived experiences with unresolved trauma, childhood abuse, mental distress, disruption of core beliefs, shame, self-blame, anxiety, and depression. Consequences include a *perceived control* over their personal recovery and, when present, lower rates of post-traumatic stress disorder (PTSD)—a higher power with feelings of *forgiveness* added to understanding the consequences and potential for healing.

Keywords: post-traumatic growth, sexual assault, concept analysis

Post-Traumatic Growth After Sexual Assault Using Rodgers Evolutionary Concept Analysis

In the United States, the lifetime prevalence of sexual assault among adult women is 20% (Smith et al., 2018). The lifetime consequences of sexual assault can lead to lasting maladaptive behaviors and coping mechanisms (Guggisberg et al., 2021; Millegan et al., 2015; Ullman & Relyea, 2016). Yet, the personal journey following such a traumatic event is an individual process with the potential for profound inner evolution, referred to as *post-traumatic growth* (change in self-perception, interpersonal relationships, and philosophy of life), as introduced by Tedeschi and Calhoun in 1996 and adopted by others since (Bryngeirsdottir et al., 2022; Henson et al., 2022; Tedeschi & Calhoun, 1996). A new appreciation of life, stronger relationships with others, personal strength, new possibilities, and spiritual change is reported in individuals who experience post-traumatic growth (Tedeschi & Calhoun, 1996). Post-traumatic growth is not well understood. Defining, conceptualizing, and analyzing post-traumatic growth and its related concepts inform nursing practice and the patient's recovery.

Background and Significance

The discipline of psychology embraced the term post-traumatic growth in 1995, and found it applicable to many types of traumas including adverse childhood experiences, sudden health threat, sexual assault, and death of a loved one (Edwards et al., 2022; Lahav et al., 2020; Takedomi et al., 2021; Tedeschi & Calhoun, 1996). Unfortunately, its connection to sexual assault, overall health, and well-being is relatively unexplored (Tehranineshat & Torabizadeh, 2021). For example, while the association of trauma on the decline of physical health has been studied (Felitti et al., 1998), the positive impact of post-traumatic growth on physical health is absent from the literature. This is further observed in sexual assault and post-traumatic growth (Kirkner & Ullman, 2020).

Post-traumatic growth is defined by five characteristics along the recovery phases including: (1) a new appreciation of life, (2) stronger relationships with others, (3) personal strength, (4) new possibilities, and (5) spiritual change (Tedeschi & Calhoun, 1996). Each phase of recovery reflects attitude and perspective changes in the concept of *personhood* that require defining tenets. The concept of post-traumatic growth in nursing has outputs and tenets such as resilience, hope, coping, and sense of self (Rou et al., 2022; Tedeschi & Calhoun, 1996). The concept of post-traumatic growth after sexual assault applied to the discipline of nursing needs an upgraded definition, one in which the exploration of the role of its antecedents, consequences, and related concepts can be examined that improves patients' health and further define the research process surrounding this concept.

The concept of post-traumatic growth is a broad term with a number of potential uses in disciplines outside of psychology, including nursing (Tehranineshat & Torabizadeh, 2021). The lack of inquiry into the nexus of post-traumatic growth with health promotion, well-being, and nursing practice after sexual assault requires exploration to improve interventions and understanding of the lived experience of sexual assault in women for positive outcomes in healing, intervention, and quality of life. The Rodgers' Evolutionary Method (Rodgers' Method) provides a structured concept analysis (Tofthagen, 2010) to define post-traumatic growth after a sexual assault and conceptual application to trauma-informed person-centered care in nursing (AACN, 2021; SAMHSA, 2014). The purpose of this article is to describe the use of Rodgers' Method for the conceptualization of post-traumatic growth, which defines antecedents and consequences, and aids the nurse's understanding of the impact on the health and well-being of women after a sexual assault. From this, a hypothetical case example is provided to emphasize the key points of this concept analysis. The article concludes with implications for nursing practice and research.

Methods

Our examination of the concept, post-traumatic growth, using the Rodgers' Evolutionary Concept Analysis Method (1989) included exploring surrogate terms, defining concepts, and describing what they are and what they are not (Rodgers, 1989). The Rodgers' Method organizes a process of conceptual analysis to conduct a literature search (Rodgers, 1989; Tofthagen & Fagerstrom, 2010) to conceptualize post-traumatic growth. The phases of the Rodgers' Evolutionary Concept Analysis Method are first, identifying tenets (i.e., resilience, hope, coping, sense of self, and survival) for analysis. In the current analysis of post-traumatic growth, the authors next addressed identifying: "(1) the concept of interest, (2) surrogate terms, (3) sample for data collection, (4) attributes of the concept, (5) references ('events, situations, and phenomena')" (Rodgers, 1989, p. 334) "…(6) antecedents, and consequences of concept, (7) related concepts, (8) a model case and, (9) conducting interdisciplinary and temporal comparisons and collecting the literature sample." (Rodgers, 2000, p. 45)

Rodgers uses an inductive method to analyze evolving or changing concepts such as post-traumatic growth (Rodgers, 2000). This inductive method does not require large bodies of previous research or fixed concepts, so concepts such as post-traumatic growth can be put into context (e.g., post-traumatic growth after sexual assault) (Taylor-Clark & Patrician, 2020; Tofthagen, 2010). The Rodgers' framework does not require post-inductive recommendations for future research (Taylor-Clark & Patrician, 2020).

Literature Search Strategy

The initial step in the literature search as required by Rodgers' ~~Concept Analysis~~ Method was database and search-term selection. PubMed, CINAHL Plus, and PsycINFO databases were utilized for the literature search because the concept of post-traumatic growth after sexual assault is a health-related topic. Search terms were identified in PubMed utilizing the MeSH database and in CINAHL Plus by using subject headings and subheadings on June 21, 2024, within a five-year timeframe. The Covidence program was utilized to record and review each article. In PubMed, the preferred search terms "post-traumatic growth," "post-traumatic growth - psychological," and "psychological post-traumatic growth" were identified and used including "AND sexual assault." The search yielded 30 results. In CINAHL Plus, one search term, "post-traumatic growth - psychological" was identified and used with "AND sexual assault" yielding 784 results for "post-

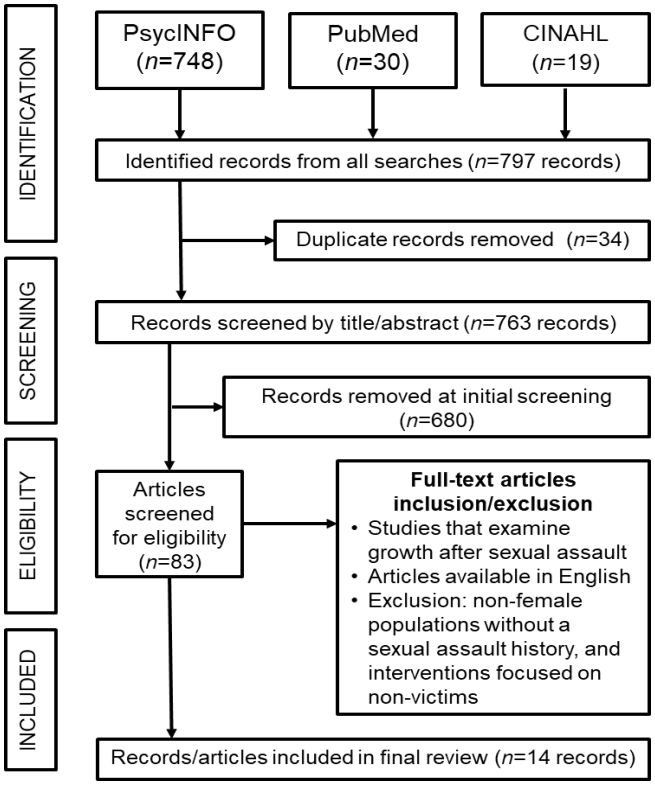
traumatic growth - psychological" and 19 results when used with "AND sexual assault." The PsycINFO search terms "post-traumatic growth, psychological" and "adult sexual assault" yielded 748 results. From this, 34 duplicate articles were identified by Covidence and eliminated, leaving 763 articles for review.

Each title and abstract (if a determination for inclusion was unable to be made based on the title) of the 763 studies was assessed for its contribution to defining the concept of post-traumatic growth in women who have been sexually assaulted. Inclusion criteria were level one through six studies that examine growth after sexual assault. Exclusion criteria were non-female populations without a sexual assault, level-seven research studies, and interventions focused on non-victims. Eleven articles met inclusion criteria and were analyzed using a critical appraisal of each article's population of focus, study purpose and design, limitations, and outcomes to ensure the article is relevant, reports valid results, and research design is appropriate for the research question.

Each full text was read for relevance to the review and a PRISMA diagram was generated to represent the articles identified (Figure 1). The content of Table 1 represents 11 articles reflecting the Rodgers' conceptual analysis components of antecedents, attributes, and consequences. Additional relevant literature was identified by searching for supportive information informed by these original articles and expertise on sexual assault recovery of the authors.

Figure 1

PRISMA Flow Diagram of Article Selection for Concept Analysis



Summary and Synthesis of Articles

Articles identified in the literature search demonstrated recurring themes among the antecedents, attributes, and consequences of post-traumatic growth following sexual assault among women. Antecedents focused on post-traumatic stress, self-blame, history of previous abuse or trauma, and a myriad of immediate responses after the assault such as anxiety, depression, and self-blame. Attributes also had similar themes among the articles that were processing- or coping-related, demonstrating that achieving post-traumatic growth is a journey. Strong themes of belonging, community, hope, and spirituality emerged as consequences of achievement of post-traumatic growth.

Table 1

Summary of Post-Traumatic Growth Among Women After Sexual Assault Articles

Author/Title	Population	Antecedents	Attributes	Consequences
Barnett & Maciel (2021) Counterfactual thinking among victims of sexual assault: relationships with post-traumatic stress and traumatic growth	Undergraduate women who had been sexually assaulted	Post-traumatic stress, self-blame	Counterfactual thinking relating to others, processing	New possibilities, personal strength, spiritual change, appreciation of life, optimism
Bryngeirsdottir et al. (2022) The post-traumatic growth journey of women who have survived intimate partner violence: A synthesized theory emphasizing obstacles and facilitating factors	Female survivors of intimate partner violence (including sexual harm by an intimate partner)		Help-seeking, empowerment, self-awareness, setting boundaries	Courage, helpfulness, independence, self-identity, happiness, self-care, positive vision, tolerance towards others, personal strength, self-respect, self-appreciation
Edwards et al. (2022) Post-traumatic growth in women with histories of addiction and victimization residing in a sober living home	Women with history of domestic and sexual violence and addiction living in a sober living home	Recent victimization, depression and post-traumatic stress disorder	Active coping and social support, safety and amelioration of psychological distress	Sense of belonging to community
Fayaz (2024a) Factors associated with growth in sexual violence survivors: A systematic scoping review	Survivors of sexual violence	Post-traumatic stress	Social support, spirituality, and religiosity	Control over recovery

Author/Title	Population	Antecedents	Attributes	Consequences
Fayaz (2024b) Systematic review of posttraumatic growth from sexual assault in women	Women survivors of sexual assault	Post-traumatic stress	Relating to others, social support, religiosity, and spirituality	Control over recovery
Guggisberg et al. (2021) Women's contexts and circumstances of posttraumatic growth after sexual victimization: A systematic review	Female victims of sexual assault who reported post-traumatic growth		Relationship with self, relationship with others, self-reflection, finding new purpose and meaning	Control of oneself
Kirkner & Ullman (2020) Sexual assault survivors' post-traumatic growth: Individual and community-level differences	Women sexual assault survivors	Disrupted core beliefs	Religious coping and positive social coping	Resilience, greater perceived control over recovery, less post-traumatic stress disorder
Lahav et al. (2020) Post-traumatic growth, dissociation, and sexual revictimization in female childhood sexual abuse survivors	Adult female survivors of child sexual abuse	Childhood sexual abuse		
Levy & Eckhaus (2020) Rape narratives analysis through natural language processing: Survivor self-label, narrative time span, faith, and rape terminology	Rape-victim stories (narratives) published on the Brave Miss World website		Use of rape terminology, passage of time	Faith, spirituality, self-forgiveness, less self-blame
Rosenthal et al. (2024) Trauma appraisals and posttraumatic growth among survivors of sexual assault	Adult women aged 18–64 survivors of sexual assault	Betrayal, alienation, post-trauma events, shame, self-blame, alienation, anger, and betrayal	Actively seeking new relationships and connections, post-trauma appraisal	Positive relationship with self and others

Results

Antecedents, attributes, related concepts, and consequences of post-traumatic growth in women who have been sexually assaulted were clarified during concept analysis. Findings demonstrated that post-traumatic growth in women who have been sexually assaulted was multidimensional and complex. Attributes of post-traumatic growth were divided categorically and included coping and processing with related concepts of resilience and optimism. Antecedents of post-traumatic growth were unresolved trauma, childhood abuse, mental distress, disruption of core beliefs, shame, self-blame, anxiety, and depression (Table 1). Consequences of the conceptual attributes were perceived control over recovery, lower rates of PTSD, and feelings of forgiveness (Affleck et al., 1987; Rivara et al., 2019). The attributes, antecedents, and consequences of post-traumatic growth after sexual assault in women are visually summarized in Figure 2.

Attributes

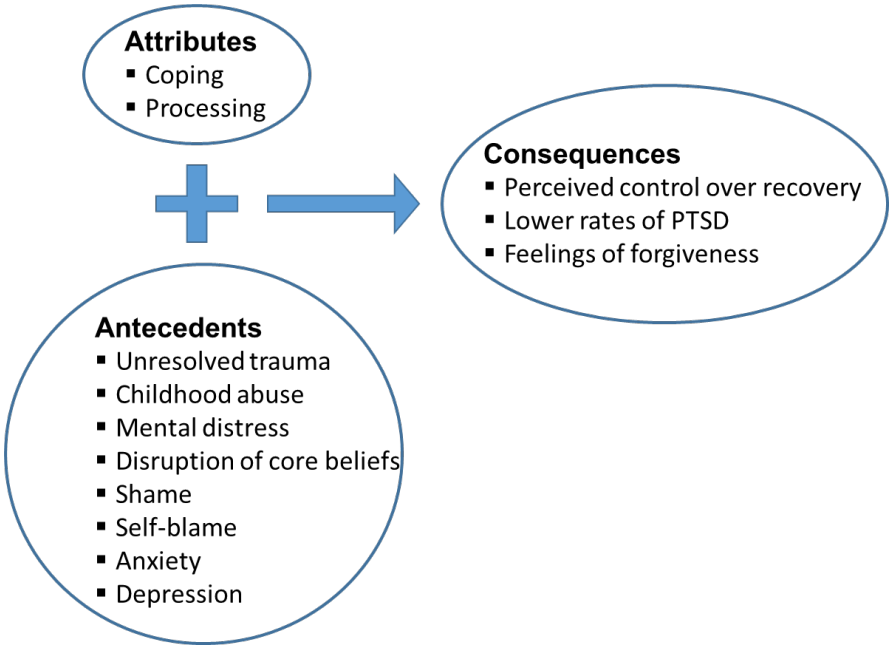
Attributes of post-traumatic growth in women who have been sexually assaulted were grouped into two main categories: coping and processing.

Coping

Coping emerged as an attribute of post-traumatic growth after sexual assault. Coping takes many forms that utilize social and religious coping methods. Cognitive and emotional processing are attributes that lead to coping which results in improvements in well-being following a sexual assault. The person's ability to process the event positively or negatively transforms their trauma (Kirkner et al., 2019; Rizkalla et al., 2021). Social coping is the opportunity to overcome adversity through engagement with others in a meaningful way that aids the person in understanding their situation and feelings and reflects a person's help-seeking behavior from persons in their environment (Kirkner & Ullman, 2020). Religious coping not only includes a person's relationship with God but a connection with their spirituality and faith that influences their ability to process the trauma (Kirkner & Ullman, 2020; Levy & Eckhaus, 2020). When a connection to God or a higher power is absent, persons who have experienced trauma have the opportunity to process their trauma on a spiritual level by participating in programs such as a 12-step program (Sanchez & Speck, 2023). Regardless of the religiosity or spiritual coping method, connections to a higher power align with spiritual and social support in religious communities. Spirituality is a developmental awareness in post-trauma recovery, connected to overcoming trauma and adversity (Speck et al., 2023a, b), and resilience is a learned skill that is conceptually adjacent to post-traumatic growth (Kirkner & Ullman, 2020; Sanchez & Speck, 2023).

Figure 2

Concept Model for Attributes, Antecedents, and Consequences of Post-Traumatic Growth



Processing

"Processing" after post-traumatic growth has attributes of its own including cognitive/informational processing and reprocessing. Psychotherapy is an example of a method that aids the person in working through their ruminations (i.e., processing and reprocessing). Specific examples of psychotherapeutic methods include cognitive behavioral therapy, trauma therapy, and cognitive processing therapy (Barnett & Maciel, 2021; Rizkalla et al., 2021).

Other "processing" mechanisms involved in post-traumatic growth after a sexual assault include counterfactual thinking and self-awareness. Counterfactual thinking (belief that there *could* have been better or worse alternative events and outcomes) is a method of cognitive processing that encourages or highlights optimism (Barnett & Maciel, 2021) and influences post-traumatic growth. Upward counterfactual thinking (reflecting on how a scenario might have been better) leads to self-blame, increased post-traumatic stress, and increased post-traumatic growth (Barnett & Maciel, 2021). Counterfactual thinking has therapeutic limitations as a processing method, and self-awareness is an attribute of post-traumatic growth that encourages self-care and resilience (Barnett & Maciel, 2021; Kirkner et al., 2019; Rizkalla et al., 2021).

Antecedents

For this analysis, antecedents are events that occurred just before the sexual assault event or long ago. Antecedents, related to past events and immediate responses following a sexual assault, impact post-traumatic growth. Examples of antecedents include unresolved trauma, childhood abuse, mental distress, disruption of core beliefs, shame, self-blame, anxiety, and depression.

Past Events

Unresolved trauma and history of childhood abuse often co-occur. Many women who experience sexual assault have experienced poly-victimization—multiple past experiences of violence or maltreatment (Cho et al., 2023). Regardless of the type of past trauma, past traumatic events impact post-traumatic growth after sexual assault in women (Kirkner et al., 2019; Rizkalla et al., 2021). Whether the woman has experienced childhood abuse or some other type of trauma, her ability to process and cope with a sexual assault is impacted during the immediate response time (Kirkner et al., 2019).

Immediate Responses

Shame, anxiety, depression, self-blame, disrupted core beliefs, and mental distress are beliefs and emotions that occur after a woman is sexually assaulted (Jessup et al., 2020; Kirkner et al., 2019; Kirkner & Ullman, 2020; Rizkalla et al., 2021; Rosenthal et al., 2023). When coupled with unresolved trauma or history of abuse during childhood, the feelings and views experienced during the immediate response period affect post-traumatic growth directly and indirectly. These feelings are also precursors impacting the trajectory of healing and well-being.

Consequences

The positive consequence following the responses a woman experiences after a sexual assault is called post-traumatic growth. Post-traumatic growth occurs when women perceive control over processing their assault (Kirkner et al., 2019; Kirkner & Ullman, 2020; Scher et al., 2017). Women who experience post-traumatic growth after being sexually assaulted report perceived control over their recovery, sense of belonging to community, experience lower rates of PTSD, and increased feelings of forgiveness (Affleck et al., 1987; Edwards et al., 2022; Fayaz (a,b), 2024; Guggisberg et al., 2021; Sanchez & Speck, 2023). The result of this post-traumatic growth also results in new skills to overcome adversity in the future (Mark & Vowels, 2022; Sanchez & Speck, 2023). Though the defining tenets of post-traumatic growth after sexual assault are clear, the journey itself is complex.

Related Concepts

Resilience and optimism emerged as related concepts when examining post-traumatic growth among women who have been sexually assaulted (Barnett & Maciel, 2021; Kirkner & Ullman, 2020). Literature focused on post-traumatic growth after sexual assault discusses concepts of resilience and optimism throughout the post-traumatic growth process. This body of work also demonstrates a close relationship to post-traumatic growth, but these are distinct independent concepts. Resilience and optimism play a role in post-traumatic growth that is not well understood.

Model Case

Ms. H. is a 22-year-old cisgender woman commercial sex worker who was sexually assaulted one year ago and reported the assault to police. She is preparing with the prosecutor to testify against the perpetrator of her sexual assault. She reports to the prosecutor that she was sexually abused by her biological father daily between the ages of 12 and 14 (past events). She reports that as a result, she ran away from home and began to sell sexual acts for survival, then fell victim to a pimp who physically beat her and sexually trafficked her, assaulting her at least twice a day for a period of months (antecedent). A year ago, a "customer" paid to have vaginal sex with her and anally assaulted her, then refused to pay (antecedent). The perpetrator beat her,

tore her fingernails from their nailbeds, strangled, and sexually abused her (sexual assault event). She was able to escape and reported the sexual assault to police (immediate response) when the perpetrator went to sleep. Since escaping, she lives in a women's recovery shelter and participates in cognitive behavioral therapy. She has joined a yoga group and though she frequently feels anxious, states that she believes she can one day forgive her father because therapy and exercise positively impact her ability to process and cope with the trauma she has endured (consequences).

A model case is provided because it aligns with Rodgers' Method and demonstrates a positive outcome of post-traumatic growth in a woman after sexual assault (Rodgers, 2000). The positive model case demonstrates the attributes, related concepts, antecedents, and consequences of post-traumatic growth after sexual assault as described throughout the analysis. Coping and processing are demonstrated by patient participation in cognitive behavioral therapy and the patient leaving the abusive situation. Related concepts of resilience and optimism are demonstrated when Ms. H states that she believes she can forgive her father. Antecedents that impact Ms. H's post-traumatic growth include the sex trafficking she experienced as an adult and the sexual abuse she experienced as a child. Ms. H's statement about forgiving her father also aligns with a consequence in post-traumatic growth, forgiveness that allows the victim to move through stages of grief to eventually thrive.

Empirical Indicators

To understand Rodgers' Method of concept analysis, the results reveal the complexity of post-traumatic growth after sexual assault in women is evidenced by the number of measurement tools and scales used in the articles reviewed that measured elements of the concept. Among six of the 11 articles, 23 tools were used to understand post-traumatic growth and reflect the attributes, antecedents, and consequences observed. Each scale represents a different facet of post-traumatic growth. When used together, the scales form a more complete view of post-traumatic growth in women with a sexual assault experience.

Discussion

The concept of post-traumatic growth (coping and processing) has application to women who have been sexually assaulted (Kirkner et al., 2019; Kirkner & Ullman, 2020; Rizkalla et al., 2021). The nursing process has potential through assessment to identify patients with trauma backgrounds. Supporting patients on their post-sexual assault journey requires knowledge about the journey to health where positive outcomes include (1) a new appreciation of life, (2) stronger relationships with others, (3) personal strength, (4) new possibilities, and (5) spiritual change (Tedeschi & Calhoun, 1996; Sanchez & Speck, 2023). Understanding the complexity of recovery after sexual assault requires use of evidence-based interventions in the nursing process that create an environment of understanding, empowerment, and hope (Speck et al., 2023a, b). This, in combination with the application of nursing ethics (Olson & Stokes, 2016) prepares the nurse to demonstrate acts of empathy and compassion.

Sexual assault trauma impacts health and well-being. The usefulness of understanding post-traumatic growth by nurses and the potential impact on nursing practice has not been established (Guggisberg et al., 2021; Millegan et al., 2015). Literature on post-traumatic growth is robust but is limited on female sexual assault victims, which guides future research inquiry. As our focus is on women experiencing sexual trauma, a separate concept analysis focused on men and other diverse populations as sexual assault victims is also warranted, but beyond the scope of this article.

Application of the Rodgers' Method helps nurses explain the complex components of post-traumatic growth such as coping and processing (attributes), resilience and optimism (related concepts), impact of past events and immediate responses (antecedents), and perceived control over their recovery (Figure 1). Self-efficacy and confidence in decisions improve agency, lowering PTSD (Sanchez & Speck, 2023). Self-forgiveness assists in overcoming, building resilience, and culminating in positive outcomes (post-traumatic growth) (Sanchez & Speck, 2023; Speck et al., 2023b). Knowledge of the Rodgers' Method aids nurses in understanding post-traumatic recovery by deconstructing trauma and the normal reactionary behaviors after trauma.

Nurses use this information to explore the patient's historical interpretation of events, addressing the improvement of planned supportive interventions throughout post-traumatic recovery, including use of positive psychology and hope (Speck et al., 2023a, b). Nurse interventions begin with history taking to capture the patient's lived experience during the encounter. Use of trauma-informed methods assist in seeking uncomfortable information essential for nursing intervention. For instance, when asking about sexuality, seek permission to begin a difficult conversation with questions that may be uncomfortable; verbalizations of "I don't know," or "Can we just skip over this?" are opportunities to bridge the gaps in identifying previously traumatized patients by providing supportive care for stress reduction (Speck et al., 2023b, c). Resistance in the evaluation occurs when the patient is a poor historian for significant events (Speck et al., 2023c). When assessing the person affected by sexual violence, seek clues of past trauma history, such as declining to answer or off-putting behavioral adaptations that push people away. For example, being impatient, withdrawn, threatening, angry, belligerent, escalating, hypervigilant, or pulling away from touch are symptoms of adaptive behavior when uncomfortable; when recognized, this is an opportunity to explore the trauma and the trauma's impact (Speck et al., 2023c).

Patients who experienced a sexual assault benefit from nursing knowledge of the examination process and normalization of unique experiences in a post-traumatic growth journey because it emphasizes trauma-informed responses and the importance of rapport building during patient interactions, which improves the nurse-patient relationship (CDC, 2020). Avoidance of routine visits, frequent cancellations, or leaving without being seen are clues to a history of trauma or current stress in jobs, family, or relationships (Speck et al., 2023b). During a physical examination of private and sensitive areas, clues to past trauma include body positions, eye diversion, pulling the sheet over their head, keeping their knees together, or pushing back on the table (Speck et al., 2023b). The nurse action is effective communication by explaining in layman's terms when the nurse is observing and seeking permission to continue after exploring the reaction. Engagement with the patient's permission empowers the patient, providing an opportunity to teach about the assessment method and their use to inspect their private and sensitive areas (Speck et al., 2023b, c). The key is to recognize the trauma symptom and stop, asking permission to proceed, and explaining exactly what you are doing and communicating the meaning of findings (Speck et al., 2023b, c).

Limitations

The literature search was limited to three databases—PubMed, CINAHL, and PsycInfo. This search revealed a limited sample size (n=11) and scope of articles for inclusion. Additional articles on other databases might be available, which could add valuable information. The Rodgers' Method aids researchers in conceptualizing and understanding complex, dynamic, and

abstract concepts. The concept of post-traumatic growth after sexual assault is so complex that attempts to conceptualize it in a single study is not possible.

Implications for Research

Using the Rodgers' Method, the analysis confirms sexual assault involves a complicated recovery and nursing practice has opportunity for utilizing this knowledge to improve practice. A deeper understanding of sexual trauma's impact changes nurse attitudes and behaviors as understanding antecedents creates an opportunity to intervene. When nurses understand the components of the healing journey that lead to post-traumatic growth, goal setting and nursing care that supports mental and physical health outcomes is better informed. Behavioral clues of post-traumatic growth occur weeks, months, or years after the assault, where nurses have opportunities for intervention (Dowdell & Speck, 2022; Speck, et al., 2023a, b). The trauma informed approach is important to create safety, build trust, and empower through person-centered trauma-informed care (Dowdell & Speck, 2022; Speck et al., 2023a). The trauma-informed care approach utilizes six principles to promote a safe, inclusive environment that promotes acceptance (Dowdell & Speck, 2022; CDC, 2020). Failure to approach patients with sexual trauma histories results in a population of *never-served* (those who avoid healthcare due to marginalization) who choose to avoid the judgement—normal reactions that result in predictable patient behaviors and choices (Speck et al., 2008; Speck et al., 2023b). Trauma-informed care is a skill that encourages nurses to implement the person-centered recommendations of AACN *Essentials* (AACN, 2021) and the trauma-informed recommendations from the *Future of Nursing 2020-2030* by National Academies of Medicine (2021) and SAMHSA (2014).

Additional research that utilizes this concept analysis can be incorporated into existing holistic models (i.e., Worker Wellbeing Model) and utilized to improve post-traumatic growth among women who have experienced sexual assault (Bender, 2018; Chari et al., 2018; Fawcett, 1984; Neuman, 1982; Roy, 1976; Turner & Kaylor, 2015). For example, the application of the concept of post-traumatic growth to Roy's Model reveals opportunities to guide researchers toward new questions that discover many aspects along the highly individualized continuum of recovery. Nursing research that focuses on the complexities of post-traumatic growth following sexual trauma supports recent understanding about trauma that guides nursing responses, specifically to improve the social, physical, and psychological health of patients. Sexual trauma is complex, requiring a foundational understanding of the concept of post-trauma recovery. This analysis of post-trauma recovery provides a foundational understanding of the components of post-traumatic growth and acknowledges the impact of trauma on health and well-being in the patient's lived experience (Moulton et al., 2019). Continued research should aim to identify specific nursing practices that can be implemented to support post-traumatic growth following sexual assault, both within the framework of trauma-informed care and the utilization of other methods and best practices.

Implications for Practice

When nurses are aware of a patient's trauma history, they have opportunities to improve their actions during care by acknowledging the impact of trauma on patients and their health; this improves the delivery of care by creating a more meaningful nurse-patient relationship (Speck et al., 2023a). Nurses can implement trauma-informed practices by ensuring patients have privacy from friends, family members, and other support persons at some point during their interaction. Safety, trustworthiness, and transparency are employed when nurses explain the nurse's limits to confidentiality prior to engaging in conversation where a trauma disclosure might occur, ensuring

patients have a better understanding of the potential consequences of trauma disclosure. Collaboration and mutuality, empowerment and choice, and cultural issues are supported when patient goals and preferences are explored and incorporated into the process of nursing care planning.

Conclusions

The concept of post-traumatic growth is broad. The Rodgers' Concept Analysis was used to conceptualize post-traumatic growth in women who have experienced sexual assault. Previous lived experiences and coping through engaging with personal, social, and spiritual supports leads to perceived control and forgiveness. These are necessary milestones to achieve for post-traumatic growth leading to restoration of health and well-being to occur. The model case demonstrates complexities among persons who experience sexual assault and their recovery. The findings fueled a discussion about discovered antecedents and consequences, identifying concepts to guide inferences from the analysis for the purpose of future research to enhance nursing interventions in the promotion of post-traumatic growth in persons with the experience of sexual assault.

Data Availability Statement: The reference data supporting this systematic review are from previously reported studies and datasets, which have been cited. The processed data are available from the corresponding author upon request.

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Journal of the Academy of Forensic Nursing

Original Research

Lockdowns Causing Lock-Ins: Impact of the COVID Pandemic on Trends Observed by Forensic Nurse Examiners

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Abstract

This study consists of a secondary, longitudinal analysis of chart data pulled from a forensic nursing program at a large Level I Hospital in Colorado between 2018–2023 to explore trends in forensic assessments conducted during pandemic lockdown periods. Descriptive analyses and logistic regression were used to examine the number and severity of consultations performed by the forensic nursing team across COVID-19 pandemic timepoints. A total of 9,944 patients received a consult from the forensic nursing program between 2018–2023, with 2,144 seen during a COVID-19 lockdown period. The odds of forensic nurses conducting exams for traumatic brain injury, sexual assault, and intimate partner violence were significantly higher during various COVID lockdowns or timepoints. No changes in the odds of patients reporting strangulation were observed during COVID-19 lockdowns. While the odds of patients being examined for risk of intimate partner violence (IPV) increased during the second lockdown and reopening periods, the severity of reported IPV did not vary compared to other timepoints. Older adult patients were less likely to be seen during COVID-19, with significant declines in patients screened for elder abuse. This analysis provides valuable insight into the changes in patient volumes, types of assault, and severity of these patient experiences before and after the pandemic and over time. Observed

trends emphasize the importance of coordinated responses and screenings in the emergency department setting as well as the value of the in-depth care that forensic nurses provide before, during, and after a time of global crisis.

Keywords: forensic nursing, COVID-19, intimate partner violence, sexual assault, strangulation, head trauma

Lockdowns Causing Lock-Ins: Impact of the COVID Pandemic on Trends Observed by Forensic Nurse Examiners

The COVID-19 pandemic triggered unprecedented disruptions to daily life, healthcare delivery, and public safety systems, significantly affecting population health and behavior. Public health restrictions and prolonged lockdowns created wide-ranging challenges and resource gaps that complicated efforts to monitor and respond to violence and trauma (Benis et al., 2021; Betron et al., 2020). The subsequent and significant shifts in the nature and context of social interactions during the pandemic had notable, and often adverse, impacts on health, behavior, and well-being (Bonsaksen et al., 2021; Godara et al., 2023; Lettiere-Viana et al., 2021).

Within this context, trends in interpersonal violence—including intimate partner violence (IPV), sexual assault (SA), and other forms of abuse—have been difficult to assess. A meta-analysis of U.S.-based studies found an 8.1% overall increase in domestic violence after the onset of the pandemic (Kourti et al., 2023). This is further supported by the National Domestic Violence Hotline (2019), which reported a 9% increase in contacts in 2020 compared to 2019. Yet our understanding of the nuances of these calls or reports remain varied widely by setting, time period, and methodology (Abdo et al., 2020; Kourti et al., 2023; Piquero et al., 2021). Similarly, structural barriers—such as social distancing requirements or fear of exposure—may have hindered access to in-person healthcare for things such as forensic nurse consultations and exams, particularly for vulnerable groups (Decker et al., 2022; Wood et al., 2022).

This study leverages a large, multi-year dataset of forensic nursing encounters from a program in Colorado to assess changes in patient characteristics, types of forensic assessments completed, and reporting outcomes across distinct COVID-19 timepoints. We specifically sought to answer the question of whether lockdown periods showed unique trends in patient characteristics (age, sex, race, and ethnicity) and experiences of IPV or other forms of violence. By examining both frequency and severity of violence-related presentations, we aimed to clarify how the pandemic shaped forensic nursing care and inform future responses during times of global crisis.

Methods

Ethical approval

The study was determined exempt by the Colorado Multiple Institutional Review Board (COMIRB #24-2259).

Setting and Population

This was a retrospective study consisting of electronic medical record (EPIC) data of patients seen by a local forensic nurse examiner (FNE) program in either the emergency

department or an inpatient unit between 2018 and 2023. The FNE program primarily serves patients at a large academic urban hospital with 130,000 ED annual visits that serves as a Level I Trauma Center in Aurora, Colorado. It also provides on-call consults for a smaller, Level III facility located south of Denver with approximately 20-40,000 annual ED visits in Highlands Ranch, Colorado. The program sees all patients affected by violence, which can include SA, physical assault, domestic/interpersonal violence, human trafficking, elder abuse, adolescent abuse, strangulation, assault by weapon (e.g. firearm injury), and vehicular assaults.

There were n = 9,975 total forensic nurse consultations with patients affected by violence between January 1, 2018 and December 31, 2023, with n = 5,733 who consented to at least part of a medical forensic exam (Table 1). The number of patients consulted by the forensic nursing program increased by an average of approximately 446 patients per year (SD = 209), reflecting a 60.8% average annual increase in patient volume over time. The largest year-to-year growth occurred between 2018 and 2019 (184.9%, from 336 to 960 patients), followed by increases of 66.9% in 2020, 31.9% in 2021, 13.3% in 2022, and 7.2% in 2023. Notably, there were two contextually relevant events that took place between 2019 and 2020 unrelated to the COVID-19 pandemic. First, in 2019, the FNE program went from an on-call consult service to a 24/7 in-house consult service. Second, between 2018 and 2019, closure of several sexual assault nurse examiner and forensic nursing programs throughout the state of Colorado may have led to increases in patient volumes. Although difficult to measure the degree of impact these events had, out of abundance of caution for potential confounding, our primary focus was therefore on trends during and after COVID pandemic lockdowns, rather than pre-post comparisons.

Data Extraction

The health system in which this forensic nursing program operates has its own Health Information Management department, independent of the study team, with specialists who receive ongoing training and auditing to extract all medical record data. Data extraction included patient demographics, diagnoses, and forensic nursing chart assessment data. Patient records were selected based on whether they received a forensic nurse consultation (most often by physician referral) and received a medical forensic exam completed at either hospital location between 2018 and 2023. Data included that which was documented at hospital intake and registration (e.g., patient demographic characteristics) as well as the information collected specifically by the forensic nursing team (e.g., abuse- or injury-specific assessments).

Measures

The predictor of this analysis was the COVID timepoint in which the patient received a medical forensic exam. Dependent outcomes included patient demographic variables (age, legal sex, race, ethnicity, primary language, and county of residence), the type of abuse/assault assessment performed by the forensic nurse (sexual assault, drug-facilitated sexual assault, intimate partner violence, elder abuse, human trafficking, and traumatic brain injury or strangulation), reporting outcomes (legal, medical, anonymous, non-reporting), and the patient's self-reported (to the forensic nurse) relationship to their assailant that harmed them.

COVID lockdowns and timepoints. The overall timeline of the COVID pandemic was divided into seven distinct timepoints based on the Executive Orders placed and enforced in Colorado during the pandemic (Exec. Order NO. D 2020 017, 2020; Exec. Order NO. D 2020 044, 2020; Exec. Order NO. D 2021 122, 2020). These include: 1) pre-pandemic: 2018–March 6, 2020; 2) first COVID lockdown in Colorado: March 7, 2020–April 26, 2020; 3) first reopening:

April 27, 2020–June 30, 2020; 4) second COVID lockdown: July 1, 2020–July 8, 2021; 5) restrictions lifted: July 9, 2021–December 31, 2021; 6) the calendar year of 2022: January 1, 2022–December 31, 2022; and 7) the calendar year of 2023: January 1, 2023–December 31, 2023. Breaking down the time points in this way allowed for comparison of trends during lockdown periods (either the initial or second lockdown period; 424 days total) vs. non-lockdown periods (i.e., before, between, or after lockdown periods; 1,767 days total). Whether patients were categorized as being seen during a COVID-specific timepoint was based on the date of their arrival to the hospital.

Demographics. Demographic variables, including sex, age, race, and ethnicity, were obtained through patient self-report or documentation and recorded at hospital intake or by their primary care team, not the forensic nurse. Age was treated as a continuous variable but also categorized into age groups to facilitate interpretation, explore group-level differences, and support the application of findings. Age categories included 17 and under, 18–29, 30–49, 50–69, and 70+ years old. Race and ethnicity were recorded as two separate variables, with race response options including White or Caucasian, Black or African American, Asian or Asian American, Native American or Alaskan Native, Native Hawaiian or other Pacific Islander, multiracial, other, or unknown (e.g., unable to assess or patient declines). Ethnicity was recorded as Hispanic/Latino/Latina or non-Hispanic/Latino/Latina, with an additional category for unable to assess/unknown. Legal sex was recorded in response to the question, "What is your legal sex?" with documentation options of male, female, or unknown/patient declined.

Relationship to assailant. Easily the most complex aspect of data cleaning was categorizing how patients responded to one of the routine forensic exam questions, "What is your relationship to the person who did this to you?" Responses are written verbatim in an open-ended text field in real time by the forensic nurse. Following Grodal, Anteby, and Holm's (2021) recommendations for categorizing qualitative data, we grouped patients' relationships to their assailants into the following 10 categories: 1) intimate partner – including current partner, ex, or child's parent; 2) relationship to partner – including current partner/ex's family member, friend, or ex/current partner; 3) family – including any blood relative, caregiver, or relative/partner of family member such as stepchild; 4) friend – including family friend; 5) roommate or cohabitating – including housemate or cellmate; 6) acquaintance or contextual relationship – including classmate, friend of friend, neighbor, tenant/landlord, healthcare worker/patient, professional colleague, employer, or client; 7) stranger; 8) multiple people; 9) other (e.g., drug dealer); or 10) unknown – including declined, patient did not see assailant, or unable to assess.

Strangulation. While all physical assaults are seen and assessed by the forensic nursing program, strangulation and are the forms of physical assault that include in-depth, tailored assessments by the forensic nursing team. When a patient reports strangulation, the forensic nurse asks a series of questions about the number of times strangled, the methods and estimated amount of pressure applied (0-10, 10 = most imaginable), the duration of each strangulation, and signs and symptoms during and after the assault. Patients were marked as having received a strangulation exam if any of these observations were in their medical record.

Traumatic brain injury. First implemented in this forensic nursing program in 2020, thus limiting observations to post-COVID only, a modified Acute Concussion Evaluation (ACE) concussion screener from the Centers for Disease Control and Prevention (CDC) is used to assess the severity of head trauma and a patient's subsequent risk for concussion (Gioia & Collins, 2006). This validated questionnaire includes 22 yes/no items about signs/symptoms the patient

may have experienced since experiencing head trauma (Gioia & Collins, 2006). The ACE total score is the sum of post-head trauma symptoms, which fall into the following sub-categories: sleep (four items), cognitive (four items), emotional (four items), and physical (eight items) symptoms.

Sexual assault (SA). Many of the patients who come to the forensic nursing program are being seen for recent experiences of SA. These patients are then asked 11 questions about the type of penetration or touching experienced, as well as 17 questions assessing their risk for drug-facilitated sexual assault (DFSA). Patients were categorized as having received an SA exam if any observations from either assessment were completed in their medical record.

Intimate partner violence. The Danger Assessment (DA) is used routinely for any patient with suspected or reported IPV to assess the presence and lethality risk of IPV-related experiences the patient reports over the past 12 months (Graham et al., 2022). The DA uses a weighted algorithm to assess general lethality of indicators such as death threats, partner access to or threats with weapons, substance abuse issues, controlling behaviors or stalking, escalation of violence over time, prior strangulation, threats to loved ones, and suicidality (Graham et al., 2022). There are two validated versions of the DA currently in use in this setting (same-sex and opposite-sex/heterosexual), both of which have been validated only among adult female samples (Campbell et al., 2009; Glass & Campbell, 2007; Graham et al., 2022; Messing et al., 2020). Due to the lack of validated instruments for assessing lethal IPV risk among males, the FNE program uses the DA with male patients while acknowledging its limitations of this approach. In the absence of validation studies specific to male populations, for this study male patients were excluded from the linear regression analyses to minimize potential bias. Total scores of the 20-items in the opposite-sex DA can range from 0–39, and total scores for the 18 items of the same-sex DA ranging from 0–25.

Elder abuse. Forensic nursing consults for elder abuse at this health system began in 2020, and subsequently the Elder Abuse Suspicion Index (EASI) was incorporated into the forensic charting system and completed whenever these consults took place (Yaffe et al., 2008). The EASI was developed in 2002 to identify patient risk factors for elder abuse or neglect using a five-item yes/no screener (Yaffe et al., 2008). Given the timing of its implementation to the forensic nursing program, only post-COVID trends were observed for this patient population.

Human trafficking. For patients suspected of being trafficked or who self-report human trafficking of any kind, forensic nurses complete a six-item critical assessment of human trafficking red flags with the patient, as recommended by the Laboratory to Combat Human Trafficking (2019).

Reporting. All patients who received consultation from the forensic nursing program are asked and informed about their reporting options. Patient choices are then recorded in the patient chart and include law reporting, medical reporting, anonymous reporting, and non-reporting.

Analysis

Stata 17 was used to perform all statistical analyses. Descriptive statistics were used to summarize patient demographics, types of forensic assessments conducted, assailant relationship, and reporting outcomes, stratified by whether the patient was seen during a COVID-19 lockdown period (Table 1). Frequencies and proportions were reported for categorical variables; means and standard deviations were reported for continuous variables.

To examine associations between lockdown status and each categorical outcome, binary logistic regression models were estimated. Next, multinomial logistic regression models were used to assess the association between COVID timepoint (seven-category variable) and the same categorical outcomes (Table 2), with 2023 used as the reference group to examine longitudinal trends following the pandemic onset. Assessments for TBI and elder abuse were limited due to the ACE assessment not being introduced until the first reopening (04/47/20–06/30/20) and the EASI first introduced during the second lockdown (07/01/20–07/08/21), thus restricting points of comparison.

To examine change over time in continuous variables, linear regression models were used to evaluate differences in patient age, DA scores, and TBI (ACE) symptom scores across COVID timepoints (Table 3). All models used robust standard errors, and significance was evaluated at the $p < .05$ level.

Missingness

There were no notable patterns in missingness in terms of the race, ethnicity, age group, or assault type that patients reported upon hospital admission. Missingness in gender identity and sex assigned at birth variables led to their exclusion and reliance on legal sex for this given 94% had legal sex charted whereas only 40–50% had gender or sex at birth documented. Temporal trends for when the TBI and elder abuse assessments were introduced in this setting limited their inclusion in the multinomial and linear regressions.

Results

Table 1

Patient Demographics

Patient Demographics, Abuse/Assault Assessment, Relationship to Assailant, and Reporting Outcome Frequencies and Regression by Whether Arrived During Lockdown Period

	Total	Non-Lockdown Period[1]	Lockdown Period[2]	Logistic Regressions
	n (%)	n (%)	n (%)	OR (SE)
Number of FNE consultations	9,944	7,800	2,144	*(ref: no exam)*
Number of FNE exams	5,733 (57.7%)	**4,420 (56.7%)**	**1,313 (61.2%)**	**1.21 (0.06)*** **
Type of FNE assessment				*(binomial)*
Traumatic brain injury	2,526 (25.4%)	**1,817 (23.3%)**	**709 (33.1%)**	**1.63 (0.09)*** **
Strangulation	2,083 (21.0%)	1,607 (20.6%)	476 (22.2%)	1.10 (0.06)
Sexual assault, including drug-facilitated	2,109 (21.2%)	**1,593 (20.4%)**	**516 (24.1%)**	**1.23 (0.07)*** **
Intimate partner violence	1,784 (17.9%)	**1,360 (17.4%)**	**424 (19.8%)**	**1.17 (0.07)***
Elder abuse	165 (1.7%)	**148 (1.9%)**	**17 (0.8%)**	**0.41 (0.11)*** **
Human trafficking	176 (1.8%)	133 (1.7%)	43 (2.0%)	1.18 (0.21)
Department				
UCH Emergency	7,891 (79.4%)	6,184 (79.3%)	1,707 (79.6%)	*(ref: UCH ED)*
HRH Emergency	394 (4.0%)	307 (3.9%)	87 (4.1%)	1.03 (0.13)
Inpatient	1,659 (16.7%)	1,309 (16.8%)	350 (16.3%)	0.97 (0.06)
Legal Sex				
Male	3,292 (33.1%)	2,559 (32.8%)	733 (34.2%)	*(ref: males)*
Female	6,652 (66.9%)	5,241 (67.2%)	1,411 (65.8%)	0.94 (0.05)
Race				
White/Caucasian	4,054 (40.8%)	3,206 (41.2%)	848 (39.6%)	*(ref: White)*
Black or African American	2,768 (27.9%)	**2,100 (27.0%)**	**668 (31.2%)**	**1.20 (0.07)***
Asian/Asian American	214 (2.2%)	167 (2.1%)	47 (2.2%)	1.06 (0.18)
American Indian/Alaskan Native	199 (2.0%)	148 (1.9%)	51 (2.4%)	1.30 (0.22)
Native Hawaiian/Other Pacific Islander	45 (0.5%)	39 (0.5%)	6 (0.3%)	0.58 (0.26)
More Than One Race	135 (1.4%)	112 (1.4%)	23 (1.1%)	0.78 (0.18)

Patient Demographics, Abuse/Assault Assessment, Relationship to Assailant, and Reporting Outcome Frequencies and Regression by Whether Arrived During Lockdown Period

	Total	Non-Lockdown Period[1]	Lockdown Period[2]	Logistic Regressions
	n (%)	n (%)	n (%)	OR (SE)
Other	2,356 (23.7%)	1,881 (24.2%)	475 (22.2%)	0.95 (0.06)
Patient Declined	22 (0.2%)	20 (0.3%)	2 (0.1%)	0.38 (0.28)
Unknown	134 (1.4%)	110 (1.4%)	24 (1.1%)	0.82 (0.19)
Ethnicity				
Non-Hispanic/Latino	6,719 (67.7%)	5,225 (67.1%)	1,494 (69.7%)	*(ref: Non-Hisp.)*
Hispanic/Latino	3,061 (30.8%)	2,430 (31.2%)	631 (29.4%)	0.91 (0.05)
Unknown	147 (1.5%)	**128 (1.6%)**	**19 (0.9%)**	**0.52 (0.13)****
Average Age - M (SD)†	36.69 (15.71)	36.83 (15.90)	36.09 (14.89)	-0.00 (0.00)
Age Group				
≤17	321 (3.2%)	261 (3.3%)	60 (2.8%)	0.84 (0.12)
18–29	3,501 (35.2%)	2,714 (34.8%)	787 (36.7%)	1.06 (0.06)
30–49	4,334 (43.6%)	3,406 (43.7%)	928 (43.3%)	*(ref: 30-49 years)*
50–69	1,368 (13.8%)	1,056 (13.5%)	312 (14.6%)	1.08 (0.08)
70+	420 (4.2%)	**363 (4.7%)**	**57 (2.7%)**	**0.58 (0.08)*****
Relationship to Assailant[3]				
Intimate partner	1,919 (35.8%)	1,475 (35.7%)	444 (35.9%)	*(ref: partner)*
Relationship to partner	111 (2.1%)	**71 (1.7%)**	**40 (3.2%)**	**1.87 (0.38)****
Family	385 (7.2%)	296 (7.2%)	89 (7.2%)	1.00 (0.13)
Friend	331 (6.2%)	258 (6.2%)	73 (5.9%)	0.94 (0.13)
Roommate or Cohabitating	129 (2.4%)	100 (2.4%)	29 (2.3%)	0.96 (0.21)
Acquaintance or contextual relationship	611 (11.4%)	468 (11.3%)	143 (11.6%)	1.02 (0.11)
Stranger	868 (16.2%)	661 (16.0%)	207 (16.7%)	1.04 (0.10)
Multiple People	343 (6.4%)	269 (6.5%)	74 (6.0%)	0.91 (0.13)
Other (e.g., drug dealer)	111 (2.1%)	88 (2.1%)	23 (1.9%)	0.87 (0.21)
Unknown	560 (10.4%)	444 (10.8%)	116 (9.4%)	0.87 (0.10)
Report Type				
None / Unknown	4,537 (45.6%)	3,496 (44.8%)	1,041 (48.6%)	*(ref: unknown/none)*
Law	4,840 (48.7%)	3,809 (48.8%)	1,031 (48.1%)	0.91 (0.05)
Medical	201 (2.0%)	160 (2.1%)	41 (1.9%)	0.86 (0.15)
Anonymous	166 (1.7%)	135 (1.7%)	31 (1.4%)	0.77 (0.16)
Nonreporting	200 (2.0%)	200 (2.6%)	0 (0.0%)	-

1. Non-Lockdown Periods: Before 3/6/20, Between 4/27/20–6/30/20, or After 7/8/21

2. Lockdown Periods: Between 3/6/20–4/26/20 or 7/1/20–7/8/21

3. How patients described their relationship to their assailant was grouped into the following 10 categories: 1) intimate partner – including current partner, ex, or child's parent; 2) relationship to partner – including current a partner/ex's family member, friend, or ex/current partner; 3) family – including any blood relative, caregiver, or relative/partner of family member such as stepchild; 4) friend – including family friend; 5) roommate – including housemate or cellmate; 6) acquaintance or contextual relationship – including classmate, friend of friend, neighbor, tenant/landlord, healthcare worker/patient, professional colleague, employer, or client; 7) stranger; 8) multiple people; 9) other (e.g., drug dealer); or 10) unknown – including declined, patient did not see assailant, or unable to assess.

**p < .05, **p < .01, ***p < .001*

† *Linear regression - reported values are the coefficient and standard error*

Patient Demographics, Assault Characteristics, and Reporting by Lockdown Period

Between January 1, 2018, and December 31, 2023, there were 9,944 forensic nurse patient consultations, with 2,144 (21.6%) occurring during COVID-19 lockdown periods and 7,800 (78.4%) during non-lockdown periods. Overall, 5,733 exams were completed (57.7%), with higher completion during lockdowns (61.2%) compared to non-lockdowns (56.7%) which was significant ($OR = 1.21$, $SE = 0.06$, $p < 0.001$). The most common assessments were for TBI (25.4%), SA (21.2%), and strangulation (21.0%). TBI was more frequently assessed during

lockdown periods (33.1%) compared to non-lockdowns (23.3%; *OR* = 1.63, *SE* = 0.09, $p < 0.001$). There was a 1.23 higher odds of a SA exam among those seen during a lockdown period (*SE* = 0.07, $p < 0.001$) and 1.17 higher odds of DAs completed to screen for lethal IPV (*SE* = 0.07, $p = 0.012$). Assessments for elder abuse (1.6%) and human trafficking (1.8%) were rare. Elder abuse had significantly lower odds of be reported and assessed during lockdown periods (*OR* = 0.41, *SE* = 0.11, $p = 0.001$).

Although most forensic nursing patients were female (66.9%), females were less represented during lockdown periods, but this was not significant (*OR* = 0.94, *SE* = 0.05, $p = 0.229$). Racial composition included White/Caucasian (40.8%), Black/African American (27.9%), and Other (23.7%), with Black/African American patients more represented during lockdown periods (31.2% vs. 27.0%; *OR* = 1.20, *SE* = 0.07, $p = 0.002$). The majority identified as non-Hispanic (67.7%), and 30.8% identified as Hispanic/Latino/Latina. Those with an unknown ethnicity had lower odds of being seen during lockdown periods (*OR* = 0.52, *SE* = 0.13, $p = 0.008$). Patients were on average 36.69 years old (*SD* = 15.71), with most between ages 18–49. No significant shifts in age group distributions were observed, apart from older patients 70 or over showing lower representation during lockdown periods (2.7% vs. 4.7%; *OR* = 0.58, *SE* = 0.08, $p < 0.001$).

In terms of the patient's relationship to their assailant, the majority (35.8%) reported a current or former partner; 16.2% reported a stranger; 6.4% reported multiple people; 7.2% reported family, 6.2% reported a friend or family friend, 11.4% reported an acquaintance or contextual relationship (such as a work colleague, neighbor, or friend of a friend) was the one who harmed them. Only 2.4% reported a roommate and 2.1% some other type of person (such as a drug dealer) was the assailant, and for 10.4% the assailant was unknown (meaning the patient either didn't see assailant or was unable/unwilling to respond to the question). During lockdown periods, the only people with higher odds of being the assailant than intimate partners/exes were the friends, other partners, and/or family of patient's partners/exes (*OR* = 1.87, *SE* = 0.38, $p = .002$). Regarding reporting outcomes, 48.7% of cases were reported to law enforcement, 2% did a medical report, 1.7% an anonymous report, 2% were explicitly nonreporting, and 45.6% had no, unknown, or undocumented reporting. No significant changes in frequency of reporting or type of report made were observed between lockdown and non-lockdown periods.

Multinomial Regression of Outcomes by COVID Timepoint

As shown in Table 2, the odds of a forensic consultation leading to a medical forensic exam were significant across nearly all time points, with exception of the initial lockdown and 2022. TBI was assessed using the ACE starting in the reopening period, with predictably lower odds of being conducted during this timepoint compared to 2023 (*OR* = 0.34, *SE* = 0.06, $p < .001$). ACE then had significantly higher odds of being conducted during the second lockdown compared to 2023 (*OR* = 1.28, *SE* = 0.08, $p < .001$). Strangulation exams had significantly higher odds of being conducted pre-COVID than in 2023 (*OR* = 1.27, *SE* = 0.10, $p = .002$). Conversely, fewer strangulation exams were conducted in 2022 as compared to 2023 (*OR* = 0.85, *SE* = 0.06, $p = .21$). There were no significant changes in the number of strangulation exams during COVID lockdowns or reopening periods. Sexual assault assessments had significantly higher odds of being conducted than in 2023, with exception of 2022. For example, pre-COVID patients had 3.58 higher odds of receiving a SA exam from this forensic program compared to 2023 (*SE* = 0.28, $p < .001$). The DA had higher odds of being conducted pre-COVID (*OR* = 2.27, *SE* = 0.18, $p < .001$), the 2020 reopening period (*OR* = 1.67, *SE* = 0.25, $p = .001$), and the second lockdown

(*OR* = 1.46, *SE* = 0.11, $p < .001$). Elder abuse screenings had significantly lower odds of being conducted during the second lockdown (*OR* = 0.32, *SE* = 0.09, $p < .001$) and the 2021 restrictions lifted period (*OR* = 0.49, *SE* = 0.15, $p = .017$) after their integration into practice in 2020.

Table 2

Outcomes by COVID Timepoint

Multinomial Regression of Patient Demographics, Types of Forensic Assessments Conducted, Relationship to Assailant, and Reporting Outcomes by COVID Timepoint

	Pre-COVID	**Initial Lockdown[1]**	**Reopening**	**Second Lockdown**	**Restrictions Lifted**	**2022**
	(1/1/2018 – 3/5/20) **n=1,486**	(3/6/20 – 4/26/20) **n=125**	(4/27/20 – 6/30/20) **n=296**	(7/1/20 – 7/8/21) **n=2019**	(7/9/21 – 12/31/21) **n=1071**	(1/1/22 – 12/31/22) **n=2390**
	OR (SE)	**OR (SE)**	**OR (SE)**	**OR (SE)**	**OR (SE)**	**OR (SE)**
Number of FNE consultations						
FNE exam (vs. no exam)	**1.46 (0.10)*** **	1.44 (0.27)	**1.95 (0.26)*** **	**1.36 (0.08)*** **	**1.27 (0.09)** **	0.99 (0.06)
Type of FNE assessment						
Traumatic Brain Injury	-	-	**0.34 (0.06)*** **	**1.28 (0.08)*** **	1.12 (0.09)	0.93 (0.06)-
Strangulation	**1.27 (0.10)** **	1.28 (0.27)	1.32 (0.19)	1.10 (0.08)	0.96 (0.09)	**0.85 (0.06)***
Sexual assault, including drug-facilitated	**3.58 (0.28)*** **	**2.37 (0.49)*** **	**1.88 (0.28)*** **	**1.83 (0.14)*** **	**1.37 (0.13)** **	1.11 (0.09)
Intimate partner violence	**2.27 (0.18)*** **	1.18 (0.29)	**1.67 (0.25)** **	**1.46 (0.11)*** **	0.97 (0.10)	1.00 (0.08)
Elder abuse	-	-	-	**0.32 (0.09)*** **	**0.49 (0.15)***	1.07 (0.19)
Human trafficking	1.59 (0.39)	1.72 (1.05)	1.20 (0.58)	1.42 (0.33)	1.40 (0.39)	1.13 (0.27)
Department						
AMC Emergency	**2.06 (0.19)*** **	1.38 (0.33)	**1.60 (0.27)** **	1.14 (0.08)	**1.20 (0.11)***	0.89 (0.06)
HRH Emergency	**0.65 (0.12)***	1.83 (0.66)	0.74 (0.26)	0.95 (0.14)	0.73 (0.15)	1.27 (0.17)
Inpatient	**0.48 (0.05)*** **	**0.51 (0.15)***	**0.62 (0.11)** **	0.87 (0.07)	0.88 (0.08)	1.07 (0.08)
Legal Sex						
Male	**0.40 (0.03)*** **	**0.62 (0.13)***	0.90 (0.12)	0.95 (0.06)	1.02 (0.08)	1.04 (0.06)
Female	**2.48 (0.20)*** **	**1.63 (0.34)***	1.11 (0.14)	1.05 (0.07)	0.98 (0.07)	0.96 (0.06)
Race						
White/Caucasian	0.95 (0.06)	1.28 (0.24)	0.87 (0.11)	0.89 (0.05)	0.88 (0.07)	1.01 (0.06)
Black or African American	**1.31 (0.10)*** **	0.96 (0.21)	**1.46 (0.19)** **	**1.47 (0.10)*** **	**1.30 (0.11)** **	**1.19 (0.08)** **
Asian/Asian American	1.33 (0.28)	1.59 (0.84)	0.66 (0.34)	1.05 (0.22)	1.20 (0.29)	0.92 (0.19)
American Indian/Alaskan Native	0.60 (0.16)	0.75 (0.55)	0.47 (0.28)	1.15 (0.23)	0.75 (0.21)	1.09 (0.21)
Native Hawaiian/ Pacific Islander	0.29 (0.22)	-	2.17 (1.41)	0.63 (0.32)	1.80 (0.80)	1.16 (0.47)
More Than One Race	1.17 (0.30)	1.11 (0.81)	0.46 (0.34)	0.72 (0.20)	1.03 (0.31)	0.92 (0.22)
Other	0.89 (0.07)	0.75 (0.17)	0.92 (0.13)	**0.82 (0.06)** **	0.91 (0.08)	**0.83 (0.06)** **
Patient Declined	-	-	0.78 (0.82)	0.23 (0.18)	0.22 (0.23)	0.68 (0.33)
Unknown	**0.41 (0.14)***	0.97 (0.71)	0.82 (0.43)	0.66 (0.17)	0.85 (0.26)	0.99 (0.22)
Ethnicity						
Non-Hispanic	**1.36 (0.10)*** **	**1.72 (0.36)***	1.30 (0.17)	**1.28 (0.08)*** **	**1.19 (0.09)***	**1.17 (0.07)** **
Hispanic/Latino/a/x	**0.78 (0.06)*** **	**0.62 (0.13)***	0.80 (0.11)	**0.83 (0.05)** **	0.86 (0.07)	**0.85 (0.05)** **
Unknown	**0.40 (0.13)** **	0.40 (0.40)	0.67 (0.35)	**0.44 (0.12)** **	0.60 (0.19)	1.01 (0.20)
Age Group						
≤17	0.70 (0.13)	0.40 (0.29)	0.51 (0.22)	0.73 (0.12)	0.76 (0.16)	0.89 (0.14)
18–29	**1.28 (0.09)*** **	0.86 (0.17)	1.03 (0.13)	**1.21 (0.08)** **	**1.24 (0.09)** **	1.04 (0.06)
25–49	1.13 (0.07)	**1.46 (0.27)***	**1.33 (0.16)***	1.01 (0.06)	1.05 (0.08)	1.01 (0.06)
51–69	**0.80 (0.08)***	1.01 (0.26)	0.88 (0.16)	1.02 (0.09)	0.90 (0.10)	0.98 (0.08)
70+	**0.21 (0.05)*** **	0.36 (0.21)	**0.30 (0.13)** **	**0.40 (0.06)*** **	**0.36 (0.08)*** **	0.94 (0.11)
Relationship to Assailant[2]						
Intimate partner	**2.13 (0.17)*** **	1.24 (0.29)	**1.71 (0.25)*** **	**1.38 (0.11)*** **	1.01 (0.10)	1.02 (0.08)
Relationship to partner	1.18 (0.43)	1.08 (1.11)	0.91 (0.68)	**2.63 (0.74)*** **	1.51 (0.56)	1.41 (0.43)
Family	0.90 (0.15)	0.77 (0.40)	1.16 (0.34)	1.03 (0.15)	0.79 (0.16)	0.88 (0.13)
Friend	1.37 (0.24)	1.29 (0.61)	1.65 (0.48)	1.08 (0.18)	1.17 (0.23)	0.81 (0.14)
Roommate or Cohabitating	1.28 (0.36)	2.00 (1.23)	1.69 (0.76)	1.06 (0.26)	1.00 (0.33)	0.93 (0.25)
Acquaintance/contextual relationship	0.95 (0.13)	1.37 (0.46)	1.26 (0.30)	1.11 (0.14)	0.97 (0.15)	1.02 (0.12)
Stranger	**0.64 (0.08)*** **	1.12 (0.34)	1.08 (0.22)	1.02 (0.10)	1.07 (0.13)	0.83 (0.08)
	Pre-Covid	Initial	Re-opening	Second	Restrictions	2022

		Lockdown		Lockdown	Lifted	
Multiple People	**0.63 (0.14)***	1.32 (0.62)	1.46 (0.45)	1.12 (0.19)	**1.65 (0.30)*****	1.33 (0.21)
Other (e.g., drug dealer)	0.57 (0.21)	0.68 (0.69)	0.57 (0.42)	0.93 (0.26)	1.60 (0.47)	0.93 (0.25)
Unknown	**1.44 (0.20)****	1.38 (0.52)	1.23 (0.33)	1.14 (0.15)	**1.63 (0.24)****	1.13 (0.15)
Report Type						
None/Unknown	**0.86 (0.06)***	1.03 (0.19)	0.81 (0.10)	**1.13 (0.07)***	1.09 (0.08)	0.97 (0.06)
Law	**0.64 (0.08)*****	0.61 (0.20)	0.70 (0.15)	**0.66 (0.08)*****	**0.71 (0.10)***	**0.74 (0.09)*****
Medical	1.38 (0.29)	1.94 (0.94)	0.81 (0.35)	0.82 (0.18)	0.79 (0.22)	0.83 (0.18)
Anonymous	**3.60 (0.86)*****	**3.01 (1.66)***	1.88 (0.82)	1.23 (0.34)	1.49 (0.47)	1.10 (0.31)
Nonreporting	-	-	-	-	-	**1.66 (0.25)*****

1. Reference timepoint was the 2023 calendar year (1/1/23–12/31/23)
2. How patients described their relationship to their assailant was grouped into the following 10 categories: 1) intimate partner – including current partner, ex, or child's parent; 2) relationship to partner – including current a partner/ex's family member, friend, or ex/current partner; 3) family – including any blood relative, caregiver, or relative/partner of family member such as stepchild; 4) friend – including family friend; 5) roommate – including housemate or cellmate; 6) acquaintance or contextual relationship – including classmate, friend of friend, neighbor, tenant/landlord, healthcare worker/patient, professional colleague, employer, or client; 7) stranger; 8) multiple people; 9) other (e.g., drug dealer); or 10) unknown – including declined, patient did not see assailant, or unable to assess.
**p < .05, **p < .01, ***p < .001*

Compared to 2023 patients, patients seen pre-COVID (*OR* = 2.06, *SE* = 0.19, $p < .001$), during the reopening (*OR* = 1.60, *SE* = 0.27, $p = .005$), and restrictions lifted (*OR* = 1.20, *SE* = 0.11, $p = .005$) periods had significantly higher odds of being seen at the large Level I trauma center in Aurora. Conversely, those seen at the Highlands Ranch facility were less frequent pre-COVID compared to 2023 (*OR* = 0.65, *SE* = 0.12, $p = .024$). Inpatient encounters had lower odds of occurring compared to 2023 during pre-COVID (*OR* = 0.48, *SE* = 0.05, $p < .001$), the initial lockdown (*OR* = 0.51, *SE* = 0.15, $p = .022$), and the reopening (*OR* = 0.62, *SE* = 0.11, $p = .010$).

Male patients had lower odds of being seen pre-COVID (*OR* = 0.40, *SE* = 0.02, $p < .001$) and during the initial lockdown (*OR* = 0.62, *SE* = 0.13, $p = .020$) compared to patients seen in 2023. By contrast, females had higher odds of being seen during pre-COVID (*OR* = 2.48, *SE* = 0.20, $p < .001$) and the initial lockdown (*OR* = 1.63, *SE* = 0.34, $p = .020$) compared to 2023 patients.

Black/African American patients had higher odds of being seen compared to 2023 patients across almost all timepoints except the initial lockdown (*OR* = 1.30–1.47, *SE* = 0.08–0.19, $p < .05$). The initial lockdown period showed no significant difference in the odds of Black/African American patients being seen compared to 2023. Those whose race was identified as "other" showed lower odds of presenting during the second lockdown (*OR* = 0.82, *SE* = 0.06, $p = .005$) and in 2022 (*OR* = 0.83, *SE* = 0.06, $p = .006$) compared to 2023.

Non-Hispanic identifying patients had higher odds of being seen across all time points with exception of the reopening period. By contrast, Hispanic/Latino/Latina patients had lower odds of being seen during pre-COVID (*OR* = 0.78, *SE* = 0.06, $p < .001$), the initial lockdown (*OR* = 0.62, *SE* = 0.13, $p = .023$), the second lockdown (*OR* = 0.83, *SE* = 0.05, $p = .003$), and in 2022 (*OR* = 0.85, *SE* = 0.05, $p = .007$) compared to 2023. Patients with an unknown ethnicity had lower odds of being seen pre-COVID (*OR* = 0.40, *SE* = 0.12, $p = .005$) and during the second lockdown (*OR* = 0.44, *SE* = 0.12, $p = .003$) than in 2023.

In terms of age group, patients between 18–29 years old were more likely to be seen during pre-COVID (*OR* = 1.25, *SE* = 0.09, $p < .001$), the second lockdown (*OR* = 1.21, *SE* = 0.08, $p = .002$), and the restrictions lifted period (*OR* = 1.24, *SE* = 0.09, $p = .005$). Those ages 30–49 years old had higher odds of a forensic consult in the initial lockdown (*OR* = 1.46, *SE* = 0.27, $p =$

.039) and the reopening period (*OR* = 1.33, *SE* = 0.16, *p* = .20) compared to 2023. Patients between 50–69 years old had lower odds of being seen pre-COVID (*OR* = 0.80, *SE* = 0.08, *p* = .026). Elderly patients 70 years of age or older were least likely to be consulted across almost all timepoints, except for the initial lockdown and 2022, compared to 2023 (*OR* = 0.21–0.94, *SE* = 0.05–0.21, *p* < .05).

More patients reported their partner/ex as the assailant during pre-COVID (*OR* = 2.13, *SE* = 0.17, *p* < .001), the reopening (*OR* = 1.71, *SE* = 0.25, *p* < .001), and the second lockdown (*OR* = 1.38, *SE* = 0.11, *p* < .001) compared to 2023. During the second lockdown, the friends, partners, or family of the patient's partner/ex had 2.63 higher odds of being the assailant compared to 2023 (*SE* = 0.71, *p* < .001). Strangers had lower odds of being the assailant pre-COVID compared to 2023 (*OR* = 0.64, *SE* = 0.08, *p* < .001) as well as healthcare workers or patients (*OR* = 0.21, *SE* = 0.16, *p* = .40). Fewer patients reported having multiple assailants pre-COVID (*OR* = 0.63, *SE* = 0.14, *p* = .037) than in 2023. Conversely, patients with multiple assailants had higher odds of a forensic consult during the restrictions lifted period (*OR* = 1.65, *SE* = 0.30, *p* = .006). Patients with an unknown assailant had higher odds of a forensic consult during pre-COVID (*OR* = 1.44, *SE* = 0.20, *p* < .01) and the restrictions lifted period (*OR* = 1.63, *SE* = 0.24, *p* < .01) than in 2023.

Patients who didn't report or with unknown reporting status at time of their forensic nurse consult had lower odds of presenting pre-COVID (*OR* = 0.86, *SE* = 0.06, *p* = .021) yet higher odds in the second lockdown (*OR* = 1.13, *SE* = 0.07, *p* = .043). Patients had lower odds of reporting to law enforcement during pre-COVID, the second lockdown, the restrictions lifted period, and in 2022 compared to 2023 (*OR* = 0.64–0.74, *SE* = 0.08–0.10, *p* < .05). There were no changes in medical reporting by COVID time point. Patients who chose to anonymously report had 3.6 higher odds of a forensic consult pre-COVID (*SE* = 0.86, *p* < .001) and 3.01 higher odds in the initial lockdown (*SE* = 1.66, *p* = .046) compared to those in 2023. Non-reporting as an explicit option in the medical record became an option in 2022, showing higher odds of occurring than in 2023 (*OR* = 1.66, *SE* = 0.25, *p* < .001) but limited in comparison otherwise.

Table 3

Linear Regression of Outcomes by COVID Treatment

Linear Regression of Patient Age, IPV Danger Assessment Scores, and Traumatic Brain Injury (ACE) Scores by COVID Timepoint

	Pre-COVID[1]	**Initial Lockdown**	**Reopening**	**Second Lockdown**	**Restrictions Lifted**	**2022**
	(1/1/2018 – 3/5/20)	(3/6/20 – 4/26/20)	(4/27/20 – 6/30/20)	(7/1/20 –7/8/21)	(7/9/21 – 12/31/21)	(1/1/22 – 12/31/22)
	n=1,486	**n=125**	**n=296**	**n=2020**	**n=1071**	**n=2390**
	Coef. (SE)	**Coef. (SE)**	**Coef. (SE)**	**Coef. (SE)**	**Coef. (SE)**	**Coef. (SE)**
Age	**-3.53 (0.51)*****	-1.33 (1.43)	**-2.19 (0.96)***	**-1.96 (0.47)*****	**-2.34 (0.57)*****	-0.39 (0.45)
Danger Assessment Scores[2]						
Opposite Sex	**-1.68 (0.60)****	-0.66 (1.83)	-0.55 (1.13)	-014 (0.61)	0.20 (0.82)	0.11 (0.63)
Same-Sex	1.00 (2.39)	-	-0.75 (3.09)	3.75 (2.65)	2.25 (4.15)	2.07 (2.17)

ACE Scores	Pre-COVID[1]	Initial Lockdown	Reopening	Second Lockdown	Restrictions Lifted	2022
All Symptoms (Total Score)	-	-	-1.13 (0.87)	**-0.71 (0.27)****	0.00 (0.33)	-0.10 (0.27)
Sleep Symptoms	-	-	**-.038 (0.17)***	**-0.19 (0.05)*****	-0.10 (0.07)	**-0.12 (0.05)***
Cognitive Symptoms	-	-	-0.29 (0.26)	**-0.20 (0.08)***	0.05 (0.10)	-0.05 (0.08)
Emotional Symptoms	-	-	-0.37 (0.24)	-0.10 (0.07)	-0.10 (0.09)	0.04 (0.08)
Physical Symptoms	-	-	-0.10 (0.44)	-0.23 (0.14)	0.14 (0.17)	0.01 (0.14)

1. Reference timepoint was the 2023 calendar year (1/1/23 – 12/31/23)

2. The Danger Assessment (DA) is a validated instrument for assessing intimate partner homicide risk among females [Campbell, 1986; Messing et al., 2020]. Due to a lack of validation evidence for male populations, only female participants' scores are included in this table.

*p<.05, **p<.01, ***p<.001

Compared to patients in 2023, patient age was significantly lower during pre-COVID ($B = -3.53$, $SE = 0.51$, $p < .001$), the reopening ($B = -2.19$, $SE = 0.96$, $p = .022$), the second lockdown ($B = -1.96$, $SE = 0.47$, $p < .001$), and Restrictions Lifted ($B = -2.34$, $SE = 0.57$, $p < .001$). For patients with opposite-sex partners, DA scores were significantly lower pre-COVID ($B = -1.68$, $SE = 0.60$, $p = .010$) but otherwise showed no significant variations compared to those seen in 2023. No significant differences were observed for same-sex DA scores. ACE symptom scores were significantly lower during the second lockdown compared to in 2023 ($B = -0.71$, $SE = 0.27$, $p = .009$). Sleep symptom scores were lower during the reopening ($B = -0.38$, $SE = 0.17$, $p = .027$), the second lockdown ($B = -0.19$, $SE = 0.05$, $p = .001$), and in 2022 ($B = -0.12$, $SE = 0.05$, $p = .034$) than in 2023. Cognitive symptom scores were also significantly lower during the second lockdown ($B = -0.20$, $SE = 0.08$, $p = .014$). No significant variations in emotional or physical symptom scores were observed over time compared to patients seen in 2023.

Discussion

In this retrospective study of an urban FNE program at a large Level I Trauma Center, patients experiencing IPV, TBI, and SA exams had higher odds of being examined during COVID-19 lockdowns. Conversely, fewer older adult patients and those experiencing elder abuse were seen during this time. These shifts may reflect changes in cycles of abuse or experiences of violence, changes in personal health or help-seeking behavior, community- or system-level changes in site utilization or availability (e.g., closures of other programs), changes in economic or housing stability, or the more likely scenario where it was a combination of more than one of these factors (Moreira & Da Costa, 2020).

Previous COVID-19 studies among U.S. regional healthcare facilities that have explored trends in patients who report trauma, violence, or abuse have found similar fluctuations in patient volume and severity after the onset of the global pandemic, with a wide range of preparedness and responses (Hartnett et al., 2020; Holland et al., 2021; Muldoon et al., 2021; Staunton et al., 2021; Rhodes et al., 2020; Kourti et al., 2023; Piquero et al., 2021; Pallansch et al., 2022). For example, Muldoon et al. (2021) compared 2018 to 2020 patient volumes at the Ottawa Hospital, observing drops in all-cause ED admissions and significant reductions in the number of patients who presented for domestic violence, SA, and physical assault. Looking at the first few weeks of the pandemic, Holland et al. (2021) examined trends from the Centers for Disease Control and Prevention (CDC) National Syndromic Surveillance Program and similarly found a 34% decrease in IPV-related ED visits within the first 14 weeks of COVID-19. However, others examining

trends in domestic violence crisis hotline calls, calls to law enforcement, and crime reporting observed the opposite—with significant increases across states and jurisdictions (CoSAOoE, 2020; Money, 2020; New York Police Department, 2020; National Commission on COVID-19 and Criminal Justice, 2021; National Domestic Violence Hotline, 2020). This FNE program, given its robust resources and reputation among community partners as a safe, trauma-informed place for seeking care for violence or abuse, perhaps captures the intersection of these diverging trends and the benefit of having a highly trained, specialized team of forensic nurses to support screening and care for these patient populations during times of global crisis.

For patients experiencing IPV, while there was a higher odds of the DA being completed during the reopening phase and the second lockdown, average DA scores did not change. In other words, more women expressed concern for their safety in relationships during periods of potential isolation, yet their risk for lethal danger was comparable to women seen at other time points. The lack of variation in the danger score is reflective of others' findings such as that by Ashwell et al. (2022), who found no changes in IPV severity in their online general-population survey among Michigan residents. The heightened odds of patients experiencing IPV presenting during lockdowns in this study aligns with substantial evidence that found an increase in IPV during the pandemic (e.g., Agüero, 2021; Bracewell et al., 2020; Hamadani et al., 2020; Hassan et al., 2020; Leslie & Wilson, 2020; Mohler et al., 2020; Payne et al., 2020; Rhodes et al., 2020; Sabri et al., 2020; Sediri, et al., 2020; Weller et al., 2021). Placing IPV findings into context both during and since the pandemic, however, has become increasingly difficult without a reliable and valid means of understanding trends in remote/rural areas or at the national level. Well-supported, robust national studies staffed by trauma-informed, highly trained researchers, such as the CDC's National Intimate Partner and Sexual Violence Surveys (NISVS; 2010 and 2017 versions) to examine national epidemiological trends in IPV-related health outcomes and injuries have previously been instrumental to making informed interpretations, responses, and plans for future directions for the field. Building on and ensuring the continuation of these efforts would be a meaningful strategy to place findings into context and inform future scientific inquiry and clinical practice.

While ACE assessments for TBIs were more common during the second lockdown, there were significantly lower overall, sleep, and cognitive symptom scores compared to 2023 trends. Further, strangulation assessments showed no significant changes by lockdown period, being more common pre-COVID and less likely to be conducted in 2022 than they were in 2023. A robust comparison to other studies is limited by the lack of published literature on the use of the ACE and strangulation assessments to examine the patient-reported symptoms associated with these blunt injuries. However, our findings are similar to a cross-sectional thesis study conducted at a concussion clinic by McIndoe (2023), which used a validated tool comparable to the ACE (the Post-Concussion Symptom Scale) in terms of its robust measurement of TBI-related symptoms and found no significant between-group differences for affective, cognitive, somatic, or sleep symptoms among its patient population. Given patients in the current study at this FNE program reported fewer sleep, concentration, or memory symptoms, this could be due to the widely documented pandemic-related declines in overall sleep and cognitive health which may have made it harder for patients to self-compare symptoms to their baseline (e.g., Alimoradi et al., 2021; Jahrami et al., 2021; Papagiovanni et al., 2022). And yet our findings are contrary to a systematic review of literature on clinical forensic medicine and psychiatry, which found how lockdown restrictions limited access to resources and care which may have led to delays in care and thus likely to present with worsened signs or symptoms (Xu, Parkin, & Cunningham, 2024).

More research specifically allowing comparison of self-reported TBI or strangulation symptoms from interpersonal or IPV-related assault is needed to better understand the generalizability of our findings during the pandemic.

There were more patients who presented for SA exams at all timepoints compared to 2023, potentially demonstrating that these assaults were happening more frequently among this patient population, changes occurred in help seeking behavior, and/or perhaps the more likely possibility that the closures of other sexual assault nursing programs locally may have limited available options for residents in the area to seek care for these assaults. The literature is mixed on pandemic trends in SA, and several studies found decreases in patients treated for SA during and following COVID-19 (e.g., Chiaramonte et al., 2022; Muldoon et al., 2021). However, many of these, much like this study, were restricted to singular healthcare systems that limited generalizability to the greater population. Findings from others aligned with ours and found increases in sexual violence prevalence or severity since the onset of COVID-19, yet often in the context of domestic violence (e.g., Kourti et al., 2023). This context matters, as in this study where assailants were predominantly a patient's intimate partner or ex, with only individuals who had a direct relationship with the patient's partner/ex (e.g., their partner's family member, ex partner, or friend) being more likely to be the assailant during the second lockdown. The nuance of these relationships and impact of the pandemic on their dynamics demonstrates the importance of healthcare professionals not only assessing patients for their injuries or experiences of assault, but the critical need for them to carefully screen for the relationship of patients to those who harmed them. It is equally essential these questions are asked in the context of evidence-based models for trauma-informed practice and survivor-centered care to prevent patient re-traumatization, such as those used to guide practice at this FNE program (Ashworth et al., 2023; Grossman et al., 2021; Navarroli, 2023; Valentine, Sekula, & Lynch, 2020).

There were significantly fewer examinations for elder abuse and older adult patients seen by this FNE program from 2020–2022 compared to 2023. While not surprising given the higher vulnerability of older adults to COVID-19 and the active discouragement of the public to seek care unless critical, this potentially had an adverse impact on those able to receive support for their experiences of abuse (Farina & Ailshire, 2022; Makaroun et al., 2021). More specifically, it may potentially reflect changes in access (such as older adult patients being unable or unwilling to seek care for abuse), changes in the types of abuse experienced (e.g., emotional or financial compared to physical), and/or changes in ability of caregivers to identify signs of abuse (e.g., being separated, restricted from, or otherwise having limited ability to visit nursing homes and facilities) (Farina & Ailshire, 2022; Makaroun et al., 2021). Evidence on elder abuse trends during the pandemic is mixed. For instance, an online survey conducted during the initial lockdown found that 21.3% of their 191 participants reported elder abuse, an 83.6% increase from their pre-COVID estimates (Chang & Levy, 2021)—whereas an analysis of the calls made to the National Center on Elder Abuse did not observe any changes in the number of calls made during COVID-19 (Weissberger et al., 2022). More coordinated, trauma-informed, and in-depth screening practices, age-appropriate educational techniques and tools, and active advocacy and support for older adult patients, particularly during times of global crisis, are needed to ensure these patients receive the care and support they deserve (Chang & Levy, 2021; Makaroun et al., 2021; Weissberger et al., 2022; Wei, 2021).

Limitations. Threats to external validity included the fact that we only analyzed data from one forensic nursing program in the Denver metro area, one that is well-resourced and supported

by the robust facility. This is not common, as a search for programs registered under the International Association of Forensic Nurses yields only 28 such programs in Colorado, and 1,051 programs overall, which is only a fraction of the 6,120 hospitals in the United States (; American Hospital Association, 2024; International Association of Forensic Nurses, 2023). In addition, generalizability is further limited by the location of this forensic nursing program at one of the largest medical facilities and emergency departments in the state, with over 100,000 ED visits annually. Smaller or more rural healthcare facilities may therefore have had very different experiences in terms of patient volume and the type or severity of violence observed. Changes to the FNE program's service hours and delivery (on-call to 24/7 in-hospital) and closures of local sexual assault nurse examiner programs further limited examination of not only pre-COVID trends, but potentially those observed after the lockdowns as well. While mentioned previously, it's worth reiterating that these closures may have confounded our findings particularly related to SA examinations.

Our ability to make robust comparisons with existing evidence was limited by inconsistencies and limitations of available literature, particularly in how time points were defined and framed across studies, as well as by when studies were published since the start of the pandemic. By including 2022–2023 data, we aimed to provide a more comprehensive retrospective view of how trends have evolved not only pre-pandemic to "post-pandemic," which could technically be defined up until present day, but across the many complex phases of change that continued to affect communities during and long after the initial lockdown. And while extensive research has examined domestic violence and IPV before and after the onset of COVID-19, future studies that take a more longitudinal approach comparing multiple timepoints and that focus on cases seen by similar FNE programs or health systems would allow for more rigorous comparisons. This would be particularly valuable for understanding trends in elder abuse, SA, strangulation, and TBI that were observed in this analysis.

Conclusion

In summary, this study found notable shifts not only in the patient volumes and demographics seen by forensic nurses, but also in the types of violence patients reported experiencing. These trends emphasize the importance of the in-depth care that forensic nurses provide during a time of global crisis and the nuanced impact of the pandemic on forensic healthcare encounters and documentation practices. The patients seen by this one FNE program were not alone in their experiences, with other facilities and studies finding similarly concerning trends. For healthcare facilities that do not have forensic nursing programs, findings demonstrate the importance of screening for not only the presence of violence or abuse, as with IPV, but also its severity and implications for patient health and safety. Strategically addressing access barriers to trauma-informed care, building multisectoral partnerships, educating all disciplines in recognizing signs of abuse, and implementing protocols to safely coordinate care for patients would provide transformative steps forward for healthcare systems to be better prepared to meaningfully support survivors of violence during times of global crisis.

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Original Research

An Investigation into a Large, Suburban, Academic Hospital's Sexual Assault Response Program

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Abstract

This study aims to profile sexual assault (SA) patients, their hospital encounters, and to identify resources necessary for effective management. It is a descriptive, retrospective chart review of all patients >18 who presented to the emergency department with a diagnosis of sexual assault or rape between January 1, 2015 and July 1, 2024. Demographics, hospital stay, and assault characteristics were extracted from patients' medical records. Odds ratios were calculated with logistic regression models. P-value of <0.05 was considered significant. 309 patients were included, majority of whom were female (89.0%), White (65.3%), and non-Hispanic (76.1%). Nearly all patients requested a SAFE exam (86.1%), and 10.5% left before arrival of the SAFE examiner. Law enforcement was involved in 43.0% of the cases. Many patients (37.5%) had pre-existing psychiatric comorbidity; 18.8% with depression and 7.1% with PTSD. Records showed 10.4% of assaults occurred in a group home, nursing facility, rehab facility, or shelter. Patients with psychiatric history had 0.40 times the crude odds of requesting a SAFE exam, and 0.38 times the crude odds of obtaining HIV testing compared to their counterparts. Patients with no known relationship with their assailant had 2.53 times adjusted odds of completing a sexual offense evidence kit compared to those with a known relationship with their assailant. This study highlights the importance of offering mental health resources and group/nursing home support from the emergency department (ED). This study illustrates focus areas for in-hospital interventions of SA-response programs and provides deeper understanding of SA patients for ED physicians.

Keywords: sexual assault, emergency department, SAFE providers, SAFE exams

An Investigation into a Large, Suburban, Academic Hospital's Sexual Assault Response Program

Sexual assault (SA) is broadly defined as any form of sexual contact or behavior that occurs without the explicit consent of the individual involved. This includes rape, unwanted sexual contact, or forcing a victim to perform sexual actions. SA also includes psychological manipulation and exploitation of individuals unable to consent (Morgan & Thompson, 2021). SA is a pervasive medical and public health crisis with an average of 463,634 cases reported annually in the United States (Morgan & Thompson, 2021). Of these, over 90% of victims identify as female, with the majority aged 18–34 years (*Sex Offenses and Offenders*, 1997). Approximately 52.2 million American women (43.6%) report experiencing some form of sexual violence in their lifetime (Smith et al., 2018). In New York, the reported incidence of rape is 33.9 cases per 100,000 inhabitants, though the true prevalence of SA as a whole is likely much higher due to underreporting (Crime in the United States, 2019; Rennison, 2002). Survivors of SA are at a significantly increased risk of long-term adverse outcomes, including suicidal ideation, substance abuse, mood and mental health disorders, and other chronic medical conditions (Clarke et al., 2023; Cucciare et al., 2022; Hassam et al., 2020; Khadr et al., 2018; Rothman et al., 2021; Ullman, 2016; Ullman et al., 2013).

Sexual assault accounts for over 55,000 visits to U.S. emergency departments (ED) each year (Smith et al., 2018). In 2024, the U.S. Department of Justice Office on Violence Against Women released the third edition of the National Protocol for Sexual Assault Medical Forensic Examinations for Adults and Adolescents, which presents guidelines for the initial evaluation of a patient presenting with sexual assault (A National Protocol for Sexual Assault Medical Forensic Examinations, 2024). This updated protocol emphasizes the need for patient-centered and trauma-informed care (TIC). It encourages providers to "adapt the examination process as needed to address the unique needs and circumstances of each patient based on the history the patient provides and how the patient presents." This approach acknowledges the profound psychological burden associated with navigating medical care following a significantly traumatic event.

The hospital program described in this study has had a robust Sexual Assault Forensic Examiner (SAFE) (formally known as SANE [Sexual Assault Nurse Examiner]) program since 2009 and is designated as a NYS Department of Health SAFE Center of Excellence for sexual assault and abuse (New York State Department of Health, n.d.). The hospital contracts with a multi-site program that provides on-call SAFE-certified registered nurses, nurse practitioners, and physician assistants. SAFEs are trained to conduct a full physical exam, collect forensic evidence, communicate with law enforcement, provide legal testimony, and determine post-exposure prophylaxis/treatment if necessary (Ciancone et al., 2000; Cole & Logan, 2008). It is estimated, however, that only 49% of EDs in the United States have access to SAFE resources, with 68% of hospitals reporting access to some sexual assault resources (Cowdery et al., 2024).

SAFE providers are often a victim's first, and sometimes only, contact with medical services immediately after SA, and therefore serve as a critical resource for survivors. In addition to conducting forensic exams, they serve as liaisons between law enforcement, further medical treatment, and mental health providers (Vogt et al., 2022). SAFE programs have proven their

effectiveness in securing thorough forensic exams, providing medical care, and addressing the psychological needs of patients (Derhammer et al., 2000; Ericksen et al., 2002; Ledray & Simmelink, 1997). SAFEs have been associated with increased uptake and usage of testing, infection and pregnancy prophylaxis, and resource utilization after an assault compared to patients who did not have a SAFE interaction (Hollender et al., 2023). The protocol for SAFE exams is detailed in the National Protocol for Sexual Assault Medical Forensic Examinations for Adults and Adolescents (A National Protocol for Sexual Assault Medical Forensic Examinations, 2024). At our institution, the on-call SAFE is consulted whenever a patient presents to the ED with primary complaint of SA. Response times vary depending on whether the SAFE is with another patient, at another hospital, or readily available. Patients always have the right to decline a SAFE exam, as well as the right to leave prior to the SAFE arriving. Many hospitals, including our own, have Rape Crisis Counselors, part of the community Sexual Assault Response Team (SART), to bridge the gap until the SAFE arrives. They remain with the patient during the exam as emotional support and can connect them with outpatient counseling and resources. ED physicians, residents, students, and ED nurses do not perform SAFE exams at our institution due to the specialized training and certification required.

SAFE exams can include HIV testing and/or prophylaxis, STD testing and/or prophylaxis, toxicology screening for drug-facilitated sexual assault, pregnancy testing, pregnancy prophylaxis if requested, photo documentation of injury, as well as completion of the evidence collection kit with medical forensic documentation. Patients may decline or terminate any or all parts of the exam or subsequent treatment. Patients may also choose to have evidence collected but not reported to law enforcement, in which case it is stored in a state-wide facility for up to 20 years, during which the patient retains the right to report the crime and have the evidence evaluated. At the conclusion of the exam the patient has the choice to bill their personal insurance or the Office of Victims Services for the emergency room encounter, medications, and labs.

Victims of SA are an often underserved and understudied patient population. SAFEs have introduced a focused component of care to these patients who may have increased psychosocial, emotional, and physical care needs compared to other patients in the ED. This study aims to profile the demographics of these patients, the resources and tests that they require, and the circumstances of their assaults. This study identifies two exposures of interest—those with previous psychiatric illnesses and those with a known assailant—and aims to showcase how these exposures may impact treatment acceptance and resource utilization. Understanding where these patients present from and what they require in the hospital can help hospitals designate funding, resources, and further research to these areas of need. This study also hopes to identify vulnerable populations that may be at greatest risk for negative outcomes. We hope to showcase commonalities among these patients and to suggest targeted prevention and intervention efforts to improve the clinical treatment and management of SA patients.

Methods

This was a retrospective chart review study that examined the medical records of individuals who presented to the ED of a large, suburban, academic hospital in the Northeastern United States between January 1, 2015 and June 1, 2024. This study was designated Not Human Subjects Research by our Institutional Review Board. All individuals who presented to the ED with ICD-10 codes of Z04.41 (Encounter for examination and observation following alleged adult rape), T74.21 (Adult sexual abuse, confirmed), or T76.21 (Adult sexual abuse, suspected) were screened via electronic health record (EHR) review for inclusion. These ICD-10 codes are

assigned by the ED provider, and there is no independent identifier for patients who received a SAFE exam. Patients determined via chart review to have an erroneous diagnosis code of above (i.e. no mention of a sexual assault or abuse in notes) and those under the age of 18 were excluded.

Data Abstraction

Two authors, AC and HA, completed all data screening, collection, and analysis. Charts were first reviewed with both authors for consistency, and the rest of the data collection was split between authors, with any discrepancies reviewed by both authors. Data were collected from nursing notes, physician notes, social work/case management notes, and the SAFE notes/paperwork within the patient's electronic medical record, where available. Not all patients had a SAFE exam, and of those with a SAFE exam, not all had notes/paperwork scanned into their EHR. SAFE notes were present in the EHR based on the patient's involvement with law enforcement and current status of any investigation. Therefore, in many patients, the only information available to us were from ED staff notes, which varied in their content and detail based on the provider, date, time, and patient status. Missing data were coded as "missing," while information a patient could not provide was coded as "unknown to patient."

Demographic data, including age, patient-reported gender identity, race, ethnicity, insurance status, smoking status, alcohol use, drug use, and sexual activity, were collected from the medical chart. Comorbidities, including psychiatric diagnoses and prior history of sexual assault or abuse were collected.

Characteristics of the hospital stay and treatment provided were extracted from hospital records, including year of visit, time of visit, whether the SAFE nurse was requested by patient, if the patient left prior to SAFE arrival, whether the sexual assault evidence kit was collected, HIV testing and/or prophylaxis, STD testing and/or prophylaxis, urine toxicology, urine pregnancy testing, pregnancy prophylaxis, if follow-up care was scheduled, and involvement of law enforcement.

Assault characteristics were collected from the patient report in EHR. This included location of assault, relationship with assailant, sex of assailant, traumatic injury associated with assault, penetration type, drug facilitation of assault, awake or regained consciousness during assault, and whether the patient recalled events of assault. Additionally, SA as primary complaint, SA within 96 hours of presentation to ED, consent to evidence collection, and patient with capacity to consent to SAFE exam were collected from SAFE documentation. Variables are further defined in Appendix A.

Cohort Exposure Variables

For the comparative analysis, two exposure categories were evaluated, psychiatric history (yes vs. no), and relationship to assailant (known vs. stranger).

Primary Outcomes

Outcomes of interest for comparative analysis were: SAFE evaluation requested, sexual evidence kit collected, HIV testing ordered, and law enforcement involvement.

Data Analysis

Statistical data were analyzed using SPSS version 29.0.0.0 (Chicago, IL) and R Studio version 1.4.1717 (Boston, MA). A descriptive analysis with the entire patient population was first conducted. Categorical data were summarized with number and percent, and continuous data were summarized with median and interquartile range (IQR). For comparison of baseline characteristics between exposure groups, Chi-squared testing was used to compare groups of categorical variables and t-test of Wilcoxon rank sum was used to compare continuous variables. Unadjusted associations between each exposure and each outcome were completed to estimate crude odds ratios (OR). Potential confounders were identified a priori and were chosen by clinical significance and existing literature. Confounders chosen were age, sex, race, ethnicity, and insurance status. Multivariate binary logistic regression models were run with potential confounders and each outcome, OR and 95% confidence interval were reported. Missing variables were not included in analyses. Two-tailed significance was defined as $p < 0.05$.

Results

Descriptive Analysis

As shown in Appendix B, 309 patients (median age 27 years [22–37], 89.0% female) were identified from January 1, 2015, to July 31, 2024. The largest age group, when stratified, was 18–24 years old (n=127, 41.1%). The majority of patients were female (89.0%), White (65.3%), and non-Hispanic (76.1%). In 41.3% of patients, there was no known or described medical history or comorbidities, inclusive of psychiatric illness history. Further, 36.6% had a documented psychiatric illness history, with 18.8% having pre-existing depression, 6.8% with pre-existing PTSD. A neurodevelopmental disorder, including developmental delay, was present in 12.6% of patients. Of those with a known sexual activity status (25.9%), 76.3% were previously sexually active. In all, 14.9% had previous documented sexual assault or trauma. The majority of patients (74.8%) utilized special billing procedures as a payment method for this encounter and treatment, and 19.1% used federal/state provided insurance (Medicaid and/or Medicare).

The majority of patients (91.6%) presented to the ED with a documented chief complaint pertaining to SA or rape, found in Appendix C. All but one patient (99.7%) was captured under the T76.21 code for suspected sexual abuse, with one patient noted under T74.21 code for confirmed sexual abuse. The number of annual ED presentations remained fairly constant between 2020–2023 (24–36 visits), and the first half of 2024 had only six presentations. Most ED presentations occurred between 12:00–17:59 (35.3%) and 18:00–23:59 (30.4%). A total of 86.7% of patients had SAFE examinations requested either by the patient or by the medical staff on their behalf. Of those, 92.5% of patients were evaluated by SAFE examiner. Evidence kits were collected (via SAFE practitioner) from 42.0% of patients, and 43.0% connected with law enforcement while in the ED for their assault. Most patients received HIV testing (74.8%) and a urine pregnancy test (80.5%). Additionally, a third of patients (34.3%) underwent other STI testing, including for *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Treponema pallidum*, and hepatitis (A, B, C). Many patients were given STI prophylaxis/treatment (55.3%), including the standard post-exposure prophylaxis regimens for *C. trachomatis*, *N. gonorrhoeae*, hepatitis (A, B, C), and HIV. A urine toxicology was done on 23.3% of patients, and 27.1% of patients received emergency contraception.

Only 19.1% of patients reported no known relationship with the assailant, whereas 42.1% identified a previous relationship, further demonstrated in Appendix D. A total of 19.4% of the patients identified the assailant as a friend or acquaintance and 11.7% as a current or former

partner. Of those with a known assailant, 1.1% of assailants were female, 88.9% were male, and 10.0% identified multiple individuals (of potentially different sexes). About a quarter (25.6%) of patients believed their assault may have involved involuntary drug or alcohol administration, and 53% of patients denied memory or awareness of the SA event. Traumatic injury was noted in 27.8% of medical records. For those who it was explicitly noted in their chart, 90% of assaults contained some form of penetration, 12.9% noted digital penetration, 3.0% involved an object, and 70.5% with penile penetration. Of the assaults, 10.4% occurred in institutional settings (group homes, hospitals, residential, nursing, and rehabilitation facilities); 14.2% occurred at a family, friend, or assailant's house, with another 10.4% occurring in the patient's home.

Comparative Cohort Analysis

Relationship with Assailant Cohort

This comparison was conducted between patients with a known relationship with their assailant ($n = 130$), further referred to as "known", and those with no known relationship with their assailant ($n = 59$), referred to as "stranger". Baseline characteristics between groups were similar, with the exception of a higher prevalence of neurodevelopmental disorders in the known group compared to the stranger group (18.5% vs. 6.8%, $p = 0.046$), as shown in Table 1. Table 2 displays characteristics of assault. In the known group, the most common places of assault were group home/nursing facility/rehab/hospital (23.8%, $p < 0.001$), other house not belonging to patient (31.4%, $p = 0.01$), and the patient's home (13.3%). The stranger group had the highest proportion of assaults occurring in a public location (36.7% vs. 10.5%, $p < 0.001$). The majority of assailants in the known group were identified as acquaintance (46.2%) or current or ex-partner (27.7%). Both groups had high proportions of male assailants (77.7% vs. 64.4%), and there were no significant differences in the penetration type in both groups. A higher proportion of patients in the known group were awake during the assault and recalled the events of the assault (63.1% vs. 42.4%, and 66.2% vs. 49.2%, respectively, both $p \leq 0.01$). Drug facilitation for their assault was reported in 39.0% of patients in the stranger group, compared to 23.8% of patients in the known group ($p = 0.02$). Outcomes and treatment, described in Table 3, were similar across both groups with the exception of the sexual offense evidence kit being collected more often in the stranger group (56.9% vs. 33.3%, $p = 0.01$).

Univariate models evaluated predictors of interest with each outcome of interest, displayed in Table 4. Patients in the stranger group had 3.39 times the crude odds of having a sexual offense evidence kit collected (95% *CI* 1.56-7.35, $p = 0.002$) compared to those in the known group. Stranger as an assailant did not predict any other outcomes in crude models. Multivariate models adjusted for age, race, ethnicity, and encounter payment method. Having no known relationship with the assailant remained a significant predictor [2.53 (1.02-6.28), $p = 0.05$] of sexual offense evidence kit collection after adjusting for other predictors. This was not a predictor in other multivariate models.

Table 1

Demographic Characteristics by Exposure Cohort

	Known relationship with assailant (n = 130)	**No known relationship with assailant/stranger (n = 59)**	**p-value**	**No known previous psychiatric history (n = 192)**	**Known previous psychiatric history (n = 113)**	**p-value**
Age, median (IQR)	28.0 (22.0-36.8)	29.0 (21.0-42.0)	0.90	25 (21-34)	31 (23-42)	**0.04**
Female sex, n (%)	109 (83.8)	54 (91.5)	0.18	173 (90.1)	100 (88.5)	0.70
Male sex	21 (16.2)	5 (8.5)		19 (9.9)	13 (11.5)	
Race			0.18			0.10
Asian	1 (0.8)	2 (3.4)	0.20	5 (2.6)	0 (0.0)	**0.04**
Black/African American	18 (13.8)	3 (5.1)	0.13	19 (10.0)	16 (14.2)	0.47
Caucasian	89 (68.5)	40 (67.8)	0.29	117 (61.6)	83 (73.5)	0.47
Other	8 (6.2)	2 (3.4)	0.73	15 (7.9)	8 (7.1)	0.38
Missing	14 (10.8)	12 (20.3)		34 (17.9)	6 (5.3)	
Hispanic ethnicity			0.32			0.37
Hispanic	5 (3.8)	0 (0.0)		8 (4.2)	4 (3.5)	
Non-Hispanic	104 (80.0)	45 (76.3)		139 (72.4)	95 (84.1)	
Missing	21 (16.2)	14 (23.7)		45 (23.4)	14 (12.4)	
Encounter payment method			0.56			**<0.001**
Private insurance	5 (3.8)	1 (1.7)	0.67	7 (3.6)	4 (3.5)	1.00
Medicaid	25 (19.2)	5 (8.5)	0.08	18 (9.4)	27 (23.9)	**<0.001**
Medicare	11 (8.5)	1 (1.7)	0.11	4 (2.1)	9 (8.0)	**0.02**
Self-Pay	1 (0.8)	0 (0.0)	1.00	2 (1.0)	1 (0.9)	1.00
Special billing	86 (66.2)	50 (84.7)	**0.004**	159 (82.8)	70 (61.9)	**<0.001**
Missing	2 (1.5)	2 (3.4)		2 (1.0)	2 (1.8)	
Sexually active	26 (20.0)	13 (22.4)	1.00	45 (23.4)	16 (14.4)	**0.02**
Missing	96 (73.8)	42 (72.4)		139 (72.4)	84 (75.7)	
History of previous sexual assault, sexual trauma or rape	28 (21.9)	6 (10.2)	0.06	14 (7.3)	32 (28.6)	**<0.001**

Psychiatric History

Cohorts were evaluated by exposure of known psychiatric history, "psychiatric history" group (n = 113), compared to those with no known psychiatric history, referred to as "non-psychiatric history" group (n = 192). Individuals in the non-psychiatric history group had a significantly lower median age of 25 (21–34) versus 31 (23–42, p = 0.04), as displayed in Table 1. There was a statistically significant difference in the distribution of racial categories between groups (p = 0.04), but no significant differences by each racial category. Individuals in the psychiatric history group had higher proportions of Medicaid payment (23.9% vs. 9.4%, p = 0.01) and Medicare payment (8.0% vs. 2.1%, p = 0.04), and a lower use of special billing (61.9% vs. 82.8%, p = 0.002). Patients with a psychiatric history had a lower prevalence of being sexually active (14.4% vs. 23.4%, p = 0.02), but higher reported rates of previous sexual assault (28.6% vs. 7.3%), medical comorbidities (56.3% vs. 31.8%), and neurodevelopmental disorders (23.9% vs. 6.3%, all $p < 0.001$). There was a similar spread of location of assault between groups as well as relationship with assailant, displayed further in Table 2. A higher proportion of patients with a psychiatric history reported being awake during their assault, recalling the events of their assault

(both p<0.001). Fewer patients (86.7% vs. 95.3%, $p = 0.03$) had SA as their chief complaint for their visit in the psychiatric history group.

Table 2

Assault Characteristics by Exposure Cohort

	Known relationship with assailant (n = 130)	No known relationship with assailant/stranger (n = 59)	p-value	No known previous psychiatric history (n = 192)	Known previous psychiatric history (n = 113)	p-value
Location of assault						
Car	5 (4.8)	5 (10.2)	0.29	9 (8.0)	3 (3.5)	0.24
Patient's home	14 (13.3)	6 (12.2)	1.00	17 (15.0)	15 (17.4)	0.70
Group home/Nursing facility/Rehab/Hospital	25 (23.8)	0 (0.0)	**<0.001**	11 (9.7)	21 (24.4)	**0.01**
Other house (not patient's)	33 (31.4)	6 (12.2)	**0.01**	23 (20.4)	21 (24.4)	0.50
Hotel	7 (6.7)	6 (12.2)	0.35	15 (13.3)	2 (2.3)	**0.01**
Party	3 (2.9)	4 (8.2)	0.21	8 (7.1)	4 (4.7)	0.56
Public location (not otherwise specified)	11 (10.5)	18 (36.7)	**<0.001**	22 (19.5)	14 (16.3)	0.58
School Campus	3 (2.9)	4 (8.2)	0.21	5 (4.4)	3 (3.5)	1.00
Shelter/Jail	4 (3.8)	0 (0.0)	0.31	3 (2.7)	3 (3.5)	1.00
Missing	25 (19.2)	9 (15.5)		79 (41.1)	27 (23.9)	
Relationship with Assailant						
Acquaintance/Friend	60 (46.2)	-	-	34 (31.8)	26 (31.7)	1.00
Current or Former partner	36 (27.7)	-	-	21 (19.6)	15 (18.3)	0.85
Caregiver or Facility staff member	13 (10.0)	-	-	6 (5.6)	8 (8.5)	0.56
Doctor	2 (1.5)	-	-	1 (0.9)	1 (1.2)	1.00
Family member	5 (3.8)	-	-	1 (0.9)	4 (4.9)	0.17
Landlord	2 (1.5)	-	-	0 (0.0)	2 (2.4)	0.19
Law enforcement officer	3 (2.3)	-	-	2 (1.9)	1 (1.2)	1.00
Neighbor/Fellow group home member	9 (6.9)	-	-	3 (2.8)	6 (7.3)	0.18
No Relationship/Stranger	-	59 (100.0)	-	39 (36.4)	20 (24.4)	0.08
Missing				85 (44.3)	31(27.4)	
Sex of assailant						
Female	2 (1.1)	0 (0.0)	1.00	0 (0.0)	2 (1.8)	0.16
Male	101 (77.7)	38 (64.4)	0.59	101 (53.2)	68 (60.2)	1.00
Multiple individuals	10 (7.7)	6 (10.2)	0.39	13 (11.4)	6 (7.9)	0.47
Missing	17 (13.1)	15 (25.4)		78 (40.6)	37 (32.7)	
Traumatic injury with assault	32 (25.0)	17 (29.8)	0.59	57 (30.5)	29 (26.6)	0.60
Penetration Type						
None	10 (7.9)	2 (3.4)	0.51	5 (6.9)	7 (13.0)	0.36
Fingers/Hand	7 (5.6)	5 (8.6)	0.30	11 (15.3)	6 (11.1)	0.60
Object	2 (1.6)	2 (3.4)	0.29	2 (2.8)	2 (3.7)	1.0
Penis	58 (46.0)	19 (32.8)	0.46	54 (75.0)	39 (72.2)	0.84
Missing	49 (38.9)	30 (51.7)		117 (61.9)	56 (50.9)	
Drug facilitation of assault	31 (23.8)	23 (39.0)	**0.02**	52 (27.2)	27 (23.9)	0.16
Missing	9 (6.9)	7 (11.9)		53 (27.7)	21 (18.6)	
Awake or regained consciousness during assault	82 (63.1)	25 (42.4)	**0.004**	66 (34.4)	65 (57.5)	**<0.001**
Missing	6 (4.6)	1 (1.7)		34 (17.7)	9 (8.0)	
Recalled events of the assault	86 (66.2)	29 (49.2)	**0.01**	70 (36.5)	69 (61.1)	**<0.001**
Missing	6 (4.6)	1 (1.7)		35 (18.2)	9 (8.0)	
Sexual assault as chief complaint	124 (95.4)	55 (93.2)	0.51	183 (95.3)	98 (86.7)	**0.03**
Patient consents to evidence collection	88 (67.7)	45 (76.3)	0.23	176 (91.7)	98 (86.7)	0.14

	Known relationship with assailant (n = 130)	No known relationship with assailant/stranger (n = 59)	p-value	No known previous psychiatric history (n = 192)	Known previous psychiatric history (n = 113)	p-value
Sexual assault occurred with 96 hours	122 (93.8)	57 (96.6)	0.72	184 (95.8)	104 (92.0)	0.15
Patient with capacity to consent to SAFE exam	110 (83.1)	59 (100.0)	**<0.001**	176 (91.7)	98 (86.7)	0.14

Treatment accepted and outcome variable varied significantly by psychiatric history status (Table 3). Psychiatric history patients were significantly less likely to request a SAFE exam (80.5% vs. 91.1%, $p = 0.01$) and HIV testing (67.3% vs. 79.7%, $p = 0.002$), but more likely to have urine toxicology and STI/STD testing ordered during their presentation (all $p \leq 0.02$). A lower proportion of patients with a psychiatric history also had STI prophylaxis or treatment (46.4% vs. 60.9%, $p = 0.02$) and emergency contraception ordered (19.6% vs. 32.3%, $p = 0.03$).

Univariate models showed those with a psychiatric history had crude odds of 0.40 (0.20-0.80, $p = 0.01$) times those without a psychiatric history of requesting a SAFE evaluation (Table 4). Individuals with a psychiatric history also had 0.38 (0.20-0.70, $p = 0.002$) the odds of having HIV testing ordered compared to those without a psychiatric history. Psychiatric history did not predict any other outcomes in the crude models. Though psychiatric history was no longer a significant predictor of any outcomes of interest in multivariate models, it did trend toward a significant impact on HIV testing ordered [0.50 (0.24-1.04), $p = 0.06$].

Table 3

Outcome and Treatment Variables by Exposure Cohort

	Known relationship with assailant (n = 130)	**No known relationship with assailant/stranger (n = 59)**	**p-value**	**No known previous psychiatric history (n = 192)**	**Known previous psychiatric history (n = 113)**	**p-value**
SAFE evaluation requested	110 (84.6)	54 (91.5)	0.25	175 (91.1)	91 (80.5)	**0.01**
Patient left prior to SAFE arrival	11(9.8)	3 (5.4)	0.39	21 (11.8)	6 (6.4)	0.20
Sexual offense evidence kit collected	43 (33.3)	33 (56.9)	**0.01**	79 (55.6)	48 (56.5)	1.00
HIV testing ordered	89 (68.5)	46 (78.0)	0.70	153 (79.7)	76 (67.3)	**0.002**
Not offered*	14 (10.8)	2 (3.4)		17 (8.9)	8 (7.1)	
Urine pregnancy testing ordered	102 (78.5)	49 (84.5)	0.43	161 (83.9)	88 (78.6)	0.28
Urine toxicology ordered	28 (21.5)	18 (31.0)	0.20	32 (16.7)	38 (33.9)	**<0.001**
STI/STD testing ordered	49 (37.7)	22 (37.9)	1.00	57 (29.7)	48 (42.9)	**0.02**
Any STI prophylaxis/treatment ordered	67 (51.5)	37 (63.8)	0.15	117 (60.9)	52 (46.4)	**0.02**
Emergency contraception ordered *	27 (23.2)	17 (31.5)	0.27	62 (32.3)	22 (19.6)	**0.03**
Law enforcement involvement	62 (48.1)	26 (44.8)	0.75	74 (38.9)	54 (48.6)	0.12
Social Work Involvement	37 (28.9)	9 (15.5)	0.07	53 (20.3)	12 (30.8)	0.15
Follow-up scheduled	16 (12.4)	10 (17.2)	0.37	22 (11.6)	14 (12.6)	0.86

*Not offered to those who presented outside 72-hour window for post-exposure prophylaxis. As such not included in analysis

**Not offered to those with confirmed positive urine pregnancy test or male sex. As such not included in analysis

Table 4

Univariate and multivariate models by exposure cohorts

		Univariate Model		Multivariate Model			
				Relationship with assailant		Known psychiatric history	
Outcome	**Independent Variable**	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**
SAFE evaluation requested	*Full Model*	-	-	-	**<0.001**		**<0.001**
SAFE Evaluation Requested	Relationship		0.20		0.75		
	Known relationship	1.00		1.00			
	No known relationship	1.96 (0.70-5.52)		0.82 (0.24-2.76)			
	Psychiatric history		**0.01**				0.57
	No known psychiatric history	1.00		-		1.00	
	Known psychiatric history	0.40 (0.20-0.80)		-		0.77 (0.32-1.87)	
	Age	1.00 (0.98-1.03)	0.94	1.02 (0.97-1.07)	0.46	1.01 (0.98-1.05)	0.49
	Race		0.37		0.35		0.59
	White	1.00		1.00		1.00	
	Asian	-	-	-	-	-	-
	Black/African American	0.46 (0.20-1.09)	0.08	0.29 (0.07-1.11)	0.07	0.44 (0.14-1.41)	0.16
	Other	0.73 (0.23-2.32)	0.60	-	-	-	-
	Hispanic ethnicity		0.48	*	*	*	*
	Non-Hispanic	1.00		-		-	
	Hispanic	2.10 (0.27-16.7)		-		-	
	Encounter payment method		**<0.001**		**<0.001**		**<0.001**
	Private insurance	1.00		1.00		1.00	
	Medicaid	1.56 (0.42-5.85)	0.51	0.94 (0.14-6.39)	0.95	1.68 (0.42-6.74)	0.46
	Medicare	4.00 (0.69-23.1)	0.12	1.68 (0.15-18.7)	0.67	4.78 (0.60-38.2)	0.14
	Self-Pay	0.40 (0.03-5.15)	0.48	-		1.19 (0.06-25.5)	0.91
	Special billing	29.6 (7.59-115.5)	**<0.001**	9.69 (1.39-67.4)	**0.02**	26.6 (6.49-109.3)	**<0.001**
Sexual offense evidence kit collection	*Full Model*	-	**-**	-	**0.002**	-	**<0.001**
Sexual Offense Evidence Kit Collection	Relationship		**0.002**		**0.05**		
	Known relationship	1.00		1.00			
	No known relationship	3.39 (1.56-7.35)		2.53 (1.02-6.28)			
	Psychiatric history		0.90				0.06
	No known psychiatric history	1.00		-		1.00	
	Known psychiatric history	1.04 (0.60-1.78)		-		1.99 (0.97-4.10)	
	Age	0.99 (0.97-1.01)	0.39	1.00 (0.97-1.04)	0.79	1.00 (0.97-1.02)	0.89
	Race		0.21		0.29		0.53
	White	1.00		1.00		1.00	
	Asian	1.89 (0.34-10.7)	0.47	-	-	1.11 (0.17-7.15)	0.91
	Black/African American	0.68 (0.31-1.50)	0.33	0.25 (0.06-1.02)	0.05	0.48 (0.18-1.29)	0.14
	Other	2.46 (0.84-7.26)	0.10	-	-	-	-
	Hispanic ethnicity		**0.045**	*	*	*	*
	Non-Hispanic	1.00		-		-	
	Hispanic	8.57 (1.05-70.0)		-		-	
	Encounter payment method	*	*		0.45		**0.003**
	Private insurance	-		1.00		1.00	
	Medicaid	-	-	-	-	-	-

		Univariate Model		Multivariate Model			
				Relationship with assailant		Known psychiatric history	
Outcome	**Independent Variable**	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**
	Medicare	-	-	-	-	-	-
	Self-Pay	-	-	-	-	-	-
	Special billing	-	-	-	-	-	-
HIV testing ordered	*Full Model*	-	-	-	0.12	-	**0.002**
HIV Testing Ordered	Relationship		0.55		0.92		
	Known relationship	1.00		1.00			
	No known relationship	1.27 (0.58-2.79)		1.05 (0.41-2.65)			
	Psychiatric history		**0.002**				0.06
	No known psychiatric history	1.00		-		1.00	
	Known psychiatric history	0.38 (0.20-0.70)		-		0.50 (0.24-1.04)	
	Age	0.97 (0.95-0.99)	**0.01**	0.98 (0.95-1.01)	0.16	0.98 (0.95-1.00)	0.08
	Race		0.92		0.59		0.68
	White	1.00		1.00		1.00	
	Asian	-		-		-	
	Black/African American	0.74 (0.31-1.79)	0.51	0.42 (0.13-1.42)	0.16	0.53 (0.19-1.47)	0.22
	Other	1.07 (0.34-3.37)	0.91	-	-	1.15 (0.01-108.8)	0.95
	Hispanic ethnicity		0.87	*	*		0.97
	Non-Hispanic	1.00		-		1.00	
	Hispanic	1.14 (0.24-5.46)		-		0.93 (0.01-86.2)	
	Encounter payment method		**<0.001**		**0.03**		**0.02**
	Private insurance	1.00		1.00		1.00	
	Medicaid	0.37 (0.07-2.07)	0.26	0.70 (0.09-5.29)	0.73	0.40 (0.06-2.52)	0.33
	Medicare	1.67 (0.12-24.3)	0.71	3.79 (0.21-68.8)	0.37	2.64 (0.16-44.9)	0.50
	Self-Pay	0.67 (0.04-11.9)	0.78	-	-	-	-
	Special billing	2.16 (0.42-11.2)	0.36	2.92 (0.44-19.6)	0.27	1.63 (0.29-9.32)	0.58
Law enforcement involvement	*Full Model*	-	-	-	0.20		**0.01**
Law Enforcement Involvement	Relationship		0.55		0.31		
	Known relationship	1.00		1.00			
	No known relationship	1.27 (0.58-2.79)		1.48 (0.70-3.13)			
	Psychiatric history		0.31				0.21
	No known psychiatric history	1.00		-		1.00	
	Known psychiatric history	0.91 (0.77-1.09)		-		1.43 (0.81-2.52)	
	Age	1.02 (1.00-1.04)	**0.04**	1.02 (0.99-1.05)	0.19	1.01 (0.99-1.04)	0.20
	Race		0.26		0.93		0.11
	White	1.00		1.00		1.00	
	Asian	1.68 (0.37-7.71)	0.50	2.22 (0.19-26.2)	0.53	3.76 (0.65-21.6)	0.14
	Black/African American	0.63 (0.30-1.33)	0.23	1.12 (0.39-3.22)	0.83	0.79 (0.34-1.84)	0.59
	Other	0.47 (0.18-1.26)	0.13	-	-	0.06 (0.00-1.21)	0.07
	Hispanic ethnicity		0.22	*	*		0.53
	Non-Hispanic	1.00		-		1.00	
	Hispanic	0.43 (0.11-1.64)		-		2.28 (0.17-29.9)	
	Encounter payment method		0.11		0.50		0.30
	Private insurance	1.00		1.00		1.00	
	Medicaid	2.44 (0.58-10.4)	0.23	2.06 (0.31-13.8)	0.46	2.32 (0.53-10.2)	0.27
	Medicare	8.89 (1.40-56.6)	**0.02**	7.21 (0.70-74.5)	0.10	7.99 (1.09-58.6)	**0.04**
	Self-Pay	-	-	-	-	-	-
	Special billing	1.75 (0.45-6.78)	0.42	1.79 (0.30-10.6)	0.52	1.82 (0.46-7.19)	0.39

**Not included due to non-convergence.*

Discussion

This large cohort study characterizes patients presenting for sexual assault care at a suburban, academic emergency department. Our findings provide insight into key factors that may affect these patients' experiences and needs following an assault. In particular, the study highlights the prevalence of co-occurring psychiatric conditions, residence in group or nursing homes, and suspected substance-facilitated assaults. A clearer understanding of the characteristics of patients presenting for sexual assault and rape can help healthcare systems more effectively address their medical, psychological, and social needs.

About 10% of assaults took place in nursing and group homes, raising critical concerns related to the rights and safety of disabled and elderly populations. Previous research has documented significantly increased incidence of sexual assault in disabled populations compared to their non-disabled counterparts, and our study supported these findings (Lee et al., 2019; Sobsey & Doe, 1991). A qualitative study suggests that physician education on sexuality, consent, and rights to their disabled patients can improve their ability to ask for help and call abuse to attention (Schmidt et al., 2022). While several screening tools for elder abuse exist, few have undergone rigorous multi-center validation and are therefore underutilized (Mercier et al., 2020). Some interventions for post-abuse care management, particularly for elders, have been suggested. One intervention is the Vulnerable Elder Protection Team (VEPT), which provides a 24/7 on-call team for elder abuse cases, facilitating safe discharge planning and appropriate housing transitions (Rosen et al., 2018). In two years, 39% of participants in the VEPT program were discharged to safer housing (Rosen et al., 2022). Hospitals should consider adopting similar programs for all vulnerable persons lacking safe post-discharge options to ensure comprehensive safe care.

The ICD-10 codes in this study demonstrated that 99.7% of patients were coded under T76.21 (Adult sexual abuse, suspected), with only one patient coded as T74.21 (Adult sexual abuse, confirmed). This suggests that providers prefer the "suspected" designation, possibly due to concerns about liability, stigma, or uncertainty in confirming the assault. A national database study of ED visits found that 52% of SA visits were coded as suspected and 48% as confirmed (Murugan et al., 2021). While the ICD-10 system introduced suspected and confirmed categories to facilitate better reporting of SA, our results suggest possible unintended consequences (Medel-Herrero et al., 2023). Provider's preference for the suspected code may inadvertently invalidate patients' experiences, particularly as only 1–2% of cases are estimated to involve false allegations (Lonsway, 2010). Few other ICD-10 codes include both the suspected and confirmed modifiers, including other non-sexual types of assault such as Y04: Assault by bodily force. Though a provider's ability to document unreported SA is important, the stigma associated with SA may be pushing providers to classify all presentations as suspected and may also impact patients' internalized stigma (Chalmers et al., 2023). The American College of Emergency Physicians guidelines recommend avoiding stigmatizing modifiers such as "alleged" or "suspected" when documenting SA in medical charts (Evaluation and Management of the Sexually Assaulted or Sexually Abused Patient, 2013). Hospitals should establish clear protocols for ICD-10 coding in SA cases to ensure accurate documentation and validate patients' experiences. Additionally, these codes captured only an estimated one-third of the patients who received a SAFE exam, further supporting the underdiagnosis and underreporting of sexual assault in medical charting.

Our study also highlighted the many factors that impact law enforcement involvement and evidence collection, including knowledge of the assailant, history of SA, and potential drugging

involvement in the assault. Less than 45% of our study population had initial law enforcement involvement or evidence collected, and it is likely that an even smaller percentage of that group continued to pursue further legal action (Morgan & Thompson, 2021). A large mediation analysis found that SAFE involvement was correlated not only with increased police involvement and SAFE evidence collection, but also additional non-SAFE evidence collection by police, which was further associated with case referral (Campbell et al., 2012). While engagement with law enforcement can be essential for legal recourse, it may also impose emotional and psychological burdens on survivors. Emergency department providers should maintain a neutral stance, offering support that empowers patients to make informed decisions regarding law enforcement involvement, while prioritizing their physical and emotional well-being.

Our study also revealed potential gaps in ED staff training on TIC, evidenced by gaps in sensitive information collected from patients, such as 74% of patients in this study not being asked and/or recorded if they are previously sexually active by ED providers. A study found that 36% of domestic violence patients would only divulge sensitive information if directly asked about it, potentially describing the reason behind large number of unknowns in our study, particularly for sensitive information (i.e. history of SA) (Hayden et al., 1997). Treating SA requires a nuanced approach that integrates medical, psychological, and social considerations and TIC is the most evidence-based practice for this (Tepper et al., 2022). TIC, as defined by the National Institute of Health (NIH), involves recognizing the widespread impact of trauma, understanding its effects, applying trauma-informed principles to practice, and preventing re-traumatization (Marsac et al., 2016). These principles can help providers ensure better psychological outcomes for their patients in the immediate aftermath of a traumatic incident (Fiske et al., 2021; Forkey et al., 2021). It is possible that providers are not fully comfortable with providing TIC and therefore avoid sensitive or potentially triggering topics when interviewing their patients for these concerns. Offering TIC training to ED providers and hosting informal conversations on the importance of TIC may offer a more thorough and safer exam for patients prior to SAFE arrival (Morra et al., 2024). Additionally, simply the act of having a SAFE presence is likely to positively impact TIC behaviors by other ED staff, adding to a culture of normalization of TIC (Chalmers et al., 2023). One study has found that current ED providers may be resistant to this change (Bruce et al., 2018), but since this study, our hospital has recently begun piloting TIC and SA-specific TIC training programs with medical students and residents to develop the next generation of physicians who see TIC as the standard of care for all patients.

Mental health conditions were more prevalent in our study population (37.5%) compared to the general U.S. population (23.1%) (Key Substance Use and Mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health, 2023). It is well documented that individuals who experience sexual assault are at an increased risk of developing PTSD, depression, and anxiety (Clarke et al., 2023; Khadr et al., 2018; Rothman et al., 2021). However, preexisting mental illnesses may not only predispose these patients to assault, but also exacerbate the psychological sequelae after an assault. Our analysis found a significant association between preexisting mental illness and declination of SAFE services and other testing modalities, raising concern about post-assault care engagement. It is possible that these patients experience heightened feelings of shame, guilt, and fear after an assault which therefore deters them from engaging in care and forensic evaluation. Additionally, severe symptoms of their illnesses, including cognitive dissociation or distortions, may cloud their ability to advocate for themselves in an acute-care setting.

Patient engagement with SAFE programs has been shown to significantly improve outcomes for survivors (Ericksen et al., 2002). However, patients with preexisting psychiatric conditions, who are already at high risk for adverse outcomes, may demonstrate reduced engagement with SAFE services. This reduced engagement likely compounds their vulnerability and worsens their overall risk profile. To address this, hospitals should integrate mental health care and psychological support into standard post-assault protocols. Even patients who do not meet criteria for acute psychiatric holds should be counselled and evaluated by psychotherapists, social workers, or psychiatrists, and promptly offered outpatient follow-up. A well-studied form of secondary prevention is ED-based video interventions after SA. These videos use the principles of cognitive behavioral therapy (CBT) and discuss coping mechanisms, warning signs for mental health emergencies, strategies for managing stress and emotions, and the details of the SAFE exam to decrease distress. These videos have consistently shown to decrease substance use and decrease PTSD symptoms post-SA (Gilmore et al., 2019, 2021; Resnick et al., 2007). This may be a low resource intervention to prevent or decrease the development or worsening of mental health symptoms in this population. Partnerships with community organizations can also help to bridge this gap. These organizations provide trained advocates who can be requested by ED staff and provide prompt emotional support as well as knowledgeable guidance and assistance during the waiting and examination process (*ECLI-VIBES*, 2023; Greeson & Campbell, 2013). Many of these organizations consist of volunteer advocates, offering a minimal cost burden for a hospital to implement.

This study has several limitations. First, its findings may not be generalizable to hospitals in urban or rural settings, as our institution serves a suburban population near a large state university. Nonetheless, our racial demographics distribution was representative of the local population, with approximately 65% of our county identifying as non-Hispanic White (Suffolk County, New York, n.d.). Second, the reliance on medical chart review includes potential biases, as documentation may be incomplete or influenced by recall or social desirability factors. Third, a significant proportion of entries contained unknown responses for social history and demographic variables, reducing our sample size and status power for certain analyses. Furthermore, if a patient decides to report to law enforcement, their SAFE records become evidence and therefore largely inaccessible to research data collection and evaluation of programs such as ours.

Conclusion

Our review of 309 emergency-department presentations for sexual assault over a 9.5-year span characterizes who seeks care, what services they receive, and which factors shape engagement with forensic and legal processes. Patients were predominantly young, female, and White, yet almost one in five assaults occurred in institutional settings such as group or nursing homes, highlighting the burden borne by disabled and elder populations. These findings have immediate practice implications. First, they reaffirm the value of an on-call SAFE program but also expose its limits when wait-times or stigma deter participation. Utilizing trained rape-crisis advocates at triage and expanding cross-facility SAFE coverage could narrow this gap. Second, uniform, trauma-informed communication, including non-stigmatizing ICD-10 coding and explicit mental-health screening can validate patients' experiences and reduce barriers to care. Third, intentional partnerships with community SART organizations offer a low-cost, high-impact solution to support the unique needs of these patients after an assault.

At a systems level, our data argue for stronger safeguarding policies for residents of long-term care and congregate living facilities, and mental-health care even in the absence of an overt

psychiatric crisis. Clarifying institutional coding protocols could both honor survivor narratives and improve surveillance accuracy for public-health planning. Further, hospital-wide, case-based training in trauma-informed care should be employed for all ED clinicians, not only SAFE personnel, so that every interaction, from triage to discharge, promotes autonomy, mitigates re-traumatization, and encourages follow-up.

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Appendix A

Data Operationalization

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
Demographics			
Age	Patient age as reported in electronic medical record (EMR).	Continuous	Dependent
Sex	Patient sex assigned at birth as self-reported in EMR.	0- Female 1- Male	Dependent
Race	Patient race (with U.S. Census categories) as self-reported in EMR.	1- Asian 2- Black/African American 3- Caucasian 4- Other 5- Missing	Dependent
Ethnicity	Patient ethnicity (with U.S. Census categories) as self-reported in EMR.	1- Non-Hispanic 2- Hispanic 3- Missing	Dependent
Encounter Payment Method	As documented for encounter with hospital emergency department (ED) for evaluation pertaining to sexual assault.	1- Private insurance 2- Medicaid 3- Medicare 4- Self-Pay 5- Special billing 6- Missing	Dependent
Sexually Active	Patient sexual activity status as documented by ED personnel in patient's EMR.	0- No 1- Yes 2- Missing	Dependent
History of previous sexual assault, sexual trauma or rape	Explicit documentation of previous history of sexual assault, sexual trauma, or rape as per report by patient. No (0) was coded if ED providers documented this as a pertinent negative as part of their history of present illness or past medical history. If no clear documentation of this history, coded as Missing (2).	0- No 1- Yes 2- Missing	Dependent
Medical Comorbidities	All medical, non-psychiatric disorders/diagnoses as described in ED providers' documentation of past medical history. If no clear documentation of the patient's medical history, this was coded as Missing (2).	0- None 1- Any non-psychiatric diagnosis/co-morbidity 2- Missing	Independent
Neurodevelopmental Past Medical History	For those with documented medical history as described	0- None	Independent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
	above- all neurodevelopmental diagnoses as described in ED providers' documentation of past medical history, including: ADD/ADHD, autism spectrum disorder, developmental delay, cerebral palsy, intellectual disability, etc.	1- Any neurodevelopmental diagnosis	
Psychiatric Past Medical History	For those with documented medical history as described above- all psychiatric diagnoses as described in ED providers' documentation of past medical history, including anxiety disorders, bipolar disorders, depression, obsessive-compulsive disorder, personality disorders, post-traumatic stress disorder, schizophrenia, etc.	0- None 1- Any psychiatric diagnosis Further recoded as an individual variable per psychiatric diagnosis.	Independent
Characteristics of Emergency Department Visit			
Year	The year of encounter with ED for sexual assault evaluation.	1- 2015 2- 2016 3- 2017 4- 2018 5- 2019 6- 2020 7- 2021 8- 2022 9- 2023 10- 2024	Dependent
Time	The time of encounter with ED for sexual assault evaluation.	1- 0:00-5:59 2- 6:00-11:59 3- 12:00-17:59 4- 18:00-23:59	Dependent
SAFE Evaluation Requested	Evaluation was requested if ever recorded as ED provider's plan in visit notes.	0- No 1- Yes	Dependent
Patient Left Prior to SAFE Arrival	Documented as Yes (1) if no evidence of evaluation by SAFE providers in EMR after clear documentation of request, or if explicitly stated by further ED providers' documentation that patient left prior to being evaluated by SAFE personnel.	0- No 1- Yes	Dependent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
Sexual Offense Evidence Kit Collected	Identified by checkbox on documentation uploaded and included in EMR from SAFE provider detailing which sections of SAFE evaluation were completed during encounter. No (0) include those who consented to evidence collection and did not complete evidence collection, and those who did not consent to evidence collection. Those with incomplete documentation or no evidence of SAFE form in EMR were marked as Missing (2).	0- No 1- Yes 2- Missing	Dependent
HIV Testing Ordered	Identified by checkbox on documentation uploaded and included in EMR from SAFE provider detailing which sections of SAFE evaluation were completed during encounter and cross-referenced with laboratory testing orders placed in EMR for HIV testing.	0- No 1- Yes 2- Not offered	Dependent
Urine Pregnancy Testing Ordered	Identified by checkbox on documentation uploaded and included in EMR from SAFE provider detailing which sections of SAFE evaluation were completed during encounter and cross-referenced with orders placed in EMR for urine pregnancy test (UPT). Not Collected (0) included those who were not offered UPT, ie. those assigned male-sex at birth.	0- Not Collected 1- Yes	Dependent
Urine Toxicology Ordered	Toxicology was considered completed based on existing results of testing and completed documentation of order placed by ED personnel for laboratory testing.	0- No 1- Yes	Dependent
STI/STD Testing Ordered	Testing was considered completed based on existing results of testing and completed documentation of	0- No 1- Yes	Dependent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
	order placed by ED personnel for laboratory testing. Includes Chlamydia trachomatis, Neisseria gonorrhoeae, Treponema pallidum, Hepatitis (A, B, C) testing.		
Any STI Prophylaxis/Treatment Provided	Identified by checkboxes on documentation associated with standard HIV, Chlamydia, Gonorrhea and other sexually transmitted infection prophylactic regimens as uploaded and included in EMR from SAFE provider detailing which sections of SAFE evaluation were completed during encounter and cross-referenced with orders placed for STI prophylaxis.	0- No 1- Yes	Dependent
Emergency Contraception Ordered	Identified by checkbox on documentation uploaded and included in EMR in EMR from SAFE provider detailing which sections of SAFE evaluation were completed during encounter and cross-referenced with orders placed for levonorgestrel. Not Offered (2) included those who were ineligible to receive levonorgestrel, ie. those assigned male-sex at birth and those with a positive pregnancy test.	0- No 1- Yes 2- Not offered	Dependent
Law Enforcement Involvement	Law enforcement was considered involved if one of the following scenarios occurred: a) ED provider explicitly documented law enforcement involvement or b) Documentation from local police departments pertaining to the events found in patient's EMR.	0- No 1- Yes	Dependent
Social Work Involvement	Social work was considered involved if there was explicit mention of consultation order placed by ED provider or documentation from social work personnel pertaining to the ED encounter in patient's EMR.	0- No 1- Yes	Dependent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
Follow up care scheduled	Follow up care scheduled was marked as Yes (1) if there was evidence of need for follow up with primary care provider, social work, etc. as part of ED provider's treatment and/or discharge plan.	0- No 1- Yes	Dependent
Characteristics of Assault			
Location of Assault	The location of the incident as documented in ED or SAFE provider notes. If no clear documentation of location, coded as Missing (9).	1- Car 2- Family, Friend, or Perpetrator's Home --> further titled "other house" 3- Group Home/Nursing Home/Rehab Facility/Hospital 4- Patient's Home 5- Hotel 6- Party 7- School Campus 8- Shelter/Jail 9- Missing	Independent
Relationship with Assailant	The relationship of the patient with their assailant as documented in ED or SAFE provider notes. If no clear documentation of relationship, coded as Missing (10).	1- Acquaintance/ Friend 2- Current or Former-Partner 3- Caregiver or Facility Staff Member 4- Doctor 5- Family Member 6- Landlord 7- Law Enforcement Officer 8- Neighbor/Fellow Group Home Member 9- No Relationship/ Stranger 10- Missing Further recoded as: 0- No relationship 1- Any relationship 2- Missing	Independent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
Sex of Assailant	The sex of the assailant as documented in ED or SAFE provider notes. If no clear documentation of sex, coded as Missing (4). Due to heterogeneity of the descriptions of incidents involving multiple assailants, descriptions of multiple assailants were coded as Multiple Individuals (3) regardless of distribution of sexes of the individuals.	1- One Female 2- One Male 3- Multiple Individuals 4- Missing	Dependent
Traumatic Injury Associated with Assault	Injuries explicitly noted in narrative or physical exam description in ED or SAFE provider's documentation. Description of any physical injury was marked as Yes (1).	0- No 1- Yes	Dependent
Drug facilitation of assault	Assaults were considered potentially facilitated by drugs in the following scenarios: a) explicit mention of concern related to being drugged in documented narrative by ED or SAFE personnel or, b) documentation describing patient narrative of alcohol affecting the patient more than is typical for them.	0- No 1- Yes	Dependent
Awake or regained consciousness during assault	Explicit documentation of patient noting that they were awake or regained consciousness during assault. If there was no or limited documentation regarding the events surround the assault, including details regarding patient's consciousness during the event, this was coded Missing (2).	0- No 1- Yes 2- Missing	Dependent
Recalled events of the assault	Explicit documentation of patient noting that they recalled the events of the assault. If there was no or limited documentation regarding the events surround the assault, including details regarding	0- No 1- Yes 2- Missing	Dependent

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
	patient's memory of the event, this was coded Missing (2).		
Sexual Assault as Primary Complaint	Sexual assault was considered the primary complaint of a patient based on the description of the chief complaint as documented by ED providers. Those with incomplete documentation or no evidence of SAFE form in EMR were marked as Missing (2).	0- No 1- Yes 2- Missing	Dependent
Sexual Assault Occurred within 96 Hours of Presentation	Identified by checkbox on documentation uploaded and included in EMR from SAFE provider and cross-referenced with ED provider notation of timeline of events. Those with incomplete documentation or no evidence of SAFE form in EMR were marked as Missing (2).	0- No 1- Yes 2- Missing	Dependent
Patient consents to evidence collection	Identified by checkbox on documentation uploaded and included in EMR from SAFE provider and cross-referenced with ED provider documentation. Those with incomplete documentation or no evidence of SAFE form in EMR were marked as Missing (2). If the checkbox for evidence kit collected (see variable titled: Sexual Offense Evidence Kit Collected) was checked, this variable was considered to be a yes as well, even in the event of the absence of this documentation as described above.	0- No 1- Yes 2- Missing	

Variable Name	Variable Description	Response/Coding and Recoding	Dependent or Independent Variable
Patient with capacity to consent to SAFE exam	A patient was considered to have capacity to consent to SANE exam if they met the following requirements: a) no documentation of health care proxy per ED or SAFE provider's documentation b) no explicit documentation by ED personnel stating that patient lacks decision making capacity for any reason c) SAFE provider documentation checkbox stating patient has capacity to consent to SAFE (if available) Those with incomplete documentation or no evidence of SAFE form in EMR were marked as Missing (2).	0- No 1- Yes 2- Missing	Dependent

Appendix B

Baseline demographic characteristics

Characteristic	N (%) or Median (IQR)
Age	27 (22-37)
Sex	
Female	275 (89.0)
Male	34 (11.0)
Race	
Asian	7 (2.3)
Black/African American	36 (11.7)
Caucasian	201 (65.3)
Other	24 (7.8)
Missing	41 (13.3)
Hispanic ethnicity	
Hispanic	13 (4.2)
Non-Hispanic	235 (76.1)
Missing	61 (19.7)
Encounter payment method	
Private insurance	11 (3.6)
Medicaid	46 (14.9)
Medicare	13 (4.2)
Self-Pay	4 (1.3)
Special billing	231 (74.8)
Missing	4 (1.3)
Sexually active	
Yes	61 (19.9)
No	19 (6.2)
Missing	227 (73.9)
History of previous sexual assault, sexual trauma or rape	
Yes	46 (14.9)
No	50 (16.2)
Missing	211 (68.9)
Comorbidity/Past Medical History	
Medical Comorbidities	124 (40.1)
Neurodevelopmental past medical history	39 (12.6)
Anxiety disorder	64 (20.7)
Bipolar disorder	33 (10.7)
Depression	58 (18.8)
Obsessive compulsive disorder	2 (0.6)
Personality disorder	3 (1.0
PTSD	21 (6.8)
Schizophrenia/Schizoaffective disorder	13 (4.2)

Appendix C

Characteristics of ED Visit

Characteristic	N (%) or Median (IQR)
Year	
2015	9 (2.9)
2016	17 (5.5)
2017	51 (16.5)
2018	65 (21.0)
2019	44 (14.2)
2020	24 (7.8)
2021	27 (8.7)
2022	36 (11.7)
2023	30 (9.7)
2024	6 (1.9)
Time	
0:00-5:59	56 (18.1)
6:00-11:59	50 (16.2)
12:00-17:59	109 (35.3)
18:00-23:59	94 (30.4)
SAFE evaluation requested	
Yes	268 (86.7)
No	41 (13.3)
Patient left prior to SAFE arrival	
Yes	20 (7.5)
No	248 (92.5)
Sexual offense evidence kit collected	
Yes	128 (42.0)
No	102 (33.4)
Missing	75 (24.6)
HIV testing ordered	
Yes	231 (74.8)
No	52 (16.8)
Not Offered	26 (8.4)
Urine pregnancy testing ordered	
Yes	249 (80.5)
Not collected*	60 (19.4)
Urine toxicology ordered	
Yes	72 (23.3)
Not collected	237 (76.7)
STI/STD testing ordered †	
Yes	106 (34.3)
Not collected	203 (67.7)

Characteristic	N (%) or Median (IQR)
Any STI prophylaxis/treatment provided ‡	
Yes	171 (55.3)
No	138 (44.7)
Emergency contraception ordered	
Yes	84 (27.1)
No	198 (64.1)
Not Offered §	27 (8.7)
Law enforcement involved	
Yes	131 (43.0)
No	174 (57.0)
Social work involved	
Yes	66 (21.7)
No	28 (78.3)
Follow-up care scheduled	
Yes	36 (11.8)
No	268 (88.2)

*Includes patients who were assigned male sex at birth and therefore not offered urine pregnancy test

†Includes Chlamydia trachomatis, Neisseria gonorrhoeae, Treponema pallidum, Hepatitis (A, B, C)

‡STI Prophylactic medications included the standard post-exposure prophylaxis regimens (and allergy alternative regimen) for Chlamydia trachomatis, Neisseria gonorrhoeae, Hepatitis, and HIV

§Includes patients who were assigned male sex at birth and therefore not offered emergency contraception. Also include patients who were pregnant (as evidenced by positive β-HCG).

Appendix D

Characteristics of Assault

Characteristic	N (%) or Median (IQR)
Location of incident	
Car	12 (3.9)
Other house (not belonging to patient)	44 (14.2)
Group home/Nursing home/Rehab facility/Hospital	32 (10.4)
Patient's home	32 (10.4)
Hotel	17 (5.5)
Party	12 (3.9)
Other public location	36 (11.7)
School campus	8 (2.6)
Shelter/Jail	6 (1.9)
Missing	110 (35.6)
Relationship with assailant	
Acquaintance/Friend	60 (19.4)
Current or Former partner	36 (11.7)
Caregiver or Facility staff member	13 (4.2)
Doctor	2 (0.6)
Family member	5 (1.6)
Landlord	2 (0.6)
Law enforcement officer	3 (1.0)
Neighbor/Fellow group home member	9 (2.9)
No Relationship/Stranger	59 (19.1)
Missing	120 (38.8)
Sex of assailant	
Female	2 (0.6)
Male	169 (54.7)
Multiple individuals	19 (6.1)
Missing	119 (38.5)
Traumatic injury associated with assault	
Yes	86 (27.8)
No	213 (70.3)
Missing	10 (3.2)
Penetration type	
None	12 (3.9)
Fingers	17 (5.5)
Object	4 (1.3)
Penile	93 (30.1)
Missing	177 (57.3)
Reported potential drugging associated with assault	
Yes	79 (25.6)
No	151 (49.0)

Characteristic	N (%) or Median (IQR)
Missing	78 (25.3)
Awake or regained consciousness during assault	
Yes	132 (42.7)
No	131 (42.4)
Missing	46 (14.9)
Recalled events of the assault	
Yes	140 (45.3)
No	122 (39.5)
Missing	47 (15.2)
Sexual assault as primary complaint	
Yes	283 (91.6)
No	26 (8.4)
Sexual assault occurred within 96 hours of presentation	
Yes	291 (94.2)
No	15 (4.9)
Missing	3 (1.0)
Patient consents to evidence collection	
Yes	220 (71.2)
No	50 (16.2)
Missing	39 (12.6)
Patient with capacity to consent to SAFE exam	
Yes	277 (89.6)
No	30 (9.7)
Missing	2 (0.6)

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Original Research

Intimate Partner Violence and OpenNotes: Challenges and Opportunities

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Abstract

Purpose of Review: Intimate partner violence (IPV) is a widespread public health issue with significant physical and psychological consequences. OpenNotes, which allows patients to view their clinical notes, presents an opportunity to enhance care for survivors by fostering transparency, trust, and patient engagement. This review provides background information on OpenNotes specifically as it relates to IPV and proposes practical recommendations for forensic nurses and clinicians in healthcare settings. Methods: We conducted a literature review of peer-reviewed publications about OpenNotes or trauma-informed IPV documentation. The writing team using an iterative process synthesized and summarized how OpenNotes can be used to support trauma-informed IPV care. Subject matter experts from various disciplines (nursing, psychiatry and social services provided feedback on the summary synthesis.

Key Findings and Recommendations: best practices for leveraging OpenNotes to support IPV survivors, including strategies for sensitive documentation, shared decision-making, and interdisciplinary collaboration were identified. The benefits of OpenNotes can empower patients, reinforce trauma-informed care, and facilitate safer, more effective communication between survivors and members of their clinical team. Limitations: there are inherent limitations of a narrative review such as potential selection bias, search strategy limitations, and lack of a systematic critical appraisal of literature. Conclusions: This narrative review provides concepts for best practices in the context of documentation in electronic health records. Further exploration using rigorous methodology is needed to understand best practices, inform policy and education.

Keywords: OpenNotes, intimate partner violence, trauma-informed care, disclosure, screening, shared-decision making, inquiry-based learning, electronic health record

Intimate Partner Violence and OpenNotes: Challenges and Opportunities

Purpose of the Review & Background

Intimate partner violence (IPV) is a pervasive public health issue with profound short- and long-term health consequences. In the US, approximately 36.4% of women (43.6 million) and 33.6% of men (37.3 million) have experienced sexual violence, physical violence, and/or stalking by a current or former intimate partner (Smith et al., 2018). These statistics may underestimate the prevalence of IPV given barriers to disclosure and reporting. Additionally, survivors are at heightened risk for acute injuries, chronic health conditions, and negative mental health outcomes, such as depression, anxiety, and post-traumatic stress disorder (Black, 2011; Dichter et al., 2020; Dichter et al., 2017). Research has illuminated the neuropsychiatric pathways that link IPV with these adverse outcomes, further underscoring the importance of effective, trauma-informed identification and intervention to support long-term health (Breiding MJ, 2015; Grossman et al., 2021).

This paper uses a trauma-informed framework to explore the intersection of IPV, clinician-patient communication, and medical documentation in the era of shared clinical notes, often referred to as OpenNotes. OpenNotes was conceived in the context of providing greater transparency and collaboration between clinicians and patients. In 202l, the new information sharing rule from the 21st Century Cures Act of 2016 was enacted whereby "patients should have online access to their medical health care record at no charge, and that patients would have full access to their clinical notes, test results, medications, etc." (Salmi, et al 2021) Applying a trauma-informed framework promotes and supports its key principles of: safety, trustworthiness, transparency, collaboration and empowerment, voice and choice (Substance Abuse and Mental Health Services Administration, 2023).

We will discuss the existing barriers to IPV identification, with an emphasis on how OpenNotes can support shared decision-making regarding IPV documentation while emphasizing safety and privacy issues for survivors. We offer guidance for clinicians (defined as one licensed to practice) and specifically forensic nurses such as SANEs conducting forensic examinations, correctional nurses documenting IPV histories, or psychiatric forensic nurses on how to approach discussions about IPV, document these interactions thoughtfully, and adopt best practices to

support survivors while mitigating risks associated with shared clinical records. This guidance is formed from a combination of literature in IPV care, literature about sensitive documentation, and clinical experience expertise from the literature.

We acknowledge that the terms patient, survivor, and abuser do not adequately capture the many identities of those impacted by IPV. We strive to promote person-first language, while providing role clarity in the text below.

Methods

We conducted a literature review of peer-reviewed publications about OpenNotes or trauma-informed IPV documentation over the past 5 years. The writing team used an iterative process to synthesize and summarize how OpenNotes can be used to support trauma-informed IPV care. Subject matter experts from various disciplines (nursing, psychiatry and social services provided feedback on the summary synthesis.

Key Findings and Recommendations

Brief History of OpenNotes

OpenNotes began in 2010 as a research project that aimed to improve transparency in healthcare by allowing patients to access the notes written by their clinicians (Delbanco et al., 2012). In 2017, the Cures Act created a mandate called the "Information Blocking Rule," requiring the electronic health record, EHR, to be made available to all patients (114th Congress, 2016). With this Act, OpenNotes became part of standard practice, although Delbanco & Wacheenheim (2021) note that there is much variability across systems and settings

A Trauma-Informed Approach to OpenNotes

A trauma-informed care (TIC) approach realizes the widespread impact of trauma on individuals and organizations, recognizes the potential paths for recovery, responds by integrating knowledge about trauma into practice, and resists re-traumatization (Lewis et al., 2023; Substance Abuse and Mental Health Services Administration, 2023). Applying a TIC framework to OpenNotes can empower patients, providers, and the system of healthcare to improve communication, enhance engagement, and especially develop trust and fostering transparency (Walker et al., 2019). Vulnerable patient populations, including those with worse self-reported health and fewer years of formal education, report dramatically higher approval of their clinicians after reading their notes (Bell et al., 2017). This suggests that OpenNotes offers an especially good opportunity for clinicians to improve trust and empower patients to be partners in their care, including how a clinician documents their clinical encounter in the electronic health record.

How Open Notes Have Informed the Standard Practice in Note Writing

The way clinicians talk and write about patients can influence the care they receive, perpetuate stigma and bias and thus underscoring the importance of thoughtful language when speaking to patients, talking about patients to members on the health care team, and writing about patients in clinic notes (Monroe et al., 1992). Furthermore, as the Electronic Health Record) EHR became more accessible to patients, clinicians recognized they needed to address language used in their notes and be cognizant of the use of stigmatizing language. For example, the visibility of the EHR to patients of a variety of educational backgrounds meant that notes should avoid technical jargon, abbreviations (e.g. "SOB" for shortness of breath) or ambiguous language that might confuse or distress patients (Klein et al., 2016; Rahimian et al., 2021). Additionally,

person-first language, for example “patient with BMI 35” rather than “obese patient,” emphasizes the individual rather than their condition (Harris et al., 2022; Klein et al., 2016). Changes like this serve to humanize the documentation process and ensure patients feel respected as they read their notes.

In sensitive situations, using person-centered-person-first language—such as referring to a patient with substance abuse disorder as someone “in recovery” or “seeking support for substance use”—helps to foster trust It also reduces stigma and feelings of shame, which negatively impact patient engagement. (Healy et al., 2022; Himmelstein et al., 2022; Joy et al., 2016; Matthews & Zisman-Ilani, 2023). Use of the correct name and pronoun is additionally important in the context of OpenNotes (Himmelstein et al., 2022).

Promoting Transparency and Sharing of Information

The 21st Century Cures Act Final Rule further prevents “information blocking” with a few exceptions, notably the “preventing harm” exception, which helps to promote patient safety (The Office of the National Coordinator for Health Information Technology, 2020). Information blocking, or preventing medical information from being accessible to patients, is permitted when it will reasonably prevent “substantial physical, emotional, or psychological harm” to the patient (Assistant Secretary for Technology Policy). Depending on the circumstances, clinicians can prevent the note from being shared through the patient portal (Carlson et al., 2021; Goldstein et al., 2024; Klein et al., 2016). Under the privacy exception, patients may request that notes, test results, or other sensitive information not be released to the patient portal. If there are safety or privacy concerns, such as an abusive partner who may have access to the patient’s portal login information, it can be helpful to inform patients of this option (Boston Medical Center Domestic Violence Program, 2020), thus promoting safety and shared-decision making opportunities,

Shared Decision Making & Best Practices Related to Screening Based Learning

Shared Note-Writing and Shared Decision-Making

Shared note-writing provides an opportunity to incorporate patient voice into clinical documentation— promoting a communication model that values patient engagement, preferences, and participation in medical decisions (Nathan et al., 2016). Writing notes together fosters transparency, trust, and patient empowerment by ensuring that documentation reflects a collaborative understanding of the patient’s experiences, concerns, and goals.

When discussing sensitive topics such as IPV, clinicians should proactively discuss a plan for documentation with their patients (Health Partners on IPV and Exploitation, 2020). Shared note-writing might include asking the patient how they would like their experience described, summarizing key points together in real time, or reviewing the note at the end of the visit to ensure accuracy and alignment with the patient’s perspective. Using the patient’s own words by recording that “patient states” and minimizing jargon can further support comprehension and engagement when patients review their notes (Klein et al., 2016; Lam et al., 2023). To reinforce the collaborative documentation process, clinicians can turn the computer screen toward the patient while dictating or typing notes so they can see what is being written (Klein et al., 2016). Importantly, each of these potential approaches to incorporate shared-note writing, like turning the computer screen or reviewing the note together, are not requirements so much as opportunities that can be adapted to clinical context. In a setting where time constraints complicate clinicians’ ability to have an extensive discussion, elements of shared-note writing can be incorporated when

they are likely to have the most impact (Trabold, King et al. 2023), for example, when describing an incident of violence or when documenting safety plans.

When documenting IPV, best practices recommend limiting documentation to necessary, pertinent details rather than an in-depth narrative (Boston Medical Center Domestic Violence Program, 2020). To prevent overdocumentation, providers may find it helpful to ask themselves, "Is this clinically relevant? Is this the minimum information necessary to guide clinical care?" before including specific details in the note. When documenting physical findings, experts recommend including objective, detailed descriptions of any injuries and non-judgmental observations of the patient's appearance and behavior (Boston Medical Center Domestic Violence Program, 2020). Involving patients in the note-writing process by seeking their feedback further ensures that the documentation aligns with their experiences and perspectives.

Screening versus Inquiry

The level of patient involvement in shared decision-making and shared note-writing is generally a shift from a traditional screening model. Screening relies on focused questionnaires that are not adapted to individual patient needs, making it difficult to create the collaborative, empowering atmosphere necessary for shared note-writing. Often the screening questions are dichotomous answers (yes or no). Large-scale trials have shown that this type of screening alone does not necessarily improve survivors' quality of life or safety (Klevens et al., 2012; MacMillan et al., 2009; O'Doherty et al., 2015). Even though patients generally view clinic visits as a safe space to discuss their experiences, it is relatively rare for individuals who are experiencing IPV to voluntarily disclose this information (Phelan, 2007).

Some healthcare providers fear that asking about IPV may be interpreted as accusatory or intrusive, leading providers to avoid broaching the topic for fear of damaging their relationship (Tarzia et al., 2021). This hesitation contributes to routine screening questions on a variety of sensitive topics becoming "check-the-box" tasks rather than opportunities for meaningful discussion (Iverson et al., 2019). Unfortunately, these feelings of hesitation on the part of clinicians are often perceived by negatively by survivors, who in turn may be less comfortable sharing traumatic experiences (Rodríguez et al., 2001).

Inquiry-based learning aligns with shared decision-making by prioritizing open-ended, patient-centered discussions. Rather than using standardized questions, it encourages dialogue and allows patients to frame their experiences in ways that feel natural and safe (Lewis-O'Connor et al., 2019). When screening has been proven to be effective, it often closely resembles inquiry-based learning (US Preventive Services Task Force, 2018). This method is an active process that includes open-ended questions and dialogue, moving beyond the rigid question-and-answer format of traditional checklist screening. Instead of merely seeking disclosure, it aims to create an environment where patients feel comfortable sharing what they deem most important. For example, asking, "Have you had any life experiences that you feel have impacted your health? How do you feel this event affects you?" allows patients to disclose information on their own terms (Lewis-O'Connor et al., 2019). In contrast, a question like, "Have you experienced violence at home?" prescribes a narrow range of responses, which may discourage disclosure or fail to capture the full scope of a patient's experience.

In practice, clinicians can use an inquiry-based approach to create the collaborative, open atmosphere necessary for shared note-writing to be successful. When writing the note to document this encounter, a provider is better able to incorporate the patient's perspective and the

full scope of care needed, rather than relying on a limited, checkbox-style summary. This collaborative note-writing process reinforces the patient's autonomy by ensuring their voice is included in their clinical record. It also improves the clinician's understanding of the patient's unique context, leading to more personalized care and stronger engagement in the care process.

Challenges and Opportunities OpenNotes Can Address

Understanding Survivor's Hesitance: Building Trust

Embarrassment and shame are significant barriers to disclosing or sharing one's lived experience of IPV, and these emotions contribute to the reluctance many survivors feel about engaging in screening and intervention processes. Survivors often describe IPV as a "private matter" they do not feel comfortable discussing with their clinicians (Dichter et al., 2020). Moreover, some survivors perceive their clinician to be too busy to discuss IPV or believe that other health concerns should take precedence (Iverson et al., 2014). Additionally, past research has found that patients' concerns about documentation of IPV in medical records pose a barrier to disclosure (Dichter et al., 2020).

Shared Note-Writing Practices

Using shared note-writing practices can help to address these hesitancies by creating an environment where patients feel comfortable sharing their experiences and by ensuring patients are aware of what will be documented, as they will be available through OpenNotes. Inquiry-based discussions that prioritize patient engagement allow clinicians to document in ways that align with patients' perspectives, rather than imposing a prescriptive narrative. Clinicians can enhance transparency and trust by reviewing notes with patients, inviting input, and confirming that documentation accurately represents their concerns. This approach empowers patients to be active participants in their care while also reinforcing the clinician's role as a supportive partner.

Importantly, all clinicians should try to avoid language that patients may view as misaligned with their understanding of the encounter. Medical language used by clinicians to maintain objectivity could potentially, if inadvertently, cause patients to feel that their credibility is being questioned or that they are being judged (Park et al., 2021). For example, seeing statements like "patient insists" or "patient claims" might be interpreted as clinician doubting the patient's account (Park et al., 2021). The choices made in documentation are crucial in shaping patients' attitudes and future interactions with the healthcare system. A qualitative study of women's experiences in IPV-related encounters found that negative disclosure experiences led some patients to avoid future interactions with healthcare providers; on the other hand, positive disclosure experiences sometimes led to more positive healthcare attitudes (Liebschutz et al., 2008). By remaining cognizant of potential patient interpretations of clinic notes, healthcare clinicians have the chance to use OpenNotes as a valuable tool for affirming patients' experiences (Park et al., 2021).

Redefining Success

Clinicians may experience frustration or disappointment when survivors do not follow their recommendations, which can discourage continued engagement on the topic (Tarzia et al., 2021). Doctors interviewed in a study about management of IPV care were often distressed by their patients' decisions to stay in their relationships, feeling "powerless and demoralized," and many of them believed the best advice for patients experiencing abuse was to leave the relationship (Taft et al., 2004). Survivors' decision to stay with or leave an abusive partner is a

complicated one (Cluss et al., 2006), and research shows that the decision to stay or leave is independent of the level of violence the survivor is experiencing (Copp et al., 2015) and the numerous implications that leaving presents: housing, child care, retribution for example.

Redefining what constitutes a "successful outcome" may help to reduce clinician fatigue and frustration (Gerbert et al., 1999). Instead of seeking a disclosure followed by the patient's leaving the relationship, inquiry-based learning seeks to encourage patients to talk about their goals for their relationship, their safety, and themselves (Lewis-O'Connor et al., 2019). Information included in the note should be informed by these goals, ensuring that documentation does not inadvertently discourage future disclosures and discussions. For example, if an abusive partner accesses a survivor's electronic health records, the discovery of IPV disclosure might result in escalated violence and reduced health care access (Shum et al., 2023). During shared note-writing, providers and patients should be aware of the option to keep some notes private. One qualitative study found that some patients will explicitly request that notes be "unshared" with the patient portal, for fear that their abusive partners might be able to access the record. Unfortunately, it also found that some ED clinic notes for IPV-related care were made visible in the patient's health portal even though the patients had explicitly expressed concerns about their abusive partner's ability to access their EHR (Shum et al., 2023).

"Successful" screening for IPV should not be defined narrowly as resulting in a disclosure, referral, or escape plan. Instead, a successful screening should focus on creating an open, supportive dialogue where patients feel heard, validated, and empowered to make medical decisions at their own pace (Lewis-O'Connor et al., 2019). By redefining success as fostering a trusting, long-term provider-patient relationship rather than securing an immediate disclosure, clinicians can create an environment where survivors feel safe returning for care when they are ready, without shame or guilt.

Understanding what Happens Next

Providers are not sure what happens next when there is reason to believe a patient is being abused, however the patient denies. This uncertainty is exacerbated in situations where clinicians have little or no training about IPV disclosure and treatment. They may feel ill-equipped to discuss IPV further due to actual or perceived lack of support services (Gutmanis et al., 2007; MacMillan et al., 2009). A clinician's uncertainty is often described as a "Pandora's Box," a metaphor which appears regularly in IPV literature, describing the fear "physicians" might have of a disclosure resulting in a series of uncontrollable or unforeseen consequences, like legal complexities or escalation of abuse (McCauley et al., 1998; Petersen et al., 2003; Sugg & Inui, 1992; te Kolstee et al., 2004).

Clinicians require organizational support to be able to ask about IPV and counsel appropriately. Many clinicians report organization-wide barriers that prevent them from asking or connecting survivors to support services (Minsky-Kelly et al., 2005; Trabold et al., 2023). Additionally, lack of coordination and communication between organizational support—like social services—and clinicians sometimes leads providers to believe that IPV is an issue better left to specialists or social workers, rather than something they can do something about. (Tarzia et al., 2021), a perspective that is misaligned with the goals of screening. Further emphasizing the disconnect between support services and clinicians, a chart review study of IPV-related encounters within a single health system that had recently implemented OpenNotes found that EHR safety discussions were documented in 60% of adult EHR encounters, with 99% of the discussions taking place with social workers (Shum et al., 2023). While clinicians often want to

'fix' the situation or 'prescribe' a plan of care in fact, patients are often looking for an empathetic ear, are seeking validation and information on services that are available.

To achieve the goals of shared decision-making and inquiry-based learning, health systems need to: ensure that all clinicians have the information of resources within the system and within the community and are able to create the trust-building environment necessary to write a shared-note following an IPV disclosure.. In the absence of clearly defined systemic resources, providing the National Domestic Violence Hotline (1-800-799-SAFE) to patients could be an effective way to provide support.

Proxy Access

In the era of OpenNotes and in the context of medical record proxy access there are opportunities to address safety. While proxy access has made care coordination less complicated for patients that have caregivers making important health decisions on their behalf, including the elderly, disabled, and people that are incapacitated (Latulipe et al., 2018) for patients experiencing intimate partner violence, proxy access can give abusive partners significant control over their partner's medical care (Manning, 2021). Proxy access may initially be obtained for well-intended purposes or, in rare cases, could be forcibly obtained by abusive partners (Manning, 2021). The process for obtaining proxy access typically requires the completion of an authorization form; however, policies vary by institution and may not be straightforward (DesRoches et al., 2020; MyChart, 2025).

Proxy access often affords access to upcoming appointments, lab results, and clinical notes. Partners can take advantage of the upcoming appointments list to coerce the patient to cancel their visits or justify their presence at appointments when the patient intended to attend alone (Manning, 2021). Clinical notes of past visits can be visible to proxy users, which may contain sensitive information (IPV disclosure, reproductive health choices, safety concerns, mental health conditions, etc.) as well as test results; thus, clinician awareness and education on this issue is imperative (Goldstein et al., 2024). Discovery of information related to IPV by abusive partners poses a potential risk to survivors, who may face retaliation from their partner, ranging from physical violence to restriction of future access to health services (Randell et al., 2022; Shum et al., 2023).

The literature is sparse on evidence linking actual cases of IPV disclosure discovery to further abuse by a partner, however anecdotal evidence is known. If a survivor is aware that their partner has proxy access, they may be less willing to disclose their experience with providers. Asking patients if anyone has proxy access to their EHR could be a best practice, promoting open discussion and avoiding potential adverse results of disclosure. Ultimately, this could delay care and access to resources, which could contribute to the long-term sequalae of adverse effects on health and well-being (Manning, 2021).

One opportunity in regard to proxy access for either concern for IPV or a disclosure or a sensitive matter, might entail asking about proxy access. Fo example during a healthcare visit, when alone with the patient the clinician might ask:" Do you have any concerns about who has access to your medical record?" "Would you prefer I make this a sensitive note that will not be seen on your portal?" "Do you have any questions about proxy access?" Healthcare systems should have information for patients with frequently asked questions related to proxy access.

There is likely a wide variability on policies and procedures related to the EHR and OpenNotes. A search of the literature did not produce a standard of practice in this regard. For

example, some healthcare systems implement blanket note-blocking for certain types of notes, like those from social work or psychiatry departments (Schust et al., 2022). One case study reported an instance where the EHR automatically populated a newborn's admission note with the mother's safety plan, which was then available to the newborn's father who was the abuser (Lamar et al., 2023). The variation in EHR protocols across different health systems requires all clinicians to be aware of the institutional policies affecting their note-writing and be proactive in addressing the downstream effects, like unintended access.

Patient's Rights: Correcting Inaccuracies in Their Medical Record

Since the enactment of a 2001 amendment to HIPPA, patients have had the right to request changes to their medical records (U.S. Department of Health and Human Services, 2001). As more patients report that reading their clinic notes is an important part of their healthcare, clinicians may worry that disagreements over the note content may erode patient trust in providers (Bell et al., 2017; Fernandez et al., 2021). This concern stems from a considerable number of patients who report finding mistakes when reviewing their notes (Bell et al., 2020). These errors range from minor to severe inaccuracies, and they may mischaracterize the patient's experience, include information the patient presumed was discussed confidentially, or simply inaccurately portray health information (Bell et al., 2020). Disagreements over note content can harm and reduce trust between the patient and their clinicians. Patients may feel as though errors, omissions, or perceived distortions are representative of a provider's lack of care or attention (Fernandez et al., 2021). In discussions of IPV, patients may feel upset if they feel that documentation is inaccurate, judgmental, or unsupportive. Patients can vary in their preferences for their visit notes: some may not want their disclosure documented at all while others may prefer a full account.

Shared note-writing discussions during the clinic visit are a way to proactively discuss documentation and resolve disagreements before the patient feels the need to pursue further action. In the worst-case scenario, notes can be amended if a patient identifies an error (Klein et al., 2016; Lam et al., 2023). Most patients have described the increased accessibility to their clinical notes as overwhelmingly positive, resulting in an improved relationship and increased trust with their provider (Blease et al., 2020).

Legal Implications

Clinicians must balance the need for including sensitive information—including ensuring continuity with future clinicians, connection to resources, supporting a later investigation, and improving tracking for epidemiological research—with concerns about including sensitive details—including proxy access, staff bias against the patient, patient shame, or the potential for the information to be used against the patient later (Greenbaum et al., 2021). These documentation choices can have important consequences, as patients often use clinic notes documenting IPV-related care to support their claims for protective orders (such as restraining orders), housing, and health insurance (Boston Medical Center Domestic Violence Program, 2020; Isaac & Enos, 2001). When medical records are used in court, they can increase the chance that the survivor will win their case by approximately 12% (Peterson & Bialo-Padin, 2012). In many legal jurisdictions, statements made outside of court about medical diagnosis or treatment are considered exceptions to the "hearsay rule" that typically does not permit out of court statements to be entered as evidence (The Committee on the Judiciary of the House of Representatives, 2018). Therefore, even if medical records are requested as part of a legal

proceeding, a clinician may not need to testify in court if the documentation is complete and comprehensive (Downing, 2020; Isaac & Enos, 2001).

Guidelines for documenting IPV include describing the providers level of concern without specific detail (Greenbaum et al., 2021). Additionally, guidelines suggest avoiding words like "noncompliant," "refused," "alleged," and "claimed" as these words could be viewed as delegitimizing the patient's perspective. Use of the patient's voice by quoting statements made by the patient can accurately reflect the patient's words made close in time to potential IPV and provide credibility in court. Guidelines suggest avoiding conclusory language about the situation, instead recording facts based upon physical examination (photographs of injuries and documentation of location of injuries is helpful) and patient statements (Isaac & Enos, 2001). Ultimately, clinicians cannot guarantee who may access confidential information. It is imperative that patients are aware of this limitation so they can provide informed decisions about what information is included in their medical record (Greenbaum et al., 2021). In the era of OpenNotes, guidelines that explicitly and proactively address the advantages of detailed documentation and the patient's personal considerations require our due diligence to ensure we prevent harm.

Clinical Guidelines

In Table 1 we highlight some key objectives when documenting IPV in the EHR. While more research will be needed to understand the feasibility and acceptability of these recommendations, some guidelines are informed by subject matter experts and survivors' narratives.

Table 1.
Clinical Guidelines

Objectives	Recommendation
Optimizing safety	• If IPV related information is discussed, review with patient if there are any individuals with proxy access to their patient portal • Ask a patient if they have any concerns for unintended access to their patient portal • If there are safety or privacy concerns, give patients the option of blocking the note from being shared with the patient portal • Stay up to date with your health system's resources for survivors, or know referral options
Optimizing transparency	• Involve patients in the note-writing process; can include turning the computer screen toward them while writing • Only write what has been discussed during the visit and minimal details based on a need-to-know basis • Document only clinically relevant information • If a patient notes an error in their note, follow your health system's protocol to request amendment (involving patients in note-writing may decrease errors documented in the HER
Optimizing trust	• Encourage shared decision-making through open-ended questions and discussion • Avoid checklist questions with dichotomous answers • Use person-centered-person-first language in notes • Validate patient concerns and experiences • Avoid stigmatizing language • If a discussion is cut short by time constraints, suggest a continuation of the conversation in a follow-up visit or telehealth encounter.

Table 1 describes how safety, transparency and trust can be supported by recommendations for best practices.

There are inherent limitations of a narrative review such as potential selection bias, search strategy limitations, and lack of a systematic critical appraisal of literature.

Conclusion

In summary, it should be a standard of practice to remind patients why it is important not to share their patient portal credentials with others (Carlson et al., 2021; Ip et al., 2021). In the case of proxy access, patients need to be aware and educated on what their proxy will have access to and the options available to hide certain information from the patient portal. To encourage this, clinical staff can offer patients information that includes the benefits and considerations when thinking about their health care proxy and how to change their proxies should their situation change (Carlson et al., 2021; DesRoches et al., 2020; Wolff et al., 2016). Additionally, patients may not know or remember who has access to their medical record via proxy access, thus it is important to have policies in place to inquire annually, at a minimum, if their current health care proxy is still their choice (Goldstein et al., 2024). When necessary, clinicians can prevent the note from being shared through the patient portal in circumstances where the "Preventing Harm" exception applies (Carlson et al., 2021; Goldstein et al., 2024; Klein et al., 2016)

Clinicians can use trauma-informed principles when working with patients affected by IPV or at risk. With OpenNotes, clinicians should avoid stigmatizing language and both providers and patients should weigh proxy access and sensitive notes. Nurses play a critical role in shaping documentation practices as they often act as the main support for survivors. More research is needed on OpenNotes' effects for survivors, policy impacts on care, and development of best-practice policies.

List of Abbreviations

IPV: Intimate partner violence

TIC: Trauma-informed care

EHR: Electronic health record

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Journal of the Academy of Forensic Nursing

Practice Perspectives

Strength in the City: Assets-Based Violence and Trauma Assessment by Nurses in Urban Environments

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Abstract

Forensic nurses operating in the urban environment frequently find themselves at the intersection of trauma and healing, often providing care in communities disproportionately affected by structural violence, poverty, and systemic inequities. While conventional trauma assessments tend to focus on pathology and risk, this article proposes an *assets-based approach* that centers resilience, cultural knowledge, and community strength. Drawing from frameworks such as Trauma-Informed Care, Strengths-Based Nursing, Resilience Theory, and the Community Cultural Wealth Model, this manuscript outlines how nurses can incorporate patient-identified coping strategies, relational supports, and community resources into violence and trauma assessments. Through illustrative case studies, ranging from school-based care to street outreach, this article demonstrates how assets-based nursing practice affirms patient agency, builds trust, and improves health outcomes. The approach aligns with anti-oppressive and equity-focused principles, reframing trauma narratives through a lens of possibility rather than pathology. Benefits of this model include enhanced therapeutic alliance and culturally responsive care, while limitations include time constraints, institutional barriers, and the potential romanticization of resilience without structural reform. The article concludes with actionable strategies for embedding this model across clinical settings, nursing education, and health policy, advocating for systemic changes that empower nurses to address trauma with cultural humility and justice-

informed care. By shifting the lens from “what is wrong” to “what is strong,” nurses can help transform urban health systems into spaces of recovery and empowerment.

Keywords: assets-based trauma assessment, urban nursing, trauma-informed care, community resilience, health equity

Strength in the City: Assets-Based Violence and Trauma Assessment by Nurses in Urban Environments

Urban environments are dynamic ecosystems that host diverse populations, rich cultural assets, and vibrant community networks. Yet, they also bear a disproportionate burden of violence and trauma exposure. Urban areas, especially those shaped by historical disinvestment and systemic inequality, defined as the entrenched disparities in access to resources, power, and opportunity resulting from discriminatory policies and institutional practices, are uniquely affected by the intersection of community and structural violence. These forms of violence manifest through social and institutional systems that systematically harm or disadvantage certain groups by restricting access to health, safety, and overall well-being (Armstead et al., 2021; Ivey et al., 2025; National Academies of Sciences, 2017; Solomon et al., 2019). These include, but are not limited to, gun violence, domestic and intimate partner violence, housing instability, systemic racism, and chronic poverty (National Academies of Sciences, Engineering, and Medicine, National Academy of Medicine, Committee on the Future of Nursing 2020–2030, 2021; U.S. Department of Health and Human Services [USDHHS], n.d.a). These layered traumas often accumulate across generations, forming what researchers refer to as *social determinants of trauma* (Mikhail et al., 2018).

In the face of such adversity, forensic nurses are essential providers in trauma-informed care delivery. They operate across a spectrum of settings, from emergency departments and urgent care to school clinics, primary care practices, shelters, and community outreach programs. In each of these spaces, forensic nurses provide not only clinical care but also emotional support, resource coordination, and advocacy. Their proximity to individuals and families during critical moments of vulnerability positions them to play a transformative role in healing and prevention (Goddard et al., 2022).

Despite this potential, trauma assessments conducted by forensic nurses, and within healthcare more broadly, often adopt a deficit-oriented lens. Traditional trauma assessments focus heavily on identifying injuries, psychological distress, or risk factors such as prior abuse, mental health conditions, or social instability. While these are important data points, the exclusive focus on deficits can inadvertently pathologize individuals and communities, reinforcing cycles of stigma and marginalization (Substance Abuse and Mental Health Services Administration [SAMHSA], 2023). More concerningly, these assessments often fail to capture protective factors and community strengths that contribute to resilience and recovery, concepts that, as defined by SAMHSA (2019), encompass the capacity of individuals and communities to adapt positively in the face of adversity, maintain or regain well-being, and engage in a continuous process of change toward improved health, self-direction, and social connectedness. By overlooking these dynamic dimensions of strength, many assessment models risk presenting an incomplete understanding of community health, one that emphasizes deficits rather than the inherent capacities that foster healing, empowerment, and sustained wellness.

Rather than viewing people solely through the lens of what has gone wrong, an assets-based approach seeks to identify what is strong; specifically, highlighting individual, familial, and community strengths that foster healing, resistance, and resilience in the face of violence and adversity. This approach aligns with the principles of trauma-informed care (TIC) and equity-centered health frameworks, encouraging nurses to recognize the full complexity of urban trauma while also honoring the agency, creativity, and strength of those who survive and thrive in its wake (SAMHSA, 2017). By shifting the paradigm from *pathology* to *possibility*, this article advocates for forensic nursing practice that not only treats trauma but helps build the conditions for lasting community well-being. Subsequently, the purpose of this article is to describe the integration of assets-based trauma assessment into forensic nursing practice in urban environments.

Theoretical and Conceptual Foundations

Assets-based assessment represents a paradigm shift in health and social care that emphasizes the identification and mobilization of individual, familial, and community strengths rather than focusing solely on deficits or pathology. In contrast to traditional models that prioritize risks, symptoms, and dysfunction, an assets-based approach seeks to uncover protective factors such as emotional coping mechanisms, supportive relationships, spiritual or faith-based practices, and cultural knowledge systems that individuals use to survive and thrive in the face of adversity (Martin-Kerry et al., 2023).

Asset-Based Violence and Trauma Assessment Framework Conceptual Model and Application

Violence-related asset-based assessment in public health emphasizes identifying strengths, capacities, and resources within individuals, families, and communities that can mitigate the impacts of violence and trauma (Martin-Kerry et al., 2023). Unlike deficit-based approaches that focus primarily on risk and pathology, this model seeks to leverage existing assets, such as social support, coping skills, cultural resilience, and institutional resources—to promote recovery and empowerment (Figure 1).

Uses of the Concept

Within forensic and trauma-informed nursing, an asset-based framework broadens assessment beyond symptomatology. It is used to:

1. Identify protective and resilience factors that buffer trauma.
2. Guide interventions toward empowerment and self-efficacy.
3. Foster collaboration between healthcare and community partners to enhance survivors' recovery capital.

This aligns with trauma-informed principles emphasizing safety, empowerment, and collaboration.

Defining Attributes

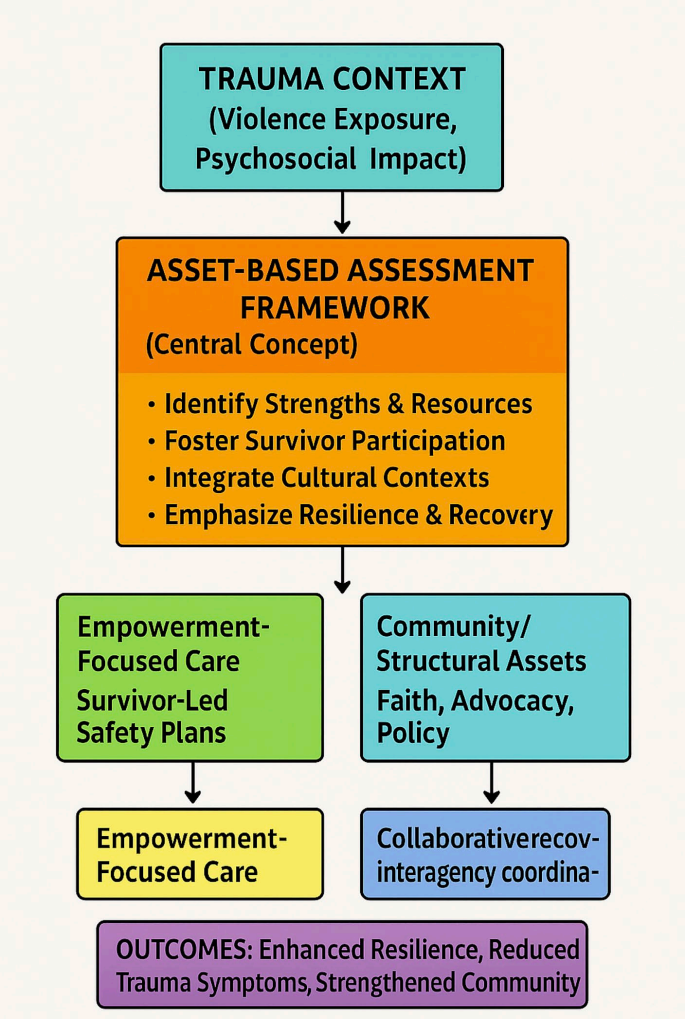
Drawing from Martin-Kerry et al. (2023), defining attributes of asset-based assessment include:

- **Strength orientation:** Emphasis on capacities rather than deficits.

- **Participatory engagement:** Collaboration between clinician and survivor to co-identify strengths.
- **Contextual sensitivity:** Recognition of cultural, social, and environmental determinants.
- **Iterative feedback:** Continuous adaptation as new strengths are discovered.

Figure 1

Asset-Based Violence and Trauma Assessment Framework



Note. Adapted from *"Characterizing asset-based studies in public health: Development of a framework,"* by J. Martin-Kerry et al., 2023, *Health Promotion International, 38*(2), Article daad015 (https://doi.org/10.1093/heapro/daad015).

Model Case

A forensic nurse evaluating an IPV survivor conducts not only lethality and risk screening (Campbell et al., 2008; Johns Hopkins School of Nursing, 2025) but also identifies assets such as strong faith community support and access to advocacy networks. The nurse integrates these strengths into the safety plan, enabling survivor-led decision-making and resilience enhancement.

Antecedents and Consequences

Antecedents include trauma exposure, community disempowerment, and institutional mistrust. *Consequences* include improved engagement in care, reduced retraumatization, and strengthened social recovery pathways.

Empirical Referents

Empirical measures of asset-based approaches include validated tools assessing resilience (e.g., Connor-Davidson Resilience Scale; Riopel, 2019) and community connectedness, which serve as indicators of the concept's operationalization.

An asset-based violence and trauma assessment framework aligns closely with several guiding theories and models relevant to trauma-informed, equity-oriented nursing practice. SAMHSA outlines six core principles of TIC: *safety, trustworthiness, peer support, collaboration, empowerment,* and *cultural, historical, and gender issues*, that align seamlessly with the assets-based approach. Forensic nurses applying TIC are called to shift from asking *What's wrong with you?* to *What happened to you?* and, further still, to *What strengths have helped you endure?* (SAMHSA, 2023).

Strengths-Based Nursing (SBN), developed by Laurie Gottlieb (2014), reinforces this perspective by positioning nurses as facilitators of capacity-building. SBN emphasizes person-centered care, self-efficacy, and the empowerment of patients to be co-participants of their healing processes. In urban settings marked by chronic exposure to violence, SBN encourages forensic nurses to recognize and amplify the skills and wisdom that all persons and communities already possess, particularly those shaped by lived experience and survival.

The **Resilience Theory** further supports this model by framing resilience not as the absence of trauma but as the capacity to adapt and grow in response to it. In the context of urban violence and trauma, resilience can be found in community activism, intergenerational caregiving networks, youth mentorship programs, and cultural storytelling traditions; all of which are integral to recovery and long-term wellness (Ungar, 2013). This theory emphasizes both individual adaptability and the availability of supportive ecological systems.

Adding an explicitly racial and cultural lens, the **Community Cultural Wealth (CCW) Framework**, originally developed by Tara Yosso (2005) and expanded upon in nursing and public health literature, provides a structure for identifying the non-dominant forms of knowledge, resistance, and cultural capital that marginalized communities use to survive oppressive systems. Yosso (2005) identifies forms of wealth such as navigational, linguistic, familial, resistant, and aspirational capital—all of which can be assessed and honored by nurses during trauma evaluations. For example, a person's connection to a mutual aid network or involvement in a cultural advocacy group may serve as both a trauma response and a healing pathway. This integrative framework situates assets-based trauma assessment within a larger commitment to health equity, anti-oppressive practice, and social justice nursing.

In urban environments, where patients may experience structural racism, housing insecurity, and policing-related trauma (Centers for Disease Control Prevention [CDC], 2024; Hirschtick et al., 2019; USDHHS, n.d.b.), forensic nurses have a moral and professional responsibility to adopt approaches that validate lived experience while avoiding pathologization. Assets-based assessments align with anti-oppressive practice (AOP) by resisting deficit-framed narratives and creating space for dignity, cultural affirmation, and patient voice. Moreover, these assessments serve as practical expressions of social justice nursing, reinforcing that healing is not only clinical but social, relational, and contextual (Buettner-Schmidt & Lobo, 2012).

Understanding Violence and Trauma in Urban Settings

Violence and trauma in urban environments are not random or evenly distributed phenomena; they are deeply embedded in structural inequities that disproportionately affect marginalized populations. The epidemiology of urban violence consistently reveals stark disparities along racial, gender, and economic lines. Black and Latin*x* individuals in urban settings experience higher rates of gun violence, police-related harm, and community trauma compared to their white counterparts (Hirschtick et al., 2019; Semenza & Kravitz-Wirtz, 2024). Women, particularly women of color and LGBTQ+ individuals, are at increased risk of intimate partner violence and sexual assault, often exacerbated by economic instability and systemic barriers to protection (Hulley et al., 2023). Youth and low-income residents are similarly overrepresented in exposure to both direct violence and its indirect consequences, such as trauma-related mental health disorders (Gaylord-Harden, 2018).

Moreover, the intersection of early adversity and community violence amplifies vulnerability. Adverse Childhood Experiences (ACEs), including exposure to household violence, neglect, parental substance use, or community-level trauma, serve as cumulative risk factors that shape developmental trajectories and increase the likelihood of both victimization and perpetration of violence in later life. High ACE scores correlate strongly with dysregulated stress responses, impaired attachment, and behavioral maladaptation, reinforcing cycles of trauma that extend across generations (Felitti et al., 1998; Merrick et al., 2019). Recognizing the influence of ACEs thus underscores the need for trauma-informed, resilience-oriented public health interventions that disrupt these pathways and promote recovery capital within high-risk urban populations.

Integrating an understanding of ACEs into violence prevention and trauma intervention strategies requires a paradigm shift from deficit-focused models toward frameworks that recognize and cultivate resilience (Clements et al., 2024). This is where the **asset-based assessment framework** becomes essential. Rather than centering solely on the sequelae of trauma, an asset-based approach identifies protective factors, such as supportive caregivers, community cohesion, spiritual grounding, and access to culturally responsive services, that can moderate the effects of early adversity. By mapping these strengths alongside risk indicators, clinicians and public health professionals can better illuminate the complex interplay between vulnerability and resilience. As Martin-Kerry et al. (2023) emphasize, asset-based models operationalize the concept of *what works well in communities*, transforming assessments from passive data collection tools into active instruments for empowerment and healing. In urban contexts marked by concentrated disadvantage and intergenerational trauma, such an approach provides a pathway for trauma-informed nursing practice to not only recognize the enduring imprint of ACEs but to mobilize the inherent assets that foster recovery, self-efficacy, and long-term well-being.

Urban trauma is multifaceted, often rooted in multiple, intersecting types of violence. Community violence, including shootings, assaults, and gang-related activity, often coexists with domestic and intimate partner violence, especially in settings with limited housing and support services. Police violence and criminalization, particularly of Black and Brown communities, are additional sources of trauma, leading to fear, hypervigilance, and distrust of

systems that should ensure safety (Buchanan et al., 2021). Furthermore, the long-term effects of intergenerational trauma, passed down through families and communities due to historical oppression, forced displacement, and systemic racism, continue to shape how individuals respond to new or ongoing traumatic events (Hankerson et al., 2022).

Environmental and infrastructural features of urban living contribute to the persistence of trauma. Overcrowded housing, inadequate sanitation, neighborhood segregation, and over-policing compound the risk of exposure to violence while limiting opportunities for recovery. For instance, children growing up in communities with limited access to green space, community services, or trauma-informed schools may experience repeated threats to their physical and emotional well-being with few protective buffers (Bikomeye et. al, 2021). In this context, trauma-informed schools are not simply educational institutions with counseling services; rather, they represent systems that acknowledge and respond to the cumulative trauma that students, staff, and communities experience due to structural inequities, racialized violence, and environmental stressors. Specifically, Bikomeye et al. (2021) imply that trauma-informed schools:

1. **Recognize the prevalence of trauma**: understanding that children and educators alike may live with chronic exposure to violence, poverty, racism, and environmental instability.
2. **Integrate safety and belonging**: ensuring that school environments are physically and emotionally safe, predictable, and supportive.
3. **Promote resilience and equity**: through access to green spaces, social supports, and policies that counteract structural determinants of stress and health disparities.
4. **Engage in community healing**: seeing schools as hubs for restorative, culturally responsive, and strength-based interventions that help buffer the effects of adversity.

Similarly, families navigating housing instability, eviction threats, or shelter conditions are at higher risk of chronic stress and exposure to abuse (USDHHS, n.d.b.).

These intersecting conditions give rise to cumulative trauma and chronic toxic stress—physiological and psychological responses to persistent adversity without adequate support or safety. Toxic stress is associated with disrupted neurodevelopment, increased risk for substance use, cardiovascular disease, and mood disorders (Center on the Developing Child at Harvard University, 2025). Importantly, urban residents often experience multiple, layered exposures to trauma over their lifespan, resulting in complex clinical presentations that challenge conventional, pathology-driven models of care (Marris, 2024). For forensic nurses working in these settings, recognizing the contextual and cumulative nature of urban trauma is essential to providing empathetic, effective, and equitable care.

Asset-Based Violence and Trauma Assessment in Practice

Forensic nurses are on the front lines of care across diverse settings, uniquely positioned to identify and respond to trauma in urban environments. Whether in emergency departments, primary care clinics, school-based health centers, public health home visits, or domestic violence shelters, forensic nurses often serve as the first point of contact for individuals who have experienced or are at risk of experiencing violence. Through routine screenings, physical assessments, and therapeutic conversations, forensic nurses have powerful opportunities to shift the lens of trauma assessment; from one focused solely on injury, risk, and dysfunction to one that recognizes the strengths, assets, and resilience of the individuals and

communities they serve (National Academies of Sciences, Engineering, and Medicine, National Academy of Medicine, & Committee on the Future of Nursing 2020-2030, 2021).

An **assets-based approach** to trauma assessment invites nurses to ask not only "What happened to you?" but also "What has helped you get through it?" This dual lens enables clinicians to uncover a range of protective factors that are often invisible in conventional assessments. At the **individual level**, assets may include personal coping strategies such as journaling, prayer, art, physical activity, cultural rituals, or language rooted in ancestral healing traditions. Patients may also draw strength from previous experiences of resilience—times they overcame hardship, reached out for support, or helped others survive (SAMHSA, 2014a).

At the **relational level**, forensic nurses should assess for supportive networks that buffer against trauma. This can include family members, close friends, trusted mentors, chosen family, or community leaders. In many urban communities, informal support systems such as neighborhood elders, youth mentors, or peer counselors may be more impactful than formal services. Recognizing these relational ties as clinical assets can promote deeper engagement, reduce isolation, and inform collaborative safety planning (SAMHSA, 2023).

Finally, at the **community and social level**, forensic nurses should explore broader structural assets that promote healing. Urban environments, despite their challenges, are rich in cultural and social resources—from faith-based organizations, community gardens, and harm reduction programs to spaces like barbershops, salons, and cultural centers that function as hubs of care, conversation, and trust (CDC, 2025). Mapping these community supports into trauma assessments can provide patients with realistic and familiar pathways to recovery.

Trauma narratives and storytelling allow individuals to define their experiences on their own terms, which can be both therapeutic and empowering. These narratives also offer valuable insight into how individuals interpret their trauma and recovery (Center for Trauma and Embodiment, 2025). Additionally, collaborative safety and recovery planning that includes the patient's identified assets ensures that the care plan is both culturally congruent and sustainable. By recognizing and documenting these multilevel assets, forensic nurses become co-creators in trauma recovery, rather than sole providers of care. This shift not only enhances therapeutic alliance and patient outcomes but also helps reframe urban trauma narratives to include resistance, healing, and collective strength.

Illustrative Case Examples

Case 1: Forensic Nurse Consultation Following Alleged Sexual Assault Disclosure

Tiana, a 15-year-old student at a public high school in a densely populated urban neighborhood, was referred to the school nurse after experiencing frequent headaches, panic attacks, and declining academic performance. Her teacher had noted increased irritability, emotional withdrawal, and signs of distress. Initially hesitant to share, Tiana eventually confided in a trusted staff member that she had experienced an incident involving a fellow student—a well-known athlete at the school. While she did not explicitly define the event as sexual assault, her account raised significant concern, prompting a forensic nurse consultation to ensure a trauma-informed and coordinated response.

Rather than relying solely on a symptom-based or deficit-focused assessment, the forensic nurse partnered with the school nurse assigned to the district to conduct a collaborative, asset-

oriented community and school assessment. Together, they identified individual, interpersonal, and community strengths that could serve as protective factors in Tiana's recovery. The school nurse contributed her expertise in community asset mapping, helping the team recognize available neighborhood supports such as youth mentorship programs, accessible family health services, and community centers that hosted safe, structured activities for adolescents.

In a trauma-informed conversation, the forensic nurse invited Tiana into the process, asking open-ended questions such as, *What helps you feel supported when things are difficult?* and *What spaces in your community help you feel most safe or understood?* This inclusive approach positioned Tiana not as a passive recipient of care, but as an active participant in her own healing plan.

Tiana shared that her older cousin, a mentor in a local after-school program, had been a consistent source of support. She also described her passion for spoken-word poetry, which she used to process emotional pain and connect with peers. Building on these strengths, the interprofessional team, which included the school nurse, the school counselor, and the forensic nurse, worked collaboratively to create a comprehensive plan that integrated both clinical and community assets.

The school nurse facilitated a connection between the school and a local youth arts collective offering expressive arts sessions focused on empowerment and healing. She also coordinated with a community-based violence prevention coalition to ensure ongoing mentorship and advocacy opportunities for Tiana and her peers. Simultaneously, the forensic nurse worked closely with the school's trauma-informed counselor to develop a safe peer support group and ensure that Tiana's experience was met with sensitivity and empowerment rather than stigma or retraumatization.

As Tiana engaged in these supportive spaces, she began using her poetry as a platform for healing and community awareness, sharing performances that reflected themes of resilience and justice. The collaboration between the forensic and school nurses exemplified how integrating asset-based assessment, youth participation, and community resource mobilization can transform crisis response into community resilience building.

Ultimately, this case underscores how trauma-informed school systems, when grounded in public health principles and interprofessional collaboration, can shift from a reactive posture to one of empowerment, honoring the voices of youth, fostering connection, and cultivating pathways for long-term recovery and advocacy.

Case 2: Public Health Nurse and Forensic Nurse Collaboration in Intimate Partner Violence Case

Amina, a 42-year-old Somali immigrant and mother of three, was referred to a public health nurse following a hospital visit for injuries consistent with intimate partner violence (IPV). Although physically stable, her presentation raised concerns about ongoing abuse and cultural barriers to seeking help. The complexity of her situation, including linguistic, spiritual, and familial considerations, prompted the public health nurse to request a joint consultation with a forensic nurse specializing in trauma-informed and culturally responsive care**.**

In a deficit-based model, Amina's care might have been confined to medical documentation, safety planning, and referral to a shelter—approaches that, while important, can inadvertently pathologize survivors and overlook cultural assets. Instead, the public health and

forensic nurses collaborated to deliver an assets-based, family-inclusive response grounded in Amina's strengths and community context.

During their joint visit, the forensic nurse initiated trust-building through culturally sensitive inquiry, asking, *Who helps you feel supported during difficult times?* and *What keeps your family strong when challenges arise?* Amina identified her faith, mosque community, and traditional healing practices as vital sources of resilience. She also expressed fears of being misunderstood or judged by community leaders and of her children being stigmatized if her situation became public.

Recognizing the importance of intergenerational healing, the public health nurse conducted a family-centered assessment to explore how the children were experiencing the disruption at home and to identify protective factors. Rather than involving the children in adult disclosure processes, the nurse engaged them through age-appropriate conversation and observation within a trauma-informed framework, acknowledging their needs without exposing them to retraumatizing details.

The assessment revealed that Amina's eldest daughter (age 16) often cared for her younger siblings and sought refuge in school and community youth activities when home life felt unstable. The public health nurse, drawing on her knowledge of community assets, identified a local youth mentorship program affiliated with the mosque that supported girls from East African backgrounds. With Amina's consent, her daughter was connected to a mentor who could provide emotional support, social connection, and leadership development opportunities. Meanwhile, the two younger children were referred to a school-based counselor trained in trauma-informed care to help them process fear and anxiety through play and storytelling.

The forensic nurse, in collaboration with Amina, integrated these family supports into a holistic trauma recovery plan that respected Amina's cultural values. This plan included connecting the family with a community liaison familiar with Somali cultural norms, ensuring safety planning incorporated spiritual practices such as prayer and community supplication. The public health nurse also facilitated access to a faith-sensitive parenting group, helping Amina strengthen parent-child communication in a way that promoted safety and emotional security for all three children.

As Amina's sense of safety and empowerment grew, she gradually resumed her role as a caregiver and community mentor. Drawing on her lived experience, she began leading small women's circles at her mosque, focusing on healthy relationships and nonviolent communication within cultural and faith-based frameworks. Her children, now engaged in community youth programs and peer support activities, mirrored her resilience, demonstrating that trauma-informed interventions can ripple across generations when families are supported as cohesive systems of strength.

Case Study 3: Street Outreach Nurse and Forensic Nurse Collaboration with Gun Violence Survivor

Darnell, a 27-year-old man, was recovering from a gunshot wound when a street outreach nurse encountered him during a mobile clinic visit in his neighborhood. His medical record documented multiple missed appointments and noted possible gang involvement—details that, in a deficit-based model, might have led to stigmatizing labels such as *noncompliant* or *high-risk.* These characterizations risked obscuring Darnell's resilience and the contextual realities of his

environment. Recognizing these complexities, the street outreach nurse partnered with a forensic nurse to conduct a holistic, trauma-informed, and asset-based assessment.

Together, the nurses approached Darnell with empathy and respect, centering his voice in the process. The forensic nurse asked open-ended, affirming questions such as, *Who has helped you navigate your healing?* and *What matters most to you as you move forward?* Darnell revealed that he had been working to disengage from street life, volunteering at a local recreation center where he mentored neighborhood children. He also spoke about reconnecting with a former high school coach who encouraged him to complete his GED and pursue training in community health work.

Recognizing the potential ripple effects of Darnell's mentorship and his existing ties to the recreation center, the public health nurse was invited into the care collaboration. Drawing on her expertise in community assessment and violence prevention resources, she identified a citywide coalition that linked hospital-based violence intervention programs with youth engagement initiatives. Through this partnership, Darnell was connected to a violence interruption program staffed by credible messengers—specifically, community leaders with lived experience who focus on preventing retaliation, supporting survivors, and mentoring at-risk youth.

To expand this community-based support, the public health nurse conducted a neighborhood asset map, identifying safe spaces, after-school programs, and trauma-informed youth organizations where Darnell could continue his mentoring work. She facilitated coordination between the local recreation center, a faith-based youth development nonprofit, and the city's public health department to develop workshops on nonviolence and resilience-building for children exposed to community trauma. Darnell, seeing the value of his own lived experience, agreed to co-facilitate sessions with violence interrupters, transforming his story from one of survival to leadership and advocacy.

Meanwhile, the forensic nurse ensured that Darnell's medical and psychosocial needs were documented through a trauma-informed lens. She provided education on victim compensation, rights, and trauma recovery options, ensuring Darnell felt ownership of his care. The interprofessional team jointly monitored his healing progress and psychosocial stability, recognizing that safety and belonging were essential to long-term recovery.

This collaborative, strengths-based approach redefined Darnell's trajectory. By leveraging community assets and including children in restorative and preventive programs, the nurses helped translate one man's recovery into a broader community-healing initiative. Darnell completed his GED, obtained a community health-worker certification, and continued to mentor youth at the recreation center, helping them build resilience and avoid cycles of violence.

Ultimately, this case illustrates how public health and forensic nurses, working in concert with community partners, can transform trauma-informed care into a platform for empowerment, reframing recovery as both a personal and collective journey toward safety, connection, and leadership.

Benefits and Limitations of Asset-Based Violence and Trauma Assessment

The shift toward an assets-based framework for violence and trauma assessment offers numerous benefits within urban forensic nursing practice. Most importantly, this approach

actively resists pathologizing narratives and invites recognition of patient strengths, community resilience, and cultural knowledge systems (SAMHSA, 2023). Patients are more likely to feel seen, valued, and engaged in their own recovery when assessments prioritize their agency and existing coping strategies. Research has shown that strengths-based models not only enhance patient trust and therapeutic alliance but also improve health outcomes, particularly in marginalized populations who have historically been underserved or misunderstood by deficit-focused systems (Goldstein et al., 2024).

Asset-based assessments foster a deeper level of relational practice, positioning nurses as collaborators in the healing journey rather than as sole authorities (Morgan et al., 2023). In urban environments marked by historical disinvestment and systemic oppression, this collaborative stance is essential for building sustainable pathways to recovery. When patients are invited to identify their own strengths, community supports, and spiritual or cultural assets, the patient is empowered to leverage these resources in pursuit of their wellness goals. This approach aligns with broader public health goals by linking individual healing with community resilience, thereby strengthening the ecological systems that support health equity (National Academies of Sciences, Engineering, and Medicine, 2021).

Despite these critical advantages, assets-based assessment is not without limitations. First, identifying and mobilizing strengths requires time, patience, and relational depth—resources often constrained by institutional demands, high patient volumes, and structural barriers which refer to systemic obstacles embedded within organizational policies, social inequities, or resource distributions that limit equitable access to care and continuity within urban healthcare settings. (SAMHSA, 2023; Yearby et al., 2022). Forensic nurses working under strict productivity metrics or experiencing burnout may struggle to incorporate the reflective, dialogical processes needed for authentic strengths-based inquiry. Additionally, while most patients possess meaningful assets, not all will be readily able to articulate them, especially when facing acute crisis, complex trauma histories, or cultural mistrust of healthcare providers (Goddard et al., 2022).

There is a risk of inadvertently romanticizing resilience, placing the burden of overcoming systemic violence onto individuals and communities without addressing the larger structural forces that perpetuate harm (Hulley et al., 2023). An overemphasis on individual or community strengths must not substitute for systemic reform. Forensic nurses must balance honoring resilience with actively challenging the structural forces that sustain inequities. Lastly, the successful implementation of assets-based assessments hinges on robust training in cultural humility, trauma-informed interviewing, and structural competency, areas where gaps still exist in many nursing curricula (Waite & Hassouneh, 2021). Despite these challenges, integrating an assets-based framework remains a powerful and necessary evolution in trauma assessment. By honoring the full humanity of patients, both their wounds and their wisdom, nurses can play a transformative role in advancing trauma recovery, health equity, and collective healing within urban environments.

Recognizing both the strengths and challenges of assets-based trauma assessment underscores the need for systemic shifts in forensic nursing practice, education, and policy. To fully realize the potential of this approach, forensic nurses must be equipped with the skills, institutional support, and community partnerships necessary to sustain trauma-informed, equity-centered care in urban environments. The following section explores practical strategies for embedding assets-based assessment across clinical, educational, and policy domains, ultimately advancing health equity and community resilience.

Implications for Forensic Nursing Practice, Education, and Policy

The adoption of **assets-based trauma assessment** in urban forensic nursing practice requires intentional changes at the levels of clinical practice, professional education, and health policy. As urban communities continue to face structural inequities and layered trauma, nurses must be empowered with tools and systems that reflect the complexity, resilience, and strength of the populations they serve. Implementing this approach goes beyond changing how questions are asked; it demands a reimagining of care that is culturally grounded, community-centered, and justice-informed.

In **clinical practice**, integrating **assets-based questions into intake and screening tools** is a concrete and immediate step. Standard assessments often focus narrowly on risk and symptoms, overlooking protective factors that can shape healing trajectories. Including prompts such as *What helps you cope when things are difficult?* or *Who do you turn to for support?* can help uncover relational, cultural, and spiritual assets that are vital for recovery (SAMHSA, 2014b). Forensic nurses can document these strengths alongside clinical data to inform care plans that are not only clinically sound but contextually and culturally congruent.

Additionally, forensic nurses should be supported in **fostering partnerships with community-based organizations** that provide critical non-clinical resources such as mentorship programs, mutual aid networks, harm reduction services, and cultural healing spaces. These partnerships enhance the continuum of care and position forensic nurses as connectors between the healthcare system and the community. Such collaborations are especially vital in urban areas where access to traditional mental health services may be limited or culturally mismatched (SAMHSA, 2023). Forensic nurses, by understanding the assets embedded in the communities they serve, can become bridges to healing pathways that extend beyond hospital walls.

In **nursing education**, preparing the next generation to apply assets-based assessment requires the intentional integration and reinforcement of key frameworks such as cultural humility, structural competency, and trauma-informed interviewing, both within the curriculum and throughout clinical practice. Cultural humility, more than a theoretical concept, must be continually reinforced in experiential learning and clinical evaluation so that nurses sustain reflective awareness of power dynamics, approach every patient as the expert of their own lived experience, and remain open to diverse healing traditions and family systems (National Academies of Sciences, Engineering, and Medicine, National Academy of Medicine, & Committee on the Future of Nursing 2020–2030, 2021b). Structural competency further equips nurses to recognize and respond to how broader systems, including housing, policing, education, and economic policy, shape health outcomes, particularly in under-resourced and urban environments (CDC, 2024; Hirschtick et al., 2019; USDHHS, n.d.b.). Trauma-informed interviewing fosters safety, choice, and empowerment during clinical encounters, aligning with the assets-based model's emphasis on resilience and patient agency (Waite & Hassouneh, 2021).

Beyond the classroom, these frameworks should be operationalized through ongoing data collection and participatory feedback loops that adopt a bottom-up approach to evaluating what works in practice. Embedding nurses in policy discussions, community boards, and systems-level initiatives allows them to articulate frontline experiences and advocate for reduction of structural barriers that impede equitable care delivery (Institute of Medicine, 2011; Turale & Kunaviktikul, 2019). Thus, nursing curricula should prioritize these competencies not as electives, but as foundational to ethical, equitable, and systemically engaged nursing practice.

Extending beyond undergraduate education, there is a pressing need to cultivate advanced educational pathways and continuing professional development for nurses specializing in forensic and public health settings, where the principles of assets-based assessment, cultural humility, and structural competency intersect most directly with social justice and population health outcomes. Graduate programs, post-master's certificates, and interprofessional training initiatives can deepen nurses' expertise in navigating complex systems, such as criminal justice interfaces, community health surveillance, and policy advocacy for violence prevention and equity promotion. Specialized education in these domains equips nurses to identify and address structural barriers that perpetuate disparities, while strengthening their ability to collect and interpret data that inform evidence-based reforms at local, state, and national levels. Furthermore, such specialization ensures that nurses positioned in public health or forensic environments serve as vital bridges between clinical practice and systemic advocacy, translating patient narratives into actionable insights for policy and institutional change (Turale & Kunaviktikul, 2019; Williams et. al, 2019).

Moreover, **investing in urban community infrastructure**, from youth centers and art spaces to violence prevention initiatives and community gardens, must be recognized as a form of public health intervention. Forensic nurses can play a pivotal role in policy conversations by highlighting how these resources serve as *social prescriptions* that mitigate the health impacts of trauma and promote resilience (Clements & Solecki, 2025). In doing so, forensic nurses can move from solely treating the consequences of violence to advocating for the conditions that prevent it.

Ultimately, embracing assets-based trauma assessment is a call to transform forensic nursing practice from one of **reaction** to one of **restorative engagement**, affirming the strength of individuals and communities even amidst profound adversity. By embedding this approach across practice, education, and policy, nursing can help reimagine urban health systems as sites of not just survival—but strength, healing, and collective power (Goldstein et al., 2024).

Conclusion

The integration of assets-based violence and trauma assessment into forensic nursing practice represents a critical evolution in how care is delivered to urban populations disproportionately affected by systemic violence, disinvestment, and structural inequities. By moving beyond a deficit-based model that centers on risk and pathology, forensic nurses are uniquely positioned to identify and amplify the strengths, resilience, and cultural assets that patients bring with them to the healing process. This shift in approach not only aligns with trauma-informed and equity-centered frameworks, but also ensures that care is responsive to the lived realities and community contexts of those most impacted by violence and trauma.

To fully realize the transformative potential of assets-based trauma assessment, systemic changes in education, policy, and practice are essential. Forensic nurses must be equipped with structural competency, cultural humility, and trauma-informed communication skills, supported by institutions that value relational depth and community collaboration. As urban communities continue to bear the weight of intergenerational trauma and systemic harm, forensic nursing can lead the way in reframing narratives—from brokenness to resilience, from crisis response to collective healing. In doing so, the profession reaffirms its commitment not just to treating trauma, but to advancing justice, dignity, and the possibility of thriving in every urban neighborhood.

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Case Study

Did I Do Enough? Trauma-Informed Care & Intimate Partner Violence

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Abstract

In this case study we explore the application of trauma-informed concepts to a situation in which a woman is experiencing intimate partner abuse. While the woman's decisions may place her at risk of harm and the nurse is uncomfortable with the decision, it remains the woman's decision. This case includes a discussion of trauma-informed care, typologies of abuse, risks for lethality, and an application to a situation.

Keywords: trauma-informed care, intimate partner violence

Case Study Author Acknowledgement*: Authors in this section acknowledge that all cases that may be based on actual clients are anonymized with removal of any identifying and unique details, or are fictitious patients based on the collective of the author's client experiences.*

Did I Do Enough? Trauma-informed Care & Intimate Partner Violence

Beth was a 45-year-old woman who came into Emergency reporting a sexual assault that occurred that evening in a park near her low-income community housing complex. During the interview it was revealed that she was a victim of long-term intimate partner violence (IPV). For years, she stated, he physically and sexually assaulted her and had attempted strangulation on multiple occasions until she passed out. Her job involved working in the public with media, but she had to call in sick on multiple occasions as he had beaten her face. She eventually lost her job, giving him full financial control. Beth stayed with him until her children were safely out of the house, going to universities in another province. As he had full control of her finances, when she

left it was necessary to go on welfare while legal aid was helping her navigate a divorce. She was placed in a subsidized community housing complex. Even with the low rent she could barely pay her bills. The cost of a cell phone was out of her budget, so she relied on the phone at the corner store. Every few weeks, her husband would come to her townhouse and ask if she was returning. When she refused, he would physically assault her and throw a cheque for a few hundred dollars on her body, then leave.

After her husband's latest visit, in which she was again assaulted, she went to the store to use their phone. She called her legal representative to discuss options. On the way home, a man she believed lived in her housing complex started talking to her and convinced her to sit with him in the park to visit. He ended up taking her into the bushes and sexually assaulting her. She came into the nearest Emergency to have a sexual assault exam.

Management and Outcome

Beth was examined and treated for the effects of a sexual assault, including prophylactic treatment and anonymous evidence collection. She did not want police involved at that time. The main concern for Beth was helping her to return home safely. She described being fearful of returning to the community housing, since the assailant also lived in the neighbourhood. Beth stated not only was she fearful but was tired of being hungry, cold, and poor. When asked if she had any friends or family she could connect with, she stated that her husband had isolated her from everyone and he was the only one she now knew in the city. It was after midnight, and social work would not be in the department until 8 a.m. Beth agreed to stay in the Emergency and was given a pillow and blanket. When checking on her about 5 a.m., Beth was seen fully dressed and heading out toward the ambulance bay. When asked what was going on she indicated "my ride is here." When asked who she contacted she admitted she finally called her husband. Concern for her safety was expressed, and it was explained that with the sexual assault, increased physical assault frequency, and strangulation that her risk of death was high on return to her husband. Beth sadly stated, "At least I will have a warm house, food, and clothes before I die." Safety planning and other options were discussed along with other community resources if she chose to leave again, as well as the ability to return to Emergency. She waved and got in his car. This interaction left the nurse feeling like she, and the system, hadn't done enough for Beth.

Discussion

Some of the key considerations here included the dynamics of interpersonal violence, and the components of trauma-informed care.

Trauma-Informed Care

The core concepts of trauma-informed care (TIC) are focused on providing the client with sufficient information, as well as control and choice. The most comprehensive description of TIC was from the Substance Abuse and Mental Health Administration in the United States (SAMSHA-Substance Abuse and Mental Health Services Administration, 2014). This is the basis for many of the models used by agencies currently. There are four main assumptions—the four Rs—and six principles (Table 1). Understanding that trauma has significant impacts on clients and can result in certain trauma responses is important, as well as resisting actions that may result in retraumatization. How we respond, using the six principles, is aimed at empowering the client to choose what they wish to do provided they have enough information. Their choice may not be what the nurse would recommend but it is up to the client; they are the expert in their lives.

Facilitating client autonomy is a key ethical principle in nursing, consistent with TIC.

Table 1
Trauma-Informed Care

Assumptions	Principles
R – realizing the impact of trauma R – recognizing trauma responses R – resisting retraumatization R – responding appropriately	Safety Trustworthiness and Transparency Peer Support Empowerment, Voice, and Choice Mutuality and Collaboration Culture, Gender, and Historical Factors

Note: Adapted from SAMHSA (2014)

Interpersonal Care Dynamics

Johnson developed a typology of intimate partner violence (Johnson, 2009, 2024). He and his team described four main types of violent behavior (Table 2). While other typologies are available, this one has been consistently supported across populations and provides a useful tool for classification and intervention (Bates & Graham-Kevan, 2016; Bermea & van Eeden-Moorefield, 2023; Cares et al., 2024; Conroy & Crowley, 2022; Johnson, 2008). "Situational violence" is characterized by someone with poor communication skills and conflict resolution. They are often described as someone with a "hot temper," and stress can trigger the abusive behavior. In contrast, the person who uses "coercive control" may be described by others outside their relationship as calm—they only use power, coercion, and control against their partner, especially when that control is threatened (Conroy & Crowley, 2022). Anger management or communication courses are not typically effective. There are some situations where both partners use power and control against each other ("mutual violence and control"). The fourth type is in retaliation to being abused by a partner, perhaps with fear for their life.

Table 2
Johnson's Typology

Type of IPV	Characteristics
Situational violence	• Anger fueled by stress, unpredictability • Poor communications, conflict resolution skills
Coercive control	• Use of power, control and coercion against partner
Mutual violence and control	• Both partners use power, control, coercion
Retaliatory violence	• Abused partner uses violence in fear or to retaliate

Note: Adapted from Johnson (2009, 2024)

The coercive control type is the one most often seen in Emergency or in police reports. Injuries are typically more severe and more likely to be fatal compared to the situational form. Beth's husband was displaying hallmarks of coercive control and thus risks of death were more likely. Beth's case also illustrates several high-lethality indicators identified by Campbell's Danger Assessment (Campbell, 2004): strangulation, escalating frequency of physical assaults,

sexual violence within the relationship, and recent separation. The Danger Assessment is commonly used by forensic nurses and has established reliability and validity, but there are other tools available, each with different strengths (Department of Justice Canada, 2021). Regardless of the risk-assessment tool used, the escalation in abuse, sexual assault, and strangulation are all high-risk indicators of lethality.

It was concerning that Beth was returning to her husband, even knowing the risk of death. There are many reasons for this. Early in a relationship, the person experiencing abuse may be unaware that it is in fact abuse—it may have started as a romantic type of interaction but eventually may be followed by emotional abuse. Examples include subtle insults, gaslighting, blaming the partner, and isolating them from friends and family. According to Prochaska and Diclementi, this would be the precontemplation phase in which the victim believes they are at fault, not the abuser (Weiss, 2003; White et al., 2017). Screening for IPV may move them to the contemplation phase, helping them to realize this is not their fault or normal for a relationship. In Beth's instance, she had moved to the "action" phase of change, but it is not considered "maintenance" until they remain away for at least 6–12 months. It is well recognized that a victim of IPV typically returns to their partner at least five to seven times before reaching maintenance stage (staying away). There are many reasons for this: codependence, isolation, lack of support, and economic concerns are examples. For males experiencing IPV, they have described not even realizing it was IPV, just that they had an angry or controlling partner (Warthe et al., 2025). They didn't have the same exposure to information on healthy relationships or signs of abuse, and male gender stereotypes of what a "real man" should do impacted their disclosure to friends or seeking supports.

In Beth's decision to return, key factors included isolation, economic concerns, as well as safety. Economic concerns are recognized as a key predictor of returning (Swadley, 2017). It is difficult to exist safely and comfortably on the amount provided by welfare cheques. The coercive partner has strategically isolated their finances and perhaps affected the victim's employability. If the victim develops mental health issues such as posttraumatic stress disorder, anxiety, or depression, they may be unable to work. The development of a mental health disorder can be used as a control mechanism in relation to child custody (Domestic Abuse Intervention Programs (DAIP), 2017) or impact perceptions of truthfulness in investigations.

Peer supports are often a key in resilience and remaining out of toxic relationships, but coercive partners isolate them from friends and family. For male victims of IPV it may be even more difficult, as concepts of gender identity and toxic masculinity prevent them from disclosing their abuse or seeking assistance (Warthe et al., 2025).

Implications

Applying trauma-informed care relies upon what the patient wants, not what the nurse would prefer. Information, choice, and control are the key concepts. We must ask ourselves: Does Beth understand the implications of her choices? Did she truly understand her risk of homicide? Did she have enough information about alternative choices? Did she have information about support resources? In this case, the answer was "Yes"—safety planning was explained as well as potential options available that social work might offer for support. Although the significance and potential lethality of her choice was made clear, she did not appear to believe that there were other options for her. She was unwilling to wait for the social worker to see if there were other options. While it was not the outcome we would have liked to see, and it is sometimes distressing

for the nurse, this was Beth's choice. We also need to recognize, if she survives, that she may return. It is important to be as accepting of her the next time as the first time she sought help, or she will stop seeking help. One survivor described leaving as a process (Weiss, 2004).

We live in a broken system in which someone on welfare is not sufficiently safe or sufficiently supported to remain out of a relationship. The partner typically has control of their finances, their children, and their mental health. They have likely ensured the partner is dependent and isolated. Male victims have even fewer supports; there are very few male IPV shelters in North America. Nurses should empower clients to make their own choices. In addition, we must advocate to create a system that offers IPV survivors' choices for their well-being and thriving. We also have a role in community education of both men and women and particularly gender-diverse populations about IPV. Further research is needed on effective strategies for screening, risk assessment, and change-management strategies for clients while ensuring they retain choice and empowerment across genders. Legal change is also occurring—police and legislators are recognizing the lethality and consequences of coercive control, working to improve screening, charges, and convictions. We may have done "enough" for Beth at the time, using trauma-informed care, but we know there is more to do to support her and others experiencing IPV.

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Journal of the Academy of Forensic Nursing

Research Reviews

AFN Journal Club Fall Reviews

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AFN Journal Club Fall Reviews

The AFN Journal Club meets regularly to review the quality of the evidence available to support our clinical practice. This is a core requirement of professional practice.

AFN Journal Review Criteria

- Evidence tables are for the review of studies that may have implications for clinical practice.
- All articles on this table have been reviewed by the AFN Journal Club.
- Abbreviations are listed in the legend following the reviews.

Melnyk Levels of Evidence (Melnyk & Fineout-Overholt, 2015)

- **Level 1 -** Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses
- **Level 2 -** One or more randomized controlled trials
- **Level 3 -** Controlled trial (no randomization)
- **Level 4 -** Case-control or cohort study; correlation design; examines relationships
- **Level 5 -** Systematic review of descriptive & qualitative studies
- **Level 6 -** Single descriptive or qualitative study; does not examine relationships
- **Level 7 -** Expert opinion

Completed Reviews

Spiller, L.R. (2024). Orofacial manifestations of child maltreatment: A review. *Dental Traumatology, 40*(Suppl. 2), 10–17. https://doi.org/10.1111/edt.12852

Study Description/Background Child maltreatment is a widespread problem that is often unrecognized and underreported. Health care professionals have the unique opportunity to identify and report concerns for maltreatment. Proper identification and reporting of concerning findings have the potential to minimize the risk of more severe injuries or events that result in death or long-term health consequences. Intraoral injuries may be overlooked if the medical professional is less familiar with the oral cavity, and up to 75% of all abused children have orofacial injuries. The purpose of this review is to assist medical professionals in identifying which orofacial findings are concerning for abuse and neglect.

Literature Review 69 references, 16 references were from last five years. There is a paucity of literature on some of the types of oral injuries in the literature. All pertained to subject matter, and a few could be considered classic works.

Design/Methods N/A - literature review

Sample N/A

Analysis N/A

Results/Limitations Bruising is an extremely common finding with both accidental and non-accidental mechanisms in childhood; however, it is the most common abusive injury overlooked in an infant or child prior to a more severe abusive injury resulting in a fatality or near-fatality. When any bruising or other injury, except for a self-inflicted scratch, occurs in a pre-cruising infant there should be concern for maltreatment. Intraoral findings that could be concerning for abuse include torn frenulum, unexplained bleeding from mouth, well-demarcated white eschar (from injuries in healing process), sublingual hematomas, lip injuries, bilateral linear injuries in corners of mouth, tongue bruising and lacerations, teeth fractures (multiple teeth are more likely to be involved when the injury was intentional), and avulsed teeth. Extraoral findings that could be concerning for abuse include mandibular fractures, maxilla fractures, orbit fractures, chin bruises/lacerations, nasal bone fractures, nasal septal hematoma, nasal erosion and deformity, facial bruising (with cheeks being most common orofacial site of bruising), subgaleal hematomas, and traumatic alopecia. Oropharynx findings concerning for abuse—perforations of oropharynx (accidental injury to oropharynx in children is rare). Ear injuries concerning abuse include bruising to ears (rarely accidental), and auricular perichondritis, also known as cauliflower ear, which can be caused by repetitive trauma and direct blows to the ear, as often observed in adults who practice martial arts. Eye injuries concerning for abuse include retinal hemorrhages, periorbital ecchymosis and/or edema, hyphema, subconjunctival hemorrhages. Orofacial findings concerning for sexual abuse from forced oral penetration may manifest as erythema, petechiae, and ecchymoses, most often at the junction of the hard and soft palate, unexplained torn frenulum, pharyngeal gonorrhea and chlamydia (diagnostic for sexual abuse but are rarely symptomatic), oropharyngeal human papillomavirus and herpes simplex virus (may be sexually transmitted, but are not diagnostic for sexual abuse in children), gonococcal conjunctivitis, and dental neglect (when it manifests as failure or delay in seeking care for significant caries, trauma and/or oral pain).

Clinical Significance It is crucial that sentinel injuries are recognized, as they often precede more severe injury and death from physical abuse. TEN-4-FACESp tool should be completed on all children under four years of age and carries a sensitivity of 95.6% and a specificity of 87.1% in identifying cases of maltreatment (excluding patient cases of inherited bleeding disorders). It is important for health care providers to understand that a reasonable suspicion of maltreatment is the standard requirement to report the concern. It is not their responsibility to confirm abuse or neglect. More training is needed for dentists, who have a unique opportunity to identify maltreatment.

Level of Evidence 5

Barranco, R., Tettamanti, C., Bonsignore, A., & Ventura, F. (2022). Otorrhagia in strangulations: An important but often underestimated finding in forensic pathology. *Journal of Forensic Sciences*, *67*(4), 1739–1742. https://doi.org/10.1111/1556-4029.15030

Study Description/Background Otorrhagia is poorly described in neck compression, and it is often an underestimated finding. This case report of massive bilateral otorrhagia produced during strangulation includes discussion of the possible pathophysiological mechanisms.

Literature Review 16 references; one within five years but there is a gap in literature of otoscopy exams performed by forensic pathologists/medical examiners.

Design /Methods N/A - case reports

Sample 1 case report

Analysis N/A - case reports

Results/Limitations 87-year-old female with senile dementia found to have been strangled in her bed with a handcrafted garrote consisting of a cloth belt and an apron. Death was attributed to combined manual and ligature (garrote) strangulation, with the ligature in place, a partial ligature impression, and bruising and abrasions of the neck skin. Massive bilateral otorrhagia produced during strangulation by garroting not associated with a head injury. In this case, otorrhagia was supportive of the death by strangulation. Limitations include one case study resulting in poor generalizability due to the unique contexts of one example.

Clinical Significance Otorrhagia can be a vital and relevant sign of neck compression and can aid in the diagnosis of strangulation. Careful and thorough examination of the ears with otoscopy may assist in the assessment of asphyxia due to neck compression and seems to be an underutilized assessment during the postmortem examination.

Level of Evidence 6

Wankhede, AG. (2021). Potential usefulness of otoscopy in the evaluation of hanging deaths: A report of two cases. *Journal of Forensic Sciences*, *67*(2), 809–812. https://doi.org/10.1111/1556-4029.14919

Study Description/Background Case report describing the postmortem otoscopic findings in two cases of suicidal hanging showing petechial hemorrhages in the tympanic membrane (TM), which is a previously reported finding in cases of hanging. Postmortem otoscopic examination of victims of hanging may provide information useful in the determination of vitality of hanging.

Literature Review 11 references, only one reference within five years. Clear research gap with use of otoscopy in postmortem examinations. Included some research with relation to abnormal

otoscopy findings that can be attributed to diving.

Design/Methods N/A - case reports

Sample 2 case reports

Analysis N/A - case reports

Results/Limitations Case #1 was 27-year-old male with history of suicidal hanging with bed sheet at residence. Postmortem exam completed 18h after death, noting subconjunctival petechial hemorrhages and a ligature mark. Otoscopic examination of both the ears revealed petechial hemorrhages in the TM with hemotympanum and engorged superficial blood vessels with bleeding. Case #2 was a 29-year-old male with history of suicidal hanging with a piece of synthetic cloth. Postmortem examination was completed 16h after death. Otoscopic examination of the right ear revealed findings suggestive of impending rupture of the TM and otic barotrauma. In both cases, there was no history or evidence of trauma to the ears or head and externally, and neither case involved bleeding from the ears. Limitations include two case studies of 20s males, resulting in poor generalizability due to the unique contexts of these specific examples.

Clinical Significance Hemorrhages of the TM detected by otoscopy may serve as evidence of congestion within the head and neck region, potentially associated with asphyxiation noted in the dead or live person, similar to periorbital and conjunctival petechial hemorrhages. The identification of petechial hemorrhages aids in the determination of whether the neck compression from hanging was life-threatening and had occurred when the victim was alive. When the vasculature of the neck is compressed or middle ear pressure increases due to cervical compression *in vivo*, hemotympanum and petechial hemorrhages in the TM are evident. Because compression of the neck vasculature and/or respiratory tract affects the middle ear, findings from postmortem otoscopy might be useful in the evaluation of hanging, and possibly other cervical compression deaths. In addition, forensic nurses should consider the utility of otoscopy in all strangulation patients, which also involves compression of neck vasculature and could provide useful assessment findings.

Level of Evidence: 6

Recalde-Esnoz, I., Prego-Meleiro, P., Montalvo, G., Del Castillo, H. (2024, July). Drug-facilitated sexual assault: A systematic review. *Trauma Violence Abuse, 25*(3):1814-1825. doi:10.1177/15248380231195877. Epub 2023 Aug 31. PMID: 37650508.

Study Description/Background This review aimed to collect, analyze, and compare research articles about DFSA phenomenon published up to date to improve understanding of this form of sexual violence.

Literature Review 62 references with 18 being within five years; all generally relate to subject matter; oldest was from 1982 and some may be considered classic works.

Design/Methods Global literature search carried out in March 2022 using search terms “drug facilitated sexual assault” and “DFSA”. Inclusion was Spanish or English articles, research articles, final publications, open access, peer reviewed publications, use of DFSA term, quantitative research, study samples, and measured study variables. Authors excluded articles based upon independent review and when there was disagreement, a third-party opinion from the research team was sought. Exclusion criteria are not well defined.

Sample Initial search resulted in 773 articles but was reduced to 19 articles. Eight articles were from North America (five from United States and three from Canada), eight articles were from Europe (three from Spain, two from United Kingdom, one from Netherlands, one from Norway, and one from Italy), one article from Australia, one article from New Zealand, and one article from Africa. All articles included in final sample performed quantitative analyses. Eight of the articles retrieved data from forensic laboratory databases.

Analysis N/A

Results/Limitations DFSA prevalence varies widely from 1.5%–78.5%. This may be due in large part to different DFSA definitions and inclusion criteria globally. Female victims vary from 81.6–100% in proactive DFSA and 80% in opportunistic DFSA. Most assailants are men ranging from 98.3–100%. In most cases, victims and assailants knew each other previously with friendship being the most frequent bond. Data suggests that in most cases, there is a single assailant. Many victims report voluntary ingestion of alcohol, followed by cannabis. Rohypnol, GHB, and stimulant drugs comprise most of the involuntary ingestion with frequent presence of benzodiazepines and antidepressants being highest pharmaceutical drugs detected during toxicological analyses. Most common locations include private residence and night-life venues. Many articles report that victims tend to be women under 30 years old with this specific form of sexual violence predominately occurring at night and on weekends. Limitations include lack of standard definition of DFSA, gaps with homosexual and male victims, results being primarily self-reports from victims, limited search terms used in this systematic review, selection bias, data only collected from DFSA cases that reported, lack of methodological and sampling homogeneity, limitations in understanding of DFSA and possible misunderstanding of alcohol as a DFSA substance, and limitations of results to urban settings.

Clinical Significance Need for standardized definition of DFSA. Need for uniformed prevalence measure, need for more awareness of opportunistic DFSA as well as DFSA among gender diverse and homosexual populations, need for more education and awareness as a strategy to decrease DFSA risk and victim blaming, need for better policy development. Nurse authorship, particularly forensic nurse authorship, may have enhanced article relevance, contributions to clinical practice, and provided contextual lens.

Level of Evidence 5

Legend: TEN-4-FACESp=bruising to the Torso, Ears, Neck, Frenulum, Angle of the jaw, Cheeks, Eyelids or Subconjunctivae, 4 represents infants 4 months and younger with any bruise, and p represents the presence of patterned bruising; **TM**= Tympanic Membrane; **DFSA=** Drug Facilitated Sexual Assault; **GHB**= Gamma-hydroxybutyrate.

Reference

Melnyk, B.M., & Fineout-Overholt, E. (2015). “Box 1.3: Rating system for the hierarchy of evidence for intervention/treatment questions” in *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.)(pp. 11). Philadelphia, PA: Wolters Kluwer Health. ISBN 9781451190946

Journal of the Academy of Forensic Nursing

Community Updates

AFN collaborates and sometimes partners with many other professional associations or organizations that relate to forensic nursing. Examples include the FNCB, Sigma Theta Tau, TAANA, and other forensic nursing associations. All are welcome to submit an update of their organization's activities through the JAFN website under "community updates". Deadlines for submission are 4-6 weeks before publication closing dates (March 31, July 31, November 30). We are stronger together. Let us hear from you!

Forensic Nursing Certification Board (FNCB) Update

FNCB https://goforensicncb.org/

Diana Faugno MSN, RN, CPN, AFN-C, IVSE-C, SANE-A/P, FAAFS, DF-IAFN, DF-AFN

Achieving the Interpersonal Violence Strangulation Evaluation micro-certification (IVSE-C) marks an important milestone in advancing your professional knowledge and skills. This accomplishment not only enhances your expertise but also empowers you to make a meaningful difference in the lives of those affected by such critical incidents. Here is what Christine Foote-Lucero had to say when she passed IVSE-C:

> Passing my board certification for Interpersonal Violence Strangulation Evaluation represents far more than an academic achievement—it is a deeply personal milestone in my journey as a forensic nurse. This certification affirms my commitment to providing the highest level of care to patients who experience some of the most traumatic and under-recognized forms of violence. Mastering the complexities of interpersonal violence and strangulation assessment, understanding its subtle presentations, and recognizing the profound medical and legal implications has strengthened my ability to advocate for patients whose voices are often minimized or overlooked. Earning this credential also signifies the culmination of years of experience, study, and dedication to advancing forensic practice. It reflects my belief that every patient deserves a clinician who is both compassionate and expertly prepared, especially in moments when their safety, health, and truth depend on meticulous evaluation. This certification validates the rigor and precision required to navigate these cases and inspires me to continue growing as a leader and educator within the forensic nursing community. It reminds me why I entered this field: to make a meaningful difference for individuals affected by violence and to help elevate standards of practice across our profession. Passing this board certification is not the end of a journey, but the beginning of an even stronger commitment to excellence, integrity, and patient-centered care. **— Christine Foote-Lucero**

Journal of the Academy of Forensic Nursing

From the President

Catherine J. Carter-Snell, PhD RN SANE-A DF-AFN

A Glance Back and Focus Forward

It has been a busy and demanding year for all of us. Nursing is experiencing many shortages of staff and energy, while our patients are increasingly more complex with many co-morbidities. At the same time, economic challenges are negatively impacting many businesses and institutions. Forensic nurses have been impacted in our places of work and with our professional associations, or even ability to maintain our memberships with financial pressures. We at the Academy of Forensic Nursing are honored that you have chosen to be members with us and want to ensure we meet members' needs.

Our annual report will be published on the website by the end of January, and we invite all of you to our annual general meeting to discuss the report and ideas for our strategic plan. The virtual meeting will be held on February 17th, 2026 at 4 pm EST (the link will be in the January newsletter). Our conferences have been successful- while smaller than many conferences we value this smaller size to facilitate networking and mentorship among participants. We have participated in the development of video resources for forensic nurses through Symptom media, updated an online sexual assault examiner course through Sigma Theta Tau, continue to offer a high-quality journal with no publication or subscription fees to members, regular webinars free to members with CE credits, and are exploring affordable options for AFN labelled merchandise. We have introduced a Financial Oversight Committee to ensure we are making sound decisions with your membership dues, and we are showing steady growth in our finances. All great work thanks to the Board of Directors, volunteers on committees, staff, and executive as well as from member suggestions.

As we move into 2026, we are evaluating our 2023-2025 strategic plan and formulating our plan for the next two years. It is important that we have your voice and advice for future directions. We know you are busy, but this is your Academy and we want to ensure it reflects what you value in your professional development and support. Share your voice and let us continue to grow in supporting your evidence-informed practice. Your voice is also important in our committees, special interest groups and on an ongoing basis.

At the same time as asking for your involvement, I would also like to emphasize you strive for some balance. We are in this profession for the long haul and need to remain healthy. In

her editorial, Dr. Fay-Hillier has emphasized the importance of self-care. This is hard to attend to when we are balancing many responsibilities at home and at work. Finding balance and connections are important to your health. Many of us belong to diverse organizations, forensic or otherwise, and these are all a part of our connectedness. Collaboration between organizations and individual forensic nurses strengthens the profession and provides mentorship and peer support in our challenging work. We hope to be a key connection for you in the coming year in networking, mentorship and professional development.

The holiday season can be stressful and often sad for many. It also is a time that we see violence and trauma. It is our hope that you find a way to have a safe and happy holiday season, however you celebrate. Thank you for all you!

Cathy (CJ)