Journal of the Academy of Forensic Nursing

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Table of Contents

Journal of the Academy of Forensic Nursing

Editorial

Welcome to JAFN

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Join Our Excitement- A New Journal!!

Welcome to our first edition of the Journal of the Academy of Forensic Nursing (JAFN). It has been a little while coming- many new discoveries as the idea grew, a long wait and much labour! We are excited to begin this journey to provide you with a source of evidence and information for your forensic nursing practice. The Academy of Forensic Nursing (AFN) is committed to excellence in evidence-based, trauma-informed forensic nursing practice. Forensic nursing is rapidly expanding globally, unfortunately in response to growing violence, disasters and increasing recognition of the impact of violence across the lifespan. Nurses bring an understanding of the impact of trauma and medicolegal considerations into their comprehensive practice. This requires that the forensic nurse is continually learning. As such, we have developed this peer-reviewed journal to address numerous aspects of practice. Our new journal adds to the tools that a forensic nurse can use to remain current. The journal is "open source", meaning that anyone can access these articles. This is important for supporting evidence based practice.

There are four peer-reviewed sections in the journal. In our "original research" section, we have new research articles to support your evidence-based practice. Our "best practices" section provides current guidelines and best evidence to support practice. The "contemporary issues" are factors that may not be directly covered in forensic nursing programs or guidelines, but which have actual or potential impact on our work. The use of case studies is a valuable learning tool, and we invite practitioners to submit cases to help expand others' learning.

In addition to the peer reviewed articles, we have global updates from our international members, and summaries of research reviews by the AFN Journal Club. In issue 2 we will be introducing a "policies and legislation" with updates relevant to forensic nursing. Another new section will be added- a research corner to walk clinicians through aspects of best methods and assessing the literature for the quality of evidence. We welcome suggestions for topics within any of these sections as well as ideas for new sections.

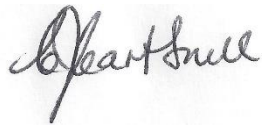
Another value of AFN is collaboration between forensic nurses and organizations. We are a community of forensic nurses and want to share, collaborate and co-create knowledge with

forensic nurses and organizations, as well as community partners. In this way we can advance the practice, influence policy and legislation, and better serve our communities. Collaboration includes supporting new writers. Not everyone feels comfortable writing and submitting their work to a journal and yet it is so important that we hear what you are doing. There are AFN members both on the editorial board and in the general membership that have committed to mentoring authors to ensure the articles are scholarly and ready for publication. Bring your ideas and innovations and we can connect you with a mentor. If the work is mainly cosmetic they are happy to assist. If there is substantial revision, they may ask to co-author with you but you would be first author. In the spirit of collaboration and multidisciplinary practice we also invite non-nurses to share their articles if they have relevance to forensic nursing practice.

JAFN is fortunate to have many skilled clinicians and academics on the editorial board and in our membership. We are committed to promoting high levels of scholarship and, if desired, mentorship. Let's work together to make this new journal a source of information and innovation to which all can contribute.

Many thanks to the editorial board, writers and the AFN Board members who contributed to this inaugural journal! We hope to see your name in print soon as well!

March 20, 2023



Editorial Board

March 20, 2023

Journal of the Academy of Forensic Nursing

Original Research

Sexual Assault Services in the Pandemic: Lessons Learned

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Abstract

Problem: Sexual assault rates rise significantly during disasters. International guidelines emphasize prioritizing and ensuring sexual assault services during disasters to reduce the risks and resulting consequences of assault. The impact of the COVID-19 pandemic and stay at home mandates on sexual assault services (counselling and healthcare) in Canada was unknown. **Purpose:** The aim was to explore the impact of the pandemic on sexual assault service provision, changes in client flow, effects on staff and clients, and lessons learned. **Methods:** A descriptive qualitative design was used. Semi-structured interviews were conducted with counselling and healthcare services across Canada. Content analysis was used for data. **Results**: Most services were disrupted but in different ways. Counselling centres were typically forced to close temporarily until they could find a way to safely provide services with distancing or virtually. Healthcare services mainly remained open as they were affiliated with healthcare sites such as Emergency, but client flow dropped off markedly initially in most sites. Healthcare staff were typically redeployed, leaving teams short-staffed when lockdowns were lifted. Both services found the severity and complexity of client needs was much worse when volumes resumed. The client complexity and workload created stress in addition to pandemic concerns, but staff support was variable, particularly in healthcare. Networks helped support staff but were largely informal. **Conclusion**: Sexual assault services were not given priority, nor were experts consulted in community messaging. I**mplications**: Forensic nurses and counsellors have a key role in advocating for sexual assault care as an essential service in disasters.

Keywords: rape, sexual trauma, sexual assault, crisis intervention

Sexual Assault Services in a Pandemic: Lessons Learned

Sexual assault affects millions worldwide, especially women and children. International prevalence data across 161 countries revealed approximately 30% of women experience physical or sexual violence either by partners or non-partners (World Health Organization-WHO, 2021). National survey data in Canada were consistent with these estimates, with 30% of women and 8% of men reporting that they had been sexually assaulted at least once since age 15 (Cotter, 2021). Canada – a 2018 national survey identified that approximately 30% of Canadian women and 8% of men in 2018 had been sexually assaulted at least once since age 15 (Cotter, 2021).

Rates and risk for sexual assault increase even further during disasters and pandemics (World Health Organization-WHO, 2020), especially if there is displacement or evacuation and that disaster responses can impact accessibility of women to services and care. These increased rates are of concern due to the significant health consequences for those affected. A history of sexual assault results in increased healthcare utilization and increased health concerns (Ullman & Brecklin, 2016). Posttraumatic stress disorder (PTSD) is a particular concern as it is common in survivors of sexual assault (Carter-Snell & Jakubec, 2013). As many as 75% of sexually assaulted clients meet the criteria for PTSD in their first year post-assault (Dworkin & Schumacher, 2018; Dworkin et al., 2021), much higher than for most other types of traumatic events. There are clear linkages between stress disorders such as PTSD and development of other mental health problems such as depression, anxiety, substance abuse, suicidality (Eisenberg et al., 2016; McLean et al., 2014; Pohane et al., 2020), and revictimization (Brenner & Ben-Amitay, 2015; Chu et al., 2014). The resulting stress disorders, in turn, are linked to physical health issues such as cancer, heart disease, diabetes, and autoimmune disorders, pain, and other physical disorders (McCall-Hosenfeld et al., 2014; Scioli-Salter et al., 2016; Wolf, 2016). The high rates of sexual assault and resulting significant consequences highlight the urgent need to understand risks for sexual assault in pandemics and, to either prevent them, or be able to intervene effectively. Early comprehensive sexual assault services have been shown to reduce the risks of PTSD (Dworkin & Schumacher, 2018), thus limiting these consequences.

Despite risks of rising rates of sexual assault and intimate partner violence during the pandemic (MacGregor et al., 2022; Muldoon et al., 2021; Pallansch et al., 2022), the public were advised initially to stay at home unless it was a health emergency. Despite the traumatic nature of sexual assault, in the authors' experience, victims of sexual assault or intimate partner violence are not always injured physically, and therefore may not always see their assault as a high priority "emergency" requiring care. Reluctance to seek services during the pandemic was also found to be due to fear of contracting COVID-19 from enhanced exposure in health care setting, or adherence to the stay at home orders (Muldoon et al., 2021; Sorenson et al., 2021). If they did choose to seek help, women experiencing the violence may not have received the required services due to changes in staffing or reduced availability of services during the pandemic (MacGregor et al., 2022). Sexual assault services may have been relocated or shut down, and staff may have been redeployed to provide basic counselling or healthcare services versus sexual assault services

The isolation with the pandemic and restrictions on contact have therefore created difficulties for both access to and delivery of healthcare and counselling services post-assault. The actual extent of changes in healthcare and counselling services during the pandemic in Canada is unknown. Many urban areas have dedicated sexual assault examiner teams-nurses and/or physicians, as well as sexual assault counselling centres. Services in rural areas or cities without

dedicated teams are sometimes less comprehensive. Rural areas do not often have specialized sexual assault services and struggle to provide comprehensive services even in non-disaster condition (Carter-Snell et al., 2019; Corbett et al., 2022). If they are reliant upon the one physician on duty to take the required time to provide services, it comes at the disadvantage of other clients in the Emergency. There may not be local counselling services or supports available without travel required, adding challenges of transportation and access (Jakubec et al., 2013). The added effects or strain of the pandemic on these services across Canada were unknown. The purpose of this study was to gain an understanding of the impact of the pandemic on healthcare and counselling services across Canada following recent sexual assault. Specific areas of interest included any changes in service delivery and use, perceived impact on clients and staff, and on lessons learned for future pandemics or disasters.

Methods

This project received ethics approval from Mount Royal University in Calgary. The principal investigator is a PhD prepared certified sexual assault nurse examiner (SANE) who has worked and researched aspects of sexual assault and intimate partner violence for many years. She conducted all the healthcare interviews, coordinated the project, and led the data analysis. The research assistant was a recent graduate and registered social worker. A consultant, a master's prepared social worker with years of experience in sexual assault support, was hired to interview the counselling centre professionals, and to assist with verification of data analysis.

The method included use of a descriptive qualitative design (Sandelowski, 2010; Vaismoradi et al., 2013). Semi-structured interviews were conducted with professionals from sexual assault services across Canada. These agencies usually provide services to clients, mostly women, who have experienced a "recent" sexual assault- typically within approximately a week.

Sample

A purposive quota sample was sought, with an attempt to represent both urban and rural perspectives, as well as healthcare and counselling, within each province or territory. F our major Canadian regions: Western (British Columbia, Alberta, Saskatchewan), Central (Manitoba, Ontario, Quebec), Eastern (New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland), and Northern (Yukon, Northwest Territories, Nunavut).

Professionals were eligible to participate if they delivered either counselling or healthcare services for clients after recent sexual assault, and if they were able to be interviewed in English. Each province provides counselling and healthcare services differently for sexual assault. The researcher and consultant are aware of some of these differences and key agencies to contact but may have been unaware of changes within a province that may have occurred during the pandemic. Potential participants were identified both through the investigator's contacts and publicly available listings of sexual assault services in each province or territory. Some provinces had networks of services so some participants were able to provide both urban and rural experiences. Snowball sampling was used with participants during the interview, asking participants to recommend other potential contacts if they thought another region in their province or territory had a different experience.

Some of the counselling agencies (93 in total) received emergency funding during the pandemic to assist with their operations provided by the Women and Gender Equity Canada ("WAGE" funding), distributed through the Canadian Women's Foundation. If participants in

this study had received WAGE funding, there was interest in how the funds were used and whether they were helpful during the pandemic.

Data Collection

A semi-structured approach was used to conduct interviews with all participants who consented. These were conducted virtually and audio-recorded for later transcription. The interviewers each took field notes during and after the interview to add depth to the context. These interviews took place between August and November 2021. The core questions included the following information, along with spontaneous prompts from the interviewers as needed:

- Demographics- type of services typically provided, location (urban vs. rural), clients served
- Core questions included the following:
  - What changes in service use, if any, have you seen during the pandemic?
  - What changes did you have to make, if any, to the services you deliver?
  - What factors have influenced your ability to deliver services or the changes you made?
  - What is the personal or professional impact on staff because of the pandemic or changes?
  - What is the perceived impact on clients, because of the changes?
  - What lessons have you learned. or would you take forward for future disasters or pandemics?
  - If you received WAGE funding from Canadian Women's Foundation during the pandemic, please explain the impact of this funding.

Analysis

Content analysis was used to examine the interview data (Vaismoradi et al., 2013). The process consisted of inductive open coding of the data and creating categories. There was also a comparison of data from urban and rural sites, regional locations, and between counselling and healthcare. The steps included reading/re-reading interviews and field notes individually to identify main points, then to condense into codes and then categories/themes. This was done vertically (individual interviews) and then horizontally (across interviews). NVivo version 12 was used to help organize the data given the number of anticipated interviews. The principal investigator conducted the initial analysis and coding, and then the consultant was asked to review these themes for credibility. Discussion was held to ensure consensus and identify any potential gaps in coding or observation and a coding journal was maintained throughout data collection and analysis.

Rigor

Numerous measures were introduced to support trustworthiness of the study (Forero et al., 2018; Morse, 2016). These included establishing credibility, dependability, confirmability, and transferability. Both the principal investigator and consultant participated in each others' initial interviews to ensure consistency of data collection. The principal investigator did the initial coding and then discussed it with the second team member and then the research assistant until

consensus was reached. These measures supported dependability. The two main researchers were both experienced sexual assault professionals (one in healthcare and one in counselling) and the assistant a registered social worker, thus enhancing credibility. Confirmability or auditability was supported through keeping a coding journal in NVivo and field notes. Descriptions of the participant characteristics and settings were included to support considerations of transferability.

Results

Sample and Settings

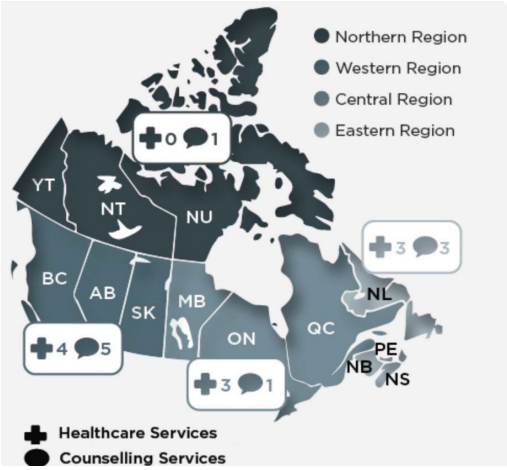
Twenty interview sessions were conducted with 21 participants (one interview included two participants at the same location). Ten interviews were with professionals from counselling centres and ten were from healthcare agencies (table 1). Many of the healthcare agencies also served clients after recent intimate partner violence, with or without experiencing sexual assault. Almost all healthcare agencies were in or near Emergency Departments, while the counselling centres were typically community based. Some provinces had standardized or shared protocols and province-wide healthcare coverage for sexual assault (in Central and Eastern Canada). At least one province had a provincial network of counselling centres.

Table 1.
Participants and Locations

Region	Counselling (n=10)	Healthcare (n=10)
Eastern (Maritimes)	3	3
Central (Ontario, Quebec, MB)	1	3
Western (SK, AB, BC)	5	4
Northern (NWT, Yukon, Nunavut)	1	0

Although attempts were made to represent all provinces and territories (Figure 1), as well as urban and rural in those regions, participants from some areas were not available. Despite numerous attempts and use of snowballing techniques, no one from Quebec participated. One of the healthcare coordinators from a nearby province, however, worked closely with Quebec as well as had worked in Quebec, and was able to provide some information on their services. The Northwest territories and Nunavut were also not represented directly but participants from neighbouring provinces provided care and support for clients who travelled from these areas and could speak somewhat to their experience. The sexual assault healthcare in the territories is either provided locally in the Emergency Department by staff on duty, or more commonly, clients are transported to nearby provinces for the medicolegal examination and treatment. Some of the provincial services covered the territories' clients, in part accounting for the limited response in the northern region. In at least two instances, the counsellors were also able to speak to healthcare services, as they either managed the services or worked closely with them. Both rural and urban representatives were obtained in most provinces, or the urban centre/network staff were able to speak to the differences in rural centres.

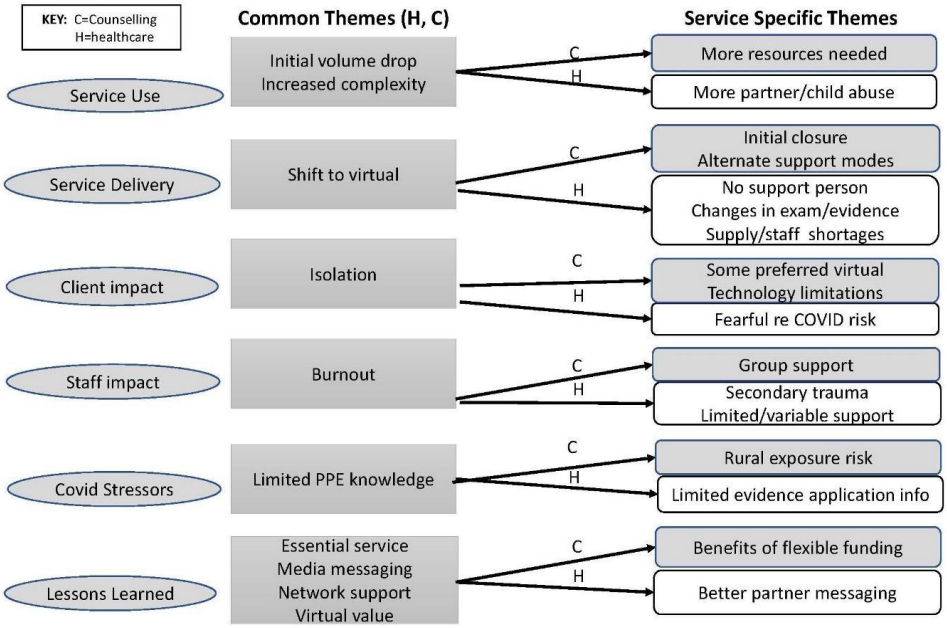
Figure 1.
Distribution of Participants across Canada



Categories and Themes

Content analysis revealed 10 consistent themes between healthcare and counselling professionals in the six major areas of interest: Service use, service delivery, client impact, staff impact, COVID stressors, and lessons learned. There was also consistency in the information provided related to the major focus areas of interest (changes to service delivery or use, changes in clients, COVID stressors, impact on staff and clients, and lessons learned). Themes within these categories are summarized in Figure 2. There were also differences in experiences, predominantly between the two groups of professionals, but also some urban/rural differences, and regional differences.

Figure 2.
Themes



a) Service Use

Most of the provinces described an initial drop in both counselling centre use and healthcare visits. The Eastern region reported less impact of COVID cases and minimal impact on their initial visits. The rate of visits increased as the lockdowns were eased and eventually resumed pre-pandemic levels. Some areas, mainly in Western and Central regions, surpassed their pre-pandemic volumes. Participants from provinces that experienced the initial drop indicated public messaging that instructed people to stay away from hospitals unless it was severe or an emergency. Both counselling and healthcare professionals described clients as not thinking their sexual assault was "severe enough" to burden the Emergency departments so chose to stay home. The professionals both described increased levels of complexity and/or severity of their clients and more mental health issues among their clients. Counsellors explained the complexity as clients needing more types of resources and referrals, and a need to increase suicide and safety checks. Healthcare professionals in most of the regions described increased severity and lethality of injuries, such as strangulation attempts, as well as a rise in intimate partner violence cases. Some healthcare agencies reported also seeing more child sexual abuse cases, acute and historic. Sexual assault volume appeared similar to pre-pandemic levels in most areas, although a few experienced increases.

b) Service Delivery

Both groups of services had some form of shift to virtual services. The shift to a virtual format for counsellors was necessary as most had to initially close with the lockdowns and could only keep crisis phone lines open. There was a delay in order to get the virtual services set up especially if affiliated with healthcare agencies, due to concerns related to security of health information. Decisions about which services to offer virtually were also required, as the nature of counselling changed with the pandemic. The focus was often described as being less on trauma counselling and more on managing the immediate crisis of the pandemic. Some counselling modalities transferred more easily than others. Centres had to become more creative with alternative ways to provide support for communities as well, such as creating support groups and mailing out aids for counselling sessions to community groups to run effectively. The adoption of virtual formats was also of mixed- use in service delivery. Some agencies found that cognitive based modalities transferred more easily than somatic or art therapies but that was not universal.

The healthcare agencies also adopted virtual services for their medical follow-up, and some used it to provide access to virtual counsellor support during the healthcare visit. COVID protocols limited the ability to support people to come into the healthcare exam. The healthcare services were able to remain open as they were part of healthcare services, but some had to relocate to Emergency to continue operating. Service delivery of healthcare was impacted in a number of regions by supply shortages (e.g., swabs and toluidine blue dye) but also by redeployment of staff. Although they could remain open, most provinces had not identified sexual assault services as essential, so nurses were often pulled into other clinical areas to meet demands. Some agencies were no longer able to provide 24/7 coverage. For example, o ne province was able to quickly set up an information line for the public to call and see which agency had a nurse examiner available shift by shift.

c) Client Impact

Both groups of service professionals described various forms of isolation experiences by their clients. Some counselling clients appreciated the virtual services, as it reduced barriers to

accessing the services even beyond the pandemic. Examples were those with limited mobility or those with limited transportation options. Other clients had difficulty with the virtual or remote delivery and felt more isolated. This isolation, in turn, worsened their trauma-related symptoms as informal supports (friends, family) were not available. Rural communities were impacted most often by the service delivery changes. They were typically challenged with access to reliable internet or lack of technology with which to access the internet. Some agencies had access to flexible funding which they were able to use for purchasing technology for community access.

d) COVID Stressors

The impact of dealing with COVID-19 was stressful, both directly and indirectly, for both counsellors and healthcare staff. Direct impacts related to the unknowns of dealing with how to use personal protective equipment, navigating understanding and fears related to risks of transmission, and having to restrict access of client support people during service provision. There was an urban/rural tension in some provinces related to vaccination cultures- the rural areas had higher rates of unvaccinated clients which created a tension around staff providing services if in person. Healthcare staff were unsure how to interpret the emerging infection transmissibility data to ensure they weren't passing on the virus. As an example, when it was unknown if the virus was spread by surface contact, one centre retained evidence kits for an additional 10 days before transferring to the police to ensure the virus would not be transmissible to them. This was later found to be unnecessary. There were no data available to guide the application of COVID protocols for forensic evidence collection and transfer, and staff had to adapt what was known based on clinical judgement. Some teams were able to create informal or formal networks to share their opinions and protocols and to discuss, share and plan courses of action. The indirect impact for all professionals was the added role strain that many carried during lockdown such as homeschooling, caregiving, and protecting family from transmission of the virus in addition to heavy workloads. Healthcare staff were frequently redeployed to Emergency, ICU, or other areas and, many continued to work extra shifts with the sexual assault teams. Coverage of all shifts 24/7 was not possible in some areas due to both redeployment and staff illnesses.

e) Staff Impact

There was a common sense of trauma across both healthcare and counselling groups. While there is slippage in terminology in the literature, there are three main forms of trauma professionals may experience: burnout, compassion fatigue, and vicarious trauma. The definitions used for this analysis are those of the Tend Academy (Mathieu, 2019). Burnout occurs when someone experiences trauma resulting from organizational issues and lack of control of the workplace. Compassion fatigue results from repeatedly caring and being unable to decompress or "refuel" the compassion satisfaction. Vicarious trauma, also called secondary traumatic stress, is the result of experiencing trauma through others. Using these definitions, burnout was the predominant form of professional trauma. The additional hours, redeployment, added workload and role strain, and professionals' personal fears and concerns about COVID-19 were all contributors to the burnout trauma. The added work of caring was seen as contributing to compassion fatigue. The experiences of their clients and severity or complexity of their experiences affected them, which is consistent with vicarious trauma. The shared experiences of these multiple forms of trauma were described by the counsellors as "collective trauma". Added to this was a sense of loss in not working together with their teams. All the counselling participants described additional measures they put into place for group support, staff incentives and rewards, debriefing sessions, and strategies to support staff. The healthcare staff similarly

described burnout with covering shifts for redeployed staff, additional home responsibilities and the uncertainty of how to manage their unique forensic needs with COVID. Healthcare staff also experienced some secondary trauma with the more severe injuries and the increased number of abused children. There was significant variability across the country in the support available to healthcare staff. At one extreme, staff in one location had to ask permission of their manager to contact Employee Assistance if stressed, while at the other extreme, teams created an informal network and reallocated funds to have a vicarious violence counsellor join regular virtual calls with staff.

f) Lessons Learned

The lessons learned continued across the last two years, as mandates and cases shifted as well as policies. Four key areas of learning were identified: the need for involvement in public messaging, recognition of sexual assault services as essential, the potential to continue virtual services, and, the value of pre-established networks and phone lines.

- Media/Public messaging. The impact of the "stay at home" messaging on clients' reluctance to seek services had not been anticipated and was in some cases harmful; possibly contributing to the severity of cases with delays. Participants expressed a need in the future to liaise with emergency services and community partners to modify the message and to ensure the community knew they were open and receiving clients.
- Recognition of sexual assault services as essential. Another key learning was the need for sexual assault service - both healthcare and counselling - to be recognized as essential services. Healthcare services were more likely to continue as they were located in health facilities, but staff were often reallocated, while counselling was often drastically reduced until they shifted to virtual.
- Continuation of virtual services. It was often commented that the virtual services were found helpful in many uses and hoped to continue with them as an option going forward. There continued to be issues with access to high-speed lines across Canada and technology so funding support would be required. In disasters or pandemics, the needs for technology or access to internet may also change. Many of the counselling communities received additional funding from the Canadian Women's Foundation (known as "WAGE" funds). The recipients learned how valuable it was to have undesignated or unrestricted funds such as these to allow them to respond quickly to the complex and unique needs of the community.
- Pre-established networks and phone lines. Networks were helpful both for providers and for the community. The networks between service providers were exceptionally helpful and more commonly found in counselling. Only a few of the provinces had any prior network set up and these were expanded, often with limited funds and volunteer time. The networks were helpful in assessing best practices given evolving evidence about COVID transmission, service delivery and supports. The networks also supported discussions of the implications for virtual service delivery (e.g., consent for services, safety strategies, best platforms, and software licensing). An added bonus of networks was a vehicle to connect staff, reduce isolation and sharing. They were used for sessions with vicarious violence counsellors, sharing circles, discussion of issues, and provision of general peer support. Support of staff was more common in counselling than in healthcare, which was a concern in some provinces. Some requested more robust types of services beyond

employee assistance for those on the front lines. Networks and access to support professionals on the networks would be one source to promote staff resilience. The networks were also helpful for community support and access. One province has a one number to call system staffed by a counsellor so community members can call in and find out where to go for services and be screened for safety. Another province set this up with existing phone lines so the community could find out which hospitals in the province had a sexual assault nurse available, but it was a phone not known to the community and advertising it added an extra burden on staff.

Discussion

Limitations

The focus of qualitative research is to understand the lived experience of participants rather than to quantify or predict with specific findings. There are not, therefore, simultaneous data to support the relative frequency of use and severity of injuries or client needs. Our confidence in the findings, however, is supported by the measures taken to establish rigor, saturation of themes, as well as consistency of the findings with other emerging literature. The cross-Canada representation of the participants and participant descriptions allows for determination of fittingness and transferability of the findings.

Implications for Practice, Education and Research

As noted, early effective interventions after recent sexual assault have been shown to reduce risks of posttraumatic stress disorder (PTSD),(Dworkin & Schumacher, 2018) which in turn can reduce clients' risks of further mental and physical consequences. Effective interventions are reliant upon provision of services by professionals who have specialized knowledge of comprehensive services and support. Despite the need for increased sexual assault services during disasters and pandemics, this has not been typical of the response and a consistent pattern of reduced or absent services is found at these times (Carter-Snell et al., 2022). Even when specialized counsellors or healthcare staff are available, they are typically deployed to other areas and their expertise is not put to use. International standards for disaster require that sexual assault services be made a priority during disasters given the increased risk (Interagency Working Group on Reproductive Health in Crisis, 2019; United Nations Population Fund-UNFPA, 2015). Despite these standards, there are not typically any gender-based violence guidelines implemented in North American disasters (Carter-Snell et al., 2022). The following recommendations for education and practice were derived from the participants and themes as well as the international recommendations.

Education and Practice

a) Prevention pre-event.

Strategies to prevent sexual assault during pandemics and other disasters are required. The nature of these varies with the type of pandemic or disaster but sexual assault professionals are well connected in the communities and are the best to determine resources. Emergency management agencies and health services disaster planning should include collaboration with sexual assault professionals both before an event and throughout. Service availability may change over time and the specialized professionals will know how to ensure comprehensive services

remain available. Sexual assault professionals provide excellent programming to prevent or reduce sexual assault and these efforts need continued support, promotion, and funding.

b) Media messaging/partners.

Inclusion of sexual assault professionals in disaster planning would allow emergency management teams to develop more effective public messaging and media. The "stay at home" order resulted in women not believing their assaults were "emergencies" and some delayed coming for help until effects were severe. In addition, the specialists are familiar with intersectionality and would be able to help focus messaging and identification of high risk or vulnerable populations where concentrated resources may be required. Messaging to partners was also an issue; for example, police were not always familiar with which services were available, or where to bring clients.

c) Essential services recognition and prioritization.

Government policy is required to ensure provision and continuation of sexual assault services along with prioritization of funding for sexual professionals, including sexual assault nurse examiners, health care teams, and counselling agencies. Without this support, sexual assault health care in particular, is often minimized or left to Emergency staff who are not typically familiar with best practices. Recognition of sexual assault counselling and healthcare as essential services helps ensure continued services during disaster and prioritization of re-opening services if closure is unavoidable. It would also limit the redeployment of specialized staff to other areas and reduce the burden and strain on remaining personnel.

d) Networking.

Each disaster or pandemic is unique. The importance of networking became clear in terms of assessing the best evidence and developing best practice protocols. These continued to evolve; so again, the network was valuable to share this information in a timely fashion. Only one counselling network and two healthcare networks were in place prior to the pandemic and only two of these were professionally developed, organized, and supported. The other was expanded using existing virtual networking and phone lines. The networks should be easy for staff to access and use. Healthcare teams within each province or territory and counselling services should be supported financially and with appropriate equipment to network. This also allows faster ability to pivot as needed when evidence changes and to provide consistent services. Networking for community awareness was also important to let partners and the public know where to go or what services remained. One province has a tollfree line already in existence, staffed by a counsellor to call and receive this information about where to go. Another province had to close some healthcare agencies due to redeployed staffing and decided to use an existing phone line staffed by volunteers for the community to call and find out which Emergency Departments had examiners on duty. Without a prior dedicated line, public awareness of this line a concern in the pandemic. A pre-established 24/7 phone line in each province would be preferred, with paid staff familiar with gender-based violence to answer calls, screen for safety and direct potential clients to best services. Familiarity with these lines would allow the community to know where to call during disasters and for staff to funnel information about what services remain accessible.

e) High speed internet Access and Technology

The virtual visit option was helpful and ideally will continue for some agencies. Rural areas in Canada do not consistently have access to high-speed internet, however, or may not have the

technology such as laptops or tablets to use for virtual visits. Support is needed in provinces and territories to provide internet, and to ensure potential clients can access the internet via technology. Many communities provide access through community spaces, health centres or libraries. Flexible funding to sexual assault agencies also supports purchase of some of these tools to ensure counsellors can connect with clients in healthcare.

Research

This study raises many questions and opportunities for further research. Examples of these include the following:

- Effectiveness of technology for various modalities of treatment and client support
- Models of networks, their development and sustainability for community support and staff support
- An environmental scan of protocols for virtual support that were used during the pandemic or other disasters and their relative effectiveness
- Staff impact burnout, compassion fatigue and vicarious violence- the occurrence of each, best practices in support and interventions, and facilitation of posttraumatic growth
- Client impact, including quantification of factors such as client satisfaction, feelings of being supported, incidence of mental health issues with various levels of support, and patterns of injury and injury characteristics with the pandemic.

Conclusion

The pandemic had an observable and important negative impact on sexual assault services accessibility, delivery and subsequent impacts on client and staff health. This study provided a beginning understanding of each of these impacts. Although limited by sample size and method, the gaps and findings were quite consistent across settings, and similar to findings of other studies. For instance, there were other reports of clients not knowing where to seek help as services were shut down or staff redeployed (Montesanti et al., 2022; Wood et al., 2021). The severity and complexity of client needs during the pandemic was also found elsewhere (Wood et al., 2021; Wood et al., 2022) as was the trauma experienced by staff (Haag et al., 2022). Challenges with conversion to virtual delivery were also described by others (Montesanti et al., 2022). These similar findings enhance the confidence and credibility of the findings. Implications for practice, research were identified to reduce risks of service gaps in future pandemics or disasters.

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References

Brenner, I., & Ben-Amitay, G. (2015). Sexual revictimization: the impact of attachment anxiety, accumulated trauma, and response to childhood sexual abuse disclosure. *Violence and victims*, *30*(1), 49-65.

http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,url,cookie,uid&db=cmedm&AN=25774414&site=ehost-live

Carter-Snell, C., & Jakubec, S. L. (2013). Exploring influences on mental health after interpersonal violence against women. *International Journal of Child, Youth and Family Studies*, *4*(1), 72-99. http://journals.uvic.ca/index.php/ijcyfs/article/view/11844

Carter-Snell, C., Jakubec, S. L., & Hagen, B. (2019). Collaborating with Rural and Remote Communities to Improve Sexual Assault Services. *Journal of community health*, *45*(2), 377-387. https://rdcu.be/bSQ0c

Carter-Snell, C., Troy, A., & Waters, N. (2022). Gaps in sexual assault prevention during natural disasters. *Journal of Sexual Medicine*, *6*(1), e1079. https://www.jscimedcentral.com/SexualMedicine/sexualmedicine-6-1079.pdf

Chu, A. T., Deprince, A. P., & Mauss, I. B. (2014). Exploring revictimization risk in a community sample of sexual assault survivors. *Journal Of Trauma & Dissociation: The Official Journal Of The International Society For The Study Of Dissociation (ISSD)*, *15*(3), 319-331. https://doi.org/10.1080/15299732.2013.853723

Corbett, E., Theobald, J., Billett, P., Hooker, L., Edmonds, L., & Fisher, C. (2022). Revictimisation of Women in Non-Urban Areas: A Scoping Review. *Trauma, violence & abuse*, 15248380221094317. https://doi.org/10.1177/15248380221094317

Cotter, A. (2021). *Intimate partner violence in Canada 2018: An overview*. Government of Canada. https://www150.statcan.gc.ca/n1/en/pub/85-002-x/2021001/article/00003-eng.pdf?st=41iPLuLC

Dworkin, E., & Schumacher, J. A. (2018). Preventing posttraumatic stress related to sexual assault through early intervention: A systematic review. *Trauma, violence & abuse*, *19*(4), 459-472.

Dworkin, E. R., Jaffe, A. E., Bedard-Gilligan, M. A., & Fitzpatrick, S. (2021). PTSD in the Year Following Sexual Assault: A Meta-Analysis of Prospective Studies. *Trauma, violence & abuse*, 1-18. https://doi.org/10.1177/15248380211032213

Eisenberg, M. E., Lust, K. A., Hannan, P. J., & Porta, C. (2016). Campus Sexual Violence Resources and Emotional Health of College Women Who Have Experienced Sexual Assault. *Violence and victims*. https://doi.org/content-VV2015-Nov_A6_Eisenberg_001-011 [pii]

Forero, R., Nahidi, S., De Costa, J., Mohsin, M., Fitzgerald, G., Gibson, N., McCarthy, S., & Aboagye-Sarfo, P. (2018). Application of four-dimension criteria to assess rigor of qualitative research in emergency medicine. *BMC Health Services Research*, *18*, 1-11. https://doi.org/10/1186/s12913-018-2915-2

Haag, H., Toccalino, D., Estrella, M. J., Moore, A., & Colantonio, A. (2022). The Shadow Pandemic: A Qualitative Exploration of the Impacts of COVID-19 on Service Providers and Women Survivors of Intimate Partner Violence and Brain Injury. *Journal of Head Trauma Rehabilitation*, *37*(1), 43-52. https://doi.org/10.1097/HTR.0000000000000751

Interagency Working Group on Reproductive Health in Crisis. (2019). *Minimum initial services package (MISP) for sexual and reproductive health*. United Nations. Retrieved March 19 from http://iawg.net/minimum-initial-service-package/

Jakubec, S. L., Carter-Snell, C. J., Ofrim, J., & Skanderup, J. (2013). Identifying rural sexual assault strengths, concerns and educational needs in rural and Aboriginal communities Alberta Canada. *Enfermeria Global*, *31*, 427-442. http://scielo.isciii.es/pdf/eg/v12n31/en_enfermeria1.pdf

MacGregor, J. C. D., Burd, C., Mantler, T., McLean, I., Veenendaal, J., Rodger, S., & Wathen, C. N. (2022). Experiences of Women Accessing Violence Against Women Outreach Services in Canada During the COVID-19 Pandemic: a Brief Report. *Journal of Family Violence*, 1-9. https://doi.org/10.1007/s10896-022-00398-2

Mathieu, F. (2019, 2019). *What is compassion fatigue?* Tend Academy. Retrieved Feb 6 from https://www.tendacademy.ca/what-is-compassion-fatigue/

McCall-Hosenfeld, J., Winter, M., Heeren, T., & Liebschutz, J. M. (2014). The association of interpersonal trauma with somatic symptom severity in a primary care population with chronic pain: exploring the role of gender and the mental health sequelae of trauma. *Journal Of Psychosomatic Research*, *77*(3), 196-204. https://doi.org/10.1016/j.jpsychores.2014.07.011

McLean, C. P., Su, Y. J., & Foa, E. B. (2014). Posttraumatic stress disorder and alcohol dependence: does order of onset make a difference? *Journal of anxiety disorders*, *28*(8), 894-901. https://doi.org/10.1016/j.janxdis.2014.09.023

Montesanti, S., Ghidei, W., Silverstone, P., Wells, L., Squires, S., & Bailey, A. (2022). Examining organization and provider challenges with the adoption of virtual domestic violence and sexual assault interventions in Alberta, Canada, during the COVID-19 pandemic. *Journal of health services research & policy*, *27*(3), 169-179. https://doi.org/10.1177/13558196221078796

Morse, J. M. (2016). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative health research*, *25*(9), 1212-1222. https://doi.org/10.1177/1049732315588501

Muldoon, K. A., Denize, K. M., Talarico, R., Fell, D. B., Sobiesiak, A., Heimerl, M., & Sampsel, K. (2021). COVID-19 pandemic and violence: rising risks and decreasing urgent care-seeking for sexual assault and domestic violence survivors. *BMC Medicine*, *19*(1), 20. https://doi.org/10.1186/s12916-020-01897-z

Pallansch, J., Milam, C., Ham, K., Morgan, P., Manning, J., Salzman, J., Kopec, K., & Lewis, M. (2022). Intimate Partner Violence, Sexual Assault, and Child Abuse Resource Utilization During COVID-19. *The Western Journal Of Emergency Medicine*, *23*(4), 589-596. https://doi.org/10.5811/westjem.2022.4.55582

Pohane, P. U., Jaiswal, S. V., Vahia, V. N., & Sinha, D. (2020). Psychopathology, perceived social support, and coping in survivors of adult sexual assault: A cross-sectional hospital-based study. *Indian Journal of Psychiatry*, *62*(6), 718-722. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_432_19

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in nursing & health*, *33*(1), 77-84. https://doi.org/10.1002/nur.20362

Scioli-Salter, E. R., Johnides, B. D., Mitchell, K. S., Smith, B. N., Resick, P. A., & Rasmusson, A. M. (2016). Depression and dissociation as predictors of physical health symptoms

among female rape survivors with posttraumatic stress disorder. *Psychol Trauma*, *8*(5), 585-591. https://doi.org/10.1037/tra0000135

10.1037/tra0000135. Epub 2016 May 5.

Sorenson, S. B., Sinko, L., & Berk, R. A. (2021). The Endemic Amid the Pandemic: Seeking Help for Violence Against Women in the Initial Phases of COVID-19. *Journal of Interpersonal Violence*, *36*(9-10), 4899-4915. https://doi.org/10.1177/0886260521997946

Ullman, S. E., & Brecklin, L. R. (2016). Sexual assault history and health-related outcomes in a national sample of women. *Psychology of Women's Quarterly*, *27*(1), 46-47. https://doi.org/https://doi.org/10.1111/1471-6402.t01-2-00006

United Nations Population Fund-UNFPA. (2015). *The Inter-Agency Minimum Standards for Gender-Based Violence in Emergencies*. The Inter-Agency Minimum Standards for Gender-Based Violence in Emergencies Programming. Retrieved January 15 from https://www.unfpa.org/featured-publication/gbvie-standards

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences*, *15*, 398-405. https://doi.org/10.1111/nhs.12048

Wolf, L. (2016). *Emotional and Social Reactivity among Individuals with Comorbid Posttraumatic Stress Disorder and Chronic Pain: A Multi-method Study of Dysregulation* [10144093, Arizona State University]. ProQuest Dissertations & Theses Global. Ann Arbor.

Wood, L., Baumler, E., Schrag, R. V., Guillot-Wright, S., Hairston, D., Temple, J., & Torres, E. (2021). "Don't Know where to Go for Help": Safety and Economic Needs among Violence Survivors during the COVID-19 Pandemic. *Journal of Family Violence*, 1-9. https://doi.org/10.1007/s10896-020-00240-7

Wood, L., Schrag, R. V., Baumler, E., Hairston, D., Guillot-Wright, S., Torres, E., & Temple, J. R. (2022). On the Front Lines of the COVID-19 Pandemic: Occupational Experiences of the Intimate Partner Violence and Sexual Assault Workforce. *Journal of Interpersonal Violence*, *37*(11-12), NP9345-NP9366. https://doi.org/10.1177/0886260520983304

World Health Organization-WHO. (2020). *Gender-based violence in health emergencies*. World Health Organization. Retrieved March 19 from https://www.who.int/health-cluster/about/work/task-teams/genderbasedviolence/en/

World Health Organization-WHO. (2021). *Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women.* https://www.who.int/publications/i/item/9789240022256

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Original Research

Self-Collection Following Rape: An Integrative Literature Review

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Abstract

The forensic nurse purports a trauma informed and person-centered approach, focusing on the health needs of the patient with a rape experience. Timing of evidence collection recently expanded, but with passing time, DNA detection decreases. One solution proposed for victims is to self-collect following rape. The concept of self-collection was viewed as controversial, evoking mixed provider reactions. To bring clarity to issues faced by victims in remote and rural areas, and for those not ready to report, an integrative literature review method targeted strengths and gaps in evidence necessary for perspective before action or reaction to the post-rape self-collection proposal. The integrative literature review explored PubMed, responsive article citations, and gray literature for publications with systematic- or meta-analysis about self-collection. One article was responsive for self-collection post-rape, so parallel literature about sensitive self-collected testing was used. Analysis identified four areas of consideration: the patient, the medical forensic provider, the evidence, and the system. The authors identified strengths, weaknesses, opportunities, and threats to patients wishing to participate or not in the adjudication of the crimes against them. The authors found gaps in the evidence about rape self-

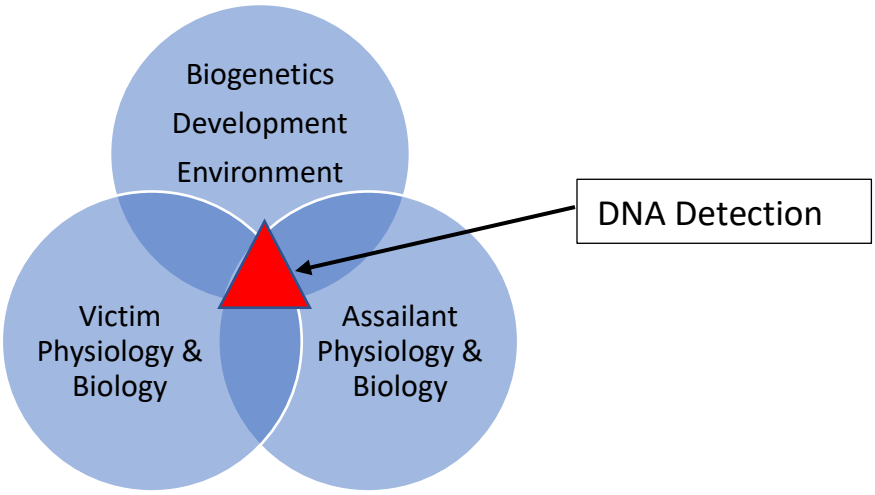
collection and found significant evidence in the self-collection of sensitive tests in the literature that concluded self-collection post-rape is a viable option when instructions meet or exceed the current practices of the forensic nurse responding to rape victims today.

Keywords: rape, sexual assault, evidence

Introduction

"In order for qualified forensic science experts to testify competently about forensic evidence, they must first find the evidence in a usable state and properly preserve it" (National Academies of Sciences Engineering and Medicine, 2009, August) (p. 9). The criminal justice system relies on functioning teams of professionals and an evidence management system with high standards to guide the identification, collection, packaging, storage, and security of evidence, guaranteeing no contamination or degradation while transported (National Institute of Justice, 2017). Figure 1 identifies evidence for multiple variables that influence the quality and amount of DNA evidence (Speck & Ballantyne, 2015). Health care providers learn about confounding health variables through their foundational education but not about evidence identification or management. Therefore, there is a recommendation for appropriate training in collecting, preserving, and packaging items holding potential probative value (Bristol et al., 2018; Magalhães et al., 2015; Newton, 2013; U. S. Department of Justice, 2013). Integral to the evidence process is the chain of custody, which tracks all the handlers of the items (Gosch & Courts, 2019; National Institute of Justice, 2017; Technical Working Group on Biological Evidence Preservation, 2014).

Figure 1
Influences in DNA Recovery

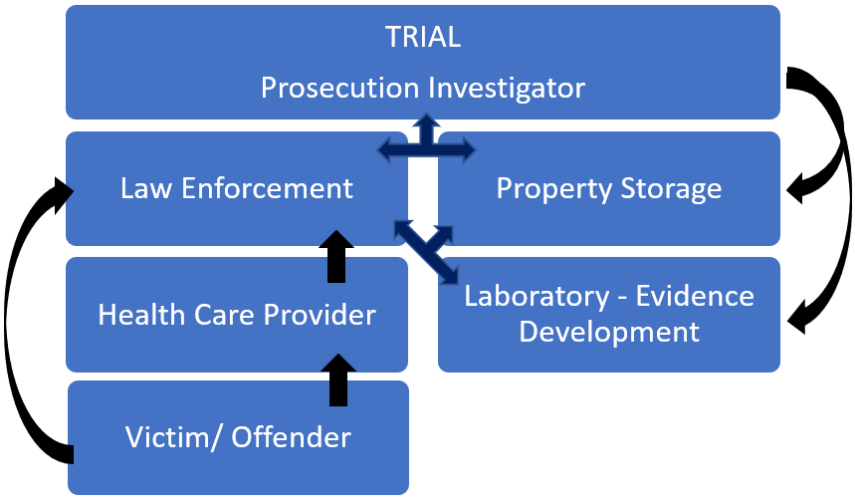


Victims of sexual crimes are often the first in the chain of custody, maintaining evidence through recommended behaviors (e.g., "do not shower," "do not drink," and "avoid eating") (Cybulska, 2007). The sexual assault victim often showers (Magalhães et al., 2015; Newton,

2013) and saves items for authorities to take when reporting. Most medical forensic health care providers or law enforcement professionals do not decline items collected by patients/victims or their guardians in the case of child victims. Most professionals accept the items, documenting the date and time received, description of the received item(s), and condition received (e.g., in a plastic or paper bag). They then package, seal, and sign the container, just as items collected directly from the patient/victim for the evidence kit or items collected at a crime scene. However, many professionals revealed during a recent meeting of forensic nurses that they rarely document if the victim brought the items in their documentation. However, once in possession of the evidence, forensic nurses begin the chain of custody, following recommendations in federal standards that properly preserve and transfer the items, as demonstrated in Figure 2.

Figure 2

Evidence Movement Among SART Members



Background

The history of post-sexual assault care has been prejudicial, promoting stereotypical views and false notions about victims (Campbell & Fehler-Cabral, 2018; DuMont & White, 2013; Lathan et al., 2019; Persson et al., 2018). These views hindered the effective investigation and prosecution of these crimes, resulting in a backlog of untested sexual assault kits (Campbell et al., 2017; Campbell et al., 2015) and additional serious crimes (ABC News, 2022). Forensic nurses and other professionals championed change through various organizations and educational institutions. When championed by emergency nurses ("Forensic Evidence Collection in the Emergency Care Setting," 2018) and team-based approaches (Lathan et al., 2019; U. S. Department of Justice, 2016) increasingly improved post- sexual assault criminal justice outcomes (Campbell, 2004; Sievers et al., 2003).

The link between stress and health (Juster et al., 2010; McEwen, 2002; McEwen & Seeman, 1999; McEwen & Stellar, 1993; Selye, 1956, 1974; Seto, 2017) improves with patient-centered and trauma-informed care (TIC) (Dowdell & Speck, 2022; Speck et al., 2023), where motivational approaches assist the patient/victim who experienced forced submission during the

sexual assault. The person-centered care approaches influences the person's self-concept (Keshet & Gilboa-Schechtman, 2017) of shame during a disclosure (DeCou et al., 2017). TIC principles (Substance Abuse and Mental Health Services Administration, 2014b; U. S. Department of Justice, 2016) of safety and transparency, voice and choice, along with peer support (Elisseou et al., 2019; Leitch, 2017; Lin et al., 2019; Muskett, 2014; Topitzes et al., 2019) enhance participation in the reporting process, which was the thinking behind the emergence of a post-rape self-collection kit. One company responded to poor reporting statistics and defended its motives as an effort to provide victims of sexual assault options in the safety of their homes. The company marketed the kit to colleges (Fowler & Bennett, 2019, August 29) where sexual assault remains poorly reported (Abner et al., 2016; DeCou et al., 2017; Donde et al., 2018) or understood among the enrolled students (Donde et al., 2018).

The firestorm that followed cited patient safety, proof of chain of custody, and untested use in court, resulting in the absence of case law to support or refute the practice (Fowler & Bennett, 2019, August 29; Knight, 2019, September 11; Wetsman, 2019, September 6). Others cited that victims would suffer immeasurably in a society that persists in victim blaming (Gravelin et al., 2019; Persson et al., 2018). The Michigan Attorney General, Dana Nessel, issued an "immediately cease and desist" letter, citing authority to "bring injunctive actions to protect the interests of consumers" under the Michigan Consumer Protection Act, MCL 445.901 *et seq* (Fowler & Bennett, 2019, August 29). The concern included failure to provide cost to consumers and information about *free* sexual assault medical forensic examination within 120 hours of the assault (p. 1). Several correctable conditions were listed with opportunities for compliance while not selling to Michigan consumers (p. 2).

Medical forensic health care providers' opinions fall across the discourse continuum. The health care equity following a sexual assault is a long-time concern among health care providers. Evidence supports access is dependent on geography, (Global Health Metrics, 2017; Ramsay et al., 2014), racial disparities (Braveman & Gottlieb, 2014), age, and medical concerns (Alvidrez et al., 2011; Zinzow et al., 2012). Some cautioned victims about a potentially negative outcome, such as the evidence quality or the patient being untrustworthy (Gravelin et al., 2019), chain of custody (Wetsman, 2019, September 6). Others cite a lack of documentation of injuries or post-assault medication access (Knight, 2019, September 11; Wetsman, 2019, September 6), whereas others have highlighted ethical considerations, the time-sensitive nature of the collection, and the need for appropriate consumer education materials.

Like many politically charged topics and issues today, initial emotional responses can hinder a robust discussion about the strengths, weaknesses, opportunities, and threats associated with self-collection following sexual assault or rape. There is no research supporting or denying support for self-collection following sexual assault. The integrative literature review aims at identifying issues associated with self-collection in parallel healthcare settings with sensitive testing, specifically self-collected kits following rape. The first aim is to identify related practices of securing evidence from patients and gaps in current practices or education that may contribute to dissension about a product designed to support victims and enhance justice through self-collection. The second aim is to provide scientifically sound assimilation of evidence to inform the path forward for researchers, funders, members of the justice system, and importantly, providers faced with the decision to take self-collected evidence brought by a victim and enter the item(s) into a chain of custody in preparation for adjudication processes.

Aims

The aims of the analysis are to

1. Identify actual practice of securing evidence and gaps in medical forensic practice related to evidence collection, as well as the health care delivery impact; and
2. Provide an evidenced-based path forward for researchers and funders alike.

Methods

A integrative literature review, limited to publications 2012 – 2022, using a PubMed search with terms *testing by self-collection* found 10,812 publications, an insurmountable number to review. Addition of the search term *rape* reduced the number to seven, where one was responsive to the search related to self-collection and rape, and six were not. Given the dearth of publications in the field related to self-collection following rape, a search using the terms *self-collection AND sensitive testing*, found 1,543 publications over the last ten years, narrowed with the search term *HIV,* finding 90 articles. Of the 90, narrowed with the search term *meta** finding six publications related to self-collection. Two articles were unresponsive (child HIV and Tuberculosis). Gray literature and references in the remaining articles were used to find other publications relevant to the integrative review completing the references cited.

Results

There are four sections reflecting the analysis of the integrative literature review, including

1. The **victim**[1] and their activities following a crime,
2. The **health care provider** and a dual role in a system where the patient assessment occurs for injury, treatment, and referral,
3. The health care provider as a **collector of evidence**, whether an RN at the bedside or advanced practice forensic nurse or physician in sexual assault care, and
4. The **system's response** when determining patient medical management or management of evidence and its usefulness after collection.

The Victim/Patient/Survivor

The integrative evidence review found that most survivors do not seek health care following sexual assault (Astrup et al., 2013; Crane, 2006; McLean et al., 2011; Office on Violence Against Women, 2013; Sommers et al., 2012; Zinzow et al., 2012). When they do, victims experience scrutiny about motives for reporting by Criminal Justice (CJ) representatives (Persson et al., 2018), and many do not report or delay reports. Particularly at risk are patients unable to report due to lack of equity and access – military deployed, incarcerated, confined, in care homes, remote rural locations, and others (Marino et al., 2019; Office on Violence Against Women, 2013). Predictable in delayed or no reporting are: age (Burnett et al., 2019), gender (Samuels et al., 2018), relationship to assailant (Bicanic et al., 2015), shame (DeCou et al., 2017), rape myth acceptance (Heath et al., 2013) and geographical location (Goodson & Bouffard, 2017; Rheuban, 2006). Supporting the reasons for the lack of reporting following sexual assault is evidence that 70% of sexually assaulted women wash their genitals following an assault and before contact with health care providers or law enforcement (Badour et al., 2012). In this case, self-collection availability helps capture the maximum DNA before washing empirically or time and activity diminish DNA detection. Some argue that rapid collection

provides evidence *if* the victim intersects with the criminal justice system (National Academies of Sciences Engineering and Medicine, 2009, August), where safety, design, and storage methods mitigate and explain contamination and degradation (Loeve et al., 2013).

Self-collection or self-administering processes are not novel concepts. Not generally known, post-coital injury is common with consensual sexual activity, and when it occurs, it heals rapidly (Anderson & Sheridan, 2012; Astrup et al., 2013; Crane, 2006; McLean et al., 2011; Office on Violence Against Women, 2013; Sommers et al., 2012; Zinzow et al., 2012). Evidence supports that patients do not hurt themselves during self-administered procedures, particularly in the genitourinary system (Kersh et al., 2021). As such, the growing home testing market for socially sensitive tests includes viral PAPs, HIV, and STIs and during Covid-19, providers and laboratory systems found ways to provide increased testing, convenience, and privacy in many areas of heath care. Self-insertion commonly occurs for sexually transmitted infection testing, intravaginal and rectal medication application, self-catheterization, tampon insertion and removal, and insertional contraception, among others (Kersh et al., 2021). When studied, research findings support self-collection increases access to health care and equity for underserved populations at risk for serious health sequelae and the same at-risk, underserved populations' increased utilization of health care (American College of Emergency Physicians, 2021; Bilbao Bourke et al., 2021; Des Marais et al., 2018; Hess et al., 2008; Kersh et al., 2021; Nelson et al., 2015). While research in self-collection does not yet include patients who experienced a sexual assault, the federal goal is increasing the utilization of specially trained medical forensic providers.

The Health Care Provider

Medical forensic health care has little to do with the law enforcement investigative process, and prosecution is outside medical forensic health care provider expertise (American Nurses Association, 2018a). At the same time, evidence is an essential tool in adjudication. Yet, the usefulness of a particular piece of evidence is mixed, especially when findings remain unclear early in an investigation (U. S. Department of Justice, 2013).

There is a lack of medical forensic health care services (Delgadillo, 2017) and patients outside the urban areas use routine clinical settings, such as public health clinics, if they choose follow-up for STI and pregnancy risks. Most communities/regions have available emergency contraception services through federally funded clinics (Holland et al., 2018). There is no evidence that the forensic nurse intervention improves recovery or mitigates adverse health outcomes (Campbell et al., 2005). However, research supports *adversarial growth* [2] (Landes et al., 2014) even without treatment after trauma. They identify elements necessary for recovery from all trauma are Trauma-Focused Cognitive Behavioral Therapy, social support, and a healthy lifestyle (nutrition, exercise, faith) (Bassuk et al., 2017; Bruce et al., 2018; Landes et al., 2014; Linley & Joseph, 2004). Continuous contact with a skilled health care provider is a strategy supported by research. It includes promoting continued mastery of reflections in response to emotional feelings about sexual violence and other traumas, as well as anxiety reduction exercises and structured reflection – all contributing to patient-victims recovery (Bassuk et al., 2017; Bruce et al., 2018; Horowitz, 2018; Landes et al., 2014; Linley & Joseph, 2004).

The Evidence

Chain of Custody. A concern related to self-collection is that packaging, storage, and transfer (chain of custody) "won't stand up in court" (Knight, 2019, September 11; Wetsman, 2019, September 6). There is little evidence to support the cautionary warnings about the chain of custody, the trustworthiness of the collector/victim, or the lack of documentation. "Chain-of-custody documentation identifies all persons who have had custody of evidence and the places where that evidence has been kept in chronological order from collection to destruction." (Technical Working Group on Biological Evidence Preservation, 2014) (p. 25). Chain of Custody is a logarithm document that chronicles possession and is designed to help victims and accused alike (Office on Violence Against Women, 2013).

The chain of custody begins with the victim, who gives evidence to a health care provider or law enforcement officer, who continues the chain. The courts use the chain linkages to ensure the integrity of evidence during adjudication, and after adjudication, all evidence ends up in property storage facilities. In health care settings, the patient is the first possessor of evidence in the chain of custody. An underlying assumption in health care settings is that the patient will tell the truth because the health care provider relies on the patient's history of events to create a medical and health promotion treatment plan (Ball et al., 2019). There is also a provider presumption that the patient would not alter or destroy evidence, argued by courts and beyond the current discussion. In cases without proper instruction on collecting and maintaining collected items, the evidence may be compromised, where adulteration may occur *without* intent in the existing environment and with the aging of the evidence. Clear instructions about the evidence and maintenance mitigate degradation.

Accuracy. Evidence collection by SANEs is more accurate than collection from non-SANE collectors (Sievers et al., 2003). Accuracy in this study was measured with ordinal descriptions of documentation and not the probative value of evidence (e.g., completed chain of custody, properly sealed and labeled envelopes, collected blood and swabs, and included crime laboratory report) and is without statistical significance. The contamination concern was not addressed, which is always a risk, even with the medical forensic provider, where laboratories often ask for provider DNA. With sensitive DNA testing, it is common to find aberrant DNA from persons not in the sphere of the victim, e.g., investigators or health care professionals. Defense challenges of such can always occur during adjudication. To minimize contamination, medical forensic providers may or may not follow recommended guidelines to avoid contamination, e.g., Personal Protective Equipment, e.g., barrier clothing, and frequent glove changes (Technical Working Group on Biological Evidence Preservation, 2014).

Parallel science of self-collection. Conflicting data in parallel science exists supporting self-collection of sensitive tests. A thorough analysis of the self-collection issue is difficult when there is no reliable research to support or refute self-collection following sexual assault. There is anecdotal evidence from forensic nurse self-reports in practice, where medical forensic health care providers[3] and law enforcement accept self-collected evidence routinely from patients/ victims. The victim is often the first in the chain of custody, preserving the item and then giving the evidence to a health care provider or law enforcement officer. From that point, the evidence proceeds throughout the established evidence management processes (Figure 2). Keep in mind

that the probative value of any item of evidence is initially unknown (Technical Working Group on Biological Evidence Preservation, 2014) (p. 2).

The self-collection movement and research exist to support in-home self-collection for at-risk and remote vulnerable patients. Advocacy groups support and advise consumers about testing for sensitive tests such as sexually transmitted infections. When the SANE collects urine for forensic purposes, they do not witness the collection and trust the person followed instructions for self-collection. Consequently, today consumers can self-test for DNA and all the available tests around heredity offered by the home-testing market. The companies providing sensitive sexually transmitted disease testing encourage "tak[ing] control of your intimate health" and sending the samples to CLIA-approved organizations and cite FDA approval for self-collection devices (Self-collect LLC, 2019).

Evidence timing. Although the timing for evidence collection is widening (Speck & Ballantyne, 2015; Speck & Hanson, 2019, November) and methods for DNA detection improve annually with rigorous analysis of the backlog (Wang & Wein, 2018), the rapid collection increases the probative value of evidence of sexual assault (Butler, 2015). Self-collection is an option for reducing the time interval between the act and the collection of evidence. With proper and safe instructions for collection, packaging, and preservation, the research indicated that patients increase their utilization of health care providers (Des Marais et al., 2018; Hess et al., 2008; Nelson et al., 2015).

Evidence acceptance or collection? Often patients/victims bring items to the medical forensic examination, and the medical forensic health care provider does not reject these items. The gap identified by this analysis is that the evidence collected and delivered by the patient, the evidence collected from the patient's body by the health care provider, and the evidence self-collected during a medical forensic exam are not consistently differentiated in the documentation by the medical forensic provider. More research is needed to discern the value of items *collected by the patient and brought to* a health care provider, *collected by the patient during an exam,* and *collected from the body by* the health care provider. There is an opportunity to discern the probative value of all collection situations with research.

The System

The evidence for the effectiveness of forensic nurses in courtrooms is challenging to study (Campbell et al., 2005). Trends demonstrate improved psychological care of victims (Barzoloski-O'Connor, 2003), fewer errors in evidence collection (Ledray & Simmelink, 1997; Sievers et al., 2003), documentation and chain of custody (Sievers et al., 2003), and better adjudication outcomes (Campbell et al., 2005). Adjudication outcomes are not forensic nurse practice outcomes or scientific endeavors for forensic nurses. Rather, they reflect the totality of an adjudicated case, including police investigation, gathering evidence of a crime, charging decisions, and attorney strategies for prosecution or defense – *all outside the scope of the forensic nurses' practice* and scientific inquiry.

One identified area influenced by forensic nurse practice and scientific inquiry is patient/victim responses to participation in court processes. One study recognized that "strong patient care practice had positive indirect effects on victims' participation in the criminal justice system" (Campbell et al., 2011) (Abstract). However, there is no evidence to demonstrate that victim participation in adjudication processes is good or bad for the victims' emotional or physical health. Often survivors recant terrible experiences with the healthcare system with the

unintended consequence of the "post-rape forensic examination ... [as an impetus to] discourage reporting, investigation, and prosecution" (Corrigan, 2013) (Abstract).

All evidence collection should be accurately recorded, whether brought to the nurse, collected by the patient during the exam, or collected by the nurse. The court views the forensic nurse's role as unbiased with three functions: "comfort and care of patients complaining of sexual assault, competent and consistent evidence collection, and expert testimony on anatomy and tissue" (Canaff, 2009) (Abstract). Other benefits of the forensic nurse witnesses include their availability, cooperativeness with the court, and understanding of their responsibility to describe nurse-initiated activities. This responsibility also includes describing the institution's protocols (e.g., physical evaluation, evidence collection, and management), reasons for referrals for medical diagnoses, documentation of injury, and, if deemed an expert (based on education and experience), providing an experienced view of the findings to the court (Early, 2016). A consideration for the court is that bedside experience is not medical certainty.

Courts deem registered nurses as experts when they meet the court's definition of an expert. With the low bar for what makes a court expert, courts should move with caution and full understanding of the General Forensic Nurse and Advanced Forensic Nurse practices as defined by the nurse licensing bodies and organizational and educational standards (American Association of Colleges of Nursing, 2021; Speck & Mitchell, 2021). Nurse expertise is a licensed designation (Huynh & Haddad, 2022), not afforded to the registered nurse without additional credentials (e.g., SANE, wound care, emergency care), healthcare organizational approval, and experiential practice history. For graduate prepared advanced practice nurses in forensic nurse settings, advanced education, and additional credentialing (e.g., nurse practitioners and clinical nurse specialists) (Mohr & Coke, 2018) are required in addition to their entry into practice credentials. The advanced practice nurse role with independent practice authority includes the creation of a differential diagnosis for the cause and manner of the findings (e.g., co-morbid disease influence or blunt trauma) as well as prescriptive treatment plans (e.g., psychological interventions and medication prescriptions). Regardless of the nurse's licensed practice authority, evidence presentation and the determination of its probative value is a criminal justice process *outside the scope of all nurse practices.*

Limitations

The authors realize other concerns not addressed in this analysis, such as delving into the ethical considerations of self-collection, explicit or implicit bias, and current collection and management processes. As best as possible, supporting data and research about the identified issues were brought forward, including publications that may be considered outside the dates typically useful in establishing an evidence base. However, some cited publications are seminal and provided the foundation for thinking about forensic nurse practices that permeate today.

Discussion

The analysis contained herein was to identify the complexities of the actual practice of a forensic nurse, gaps in medical forensic practice related to evidence collection, and treating the patient in a medical forensic health care delivery system. The authors hope to provide a path forward for researchers, educators, administrators, and funders alike in the areas of patient/victim/survivor care, forensic medical health care provider education and practices (whether RN or advanced practice), evidence management in health care settings, and legal

systems' use of professional practice roles and the evidentiary outcomes. The following summary follows the evidence for each stakeholder.

The Patient

- Self-collection of samples/specimens is a safe, widely accepted practice in medical communities, particularly for populations at risk and without access to care and promotes engagement with health care providers.
- There is no evidence supporting that patients will self-injure any more than other patients who seek medical forensic health care providers or law enforcement intervention with a report of rape or sexual assault.
- The concern about patients not receiving comprehensive care is a valid concern, supported by the persistent evidence that few victims report (<1:4) and most wash or bathe before reporting (8 of 10 reporters). There are no recommendations other than encouraging reporting sexual assault and care in a medical forensic setting, if available.
- There is a federal push to train providers for those in rural and remote locations, which has not yet materialized in all geographic areas. Tele-health/medicine is growing to assist providers and, in the future, may provide an outlet for care for the victim directly.
- There is no evidence to address self-collection outcomes as there is no data. However, self-collection offers the military deployed, remote or rural victims a choice about when and if to report with strong evidence that reduces the timing from event to collection. For those unsure about reporting, educational literature emphasizing seeking specialized care post-assault may capture a population never served by the medical forensic health care provider community.
- Self-collection in medical procedures is receiving wide acceptance, particularly in vulnerable populations where manufacturers adhere to regulations for the safe use of their products.
- Nurse ethics supports the patient's autonomy by providing options for individuals without resources to participate in alternate methods for seeking services – one of the options in the case of sexual assault is self-collection.
- Companies providing self-collection options must meet legislative and regulatory guidelines for protecting the public, with evidence-based instructions for the collection process and safety of the product and strong recommendations to seek formal care from medical forensic providers. Providing experienced forensic nurses via telehealth is one way to address gaps to support victims who are unsure about reporting.

The Medical Forensic Health Care Provider

- Self-collection, a trauma-informed and patient-centered approach, meet the ethical obligation of nurses to support patient autonomy and self-actualization (American Nurses Association, 2015b).
- The sparse evidence is clear that the quality of evidence collected by a medical forensic provider is more accurate than non-trained providers (Sievers et al., 2003). Still, the notion that quality evidence diminishes without a medical forensic provider is conjecture. There is no data with which to compare the two.
- There is a need in health care communities serving patients/victims to distinguish between evidence collected by the patient/victim and given to the provider, evidence collected by the patient/victim during an exam with a forensic nurse present, and items

directly collected by the medical forensic provider. The patient-provider encounter should reflect this distinction in the documentation of items of evidence.

- The research evidence indicates a shortage of providers to care for victims outside urban areas. However, there are community health care centers and public health departments that could provide contraceptive and medical care recommended to patients after a sexual assault.
- All evidence collected by the medical forensic health care provider holds potential probative value because the items are collected as directed by the patient's event history. Licensed registered nurses are skilled providers trained to recognize potential health sequelae as risks to recognize and mitigate (American Nurses Association, 2018a, 2018b). Licensed advanced practice registered nurses have RN skills and can also diagnose and treat post-assault risk and illness like physicians. In the best circumstances, the patient/victim can access the advanced forensic nurse provider for future health care needs.
- There is no evidence that medical forensic health care providers improve recovery or mitigate adverse health outcomes for patients/victims. There is some evidence that the presence of SARTs and SANEs improve satisfaction surveys with the process, and clients feeling supported in a very scary system (Campbell, Patterson, & Lichty, 2005;Campbell et al, 2008; Fehler-Cabral, Campbell, & Patterson). Similar anecdotal reports exist from victims who report in the communities with the *Start by Believing* campaign (EVAWI, 2023). Further research is needed in this area to understand specifically how populations differ, with and without the presence of a supportive team. Regardless, nurses motivated by ethical principles (American Nurses Association, 2015a) in person-centered and trauma-informed care support and encourage patients to exercise autonomy through the follow-up process, with mental health and medical services that improve opportunities for post-trauma growth. Futuristically, interaction with the forensic nurse, trained as SANE or advanced forensic nurse, via telehealth may be sufficient to guide the client through self-collection. Contact with a forensic nurse, knowledgeable about local resources and processes following rape reports is essential for referrals promoting continuity in patient care.
- Large-scale studies following patients/victims through their recovery experiences are essential in understanding personal growth post rape trauma.

The Evidence

- Questions about the victim's motive (DeCou et al., 2017; Koss, 2000) to bring evidence to a medical forensic provider destabilizes the victim's belief of safety when seeking care. The question about source or motive undermines the decision of the victim to self-collect any evidence and questions the victim's desire to enhance their case or improve the quality of evidence with the rapid collection, particularly if there is a psychological urge to bathe/shower/or clean orifices "contaminated" by an assailant.
- Victims/Survivors have traumatic treatment experiences in systems (Christian-Brandt et al., 2019) and are often subjected to court proceedings that question motives for reporting, where their words or behaviors are twisted, and often the victim regrets agreeing to the court processes (Heath et al., 2013).
- The parallel science of self-collection is robust and used throughout medicine for various sensitive testing (e.g., STIs). It is common (e.g., cardiac arrhythmia and diabetes

monitoring), and the probative value of any self-collection, as in medicine, is unknown until translated by the licensed health care provider or laboratory scientist, whether clinical or forensic.

- The research supports a narrow interval between the event and the collection of samples, a goal of the self-collection movement. After meeting consumer safety needs, instructions to seek care from medical forensic providers are important to the adjudication process.
- A gap occurs due to a lack of evidence supporting the assertion that self-collection of evidence, a common practice noted anecdotally by forensic nurses (see footnote 2), results in problems with the chain of custody.
- There is no evidence that the chain of custody is more vulnerable to defense charges than it already is. Data is needed to support or refute this claim.
- Evidence collected from the patient who brings evidence and consents to release the evidence to a forensic nurse or law enforcement professional should follow standard operating procedures (SOP) 2 (Found at https://www.safeta.org/page/ExamProcessEviden3)
- The probative value of self-collected evidence has no support in the literature because it is not yet studied. The literature, however, supports the need for accuracy in labeling, packaging, and management of evidentiary items, including sexual assault kits and other items collected following sexual assault.
- Contamination is also not studied, whether by providers, law enforcement professionals, or victims, but it is omnipresent in standards requiring increasing barrier protections for the current highly sensitive DNA tests (National Institute of Justice, 2017).
- The concern about an interrupted chain of custody is not supported by published studies or current evidence management practices.
- Additional research is needed to differentiate and prioritize the evidentiary value of items, regardless of the collection or acceptance into the chain of custody.

The System

- The courts find the practices of medical forensic health care providers useful, where they document care activities and interventions to mitigate trauma reactions, collect evidence, document injuries, and testify about their activities.
- Emotionally driven reactions in systems and organizations are divisive and not useful in the scientific endeavors of forensic nurses.
- Medical forensic health care providers advocate and influence victim participation in the criminal justice system through fewer errors in evidence collection, treatment, and psychological care of victims, resulting in better adjudication.
- However, it is unknown if the victim benefits from participation in the adjudication process, and the link to the nurse is not measurable.
- The evidence presentation by officers of the court, acceptance by the court, and determination of the probative value of evidence in the adjudication process are outside the scope of all nurse practices.

Conclusions

The assertions about forensic nurse practices and potential negative outcomes are concerns without evidence, and the results of the integrative analysis did not support widely disseminated assertions of ethical violations or political actions taken by victims who choose self-collection

following sexual assault. The analysis did identify many gaps in the literature about forensic nurse practices and the acceptance of evidence collected by the victim and brought to law enforcement or the forensic nurse. However, this is not an exhaustive list of the research gaps in medical forensic health provider practices or patient outcomes. As such, these authors support research and practice that is trauma-informed and patient-centered, with a focus on using nursing theories, concepts, frameworks, and accepted scientific processes for research and analysis. Participation and leadership in teams that include forensic nurse researchers are necessary to answer the following:

- What is the impact of nurse practice on patient health outcomes following trauma (rape or any act of violence)?
- What are current methods to establish the safety and efficacy of self-collection after sexual assault or rape, or any act of violence?
- What impact does self-cleaning have on DNA retrieval over time and the effect on victim healing?
- What defines victim self-collection and medical forensic provider collection? How is that documented?
- What evidence tracking occurs from the collection of items in a sexual assault kit through the disposition of the kit or items in the kit, and how does it affect victim healing?
- What ethical tenets should be considered and addressed regarding self-collection following a sexual assault by the nurse and the system?
- What are the minimal recommended contents of a sexual assault kit, whether used by a medical forensic health care provider, law enforcement officer, or the survivor of a sexual assault?

The evidence supports a robust data retrieval system, instructions in self-collection, access to educational materials, location of nearest health care services, and detailed instructions about safe self-collection where the consumer can read, listen, or visually see the website, with language options and visual/auditory support. There should be tracking of the self-collection kits from development through the collection to destruction, with expiration dates and time limits for use. For example, an activation coding system, use of a cell phone to photograph documentation of date and time for steps, and access to a system to document their history in a journal, allowing the sexual assault survivor to record their memory as it returns.

The medical forensic health care provider should add data points to the medical forensic chart that distinguish who brings evidence to the encounter (first in the chain of custody) and who collects evidence after arrival in the system. In self-collection, the medical forensic health care provider avoids challenging victim decisions and encourages patients/victims to be confident in their motives and actions. As such, the provider accepts all items from the patient, and history of the patient's experience, supporting trauma-informed principles (Substance Abuse and Mental Health Services Administration, 2014a), beginning with their autonomy, voice, and choice to report and any subsequent decisions, aligning with nurse ethics (American Nurses Association, 2015a). Additionally, for the advanced practice and physicians, opportunities to support the survivor throughout post-trauma emotional growth and being present to help overcome triggering and sensory reactions that occur for some throughout their lived experience. Nurses also provide additional instructions and opportunities for all health concerns.

For the courts, all evidence, regardless of source, requires effective recording to maintain the chain of custody. The nurse's role is broad, but for the court, the expectation is to take care of the patient first. Then the court expects consistent evidence collection, also known as sampling in nursing, using methods based on the current nursing and medical science to avoid harm to the patient. Last, the court expects testimony about nurse education and experience, and in the case of sexual assault – caring for the biopsychosocial and spiritual impact and health outcomes, which is the practice of all registered nurses. The medical forensic nurse provider should understand that factual witnessing about the encounter and their nurse activities provides documented and verbal evidence for the system. The comprehensive criminal justice or civil investigation and other probative evidence gathered by the professionals charged with investigating the crime are unknown to the medical forensic health care provider. Nurses must know their scope of practice and the limits of their role as forensic nurses, whether registered nurses or in advanced nursing practice. Last, presenting evidence and determining its probative value is a criminal justice process *outside the scope of all nurse practices*.

Footnotes

[1] In this paper, the patient, victim, and survivor terms are used interchangeably. As nurse authors, patient is the preferred term as the person seeking care is receiving care under a license governed by the State Boards of Nursing or other governmental agency designated to license providers. The purpose is to guarantee minimum education, scope and practice standards, and safety of the population served.

[2] *Adversarial growth* (AKA *post-trauma growth*) is a term that describes the process of recovery and acceptance of traumatic events in one's life, identifying strengths and lessons learned. Research is clear that most recover from traumas, where recovery for some is more difficult with adverse childhood experiences.

[3] At a recent meeting of forensic nurses, the following question was asked of random attendees: "Have you declined to take items that were collected by the victim and brought to the medical forensic examination?" The resounding answer was "no," and many reported taking tampons, wash cloths, paper napkins, Kleenex, and toilet paper and other miscellaneous items brought by the patient to the medical forensic evaluation.

References

ABC News. (2022, September 21, 2022). Nightline: Body of Evidence (Season Fall, 2022, [Television]. *Memphis woman files lawsuit against police for failing to investigate her rape case*. ABC News, https://www.yahoo.com/news/memphis-woman-files-lawsuit-against-124948893.html

Abner, E. L., Teaster, P. B., Mendiondo, M. S., Ramsey-Klawsnik, H., Marcum, J. L., Crawford, T. N., & Wangmo, T. (2016). Victim, Allegation, and Investigation Characteristics Associated With Substantiated Reports of Sexual Abuse of Adults in Residential Care Settings. *J Interpers Violence*, 886260516672051. https://doi.org/10.1177/0886260516672051

Alvidrez, J., Shumway, M., Morazes, J., & Boccellari, A. (2011). Ethnic disparities in mental health treatment engagement among female sexual assault victims. *Journal of Aggression, Maltreatment & Trauma, 20*(4), 415-425.

American Association of Colleges of Nursing. (2021). *The Essentials: Core Competencies for Professional Nursing Education* AACN. Retrieved August 1, 2022 from https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf

American College of Emergency Physicians. (2021). Caring for Patients Who Have Experienced Trauma: ACOG Committee Opinion, Number 825. *Obstetrics and Gynecology*, *137*(4), e94-e99. https://doi.org/10.1097/aog.0000000000004326

American Nurses Association. (2015a). *Code of ethics for nurses with interpretive statements*. American Nurses Publishing,. https://www.nursingworld.org/coe-view-only

American Nurses Association. (2015b). *Code of Ethics for Nurses With Interpretive Statements*. American Nurses Association. Retrieved March 20, 2017 from http://nursingworld.org/DocumentVault/Ethics-1/Code-of-Ethics-for-Nurses.html

American Nurses Association. (2018a). *Forensic Nursing Scope and Standards of Practice*. American Nurses Association. https://www.nursingworld.org/nurses-books/forensic-nursing-scope-and-standards-of-practice-2nd-ed/

American Nurses Association. (2018b). *The Nursing Process*. American Nurses Association. Retrieved January 1 from https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/the-nursing-process/

Anderson, J. C., & Sheridan, D. J. (2012). Female genital injury following consensual and nonconsensual sex: state of the science. *Journal of Emergency Nursing, 38*(6), 518-522. https://doi.org/10.1016/j.jen.2010.10.014

Astrup, B. S., Ravn, P., Thomsen, J. L., & Lauritsen, J. (2013). Patterned genital injury in cases of rape – A case–control study. *Journal of Forensic and Legal Medicine, 20*(5), 525-529. https://doi.org/https://doi.org/10.1016/j.jflm.2013.03.003

Badour, C. L., Feldner, M. T., Babson, K. A., Blumenthal, H., & Dutton, C. E. (2012). Disgust, mental contamination, and posttraumatic stress: Unique relations following sexual versus non-sexual assault. *Journal of Anxiety Disorders, 27*(1). https://doi.org/10.1016/j.janxdis.2012.11.002

Ball, J. W., Dains, J. E., A., F. J., Solomon, B. S., & Stewart, R. W. (2019). *Seidel's Guide to Physical Examination: An Interprofessional Approach* (9th ed.). Elseiver.

Barzoloski-O'Connor, B. (2003). Perspectives in leadership. SAFE haven for sexual assault victims at Mercy ED. *Nursing Spectrum (Washington, DC/Baltimore Metro Edition) 13*(21), 221.

Bassuk, E. L., Latta, R. E., Sember, R., Raja, S., & Richard, M. (2017). Universal Design for Underserved Populations: Person-Centered, Recovery-Oriented and Trauma Informed. *Journal of Health Care for the Poor and Underserved, 28*(3), 896-914. https://doi.org/10.1353/hpu.2017.0087

Bicanic, I. A. E., Hehenkamp, L. M., van de Putte, E. M., van Wijk, A. J., & de Jongh, A. (2015). Predictors of delayed disclosure of rape in female adolescents and young adults. *European Journal of Psychotraumatology, 6*(1). https://doi.org/10.3402/ejpt.v6.25883

Bilbao Bourke, J., Dobrovolny, J., Eaton, M., Ferrante, T., & Smith, M. (2021). Complex Trauma Care Pathway: Results of a 12-Month Pilot. *Perm J, 25*. https://doi.org/10.7812/tpp/20.147

Braveman, P., & Gottlieb, L. (2014). The Social Determinants of Health: It's Time to Consider the Causes of the Causes. *Public Health Reports, 129*(Suppl 2), 19-31. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3863696/

Bristol, S., Kostelec, T., & MacDonald, R. (2018). Improving Emergency Health Care Workers' Knowledge, Competency, and Attitudes Toward Lesbian, Gay, Bisexual, and Transgender Patients Through Interdisciplinary Cultural Competency Training. *Journal of Emergency Nursing, 44*(6), 632-639. https://doi.org/10.1016/j.jen.2018.03.013

Bruce, M. M., Kassam-Adams, N., Rogers, M., Anderson, K. M., Sluys, K. P., & Richmond, T. S. (2018). Trauma Providers' Knowledge, Views, and Practice of Trauma-Informed Care. *Journal of Trauma Nursing, 25*(2), 131-138. https://doi.org/10.1097/jtn.0000000000000356

Burnett, J., Dyer, C. B., Clark, L. E., & Halphen, J. M. (2019). A Statewide Elder Mistreatment Virtual Assessment Program: Preliminary Data. *Journal of the American Geriatrics Society, 67*(1), 151-155. https://doi.org/10.1111/jgs.15565

Butler, J. M. (2015). The future of forensic DNA analysis. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences, 370*(1674), 20140252. https://doi.org/10.1098/rstb.2014.0252

Campbell, R. (2004, 2008). *The effectiveness of sexual assault nurse examiner (SANE) programs*. National Online Resource Center on Violence Against Women https://vawnet.org/sites/default/files/materials/files/2016-09/AR_SANE.pdf

Campbell, R., Feeney, H., Fehler-Cabral, G., Shaw, J., & Horsford, S. (2017). The National Problem of Untested Sexual Assault Kits (SAKs): Scope, Causes, and Future Directions for Research, Policy, and Practice [Review]. *Trauma, Violence, and Abuse, 18*(4), 363-376. https://doi.org/10.1177/1524838015622436

Campbell, R., & Fehler-Cabral, G. (2018). Why Police "Couldn't or Wouldn't" Submit Sexual Assault Kits for Forensic DNA Testing: A Focal Concerns Theory Analysis of Untested Rape Kits [Article]. *Law and Society Review, 52*(1), 73-105. https://doi.org/10.1111/lasr.12310

Campbell, R., Greeson, M., & Patterson, D. (2011). Defining the boundaries: how sexual assault nurse examiners (SANEs) balance patient care and law enforcement collaboration. *Journal of Forensic Nursing, 7*(1), 17-26. https://doi.org/10.1111/j.1939-3938.2010.01091.x

Campbell, R., Patterson, D., & Lichty, L. F. (2005). The effectiveness of sexual assault nurse examiner (SANE) programs: a review of psychological, medical, legal, and community outcomes. *Trauma Violence Abuse, 6*(4), 313-329. https://doi.org/10.1177/1524838005280328

Campbell, R., Shaw, J., & Fehler-Cabral, G. (2015). Shelving Justice: The Discovery of Thousands of Untested Rape Kits in Detroit [Article]. *City and Community, 14*(2), 151-166. https://doi.org/10.1111/cico.12108

Canaff, R. (2009). Nobility in objectivity: A prosecutor's case for neutrality in forensic nursing. *Journal of Forensic Nursing, 5*(2), 89-96. https://doi.org/10.1111/j.1939-3938.2009.01039.x

Christian-Brandt, A. S., Santacrose, D. E., Farnsworth, H. R., & MacDougall, K. A. (2019). When Treatment is Traumatic: An Empirical Review of Interventions for Pediatric Medical Traumatic Stress. *American Journal of Community Psychology*. https://doi.org/10.1002/ajcp.12392

Corrigan, R. (2013). The New Trial by Ordeal: Rape Kits, Police Practices, and the Unintended Effects of Policy Innovation. *Law & Social Inquiry, 38*(4), 920-949. https://doi.org/10.1111/lsi.12002

Crane, P. A. (2006). *Predictors of injury associated with rape* University of Pittsburgh]. rzh. http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=109846919&site=ehost-live

Cybulska, B. (2007). Sexual assault: key issues. *Journal of the Royal Society of Medicine, 100*(7), 321-324. https://doi.org/10.1177/014107680710000713

DeCou, C. R., Cole, T. T., Lynch, S. M., Wong, M. M., & Matthews, K. C. (2017). Assault-related shame mediates the association between negative social reactions to disclosure of sexual assault and psychological distress. *Psychological Trauma: Theory, Research, Practice and Policy, 9*(2), 166-172. https://doi.org/10.1037/tra0000186

Delgadillo, D. C. (2017). When There is No Sexual Assault Nurse Examiner: Emergency Nursing Care for Female Adult Sexual Assault Patients. *Journal of Emergency Nursing, 43*(4), 308-315. https://doi.org/https://doi.org/10.1016/j.jen.2016.11.006

Des Marais, C. A., Zhao, M. Y., Hobbs, T. M., Sivaraman, S. V., Barclay, S. L., Brewer, S. N., & Smith, S. J. (2018). Home Self-Collection by Mail to Test for Human Papillomavirus and Sexually Transmitted Infections. *Obstetrics and Gynecology, 132*(6), 1412-1420. https://doi.org/10.1097/AOG.0000000000002964

Donde, S. D., Ragsdale, S. K. A., Koss, M. P., & Zucker, A. N. (2018). If It Wasn't Rape, Was It Sexual Assault? Comparing Rape and Sexual Assault Acknowledgment in College Women Who Have Experienced Rape. *Violence Against Women, 24*(14), 1718-1738. https://doi.org/10.1177/1077801217743339

Dowdell, E. B., & Speck, P. M. (2022). Foundations For Trauma Informed Care in Nursing Practice. *American Journal of Nursing, 122*(4). https://journals.lww.com/ajnonline/Fulltext/2022/04000/CE__Trauma_Informed_Care_in_Nursing_Practice.22.aspx

DuMont, J., & White, D. (2013). Barriers to the effective use of medico-legal findings in sexual assault cases worldwide. *Qualitative Health Research, 23*(9), 1228-1239. https://doi.org/10.1177/1049732313502396

Early, S. (2016). North America's Evolving Nursing Specialty. *Journal of Legal Nurse Consulting, 27*(4), 10-15. http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=120134334&site=ehost-live

Elisseou, S., Puranam, S., & Nandi, M. (2019). A Novel, Trauma-Informed Physical Examination Curriculum for First-Year Medical Students. *MedEdPORTAL, 15*, 10799. https://doi.org/10.15766/mep_2374-8265.10799

Forensic Evidence Collection in the Emergency Care Setting. (2018). *Journal of Emergency Nursing, 44*(3), 286-289. https://doi.org/10.1016/j.jen.2018.03.010

Fowler, D. F., & Bennett, K. J. (2019, August 29). *Letter: Cease and desist* https://www.michigan.gov/documents/ag/Notice_of_Intended_Action_to_MeToo_Kits_Company_08-29-19_664596_7.pdf

Global Health Metrics. (2017). Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet, 390*(10100), 1151-1210. https://doi.org/10.1016/s0140-6736(17)32152-9

Goodson, A., & Bouffard, L. A. (2017). The Rural/Urban Divide: Examining Different Types of Assault Through a Social Disorganization Lens. *J Interpers Violence*, 886260517711179. https://doi.org/10.1177/0886260517711179

Gosch, A., & Courts, C. (2019). On DNA transfer: The lack and difficulty of systematic research and how to do it better. *Forensic Sci Int Genet, 40*, 24-36. https://doi.org/10.1016/j.fsigen.2019.01.012

Gravelin, C. R., Biernat, M., & Bucher, C. E. (2019). Blaming the Victim of Acquaintance Rape: Individual, Situational, and Sociocultural Factors. *Frontiers in Psychology*, *9*, 2422-2422. https://doi.org/10.3389/fpsyg.2018.02422

Heath, N. M., Lynch, S. M., Fritch, A. M., & Wong, M. M. (2013). Rape myth acceptance impacts the reporting of rape to the police: a study of incarcerated women. *Violence Against Women, 19*(9), 1065-1078. https://doi.org/10.1177/1077801213501841

Hess, R., Austin, R. M., Dillon, S., Chang, C. C., & Ness, R. B. (2008). Vaginal maturation index self-sample collection in mid-life women: acceptability and correlation with physician-collected samples. *Menopause, 15*(4 Pt 1), 726-729. https://doi.org/10.1097/gme.0b013e31816c5541

Holland, A. C., Strachan, A. T., Pair, L., Stallworth, K., & Hodges, A. (2018). Highlights From the U.S. Selected Practice Recommendations for Contraceptive Use. *Nursing for Women's Health, 22*(2), 181-190. https://doi.org/10.1016/j.nwh.2018.02.006

Horowitz, M. (2018). Redefining Identity after Trauma or Loss. *Psychodyn Psychiatry, 46*(1), 135-144. https://doi.org/10.1521/pdps.2018.46.1.135

Huynh, A. P., & Haddad, L. M. (2022). Nursing Practice Act. In *StatPearls*. StatPearls Publishing Copyright © 2022, StatPearls Publishing LLC. https://www-ncbi-nlm-nih-gov.ezproxy3.lhl.uab.edu/books/NBK559012/

Juster, R. P., McEwen, B. S., & Lupien, S. J. (2010). Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience and Biobehavioral Reviews, 35*(1), 2-16. https://doi.org/10.1016/j.neubiorev.2009.10.002

Kersh, E. N., Shukla, M., Raphael, B. H., Habel, M., & Park, I. (2021). At-Home Specimen Self-Collection and Self-Testing for Sexually Transmitted Infection Screening Demand Accelerated by the COVID-19 Pandemic: a Review of Laboratory Implementation Issues. *Journal of Clinical Microbiology, 59*(11), e0264620. https://doi.org/10.1128/jcm.02646-20

Keshet, H., & Gilboa-Schechtman, E. (2017). Symptoms and beyond: Self-concept among sexually assaulted women. *Psychological Trauma: Theory, Research, Practice and Policy, 9*(5), 545-552. https://doi.org/10.1037/tra0000222

Knight, V. (2019, September 11). *At-home rape kits draw criticism: 'It's hard enough for survivors to get justice, and this is just making it even harder.' Online Media.* CNN.com. https://www.cnn.com/2019/09/10/health/rape-kit-home-test-partner/index.html?no-st=1568118458

Koss, M. P. (2000). Blame, shame, and community: justice responses to violence against women. *American Psychologist, 55*(11), 1332-1343. https://www.ncbi.nlm.nih.gov/pubmed/11280942

Landes, S. D., Ardelt, M., Vaillant, G. E., & Waldinger, R. J. (2014). Childhood adversity, midlife generativity, and later life well-being. *Journals of Gerontology. Series B: Psychological Sciences and Social Sciences, 69*(6), 942-952. https://doi.org/10.1093/geronb/gbu055

Lathan, E., Langhinrichsen-Rohling, J., Duncan, J., & Stefurak, J. T. (2019). The Promise Initiative: Promoting a trauma-informed police response to sexual assault in a mid-size Southern community. *Journal of Community Psychology, 47*(7), 1733-1749. https://doi.org/10.1002/jcop.22223

Ledray, L. E., & Simmelink, K. (1997). Sexual assault: clinical issues. Efficacy of SANE evidence collection: a Minnesota study. *Journal of Emergency Nursing, 23*(1), 75-77. http://www.jenonline.org/article/S0099-1767(97)90070-2/pdf

Leitch, L. (2017). Action steps using ACEs and trauma-informed care: a resilience model. *Health Justice, 5*(1), 5. https://doi.org/10.1186/s40352-017-0050-5

Lin, Y. K., Liu, K. T., Chen, C. W., Lee, W. C., Lin, C. J., Shi, L., & Tien, Y. C. (2019). How to effectively obtain informed consent in trauma patients: a systematic review. *BMC Medical Ethics, 20*(1), 8. https://doi.org/10.1186/s12910-019-0347-0

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: a review. *Journal of Traumatic Stress, 17*(1), 11-21. https://doi.org/10.1023/B:JOTS.0000014671.27856.7e

Loeve, A. J., Bilo, R. A., Emirdag, E., Sharify, M., Jansen, F. W., & Dankelman, J. (2013). In vitro validation of vaginal sampling in rape victims: the problem of Locard's principle. *Forensic Science, Medicine, and Pathology, 9*(2), 154-162. https://doi.org/10.1007/s12024-013-9426-6

Magalhães, T., Dinis-Oliveira, R. J., Silva, B., Corte-Real, F., & Nuno Vieira, D. (2015). Biological Evidence Management for DNA Analysis in Cases of Sexual Assault. *TheScientificWorldJournal, 2015*, 365674-365674. https://doi.org/10.1155/2015/365674

Marino, M. A., Wolgast, K. A., Speck, P. M., Kenny, D. J., & Moriarty, H. (2019). American Academy of Nursing Policy Brief: Military sexual trauma. *Nursing Outlook*. https://doi.org/10.1016/j.outlook.2019.06.002

McEwen, B. (2002). Sex, stress and the hippocampus: allostasis, allostatic load and the aging process. *Neurobiology of Aging, 23*(5), 921-939. https://www.ncbi.nlm.nih.gov/pubmed/12392796

http://ac.els-cdn.com/S0197458002000271/1-s2.0-S0197458002000271-main.pdf?_tid=52607d00-8071-11e6-9ca4-00000aacb35e&acdnat=1474513668_bdf501e9b36d72a88e761b684bf3b011

McEwen, B. S., & Seeman, T. (1999). Protective and damaging effects of mediators of stress. Elaborating and testing the concepts of allostasis and allostatic load. *Annals of the New York Academy of Sciences, 896*, 30-47. https://www.ncbi.nlm.nih.gov/pubmed/10681886 OR http://onlinelibrary.wiley.com/store/10.1111/j.1749-6632.1999.tb08103.x/asset/j.1749-6632.1999.tb08103.x.pdf?v=1&t=itdqxwti&s=9424d2507185841337bfc91abded89ed7da0c3b5 OR http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.1999.tb08103.x/abstract

McEwen, B. S., & Stellar, E. (1993). Stress and the individual. Mechanisms leading to disease. *Archives of Internal Medicine, 153*(18), 2093-2101. https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/617820

McLean, I., Roberts, S. A., White, C., & Paul, S. (2011). Female genital injuries resulting from consensual and non-consensual vaginal intercourse. *Forensic Science International, 204*(1–3), 27-33. https://doi.org/https://doi.org/10.1016/j.forsciint.2010.04.049

Mohr, L. D., & Coke, L. A. (2018). Distinguishing the Clinical Nurse Specialist From Other Graduate Nursing Roles. *Clinical Nurse Specialist: The Journal for Advanced Nursing Practice, 32*(3), 139-151. https://doi.org/10.1097/NUR.0000000000000373

Muskett, C. (2014). Trauma-informed care in inpatient mental health settings: a review of the literature. *International Journal of Mental Health Nursing, 23*(1), 51-59. https://doi.org/10.1111/inm.12012

National Academies of Sciences Engineering and Medicine. (2009, August). *Strengthening forensic science in the United States: A path forward*. National Academies Press. https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf

National Institute of Justice. (2017). *National best practices for sexual assault kits: A multidisciplinary approach*. National Institute of Justice. https://www.ncjrs.gov/pdffiles1/nij/250384.pdf

Nelson, E., Hughes, J., Oakes, J., Thyagarajan, B., Pankow, J., & Kulasingam, S. (2015). Human Papillomavirus Infection in Women Who Submit Self-collected Vaginal Swabs After Internet Recruitment. *Journal of Community Health, 40*(3), 379-386. https://doi.org/10.1007/s10900-014-9948-1

Newton, M. (2013). The forensic aspects of sexual violence. *Best Practice & Research: Clinical Obstetrics & Gynaecology, 27*(1), 77-90. https://doi.org/10.1016/j.bpobgyn.2012.08.020

Office on Violence Against Women. (2013). *A National Protocol for Sexual Assault Medical Forensic Examinations Adults/Adolescents* (NCJ 228119). https://www.ncjrs.gov/pdffiles1/ovw/241903.pdf

Persson, S., Dhingra, K., & Grogan, S. (2018). Attributions of victim blame in stranger and acquaintance rape: A quantitative study. *Journal of Clinical Nursing, 27*(13-14), 2640-2649. https://doi.org/10.1111/jocn.14351

Ramsay, S. E., Bartley, A., & Rodger, A. J. (2014). Determinants of assault-related violence in the community: potential for public health interventions in hospitals. *Emergency Medicine Journal, 31*(12), 986-989. https://doi.org/10.1136/emermed-2013-202935

Rheuban, K. S. (2006). The role of telemedicine in fostering health-care innovations to address problems of access, specialty shortages and changing patient care needs. *Journal of Telemedicine and Telecare, 12 Suppl 2*, S45-50. https://doi.org/10.1258/135763306778393171

Samuels, E. A., Tape, C., Garber, N., Bowman, S., & Choo, E. K. (2018). "Sometimes You Feel Like the Freak Show": A Qualitative Assessment of Emergency Care Experiences Among Transgender and Gender-Nonconforming Patients. *Annals of Emergency Medicine, 71*(2), 170-182.e171. https://doi.org/10.1016/j.annemergmed.2017.05.002

Self-collect LLC. (2019). *Take control of your intimate health*. Retrieved October 20 from https://www.selfcollect.com/

Selye, H. (1956). *The Stress of Life*. McGraw-Hill.

Selye, H. (1974). *Stress Without Distress*. Lippincott.

Seto, J. (2017). Impact of trauma and a shift in focus on healthcare. *Canadian Journal of Emergency Nursing (CJEN), 40*(1), 15-17. http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=128760576&site=ehost-live

Sievers, V., Murphy, S., & Miller, J. J. (2003). Sexual assault evidence collection more accurate when completed by sexual assault nurse examiners: Colorado's experience. *Journal of Emergency Nursing, 29*(6), 511-514. http://ac.els-cdn.com/S0099176703004227/1-s2.0-S0099176703004227-main.pdf?_tid=89dab764-8071-11e6-b40c-00000aab0f6c&acdnat=1474513761_6d796afc26f47c991c25dc9af10999b2

Sommers, M. S., Brown, K. M., Buschur, C., Everett, J. S., Fargo, J. D., Fisher, B. S., Hinkle, C., & Zink, T. M. (2012). Injuries from intimate partner and sexual violence: Significance and classification systems. *Journal of Forensic and Legal Medicine, 19*(5), 250-263. https://doi.org/https://doi.org/10.1016/j.jflm.2012.02.014

Speck, P. M., & Ballantyne, J. (2015). *Post-Coital DNA Recovery Study*. https://www.ncjrs.gov/pdffiles1/nij/grants/248682.pdf

Speck, P. M., & Hanson, E. (2019, November). *Post-Coital DNA Recovery in Minority Proxy Couples* (2014-NE-BX-0009) [Grant]. Birmingham, AL. https://www.ncjrs.gov/pdffiles1/nij/grants/254366.pdf

Speck, P. M., Johnson, K., Robinson, Q., Mays, L. (2023). Caring for Women with Past Trauma Using Trauma Informed Care Strategies. [Women's Health Section, S. Holley, ed.] Advances in Family Practice Nursing (5th ed.) 00(0), 119-135. Doi. https://doi.org/10.1016/j.yfpn.2022.11.002 [in press]

Speck, P. M., & Mitchell, S. A. (2021). *Forensic Nursing Core Competencies for Generalist and Advanced Forensic Nursing Practice*. Forensic Nursing Certification Board.

Substance Abuse and Mental Health Services Administration. (2014a). *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach*. Substance Abuse and Mental Health Services Administration,. https://scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=1006&context=covid

Substance Abuse and Mental Health Services Administration. (2014b). *Trauma-Informed Care in Behavioral Health Services. Treatment Improvement Protocol (TIP) Series 57* (Vol. HHS Publication No. (SMA) 13-4801). US Deparment of Health and Human Services. https://www.integration.samhsa.gov/clinical-practice/SAMSA_TIP_Trauma.pdf

Technical Working Group on Biological Evidence Preservation. (2014). *The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers* (2nd ed.). U.S. Department of Commerce and National Institute of Standards and Technology https://doi.org/doi.org/10.6028/NIST.IR.7928

Topitzes, J., Mersky, J. P., Mueller, D. J., Bacalso, E., & Williams, C. (2019). Implementing Trauma Screening, Brief Intervention, and Referral to Treatment (T-SBIRT) within Employment Services: A Feasibility Trial. *American Journal of Community Psychology*. https://doi.org/10.1002/ajcp.12361

U. S. Department of Justice. (2013). *A National Protocol for Sexual Assault Medical Forensic Examinations Adults/Adolescents* (2nd ed.). https://www.ncjrs.gov/pdffiles1/ovw/241903.pdf

U. S. Department of Justice. (2016). *A national protocol for sexual abuse medical forenisc examinations pediatric* (Office on Violence Against Women, Ed.) https://www.justice.gov/ovw/file/846856/download

Wang, C., & Wein, L. M. (2018). Analyzing Approaches to the Backlog of Untested Sexual Assault Kits in the U.S.A. *Journal of Forensic Sciences, 63*(4), 1110-1121. https://doi.org/10.1111/1556-4029.13739

Wetsman, N. (2019, September 6). You can't do a sexual assault exam at home, despite what this startup says. *Microsoft News Popular Science*. https://www.msn.com/en-us/news/technology/you-can't-do-a-sexual-assault-exam-at-home-despite-what-this-startup-says/ar-AAGTXv8#page=2

Zinzow, H. M., Resnick, H. S., Barr, S. C., Danielson, C. K., & Kilpatrick, D. G. (2012). Receipt of Post-Rape Medical Care in a National Sample of Female Victims. *American Journal of Preventive Medicine, 43*(2), 183-187. https://doi.org/10.1016/j.amepre.2012.02.025

Zinzow, H. M., Resnick, H. S., Barr, S. C., Danielson, C. K., & Kilpatrick, D. G. (2012). Receipt of Post-Rape Medical Care in a National Sample of Female Victims. *American Journal of Preventive Medicine, 43*(2), 183-187. https://doi.org/10.1016/j.amepre.2012.02.025

Journal of the Academy of Forensic Nursing

Best Practices

What is Trauma-Informed Care?

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Abstract

Trauma-informed care is a popular term used today, yet its application and how it is applied varies. This article will address: what is trauma? what is trauma-informed care (TIC) ? and examples of how to apply the guiding principles of TIC into practice.

Keywords: trauma-informed care

What is Trauma-Informed Care?

Trauma-informed care has become a popular term that is commonly referenced today in a myriad of systems, such as schools, substance use treatment, health care and behavioral health. Yet its application into practice has much variability. This article will address:

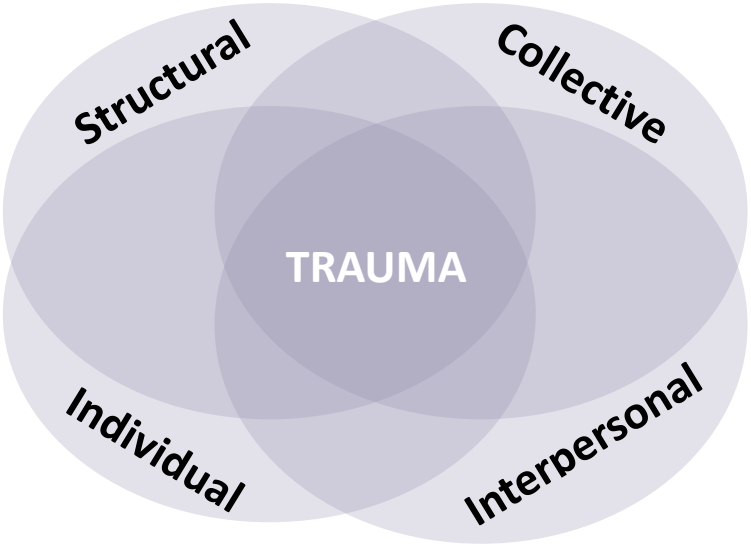
1. What is trauma?
2. What is trauma-informed care?
3. How can you apply the principles of trauma-informed care into broad-range practices?

What is Trauma?

Understanding what defines *trauma* varies from person to person and is dependent on an individual's life experiences, as well as their professional exposures. According to Substance Abuse Mental Health Service Administration (SAMHSA) (2014), "trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects on the individual's functioning and physical, social, emotional, or spiritual well-being.

Lewis-O'Connor and colleagues (2019) define trauma as individual, interpersonal, collective, and structural. *Individual trauma* may include a poor diagnosis, loss of loved one, fall, or motor vehicle accident for example. *Interpersonal trauma* may occur across the life span, for example child maltreatment, Adverse Childhood Experiences (ACES), domestic and sexual violence, human trafficking, and elder abuse. We have all been through what is viewed as *Collective trauma*- that which occurs from natural disasters, pandemic (COVID), community violence, mass shootings and the like. Lastly*, Structural trauma*- refers to the cultural, historical, and/or socio-political traumas that impacts individuals and communities across generations. This may Include: institutional barriers, social determinant of health (inequities, 'isms', poverty, food and housing insecurity and violence and abuse, and policies and procedures that advantage some while disadvantaging others. Dr. Camara Jones (Jones, 2003), former President of the American Public Health Association defines racism as a 'system of structuring opportunity and assigning value based on the social interpretation of how one looks (race) that unfairly and structurally disadvantages some individuals and communities while advantaging other individuals and communities which saps the strength of the whole society. As depicted in Figure 1, these types of traumas are not mutually exclusive- rather there is often an intersection between the various forms.

Figure 1.
Trauma Intersections



Our challenge and opportunity in health care settings is to develop a pedagogy that advances Health Equity and Social Justice with mindful intention and attention to traumas that are rooted in structural racism, oppression, explicit bias, and stigma. We care for patients that have been impacted by all forms of trauma and these patients are likely the ones with the most complex health needs.

Lastly, it is important to be cognizant that not everyone who is impacted by trauma is negatively impacted—in fact most that experience trauma will experience post-traumatic growth; but for those whose wellbeing is impacted, we must seek to understand and promote models of care, such as Trauma-Informed approaches that may help individuals heal.

Impact of Trauma

Whether you work with people through legal, health, or community services, understanding how trauma has impacted an individual helps to inform the way in which you interact with them. How we engage, the language we use, how we show up in an encounter can foster healing or unintentionally may re-traumatize an individual. Prevalence of trauma is well documented.

Benjet et al (2016) conducted general population surveys in 24 countries (n=68,894 adults) across six continents. Researchers assessed for exposures to some 29 traumatic life-event types. Findings indicated that more than 70% of respondents reported a traumatic event and 30.5% were exposed to four or more traumatic events. Over half of the traumatic events reported in the study included witnessing death or serious injury, the unexpected death of a loved one, being mugged, being in a life-threatening automobile accident, or experiencing a life-threatening illness or injury. Exposures to trauma varied by country and socio-demographic; history of prior traumatic events and further analysis into race and ethnicity would further help to inform root causes. Exposure to interpersonal violence had the strongest association with subsequent traumatic events (Jones, 2003). Similar large survey studies in the U.S. reveal a high prevalence of traumatic life experiences, with 90% reporting a serious adverse lifetime event. The National Intimate and Sexual Violence, the most comprehensive large-scaled survey in the United States, gathers national data on interpersonal and individual trauma (Benjet et al, 2016; Black et al, 2011; Breiding et al, 2014). In future population surveys, we are likely to see a dramatic increase in the prevalence of trauma related health consequences post COVID.

What is Trauma-Informed Care?

In 1994, SAMHSA (2014) convened the Dare to Vision conference, an event that was intentionally designed to bring trauma to the foreground. It was the first national conference in which women who had survived trauma talked about their experiences and ways in which standard practices in hospitals re-traumatized and, often, triggered memories of previous abuse.

Today, trauma-informed care is represented with six guiding principles. These principles are grounded in evidence and that evidence offers us an opportunity that should inform our policies and procedures organizationally, in relationships with patients, their families and our colleagues. As we consider the challenges and opportunities to embed trauma-informed approaches systemically, we must be proactive in employing policies and procedures that use a social-justice lens. Trauma-informed guiding principles offer a framework from which to develop and implement policies and practice guidelines. Figure 2 illustrates the six guiding principles of TIC from SAMHSA (2014).

Figure 2
Trauma Informed Care Principles

Used with permission www.samhsa.gov

As you look at these guiding principles, let's consider translating these through the eyes of a victim or survivor. This person might be thinking:

- 'What are they going to ask me? Do I have to tell them everything?
- Will I react to the questions, and will they think I am crazy because I still get triggered and have body memories? Are they going to do something that hurts? I really have terrible pain tolerance.
- I wonder if they will give me choices, will they hear me? Will they repeat things when I don't understand, or will that annoy them? Will they help me to connect with other professionals that they want me to see, or will I need to figure this out on my own?
- Will they understand what I bring with me from my culture, my historical background—my race? Will they understand that English is my second language?
- Gosh I hope they don't ask: *Why did you…* Or *Why didn't you…*
- I wonder, what are they typing into the computer? Who is going to see this and are they capturing what I am saying?
- I hope I will feel safe, that I can share, that I can get help and support, that I can find and use my voice, and that I can be acknowledged for who I am—not what happened to me. I hope they will not judge me or have bias towards me.'

Principle 1: Safety—Physical & Psychological

When considering the principle of *safety*, you want to consider *physical and psychological* safety. How does the individual best cope with stress? What triggers them, and what is helpful? For example, a patient who suffered a non-fatal strangulation might share that she plays a musical instrument, that she does not like her neck or mouth examined, and that she copes best when receiving small amounts of information at a time. Consider asking an individual about their strengths, what they are proud of? And how they cope best.

Principle 2: Transparency & Trustworthiness

Transparency and *trustworthiness* are key principles for people who have experienced trauma, violence, or abuse. Many victims and survivors trusted someone who hurt them, and sometimes the systems that were intended to help re-traumatized them. State with clarity what you can and can't do. Build trust through listening and acknowledging a patient's wishes. It's important to respect the autonomy (adult) of patients even when you might not agree with the choices they are making. Trust needs to be built and can't be assumed.

Principle 3: Cultural, Historical, & Gender Acknowledgement

Acknowledge how structural barriers and bias have marginalized people of color, those whose gender identity is non-binary, people of size, those struggling with mental health and or substance use disorder. *Cultural, historical, and gender acknowledgment* requires everyone to receive training on unconscious bias and stigma, pro-actively self-reflect on those biases, and a commitment to change systems for the betterment of all. We need to hold ourselves accountable and those in leadership should lead by example.

Principle 4: Peer Support

Peer support is not only the support we put in place for patients and clients, but also the support we build into our structure to support each other. Do you hold optional debriefs? Do you have trained peer supporters? Do you assess staff for compassion fatigue or burnout? Do you promote opportunities for team building? As a leader do you foster work-life balance? For patients and clients, do you assess their available resources? Do you assess for social determinants of health and connect the patient or staff to additional services needed? Are you inclusive of staff including non-clinical and support staff?

Principle 5: Empowerment, Voice, and Choice

While this principle is likely one to which we might all personally relate, it is often the principle that we might fall short on. Do you do things '*for'* or '*to'* a patient, or do you do things '*with'* them? For leaders, do you promote shared governance and proactively include diverse members on your staff? Do you lift their strengths, or do you focus only on deficits? Do you accept an individual's decision even when you don't agree?

Principle 6: Collaboration & Mutuality

Finally, *collaboration and mutuality* begs a few questions: 1) How is information shared among team members, and are there ways to improve? and 2) What are the barriers to collaboration, and how are they being addressed? Improved? Addressing this principle will require due diligence and commitment to address barriers, access, and engagement to allow for seamless collaboration and mutuality. Exploring ways that optimize communication and collaboration is essential to quality care and outcomes.

How Can You Apply the Principles of TIC into an Organization?

The literature reveals how widespread and prevalent trauma is worldwide (Benjet et al, 2016; Kilpatrick et al, 2013). There are currently a number of challenges and gaps to consider when applying TIC care into practice. First, there is wide variability in what connotes TIC; secondly, recommendation for specific action around implementation are slowly emerging (Yatchmenoff, Sundborg & Davis, 2017), thirdly, trauma-informed practices are best realized when integration occurs throughout the organization (Cholz & Wagner, nd; Institute on Trauma and Trauma Informed care, 2023).

When these principles are applied across an integrated system, process and outcomes may have a notable impact on patients and staff. Identifying metrics by which to measure the impact will be crucial to understand challenges and opportunities. For example, when TIC models are used- did ED visits decrease? Was there an increase engagement with primary care? Was the length of stay shorter? Did the patient report increase satisfaction with care delivery, coordination of care, or other indicators of service? For the staff- did they feel more satisfied in caring for their patients? Did they feel more compassion, empathy? Do they feel they have a more meaningful relationship with patient and with their peers?

There are some actions steps to consider: forming a task force across your organization and service lines and identify a senior sponsor. Further suggest co-chairs (or tri-chairs) of diverse colleagues. Invite anyone with interest in trauma-informed care to join. Eventually, a group forms and you will get some traction! Set meeting dates for the year, include agenda items, and after the meeting, send out a short summary with actionable items. Set a few short term and long-term goals. Let the principles of trauma-informed care guide your work in this committee: be inclusive, listen, learn, and share together by creating a safe and welcoming space for all. Consider holding an annual symposium where you share your accomplishments and set goals for the upcoming year. Overall, you will find that trauma-informed care is a theoretical framework that offers organizations and practices, staff, and patients approaches that promote healing and wellness and more meaningful relationships.

Trauma-Informed Care & Forensic Nursing Practice

Considering that forensic nurses care for patients across the lifespan including adverse childhood experiences (ACEs), elder abuse, interpersonal violence, strangulation, labor, and sex trafficking, we have a responsibility to be informed of the acute and long-term neurobiological impact and health consequences of traumatic experiences. In addition, forensic nurses should be prepared to recognize the varied manifestations of trauma, while utilizing trauma-informed approaches and interventions that can prevent secondary victimization and foster wellness. While there is some TIC education included in nursing curriculum, there is much variation in content and application. There are, however, curricula developing in medical schools that is showing much promise (Brown, Berman et al, 2021; Brown, Mehta et al, 2021).

The Academy of Forensic Nursing, from its inception, recognized that while supporting forensic healthcare, they have a unique and collective obligation to promote evidence-based forensic nursing education and advance contemporary health policy. The organization's *Trauma, Violence & Resilience Informed Care* position statement was published in 2021 and supports the adoption of a trauma-informed framework into nursing practice, education, research and policy (Academy of Forensic Nursing, 2021). It is anticipated that this position statement can

serve as a reference for healthcare policies, practice standards, and as an informative framework for collaboration with interprofessional partners.

References

Academy of Forensic Nursing. (2021). Trauma, Violence & Resilience Informed Care [Position statement] https://www.goafn.org/afn-positionstatements

Benjet C, Bromet E, Karam G, Kessler RC, McLaughlin KA, Ruscio AM, Shahly V, Stein DJ, Petukhova M, Hill E, et al. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine*, 2016(46): 327–343.

Black, M. C., K. C. Basile, M. J. Breiding, et al. (2011). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Breiding MJ, Smith SG, Basile KC, et al. (2014). Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization—National Intimate Partner and Sexual Violence Survey, United States, 2011. *MMWR Surveillance Summaries*. 63(8): 1–18.

Brown T, Berman S, McDaniel K, Radford C, Mehta P, Potter J, Hirsh DA. (2021) Trauma-Informed Medical Education (TIME): Advancing Curricular Content and Educational Context. Acad Med, 96(5):661-667. doi: 10.1097/ACM.0000000000003587. PMID: 32675789.

Brown T, Mehta PK, Berman S, McDaniel K, Radford C, Lewis-O'Connor A, Grossman S, Potter J, Hirsh DA, Woo B, Krieger D. (2021). A Trauma-informed Approach to the Medical History: Teaching Trauma-informed Communication Skills to first year Medical and Dental Students. *MedEdPORTAL, 17:11160* https://doi.org/10.15766/mep_2374-8265.11160

Cholz, V. & Wagner, S. (nd). A Trauma-Informed Approach to Workforce: An introductory guide for employers and workforce development organizations. Available at https://nationalfund.org/wp-content/uploads/2021/04/A-Trauma-Informed-Approach-to-Workforce.pdf

Institute on Trauma and Trauma-Informed Care (2023). Buffalo Center for Social Research School of Social Work Document. Website http://socialwork.buffalo.edu/ittic

Jones, CP. (2003). Confronting Institutional Racism. Phylon, 50(1-2):7-22

Kilpatrick DG, Resnick HS, Milanak ME, et al. (2013). National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress*. 26(5):537–547.

Lewis-O'Connor A, Warren A. Lee JV, Levy-Carrick N, Grossman S, Chadwick M, Stoklosa H, Rittenberg E. (2019). State of the science on trauma-inquiry. *Women's Health*. 15: 1–17.

Substance Abuse and Mental Health Services Administration-SAMHSA (2014). SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Yatchmenoff D, Sundborg S, Davis M. (2017). Implementing Trauma-informed Care: Recommendations on the Process. Advances in Social Work, Special Issue: Trauma-informed Practice. Vol. 18, No. 1 DOI: https://doi.org/10.18060/21311

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Suburban Contemporary Issues

Suburban and Rural Gang Presence: Pre-empting Violence in Response to This Shifting Threat for Hospitals

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Abstract

The threat of gang violence spilling over into healthcare settings has become a reality in communities of all sizes. In particular, many people still perceive suburban and rural areas as havens from significant organized crime when they may actually be places where criminal gang activity and violence are less detectable by law enforcement. Additionally, lesser populated regions of the nation often have small and sometimes underfunded police departments, which can make those communities vulnerable and attractive to criminals trying to avoid larger cities with more sophisticated gang units. To deal with the potential for gang violence in the hospital setting, there is a need to understand the basics of the gang culture, related behaviors, and the continuing gang threat. The keys to a successful campaign against gang violence in a hospital setting are training and education of security and clinical staff, including coordination and cooperation with law enforcement, and proper reporting procedures and protocols.

Keywords: gangs, hospital violence, gang violence

Nearly a decade ago, McDaniel and nursing colleagues (2014) shared the following visionary commentary:

> *Many health providers might not have thought they would see the words "gang violence" and "public health" in the same sentence. However, nurses who work in emergency rooms, schools, local public health agencies, and health clinics located in communities*

> *with high levels of gang activity likely have daily reminders that gang violence and public health do intersect* (p. 3).

As with all national challenges that relate to quality of life, injury prevention, and untimely death, public health and public safety share a mission when it comes to stopping gang violence before it starts.

In the years that have followed, public health and public safety workers who respond to gang problems know that after-the-fact efforts are not enough. Specifically, to help change the course of the future for youth in the nation, Ritter, et al. (2019) published *Changing Course: Preventing Gang Membership* to address the challenge of gangs in America. Regrettably, gangs continue to proliferate, and nurses and other healthcare personnel will encounter their members and associates in a variety of settings. This is of particular importance since gang affiliates are now documented to be present in all 50 United Stated and territories and have had a persistent presence in all cities with a population over 250,000 every year since 1996 (U.S. Department of Justice Office of Justice Programs, 2020). Additionally, according to the Royal Canadian Mounted Police (2018), the federal government says gang violence is a serious threat to the safety of Canadian communities. Although crime rates in Canada have declined, gang activity has continually increased. Specifically, there are more than 430 active gangs in Canada – with the largest gang activity in Regina and Saskatoon. Further, with the consistent migration to suburban and rural geographical regions of these two nations, it has frequently found healthcare facilities and local law enforcement units minimally prepared to respond – not only for pre-emptive safety measures - but to the types of injuries that are frequently manifest from gang-related activities (Akiyama, 2015; McDaniel, et. al, 2014). Subsequently, it is critically important to raise awareness among healthcare providers, enhance forensic assessment of risks, and maintain safety for human lives in healthcare settings (National Gang Center, 2017; Public Safety Canada, 2022).

Review of Literature Supporting Practice Change

Using the United States as an exemplar, according to the seminal *National Youth Gang Survey Analysis* conducted by the U.S. Department of Justice, data between the years 2005 and 2012 revealed that gang-related crime more than tripled among smaller towns and neighborhoods in the national trend towards gangs expanding beyond urban areas (Egley, et al., 2014; National Gang Center, 2017). This situation is compounded by an accompanying lack of awareness or, in many cases, denial on the part of many, including healthcare personnel, that a gang problem exists in suburban and rural regions of the nation. This lack of awareness or realization is in stark and direct contrast to data from the Federal Bureau of Investigation (FBI) (n.d.) emphasizing that some 33,000 violent street gangs, motorcycle gangs, and prison gangs are criminally active in the U.S. today; that many are sophisticated and well organized; and that all use violence to control neighborhoods and boost their illegal money-making activities, which include robbery, drug and gun trafficking, prostitution and human trafficking, and fraud. However, the expansion of gangs into lesser populated regions of the nation often challenge small, and sometimes underfunded, police departments, which can make the communities extremely vulnerable and attractive to criminals trying to avoid larger cities with more sophisticated gang units. Also, gangs find these non-urban areas to be full of eager new drug customers with money, and a lack of significant competition from other gangs. The bottom line is that gangs go where business is good; where typically illegal drugs, illegal weapons, and most recently, where human trafficking can easily go

unnoticed (House Committee on the Judiciary, 2017; U.S. Department of Justice, 2021). For example, many people still perceive rural areas as being pastoral havens with rolling fields, grazing cattle, and flowing streams—when they may actually be places where a gang's criminal activity is less detectable by law enforcement, and they aren't competing with other gangs for business (Watkins, & Taylor, 2016).

The threat of gang violence spilling over into healthcare settings has become a reality in communities of all sizes. The keys to a successful campaign against gang violence in a hospital setting are training and education of security and clinical staff, including coordination and cooperation with law enforcement, and proper reporting procedures and protocols. According to *Campus Safety: Hospital/School/University* (2019), specific questions that healthcare settings need to answer are the following:

1. What occurs when a gang member presents himself or herself to a healthcare environment?
2. What can security, nurses, physicians, and other personnel working in areas such as registration and other departments do to respond to the potential danger and prevent a possible incident?
3. When and how is local law enforcement activated and involved?

In addition, these environments need to establish clear policies and procedures that can expand awareness and enhance early identification of potential gang violence so strategies can be implemented to prevent violence from erupting in workplace and community. (Occupational Safety and Health Administration [OSHA], 2016).

Furthermore, nurses should be familiar with the basic information related to gang membership and behaviors, and the types of gang activity occurring in their communities. For example, in one "middle-class suburb," a gang member presented himself to the Emergency Department (ED) with injuries after being beaten by rival gang members. The patient was accompanied by fellow gang members—all of whom were clearly dressed in gang-affiliated attire which was red and white (typically associated with the "Bloods"). Soon after they entered the ED lobby, registered at the front desk, and were seated in the waiting area, rival gang members—clearly dressed in opposing gang-affiliated attire which was blue and white (typically associated with the "Crips") entered, one of whom was carrying a baseball bat, who subsequently began striking the patient. Everyone was caught off-guard, including security. As two security guards impulsively attempted to respond, they, along with several gang members, were struck by the bat. The unit clerk dialed 911, but by the time the police responded, the assailant ran from the ED. The patient resultantly had severe head trauma, one security guard received a facial fracture, and several other patients and family members in the waiting area were injured with bruises and emotionally traumatized. The other gang members who accompanied the patient were arrested; subsequently, several were discovered to be in possession of firearms during their body searches by police.

In another case, a 19-year-old member of the MS-13 gang (*Mara Salvatrucha*), noted to be the largest and most violent gang by the FBI, and located mainly in rural and suburban areas (BBC News, 2017; Congressional Research Service, 2018), opened fire in the trauma unit of a rural hospital in an attempt to "finish off" the rival gang member who had survived an attack during a "gangbang" (i.e., an extreme instance of violence involving members of two opposing gangs) from the previous night. Knowing that the injured gang member was vulnerable (in slang

terms, "a sitting duck") while confined to a hospital bed, they wanted to take advantage of this situation that would make him an easy target for retaliation. However, during the attack, the intended target—the gang member—was actually surrounded by other MS-13 gang members and not struck by the chaotic gunfire. Rather, during the scuffle, a 37-year-old female registered nurse received a non-life-threatening gunshot wound to the forearm and a 62-year-old male security guard received concussive head trauma from being struck with the gun as the assailant fled the unit. The psychological trauma on all personnel (both present and vicariously) was palpable. A post-sentinel event debriefing reflected that the unit had not been locked down in any manner to limit or restrict visitors and no pre-emptive early awareness education or "target hardening" training (referring to the strengthening of the security of a building or installation in order to protect it in the event of attack or reduce the risk for retaliation by the gang within the hospital) had been provided (US Department of Homeland Security, 2018).

Preparing and Educating a Facility for Gang Violence

To evaluate the potential for gang violence in the hospital setting, there is a need to understand the basics of gang culture, related behaviors, and continuing gang threat. There is no single definition of a gang, but there are a number of widely accepted criteria for classifying groups as gangs, specifically: (1) the group has three or more members; (2) members share an identity, typically linked to a name and/or symbols; (3) members view themselves as a gang, and they are recognized by others as a gang; (4) the group has some permanence and a degree of organization; and (5) the group engages in a significant level of criminal activity (U.S. Department of Justice Office of Justice Programs, 2020). Generally, adult organized crime groups, hate groups, ideology groups, and militia groups are excluded from this overarching definition of a *gang*.

It is also important for nurses and others in the healthcare setting to be aware of and educated about the foundations of gang loyalty, which most importantly includes the "*Three Rs of Gang Life: Reputation, Respect, and Retaliation"* as presented below (Lauger & Lee, 2019; Moore, 2012):

Reputation

Reputation is crucial for the continued existence and achievement of any gang member. Additionally, gang reputation is critical in the endurance and promotion of the gang as a viable criminal enterprise. The fear of reprisal and violence is created through reputation. Gang-related behaviors, as well as the willingness of a gang member to do whatever it takes in furtherance of gang objectives, gain the member's status and reputation. If a gang member feels that he or she will lose respect, they are motivated to prevent that from happening because they are protecting their own and the gang's reputation and respect. For this reason, gangs will use violence almost anywhere.

Respect

Respect is a dominant desire for all gang members. Gang members seek respect and demand respect for themselves and their gang. They insist that rival gangs respect their territory, their gang colors, and their fellow members. They are often willing to risk serious injury or death to ensure this occurs. Maintaining respect is a fundamental goal for gang members and plays a role in gang behaviors. To lose face, to get challenged, or to be stared at too long and not respond are all ways that gang members think they lose respect. Gang members often have a sense that the gang they belong to and they themselves lose respect if any insult goes unanswered. This

belief causes gangs to respond—often violently—to minor incidents, like those mentioned above. If a gang member witnesses a fellow member failing to *dis* (i.e. *dis*respect) a rival gang through hand signs, graffiti ("tagging"), or a simple "mad dog" stare-down, they can issue a "violation" to their fellow posse member and he/she can actually be "beaten down" by their own gang as punishment. After a *dis* has been issued, if it is witnessed, the third "R" will become evident.

Retaliation

Retaliation happens when gang members believe that they or the gang has been disrespected or their reputation has been violated. It must be understood that in gang culture, no challenge goes unanswered. Many times, drive-by shootings and other acts of violence follow an event perceived as a *dis*. A common occurrence is a confrontation between a gang set and single rival "gangbanger." Outnumbered, he/she departs the area and returns with others to complete the confrontation to keep their reputation intact. This may occur immediately or follow a delay in planning and obtaining the necessary weapons to complete the retaliatory strike.

Gang Levels / Membership

There are also various levels of memberships within gangs, and this can be important information as far as understanding whom nurses might encounter in the ED or other healthcare setting and in what capacity.

Original Gangsters (OG)

These are the foundational members and are the highly protected leaders; they are in it forever. It is unusual to see these members in the ED unless they have been severely injured.

Emergency department providers will encounter hardcore members in trauma situations after gang shootouts.

Hardcore Members

These comprise approximately 5–15% of the gang. These are the die-hard gangsters, who thrive on the gang's lifestyle and will always seek the gang's companionship. These hardcore gangsters will almost always be the leaders and without them, the gang may fall apart. The gang's level of violence will normally be determined by the most violent hardcore members. They are usually the shooters and therefore most prone to severe injury and death. Hardcore members used to be considered only males, but this is changing as more females become active gang members and weapon carriers. ED nurses will see these members in trauma situations after gang shootouts.

Regular Members (Associates)

They usually range from 14 to 17 years old and are often oriented toward proving themselves to older gang members and running errands while making money. They usually join the gang for status and recognition, which is congruent with adolescent development. They may not participate in hardcore gang activities, but they may be involved in juvenile delinquent acts. They may doodle gang insignias, commit acts of graffiti vandalism ("tagging"), and speak in slang, use gang terminology, and display gang hand signs. They also may carry concealed weapons for protection.

Wannabes

These are usually 11 to 13 years old and their jobs are tagging and stealing. They are not yet initiated into the gang, but they hang around with them and usually will do most anything the gang members ask of them so that they may prove themselves worthy of belonging.

Could-Bes

They are usually under the age of ten. Children of this age are at more risk when they live in or close to an area where there are gangs or if they have a family member who is involved with gangs. It is important to find alternatives for these children in order that they may avoid gang affiliation completely.

Recommended Best Practices

Healthcare Facility Preparedness and Protocols

All healthcare facilities—not just those hospitals located in the inner cities—need to adopt a gang-awareness training program that incorporates local and regional gang identification, risk assessment of warning signs for potential violence, target hardening with strategic pre-emptive facility planning, and established reporting procedures. This education should be available to all employees, especially Emergency Department (ED), Intensive Care Unit (ICU), and safety and security personnel. In 2017, the U.S. Department of Justice developed Gang Violence Protocols for Medical Facilities. These include requesting annual gang identification training for ED personnel, including receptionists and security officers, by local law enforcement or gang taskforce officers. This training should include:

- Visuals of local gang tattoos, clothing, and other identifiers, and should also describe existing rivalries.
- Development of a relationship with local law enforcement or gang unit administrators.
- Requesting dispatcher notification when individuals of a gang conflict are transported to the ED. Emergency department personnel should also request further information, including the names/identifiers of the gangs involved and descriptions of suspects/vehicles. This information should then immediately be shared with security and reception personnel.
- Limiting the number of visitors who can accompany patients into waiting and treatment areas.
- Notifying security and/or requesting a law enforcement response in the ED when a patient with gang-involved injuries is treated.
- Being actively aware that rival gang members may encounter one another inside hospital facilities and in parking areas, so both areas require attention and security.
- Being prepared that in the event of a serious gang incident in the community, hospitals may wish to develop escalated security protocols that include locking down the emergency department and waiting area.

Additionally, hospital administrators may wish to incorporate *Crime Prevention Through Environmental Design* (CPTED) strategies. Many law enforcement and city planning agencies can provide CPTED reviews. Go here for information on CPTED courses: https://www.cptedtraining.net

In addition, it is very important that security and clinical staff be trained on how to assess for warning indicators related to potential gang violence. These are some of the signs (Moore, 2012; U.S. Department of Justice Drug Enforcement Administration, 2018; U.S. Office Department of Justice Office of Justice Programs, 2017):

- Obvious signs of agitation of patients and/or visitors arriving at the ED, or signs that they just came from a fight.
- The staring down of other visitors or staff members may be an indicator of looming violence. Known as "mad dogging," this tactic is often used between rival gang members.
- Gang indicators, whether it is the wearing of gang colors, identical clothing or sports attire, tattoos, or the use of hand signs.
- A patient with traumatic injuries from shooting, stabbing, or assault, who arrives with a group or "posse," or is being dropped off ("dumped") at the hospital entrance (sometimes from a still moving vehicle).
- A patient refusing to give up clothing or packages. These may contain weapons or illegal drugs.

Implications for Education, Research or Practice Implementation

"There aren't any 'real' gangs around here," often paired with the common misconception that hospitals are considered "neutral territory" for gangs, are two mindsets regarding gangs and gang-related violence that need to be changed; particularly in suburban and rural areas. Gang violence is not only a societal issue but also, a public health issue that doesn't stop at the hospital doors. Across the country, gang members enter hospital EDs and other healthcare settings daily as patients with injuries from shootings, stabbings, and beatings, as well as for medical needs that are not related to violence. Often accompanying these patients are fellow gang members whom they consider their "family" - even if they are not legally considered such. The conundrum for many healthcare providers is that, although *gang activity* may be illegal, *treating gang members* for health-related illness and injury is not. As a matter of fact, the opposite is true: it would not only be unethical but also malpractice to deny healthcare simply because a patient is clearly in a gang. As such, when it is apparent that the patient being treated in the ED is a gang member, it does not necessarily mean that gang violence will inherently follow; however, it should mean that the healthcare provider should modify their assessment and environmental awareness throughout their therapeutic interaction.

Ultimately, a workplace violence policy should be in place and all hospital employees should be familiar with its content. This policy should be a part of any new-employee orientation program and should detail the procedures for incident reporting; not only incidents of violence but also the potential for violence. The clinical staff should receive education regarding the best methods to deploy while interacting with suspected gang members. Should gang members feel disrespected by a nurse or physician, they may retaliate and lash out at the staff. Hospital staff should be straightforward and honest with the patient regarding his or her injuries and treatment. Treat the gang-member patient respectfully, as you would any other patient. Like all patients, gang members cannot be turned away when seeking emergency medical treatment. Therefore, the keys to a successful campaign against gang violence in a hospital setting are preparing for incidents of potential gang violence through training, education, and cooperation with law enforcement, as well as proper reporting procedures and protocols.

Resources

The National Gang Center (NGC) is a project funded by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the Office of Justice Programs (OJP), U.S. Department of Justice (DOJ). The NGC is an integral component of the Justice Department's mission to provide innovative leadership in coordination with federal, state, local, and tribal justice systems to prevent and reduce crime. The NGC disseminates information, knowledge, and outcome-driven practices that engage and empower those in local communities with chronic and emerging gang problems to create comprehensive solutions to prevent gang violence, reduce gang involvement, and suppress gang-related crime.
Office of Justice Programs – National Gang Center: Resources and training opportunities

Violent Gang Task Forces (by State and Region): https://www.fbi.gov/investigate/violent-crime/gangs/violent-gang-task-forces

Public Safety Canada:
Gang Prevention Strategy: https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/gng-prvntn-strtgy/index-en.aspx

Youth Gangs in Canada: A Review of Current Topics and Issues:
https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2017-r001/index-en.aspx

References

Akiyama, C. (2015). Confronting youth gangs in the intensive care unit. *Critical Care Quarterly, 38* (10), 17-29. *DOI:* 10.1097/CNQ.0000000000000050

BBC News (2017, April 19). MS-13 gang: The story behind one of the world's most brutal street gangs. US & Canada. https://www.bbc.com/news/world-us-canada-39645640

Congressional Research Service (2018, August 20). *MS-13 in the United States and federal law enforcement efforts.* Prepared for Members and Committees of Congress. https://crsreports.congress.gov/product/pdf/R/R45292/3

Campus Safety: Hospital/School/University (2019, February 25). Is your hospital prepared for gang violence and injuries? Hospital Security. https://www.campussafetymagazine.com/hospital/gang-member-patients/2/

Egley Jr, A., Howell, J. C., & Harris, M. (2014). Highlights of the 2012 National Youth Gang Survey. Juvenile Justice Fact Sheet. Washington, DC: Office of Juvenile Justice and Delinquency Prevention. 2014. www.ojjdp.gov/pubs/248025.pdf

Federal Bureau of Investigation (n.d.). Gangs. https://www.fbi.gov/investigate/violent-crime/gangs

House Committee on the Judiciary.(2017, July 20). *Gangs in our community:Drugs, human trafficking, and violence* [Video]. https://youtu.be/q4llY5xoSpg

Lauger, T., & Lee, S. (2019). Gang violence: Examining ecological, cultural, social psychological, and psychological factors across the life course (pp. 1-20). In R. Geffner, J.W. White, L.K. Hamberger, A. Rosenbaum, V. Vaughan-Eden, & V.I. Vieth (Eds), *Handbook of interpersonal violence across the lifespan.* Springer. https://doi.org/10.1007/978-3-319-62122-7_104-1

McDaniel, D.D., Logan, J.E., & Schneiderman, J.U. (2014). Supporting gang violence prevention efforts: A public health approach for nurses. *Online Journal for Issues in Nursing, 19*(1), 3. https://pubmed.ncbi.nlm.nih.gov/26752944

Moore, C.D. (2012 June 13). *Maintaining security when gang members visit your ER: Prevent gang violence on your campus by partnering with local law enforcement and training security and clinical staff.* https://www.campussafetymagazine.com/hospital/gangs-healthcare-security-preparation-education-are-the-keys/2/

National Gang Center (n.d.). *National Youth Gang Survey Analysis*. https://nationalgangcenter.ojp.gov/survey-analysis

National Gang Center (2017 January 16). Gang violence protocols for medical facilities. https://nationalgangcenter.ojp.gov/insights/34/gang-violence-protocols-for-medical-facilities

Occupational Safety and Health Administration (2016). *Guidelines for preventing workplace iolence for healthcare and social services workers*. U.S. Department of Labor. https://www.osha.gov/sites/default/files/publications/osha3148.pdf

Public Safety Canada (2022 August 16). *Regina Anti-Gang Services* https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/rgn-nt-gng/index-en.aspx

Ritter, N., Simon, T.R., & Mahendra, R.R. (2019). Changing course: Preventing gang membership. https://nij.ojp.gov/topics/articles/changing-course-preventing-gang-membership#citation--0

Royal Canadian Mounted Police (2018 July 3). Gangs. https://www.rcmp-grc.gc.ca/en/gazette/gangs

U.S. Department of Homeland Security. (2018). *Soft targets and crowded places: Security plan overview.* https://www.cisa.gov/sites/default/files/publications/DHS-Soft-Target-Crowded-Place-Security-Plan-Overview-052018-508_0.pdf

U.S. Department of Justice (2021 April 30). *About violent gangs*. https://www.justice.gov/criminal-ocgs/about-violent gangs#:~:text=The%20association%27s%20primary%20purpose%20is,%2C%20reputation%2C%20or%20economic%20resources

U.S. Department of Justice Drug Enforcement Administration (2018). *2018 National Drug Threat Assessment* DEA-DCT-DIR-032-18 https://www.dea.gov/sites/default/files/2018-11/DIR-032-18%202018%20NDTA%20final%20low%20resolution.pdf

U.S. Department of Justice Office of Justice Programs (2020, January 8). *Gangs*. https://www.ojp.gov/program/programs/gangs

U.S. Department of Justice Office of Justice Programs (2017). *Gang violence protocols for medical facilities*. National Gang Center Insights. https://nationalgangcenter.ojp.gov/insights/34/gang-violence-protocols-for-medical facilities

Watkins, A.M., & Taylor, T.J. (2016). The prevalence, predictors, and criminogenic effect of joining a gang among urban, suburban, and rural youth. *Journal of Criminal Justice, 47*, 133-142.

Journal of the Academy of Forensic Nursing

Case Study

One Awe-Inspiring Projectile

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One Awe-Inspiring Projectile

Forensic nurse examiners (FNE) and medical professionals may encounter patients who have sustained a gunshot wound – which may be either self-inflicted or inflicted by another. An essential assessment outcome is ensuring proper interpretation of the wound(s), obtaining forensic photography of the physical presentation before and after medical intervention, and cleaning the injury. Additionally, the FNE ensures appropriate collection and handling of valuable forensic evidence, including patient clothing and the retained projectile, while simultaneously maintaining the chain of custody. Ultimately, the FNE will document their findings within the medical record to ensure no erroneous identifications of the entrance and exit wounds which could cause profound issues in subsequent legal proceedings.

Gunshot wounds provide a wealth of information by focusing on patterns, range of fire, and trajectory. Gunshot wounds are either *penetrating*, where there is one single entrance wound and no exit, or *perforating*, where there is both an entrance and an exit wound. Beyond the entrance and potential exit wound, many other physical characteristics may be present during the evaluation. Rather than the size of the wounds, other physical characteristics will aid in differentiating between the entrance and exit wounds.

Entrance wounds have six physical findings that may be present:

1. The **abrasion collar** is caused by the projectile entering the skin. An abrasion collar may be circular in fashion; however, if the projectile travels and enters the body at an angle, this will result in an angled or comet-tail abrasion collar because the bottom side of the

projectile has more contact with the skin. This abrasion collar can provide information about the trajectory and the direction the projectile was traveling through the body.

2. Another physical finding is **tattooing** or **stippling** which can be caused by unburned gunpowder.
3. If the gunpowder is burned, the carbon abrasion residue, called **soot**, may be present on the skin, which may be wiped away. Soot can make direct visualization of the abrasion collar difficult for the examiner. The recommended practice would be to initially photograph the injury as it appears, then wipe away the soot to visualize the abrasion collar and obtain additional photographs. Soot will only be present in those gunshot wounds within close range of fire.
4. The skin may be **seared** from the flame emitted from the barrel of the gun, or
5. **triangular shaped tears** may form from the gas injected into the skin, causing the skin to expand to a point where it rips and tears.
6. Lastly, in some instances, there may be a **muzzle contusion** resulting from the injected gas pushing the skin against the barrel of the gun itself.

Exit wounds may also have irregular borders, even though there may be an absence of soot and seared skin; specifically, there is a possibility of having no tattooing or stippling apparent but still presenting with triangular shaped tears.

Range of fire is the distance from the gun to the impacted anatomical location on the body. The range of fire will also present physical characteristics at the wound location. Contact with the skin, even through layers of clothing, will result in an abrasion collar, seared skin, triangular shaped tears, and the presence of soot. **Close contact**, which is designated as zero to six inches, will result in the presence of an abrasion collar and the presence of soot. **Intermediate range of fire**, which is up to 48 inches, will present with an abrasion collar and tattooing or stippling. **Distant**, or **indeterminate range** of fire, is greater than 48-inches and the singular physical finding will be that of an abrasion collar.

Implications for Practice

When the forensic examiner assesses an individual who has sustained a gunshot wound, the examiner notes the entrance and exit wound characteristics, identifies the range of fire based on the physical characteristics noted, and then identifies the projectile's trajectory. The trajectory is the path the projectile takes into and through the body to its resting place, either inside the body or through an exit wound. The travel pathway of the projectile is documented as superior to inferior, medial to lateral, and anterior to posterior in relation to the entrance and exit wound.

When evaluating an individual who has sustained a gunshot wound, there are some essential questions to ask:

- What happened?
- Was the individual facing toward or away from the gun?
- Who shot them?
- If you are familiar with types of guns, what type of gun was used?
- How many shots were heard?
- Does the individual know why they were shot?

- Does the individual with the gunshot wound own a firearm?
- How far away from the gun were they?

An Unusual Case Study

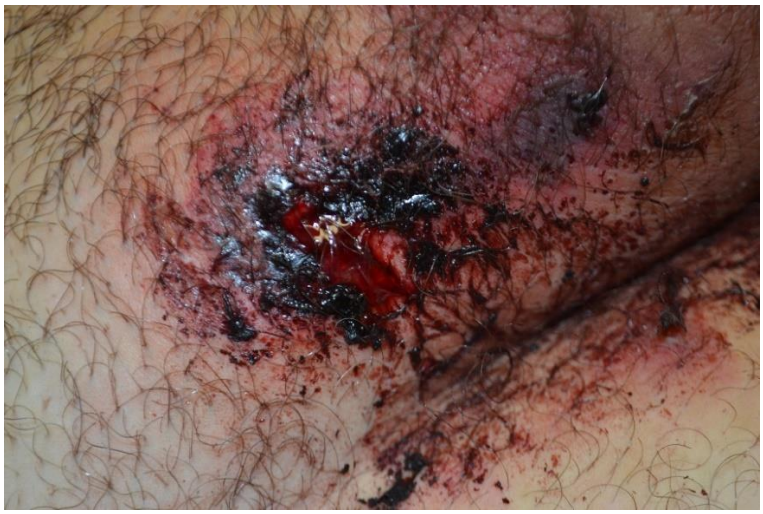
Not every day does a forensic examiner encounter the opportunity to evaluate an individual with two bullet entrance wounds and two exit wounds. The following case will showcase the physical presentation of a self-sustained gunshot wound.

Case Study

A man in his 20s presented to the emergency department after a gunshot wound. He described placing the firearm into the front right pocket of his jeans. The gun discharged, and the projectile traveled superior to inferior and from lateral to medial through his right testicle and exited through his left testicle. In this case, there was contact with clothing, as the firearm was located within the front pocket. Gases were injected into the pelvic area where the barrel was located. Gases were injected into the pelvic area where the barrel was located. The ejected gases were caught between the pocket liner and the underlying skin. As such, not all the gases went into the wound, but on the skin's surface, the presentation of seared skin, soot, and triangular-shaped tears was visualized. The pocket liner expanded, and the flame and the projectile contacted the skin, resulting in additional injury.

The following pictures depict the wound presentations identified during the medical forensic evaluation. Figure 1 shows the entrance wound at the base of the right testicle, at the ten o'clock position. Notice the soot and seared skin that is present. Close examination shows there are triangular shaped tears present as well.

Figure 1.
Entrance Wound



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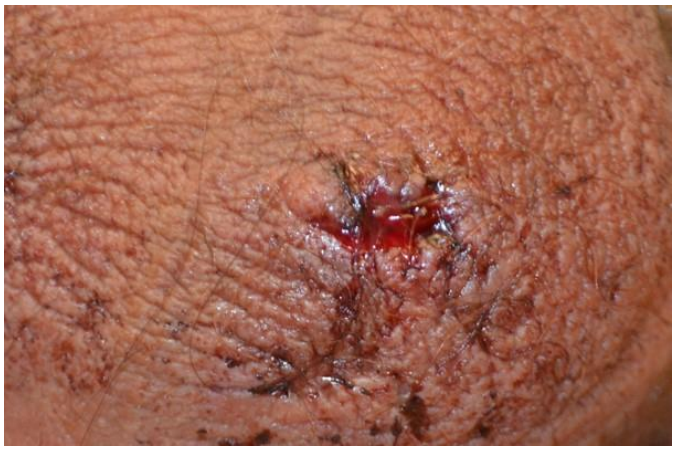
The projectile traveled through the testicular region and exited the left testicle at the four o'clock position (Figure 2). Note the absence of seared skin and soot; there is no stippling present, and there are some definitive triangular shaped tears visualized on the superior portion of the wound.

Figure 2.
Exit Wound

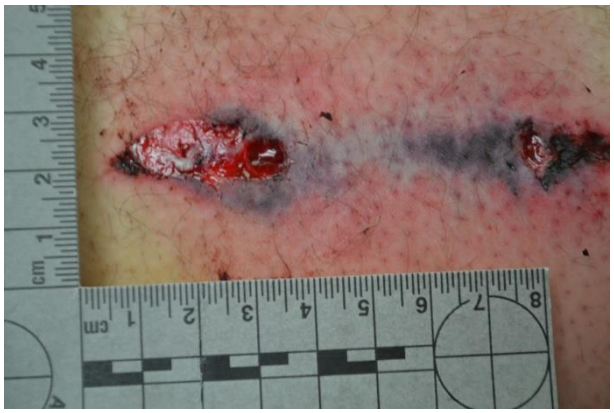


Inside the right-front pocket liner, bullet wipe and fiber defects were visualized. Bullet wipe residue transfer is caused when the projectile passes through the pocket liner. The bullet wipe forms when the carbon residue in the barrel is transferred onto the projectile as it travels downward, which is then deposited on the pocket liner. The bullet, a soft-nosed lead without a jacket present, travels down the barrel and results in the lead wiping off onto the clothing as the projectile travels through it before penetrating the skin.

Primer residue was visualized; when the projectile is discharged, a puff of residue from the primer is expelled from the barrel and then deposited on the pocket liner. There is also an absence of projectile lubricant, an oil that may be deposited onto the projectile while it is either in the magazine or the chamber. When the projectile is discharged, the lubricant travels down the barrel and makes contact with the right pocket liner.

Interestingly, the projectile then re-entered through a comet tail abrasion collar **(**Figure 3**),** traveled inferiorly down the inner aspect of the medial aspect of the left thigh, and then exited. The projectile was later to have been located and retrieved at the residence.

Figure 3.
Left Thigh



Outcome

Because of the anatomical location of the injuries, the gunshot wound victim was subsequently transported after stabilization for additional evaluation and treatment in a trauma center under the care of a urologist.

Journal of the Academy of Forensic Nursing

Research Reviews

AFN Journal Club Research Reviews

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AFN Journal Club Research 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

Legend

ALS= Alternative Light Source; AVS= Absorption Visibility Scale; BVS= Bruise Visibility Scale; CPS= Child Protective Services; ER= Emergency Room; FN=Forensic Nurse; HCP= Healthcare Provider; HT= Human Trafficking; HX= history IPV= Intimate Partner Violence; ID= Intellectual Disability; LGBTQIA= Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, Asexual; LE= Law Enforcement; MFE= Medical Forensic Exam; N/A=Not Available; NP=Nurse Practitioner; PED= Pediatric Emergency Department; POC= People of Color; P-SANE= Pediatric Sexual Assault Nurse Examiner; SA=Sexual Assault; SAK= Sexual Assault Kit; SANE= Sexual Assault Nurse Examiner; STI=Sexually Transmitted Infection; TBI= Traumatic Brain Injury

Completed Reviews

Rossman L, Solis S, Ouellette L, Kolacki C, Jones JS. (2020). *Colposcopic genital findings in female sexual assault victims: Relationship to prior sexual intercourse experience*. American Journal of Emergency Medicine; ePub(ePub):ePub DOI: 10.1016/j.ajem.2020.10.059

Literature Review. One reference from 2017; everything else older but literature on this topic is scant.

Design/Method/Fidelity. Retrospective chart review. Method- not easy to follow; missing headings. Data extraction obtained by two NPs (interrater reliability likely high) but not clear who did the actual exams

Sample/Setting. 12 years and older; 4 downtown ERs that referred to this clinic. Criteria was specified; exclusions- declining MFE, multiple assailants, consensual intercourse more than 72 hrs prior, lack of penile penetration (vaginal or rectal). Inclusions- 12 years or older, female, consenting to MFE. Representative- limited to the urban ERs; majority were white, mean age 17-26. Selection bias- none noted; no attrition

Analysis. . Chi Square and ANOVA

Results/Limitations. P value less than 0.001. Interrater reliability of the data abstraction was excellent, with a median kappa statistic of 0.88. Limitations- no control for the clinical evaluations by different examiners, and it may be that the documentation was not uniform (reporting bias). Also women were included only if they agreed to a forensic examination and evidence collection (selection bias). A total of 684 genital injuries were described. Ninety-eight victims (32%) had single and 211 (68%) had multiple sites of injury. 72% percent of these injuries occurred at one or more of four sites: fossa navicularis, hymen, labia minora, and posterior fourchette. Patients without prior sexual intercourse experience had significantly more genital injuries documented (3.4 versus1.9, $P < 0.001$). The most common site of injury in this group was the fossa navicularis and hymen; the most common injury was lacerations.

Clinical Significance/Practice Implications. Type and site of genital trauma from SA in women vary in relation to prior sexual intercourse experience. Although the two

groups were comparable in terms of assault history and overall frequency of genital injuries, women without prior experience sustained more genital injuries typically involving the fossa navicularis and hymen. This may challenge police and prosecutors who often view a lack of injuries as a negative finding. Also, anogenital injuries in virgins were located not just at the hymen but equally on the fossa navicularis and labia minora; need to do a thorough anogenital exam

Evidence Level. Level 4

Hornor, G., Thackeray, J., Scribano, P., Curran, S. and Benzinger, E. (2012). *Pediatric sexual assault nurse examiner care: Trace forensic evidence, ano-genital injury, and judicial outcomes*. Journal of Forensic Nursing, 8: 105-111. https://doi.org/10.1111/j.1939-3938.2011.01131.x

Literature Review: 9 of 19 references within last 5 years; a few older ones are seminal works

Design/Method: A retrospective review of medical and legal records of all patients presenting to the Pediatric Emergency Room (PED) at Nationwide Children's Hospital with concerns of acute sexual abuse/assault requiring forensic evidence collection from 1/1/04 to 12/31/07. Easy to follow; clear headings.

Sample/Setting: Pediatrics age 1-20, both male and female, received care in the PED at Nationwide Children's Hospital, a large urban pediatric hospital in Midwest. The medical and legal records criteria include: 1. Assault within 72 hrs. 2. History of sexual abuse involving genital–genital, anal-genital, oral-genital, and/or digital–genital contact. 3. Injury to anus or genitalia appears acute and is concerning for sexual abuse/assault. 4. Reason to believe that acute sexual abuse/assault has occurred despite child/adolescent unable to give history. Representative: Not necessarily; Mostly adolescent; mostly Caucasian; from Midwest; urban hospital setting

Analysis: STATA statistical software. Descriptive statistics of the study population are reported. Univariate analyses to compare quality indicators prior to the Pediatric Sexual Assault Nurse Examiner (P-SANE) support vs. with P-SANE support in the PED

Results/Limitations: P-SANE support demonstrated greater likelihood of: identifying and documenting an acute and/or nonacute ano-genital injury (34% vs. 20%; $p = 0.006$); evaluating and documenting pregnancy status (59% vs. 47%; $p = 0.030$); and testing for N. gonorrhea and C. trachomatis (95% vs. 80%; $p < 0.0001$), when compared to pre-implementation of the P-SANE support. No significant difference in provider group was noted for the following: rape evidence kit positive for trace forensic evidence (P-SANE 27% vs. pre-implementation of P-SANE support, 26%; $p = 0.807$); ability to identify perpetrator DNA profile from trace forensic evidence (P-SANE 20% vs. pre-implementation of P-SANE support 16%; $p = 0.390$); and judicial outcomes (charges filed P-SANE 43% vs. pre-implementation of P-SANE support 38%; $p = 0.339$). Limitations: The quality indicators measured are somewhat narrow and do not

comprehensively measure acute SA care. Examples of other quality indicators not measured in this study include the following: time of care from ED admission to discharge, STI/pregnancy prophylaxis, referral to mental health counseling, and others. Judicial outcomes and forensic evidence kit results may be influenced by a number of factors unrelated to the type of health care provider performing the examination/rape evidence kit collection, including quality of the forensic evidence analysis at the crime lab.

Clinical Significance: P-SANEs play a vital supporting role in the care of child and adolescent victims of acute SA including the collection of trace forensic evidence, physical assessment including anogenital examination, STI/pregnancy testing and prophylaxis, providing emotional support, providing appropriate follow-up referrals, collaboration with CPS and LE, and court testimony. This study documented P-SANEs to be more likely to recognize and document an abnormal ano-genital exam finding and to evaluate for pregnancy and STIs, yet additional research is needed to fully document the impact of P-SANEs on patient care outcomes. Many studies look at legal/court outcomes; need to focus on patient care/clinical outcomes.

Level of Evidence: Level 4

Long E & Dowdell EB. (Jul 2018). Nurses' Perceptions of Victims of Human Trafficking in an Urban Emergency Department: A Qualitative Study. *Journal of Emergency Nursing*; 44(4):375-383. DOI: 10.1016/j.jen.2017.11.004.

Literature Review. 14 references less than 5 years; 10 are greater than 5 years. Many are position statements/opinions (and not actual research articles), which supports there are gaps in research.

Design/Method: Descriptive qualitative design; data collected during semi structured interviews. Clear and easy to follow; headers assist reader. Participation was voluntary; oral consent was deemed adequate.

Sample/Setting: 10 nurses from an urban ER that was a large, academic level I. Had to have BSN and worked at least 2 years in the ED. 4 males; 6 females, 7 had less than 10 years of experience. Not representative: only one nurse practicing as SANE, mostly Caucasian. Limitation that sample requirements were too general.

Analysis: Semi structured interviews using 12 open ended questions. Data saturation reached after 10 participants. Content analysis was used to analyze the data; interviews transcribed verbatim by first author and read/ confirmed by second author to ensure comprehensive examination of the data; interviews were recorded, transcribed, and thematic analysis was performed. Trustworthiness was addressed. Questions 1, 6, 7, and 10- not open ended

Results/Limitations: Six themes emerged from the interviews including: HT exists in the patient population; HT victims are “young, female, and foreign born”; all the ED nurses reported having worked with or screened a victim of violence; victims of violence were

viewed as patients who present as "sad and grieving"; prostitutes are seen as "hard and tough"; and ED nurses did not have education on human trafficking victims' needs or resources. Limitations: explicit/implicit bias, small sample size, age ranges and experience, 1 SANE participant, mostly Caucasian and without LGBTQIA representation; no ER policy on HT

Clinical Significance: ED nurses need to be empowered with the tools and assessment skills to identify as well as provide care to these populations; ED nurses are in key positions to use current research and guidelines to advocate for a federal mandate to screen for these patients; develop HT policy and training

Level of Evidence: Level 4

Lynch, K. R., & Jackson, D. B. (2021). Firearm exposure and the health of high-risk intimate partner violence victims. *Social Science and Medicine*, 270, [113644]. https://doi.org/10.1016/j.socscimed.2020.113644

Literature Review: 17 of 68 references in last 5 years; had references from 1986 and 1984 and 1989. Analyzing a lot of variables, so references covered a lot of broad topics.

Design/Method: Questionnaires: Participant physical health was assessed using a list of nine health problems based on health symptoms. The list also included the addition of a brain/head injury item given evidence of a high occurrence of head injuries among intimate partner violence (IPV) victims. Health problems included Diabetes, High Blood Pressure, Pain, seizures/Epilepsy, Heart Disease, Back Problems, Brain Injury/Concussion/Other Head Injury, Headaches/Migraines, and Stomach/Intestinal Problems. Method somewhat easy to follow, but analysis description was complex.

Sample/Setting: Participants (N = 215 women) were recruited through IPV shelters across six locations in South Texas. Participants must have been at least 18 years old and experienced IPV at some point in their life to participate. Most participants were living at the shelter. Participants completed a questionnaire available in both English and Spanish. 75 min questionnaire and participants were compensated with a $20 gift card. Was not random sampling; was from one area of one state; was both urban and rural.

Analysis: Descriptive statistics, as well as OLS regression was employed to examine the association between both abuser firearm ownership and firearm related IPV and physical health problems. The association between partner firearm ownership and specific physical health problems is further explored by calculating the predicted probabilities of each of the physical health problems by partner firearm ownership while adjusting for the influence of covariates. The potential for measures of trauma (i.e., PTSD and sleep disturbances) to attenuate associations between partner firearm ownership and physical health problems examined using the Karlson-Holm-Breen (KHB) method

Results/Limitations: Both non-firearm IPV and partner gun ownership are both positively and significantly associated with physical health problems. Standardized coefficients reveal that these two measures – non-firearm IPV and partner firearm

ownership – are among the strongest predictors of physical health problems in the model, with age also exerting a robust effect on physical health problems. Partner firearm ownership is not significantly associated with all physical health problems, but it is significantly and positively associated with most of them, including pain, seizures/epilepsy, back problems, brain/head injury, and headaches/migraines. Predicted probabilities of pain, back problems, and headaches/migraines were especially high among participants with abusive partners who owned firearms. PTSD symptomatology and sleep disturbances attenuate the association between partner gun ownership and physical health problems by 40.60%. Results confusing/ambiguous at times; limitations including an inability to establish causal relationships between abuser firearm ownership, sleep disturbances, and health issues. Health questionaries are self-reported rather than actual medical diagnoses and data was cross sectional. Might not be generalizable to victims in less severe IPV situations or non-shelter examples.

Clinical Significance: Consider that abusers did not have to use firearms explicitly for victims to experience harm and an abuser's potential access to a firearm has consequences distinct from abusive behaviors. Need more research on anxiety and depression, beyond PTSD, sleep disturbances, and health outcomes addressed on this study's questionnaires.

Level of Evidence: level 4

Scafide, K; Downing, N; Kutahyalioglu, N; Sebeh, Y; Sheridan, D; & Hayat, M (2021). Quantifying the Degree of Bruise Visibility Observed Under White Light and an Alternate Light Source. *Journal of Forensic Nursing*, 17 (1), 24-33.

Literature Review: 29 references. Older ones from 1979-2011; do not all seem to relate to research problem

Design/Method: Blunt force trauma to upper arm w/paintball gun from 20 feet. Bruises assessed 21 time points over 4 weeks, earliest was at 30 mins after first paintball trauma. Method easy to follow

Sample/Setting: Adults 18-65. Two University settings. Criteria identified: No skin lesion under white light on the area to be bruised, no reported health conditions or medication that impacts bleeding, no hx of delayed wound healing, upper arm circumference less than 24 cm. Mostly female (67%), mostly young (mean 24.6); split well between Caucasian and POC (half/half).

Analysis: SPSS & SAS Descriptive stats, Kappa for interrater reliability, ICC analysis for interrater agreement.

Results/Limitations: Satisfactory interrater agreement in both detection & visibility of bruises using ALS or white light. The proportion of agreement was over 90% for all assessments except when using ALS wavelengths with red filter (515 and 535), Nine of

the 240 observations fell outside the 95% confidence interval; of these 9 outliers, one rater was involved in 5 of them. Results are slightly muddy; scatter plots confusing. Limitations: lack of validated measure for assessing bruise visibility; did not assess the reliability of the raters' bruise size measurements.

Clinical Significance: Detailed, consistent, and precise documentation can contribute to better quality of care and preservation of evidence. Documentation should be reliable and accurate. FNEs should incorporate BVS and AVS instruments though more replication studies are recommended. Could/should implement table 6 into practice

Level of Evidence: level 2

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.

Journal of the Academy of Forensic Nursing

Global Update

The First Forensic Nursing Forum in Switzerland: the Fundamental Milestone in the Establishment of Forensic Nursing.

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Forensic Nursing is a relatively new nursing specialization in Switzerland, which is not yet very well-known across the country. There are currently only a few nurses who are employed as forensic nurses itself in institutions like hospitals or care centres.

But also in Switzerland, as in the rest of the world, there is violence in the society and the need of finding new ways to protect victims of violence is constantly growing. It can be assumed, that there is, like in many other countries, a high number of unreported cases when it comes to domestic or sexual violence.

In 2011, the Council of Europe resolved the so-called Istanbul Convention. A concept on Preventing and Combating Violence against Women and Domestic Violence in Europe. The Implementation of the concept is mandatory for all the member states. Therefore it is mandatory for Switzerland to plan the implementation and get over the books of the actual structures and systems in prevention and treatment of victims of violence.

In 2015 The Institute of Forensic Medicine in Zürich started their first educational program in Forensic Nursing. Taking the "Forensic Nurse" in the United States and Canada as a role model. 16 participants started the "Certificate of Advanced studies (CAS) in Forensic Nursing" at the Institute of Forensic Medicine, in collaboration with the University of Zurich. As for today in 2022, we already have approximately 95 trained Forensic Nurses who did the CAS

in Forensic Nursing in Zürich and around 13 Forensic Nurses from the postgraduate course of Forensic Nursing in Chur.

The Swiss Association of Forensic Nursing was founded in 2017 and is counting on around sixty members today. So we already have resources in Forensic Nursing but there is still a lot more to do.

To optimize the implementation of Forensic Nursing in Switzerland, the Institute of Forensic Medicine in cooperation with the Swiss Association Forensic Nursing had decided to host the first Forensic Nursing Forum in Switzerland this year.

On May 6 and 7, 2022, on the Pilatus, Lucerne`s beautiful house mountain, around 60 participants came together with the motto of the forum "Vision, Mission, Strategy and Action". Due to the bad weather conditions, the magnificent panoramic view from the Bernese Jura over the Eiger, Moench and Jungfrau to the Pfannenstiel was out of sight. Good for the forum as there was no distraction from the outside to the forum attendees and it was easy to focus on the main goals (Figure 1).

Figure 1:
The official announcement of the First Forensic Nursing Forum in Switzerland

The main topics of the forum were the presentation of numerous areas of application of Forensic Nursing and the discussion of the current challenges we face. A big interest was to promote and strengthen the interdisciplinary cooperation and to develop perspectives for an implementation in the Swiss health care system.

Among the participants were representatives of forensic medicine, law enforcement agencies, nursing management, nursing services, politicians, lawyers, and aspiring and trained forensic nurses. This constellation allowed the desired interdisciplinary exchange to take place at the highest level.

The opening ceremony was hosted by Prof. Dr. Michael Thali, Director of the Institute of Forensic Medicine of the University of Zurich and Director of the CAS in Forensic Nursing at the University of Zurich and Valeria Kägi, President of the Swiss Association of Forensic Nursing. The main focus was put on the developing field of Forensic Nursing in Switzerland and the urgent need in society for high quality forensic competence and the opportunities to optimize the process for Forensic Nurses as interface managers.

The opening of the forum was concluded with virtual greetings from two pioneers of Forensic Nursing. Catherine Carter-Snell (Mount Royal University, CA, Faculty of Health, Community & Education – School of Nursing and Midwifery), and Virginia Lynch (MSN, RN, FAAFS, FAAN, once University of Texas at Arlington's School of Nursing) demonstrated in their speeches the journey that Forensic Nursing has taken for more than 20 years. They vividly conveyed that Forensic Nursing has been a success story in Canada as well as in the United States of America. It came from a niche existence to a broad and indispensable role in the health care system.

The first day of the forum was dedicated to already successful implementations in Switzerland and gave space for speakers to give ideas on different ways to go in the future. A forensic consultation center in Chur, provided practical examples from gynecological emergencies and psychiatry wards showing that forensic nurses are already successfully assuming important functions and tasks in parts of the Swiss health care system. The model of Flying Forensic Nursing was introduced, as well as the possibility of a Forensic Nursing App to provide a simple access to high forensic competence. The last presentation of the day by a prosecutor again emphasized the relevance of clean documentation of injuries and good preservation of evidence at an early stage.

The second day was devoted to perspectives for Forensic Nursing in Switzerland. The adoption of physician associates in the Swiss Health Care system was showed as an example way to go when it comes to the implementation of new nursing specialties in an existing system. Dr. Julian Mausbach, a lawyer at the Institute of Forensic Medicine gave an overview of forensic nursing from a legal perspective and showed the participants what the possibilities in Switzerland are when it comes to competences, rights and obligations. This was followed by Valeria Kägi, Forensic Nurse at the institute of forensic medicine who introduced the Swiss Association Forensic Nursing, their main goals and their national and international cooperation partners. Once again, she emphasized the importance of networking together between all of the disciplines with forensic relevance.

The Lucerne cantonal councilor Stefan Schärli, not only moderated the forum, he also gave a contribution to the political dimension of the integration of Forensic Nursing in Switzerland. We heard an informative presentation on human trafficking in Switzerland from a representative of ACT 212, an anti-trafficking organization. And at the of the day various exciting presentations by the members of the police force about topics such as senior citizen protection as well as possibilities for the collaboration between forensic nurses and the police rounded up the very informative two-day event.

All presentations were accompanied by numerous comments and discussions from the plenum. It was possible to achieve a holistic overview of Forensic Nursing in Switzerland. What we already achieved and what we need to aim for in the future. A concluding panel discussion once again demonstrated the great need and the great potential of Forensic Nursing in Switzerland and in general. With all the participants coming together from different points of view we came to the main conclusion, that we need to put the victim of violence into the center of attention when we are working together, and we need to stabilize our network to professionalize their support in the care system.

Overall, the many discussions during and around the event led to the establishment of a variety of new friendly and professional contacts. The first Swiss Forensic Nurse Forum was such a great success for all of us that we are already planning the second Forensic Nursing Forum in 2023.

The second Swiss Forum will be held on **May 5th and 6th 2023** in the beautiful Swiss canton of Glarus, and we would be very pleased to welcome you there.
https://swissforensicnurses.ch/

News and Opportunities

Forensic Nursing Certification Board (FNCB)

Academy of Forensic Nursing Membership

Founded in 2018, the Academy of Forensic Nursing (AFN) has worked to improve and advance the field of forensic nursing. The organization's leadership aims to continue developing the practice with well-researched, evidence-based, trauma-informed care and techniques. The Academy brings together nursing providers, nurse practitioners, educators, researchers, and nurse advocates to provide education, research, networking, and career advancement. Some key methods of disseminating this information include conferences, webinars, podcasts – and, now, the Journal of the Academy of Forensic Nursing. AFN encourages all professionals who support those affected by trauma to be a part of this effort, both receiving and contributing to this critical source of forensic nursing information.

For more information, visit: https://www.goafn.org

To view all of AFN's online learning opportunities, visit: https://goafn.thinkific.com