Integrating harm reduction into acute care: A single center's experience

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ABSTRACT

Objective: Injection drug use (IDU) is prevalent in North America and is associated with presentations with infective endocarditis. Supporting patients who present with infective endocarditis related to IDU through harm reduction, a pragmatic approach to reduce secondary harms of a health behavior, helps address the underlying IDU. We share a case exemplar of how one acute care facility integrated harm-reduction practices into daily patient care.

Methods: We took a 3-stage approach to integrate harm-reduction practices into daily patient care. In stage 1, we raised awareness and knowledge of harm reduction through education. In stage 2, we provided explicit support for harm reduction. In stage 3, we provided tangible tools to support harm reduction.

Results: More than 300 staff attended education sessions and reported increased knowledge related to substances, harm reduction, and engaging patients who use substances in conversations. Staff requested the hospital explicitly support harm reduction, which led to stage 2. The creation of a harm-reduction philosophy statement provided permission to engage in harm-reduction practices. Stage 3 included the creation of a harm-reduction supply distribution program and consultations with Addictions Medicine and treatment programs. The implementation of harm-reduction supply distribution was successful and is being spread across the facility.

Conclusions: Engaging in harm-reduction practices within an acute care facility is possible through a multistage process focused on education, explicit support, and tangible tools. Spreading harm-reduction integration and working with patients who used substances to evaluate effectiveness are key next steps. (JTCVS Open 2023;15:342-7)

Harm-reduction kit contents.

CENTRAL MESSAGE

Harm reduction is a pragmatic approach to reduce the secondary harms of substance misuse. Engaging in harm-reduction practices within an acute care facility is possible through a multistage approach.

PERSPECTIVE

Infective endocarditis (IE) is a common harm associated with injection drug use. Supporting patients through a harm-reduction approach can reduce the occurrence of IE. This article presents a 3-stage approach to introducing harm reduction into acute care through education, explicit institutional support, and tangible harm-reduction tools.

Substance use is prevalent in North America[1,2] and increased in prevalence throughout the coronavirus disease 2019 (COVID-19) pandemic.[3] Among methods for ingesting substances, injection drug use (IDU) has become increasingly prevalent in North America[4,5] and is associated with 11%[3,6] to more than 50%[7] of presentations with infective endocarditis (IE). When people who inject drugs (PWID) present with IDU-related IE, acute care facilities and cardiovascular care providers focus on IE as the primary health issue and address substance use through referrals to services such as outpatient rehabilitation.[8] Although IE may be the most acute health issue, it is a symptom of another, more pervasive health issue, substance use. Until PWID wish to seek treatment for substance use and address the reasons for engaging in using substances, they cannot be expected to abstain from IDU and are therefore at risk for IE.

Harm reduction is a pragmatic approach that seeks to reduce the secondary harms of a health behaviour.[9-11] The

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Abbreviations and Acronyms

AFM = Addictions Foundation of Manitoba
COVID-19 = coronavirus disease 2019
ICU = injection drug use
IE = infective endocarditis
PWID = people who inject drugs

principles of harm reduction are (1) evidence-based; (2) respectful of dignity and self-determination; (3) inclusive regardless of sex, gender, race, sexual orientation, education, and socioeconomic status; and (4) informed through the inclusion of PWID.[12] Harm reduction seeks ways to reduce the potential harms of substance use through initiatives such as naloxone distribution, drug checking, and supervised consumption sites.[9-11] Harm-reduction approaches specific to IDU include abstinence, changing the frequency of use, and the distribution of sterile injection equipment (Figure 1).[9-11]

Although evidence-based, harm reduction is not well integrated into acute care facilities. This lack of integration may be due to inherent stigma and biases related to the lack of knowledge of acute care providers about harm reduction, institutional biases requiring a change in the culture of a facility to support harm reduction, and a lack of harm-reduction supplies. The objective of this article is to share an exemplar of the approach of one acute care facility in integrating harm-reduction practices into daily patient care. Following the Standards for Quality Improvement Reporting Excellence 2.0 reporting guideline,[13] we review the 3-stage process we undertook to move from abstinence-based and unaware of harm reduction to the integration of harm-reduction practices throughout our facility. We share insights and what we learned to support the integration of harm reduction at other facilities and the work needed to support the expansion of harm reduction among acute-care facilities. The institutional review board of St Boniface Hospital did not approve this study, and patient written consent for the publication of the study was not received, as this was a quality improvement initiative.

METHODS

Stage 1: Raise Awareness and Knowledge of Harm Reduction

In early 2018, we noted a 125% increase in presentations with IE and increased concern from frontline staff about how to appropriately care for the increasingly prevalent population of PWID. The hospital had no resources, be those education, human, or programming, related to substance use at this time. We gained the support of hospital executives to engage in hospital-wide education related to substance use. We organized four 1-hour long education sessions and requested feedback after each session related to the utility of the information provided and the remaining gaps in knowledge. The first presentation was by an emergency physician related to patient presentations and initial management of commonly used substances.

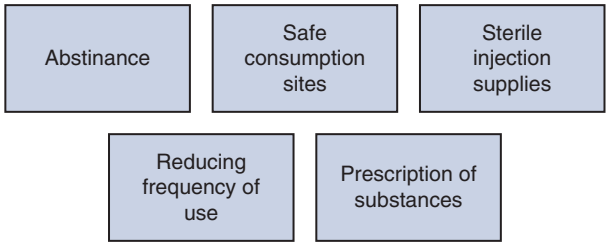

FIGURE 1. An example of various harm-reduction practices.

The second presentation was by a police officer who shared information on the various substances used locally, including their street names, common symptoms of intoxication, and use patterns. He provided examples of each substance in sealed specimen containers to allow for visualization and normalization of the substances. The third presentation was by a community harm-reduction expert, who was the first to introduce the concept of harm reduction, to introduce the implicit bias being perpetuated by failing to recognize the patient-specific context of substance misuse and the acute care presentation as a symptom of a larger issue. The final presentation was by a practice consultant from the provincial nursing licensing body focusing on the ethical and legal issues surrounding substance use in acute care. Hospital executives and the local nursing union representatives were invited to attend to ensure awareness of and support for education.

Feedback on the initial sessions informed the next series of education sessions. Nurses indicated that they were concerned about licensing and liability issues. Other feedback included prescriber questions about opioid-agonist therapy and requests for more information related to harm reduction. Based on this, we organized 4 more education sessions.

We had the community harm-reduction expert return and present a more in-depth session related to harm reduction. We had a lead from the Manitoba Addictions Knowledge Exchange Centre with the Addictions Foundation of Manitoba (AFM), a Crown agency providing addictions services and supporting healthy behaviors, present specifically on methamphetamine, the dominant substance being used at that time. We had the hospital's clinical ethicist (K.L.A.), who reviewed basic ethical principles with a focus on capacity and informed decision-making. Finally, we engaged the head of Addictions Medicine, who presented about opioid-agonist therapy and provided suggestions for managing pain in the postoperative period. These sessions were recorded and made available on the hospital's internal website to allow for access for both staff who were not able to attend in person and for future staff to support onboarding. We again solicited feedback following each session and, at this point, staff indicated that they felt informed and able to begin to provide harm reduction; however, they were unsure of the support from the organization due to the lack of tangible support and tools.

At the same time, cardiologists, cardiac surgeons, cardiac anesthesiologists, and clinical and physician assistants supporting cardiac surgery requested education. We organized a Royal College of Physicians and Surgeons of Manitoba–accredited education day to provide information specifically targeted at prescribers. Education was provided by several experts from the spring and autumn sessions with the objectives of providing increased knowledge related to methamphetamine addiction, ethical considerations for caring for PWID, and the postoperative management of PWID. Simultaneously, we began work on stage 2.

Stage 1 required minimal resources to complete. The hospital provided financial support for honorariums for the speakers, totaling $350. Two people (E.K.H. and S.G.) dedicated approximately 12 hours each to organizing speakers, rooms, accreditation, and honoraria. A statistician supported the creation and interpretation of the surveys, totaling 2 hours. There were no incentives provided for staff to encourage attendance beyond the accredited education hours for physicians.

Stage 2: Provide Explicit Support for Harm Reduction

To address the requests from staff to provide tangible support for harm reduction, we reviewed provincial and regional health authority guidelines and policies. A guideline explicitly supporting harm reduction existed at the regional level; however, after conversations with frontline staff, we decided to pursue the creation of a site-specific harm-reduction philosophy statement. This decision was made for 2 reasons, first, to ensure that the hospital executives and board were aware and supportive of actively engaging in harm reduction, and second, to provide a statement with the hospital logo to clearly share facility support for engaging in harm reduction. The proposed philosophy statement was presented to hospital executives and the board and the alignment of harm reduction with the hospital's mission and strategic priorities was highlighted. There was resounding support for this philosophy statement, which was approved in the summer of 2019. Hospital executives and the board were also supportive of tangible tools to actively support harm reduction, which enabled stage 3 of this project.

Simultaneously, a facility-wide Substance Use Working Group was created in 2019. The working group, co-chaired initially by K.L.A. and the manager of social work and later by K.L.A. and E.K.H., provides a forum for collaboration across the facility on the tangible tools created in stage 3. Over time, the working group has expanded to include external partners from AFM and Main Street Project, a community health center serving the most marginalized residents of Winnipeg. The working group is interdisciplinary, with members from medicine, nursing, social work, ethics, pharmacy, occupational health, Indigenous Health, and a variety of leadership levels including managers, program directors, and hospital executives.

Stage 2 also required minimal resources. The harm-reduction philosophy statement was written by K.L.A., E.K.H., and S. G. and took approximately 4 hours each. The Substance Use Working Group required approximately 10 hours to initiate and requires 90 minutes of human resources support each month from an administrative assistant, K.L.A., and E.K.H.

Stage 3: Provide Tangible Tools to Support Harm Reduction

The first tangible tool began in the autumn of 2019 as a collaboration with AFM to bring counselors into the hospital to meet with PWIDs to discuss rehabilitation options if this is the goal of the patient. The AFM counselors are accessed through a consult with hospital social workers, who meet with the patient and share the option to meet with AFM and potential options that AFM can offer. The AFM counselors attend the hospital 2 days each week to meet with identified patients to discuss treatment options and support transitioning from hospital to treatment. If desired and when possible, patients move directly from hospital care to inpatient treatment.

The distribution of harm-reduction supplies for IDU began in the winter of 2020. We collaborated with the regional community program to obtain harm-reduction supplies identical to the supplies distributed in the community. There was no cost for the supplies due to a provincial grant supporting the regional community program in supporting harm-reduction supply distribution. When discussing the creation of kits, the volume of supplies was identified as needing to be informed by a PWID, so we engaged a PWID champion. In the community, a large volume of supplies is distributed to support fewer touchpoints with suppliers. In the hospital, the PWID champion suggested a smaller volume of supplies be distributed to provide the opportunity for more conversations with hospital staff. We settled on supplies for 2 uses for 2 people to encourage PWID to not engage in IDU alone and to provide enough supplies to attempt to ensure that PWID retained a sense of autonomy. We began by creating 5 kits, which were added to the regular supply chain management of the unit. Replacement kits were created by material management when the kits on the unit were depleted.

The PWID champion encouraged the harm-reduction supplies to be viewed as conversation starters related to IDU rather than a solution. This approach was integrated into the education provided to the manager, nurse educator, and charge nurses of the cardiac surgery inpatient unit. The education focused on refreshing the staff on the concept of harm reduction and reviewing the contents of the kits. Several sessions were provided and staff were able to attend virtually or in person. Those attending in person were provided with kits to open and explore, which provided the opportunity to normalize the contents of the kit. Finally, information was created to provide to PWID to identify community sites to access for harm-reduction supplies if they were not already using these services.

Finally, an Addictions Medicine consult service formally began in the summer of 2020. Previously, Addictions Medicine services were not available at this hospital. This consult service provided access to Addictions Medicine physicians 12 hours a day, 7 days each week. To tie these harm-reduction tangible tools together, we created an order set in the electronic record to identify which patients are receiving kits and offer Addictions Medicine and social work consults to be entered as required or desired.

Stage 3 required the most human resource support. Bringing AFM counselors into the hospital took approximately 6 hours each from K.L.A. and E.K.H. Creation, education, and evaluation of harm-reduction supply distribution to the initial site took approximately 12 hours each from E.K.H., K.L.A, S.G., and T.N. No resources were required to support the initiation of an Addictions Medicine consult service from this team.

Measurements of Success

Success was measured via process measures and outcome measures. The Standards for Quality Improvement Reporting Excellence 2.0 guideline defines process measures as "the routines and other activities through which healthcare services are delivered."[13] These demonstrate the impact of the processes undertaken for the project. The outcome measures demonstrate the impact of the project itself.

The process measure for stage 1 was the attendance of staff at the education sessions. For the spring and fall 2018 sessions, sign-in sheets were provided for each session for staff to indicate their attendance and their role (ie, nursing, physiotherapy, executive). For the physician education session, registration was required, and attendance was taken. Stage 2 did not have a formal evaluation component, as it was focused on providing explicit support. The process measure for stage 3 was the volume of kits distributed, which reflects the success of staff in engaging in conversations related to harm reduction with PWID.

The outcome measure for stage 1 was the staff-reported increase in knowledge from the education sessions. Surveys were provided after the series of sessions. The surveys included quantitative, Likert-style scales related to knowledge of: substances being used, how to medically manage patients, the concept of harm reduction, how to engage PWID in conversations related to IDU, the ethical and legal considerations of caring for PWID, and licensing and liability issues. The outcome measure for stage 3 was the length of stay of PWID with IE, as increased length of stay may reflect the success of the harm-reduction approach because patients feel the hospital is a safe place to visit and seek care. The length of stay of PWID with IE will be extended if they remain in the hospital for the completion of treatment related to their IE.

RESULTS

Stage 1 was successful in both process and outcome, as evidenced by high attendance at the spring and fall 2018 education sessions and staff-reported increased knowledge following the education sessions. Process-wise, more than 300 of approximately 1550 staff voluntarily attended the spring and the fall 2018 education sessions each. It was noted that social workers and pharmacists were attending

the spring education sessions, so these groups were specifically targeted for messaging related to the fall education sessions. Staff requested increased access to the education sessions by recording them and making them available to those who could not attend. The fall education sessions were recorded and are available on the hospital intranet site. These videos have had more than 200 views since 2018 despite access being limited to hospital computers only. The physician education session had 20 registrants of a possible 72. On the day of the education session, there was a winter storm, which led to the attendance of only 5 of the registrants. As this session was held pre–COVID-19 pandemic, virtual resources were not yet in place to support remote attendance.

Outcome-wise, the majority of attendees agreed that they had increased knowledge related to substances being used by patients, how to medically manage patients, the concept of harm reduction, how to engage PWID in conversations related to IDU, the ethical and legal considerations of caring for PWID, and how licensing and liability issues. Staff also provided comments that indicated enjoyment of the education sessions, that the sessions were providing relevant information, and provided requests for future education sessions that demonstrated an understanding of harm-reduction principles. For example, comments from the spring sessions requested specific hospital policies regarding the care of PWID while in the hospital, how substance use relates to socioeconomic issues such as homelessness and poverty, and to simply repeat the sessions. Due to this feedback, future sessions were recorded to allow staff to access them at any time and speakers were asked to tie the broader contexts of socioeconomic status into their presentations. This feedback also led to the work in stage 2.

Stage 3 was also successful, as evidenced by the volume of kits distributed, hospital presentations, and length of stay of PWID presenting with IE. From the spring of 2020 to the winter of 2021, 11 kits were distributed on the cardiac surgery inpatient unit. The length of stay of PWID with IE increased, from 36 days in 2017/2018 to 44 in 2019/2020. It should be noted that the contextual factor of the COVID-19 pandemic needs to be considered when interpreting these results, as it significantly impacted the supply of substances due to border closures, which may have led to patients ceasing IDU and switching to a different substance and route.[14] These results also rely on the disclosure and documentation of IDU.

DISCUSSION

A 3-stage approach was used to integrate harm-reduction practices into daily patient care to reduce the IDU-related complications PWID experience (Figure 2). In stage 1, awareness and knowledge of harm reduction were developed to reduce inherent stigma and biases held by health care providers. In stage 2, explicit support for harm reduction by the facility was shared to remove any perceived institutional barriers. In stage 3, tangible tools to support harm reduction were created, including connections to recovery options, harm-reduction supplies, and Addictions Medicine physicians. Together, these stages led to increased knowledge, a sense of permission to engage in harm-reduction practices, and harm-reduction tools to use in practice. This helped shift our hospital toward focusing on reducing the harms related to IDU (Figure 3). The authors believe that this is the first project sharing how to integrate harm-reduction principles, including supply distribution, into the acute care of cardiac surgery patients.

Recognizing the upstream issues that lead to IE is the first step in supporting patients through a harm-reduction lens. A common misconception of harm reduction is that it supports or even encourages the health behavior.[9] This was noted with the introduction of seatbelts to automobiles in the 1960s and the concern that using a device that can prevent death and injuries may lead to riskier driving behaviors.[9] Seatbelts are now a safety standard and have not been linked to riskier driving behavior.[15] Similarly, there is no evidence to support that engaging in harm reduction leads to unintended consequences, including greater injection frequency, increased illicit drug use, syringe lending, or numbers of discarded used needles, new PWIDs, less motivation to change, nor increased transition from non-injecting drug use to IDU.[16] Evidence does support that harm-reduction practices reduce the transmission of HIV and hepatitis B and C (related to reduced needle sharing and re-use) and reduce the occurrence of skin bacterial infections (such as

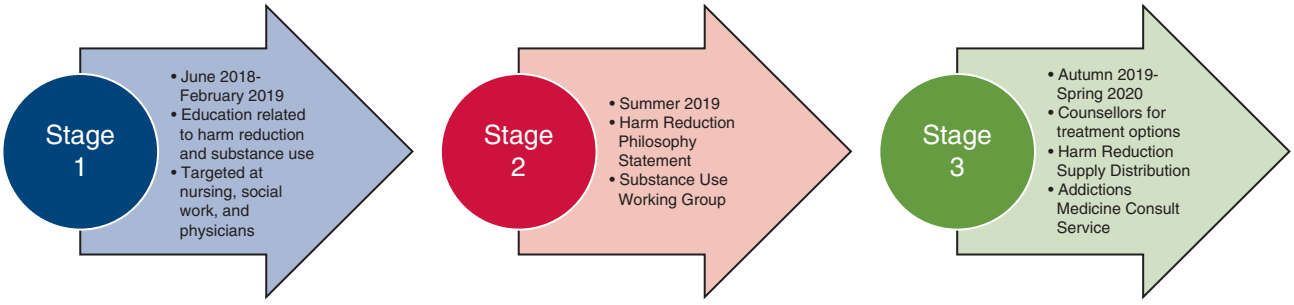

FIGURE 2. A timeline overview of the 3 stages.

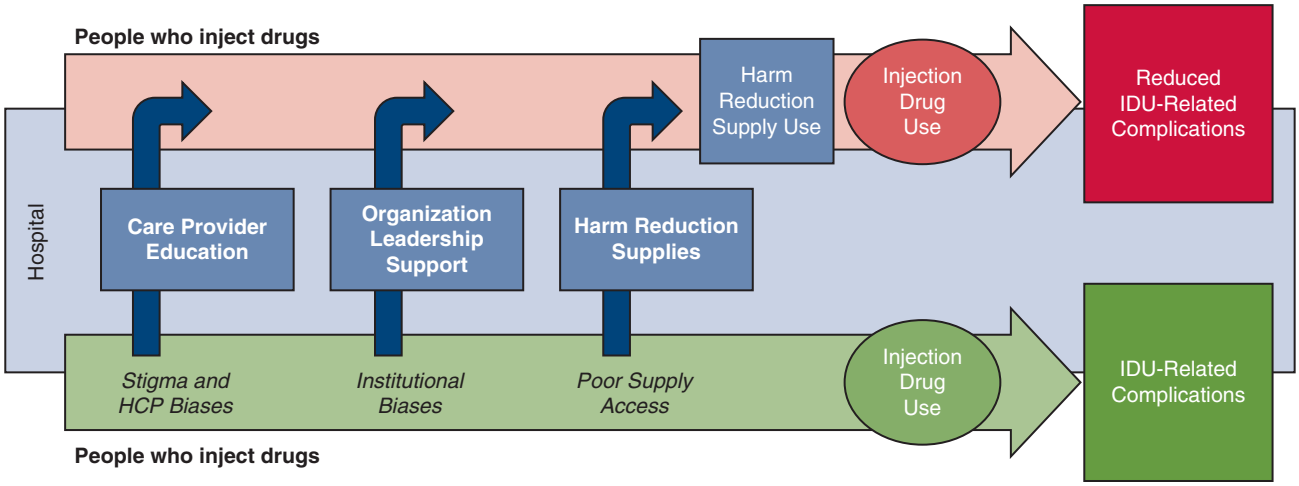

FIGURE 3. The stages and outcomes to integrate harm reduction into acute care facilities. *IDU*, Injection drug use; *HCP*, healthcare provider.

methicillin-resistant *Staphylococcus aureus*, a common pathogen responsible for IE).[17]

Spread and sustainability are key components of this 3-stage approach. Spreading the integration of harm reduction throughout all programs at a hospital takes time, champions of the initiative within each program, and further education. Taking the time to learn from the initial rollout and making changes to close the gaps identified is important to optimize success within future programs. Identifying champions among formal and informal leaders ensures that there is support for harm reduction and people who will lead the way of integrating the practice into daily patient care. Ensuring appropriate education provides the required knowledge related to harm reduction and the tools available. Providing this education with both in-person and virtual options increases access and spread of knowledge. Providing incentives to attend, such as paid education time or draws for prizes, may also increase attendance. Sustainability is always a concern with new initiatives. Engaging champions within each program is one way to ensure ongoing support of harm reduction after the initial rollout. Also important is sharing successes and the results of integrating harm-reduction practices into daily patient care. Sharing the successes from an organizational, health care provider, and patient perspective can help to demonstrate the large impacts of the project.

This project had several limitations. Attendance at the education sessions in stage 1 was voluntary, so those staff members attending were interested in learning about harm reduction and likely more open to integrating harm reduction into daily patient care. The COVID-19 pandemic limited the time and resources available to support stage 3. Another limitation is the context of the Canadian health care system. This context removes the barrier of insurance from accessing treatment. This portion of the 3-stage framework would need to be negotiated among insurers and hospitals to provide access to underinsured patients. As well, the lack of research ethics approval eliminated our ability to obtain feedback from PWID about their experiences related to harm reduction at the hospital. These patient-level data would be a powerful addition to support the success and spread of programs such as this at other hospitals.

CONCLUSIONS

Integrating harm reduction into daily patient care at an acute care facility is possible through a 3-stage approach focusing on education, support from the facility, and tangible harm-reduction tools for staff. Providing care using a harm-reduction approach helps to address the underlying issue of IDU and substance use when a patient presents with secondary harms, such as IE. This evidence-based approach addresses the risk of re-presenting with IE and supports patients while they address their reasons for engaging in using substances.

Conflict of Interest Statement

The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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