Final report: Evaluation of the PSHSA's Violence, Aggression and Responsive Behaviour (VARB) toolkits

October 3, 2019

Public Services Health and Safety Association

Cathexis

Executive summary: Evaluation of the PSHSA's VARB toolkits

September 27, 2019

Introduction

In 2017 and 2018, the Public Services Health and Safety Association (PSHSA) produced five Violence, Aggression and Responsive Behaviour (VARB) toolkits for use in health care settings. In 2018-19, Cathexis evaluated adoption and use of four of the toolkits in hospital settings, assessing the impact of the toolkits on workplace violence prevention and controls, and identifying lessons learned about toolkit design and use.

Key findings

Sources of information for the evaluation included interviews, an inventory of Ontario hospitals, case studies, and system data (from WSIB and hospitals' Quality Improvement Plans). This information indicates that:

- There has been **strong uptake of the VARB toolkits**, with at least two thirds of Ontario's public hospitals having used one or more of the toolkits.
- The toolkits are very **high quality resources**:
  - They are an **authoritative source of information** about what hospitals should do to address workplace violence.
  - They **provide practical guides, tools and resources** that help hospitals align their violence prevention and management efforts with evidence-based practices.
  - They are **flexible** enough that hospitals with very different needs, contexts and capacities can use them and benefit from them. However, some hospitals felt that certain toolkits were not a great fit for them.
  - They are generally **easy to use.** However, some of the toolkits have aspects that are unclear, difficult to navigate, or frustrating to users.
- **Outcomes**: Use of the toolkits has **helped hospitals improve** their processes, programs and systems for preventing and managing workplace violence. The toolkits have also given stakeholders peace of mind that their hospital is doing what it should be doing to address workplace violence and keep workers safe.
- Many factors have contributed to the toolkits' popularity and success, including their **quality**, their **timeliness** (becoming available when hospitals really needed to take action on workplace violence), PSHSA's **credibility** with both labour and management, and the **Ministry of Labour's endorsement** of the toolkits.
- It is too early to determine whether the toolkits have helped to reduce the incidence or impact of workplace violence in hospitals, since workplace violence has historically been under-reported (i.e., the historical figures are not accurate). Awareness campaigns, provincial initiatives and hospitals' own efforts are expected to increase the number of workplace violence incidents and injuries reported over the next few years. In line with these expectations, we observed **increases in rates of violent incidents** reported in hospital QIPs **and rates of injuries due to workplace violence** that are reported to WSIB.

77% of Ontario hospitals are **aware of** the VARB toolkits

67% of Ontario hospitals are **using** VARB toolkit(s)

Source: Hospital inventory (both rounds)

89% of hospitals that used the toolkits ended up **improving their processes, programs and systems** to prevent and manage workplace violence.

Source: Round 2 hospital inventory

Conclusions and recommendations

The evaluation has concluded that the VARB toolkits have been taken up by most Ontario hospitals, and have had a **positive impact on how hospitals prevent and manage workplace violence**. There are many organizations in the Ontario health system putting out toolkits and guidelines each year; based on what we have seen, few have achieved the kind of uptake and impact that the VARB toolkits are having.

Throughout the evaluation process, emerging findings were shared with PSHSA team members, who have already started using them to improve the current toolkits and inform the development of the next four toolkits.

The following **recommendations for future toolkits** are based both on the strengths of the current VARB toolkits and the opportunities identified for making future toolkits even stronger.

Toolkit topics/content

1. Invest in toolkits that will prepare healthcare organizations to respond to new or upcoming expectations that they are not yet able to meet.
2. Continue to populate the toolkits with comprehensive, evidence-informed content, processes, tools, and examples.
3. Keep the toolkits focused by filtering out any information that is not directly relevant.

Usability

4. Follow principles of user-centred design in the development of new tools and toolkits.
5. If a toolkit will include interactive tools, ensure that there are adequate time and funds for strong user-centred design, and that the benefits will be worth the additional costs.
6. Make the toolkits as easy to navigate as possible.
7. Provide guidelines for using the VARB toolkits as an interconnected suite of resources.

Promoting toolkit use

8. Continue to engage key partners in promoting the toolkits and encouraging use.

Monitoring and evaluation

9. Evaluate awareness, use and utility of the toolkits in long-term care and community care settings.
10. Continue to compile, share and discuss system-wide trends in incidence and injury rates on an annual basis.

Table of contents

This report summarizes the evaluation of four Violence, Aggression and Responsive Behaviour (VARB) toolkits produced for hospitals by the Public Services Health and Safety Association (PSHSA) in 2017 and 2018.

About the Violence, Aggression and Responsive Behaviour (VARB) project

Workplace violence prevention in health care

Workplace violence within health care settings is a serious concern leading to physical, psychological, interpersonal and financial harms for health care workers (Brophy, Keith & Hurley, 2018; 2017). In 2014, workplace violence accounted for 11% of lost time injuries within the Ontario health care sector (Public Services Health and Safety Association, 2015), with direct system costs of about $23.8 million (Ontario Ministry of Labour, 2015).

In 2015, Ontario's Ministry of Health and Long-Term Care (MOHLTC), and Ministry of Labour (MOL) established a **Leadership Table for Workplace Violence Prevention in Health Care**. This Table, made up of senior-level players in Ontario's health care system, released an actionable report, *Preventing workplace violence in the health care sector*, in 2017. It features 23 recommendations and 13 tools for policy and program changes at the provincial and hospital levels.

One of the report's recommendations is to promote the use of the Public Services Health and Safety Association's (PSHSA) **Violence, Aggression and Responsive Behaviour (VARB) toolkits** to reduce violent incidents and their impact.

The VARB toolkits

The VARB project includes **nine toolkits** (shown below), each focusing on a specific concern. When this evaluation began, five of the toolkits had been developed and were available on the workplace-violence.ca website. An online assessment tool had also been developed for the Workplace Violence Risk Assessment (WVRAT) and Security toolkits. Another four toolkits are being released in 2019. This evaluation focused on the first four VARB toolkits (Flagging, WVRAT, Security and PSRS).

The first five toolkits focus on **Type II violent incidents**, where the perpetrator is a recipient of care at the workplace who becomes violent toward a worker or another recipient of care. They are designed for use in hospitals, long-term care, community care, and emergency services to protect those workers who are most at risk of workplace violence (nurses, nurses' aids and orderlies, other allied health care staff, community and social service workers, and visiting homemakers/housekeepers).

Partners from across the health care sector (including government, labour unions, professional associations, patient advocates, and representatives from community, home and hospital settings), were engaged in developing the VARB toolkits.

The VARB toolkits

Toolkits included in this evaluation

Communicating the Risk of Violence ("Flagging")
Jun 2016

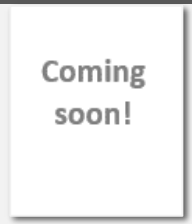
Workplace Violence Risk Assessment (WVRAT)
Apr 2017

Security
Apr 2017

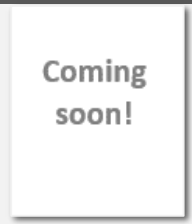
Personal Safety Response Systems (PSRS)
Nov 2017

Toolkits ***not*** included in this evaluation

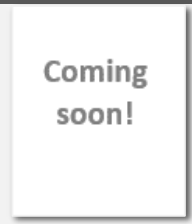
Individual Client Risk Assessment (ICRA)
Dec 2017



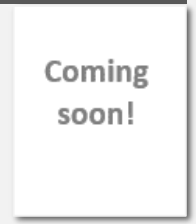
Code White
2019



Incident Reporting and Investigation
2019



Work Refusal Procedures
2019



Transfer and Transit
2019

Key findings

Overview of the key findings

This evaluation focused on the adoption, use and impact of the first four VARB toolkits (Flagging, WVRAT, Security and PSRS) in Ontario hospitals. We did not examine use of toolkits in other healthcare settings, such as long-term care or community care.

The evaluation findings are based on an inventory of toolkit use at all Ontario hospitals, in-depth case studies at six hospitals, and interviews with a small number of hospitals that were not using, or not sure if they would use, the VARB toolkits. See Appendix A for full details about the evaluation methods.

In this report, the evaluation findings have been grouped into three broad sections:

1. **Awareness and uptake of the VARB toolkits in Ontario hospitals:** It is clear that the toolkits can only be effective if the hospitals know about them and choose to use them. We have assessed the extent of awareness and use, as well as what contributed to strong uptake across the province.
2. **How hospitals used the toolkits to improve their workplace violence prevention/ management:** We looked at how the toolkits were being used by Ontario hospitals, and what helped/hindered them in using the toolkits effectively. We explored the perceived impact of the toolkits on staff awareness of workplace violence risks and controls; improvements to hospitals' processes, programs and systems; and confidence in the hospitals' approach to workplace violence.
3. **Trends in workplace violence incidents and injuries**: If the toolkits are effective, we should eventually see a decrease in violent incidents and injuries, or at least in the severity of violent incidents.

Highlights of the key findings

the VARB toolkits have **had a positive impact on how Ontario hospitals prevent and manage workplace violence**.

The majority of Ontario hospitals are aware of, and are using, the VARB toolkits. The relevance and timeliness of the toolkits, and their credibility to all stakeholder groups, have contributed to their strong uptake.

The toolkits have **helped hospitals improve processes, programs and systems to prevent and manage workplace violence.** This impact was supported by high-quality and comprehensive information, strong process guidelines, user-friendly tools, and flexible design.

It is too early to tell if the toolkits have helped to **reduce the incidence or impact of workplace violence** in hospitals.

Awareness and uptake of the VARB toolkits in Ontario hospitals

This section describes the awareness and uptake of the VARB toolkits in Ontario hospitals, and explores the factors that contributed to strong uptake across the province.

Highlights of the findings

The VARB toolkits have enjoyed **very high levels of awareness and use** within Ontario hospitals. Over three quarters of Ontario hospitals are aware of the toolkits, and two thirds have chosen to use at least one of them. The toolkits have also been taken up beyond Ontario, with healthcare organizations in other provinces and in the United States accessing and using them.

Uptake of the VARB toolkits has been so high because the toolkits meet a current and pressing need in hospitals to improve violence prevention efforts and improve workplace safety. The high quality of the toolkits and endorsement from the Ministry of Labour have both contributed to strong uptake.

Data sources

The findings in this section come from the following sources:

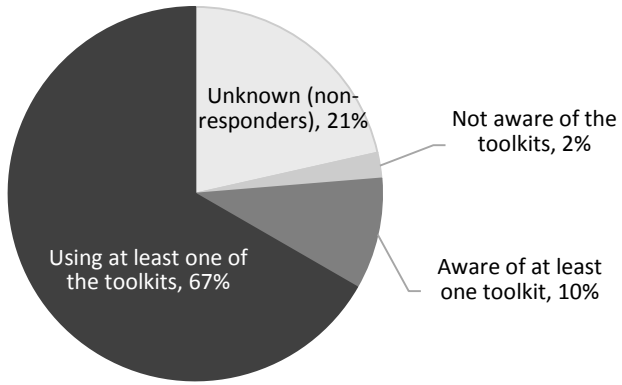
- **Inventories of Ontario hospitals** that were asked about their awareness and use of the VARB toolkits, as well as awareness and use of specific VARB toolkits. Through the two inventories and follow-up polls, we were able to gather information from 79% of the public hospitals in Ontario.
- **In-depth case studies** at 6 hospitals that explored factors contributing to awareness and use in those hospitals.
- **Interviews** with representatives from 10 hospitals that had decided not to use some of the VARB toolkits, or that were still deciding, to explore the main considerations factoring into their decisions.

Most Ontario hospitals are aware of and are using the VARB toolkits

The evaluation found that the toolkits have enjoyed very **high levels of awareness and use** within Ontario hospitals.

Over three quarters of Ontario's 135 public hospitals were aware of the VARB toolkits, and two thirds had chosen to use at least one of the toolkits.

Awareness and use of the VARB toolkits in Ontario's 135 public hospitals*



Sources: 2018 and 2019 hospital inventory
**The figures in this chart have been updated to reflect recent hospital mergers*

10 hospitals identified how they heard about the VARB toolkits. PSHSA was the most common source, with hospitals learning about the toolkits through the website, direct communications, or their involvement on PSHSA working groups. Hospitals also mentioned hearing about the toolkits from the Ministry of Labour and Ontario Hospital Association.

Some toolkits were more widely known and used than others:

- Almost all inventoried hospitals were aware of, and the majority were using, the **WVRAT**.
- The **Flagging** toolkit and **ICRA** were also widely used; large community hospitals were more likely to use these toolkits than small hospitals.
- Fewer hospitals were aware of or had used the **PSRS** and **Security** toolkits.

Awareness and use of specific VARB toolkits in inventoried hospitals

Source: 2019 hospital inventory

According to PSHSA staff, the toolkits have also been taken up by some healthcare organizations in other provinces (Saskatchewan, Alberta and Quebec) and in the United States (Idaho).

Uptake was strong because the toolkits were timely, relevant and trusted

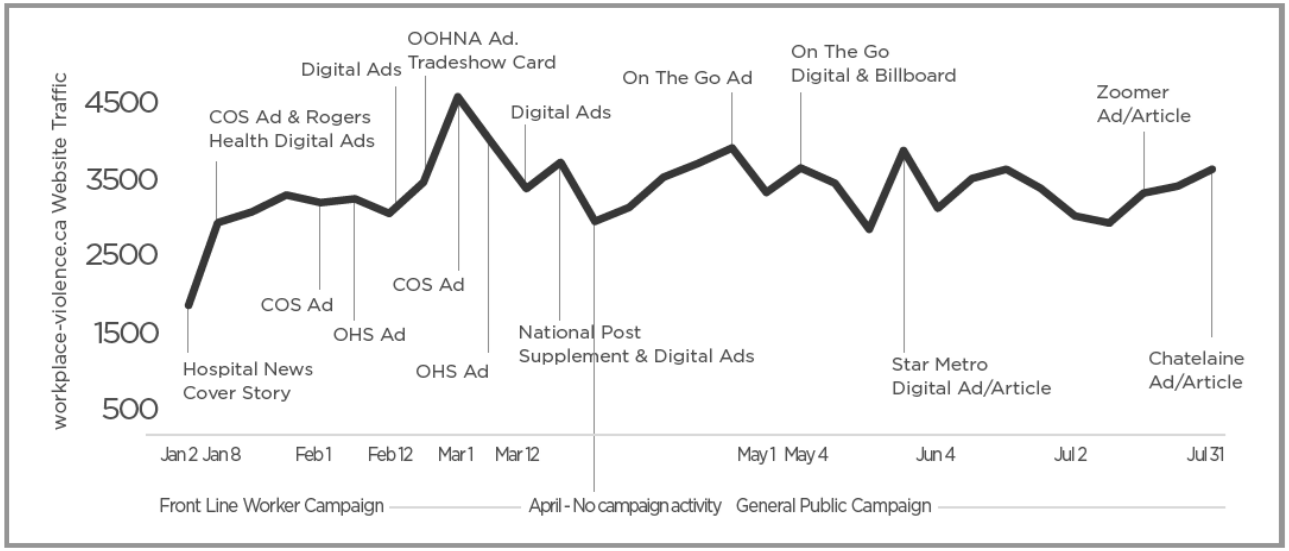
The toolkits were promoted by PSHSA, the Ministry of Labour, the Ministry of Health and Long-Term Care, the Ontario Hospital Association and the Ontario Nurses' Association (the diagram below illustrates key activities in PSHSA's 2018 public awareness campaign). Their use was also recommended to some hospitals by Ministry of Labour inspectors and PSHSA consultants.

We would not usually expect to see widespread uptake of toolkits in Ontario hospitals unless there are people designated to actively support adoption and implementation. Hospitals could access free implementation support from PSHSA consultants. Some hospitals did make use of this support, but proactive implementation support was not built in to the VARB project design. Given that, the uptake of the VARB toolkits is really quite remarkable.

The case studies and non-user interviews provided some insight into three contributing factors, which are described further on this page and the next:

- The toolkits were very **relevant** to hospital priorities
- They were introduced at just the **right time**
- They are **trusted** by both labour and management

PSHSA public awareness campaign activities and website traffic, January to July 2018



"We had a Ministry [of Labour] inspection done […] that's when we really started looking into options for security and risk of violence here at the hospital."

Source: Case Study Interview

The toolkits were very relevant to hospital priorities

When the VARB toolkits came out, hospitals were feeling pressure on multiple fronts to take action on workplace violence:

- Attitudes toward workplace violence were shifting as workers' associations and unions rolled out public awareness campaigns. Healthcare workers were becoming less willing to tolerate violence as just "part of the job" and were raising more concerns about safety.
- The *Occupational Health and Safety Act (OHSA)* was updated in 2010, establishing expectations for employers to take all reasonable precautions to protect their staff from violence or harassment in the workplace.
- The Ministries of Labour and Health and Long-Term Care declared workplace violence prevention a priority and set up a leadership table to drive change within the system. The leadership table's May 2017 report presented 19 recommendations to reduce the risk of violence, one of which encouraged the use of the PSHSA toolkits.
- The Ministry of Labour, which enforces the *Occupational Health and Safety Act*, conducted a 10-month health care enforcement initiative in 2017-18 that focused on violence prevention. The initiative involved inspections at 122 hospital workplaces and resulted in 352 orders and requirements being issued.
- Health Quality Ontario incorporated workplace violence as a mandatory indicator in hospitals' 2018-19 QIPs, requiring hospitals to measure and report on violent incidents, and implement violence prevention initiatives.

The toolkits were introduced at just the right time

The VARB toolkits were developed and released right when hospitals were grappling with these increased pressures and new requirements to make their workplaces safer. The timing was perfect.

- Had the toolkits been introduced later, more hospitals would have started figuring things out on their own and may have been reluctant to change course partway through. In non-user interviews, 8 of the 10 interviewees identified that having an existing program in place was a key consideration in deciding whether to use the VARB toolkits.
- Had they been developed much earlier, their content would have been out-of-date by the time hospitals needed them.

They are trusted by both labour and management

Hospital stakeholders see the VARB toolkits as high-quality resources that can help them make their workplaces safer. They have confidence that the information in the toolkits is well-aligned with best practices. Confidence in the toolkits was likely enhanced by the extensive and collaborative process used to develop them, which involved all stakeholder groups, including front-line health care workers chosen by the unions.

In multiple case study sites, both management and labour representatives described PSHSA as a trusted source for this type of information.

The credibility of the toolkits was bolstered by the fact that the Ministry of Labour promoted the VARB toolkits and the PSHSA as go-to resources for prevention and management of workplace violence. Hospitals want to make sure they are compliant with the *OHSA*, so many turned to the VARB toolkits based on the Ministry's recommendation.

Outcomes: How hospitals have used the toolkits to address workplace violence

This section describes how hospitals have made use of the toolkits to prevent and manage workplace violence, what has changed in hospitals as a result of using the toolkits, and what key factors influenced the effectiveness of the toolkits.

Highlights of the findings

Hospitals used the VARB toolkits to identify safety risks, consider safety proactively in planning, and validate or improve existing practices. Different hospitals used them in different ways.

Regardless of their starting point or how they used the toolkits, most hospitals that used the toolkits ended up **improving their processes, programs and systems** to prevent and manage workplace violence. Using the toolkits also led to increased **awareness** of workplace violence risks and controls and enhanced **confidence** in decisions.

Key factors contributing to the effectiveness of the toolkits were their credibility, comprehensiveness, flexibility, ease of use, and guidelines for effective stakeholder engagement.

Data sources

The findings in this section come from the following sources:

- The **inventories of Ontario hospitals** that explored the perceived quality of the toolkits and what impacts they had in the hospitals.
- **In-depth case studies** at 6 hospitals that explored how the toolkits were used in different types of hospitals and what changed as a result.

The VARB toolkits were used differently from one hospital to the next

It was common practice for hospitals to **start with risk assessment** and then to use other toolkits as needed. Beyond that commonality, there was no single way that the hospitals used the VARB toolkits. Each hospital had a different starting point, and **adapted the toolkits** (with varying degrees of success) according to their own needs and contexts.

The ways the hospitals used the toolkits can be loosely grouped into three broad categories:

1. **Identify and address safety risks**: Some hospitals used the tools and processes to identify risks within their hospital.
2. **Build safety in from the start:** Some hospitals used the toolkits ahead of time, to plan for new builds, new units, or new programs.
3. **Validate and improve existing practices**: Some hospitals used the content of the toolkits to review and validate existing workplace violence policies, processes and programs, to ensure alignment with best practices.

The vignettes to the right provide examples of each type of use.

Case study example: identify safety risks

A small hospital engaged a PSHSA consultant to help them carry out a workplace violence risk assessment. Over a four-day period, the PSHSA consultant and members of the hospital's Joint Health and Safety Committee (JHSC) did risk assessments of all hospital departments. They met with department managers and staff, walked through the departments, took photos and gathered documentation. The consultant compiled the information and prepared summary reports and action plans. As a result, the hospital has implemented a new communication system, introduced a new system for tracking staff training, and launched an awareness campaign.

Case study example: build safety in from the start

A rehabilitation and complex care hospital plans to use the Security toolkit at several points over the coming years as it undergoes construction and expansion.

Case study example: build safety in from the start

A teaching hospital was preparing to establish a new program site within a different hospital. Before the site opened, the hospital did a workplace violence risk assessment so appropriate controls could be put in place ahead of time. Representatives from both hospitals were involved in the process.

Case study example: validate and improve existing practices

A large community hospital recognized that its existing patient alert code system was not helpful for communicating the risk of violence on a day-to-day basis. A working group used the Flagging toolkit to refine the system, adding temporary alert codes that were much more effective for communicating risk in real-time.

Case study example: validate and improve existing practices

A specialized mental health hospital already had comprehensive mechanisms in place to ensure a safe environment. They have used the toolkits as 'best practice' reference documents for assessing their own practices. Working groups used the toolkits to evaluate policies, risk assessment processes, security and flagging programs and personal safety response systems. While the existing practices mostly met the mark, the working groups identified some improvements.

Source: Case studies

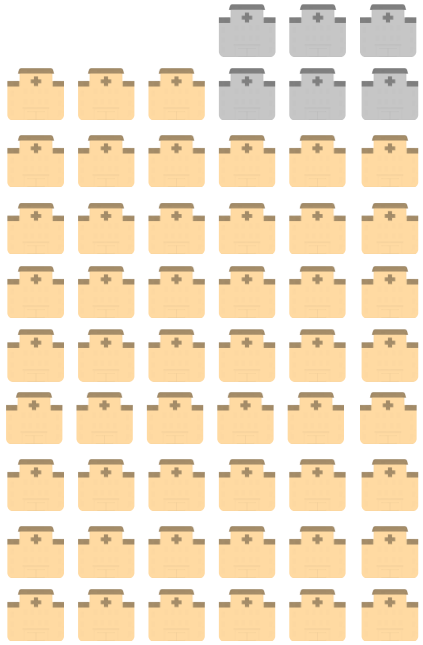
Impact of VARB toolkits in hospitals

The VARB toolkits have effectively increased **awareness** of workplace violence, provided concrete **ideas for improvements**, and enhanced **confidence** in decisions about prevention and management of workplace violence in hospitals that have used them.

89% of inventoried hospitals that used the toolkits ended up improving their processes, programs and systems to prevent and manage workplace violence.

Source: Round 2 hospital inventory

Reported improvements among the inventoried hospitals that used the toolkits (N=57)



Source: Round 2 hospital inventory

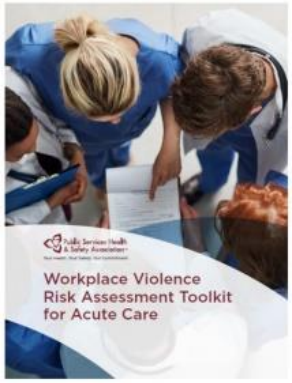
No Improvements

Improvements reported

Stakeholders at one of the case study sites spoke **about the impact of the VARB toolkits as an interconnected suite of resources:**

1. This hospitals first used the ICRA toolkit to improve how they assess level of risk at a client level
2. They then applied elements of the WVRAT approach to risk assessment in order to improve how they involve their staff in risk assessment and prevention activities
3. Through these enhancements, the site identified gaps in their safety response system
4. They then used the Flagging and PSRS toolkits to determine the best approach and devices to use in better protecting their staff

Impact of WVRAT in hospitals



Among the 48 inventoried hospitals using the WVRAT:

34 improved their risk assessment processes

28 increased awareness of workplace violence risks and controls

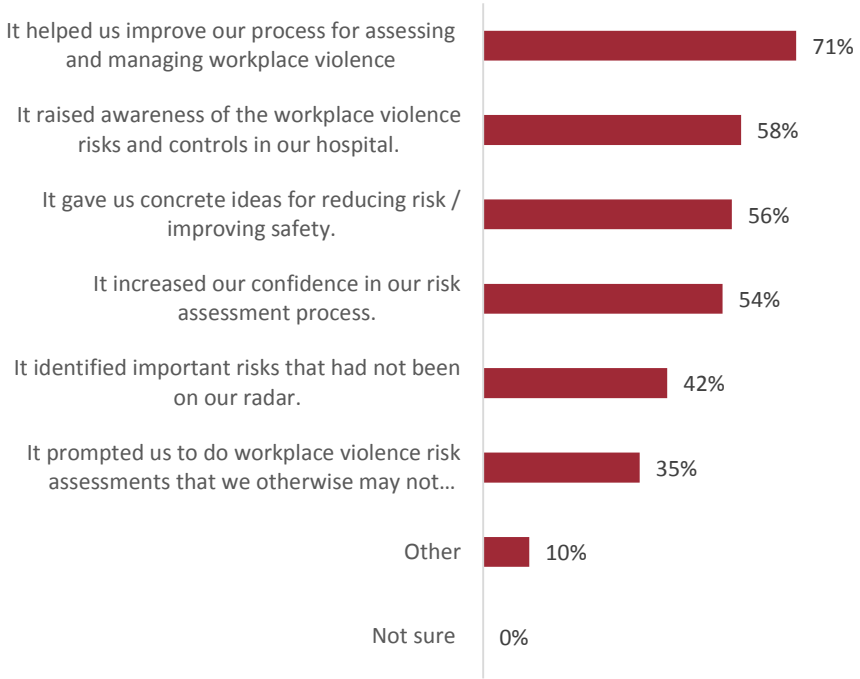
20 identified new risks that hadn't been on their radar before

Source: Round 2 hospital inventory

All but one of the case study sites noted that **examples of hazards and controls** to address gaps were helpful, and in some instances led to recommendations they would not otherwise have thought of.

Most of the case study sites enhanced stakeholder engagement in the risk assessment process, noting that this **increased awareness about workplace violence** among workers and hospital management, including the potential risks in specific settings and the safeguards in place to protect them.

How did use of the WVRAT affect your hospital? (N=47)



Percentages add up to greater than 100%, because respondents were able to select more than one response option. No clear themes emerged from "other" responses.

Source: Round 2 hospital inventory

Impact of Flagging toolkit in hospitals

Among the 32 inventoried hospitals using the Flagging toolkit:

15 improved their risk communication program

9 developed a risk communication program for the first time

Source: Round 2 hospital inventory

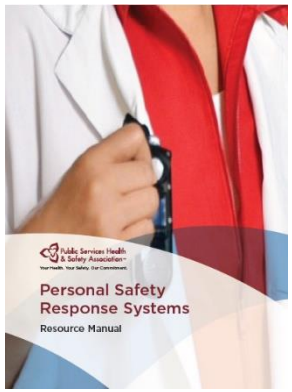
Two of the case study hospitals did not have a flagging mechanism in place to communicate the risk of violence. These hospitals found that the handbook in the Flagging toolkit provided **valuable guidance and structure** for developing their flagging program.

How did use of the Risk Communication/Flagging Toolkit affect your hospital? (N=32)

Percentages add up to greater than 100%, because respondents were able to select more than one response option. No clear themes emerged from "other" responses.

Source: Round 2 hospital inventory

Impact of the PSRS toolkit in hospitals



Among the 24 inventoried hospitals using the PSRS toolkit:

11 improved their existing safety response system

9 were prompted to develop a new safety response system

Source: Round 2 hospital inventory

One of the case study sites noted that the PSRS was very helpful to **validate and confirm decisions about a PSRS, and strengthen the commitment to invest in one**. This hospital had already decided what PSRS to use, but was nervous about making such a large investment in new technology.

When the PSRS toolkit was released, they used the tools to assess their hospital's needs. The results validated their original choice and, beyond that, demonstrated *why* it was the best option for their hospital. All staff at the hospital were invited to attend presentations about the available devices and systems. This process built confidence in and commitment to the investment in a new response system.

How did use of the PSRS Toolkit affect your hospital? (N=24)

Percentages add up to greater than 100%, because respondents were able to select more than one response option. No clear themes emerged from "other" responses.

Source: Round 2 hospital inventory

Impact of the Security toolkit in hospitals

Among the 19 inventoried hospitals using the Security toolkit:

13 identified gaps in their existing security program

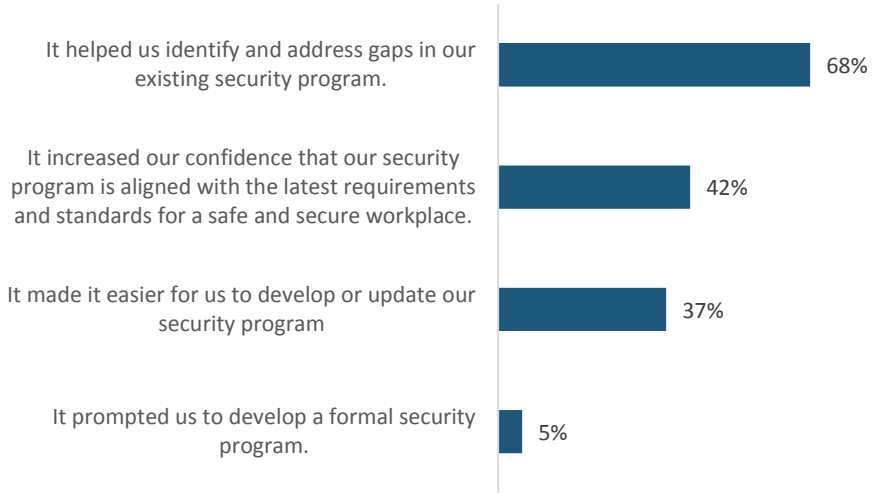
7 updated their existing security program

9 were prompted to establish their first formal security program

Source: Round 2 hospital inventory

Use of the Security toolkit at four of the case study sites prompted meaningful engagement of staff in a range of roles and from different areas of the hospital. Bringing together a mix of perspectives resulted in rich discussions about safety in the workplace, security risks and the hospital's security program. This process helped to validate **hospitals' existing security measures and identify gaps that needed to be addressed.**

How did use of the Security Toolkit affect your hospital? (N=19)



Percentages add up to greater than 100%, because respondents were able to select more than one response option.

Source: Round 2 hospital inventory

The comprehensiveness and quality of the content made the toolkits more effective

Findings from this evaluation demonstrate that the **quality and comprehensiveness of the content** within the toolkits was a big part of why they were effective resources to support hospitals in addressing workplace violence.

Comprehensive information ensures that all bases are covered

The toolkits are **comprehensive suites of tools** that:

- Provide processes for assessing current state, identifying gaps, creating action plans, and evaluating success
- Include specific tools that make it easier for hospitals to work through the process.
- Identify all of the things that hospitals need to consider in assessing or addressing risks of violence, including conceptual considerations (e.g., balancing safety with personal privacy) and finer-grained details (e.g., comprehensive lists of specific risks and controls).
- Provide practical examples and templates that give hospitals a starting point for developing their own materials.

Concrete tools and examples were **especially helpful for hospitals that were developing new programs.** For example, one case study site used training resources contained in the Security toolkit to develop a security training program for front-line staff and patient-watch volunteers. Another used the recommended process, sample policy and sample tools in the Flagging toolkit to develop a flagging program. Having these resources provided a starting point that the hospitals could then tailor to their needs, rather than having to develop everything from scratch.

Because they were so comprehensive, the toolkits also provided ideas for **strengthening established programs and systems.** For example, the WVRAT provided ideas for stakeholder engagement that several case study sites incorporated into their risk assessment processes. These hospitals also benefited form the detailed list of risks and controls in the WVRAT, which included some elements that they had not previously considered.

Whether hospitals had existing systems or were developing new ones, the comprehensiveness of the toolkits gave them confidence and peace-of-mind that they had covered all their bases.

Evidence-based content supports use of effective practices

The toolkits were designed to **align with relevant standards, best practices and promising approaches** to addressing work place violence in hospitals. This strong tie to the evidence base makes the toolkits effective to support improvements within hospitals that should ultimately reduce the incidence and impact of workplace violence.

Hospital stakeholders clearly recognize the quality of the information and processes in the toolkits:

- Among the inventoried hospitals there **was almost unanimous agreement that the toolkits are evidence-informed**.
- Stakeholders interviewed for the case studies largely felt that the information was credible and consistent with the evidence base. At all of the case study sites, the toolkits were seen as an **authoritative source of information about what hospitals should be doing to address workplace violence.**

98%+ of inventoried hospitals were confident that the toolkits are evidence-informed

Source: Round 1 hospital inventory

Because of the credibility they carry, the toolkits were effective in increasing confidence in workplace violence programs and systems.

- Case study hospitals reported that the toolkits made them more confident that they were meeting legislative requirements (3/6), that their efforts aligned with best practice (4/6) and that they were doing enough to keep staff safe (4/6).
- Respondents to the hospital inventory commonly noted increased confidence in their decisions pertaining to workplace violence after having used a toolkit.

Use of the toolkits was also reported to have **increased acceptance and support for key decisions/changes** in the case study hospitals, because the toolkits were credible to both union/labour groups and hospital leadership.

The toolkits' flexibility enabled them to be effective in diverse hospitals

The toolkits had something helpful for every type of hospital, regardless of their starting-point in addressing workplace violence issues. The toolkits include a resource manual, a core/foundational tool or resource (typically a tool for self-assessment and action planning), and a set of supplementary resources that hospitals can choose to use or not, as relevant for them. The supplementary resources often included sample policies, curricula, or informational materials that hospitals could use as a starting point for their own materials. The following table below lists the core and supplementary resources contained within each toolkit.

Toolkit	Core resource(s)	Supplementary resources
WVRAT (Apr 2017)	▪ Workplace Violence Risk Assessment	▪ Online Tool User Guide
Flagging (Jun 2016)	▪ Flagging Program Handbook ▪ Sample Flagging Policy	▪ Fact Sheet ▪ Sample patient and family brochure, flag symbols, door/unit signage, flagging algorithm
PSRS (Nov 2017)	▪ Legislation Checklist ▪ Device Needs Assessment	▪ Gap Analysis and Action Plan ▪ Device Options and Features Tool ▪ Device SWOT Analysis ▪ Policy and Procedure Guideline ▪ Training Considerations and Evaluation ▪ PSRS Awareness Fast Fact Tool
Security (Apr 2017)	▪ Security Program Self-assessment Checklist with Action Plan	▪ Sample security policy, list of policies and procedures, topics for workers and managers, training program components, training checklist ▪ Workplace Security Fast Fact Awareness Tool

This structure makes the toolkits flexible enough that hospitals can **adapt them according to their own needs** and contexts: specific resources are there for hospitals that need them, but these do not constrain hospitals that already have established systems and processes. Case study sites largely felt this flexibility allowed them to use the tools in ways that were **relevant, suitable, reasonable and feasible** for them.

- Most inventoried hospitals who had used the toolkits indicated that they were a **good fit for their hospital** (see appendix B: Feedback about specific toolkits from Round 1 of the hospital inventory).
- Most inventoried hospitals also felt the **resources required** for the toolkits were reasonable, suggesting they could tailor activities according to their capacity or means.
- Case study sites generally reported that the toolkits were suitable and feasible for their purposes (see appendix B: Feedback about specific toolkits from the case studies) despite the major differences between the case study sites in terms of their location, size and type – this is a strong indication that the **toolkits are effective in an wide range of hospital settings**

87%+ of inventoried hospitals felt the WVRAT, Flagging and PSRS toolkits were a good fit for their hospital.

Source: Round 1 hospital inventory

The toolkits' emphasis on engagement led to increased awareness and understanding

The toolkits encourage hospitals to **engage a wide range of stakeholders**. All of the toolkits recommend forming a multidisciplinary committee or working group to guide the process, generally including management, staff, union members and – especially – representatives of the hospital's Joint Health and Safety Committee (JHSC).

The WVRAT, in particular, provides specific guidance about engaging front-line staff in the process, noting that managers "may not have a complete picture of the organization's functions and risks". It recommends that hospitals survey front-line staff in advance of the risk assessment, and engage front-line staff (along with other stakeholder groups) in the risk assessments.

This **emphasis on engagement** has resulted in increased awareness and understanding of workplace violence. All six case study sites reported that use of the WVRAT toolkit helped to **engage staff across the organization in understanding risks of violence in the workplace and the importance of protective mechanisms**. This engagement was noted to have a variety of benefits including a more safety conscious culture, greater understanding of risks and controls, and opportunity to identify/correct misconceptions.

Even with increased staff engagement at the case study sites, unionized staff who were surveyed at the case study sites tended to be less aware than managers about the changes their hospital was making to address workplace violence, and they were also less likely to feel that they had everything they needed to stay safe. This may indicate a need for more awareness-raising and communication about workplace violence and steps being taken to address it.

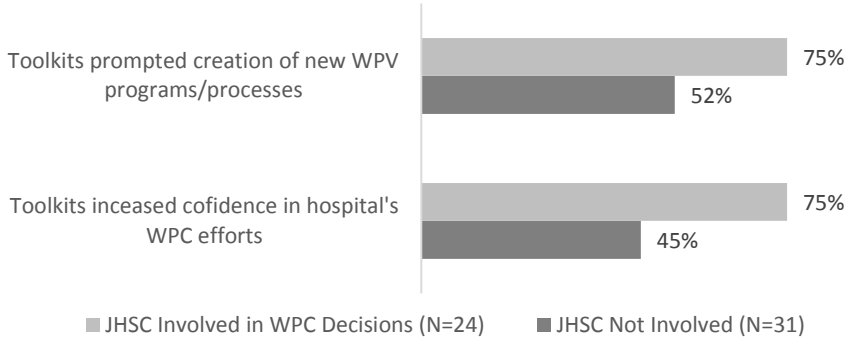
58% of inventoried hospitals using the WVRAT reported increased awareness of workplace violence risks and controls

Source: Round 2 hospital inventory

JHSC involvement in high-level planning related to workplace violence prevention may be an important driver of toolkit use and effectiveness:

- Hospitals where the JHSC was involved in decisions related to workplace violence prevention were more likely to decide to use the VARB toolkits (96% did, compared with 76% in hospitals where the JHSC was not involved in the decision).
- When the JHSC was involved in decisions about using the VARB toolkits, the toolkits were more likely to prompt the creation of new programs and processes, and to increase confidence in the hospital's efforts to prevent and manage workplace violence (see figure below).

Effect of JHSC involvement in decisions about the VARB toolkits (N=55)



Source: Round 2 hospital inventory

"Involving our Joint Health and Safety Committee throughout the process [of workplace violence risk assessment] helped get management on board when it came time to make changes."

Source: Case Study Interview

User-friendly features make it easier for hospitals to use the toolkits effectively

Although the toolkits contain a lot of content (they are all at least 60 pages long), hospitals for the most part found them easy to navigate and to use (see appendix B: Feedback about specific toolkits from Round 1 of the hospital inventory).

The toolkits include many user-friendly features that make them easier to use them. For example:

- The toolkits all have a consistent structure (background content, core tool and supplementary tools)
- Much of the content has been translated into hands-on tools, making it more engaging and accessible (WVRAT, PSRS, Security)
- They include concrete materials such as sample policies, training topics and posters that hospitals can use as a starting point for developing their own materials (Flagging, PSRS, Security).
- The core tools include an action plan that outlines specific responsibilities, timelines and accountabilities, which makes it much more likely that changes will be implemented (WVRAT, PSRS, Security).
- They provide a step-by-step guide for using the toolkit (WVRAT, Flagging, PSRS).
  - The PSRS toolkit includes a very clear schematic diagram of the steps, complete with references to the relevant appendices
  - The step-by-step guide in the Flagging toolkit provides particularly clear direction to users by conveying not only the process steps, but also the underlying principles and considerations associated with each step.
  - Most of the toolkits also have a video tutorial that provides an overview of the process.
- They provide clear step-by-step instructions for using specific tools and resources (PSRS, Security). The PSRS toolkit also includes an example of a completed Device SWOT analysis, to show how it is meant to be used.

81%+ of inventoried hospitals felt the WVRAT, Flagging, PSRS and Security toolkits were easy to use

Source: Round 1 hospital inventory

Some aspects of the toolkits make it harder to use the toolkits appropriately

Toolkit-users at case study sites identified a few aspects of some of the toolkits that are unclear, difficult to navigate, or frustrating to users. For example:

- Some parts of the WVRAT were interpreted in different ways by different people (e.g., the ratings in the risk assessment matrix).
- Some examples of questionable use emerged (e.g., treating example controls as required), suggesting that it was not always clear how the tools were meant to be used.
- Some hospitals found it hard to navigate the large volume of information in the PSRS toolkit, and needed a PSHSA consultant to help them use the toolkit. PSHSA later developed a webinar for the PSRS toolkit, which hospitals found very helpful.

The online version of the WVRAT seems – in theory – like it should be a tremendously useful resource. Teams could do the risk ratings using a tablet when walking around the unit, appropriate suggestions for controls could be generated according to the risk level selected, the system could send people notifications about their actions, and it would be easy to monitor progress in real-time.

The reality of the online platform did not turn out this way. The online tools generate duplicate actions, unnecessarily long reports and a barrage of email notifications. This is extremely frustrating and time consuming for hospital staff who are leading the assessment processes.

All of the case study sites using the online platform did the risk assessment on paper, entered information into the platform separately, and ended up using an Excel export of the action plans that they had to fix up for broader consumption. Only one used the platform to monitor progress. At this point, it is fair to say that the online platform has been more detrimental than beneficial.

Trends in workplace violence incidents and injuries

Violence and aggressive behaviour should, in theory, decrease as hospitals use the VARB toolkits to improve their systems. To assess this longer-term impact of the toolkits, we examined trends in:

1. **Workplace violence injuries** that hospitals reported to the Workplace Safety and Insurance Board (**WSIB**)
2. **Violent incidents** reported by hospitals in their **QIPs** for 2018 and 2019.

These measures are currently in flux. With the QIP data, most hospitals that were monitoring violent incidents expected to see an increase in their numbers as they focused on improving reporting. Other hospitals are just setting up their systems for tracking violent incidents for their QIPs. They are still refining the associated processes and definitions, and it will take some time before the data can be considered reliable and accurate.

With the WSIB data, under-reporting has long been thought to be a problem. The current spotlight on workplace violence is expected to increase the proportion of injuries that are actually reported to WSIB. Over time, this should lead to more reliable and accurate data, but at the moment, it makes it very difficult to detect any positive effects of the VARB toolkits on workplace violence.

It will be worthwhile to monitor the trends in injury and incident rates on an annual basis. Because there are so many variables affecting the trends, it will be important to share and discuss the trends with partner organizations who can help to interpret them. As accuracy improves, the year-to-year figures should start to become more consistent, making it easier to detect change as new interventions are introduced.

Trends to date are shown on the following page.

Highlights of the findings

The current data about workplace violent incidents and injuries show **increases in rates of violent incidents** reported in hospital QIPs **and rates of injuries due to workplace violence** that are reported to WSIB.

These trends can likely be attributed to changes in attitudes about workplace violence, increased awareness that it is important to report workplace violence, and changes in hospitals' processes for tracking incidents and injuries. Because of these broader changes in whether and how incidents/injuries are tracked, the data does not shed light on the VARB toolkits' contribution to reducing the incidence or impact of workplace violence in hospitals.

Trends in injuries reported to WSIB

As hospitals improve systems for managing workplace violence, we would expect to see a decrease in worker injuries. We examined WSIB injury rates to see if they could shed light on the longer-term impacts of the VARB toolkits.

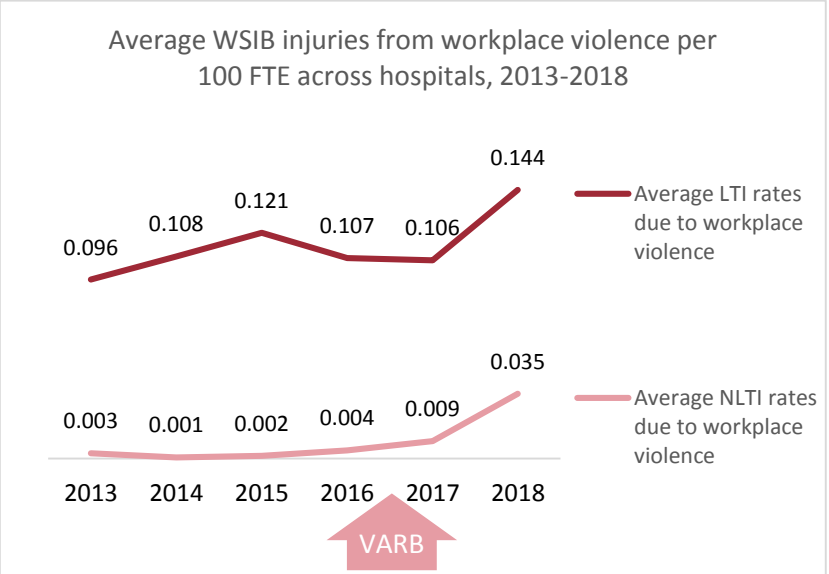
Hospitals are required to notify WSIB of any injury resulting in lost wages or medical attention. The graph to the right shows trends in:

- WSIB *lost time injury* (LTI) rates due to workplace violence. These include injuries that result in the worker being off work past the day of the incident, lost wages/earnings, or permanent disability/impairment.
- WSIB *no lost time injury* (NLTI) rates due to workplace violence, which include injuries that require health care but do not result in lost time or earnings.

In 2018, there was a **noticeable increase in the rates of both LTIs and NLTIs due to workplace violence**. This does not mean that there has been a sudden increase in violent incidents within Ontario hospitals. Rather, it reflects many changes that are occurring in how hospital managers and workers are attending to and dealing with violent incidents when they happen.

In the past, violence-related injuries are thought to have been under-reported to WSIB for a number of reasons: because people have become desensitized (e.g., see violence as just "part of the job"); because incidents are not deemed serious enough to be worth reporting; because they feel nothing will happen as a result; etc. (Institute for Work & Health, 2018).

In the past few years, many hospitals have been taking steps to improve their monitoring of violence-related incidents and injuries. Almost two thirds of hospitals identified this as a goal in the 2018-19 or 2019-20 QIPs. At the same time, awareness campaigns (led by PSHSA, ONA and other associations and unions) have been changing attitudes about workplace violence, so that workers and managers are taking violent incidents more seriously. Accordingly, we expect to see an increase in the number of incidents reported to WSIB, possibly for several years.



Sources: WSIB FTE, NLTI and LTI data for 132 public hospitals in rate group 853

Is under-reporting of workplace violence injuries more likely when no earnings are lost?

Almost all of the workplace violence injuries that hospitals report to WSIB by hospitals are LTIs, but the opposite is true for other causes of injury. In the 2018 WSIB data for Ontario hospitals:

11% of injuries due to workplace violence were NLTIs and 89% were LTIs

73% of injuries from other causes were NLTIs and 27% were LTIs

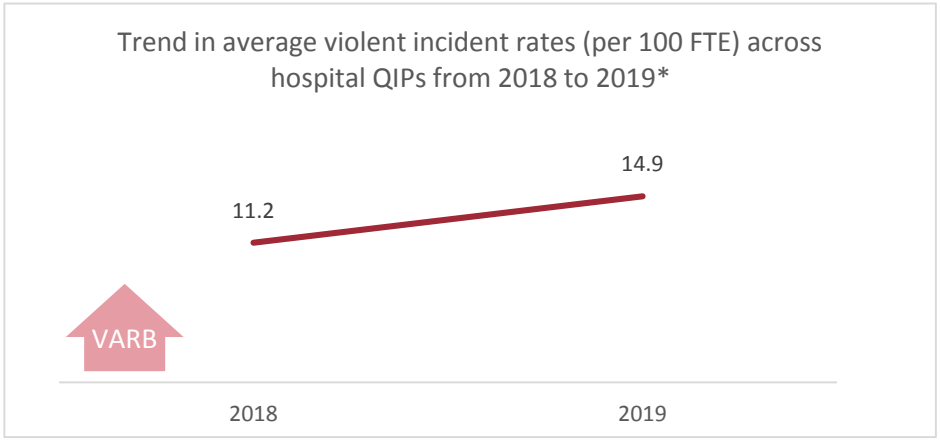
Sources: 2018 WSIB FTE, NLTI and LTI data for 132 public hospitals in rate group 853.

Trends in violent incidents reported in hospital QIPs

Trends in violent incidents, tracked by hospitals, provide another way of assessing the impacts of hospitals' improvements to their systems and processes for managing workplace violence. Hospitals have been required to track and report violent incidents in their QIPs since 2018. Historical data from before 2017 was not available system-wide.

The graph below shows overall trends in the rate of violent incidents for hospitals that reported incident data in both their 2018 and 2019 QIPs. Between 2018 and 2019, the **rate of violent incidents increased by 3.7**, rising from 11.2 to 14.9 per 100 FTE workers (see the figure to the right).

At this point, the QIP data is incomplete (the graph below includes only half of the hospitals) and is likely not very accurate. Many hospitals are still setting up their systems for tracking violent incidents, and most hospitals with existing systems are taking steps to improve reporting. As processes and definitions are refined over the next few years, the data should become more reliable and accurate.



Source: QIP data exported from the HQO QIP navigator
**Includes 68 hospitals that provided enough data to calculate incident rates for both years*

Conclusions and recommendations

Overall conclusions and recommendations

Although it is too early to determine whether the toolkits have helped to reduce the incidence or impact of workplace violence in hospitals, this evaluation can conclude that the VARB toolkits have had a **positive impact on how Ontario hospitals prevent and manage workplace violence**. Specifically, the evaluation determined that:

- There has been **strong uptake of the VARB toolkits**, with at least two thirds of Ontario's public hospitals having used one or more of the toolkits.
- The toolkits are very **high quality resources**:
  - They are an **authoritative source of information** about what hospitals should be doing to address workplace violence.
  - They **provide practical guides, tools and resources** that help hospitals align their violence prevention and management efforts with evidence-based practices.
  - They are **flexible** enough that hospitals with very different needs, contexts and capacities can use them and benefit from them. However, some hospitals felt that certain toolkits were not a great fit for them.
  - They are generally **easy to use.** However, some of the toolkits have aspects that are unclear, difficult to navigate, or frustrating to users.
- Use of the toolkits has **helped hospitals improve** their processes, programs and systems for preventing and managing workplace violence. The toolkits have also given stakeholders peace of mind that their hospital is doing what it should be doing to address workplace violence and keep workers safe.
- Many factors have contributed to the toolkits' success, including their quality, their timeliness (becoming available when hospitals really needed to take action on workplace violence), PSHSA's credibility with both labour and management, and the Ministry of Labour's endorsement of the toolkits.

There are many organizations in the Ontario health system putting out toolkits and guidelines each year; based on what we have seen, few have achieved the kind of uptake and impact that the VARB toolkits are having.

Throughout the evaluation process, emerging findings were shared with PSHSA team members, who have already started using them to improve the current toolkits and inform the development of the next four toolkits.

The following **recommendations for future toolkits** are based both on the strengths of the current VARB toolkits and the opportunities identified for making future toolkits even stronger.

Toolkit topics/content

1. **Invest in toolkits that will prepare healthcare organizations to respond to new or upcoming expectations that they are not yet able to meet.**
   - Toolkit development is resource-intensive, and will not be worthwhile unless organizations adopt and use the toolkit.
   - As we saw with the VARB tools, the relevance of the toolkits to legal obligations and shifting expectations was a strong driver of toolkit use.
   - PSHSA, the Ministry of Labour and their partner organizations are in a good position to monitor trends in the system and anticipate changing requirements (e.g., due to new legislation, reporting requirements, awareness campaigns).

2. **Continue to populate the toolkits with comprehensive, evidence-informed content, processes, tools, and examples.** This is an area of strength for PSHSA, reflected in the quality of the current toolkits.

3. **Keep the toolkits focused by filtering out any information that is not directly relevant.**
   - Comprehensive toolkits tend to contain voluminous content.
   - Any extraneous content has the potential to distract or confuse users and make it harder for them to see and understand important information.
   - A careful balance is needed to ensure the toolkits provide enough context to understand and use the tools effectively, while staying focused on their core topic.

Usability

4. **Follow principles of user-centred design[1] in the development of new tools and toolkits.**
   - Engage users at the design phase.
   - Test early prototypes with real users.
   - Do robust usability testing before launching the toolkit on a broad scale
   - Build in rapid feedback/improvement processes.

> ✓ PSHSA has held focus groups about the online Risk Assessment tool to gather feedback and make improvements.

5. **If a toolkit will include interactive tools, ensure that there are adequate time and funds for strong user-centred design, and that the benefits will be worth the additional costs.**
   - Limitations in the reporting feature of the online WVRAT have frustrated hospital staff, who have spent hours creating workarounds that enable them to share risk assessment results in a meaningful way.
   - The limitations have prevented many hospitals from using those features of the online WVRAT that add the most value (e.g., completing the assessment online while walking through the unit, monitoring progress in real-time).
   - In its current form, the investment in the online tool is not worth the additional costs. It would have been more helpful to create an Excel template that hospitals could use to record and share the results of a risk assessment using the paper tool.
   - The vendor has been working to address many of the limitations, but some of the most significant problems may not be possible to fix at this stage of the process. Using principles of user-centred design would have helped to identify the problems earlier when it would have been easier to fix them.

> ✓ PSHSA has struck a focus group to engage users in providing feedback about enhancements to the online tool

6. **Make the toolkits as easy to navigate as possible.** Hospitals have many competing priorities and pressures, so if they are going to effectively use the VARB toolkits they need to be easy to be user friendly. Suggestions, based on effective practices in toolkit development, include:
   - Continue to use a consistent structure across all toolkits (concise background, how to use the toolkit, core tool and supplementary tools).
   - Move detailed background information (e.g., how the toolkit was developed, about the VARB toolkits generally) to an appendix.
   - Engage a graphic designer to lay out the content in an intuitive way that is easy to navigate.
   - Create a style guide or checklist with style specifications (e.g., fonts, white space, graphics, colours) as well as guidelines for content and how it should be organized.[2]
   - Provide a one-page visual schematic showing how to use the toolkit, with references to the relevant sections or tools. See page 40 of the PSRS toolkit for a great example. Place this near the beginning of the toolkit so it can serve as a road map for the user.
   - Ensure the visual schematic touches on all elements of the process that are important for success. For example, if it is critical to engage front-line workers in the process, this should be identified at the appropriate place in the schematic, with reference to the section or tool that will provide guidance about how to do this effectively.

> ✓ PSHSA has used the evaluation findings to improve the usability of the new VARB toolkits:
> - Created a common (updated) introduction
> - Added an overview or quick-reference guide at the beginning of the toolkit
> - Made linkages to the other toolkits throughout
> - Moved acknowledgements and details about toolkit development to the end

[1] See ISO standards for human-centred design: https://www.iso.org/standard/52075.html
[2] See this helpful checklist from AHRQ: https://www.ahrq.gov/research/publications/pubcomguide/pcguide6.html#usability

7. **Provide guidelines for using the VARB toolkits as an interconnected suite of resources.** As more toolkits are developed, it will become harder for healthcare organizations to identify and find the one(s) that they need, on the workplace-violence.ca website. Guidelines for using the suite of toolkits should include:
   - A schematic or framework showing how the toolkits are interrelated
   - A guide for deciding which toolkit(s) to use and when (e.g., which toolkit they should use first, how often / in what circumstances each toolkit should be used, key benefits of each toolkit)
   - Tips on how to coordinate efforts across toolkits, particularly if they are being used by different groups (e.g., one case study hospital assigned leads for each toolkit who came together as a larger group to discuss issues, areas of overlap, potential actions and considerations)

Promoting toolkit use

8. **Continue to engage key partners in promoting the toolkits and encouraging use.**
   - Promotion of the toolkit by Ministry of Labour inspectors is particularly effective because of their oversight role. Other partners (e.g., associations, unions) were not mentioned in the case studies, but may well have influenced hospitals' awareness of the toolkits and their decision to use them.
   - The Ministry of Health and Long-Term Care's (MOHLTC) involvement and promotion of the toolkits undoubtably also contributes to their credibility and use, even though interviewees did not mention it. If the MOHLTC were to promote relevant toolkits in the context of specific projects or programs addressing workplace violence, it would likely have a more direct and noticeable effect.
   - Membership-based organizations like the Ontario Hospital Association, professional associations and labour organizations can inform their members about toolkits. This could be an effective way to reach JHSC members who may otherwise be unaware of the toolkits, which would be helpful since hospitals were more likely to adopt the toolkits when JHSC members were involved in the decisions.
   - PSHSA consultants are also effective ambassadors who can support implementation as well as encouraging use.

Monitoring and evaluation

9. **Evaluate awareness, use and utility of the toolkits in long-term care and community care settings**, to identify any important considerations or barriers that are specific to those settings.
10. **Continue to compile, share and discuss system-wide trends in incidence and injury rates on an annual basis.** This will enable PSHSA and its partners (including labour groups, employer groups, and government) to better understand the trends in the data and to monitor the efficacy of violence prevention efforts across the system.

Acknowledgements

A great many people contributed their time, expertise and ideas to this evaluation. We would like to thank…

- …the hundreds of **hospital staff and managers** who filled out inventories, did surveys, or took part in interviews, and especially our key contacts at the case study sites, whose support in coordinating and reviewing was invaluable.
- …the team at **PSHSA** who took each step of this journey alongside us:
  - Henrietta Van hulle
  - Tina Dunlop
  - Frances Ziesmann
  - Christopher Botsko
  - And many others who supported the evaluation behind the scenes
- …the **Cathexis** team:
  - Rochelle Zorzi
  - Scott Christian
  - Ally Holmes
  - Megan McGinnis-Dunphy
  - Melissa McGuire
- …the (very engaged) members of our **evaluation advisory committee:**
  - Michelle Acorn, Ministry of Health and Long-term Care
  - Erna Bujna, Ontario Nurses Association
  - Laurie Cabanas, Ontario Hospital Association
  - Janis Cramp, Addictions & Mental Health Ontario
  - Gail Crowe, Ontario Personal Support Workers Association
  - Vinita Haroun, Ontario Long-Term Care Association
  - Jennifer Ho, Health Shared Services Ontario
  - Rhonda Lammert, Home Care Ontario
  - Shilpi Majumder, AdvantAge Ontario
  - Brenda Manion, Ontario Community Support Association/ Personal Support Network of Ontario
  - Dawn Miller, Ontario Hospital Association; Guelph General Hospital
  - Stacey Papernick, Ontario Nurses Association
  - Bridget Pridham, Canadian Union of Public Employees
  - Sari Sairanen, Unifor
  - Brenda Snider, Service Employees International Union
  - Jennifer (JJ) Stanley, Ministry of Labour
  - Althea Stewart-Pyne, Registered Nurses' Association of Ontario
  - Terri Szymanski, Ontario Public Service Employees Union
  - Dwayne Van Eerd, Institute for Work and Health
  - Annette Weeres, Registered Practical Nurses Association of Ontario

References

Brophy, J. T., Keith, M. M., & Hurley, M. (2018). Assaulted and unheard: Violence against healthcare staff. *New Solutions: A Journal of Environmental and Occupational Health Policy*, *27*(4), 581-606. Accessed April 10, 2018 from: https://www.researchgate.net/profile/Margaret_Keith/publication/319672426_Assaulted_and_Unheard_Violence_Against_Health-Care_Staff/links/5a9d61aea6fdcc3cbacdfa59/Assaulted-and-Unheard-Violence-Against-Health-Care-Staff.pdf

Brophy, J. T., Keith, M. M., & Hurley, M. (2017). Violence experienced by healthcare workers in Ontario: an exploration of the reasons for the high incidence and measures that might be taken to curb it. Draft research summary. Accessed April 10, 2018 from: http://www.epidemicofviolence.ca/wp-content/uploads/2017/10/Draft-research-summary-jan-10-2017.pdf

Government of Ontario (1990). *Occupational Health and Safety Act, RSO 1990*, c O.1. Accessed August 1 2019 from: https://www.ontario.ca/laws/statute/90o01

Smith, P. & Yanar, B. (2018). The reporting and consequences of workplace violence in six Ontario hospitals. Institute for Work & Health. Accessed August 1, 2019 from: https://www.iwh.on.ca/sites/iwh/files/iwh/presentations/2018-05-22_PSmith_OPEN.pdf

Ontario Ministry of Labour (2015). August 12, 2015 press release. Accessed April 2, 2018 from *https://news.ontario.ca/mol/en/2015/08/ontario-taking-action-to-better-protect-health-care-workers.html*.

Ontario Ministry of Labour (2017). Preventing workplace violence in the health care sector. Accessed April 10, 2018 from: https://www.ontario.ca/page/preventing-workplace-violence-health-care-sector#section-6.

Ontario Ministry of Labour (2018). November 19, 2018 publish date. Inspection initiative results: 10-month health care sector initiative. Accessed June 20, 2019 from: https://www.ontario.ca/page/inspection-initiative-results-10-month-health-care-sector-initiative

Public Services Health and Safety Association (PSHSA, 2015). Workplace Violence in Healthcare Environmental Scan (Data Source: WSIB EIW Claim Cost Analysis Schema, June 2015 data snapshot), as cited in OHA (2015) Workplace Violence Prevention Summit. Accessed April 2, 2018 from https://www.oha.com/Documents/OHA%20Workplace%20Violence%20Prevention%20Summit%20Report.pdf.

Appendix A: Evaluation design

Evaluation purpose and design

Evaluation purpose

This evaluation focused on the first four VARB toolkits (Flagging, WVRAT, Security and PSRS) in Ontario hospitals; the ICRA is being evaluated/ validated separately. This evaluation did not examine use of toolkits in other healthcare settings, such as long-term care or community care.

The evaluation explored adoption and use of the toolkits, assessed the impact of the toolkits on workplace violence prevention and controls, and identified lessons learned about toolkit design and use that informed the development of the 2019 toolkits.

The evaluation was designed to answer the following high-level questions.

1. **To what extent have the toolkits been adopted by hospitals?** (# accessing, # using each toolkit)
2. **How have hospitals used the toolkits to align their approaches with recommended best practices?**
3. **How effective are the toolkits in reducing incidents of workplace violence and their impact?** (workplace violent incidents, how hospitals manage incidents, changes in employer/worker behaviours)
4. **What has been learned about toolkit design and use?** (barriers and enablers to using the toolkits, what is working well, opportunities for improvement, what else is needed now)

Evaluation findings have guided improvements to the 2016-17 toolkits and informed the development of the 2019 VARB toolkits. It is hoped that they will also provide a foundation for a longer-term evaluation of the toolkits' value.

Evaluation design

The evaluation used a **mixed method design**, combining information from different sources (both qualitative and quantitative) to answer the guiding evaluation questions. The diagram to the right gives an overview of the methods. The following pages provide additional details about each method.

Hospital inventory (107 hospitals)

The hospital inventory and follow up polls took stock of hospitals' use of the toolkits, perceptions of the toolkits, implementation challenges and facilitators, and perceived impacts. Information was gathered from 107 of Ontario's 135 public hospitals (79%).

Case studies (6 hospitals)

Case studies explored use and impact of the toolkits in much greater depth at six hospital sites. The case studies were based on key informant interviews, surveys of workers and managers, and relevant documents and metrics.

Interviews with non-users (10 hospitals)

Interviews were done with representatives of 10 hospitals that were not using one or more of the VARB toolkits, to explore considerations that factor in to hospitals' decisions and identify opportunities for improvement.

Analysis of system data

We analysed patterns of injury events (WSIB data) and workplace violent incidents (HQO QIP data), to record baseline levels and explore the toolkits' contribution to changes in these longer-term outcomes.

Evaluation methods: hospital inventory and poll

Round 1 hospital inventory and poll

Purpose: To provide information about hospitals' awareness and use of the toolkits, their perceptions of the toolkits, and implementation challenges and facilitators.

Timing: The inventory was carried out in May of 2018.

Sample: The inventory was sent to staff responsible for workplace safety at 125 of Ontario's 138* public hospitals. (Contact information could not be obtained for representatives at the other 13 hospitals).

Process: The Chief Prevention Officer, Ministry of Labour, notified hospital CEOs about the evaluation and the inventory. Subsequently, PSHSA sent an introductory email to workplace safety staff contacts at the hospitals. An invitation to complete the online inventory was then sent by email on May 17, 2018. Reminders were sent to non-respondents on May 23, May 28, and May 31, 2018. A PSHSA consultant also called non-respondents and/or sent emails on May 30-31 to encourage responses.

After the online inventory was closed, non-responding hospitals were sent a one-question follow-up poll to inquire about their hospital's use of any of the VARB toolkits.

Response rate: 74 of the 125 hospitals participated in the inventory (59% response rate). Of these, 70 respondents completed the inventory in full, and 4 completed a portion of the inventory (7% - 85% complete). An additional 21 hospitals responded to the one-question poll. Combining the poll and the inventory, we heard from 95 hospitals (76% response rate).

Respondent characteristics: The inventory was completed by representatives of hospitals in all but one of Ontario's 14 Local Health Information Networks. About half were from large community hospitals, and one quarter were from small hospitals. Inventories were also submitted on behalf of teaching hospitals, chronic/rehab hospitals, and specialty mental health hospitals.

Round 2 hospital inventory and poll

Purpose: To provide additional information, one year after the initial inventory, about hospitals' awareness/use of the toolkits and toolkit impact, and to better understand hospitals who are not currently using the toolkits (i.e., other processes in place, future intentions).

Timing: The inventory was carried out in March and April of 2019.

Sample: The inventory was sent to individuals responsible for workplace safety at 131 of Ontario's 138* public hospitals. (Contact information could not be obtained for representatives at the other 7 hospitals).

Process: On March 19-20, 2019, the Executive Director of Health and Community Services at PSHSA notified hospital contacts about the need for more feedback about the VARB toolkits and the upcoming inventory questionnaire. Cathexis sent hospital contacts an invitation to complete the online inventory on March 20, 2019. A first reminder was sent to non-respondents on March 26, 2019. Recognizing that hospitals were busy with their year-end, the inventory was extended and additional reminders sent on April 8 and April 16, 2019. A list of non-respondents was also sent to PSHSA on April 15, 2019 so PSHSA consultants could follow-up with non-respondents prior to the inventory close date of April 18, 2019.

After the online inventory was closed, non-responding hospitals were sent a one-question follow-up poll to inquire about their hospital's use of any of the VARB toolkits.

Response rate: 69 of the 131 hospitals participated in the inventory (53% response rate). Of these, 66 respondents completed the inventory in full (100%) and 3 respondents completed a portion of the inventory. An additional 14 hospitals responded to the one-question poll. Combining the poll and the inventory, we heard from 83 hospitals (63% response rate).

Respondent characteristics: About half of respondents were from large community hospitals, and one quarter were from small hospitals. Inventories were also submitted on behalf of chronic/rehab hospitals, teaching hospitals, and specialty mental health and children's hospitals.

* Our final list of 135 hospitals reflects recent amalgamations that had not been taken into account when the inventories were conducted.

Evaluation methods: Case studies

Purpose: To explore in greater depth how hospitals are using the VARB toolkits, to gather feedback about the toolkits (credibility, relevance, usability, feasibility and helpfulness), and to gain insight into the potential impact of the toolkits within Ontario hospitals.

Timing: The case study research was carried out from July, 2018 to November, 2019.

Sample: The case studies feature six hospitals that had used one or more VARB toolkits. Hospitals were selected purposefully from a pool of 16 hospitals that had expressed interest in the case studies (through the May 2018 hospital inventory). Characteristics of the participating hospitals are shown to the right.

Process: Selected hospitals were provided additional information about the case studies, and were formally invited to participate. In total, 6 hospitals agreed to participate. For each case study hospital, consultants:

- **Interviewed** ~six individuals who had been involved in using the toolkit(s). Interviewees were identified in consultation with the primary case study contact at the hospital. Across the six hospitals, 36 individuals were interviewed, including 26 managers, leaders or corporate staff and ten clinical front-line staff (of these, six were union representatives on the hospital's Joint Health and Safety Committee (JHSC)**.
- Conducted a brief **survey of staff and managers** asking about their feelings of safety and their perceptions of the hospital's violence prevention efforts. Across the six hospitals, surveys were completed by 225 non-unionized staff/managers and 685 staff who were union members.
- Requested and reviewed relevant **documents and data** (e.g., policies, program documents, workplace violence Quality Improvement Plans, WVRAT outputs, past staff surveys, historical data on events or injuries).
- Prepared a **case study summary**, which was shared with the primary case study contact for review.

HQO hospital type/model

- 2 small hospitals
- 1 large community hospital
- 1 chronic/rehabilitation hospital
- 1 specialized mental health hospital
- 1 teaching hospital

LHIN

- 2 South West
- 1 Champlain
- 1 Toronto Central
- 1 North Simcoe Muskoka
- 1 North West

Toolkits used

- 6 WVRAT
- 2 ICRA
- 2 Flagging Toolkit
- 3+ Security Toolkit
- 2 PSRS Toolkit

* One hospital was invited to participate but declined because staff were too busy with other initiatives. An alternate hospital was selected, and agreed to take part.
** At least one union member was interviewed at each hospital. Unionized staff were offered the opportunity to be interviewed separately from managers.

Evaluation methods: Non-user interviews

Purpose: To provide a better understanding of the considerations that factor in to hospitals' decisions about whether to use the VARB toolkits, while also exploring how the toolkits can be improved and other tools and resources that hospitals find useful for preventing and managing incidents of workplace violence.

Timing: The interviews were done in July and August of 2018.

Sample: 10 hospitals that were planning not to, or were still deciding whether to, use one or more of the VARB toolkits, as indicated in their responses to the round 1 hospital inventory. Two additional hospitals were invited to participate, but either declined or did not respond to the invitation.

Process: Potential respondents from the primary sample were invited by email to participate in an interview. Interviews were conducted by telephone, and were recorded with the participant's consent to ensure the interview notes accurately captured the conversation.

Interview notes were analyzed using an iterative descriptive approach in order to identify emergent themes, as well as unique but important ideas. NVivo (qualitative analysis software) was used to code key characteristics, themes and concepts.

HQO hospital type/model

- 2 small hospitals
- 5 large community hospitals
- 1 chronic/rehabilitation hospital
- 2 teaching hospitals

LHIN

- 1 Central
- 2 Champlain
- 1 Erie St. Clair
- 1 North East
- 1 North Simcoe Muskoka
- 1 North West
- 2 Toronto Central
- 1 Waterloo Wellington

Evaluation methods: Analysis of WSIB and QIP data

WSIB data

Purpose: To gain insight about the extent to which the toolkits are contributing to changes in injury events reported to the Workplace Safety and Insurance Board (WSIB).

Years: 2013 through 2018

Data source: PSHSA staff extracted hospital-level data from the WSIB Enterprise Information Warehouse (EIW) , including the EIW Claim Cost analysis schema.

Data elements:

- Derived # FTE workers for each hospital, by year
- Total # lost-time injury (LTI) claims – for each hospital, by year
- # LTI claims due to workplace violence (WPV) – for each hospital, by year
- Total # of No-lost-time claims (NLTI) – for each hospital, by year
- # NLTI claims due to WPV – for each hospital, by year

Sample: Rate Group = 853. WSIB data was available for 132 of the 135 hospitals.

Process: For each hospital and each year, we calculated injury rates per 100 FTE, as follows: **# number of injuries ÷ FTEs x 100**.

Annual injury rates were calculated at the hospital level for Total LTI, LTI due to WPV, Total NTLI, and NLTI due to WPV. For each of these variables, we then computed the average injury rate across all hospitals. The average injury rates were graphed to show change over time.

Limitations: Injuries due to workplace violence are thought to be under-reported. As injury reporting improves, the LTI and NLTI rates reported to WSIB are expected to increase, independently of any changes to actual injury rates.

QIP data

Purpose: To gain insight about the extent to which the toolkits are contributing to changes in incidence of workplace violence, as reported in hospital Quality Improvement Plans (QIPs).

Years: 2018-19 and 2019-20 QIPs

Data source: Health Quality Ontario's QIP navigator [1]

Data elements:

- Number of workplace violence incidents reported by hospital workers (as by defined by OHSA) within a 12 month period (Current performance, Target, Target justification)
- Planned improvement initiatives (Methods, Process measures, Target for process measure)
- Comments (Most hospitals provided # FTE workers)

Sample: Sector = Acute Care/Hospital. QIPs were available for 133 of the 135 hospitals. Violent incident rates could be calculated for 76 hospitals (56%) in 2018 and 117 hospitals (87%) in 2019. Incident rates for both years could be calculated for 68 hospitals (50%).

Process: We thematically coded the planned improvements to indicate whether the hospital's primary focus was to decrease violent incidents or improve reporting. We then filtered the data export so that each hospital had only one entry in our dataset.

FTE information was extracted from the comments. For 12 hospitals, the 2018-19 FTE information was missing or appeared inaccurate. We adjusted the 2018-19 FTEs for 9 hospitals based on the 2019-20 FTEs. There may still be inaccuracies in the number of FTEs provided by other hospitals, which would affect the accuracy of any incident rate or injury rate calculations.

Incident rates per 100 FTE were calculated for each hospital, as follows: **total number of incidents ÷ FTEs x 100**.

We computed the average incident rates across all hospitals. The average incident rates were graphed to show change over time.

Limitations: Many hospitals are still setting up and refining their systems for tracking violent incidents. The dataset is currently incomplete and is likely not very accurate at this point.

[1] https://qipnavigator.hqontario.ca/QIPReports/ReportDialog.aspx?rn=WorkplanIndicatorReport

List of the 135 Ontario hospitals included in the dataset for this evaluation

- Alexandra Hospital
- Alexandra Marine and General Hospital
- Almonte General Hospital
- Atikokan General Hospital
- Baycrest Hospital (North York)
- Bellwood Health Services Inc (Scarb)
- Bluewater Health
- Brant Community Healthcare System
- Brockville General Hospital
- Bruyère Continuing Care Inc.
- Cambridge Memorial Hospital
- Campbellford Memorial Hospital
- Carleton Place and District Memorial Hospital
- Centre for Addiction and Mental Health
- Chatham-Kent Health Alliance
- Children's Hospital of Eastern Ontario
- Collingwood General and Marine Hospital
- Cornwall Community Hospital
- Deep River And District Hospital
- Dryden Regional Health Centre
- Englehart And District Hospital
- Erie Shores Healthcare
- Espanola General Hospital
- Georgian Bay General Hospital
- Geraldton District Hospital
- Glengarry Memorial Hospital
- Grand River Hospital Corporation
- Grey Bruce Health Services
- Groves Memorial Community Hospital
- Guelph General Hospital
- Haldimand War Memorial Hospital
- Haliburton Highlands Health Services Corporation
- Halton Healthcare Services Corporation
- Hamilton Health Sciences Corporation
- Hanover And District Hospital
- Hawkesbury And District General Hospital
- Headwaters Health Care Centre
- Health Sciences North
- Holland Bloorview Kids Rehab Hospital
- Hôpital de Mattawa Hospital
- Hôpital Montfort
- Hôpital Notre Dame Hospital (Hearst)
- Hornepayne Community Hospital
- Hotel Dieu Hospital / St. Joseph's Continuing Care Centre - Cornwall
- Hotel-Dieu Grace Healthcare
- Humber River Hospital
- Huron Perth Healthcare Alliance
- Joseph Brant Hospital
- Kemptville District Hospital
- Kingston Health Sciences Centre
- Kirkland and District Hospital
- Lady Dunn Health Centre
- Lake Of The Woods District Hospital
- Lakeridge Health
- Lennox And Addington County General Hospital
- Listowel Wingham Hospitals Alliance
- London Health Sciences Centre
- Mackenzie Health
- Manitoulin Health Centre
- Manitouwadge General Hospital
- Markham Stouffville Hospital
- MICS Group of Health Services
- Middlesex Hospital Alliance
- Muskoka Algonquin Healthcare
- Niagara Health System
- Nipigon District Memorial Hospital
- Norfolk General Hospital
- North Bay Regional Health Centre
- North of Superior Healthcare Group
- North Shore Health Network
- North Wellington Health Care
- North York General Hospital
- Northumberland Hills Hospital
- Ontario Shores Centre For Mental Health Sciences
- Orillia Soldiers' Memorial Hospital
- Pembroke Regional Hospital Inc.
- Perth And Smiths Falls District Hospital
- Peterborough Regional Health Centre
- Providence Care Hospital
- Queensway Carleton Hospital
- Quinte Healthcare Corporation
- Religious Hospital of St. Joseph of Hotel Dieu / Hotel Dieu Shaver Health & Rehabilitation Centre
- Renfrew Victoria Hospital
- Riverside Health Care Facilities Inc.
- Ross Memorial Hospital
- Royal Ottawa Health Care Group
- Royal Victoria Regional Health Centre
- Runnymede Healthcare Centre
- Salvation Army Toronto Grace Health Centre
- Sault Area Hospital
- Scarborough and Rouge Hospital
- Services De Santé De Chapleau Health Services
- Sinai Health System
- Sioux Lookout Meno-Ya-Win Health Centre
- Smooth Rock Falls Hospital
- South Bruce Grey Health Centre
- South Huron Hospital
- Southlake Regional Health Centre
- St. Francis Memorial Hospital
- St. Joseph's Care Group - Thunder Bay
- St. Joseph's Continuing Care Centre Of Sudbury
- St. Joseph's General Hospital Elliot Lake
- St. Joseph's Health Care London
- St. Joseph's Health Care System Hamilton
- St. Joseph's Health Centre Guelph
- St. Joseph's Infirmary
- St. Mary's General Hospital
- St. Thomas-Elgin General Hospital
- Stevenson Memorial Hospital
- Sunnybrook Health Sciences Centre
- Temiskaming Hospital
- The Arnprior and District Memorial Hospital
- The Hospital For Sick Children
- The Ottawa Hospital
- The Red Lake Margaret Cochenour Memorial Hospital
- The Sensenbrenner Hospital
- Thunder Bay Regional Health Sciences Centre
- Tillsonburg District Memorial Hospital
- Timmins And District General Hospital
- Toronto East Health Network
- Trillium Health Partners
- Unity Health Toronto
- University Health Network
- University of Ottawa Heart Institute
- Waypoint Centre For Mental Health Care
- Weeneebayko Area Health Authority
- West Haldimand General Hospital
- West Nipissing General Hospital
- West Park Healthcare Centre
- West Parry Sound Health Centre
- William Osler Health System
- Winchester District Memorial Hospital
- Windsor Regional Hospital
- Women's College Hospital
- Woodstock General Hospital

Appendix B: Feedback about specific toolkits

Feedback about specific toolkits from Round 1 of the hospital inventory

Characteristic	WVRAT	Flagging	PSRS	Security
Date released	2017-04-25	2016-06-10	2017-11-17	2017-04-21
# that had used the toolkit	**52**	**34**	**18**	**15**
% indicating other tools were needed	12%	9%	13%	13%
% found it very or extremely useful for identifying what changes were needed	72%	70%	39%	50%
% found it very or extremely useful for determining how to implement changes	53%	50%	39%	36%
% indicating resources are reasonable	80%	84%	86%	75%
% indicating good fit for their hospital	87%	90%	94%	73%
% confident that toolkit is evidence-informed	98%	100%	100%	100%
% finding toolkit clear and easy to understand	82%	100%	92%	100%
% finding toolkit easy to use	81%	97%	93%	85%
% finding online assessment tool easy to use	78%			77%

Source: Round 1 hospital inventory
Percentages are of those inventoried hospitals that had used the toolkits

Feedback about specific toolkits from the case studies

We assessed the toolkits on five dimensions that are critical to user experience and value:

1. **Suitability:** Toolkit is suitable to range of hospital contexts
2. **Credibility:** The practices being recommended are (and are perceived to be) "best practices"
3. **Usability:** Toolkit is easy to use (clear purpose and instructions, easy to find information, limited potential for misuse)
4. **Feasibility:** The resources required to use the toolkit are reasonable, do not cause undue hardship
5. **Utility:** The toolkit addresses a difficult/pressing problem, and helps individuals/hospitals do things better/faster/more easily, and the benefits are apparent to stakeholders

Each dimension was assessed as poor, mixed or strong, based on interviews with stakeholders who had used the toolkits at the six case study sites. The interviews also provided insight into what is working well with the toolkits, what challenges they had, and how the toolkits can be improved.

Overall, feedback about the Flagging, Security and PSRS toolkits was quite positive. There are some significant issues with the WVRAT that will need to be addressed (especially the online assessment tool). The table below provides a high level overview of the feedback.

Dimension	WVRAT	Flagging	Security	PSRS
Used at…	*6 hospitals*	*2 hospitals*	*4 hospitals*	*2 hospitals*
Suitability	Strong	Mixed	Strong	Strong
Credibility	Mixed	Strong	Strong	Strong
Usability	Poor	Strong	Strong	Mixed
Feasibility	Mixed	Strong	Strong	Strong
Utility	Strong	Strong	Strong	Strong
Working well	Emphasis on engaging staff, useful examples	Flexibility, practical examples	Well structured, useful for array of orgs.	Validating, explore gaps and suitable devices
Challenging	Usability, online tool	Suitability for high-risk populations	Requires creativity in applying concepts	Volume of information difficult to navigate
Suggestions	Align to standard, clarify instructions	More on ethics of flagging	Tailor examples to rural/remote settings	Improve access to support

Source: Case studies

ASSESSMENT RATINGS

Strong: Toolkit satisfies all conditions for this dimension

Mixed: Toolkit satisfies the conditions in some cases but not others; its value in some settings may be lower than it could be

Poor: Significant concerns or gaps that are having a serious negative impact on use and/or value