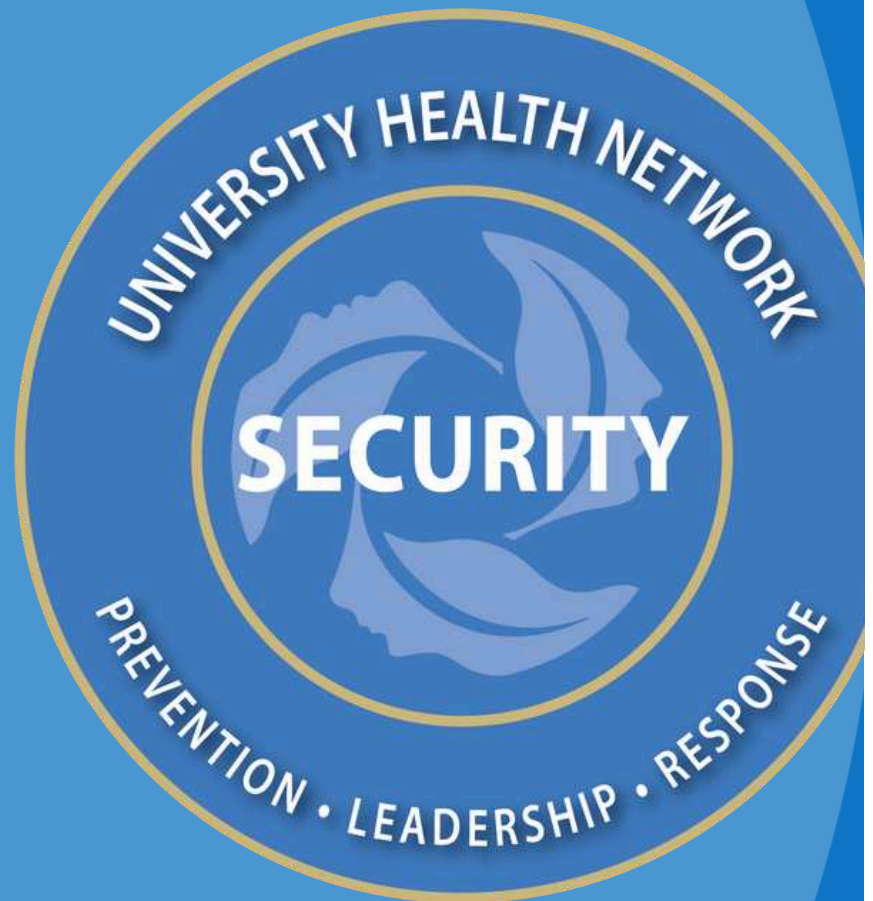




UHN Security QI Project 2: Evidence-Based Quality Indicators to Measure Workplace Violence



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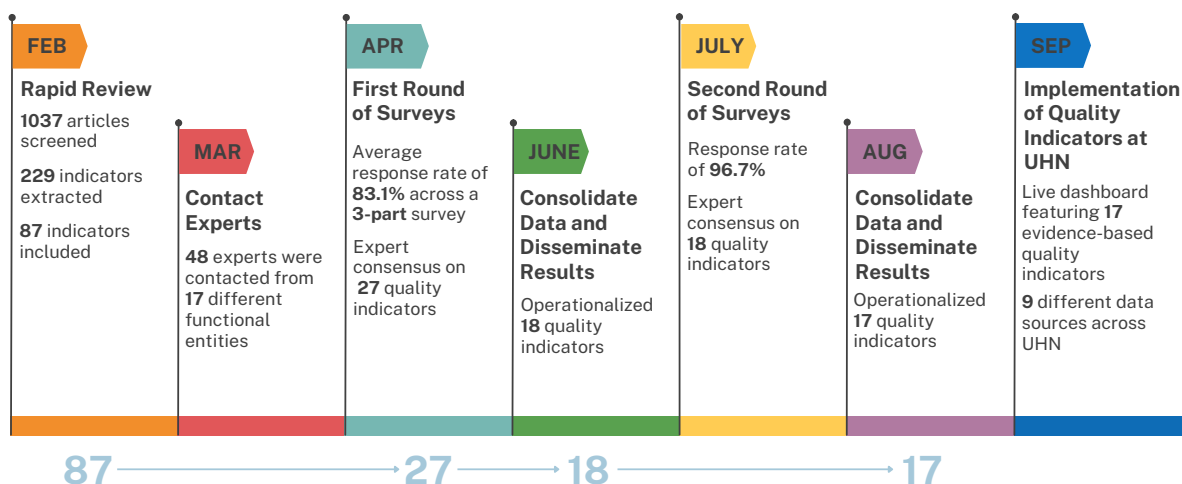
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Dear esteemed colleague,

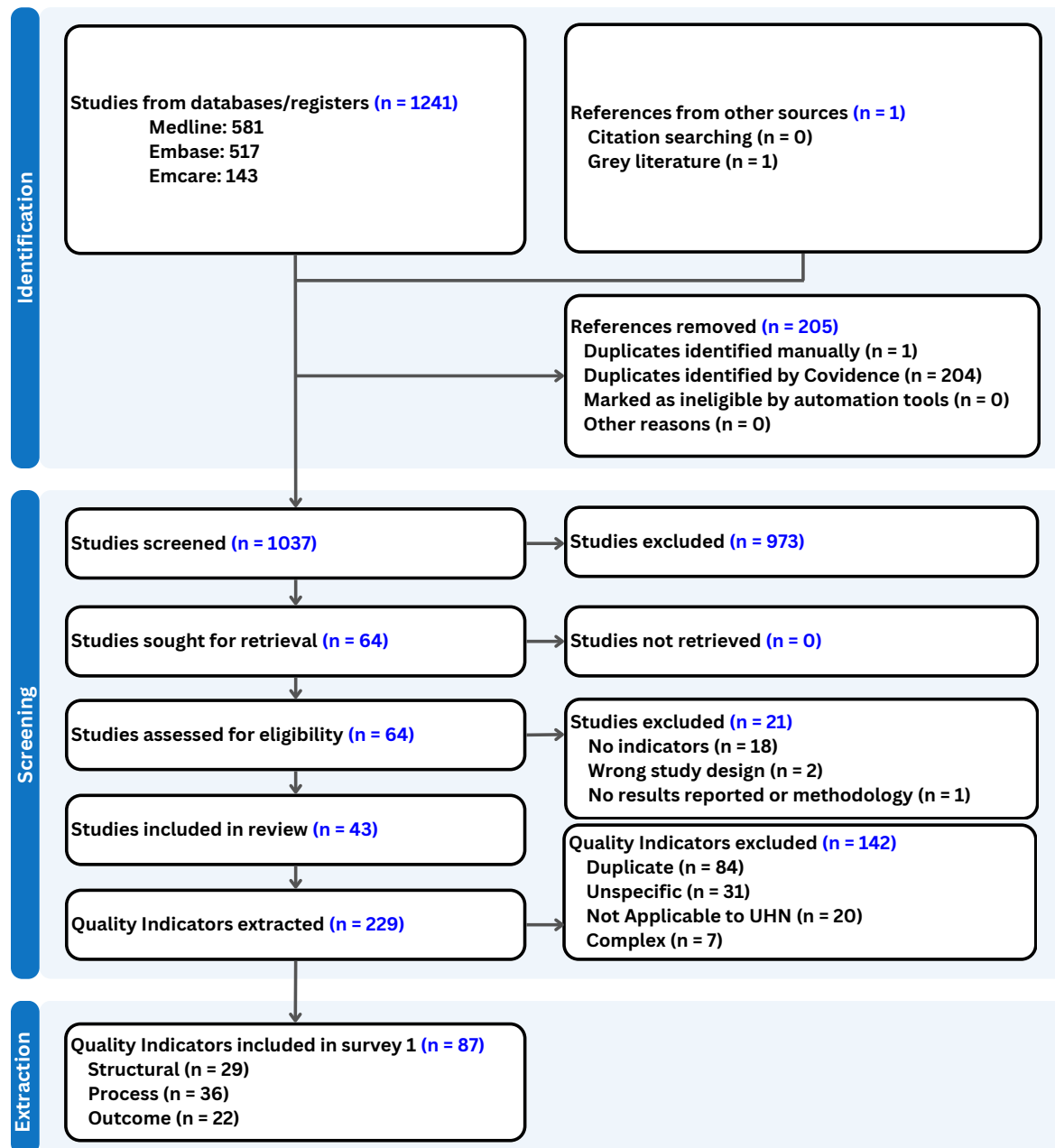
We would like to thank you for participating in our quality improvement project for the University Health Network (UHN). Currently, a multi-level quality improvement project is underway, addressing workplace violence (WPV) and Code White incident management across all sites at UHN. This subproject (project 2 of 12) focuses on measuring and understanding WPV and agitation management in the context of Code White incident management. While it has been a long process, we are happy to say that this project is complete and would not have been possible without your contributions. The input received from each of you, and the unique perspectives and expertise you bring to our research are invaluable. The information you provided us was used to determine the final set of quality indicators currently being implemented at UHN for evaluating and reporting workplace violence.

To identify the top quality indicators to measure WPV at UHN, our team utilized the Delphi Process, a systematic approach to developing important quality indicators by expert consensus. We engaged in this evidence-based methodology to obtain consensus from experts at our organization. This process included a literature search, a rapid review, connecting with our experts, creating, collecting, consolidating and analyzing two rounds of surveys and, now, implementing the top evidence-based quality indicators based on expert consensus at UHN. These steps and their results will be described in detail below.

Overview of the 2023 Project 2 timeline



The rapid review began with a literature search, with significant support from UHN Library Services, the UHN Security QI team identified 1241 articles related to measuring workplace violence and one additional article from the Ontario Public Services Health and Safety Association. 1037 studies were then screened, and 64 underwent full-text reviews. Afterwards, 229 quality indicators were extracted from the remaining 43 studies. Finally, these 229 evidence-based quality indicators were evaluated and operationalized by the UHN Security QI team, resulting in 87 evidence-based quality indicators. Afterwards, the indicators were organized into one of three categories: structure, process and outcomes, as outlined by the Systems Engineering Initiative for Patient Safety (SEIPS) framework.



Following identifying evidence-based quality indicators, our team identified 48 experts in workplace violence from different functional units at UHN. This included Safety Services, Security Operations, Emergency Preparedness, Emergency Medicine, Quality of Care Committee, Diversity and Mediation Services, Clinical Education, Code White Governance Committee, Workplace Violence Prevention Advisory Committee, Centre of Mental Health, Patient Relations, General Internal Medicine, Rehabilitation Medicine, People, Culture & Community, Legal Affairs, Workplace Violence Education Collaboration and our CAMH Project Partners. These experts were contacted with consent to contact forms and our first survey. Of the 48 experts, 30 provided consented to contact and engage in the Delphi process. These experts were included in the first round of surveys and were sent surveys in succession.

In the first round of surveys, we utilized a 5-point Likert scale to evaluate the validity, feasibility and importance of each quality indicator according to experts. We included an open comment field for each indicator and input for additional indicators to add based on expert opinions. Due to the high number of quality indicators, we divided the first round into three individual surveys by structure (29 indicators), process (36 indicators) and outcome (22 indicators) quality indicators. While we initially received a low response rate to survey 1a (62.5%), this continued to rise with each survey as surveys 1b and 1c received response rates of 90.0% and 96.7%, respectively. After collecting the data from all three surveys, the QI team analyzed the data for consensus, defined as a minimum weighted average of 4.0 out of 5.0 points (80%) in at least one category. Indicators were removed unless validated comments provided by experts warranted the inclusion of the quality indicator. The decision to include any quality indicator that did not reach the cutoff had to have received valuable feedback from experts in support of the indicator, evidence that this indicator is necessary and important, and be agreed upon by all members of the UHN Security QI team. Round 1 yielded 27 indicators (7 structure, 12 process and 8 outcome). They were then further analyzed to ensure that the data to operationalize these indicators was available. After further review, 18 indicators (7 structure, 7 process and 4 outcome) remained after our analysis and would be evaluated using a second round of surveys.

Delphi Round 1			
Survey	1a Structural Quality Indicators	1b Process Quality Indicators	1c Outcome Quality Indicators
Survey Availability	March 17th, 2023 to April 5th, 2023	April 5th, 2023 to April 20th, 2023	April 20th, 2023 to May 12th, 2023
Response Rate	62.5%	90.0%	96.7%
Number of Quality Indicators	29	36	22
Number of Quality Indicators with Expert Consensus	7	12	8
Number of Operationalizable Quality Indicators	7	7	4

In the second round of the Delphi process, we had one survey where we utilized a 5-point Likert scale to evaluate expert's satisfaction with the remaining 18 quality indicators. We included an open comment field for each indicator and input for additional indicators to add based on expert opinions. In response to the valuable feedback we received in our first round of surveys, we highlighted a pulse survey that was evaluated in the second round of surveys. We are extremely pleased to receive a response rate of 96.7% for this survey! Following the survey completion from our expert panel, UHN Security QI team collected and analyzed the data from the survey. All indicators without a minimum weighted average of 4.0 out of 5.0 (80%) were removed unless validated comments provided by experts warranted the inclusion of the quality indicator. The decision to include any quality indicator that did not reach the cutoff had to have received valuable feedback from experts in support of the indicator, evidence that this indicator is necessary and important, and be agreed upon by all members of the UHN Security QI team. Following analysis, all 18 quality indicators (7 structure, 7 process and 4 outcome) remained. However, while reviewing data and operationalizing these quality indicators, two of the indicators were indistinguishable based on the available dataset, therefore, one was removed. The conclusion after Round 2 is 17 indicators (6 structure, 17 process and 4 outcome).

Delphi Round 2			
Survey Availability	June 26, 2023 to August 7, 2023		
Response Rate	96.7%		
Quality Indicator Type	Structure	Process	Outcomes
Number of Quality Indicators	7	7	4
Number of Quality Indicators with Expert Consensus	7	7	4
Number of Operationalizable Quality Indicators	6	7	4

While we initially planned to hold a virtual meeting with all experts to reach a final consensus, this meeting was omitted due to the high response rate and clear consensus observed in the second round of surveys, as well as concerns regarding the feasibility of organizing this meeting, particularly identifying a time that would be convenient for all 30 experts included in this process.

	Quality Indicators	Data Source	Literature Source
Structure	1. Percentage of new hire HCWs* who completed risk-profile specific WPV training (Level 1-4) within 90 days of onboarding at UHN.		1, 2, 3, 4, 5, 6, 7, 8
	2. Percentage of new hire HCW with level 3 & 4 risk profiles who completed Code White training within 90 days of onboarding at UHN.		1, 2, 3, 5, 6, 7, 8
	3. Median time in minutes from triage to first-contact with HCW for patients involved in Code White incidences within the past calendar year at UHN.		9, 10, 11, 12, 13, 14
	4. Percentage of WPV incidents that were reported by HCWs within the past calendar year at UHN.		6, 15, 16, 17, 18
	5. Percentage of patients with a care plan or updated care plan following a Code White incident within the past calendar year at UHN.		3, 5, 19
	6. Rate of reported incidents of physical harm towards HCW per 1000 patient visits within the last calendar year at UHN.		6, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27
	7. Rate of reported incidents of physical harm towards HCW involving a weapon per 1000 patient visits within the last calendar year at UHN.		4, 6, 16, 28
Process	8. Percentage of Code Whites involving physical force towards environment within the past calendar year at UHN.		13, 16
	9. Percentage of Code Whites involving physical force towards HCWs within the past calendar year at UHN.		2, 6, 13, 15, 16, 20, 21, 22, 23, 24, 25, 26, 27, 28
	10. Percentage of UHN Security activation within the past calendar year due to Code White incidents.		29
	11. Percentage of UHN Security activation within the past calendar year due to Patient assist restraints.		29
	12. Frequency of UHN Security activation per 1000 ED patient visits.		29
	13. Percentage of physical restraints utilized during Code White incidents within the past calendar year at UHN.		1, 3, 5, 9, 11, 30, 31, 32, 33
Outcome	14. Percentage of HCWs involved in a WPV incident that reported physical injury within the past calendar year at UHN.		5, 25, 32, 34
	15. Percentage of Code Whites with a documented hot debrief within the past calendar year at UHN.		7
	16. Percentage of HCWS that required time off work following a WPV incident within the past calendar year at UHN.		2, 15, 25, 28
	17. Median number of days taken off work (eg. sick days, missed days) by a HCW following a WPV incident within the past calendar year at UHN.		2, 15, 25, 28

*HCW includes healthcare providers, staff, residents, fellows, learners and volunteers.



While the metrics that our quality indicators provide will be quite helpful in evaluating WPV at UHN, collecting feedback from UHN Healthcare workers (HCW) on topics that may be difficult to measure quantitatively at this time, is equally important. The topics presented in the table below will be investigated in a pulse survey. These topics were derived from the valuable information and feedback received from both Round 1 and Round 2 of the Delphi surveys.

Verbal harassment and threats faced by HCW*	HCWs feelings of well being and safety	HCWs perception of organizational support
Incidents of harm towards HCWs involving bodily fluids	HCWs satisfaction with team response time to Code Whites	HCWs satisfaction with organizational approach to address WPV
HCWs experiencing psychological trauma following WPV incident	HCWs that evaluated the WPV incident they were involved in as preventable	HCWs satisfaction with organizational communication on WPV
HCWs offered support by UHN following WPV incident	HCWs perception of safety in their workplace	HCWs perception of unit level leadership support

* HCW includes healthcare providers, staff, residents, fellows, learners and volunteers.

We appreciate your invaluable contribution to identifying the top-quality indicators to measure WPV at UHN. We are pleased to announce that the 17 selected leading indicators have been operationalized into a dashboard that will support data-driven decisions at UHN. The expected launch date of the dashboard is November 2023.



Please scan the QR code to access the UHN WPV dashboard.

We trust that the dashboard will serve as a crucial resource for UHN, providing insights to support informed decision-making. We acknowledge your expertise and the effort you invested, which has culminated in the realization of this project.

We look forward to witnessing the positive impact the dashboard will have on UHN's operations, and we thank you once again for sharing your expertise throughout this project.

-UHN Security WPV Quality Improvement Team

Appendix E. References

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