

Implementation of the Van Walraven & Mussleman Surgical Site Infection Risk Score Tool-Evaluation

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BACKGROUND PURPOSE METHODS RESULTS

Surgical site infections (SSI) are a noted cause of peri-surgical morbidity ¹

- Advances in infection control practices to improve:
 - Operating room ventilation
 - Sterilization methods
 - Surgical technique
 - Availability of antimicrobial prophylaxis
- SSIs remain a substantial cause of ¹
 - Morbidity
 - Prolonged hospitalization
 - Death
- Midwestern Outpatient Surgery Center (OSC) did not have
 - Process for identifying risk for a surgical site infection
 - Process to report risk to the care team
- Van Walraven & Musselman tool aligns with health status & comorbidity criteria ²
- Organizational quality metrics
 - Increase in SSI rates from 2021 (0%) to 2022 in quarters 1-3 (1.1%)
 - Reinforced need to explore prevention techniques that could reduce the prevalence of surgical site infections

The purpose of this Quality Improvement (QI) project was to evaluate the implementation of a standardized workflow process including the Van Walraven & Musselman Surgical Site Infection Risk Score (SSIRS) tool

Specific Aims:

- Staff Satisfaction
- Staff Perception of Score's Value
- Nurse Completion of SSIRS tool
- Nurse Accuracy of SSIRS tool

- Institutional Review Board Reviewed – Exempt
- Quantitative data obtained from pre- and post-implementation staff surveys through Qualtrics
 - Each survey question was weighted on a modified Likert scale of one through five

Question #:	Pre-Survey Aspect Evaluated:	Post-Survey Aspect Evaluated:	Comparison:
1	Perceived importance of tool before implementation	Importance of tool after implementation	Direct
2	Willingness to implement tool before project	Willingness to implement tool after project	Direct
3	Perceived confidence level in tool use before project	Confidence level in tool use after project	Direct
4	Perceived level of workload increase before project	Level of workload increase after project	Direct
5	Thoughts of tool accuracy before project	Thoughts of tool accuracy after project	Direct
6	Thoughts of informational value from tool before project	Thoughts of informational value from tool after project	Direct

# Of Scores Documented Correctly	# Of Scores Documented Incorrectly	# Of Scores Documented in Total
34	0	34
34/34 = 100%	0/34 = 0%	

Documentation of the SSIRS tool was completed 100% (34/34) of the time, and scores were confirmed to be 100% accurate

Question #	Pre-Implementation Survey Question Mean	Post-Implementation Survey Question Mean	Z score	p-value	Statistically Significant? (p > 0.05)
1	3.86	3.43	0.04	0.97	No
2	4.14	3.57	0.06	0.95	No
3	3.43	3	0.05	0.96	No
4	3.29	2.57	0.08	0.94	No
5	3.57	3.14	0.04	0.97	No
6	3.86	3.29	0.06	0.95	No

Results from the pre- and post-implementation surveys proved inconclusive as there was no statistical significance in the average mean score of each question when compared

Although not statistically significant (p=0.94), staff perception of increased workload with tool implementation decreased from 3.29 to 2.57

IMPLEMENTATION NURSING IMPLICATIONS

- The Promoting Action on Research Implementation in Health Services (PARIHS) model (see Figure 1) guided this quality improvement project ³
- Interdisciplinary collaboration was utilized during the planning process
 - Gap identified and plan for improvement developed (see Figure 2)
 - SSIRS scoring tool identified (see Figure 3)
 - Collaborative development of risk score spectrum (see Figure 4)
- Staff education on the process was completed and a pre-implementation survey distributed prior to implementation
- Implementation date February 15, 2023 – March 15, 2023
 - Staff followed the implementation plan (see Figure 5)

Limitations

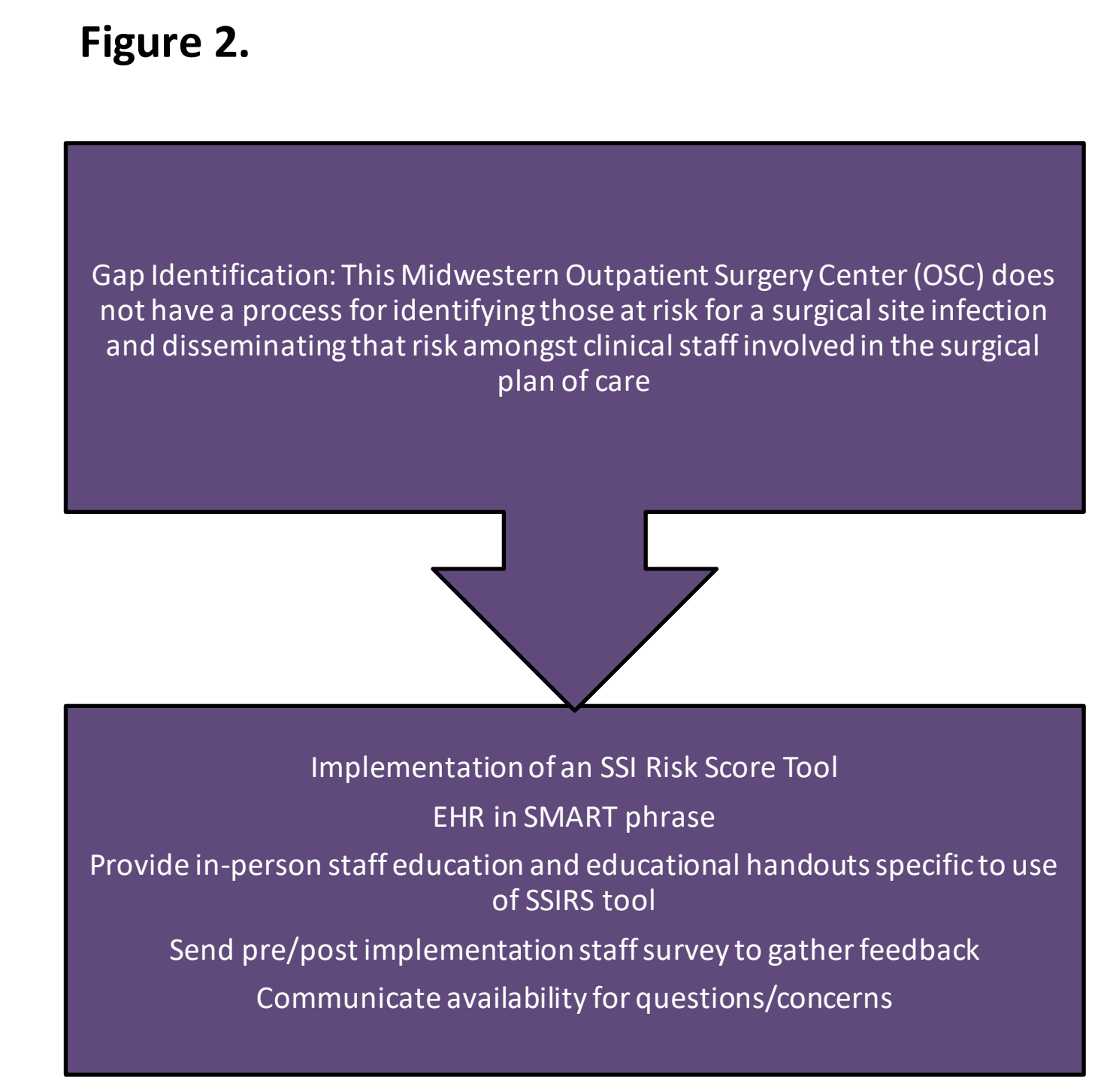
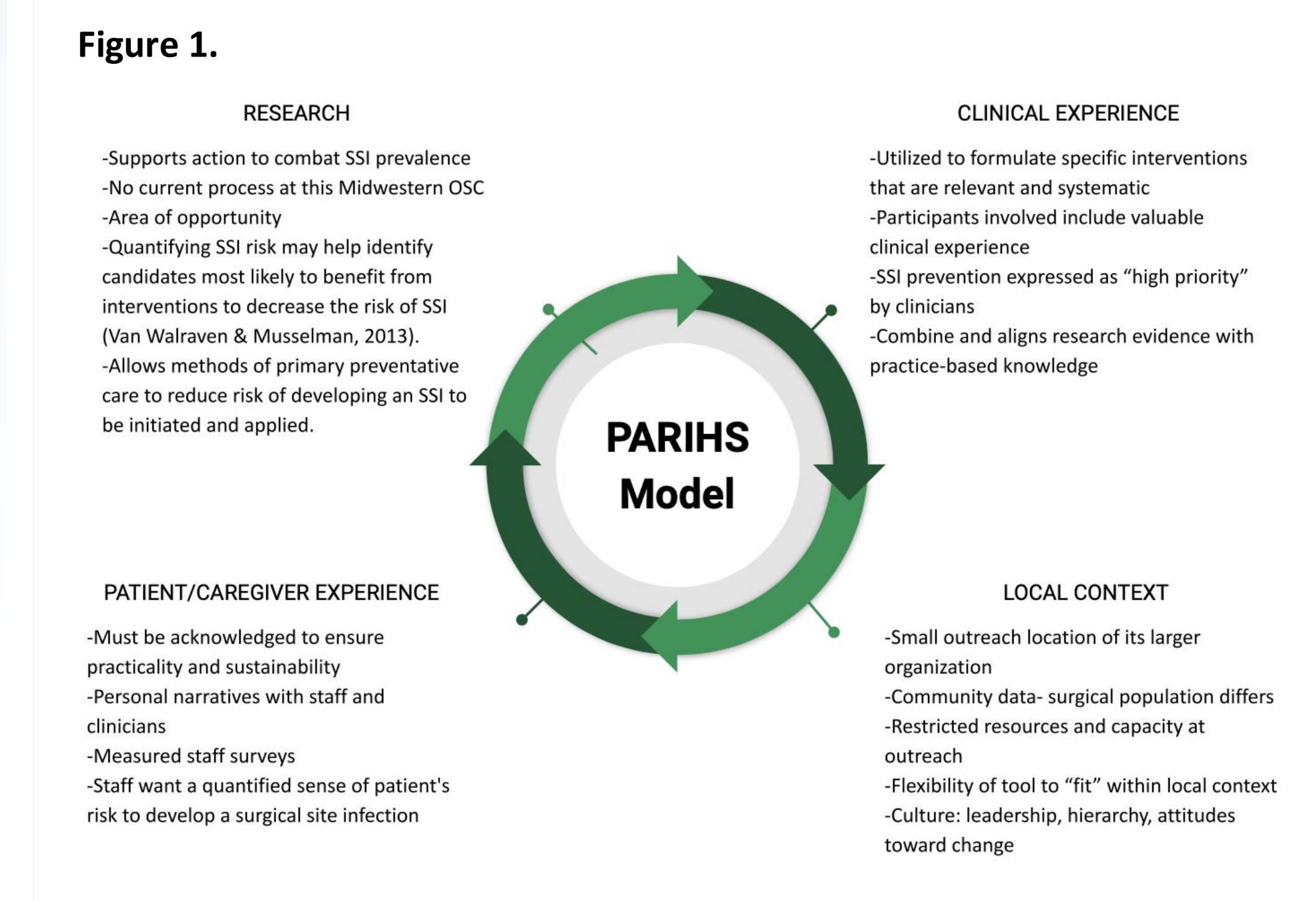
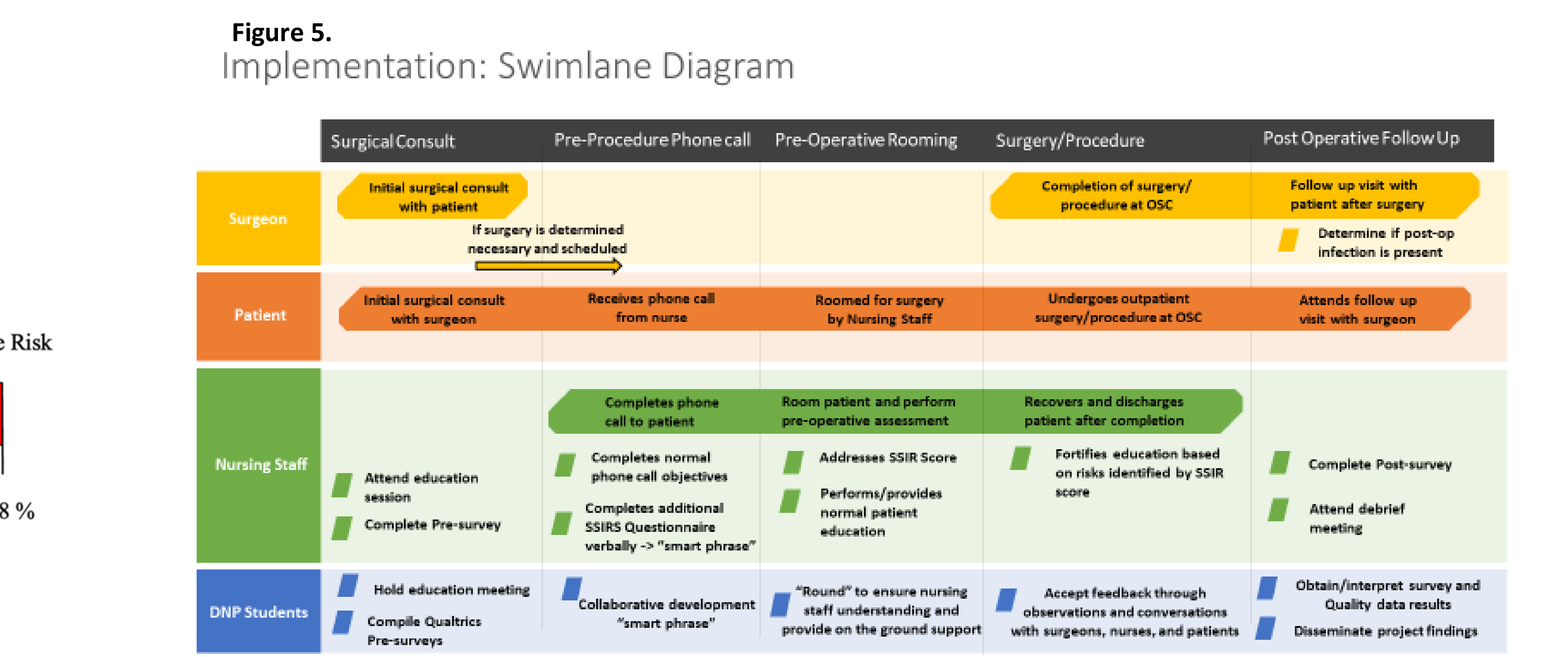
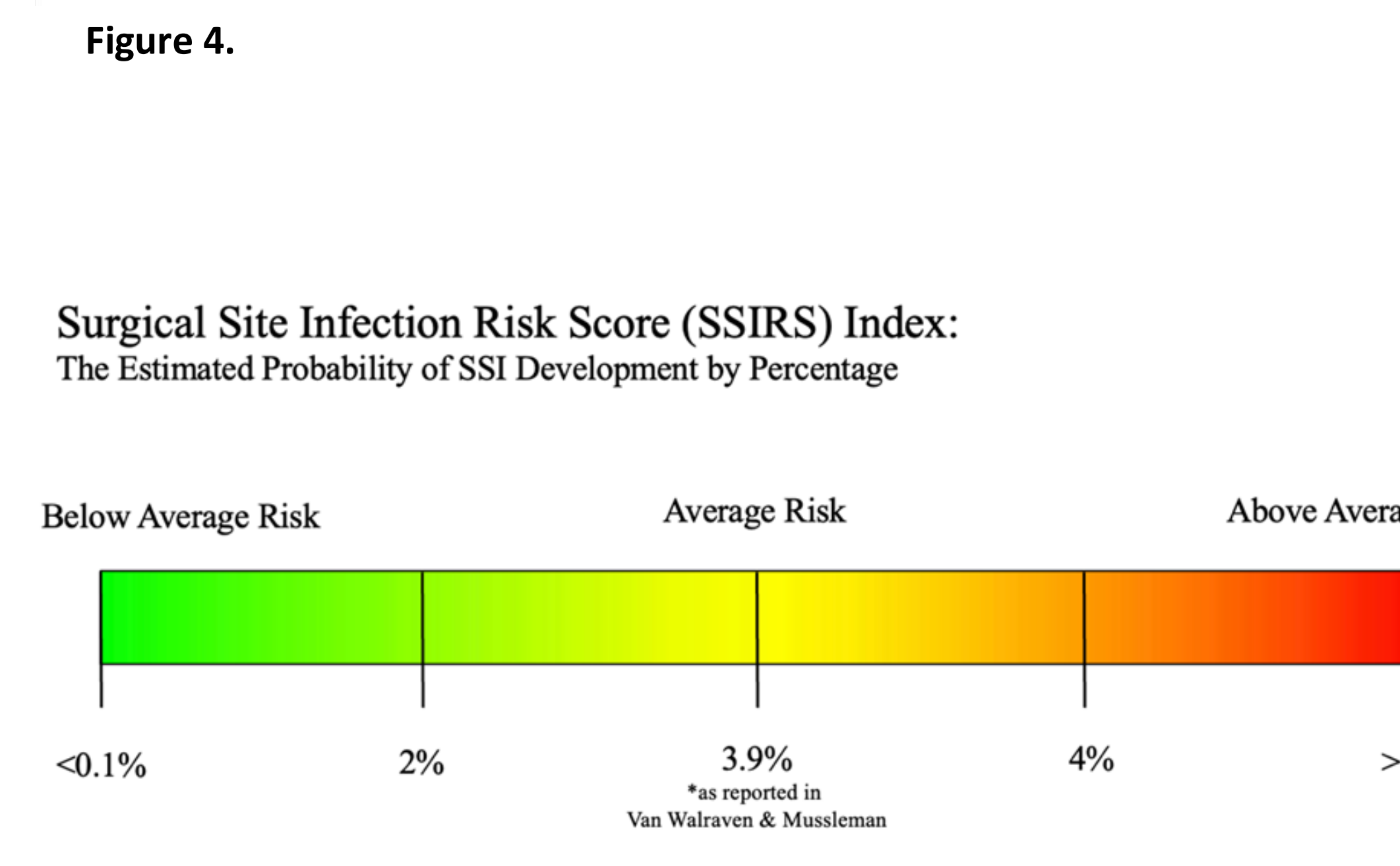
- SIRSS scoring website was intermittently blocked by the organization's internet safety measures
- Limited timeframe of the project was also a limiting factor
- Small population size
 - Inclement weather cancellations
 - Rescheduled surgical appointments

Learnings

- Project outcomes highlighted the importance of quantifying SSI risk and disseminating to staff to promote surgical care
- Midwestern OSC Charge Nurse identified as project champion to complete chart reviews
- Initial oral feedback indicates the workflow process design was perceived to be successful, but continued evaluation of the results will provide information to indicate its' true success

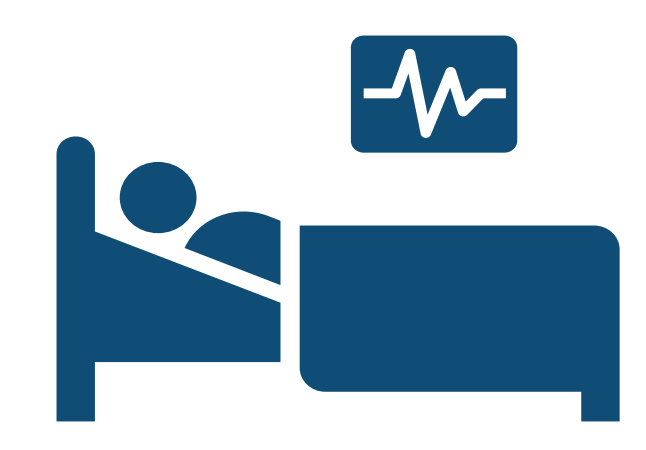
Next Steps

- Continued evaluation of the process is recommended to identify areas for improvement and assist with creating a sustainable process

CONCLUSIONS

- Initial oral feedback indicates that staff perceived the workflow process and design to be successful
- The specific data extracted from the pre-implementation and post-implementation surveys were deemed non-statistically significant
 - Data was clinically significant as it provided valuable insight into using an SSIRS risk score tool and its benefits in this Midwestern OSC
- Positive feedback from stakeholders-OSC staff, clinicians, leadership, and infection control



REFERENCES & MORE INFORMATION

