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

Pre-surveys

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BACKGROUND

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

- 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 & cor criteria²
- Organizational quality metrics
 - Increase in SSI rates from 2021 (0%) to 2022in quarters 1-3
 - Reinforced need to explore prevention techniques that cou the prevalence of surgical site infections

The Promoting Action on Research Implementation in Health Se

- Interdisciplinary collaboration was utilized during the planning p
 - Gap identified and plan for improvement developed (see
 - SSIRS scoring tool identified (see Figure 3)
 - Collaborative development of risk score spectrum (see Fig
- Staff education on the process was completed and a pre-implem
- Implementation date February 15, 2023 March 15, 2023
 - Staff followed the implementation plan (see Figure 5)



Figure 4

Surgical Site Infection Risk Score (SSIRS) Index: The Estimated Probability of SSI Development by Percentage



	PU	RPOSE			METHODS			
orbidity ¹	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			 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 				
omorbidity	 Specific Aims: Staff Satisfact Staff Percept Value Nurse Compl Nurse Accura 	tion ion of Score's etion of SSIRS too		estionPre-Survey#:Aspect Evaluated:1Perceived importantbefore implementation2Willingness to implementation3Perceived confidence3Perceived confidence4Perceived level of weight5Thoughts of tool action6Thoughts of information	Post-Survey Aspect Evalce of toolImportance of implementationimplementatement toolWillingness after projectce level inConfidence of after projectectafter projectvorkloadLevel of wor after projectcuracyThoughts of projectationalThoughts of	uated: of tool after ion to implement tool level in tool use rkload increase tool accuracy after informational	Comparison: Direct Direct Direct Direct Direct Direct	
(1.1%)				value from tool befo	ore project value from t	ool after project		
ervices (PAR process Figure 2) gure 4) nentation su	IHS) model (see Fig urvey distributed p	gure 1) guided t	his quality imp entation	orovement project	3	Lim • SI • Li • Sr	itations RSS scorin afety meas mited time nall popul • Incleme • Resched	
gure 2.		Figure	3.			Lea	rnings	
						• Pr di	oject outc isseminatii	
ap Identification: This N ot have a process for id	lidwestern Outpatient Surgery Center entifying those at risk for a surgical sit	r (OSC) does te infection	SSI Risk Index A - PATIENT DEMOGRAPHICS AND BASELINE Smoker: O Yes O No				 Midwestern 	
	plan of care	B - PAST MEDICA	Patient weight (in pounds): pound Patient height (in inches): inche AL HISTORY	ds s		re • In	views	
		Steroid in la	Metastatic Cancer: O Yes O No			SL	uccessful, k	
		C - SURGICAL IN	FORMATION Location, urgency: O Out-Patient O In-Patient, non	-emergent		in	dicate its'	
Impleme rovide in-person staff ec Send pre/post impl Communicat	entation of an SSI Risk Score Tool EHR in SMART phrase lucation and educational handouts sp of SSIRS tool lementation staff survey to gather fee te availability for questions/concerns	ecific to use dback	Wound Type: Clean Clean / Contar Contaminated Physical Status Classification: General Anaesthesia: Yes No edure by same surgical team: Yes No Total Operation time in hours: CPT Code: Select one	minated / Dirty / Infected	Ÿ	• Co in	ontinued e	
F In	igure 5. nplementation: Sv	vimlane Diagra	m			• Ini de	itial oral fe sign to be	
	Surgical Consult	Pre-Procedure Phone call	Pre-Operative Rooming	Surgery/Procedure	Post Operative Follow Up	• Th im	e specific	
Su	rgeon Initial surgical consult with patient If surgery necessary	is determined and scheduled		Completion of surgery/ procedure at OSC	Follow up visit with patient after surgery Determine if post-op infection is present	(Data was	
Pi	atient with surgeon	Receives phone call from nurse	Roomed for surgery by Nursing Staff	Undergoes outpatient surgery/procedure at OSC	Attends follow up visit with surgeon	• Pc	ssiks risi	
						inf	fection cor	
Nurs	ing Staff Attend education session Complete Pre-survey	Completes phone call to patient Completes normal phone call objectives Completes additional SSIRS Questionnaire verbally -> "smart phrase"	Addresses SSIR Score Performs/provides normal patient education	Fortifies education based on risks identified by SSIR score	Complete Post-survey Attend debrief meeting			
DNP	Students Compile Qualtrics	Collaborative development "smart phrase"	"Round" to ensure nursing staff understanding and provide on the ground support	Accept feedback through observations and conversations with surgeons, nurses, and patients	 Obtain/interpret survey and Quality data results Disseminate project findings 			



Of Scores Documented

34/34 = 100%

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

- compared

- sures
- lation size
 - ent weather cancelations
 - duled surgical appointments

- comes highlighted the importance of quantifying SSI risk and ing to staff to promote surgical care
- n OSC Charge Nurse identified as project champion to complete chart
- true success

successful

- ntrol





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RESULTS

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

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

• 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

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

NURSING IMPLICATIONS

ng website was intermittently blocked by the organization's internet

eframe of the project was also a limiting factor

feedback indicates the workflow process design was perceived to be but continued evaluation of the results will provide information to

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

CONCLUSIONS

eedback indicates that staff perceived the workflow process and

data extracted from the pre-implementation and postition surveys were deemed non-statistically significant is clinically significant as it provided valuable insight into using an sk score tool and its benefits in this Midwestern OSC dback from stakeholders-OSC staff, clinicians, leadership, and

REFERENCES & MORE INFORMATION

