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Anjali Kumari Singh

University of San Francisco, aksingh9@usfca.edu

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Non-Clinical Perspectives on Sepsis: A Project for Enhanced Awareness

Anjali Singh, RN

University of San Francisco School of Nursing and Health Professions

NURS653-01: Quality Improvement Internship

Dr. Theresa M. Mostasisa, EdD, MS, BSN, RN

November 23, 2023

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Abstract

Problem: This project aimed to enhance non-clinical staff knowledge of sepsis through a targeted awareness campaign, while also seeking to uphold or enhance the organization's sepsis-related performance.

Context: Clinical Nurse Leader students conducted a microsystem assessment in five crucial non-clinical departments of an urban Bay Area hospital, each playing a vital role in the organization's efficiency at different levels.

Intervention: During Sepsis Awareness Month, a sepsis awareness campaign was implemented. This involved a concise presentation on sepsis, its consequences, and the significance of awareness in each department. Additionally, informational fliers detailing sepsis signs and symptoms were distributed.

Measures: A pre-and post-intervention verbal survey assessed sepsis awareness. Participants were asked a direct question: "Do you know what sepsis is?" Respondents indicating awareness raised their hands, providing a tangible measure of comprehension.

Results: Post-intervention assessment was feasible in only one department – environmental services. Unfortunately, none of the respondents reported awareness of sepsis, its signs or symptoms, or preventative measures.

Conclusions: The limited post-intervention data highlights the need for further research to determine the broader impact of sepsis awareness campaigns on organizational performance. Additionally, investigations are warranted to assess whether such campaigns influence early sepsis recognition, prompting rapid diagnosis and treatment.

Section II: Increasing Sepsis Awareness Amongst Five Non-Clinical Departments

Introduction

Sepsis, a severe organ failure that poses a life-threatening risk and is brought on by an abnormal host reaction to infection, is currently responsible for 1 in 5 deaths of those diagnosed with the condition (Srzić, et al., 2022). In its most severe form, septic shock, patients experience a significant decrease in blood pressure thereby decreasing the body's ability to properly perfuse resulting in hypoxia (Srzić, et al., 2022). CDC reports that as of 2023, 1.7 million people are affected by the condition and at least 270,000 cases result in death. With such a substantial effect, it is no surprise that sepsis is the number one cost of hospitalization within the U.S. totaling \$62 billion annually (Sepsis Alliance, 2023).

A condition that is indiscriminate and has the potential to impact any individual in a population necessitates vigilant observation from both healthcare professionals and community members. Sepsis awareness, crucial for prompt diagnosis & treatment, was evaluated by the Sepsis Alliance in a survey of 2,512 U.S. adults. Shockingly, only 63% were aware of the term “sepsis” and among them, a mere 15% correctly listed the four symptoms that require hospitalization (Sepsis Alliance, 2023). This marked a decrease from the 2022 survey findings, indicating a concerning trend in public awareness (Sepsis Alliance, 2023). Sepsis awareness campaigns have traditionally focused on clinical staff, with high awareness levels reported among nurses and physicians (Fiest et al., 2022). However, the knowledge levels among non-clinical staff, a vital component of the macrosystem, have been largely overlooked in existing research. In the pursuit of reducing the global burden of sepsis, our project aims to

assess and enhance sepsis awareness among non-clinical staff in our San Francisco Bay Area organization as part of the annual Sepsis Awareness month in September.

Problem Description

The non-clinical staff which we included in our project serve at different levels within the organization but in conjunction, support the efficacy of the facility. Participants included the following departments: security, communications, central supply, surgical sterilization department, and environmental services (EVS). As key players in the organization, we set out to assess their current knowledge of the term “sepsis.” For a quick assessment, we asked each group to raise their hands if they knew/were familiar with the term “sepsis.” Approximately 3% ($n = 1/33$) of our population reported familiarity with the term but none ($n = 0/33$) were able to provide a definition or associated signs or symptoms (see Appendix J). One EVS staff member was able to provide some information about how sepsis is acquired stating it can develop from a cut but also believed it to be a blood infection.

These findings reveal a significant gap in awareness among non-clinical staff in our organization. While each department plays a critical role in the facility, some, like EVS, have a more substantial impact on preventing the spread of infections within the hospital, thereby mitigating healthcare-acquired infections (HAIs) and complications like sepsis.

The implications of limited awareness extend to infection control measures, patient safety, and the overall functioning of the facility. Despite the facility's commendable performance, surpassing the standard (standard = 75%) for sepsis and timely intervention, addressing sepsis awareness in non-clinical staff is crucial for maintaining or further improving

macrosystem sepsis metrics. Consequently, we have designed a Sepsis Awareness Campaign to bridge the knowledge gap within this population.

Available Knowledge

Non-clinical staff have a unique role in preventing healthcare-acquired infections that can result in serious complications such as sepsis. Our literature review aims to investigate and summarize the current findings on sepsis awareness campaigns targeted toward non-clinical departments in light of the essential role non-clinical staff play in enhancing patient safety and the larger healthcare environment.

PICO Question

Amongst 5 non-clinical departments in an urban hospital (P), how does the sepsis awareness campaign (I), compared to no sepsis awareness campaign (C), affect sepsis knowledge and organizational metrics (O)?

Search Strategy

Our literature review utilized several databases to assess current research on sepsis awareness campaigns amongst non-clinical staff. These databases included Pubmed, Scopus, and Cumulative Index to Nursing and Allied Health (CINAHL). Search terms used included the following: sepsis, sepsis awareness, non-clinical staff, quality improvement, sepsis knowledge, environmental hygiene, non-patient facing, infection prevention, infection control, & sepsis training. Criteria for research included the interval 2017-2023 and peer-reviewed. No studies were identified in the literature that specifically addressed sepsis awareness campaigns tailored for non-clinical staff. This, yet again, highlighted the need for further research and studies within non-clinical staff.

Synthesis of Evidence

Our review focused on the impact of sepsis awareness campaigns on non-clinical staff; however, due to a lack of research, we broadened our search to include clinical staff, sepsis awareness campaigns, and infection prevention practices.

Infection prevention and control is key to reducing the spread of healthcare-associated infections (HAI) within hospitals. The World Health Organization (WHO) reports that approximately half (49%) of sepsis patients in intensive care units contracted the illness while hospitalized (WHO Calls for Global Action on Sepsis - Cause of 1 in 5 Deaths Worldwide, 2020). One study, which discussed the overlooked role of EVS workers within a maternity unit, established a link between environmental hygiene, HAIs, and as a result sepsis (Cross et al, 2019). The study further explored the connection between infection rates and hospital cleanliness through the lens of infection prevention control and the role EVS workers play in it suggesting that to achieve lasting decreases in HCAIs within maternity units, it is crucial to tackle the oversight of cleaners and, consequently, cleaning (Cross et al, 2019). Though this study focused on maternity units, its findings are applicable to the EVS department and their role within our facility and sepsis prevention. Likewise, in a review of the literature on the notion that advancements in environmental disinfection may play a role in preventing the transmission of and decreasing HAIs, Donskey (2013) found that there is a connection between the two. These studies confirm the vital responsibility EVS staff have in sepsis prevention within hospitals. Therefore, sepsis awareness is necessary to promote positive cleaning practices and decrease the spread of HAIs.

Sepsis awareness campaigns can be a successful approach to increasing sepsis knowledge within the general population and in our case, non-clinical staff. Sepsis awareness campaigns in research encompass several different components but are usually addressed to clinical staff. In Australia, a national sepsis awareness campaign, employed on World Sepsis Day, was carried out. This campaign strived to lessen avoidable harm stemming from sepsis (National Sepsis Awareness Campaign Guide, 2023). Their guide to sepsis awareness within the Australian population was geared towards clinicians and health service organizations. Various initiatives were utilized throughout the program to raise awareness, increase understanding, and reinforce actions that lead to the reduction in harm associated with sepsis throughout Australia.

Additional insights can be drawn from a study conducted by Brizuela et al. (2020). Brizuela and her colleagues sought to assess the influence of the WHO Global Maternal Sepsis Study (GLOSS) awareness campaign on the knowledge of maternal sepsis among healthcare professionals. The GLOSS campaign incorporated the use of various informative infographics, including a sepsis fact sheet, warning signs, early actions, and guidance on managing the condition. The study involved the participation of several nations globally, such as Colombia, Guatemala, Mexico, and the Philippines. Positive outcomes resulted from this study as a substantial increase in awareness, as evidenced by a 63.4% reduction in respondents not having heard of maternal sepsis. Moreover, campaign materials were positively acknowledged by 94% of respondents. Drawing inspiration from the effective use of infographics in initiatives such as the GLOSS awareness campaign and the referenced study, we decided to incorporate infographics as a supplementary element in our intervention. The positive outcomes observed in this campaign, including heightened knowledge and engagement, support our strategic decision

to utilize infographics in conveying critical information about sepsis to our non-clinical staff participants.

Conceptual Framework

The theoretical framework on which this project is based is the reinforcement theory of motivation, also known as operant conditioning, developed by behavioral psychologist B.F. Skinner. The theory is rooted in the belief that the behavior of an individual can be modified by the use of reinforcement, punishment, and extinction. Furthermore, the theory follows five steps to strengthen or weaken a behavior through the usage of consequences. The first step, identifying the behavior we want to reinforce or modify, was identified through our pre-survey assessment. It was determined that the non-clinical staff had inadequate knowledge of sepsis, its cause, signs, and symptoms, as well as its prevention techniques. As a result, our determined outcome was to increase this group's knowledge of sepsis fulfilling step two of our theory. Next, the theory proposes to select an enforcer to encourage the desired behavior. As non-clinical staff are just as instrumental in preventing sepsis and maintaining the organization's performance related to sepsis as clinical staff, we concluded that the reinforcer would be the prevention of sepsis within non-clinical staff, their families, their communities, and patients within their facility. Administering the reinforcer was accomplished through a discussion around sepsis, how it is spread, methods of prevention, and the importance of sepsis awareness. Additionally, we employed the use of flyers, which were created using infographics generated by Sepsis Alliance, for staff to share with their families, coworkers, and communities. Lastly, the theory monitors changes as a result of the intervention and adjusts as necessary if the desired behavior is not achieved.

Specific Project Aim

The specific aim of this project was to increase the sepsis knowledge of non-clinical staff in five non-patient departments by 50% by November 1, 2023. The process began with a pre-assessment survey of the staff's current knowledge of sepsis after which the sepsis awareness campaign was presented through the month of September. Information given via fliers was created through the compilation of information from Sepsis Alliance and current sepsis research. Post-intervention, the staff were assessed again to evaluate the effectiveness of the campaign.

Section III: Methods

Project Overview

Several assessments were made to set the foundation for our sepsis awareness campaign. A microsystem assessment, incorporating the 5 P's and a Root Cause analysis (refer to Appendix C & D) was facilitated by our group to gain a greater understanding of how each of the participating departments function. A Plan, Do, Study, Act (PDSA) cycle (refer to Appendix E) was conducted as a framework to guide the implementation of our campaign. Collaboration with organizational stakeholders led to the development of a PICO question in addition to our specific aim. A literature review on sepsis awareness campaigns, infection prevention and control, and sepsis knowledge in non-clinical staff helped form appropriate interventions for our awareness campaign. Additionally, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis (refer to Appendix F) was carried out to understand the factors that led our organization. A pre-intervention assessment (refer to Appendix J) was conducted and the campaign and additional materials were administered (refer to Appendix H & I). Post-intervention, we set out to assess the effectiveness of the campaign and readministered the verbal survey gathering

post-intervention data (refer to Appendix K). A visual tool to illustrate the project's timeline was formed through a Gantt chart (refer to Appendix G).

Microsystem Assessment

Gaining insights into the staff, their roles, work schedules, perspectives, and their assessments of the workplace is crucial for a comprehensive understanding of any microsystem. As a result, a microsystem assessment was undertaken within our five departments. This entailed looking at the purpose, patients, professionals, process, and patterns of each of our populations in order to understand how they run. The departments primarily focus on non-direct patient care activities. The assessment explored the processes within each department, emphasizing infection prevention training and activities occurring before patient admission, during admission, and post-discharge. Notably, the examination revealed distinct patterns in their functions: Environmental services (EVS/housekeeping) maintains environmental hygiene to reduce healthcare-associated infections, central Supply manages material flow throughout the facility, communications fosters collaboration among healthcare providers, security oversees hospital access while ensuring patient and staff safety and sterile processing handles the preparation, processing, and distribution of medical supplies crucial for patient care. Understanding these roles and processes is essential for a comprehensive grasp of the microsystem's functioning.

Plan, Do, Study, Act (PDSA) Cycle

Our first step in initiating the PDSA cycle began with the planning phase. During this period, our group collaborated with stakeholders within the organization during which we identified the need for a sepsis awareness campaign targeted towards non-clinical departments.

As a result, we created a PICO question in addition to a specific aim statement. Material necessary for implementation, such as the campaign script and flier, were created during this phase. Advancing to the “do” phase, also known as the implementation phase, our group conducted a microsystem assessment using the 5 P’s (see Appendix D). A strengths, weakness, opportunities, and threats (SWOT) analysis was performed to identify the strengths and weaknesses of our organization which guided our project. The awareness campaign was also carried out during this phase and encompassed a script alongside an informational flier that fueled a discussion about sepsis. The third phase of the cycle, study, is when we analyze the data collected during the implementation phase. This included pre-intervention data – non-clinical staff’s existing knowledge and awareness of the term ‘sepsis,’ how it develops, preventative measures, and the importance of awareness. We also collected available post-intervention data and analyzed it in search of improvements from our preliminary data collection. Finally, during the act phase, we assessed the impact of our campaign and made any required adjustments. If the project proves successful, the cycle will conclude.

Root Cause Analysis

A root cause analysis was performed to determine the root cause of delayed recognition and treatment of sepsis. This was performed through a fishbone diagram in which we included factors such as patients, processes/methods, professionals, and the environment. Our findings suggest that addressing the non-clinical staff within our facility can aid in the rapid diagnosis and treatment of sepsis, benefitting the organization's performance related to sepsis.

SWOT Analysis

The main objective of a SWOT analysis is to improve the understanding of the variables involved in making crucial decisions or implementing changes. As we aim to implement positive changes within our organization, a SWOT analysis was conducted. Resultant of the assessment, our group identified that there were several opportunities we could utilize within our campaign to create effective and sustainable change within our organization.

Timeline

To monitor the process of this quality improvement project, we utilized a Gantt chart—a visual tool aligning with our goals and objectives—spanning from August 2023 to December 2023 (refer to Appendix G).

Intervention

The intervention, a sepsis awareness campaign, was implemented throughout September, also known as Sepsis Awareness Month. The campaign encompassed a script and flier which were both discussed with each department. The script covered who our group is, what sepsis is, who can be affected and how, how it can be prevented, and finally why it is important to be aware of sepsis. Our flier combined and reused material created by Sepsis Alliance describing the signs and symptoms of sepsis and when to seek medical assistance. This prompted a discussion within the group about how to spread the information learned to their coworkers, families, and communities. Staff members posted flyers throughout their environment to sustain the dissemination of information and increase greater participation in our campaign.

Measures

Pre-survey: our group visited each department and assessed the staff's current knowledge of sepsis through a verbal survey. The question "Do you know what sepsis is" was asked.

Respondents aware of the term indicated so by raising their hands; those unaware were also measured and noted. After our intervention was implemented, we visited the facility once again to measure the change in awareness amongst our participants. Post-survey, the same verbal survey was carried out and respondents who were aware and unaware of the term sepsis were once again counted and noted. Hands raised by respondents who indicated awareness served as a qualitative indicator of comprehension.

Ethical Considerations

Faculty have accepted this project as a quality improvement project in accordance with QI review procedures; IRB approval is not needed for this project.

Section IV: Results

In total, 34 non-clinical employees from different departments—four from central supplies, fifteen from EVS, two from security, and two from communications—participated in our campaign. Pre-intervention assessments were conducted for the entire population. However, challenges arose during the post-intervention assessment phase. A leadership transition within our organization significantly impacted our ability to obtain approval from relevant management for revisiting each department for post-intervention evaluation.

These challenges, coupled with factors such as time constraints, scheduling conflicts, and variations in participant availability, affected our ability to conduct comprehensive post-intervention assessments across all departments. Despite these obstacles, we assessed post-intervention changes within the EVS department. However, it's important to note that EVS staff who participated in the post-assessment were not present during the Sepsis Awareness Month discussion and flier handout.

As a result, when their sepsis knowledge was assessed post-intervention, none of the EVS staff (n = 0/5) demonstrated the ability to define sepsis, reported awareness of the term 'sepsis,' or listed applicable signs and symptoms or preventative measures.

Section V: Discussion

As far as our knowledge extends, this study is the initial attempt to evaluate the effects of an awareness campaign targeting non-clinical staff and involving the collection of data both before and after the campaign. Determining the precise impact of our sepsis awareness campaign proved challenging. Although we weren't able to produce a change in awareness within our population, we noticed a change in motivation within staff members. One member of staff, in particular, was eager to learn more about sepsis and how to protect themselves. They expressed a sincere appreciation for the material we presented and demonstrated a proactive willingness to disseminate it to individuals they encountered throughout the course of our project. When visiting other departments, they took on the role of educators after gaining insights from our presentation and encouraged participation and engagement with our infographic flier motivating further distribution of knowledge to families and friends. It is noteworthy that this behavior triggered increased commitment and comprehension among our participants. This dynamic learning environment contributed to the effectiveness of the sepsis awareness campaign.

To establish a conclusive positive outcome, additional studies and campaigns are deemed necessary. However, it is significant that our macrosystem consistently meets and even exceeds the established standards for sepsis performance (standard = 75%). This achievement suggests that our sepsis campaign likely played a role in sustaining and even enhancing the overall functioning of our macrosystem.

Limitations

Several limitations impacted the outcomes of our project. Shifting leadership posed challenges in obtaining necessary approvals for conducting post-intervention assessments in various departments. Moreover, time constraints among participants necessitated a change in the target population within the only available department. External events, such as a work stoppage, further complicated scheduling, making it challenging for both our team and the facility to coordinate suitable meeting times.

Conclusion

Early identification and prompt intervention are essential to reducing morbidity and mortality related to sepsis. Although we place a greater emphasis on clinical staff and their knowledge of sepsis as they provide direct patient care, informing the general public and non-clinical staff on the subject is just as necessary. Previous research supports the need to inform the greater public and other stakeholders on sepsis in order to contribute to the tackling of the global burden.

This campaign, in collaboration with organizational leadership, aimed to undertake this endeavor within our facility. Continued research within this population – non-clinical staff – will demonstrate greater validity of the positive impact of sepsis awareness campaigns beyond the bedside. Further studies can also create a body of evidence on the benefits these campaigns have on early identification and prompt intervention contributing to the global effect of sepsis.

Section VI: References

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Www.who.int.

<https://www.who.int/news/item/08-09-2020-who-calls-for-global-action-on-sepsis---cause-of-1-in-5-deaths-worldwide#:~:text=The%20report%20also%20finds%20that>

Section VII: Appendices

Appendix A

Statement of Determination

Student Project Approval: Statement of Determination

Title of Project:

Non-Clinical Perspectives on Sepsis: A Project for Enhanced Awareness

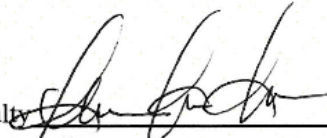
Brief Description of Project:


In this project, the objective is to improve the knowledge of non-clinical staff regarding sepsis through a targeted awareness campaign, aiming to maintain or improve the organization's sepsis-related performance. Pre-assessment surveys highlight a knowledge gap amongst non-clinical staff within the organization which are addressed through a Sepsis Awareness Campaign.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:

<http://answers.hhs.gov/ohrp/categories/1569>

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached).

Signature of Supervising Faculty  (date) 11/29/2023

Signature of Student  (date) 11/28/23

Appendix B

Literature Review Table

Title & Author(s)	Objective & Design	Sample Setting	Results & Conclusions	Level of Evidence
<p>An international survey: Public awareness and perception of sepsis – Francesca M Rubulotta, Graham Ramsay, Margaret M Parker, R Phillip Dellinger, Mitchell M Levy, Martijn Poeze; Surviving Sepsis Campaign Steering Committee; European Society of Intensive Care Medicine; Society of Critical Care Medicine</p>	<p>This study conducted a survey to assess the public’s knowledge and behaviors surrounding sepsis. Prospective, international survey performed using structured telephone interviews</p>	<p>6021 interviewees, 5021 were from Europe and 1000 were from the United States.</p>	<p>In Italy, Spain, the UK, France, and the US, 88% had never heard of "sepsis," and in Germany, only 53% recognized the term. Additionally, in these countries, 58% of those familiar with sepsis were unaware of its leading cause of death status. The general public is not well informed about the existence of sepsis syndrome. The questionnaire's results highlight the difficulties in treating and managing infected patients who are at risk of developing sepsis syndrome early on.</p>	<p>Level III (Dang et al., 2022)</p>
<p>Patient, Public, and Healthcare Professionals Sepsis Awareness, Knowledge, and Information Seeking Behaviors: A Scoping Review – Kirsten M. Fiest, PhD, Karla D. Krewulak, PhD, Rebecca Brundin-Mather, MSc, Madison P. Leia, MA, Alison Fox-Robichaud, MD, François Lamontagne, MD, and Jeanna</p>	<p>The purpose of this review was to identify and map the literature on general knowledge, information-seeking behaviors, and awareness of sepsis in order to influence future research and knowledge translation</p>	<p>80 studies -Articles related to sepsis awareness, knowledge, and information seeking behaviors among patients, public, and healthcare professionals</p>	<p>Out of 5,927 studies, 80 focused on sepsis awareness. Healthcare professionals showed higher knowledge than patients/public. Awareness varied widely among patients/public (2% to 88.6%), and correct definitions ranged from 4.2% to 92%. Results suggest improved awareness over time, but definitions were inconsistent, and there's limited information on risk factors. Patients/public get information from the internet, while professionals rely on job training or education. Global awareness of sepsis differs between the different groups. A standard definition is suggested to help improve awareness.</p>	<p>Level V (Dang et al., 2022)</p>

<p>Parsons Leigh, PhD</p>	<p>initiatives related to sepsis. Scoping review</p>	<p>nals.</p>		
<p>Early evaluation of the ‘STOP SEPSIS!’ WHO Global Maternal Sepsis Awareness Campaign implemented for healthcare providers in 46 low, middle and high-income countries – Vanessa Brizuela, Mercedes Bonet, Carla Lionela Trigo Romero, Edgardo Abalos, Adama Baguiya, Bukola Fawole, Marian Knight, Pisake Lumbiganon, Meilè Minkauskienė, Ashraf Nabhan, Nafissa Bique Osman, Zahida P Quresh, João Paulo Souza</p>	<p>The purpose of this study was to assess how the WHO Global Maternal Sepsis Study (GLOSS) awareness campaign has affected healthcare practitioners' knowledge of maternal sepsis. They collected independent samples for over 30 days before (pre) and after (post) the campaign using online and paper surveys. To understand awareness changes, they used logistic regression. Descriptive stats were used for</p>	<p>Healthcare professionals from 398 facilities across 46 countries with varying income levels participated.</p>	<p>A total of 2,188 surveys were analyzed, consisting of 1,155 at baseline and 1,033 post-campaign. The majority of respondents (94%) found the campaign materials helpful, 90% reported increased awareness, and 88% felt motivated to act differently. Significant changes included a 63.4% decrease in those who hadn't heard of maternal sepsis and a 7.3% increase in confidence regarding maternal sepsis identification and management decisions. Raising awareness through campaigns can lead to more people being aware of maternal sepsis and an improved confidence among providers in making accurate decisions. Providing information for making timely and precise decisions, along with fostering supportive environments, may enhance the identification and management of maternal sepsis.</p>	<p>Level II (Dang et al., 2022)</p>

	campaign recognition and exposure.			
Effectiveness of a hospital-wide programme to improve compliance with hand hygiene – Prof Didier Pittet, MD Stéphane Hugonnet, MD Stephan Harbarth, MD Philippe Mourouga, MD Valérie Sauvan, RN Sylvie Touveneau, RN Thomas V Perneger, MD	They implemented a hospital-wide program with a focus on alcohol-based hand disinfection at the bedside in an effort to promote hand hygiene. In parallel, they also recorded nosocomial infections. Observational surveys in	A teaching hospital in Geneva, Switzerland,	Hand hygiene compliance significantly improved from 48% in 1994 to 66% in 1997, with increased hand disinfection despite stable hand washing rates. This improvement, particularly among nurses and nursing assistants, correlated with a decrease in overall nosocomial infections, MRSA transmission rates, and an increase in alcohol-based handrub solution consumption from 1993 to 1998. The initiative led to a lasting enhancement in hand hygiene adherence, aligning with a decline in hospital-acquired infections and MRSA transmission. The encouragement of using antiseptic hand rubs at the bedside played a significant role in boosting compliance.	Level III (Dang et al., 2022)
Sepsis awareness and understanding in Australian parents: A National Child Health Poll survey – Emma Peters, Anthea Rhodes, Mary-Anne Measey, Franz E Babl, and Elliot Long	The study aimed to understand what parents know about childhood sepsis, including its signs and symptoms. It also looked into what	A sample of Australian families with at least one child aged 0–17 years old, represent	Out of 3352 parents surveyed, 61.6% had heard of sepsis, and 84.1% were considered 'sepsis aware.' Among these, 82.9% knew sepsis is life-threatening, but only 33.8% knew it might not be curable. Less than 28% felt confident recognizing sepsis signs in their child, and less than half correctly identified indicative symptoms. While 71% would seek urgent care at a hospital, only	Level IV (Dang et al., 2022)

	parents would do if they thought their child might have sepsis. Online questionnaire/poll	ative by age, sex and state of residence	37.3% would consider calling an ambulance if they suspected their child had sepsis. Parents have significant gaps in understanding sepsis, especially in recognizing its signs. To enhance how parents seek healthcare and communicate with providers, education should focus on filling these knowledge gaps, promoting early sepsis diagnosis and treatment.	
Focus on sepsis –Morten Hylander Møller , Waleed Alhazzani, and Manu Shankar-Hari	This study provides an overview of recent developments and challenges in sepsis research. The study aims to discuss updates to the Surviving Sepsis Campaign bundle, research priorities identified by international experts, and the burden of sepsis based on various studies. Additionally, the study explores the	Various aspects of sepsis research, including updates, challenges, and findings from different studies and trials	The study provides an overview of recent sepsis research, highlighting updates to the Surviving Sepsis Campaign bundle, research priorities, and the burden of sepsis based on various studies. It also discusses interventions such as intravenous immunoglobulin and polymyxin B hemoperfusion, along with challenges in early sepsis identification and prediction. The growing body of evidence in sepsis research is discussed, with attention to challenges in trial interpretation, potential publication bias, and heterogeneity in control groups. Ongoing research is emphasized to address knowledge gaps and improve sepsis outcomes, recognizing the need for cautious interpretation of findings in critical care discussions.	Level V (Dang et al., 2022)

	<p>lack of public awareness of sepsis and highlights research findings related to early identification and prediction of sepsis, biomarkers, and the effectiveness of certain interventions . The information presented aims to contribute to the understanding of sepsis, its management , and the current state of research in the field. Narrative Review</p>			
<p>Patient outcomes and cost-effectiveness of a sepsis care quality improvement program in a health system –</p>	<p>The study aims to evaluate the results for patients with suspected infections and analyze</p>	<p>13,877 adults with suspected infection between March 1, 2014 and</p>	<p>After implementation, the chances of in-hospital death decreased by 30% in patients with suspected infection, and the time to discharge increased by 25%. Similar improvements were observed in those meeting Sepsis-3 criteria. The program was cost-saving for</p>	<p>Level III (Dang et al., 2022)</p>

<p>Afshar Majid, MD, MSCR, Erum Arain, MD, Chen Ye, MD, Emily Gilbert, MD, Meng Xie, BS, Josh Lee, MD, Matthew Churpek, MD, MPH, Ramon Durazo-Arvizu, PhD, Talar Markossian, PhD, and Cara Joyce, PhD</p>	<p>the cost-effectiveness of implementing a quality improvement initiative. Observational single-center study</p>	<p>July 31, 2017</p>	<p>patients with suspected infection and those meeting Sepsis-3 criteria, with estimated savings of approximately \$272,646. Through their health system's sepsis program, they aimed at meeting bundle metrics, effectively reducing mortality and length of stay across a broader group than those specifically meeting CMS measures. This single-center model could be considered a practical benchmark for managing hospitalized patients with suspected infection.</p>	
<p>Communicating antimicrobial resistance and stewardship in the national press: Lessons from sepsis awareness campaigns – L. Rush, C. Patterson, L. McDaid, and S. Hilton</p>	<p>The study aims to analyze how antimicrobial resistance (AMR) and sepsis are portrayed in the UK national press. The analysis focuses on how these issues are defined, the reported drivers, and suggested solutions as presented in the media. Novel research design which involves</p>	<p>Analysis of articles from six major newspapers and their Sunday editions, representing diverse readership profiles</p>	<p>Broadsheet newspapers featured more articles on antimicrobial resistance (AMR), while middle-market publications focused on sepsis. Both topics saw an increase in coverage over time, driven by key events. Articles tended to address sepsis and AMR separately, portraying sepsis as a current UK issue and AMR as a global future threat. Sepsis articles often blamed identifiable healthcare staff, while AMR implicated industries and public behavior. Global collaboration was emphasized in AMR solutions, while sepsis solutions leaned towards awareness, with less emphasis on reducing unnecessary prescribing. Sepsis articles often included personal narratives, while AMR articles lacked such stories. Conflicting media messages about antibiotic use exist, with sepsis seen as a current risk and AMR as a future threat. Sepsis coverage might increase</p>	<p>Level III (Dang et al., 2022)</p>

	content analysis of articles from six major newspapers and their Sunday editions, representing diverse readership profiles		antibiotic demand, impacting public perceptions. Recommendations include balancing antibiotic messages, evaluating sepsis campaigns, and learning from sepsis communication for AMR awareness.	
Epidemiology and Costs of Sepsis in the United States—An Analysis Based on Timing of Diagnosis and Severity Level – Carly J. Paoli, PharmD, MPH, Mark A. Reynolds, PhD, Meenal Sinha, MBA, Matthew Gitlin, PharmD, and Elliott Crouser, MD	This study aims to describe the present impact, results, and expenses associated with caring for sepsis patients in hospitals across the United States. Retrospective observational study	Adults over 18 years old with a hospital discharge diagnosis code of sepsis from January 1, 2010, to September 30, 2016.	The study included 2,566,689 sepsis cases, with an average patient age of 65 (50.8% female). The overall mortality rate was 12.5%, but it differed based on severity: 5.6%, 14.9%, and 34.2% for sepsis without organ dysfunction, severe sepsis, and septic shock, respectively. Costs followed a similar pattern, increasing with severity: \$16,324, \$24,638, and \$38,298. Costs also varied based on whether sepsis was present at admission (\$18,023) or developed later (\$51,022). Sepsis had the highest incidence and total costs in the least severe cases. Cases diagnosed after admission and those with greater severity had higher costs and mortality. Improving early sepsis identification could help lessen its severity and economic impact in the United States.	Level III (Dang et al., 2022)

Appendix C

5 P’s Microsystem Assessment

Purpose

- The five non-clinical departments support the macrosystem at different levels.

Patients

- Each department deals with non-direct patient care.

Professionals

- Housekeeping (EVS)
- Central supply (loading dock)
- Communications
- Security
- Sterile Processing

Process

- Infection Prevention Training
- Pre-patient admission
- During patient admission
- Post-patient discharge
- Awareness on sepsis

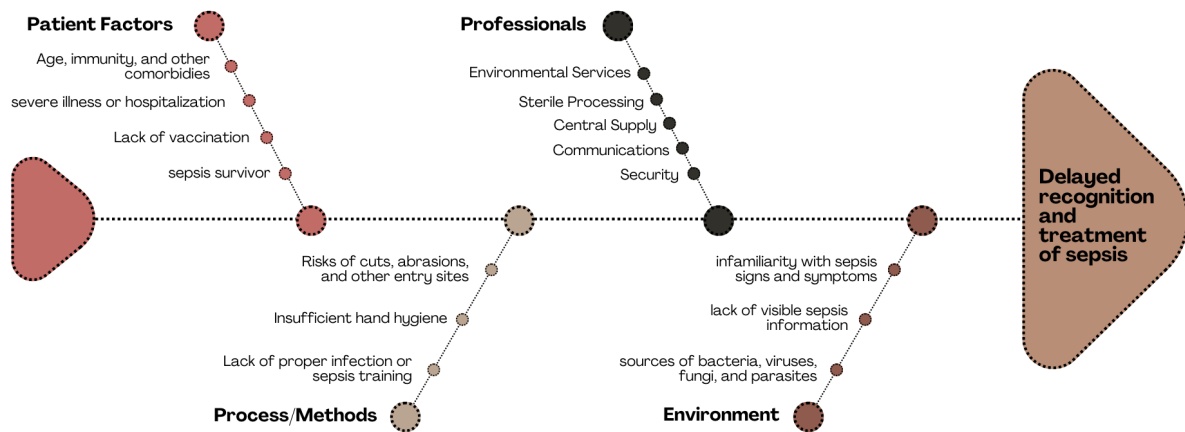
Patterns

- Housekeeping: Removes medical waste on units and throughout the facility. Responsible for maintaining environmental hygiene thereby decreasing the spread of healthcare-associated infections.
- Central supply: Receives and disperses material throughout facility

- Communications: facilitates the ability for healthcare providers and supporting staff to connect collaborate and exchange information
- Security: Manages hospital access while protecting patients and staff.
- Sterile Processing: Cleanses, prepares, processes, sterilizes, stores and issues medical/surgical supplies necessary for patient care.

Appendix D

Root Cause Analysis

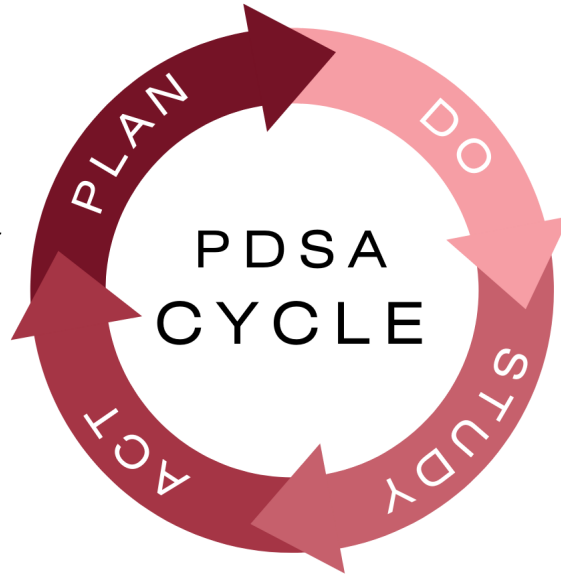


Appendix E

Plan, Do, Study, Act (PDSA) Cycle

PLAN

- Collaborated with stakeholders at our organization regarding non-clinical staff's sepsis knowledge
- Created a PICO question and specific aim statement
- Created a script and flyer to present during the preliminary data collection



DO

- Assessed the 5 non-clinical departments using the 5Ps
- Performed a SWOT analysis
- Implemented Sepsis Awareness Campaign
- Collected qualitative and quantitative data

ACT

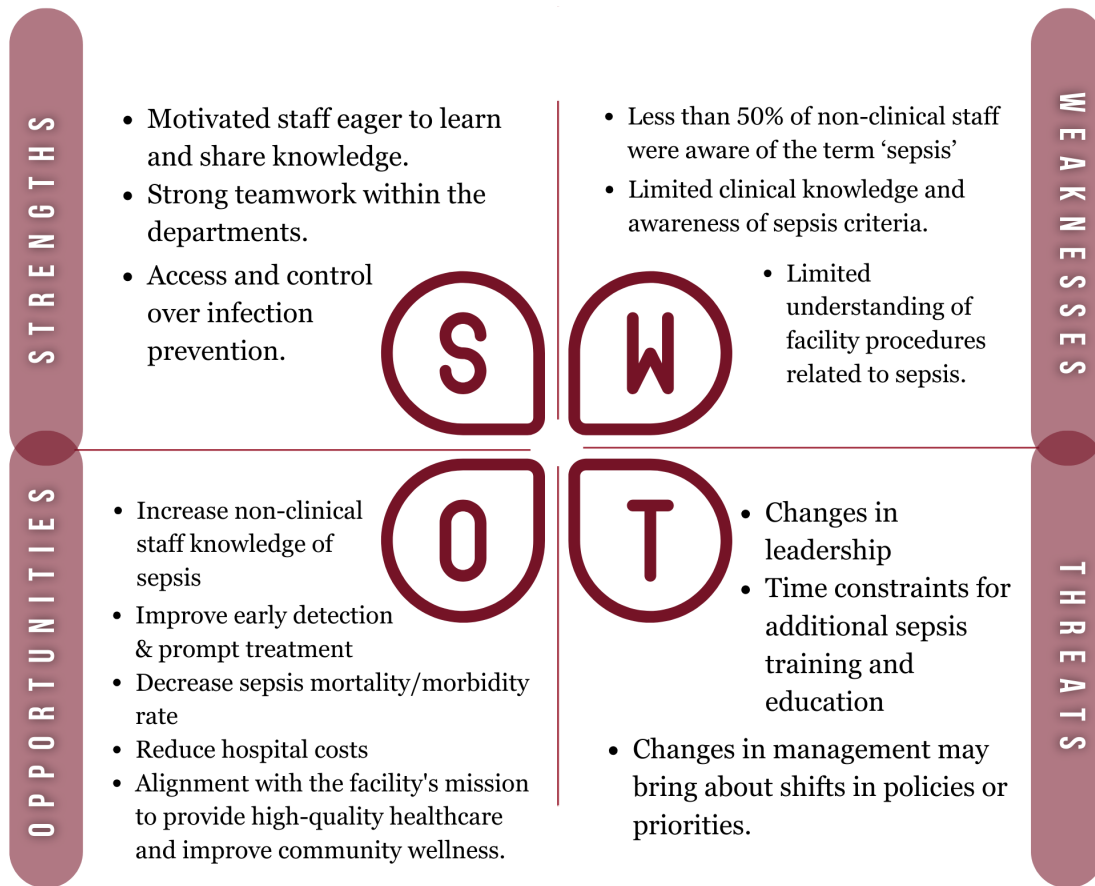
- Continue to collect and observe data post-intervention and implement necessary adjustments

STUDY

- Analyze data from campaign
- Will analyze the effect of Sepsis Awareness Campaign on non-clinical staff knowledge and organizational metrics related to sepsis

Appendix F

SWOT Analysis



Appendix G

Gantt Chart

			3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Project Initiation																	
Research of literature	8/17/23	8/31/23															
Synthesis of literature	8/24/23	8/31/23															
Compliation of literature review	8/31/23	9/6/23															
Project Planning																	
Poster creation	9/6/23	9/12/23															
Script creation	9/6/23	9/12/23															
Microsystem assessment	9/8/23	9/20/23															
Coordinate with stakeholders to visit the facility	9/1/23	9/20/23															
Project Implementation																	
Conduct pre-survey with non-clinical departments	9/8/23	9/13/23															
Collect pre-survey data on sepsis awareness in non-clinical departments	9/8/23	9/13/23															
Perform non-clinical department staff education on sepsis	9/8/23	9/13/23															
Project Evaluation and Synthesis																	
Meet with relevant staff to solidify plan for post-survey	10/5/23	10/12/23															
Coordinate with stakeholders to visit the facility	10/19/23	10/25/23															
Conduct post-survey with non-clinical departments	11/1/23	11/1/23															
Data analysis	11/2/23	11/15/23															

Appendix H

Sepsis Awareness Campaign Script

WHO

We are Nursing Students from USF and are here to spread the word about sepsis as September is Sepsis Awareness Month. Do you know what sepsis is?

WHAT

What is Sepsis? Sepsis is a life-threatening reaction to an infection.

WHO CAN BE AFFECTED

Anyone can be affected!

WHEN

It's an infection in the body as a response to a simple cut, pneumonia, or even the common cold.

PREVENTION

We can prevent sepsis by following hand hygiene, getting vaccinated, and protecting ourselves from illness.

WHY IS THIS IMPORTANT

According to the joint commission, sepsis is the leading inpatient cause of death over heart attacks!

Depending on which department:

- *“You can be at risk as you deal with sterilizing equipment”*
- *“You can be at risk as you use razor blades and material which can cause a cut in your role”*

Appendix I

Sepsis Awareness Flier

Sepsis Awareness Month 2023

THIS SEPTEMBER, TAKE THE TIME TO KNOW THE SIGNS
 More than 80% of sepsis patients are 50 years of age or older.

T I M E
 TEMPERATURE that's abnormal | Signs of an INFECTION | MENTAL DECLINE | Feeling EXTREME ILL

For every hour treatment is delayed, the risk of death increases by as much as 8%. If you suspect sepsis, seek urgent medical care.

SEPSIS SAY SEPSIS SAVED LIVES
SEPTEMBER
 SepsisAwarenessMonth.org

When it comes to sepsis, remember **IT'S ABOUT TIME™**. Watch for:

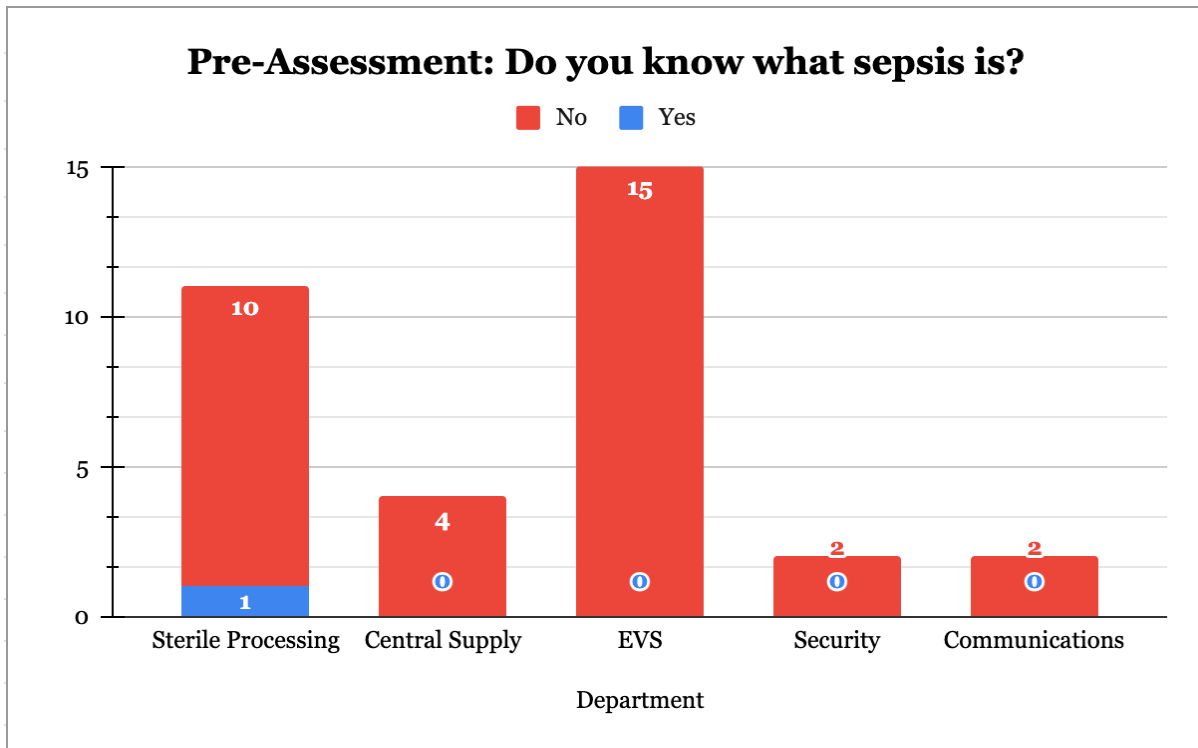
- TEMPERATURE**
higher or lower than normal
- INFECTION**
may have signs and symptoms of infection
- MENTAL DECLINE**
confused, sleepy, difficult to rouse
- EXTREMELY ILL**
Severe pain, discomfort, shortness of breath

Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911, or go to a hospital and say, **"I AM CONCERNED ABOUT SEPSIS."**

SEPSIS ALLIANCE sepsis.org ©2020 Sepsis Alliance

Appendix J

Pre-Survey Data



Appendix K

Post-Survey Data

