Optimization of Triage Documentation in a Large Urban Emergency Department

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Optimization of Triage Documentation in a Large Urban Emergency Department

Monica Reynoso-Prieto, RN

NURS 670.03: Internship

School of Nursing and Health Professions, University of San Francisco

Sierra Dias McEvoy, MSN, RN, CEN, CNL

May 13th, 2024
Section I: Abstract

**Problem** California ranks ninth nationwide in terms of longest emergency department wait times. The project aims to reduce patient triage times by refining the workflow of triage documentation, achieved through strategic rearrangement of triage documentation questions.

**Context** This quality improvement project took place in the emergency department of a large urban Bay Area hospital. **Intervention** The intervention was implementation of changes to the triage documentation based on staff feedback from an opinion survey, such as: elimination of redundant questions, consolidation of related categories, and logical reorganization of triage topics. **Measures** Measures used in the project were triage times and pre and post nursing feedback surveys. **Results** Due to time constraints and other limitations, the intervention was not implemented nor was post data collected from implementation. However, pre-implementation surveys found strong support from staff for the recommended intervention. **Conclusion** Future recommendations for this project include implementation of the intervention and post-implementation data collection for comparison.

**Keywords:** emergency department, emergency triage, quality improvement, triage documentation, optimization
Section II: Introduction

The emergency department (ED) stands as a critical lifeline for immediate care during emergencies. However, the term ‘immediate’ depends on the patient’s condition and this is only one factor that contributes to the ongoing problem throughout the United States of long ED wait times. A portion of these wait times is attributed to the duration required for patients to undergo triage assessment. At every stage of this waiting process, any delay can intensify patient distress, heightening levels of anxiety and stress within the already tense environment of the ED.

Triage serves as primary sorting methods for categorizing patients according to the severity of their injuries. This process also dictates the priority for care and monitoring among multiple patients (Yancey & O’Rourke, 2023). Triage nurses are responsible for this sorting process and are trained in documenting patient’s conditions, however sometimes they are overwhelmed with how much documentation they are required to do by their institution. In the face of escalating patient volumes and overcrowded waiting areas within the ED, it becomes imperative that revisions to triage documentation are geared towards more efficient throughput and less time for patients waiting. This thesis aims to explore and present an approach in assessing the impact of optimizing triage documentation on triage times at Hospital X’s adult ED.

Problem Description

The adult ED at Hospital X is the only Level I trauma Center between San Francisco and the South Bay and serves patients who reside in San Mateo and Santa Clara County (Hospital X, n.d.). It has three triage stations and contains 66 beds for patients to be seen.

Data from the electronic medical records showed that the median triage wait time January 2024 to March 2024 was 4.9 minutes. To gain perspective to the current triage state, a
short initial survey was first initially done with ED nurses. About 47% of responses reported that they felt like there were too many triage questions and that the triage documentation could be reduced. Feedback from this initial survey underscores the suitability of a quality improvement (QI) initiative focused on enhancing the layout triage documentation within the ED and improving triage wait times.

**Search Strategy**

The problem, intervention, comparison, and outcome (PICO) tool was used to guide the literature research for this QI project. The PICO question for this project is as follows: for patients visiting an urban emergency department, does optimization of the triage flow sheet decrease triage times?

A literature review was performed by using PubMed and the Cumulative Index to Nursing and Allied Health databases to use articles most relevant approximately between 2011-2024. Studies more than 15 years old were excluded. Search criteria was narrowed down to terms such as, “emergency triage,” “time,” “efficiency,” “emergency triage workflow”, “documentation questions,” “components of triage,” and “triage questions nursing,” “mandatory questions.” The John Hopkins Research Evidence Appraisal Tool (Appendix B) was utilized to evaluate the level of evidence for each article chosen (Dang et al., 2022).

**Available Knowledge**

Collecting relevant articles pertaining to emergency triage questions and efficiency was a challenge as there is limited information about this topic. While many articles illustrate the varying factors that could play a role in patient wait times in the overall emergency department (ED) experience, our project only focuses on triage times from the moment a patient enters the ED until the end of the initial triage intake.
This section discusses relevant journal articles related to triage times and essential questions during triage intake. Triage is crucial in determining the urgency of patient care in the ED. Johnson et al. found that additional risk-screening questions being asked are prolonging triage times. Additionally, emergency nurses noted the presence of two distinct question categories triage: essential questions deemed crucial for triage, and nonessential questions considered less urgent for immediate assessment (Johnson, Punches, & Smith, 2021). The authors suggest categorizing questions as immediate (category 1 and 2) or delayed (category 3 or 4) depending on triage capacity (Johnson, Punches, & Smith, 2021).

Despite the indisputable importance of nursing documentation, it can still take up a lot of time during a nurse’s shift and can burden a nurse’s workflow. De Groot et al. (2022) discovered that the amount of time nurses dedicate documentation differs across countries, yet it remains a significant aspect of their workload. This Dutch study examined nurses’ viewpoints regarding clinical and organizational documentation tasks, as well as their perceptions of nursing workflow. While the association between specific documentation types and perceived workload remains uncertain, the study highlighted issues of duplication in documentation is a problem and the importance of user-friendly electronic health record systems. In the context of our project, prioritizing simplicity and user-friendliness was essential to minimize disruptions to nursing workflow.

In addition to these findings, researchers from a separate study that involved collecting data from ED nurses in focus groups revealed that the timing and content of questions during triage are largely influenced by the triage nurse’s perception of wait times (Wolf et al., 2024). This study also noted that several questions related to regulations could potentially be addressed at later stages of care, indicating the possibility of deferring certain triage questions to other
moments in emergency care, supporting the view that some triage questions can be delayed to other points in time of emergency care (Wolf et al., 2024).

AlShatarat et al. (2022) examined triage knowledge gaps among emergency nursing staff at King Fahad Medical City in Saudi Arabia that could play a role in timely healthcare delivery. Participants completed a questionnaire comprising 14 statements graded on an agree/disagree scale (AlShatarat et al., 2022). The authors argued that high triage knowledge and practice levels reduced overcrowding in the ED, shorter waiting times, enhanced patient flow, and heightened patient satisfaction (AlShatarat et al., 2022). Their study highlighted the significance of triage proficiency and prompt triage in enhancing organizational capacity and patient outcomes.

Exploring inefficiencies in the ED throughput process gave further insight into challenges that arise during patient wait times. Sayah et al. (2014) conducted a study at Cambridge ED where they argued for a complete transformation of the ED process to enhance efficiency. They streamlined the arrival phase by simplifying initial registration to essential details like name, social security (or date of birth), and chief complaint. Afterwards, patients were promptly directed to a rapid assessment unit for clinical evaluation, followed by full bedside registration post-care initiation. Not only did their process significantly decrease patient wait times but they also highlight the importance of stakeholder buy-in from physicians, nurses, and administrative ED leadership for a project like this (Sayah et al., 2014).

Another study at Kaiser Permanente developed a Rapid Triage and Treatment (RTT) system by applying Lean Principles. Lean principles, originating from Japanese auto manufacturers, strive to enhance efficiency, reduce waste, and facilitate workflow (Murrell et al., 2011). Waste, as defined in this study, encompasses any task, time, or resources that do not contribute value from the patient’s perspective (Murrell et al., 2011). Consequently, triage and
RTT were conducted, therefore, simultaneously by the triage nurse and registration staff to maximize patient interaction time.

Lean principles were also implemented in a separate study conducted at the ED of Manchester Royal Infirmary. This initiative involved eliminating non-contributing processes in triage, empowering individual triage nurses to enhance their effectiveness, and refining the overall triage procedure (Mackway-Jones, Hornby, & Mackway-Jones, 2023). Their interventions led to a 44% reduction in mean triage times. Although our project doesn’t directly target improving triage nurse performance, these findings demonstrate that their methods of optimization do improve triage times and support our project’s aim.

Additionally, a retrospective cross-sectional study evaluated the value of the triage process in ambulatory patients presenting to the ED. The authors proposed a 5-element abbreviated triage to mitigate time-consuming tasks such as chief complaint, allergies, vital signs, pain scale, and emergency severity index (ESI) level to mitigate time consuming triage tasks (Weber, McAlpine, & Grimes, 2011). However, this approach still took 6 minutes, highlighting challenges in meeting triage guidelines during high patient influxes (Weber, McAlpine, & Grimes, 2011). This study highlights the ongoing debate regarding the necessity of triage in identifying the most critical patients in the ED.

We must also not forget that healthcare is a business and every minute spent with a patient has a price tag. Migdal et al. (2019) argue that required screening questions during triage may not clearly impact triage acuity determination and can prolong the process. They calculated the cost of five standardized screening questions, which align with those used in our emergency triage. This study supports the notion of asking these questions later in the patient’s ED visit.
Additional cost-benefit analysis is required to determine the efficacy of incorporating standardized questions (Migdal et al., 2019).

Ouellet et al. (2022) proposed a theory driven approach in assessing strategies that impact triage nurses’ behavior with the goal of enhancing triage quality in the ED. This realist review proposes a five-step in-depth process to appraise evidence and to be used as a guide to identify barriers to quality triage, enhance interprofessional collaboration, and consequently, patient outcomes (Ouellet et al., 2022). While beyond our project’s scope, their review offers a comprehensive method for evaluating quality triage practices and draws insights from external studies.

**Rationale**

The failure rate of change initiatives in healthcare stands at two-thirds, largely attributed to inadequate planning, lack of staff motivation, ineffective communication, or excessive and frequent changes (Barrow, Annamaraju, & Toney-Butler, 2022). To prevent this from happening, we explored various change theories to improve the odds of a successful project.

Everette Rogers’ diffusion of innovation theory, also referred to as the innovation-decision process, stands as a classical theory of change (McDonald, Graham, & Grimshaw, 2004). Rogers’ theory introduced five phases of change: knowledge, persuasion, decision, implementation, and confirmation (Barrow, Annamaraju, & Toney-Butler, 2022). Rogers’ theory is useful for introducing new ideas into a microsystem and its simple framework makes it easy to follow. Roger’s theory predominantly emphasizes the implementation of individual ideas but falls short when it comes to addressing cessation or prevention of behaviors. This limitation poses a challenge in the advancement of quality improvement projects within the healthcare
domain since not all novel processes warrant introduction; in fact, some require removal to enhance outcomes.

Lippitt’s theory is another classical theory of change, and its framework is similar to the elements of the nursing process that includes assessment, planning, implementation, and evaluation. This theory delineates seven phases: 1) Problem diagnosis, 2) Evaluation of change capacity, 3) Evaluation of the change agent’s motivation and resources, 4) Goal and objective setting for change, 5) Selection of the change agent’s role, 6) Sustaining change, and 7) Terminate the helping relationship (Mitchell, 2013).

Lippitt’s theory is longer, more detailed, and requires more of an understanding of the theory for it to be used. Despite this, it has the advantage of being used more often by nursing managers because it is most similar to the nursing process (Mitchell, 2013).

**Applying Lippitt’s theory**

Lippitt’s change theory framework guided our process for this project. Phase 1 consisted of diagnosing and identifying the problem of poor efficiency in the triage documentation process by interviewing nurses on their perspectives of current triage documentation. In phase 2 and 3, more interviews and surveying was conducted. Phases 4, the capacity for change was further assessed with a team consisting of the ED nursing manager, regulatory affairs, and senior clinical systems analyst who would help make changes to the triage documentation in the electronic medical record system. During phase 5, the formation of our proposed triage documentation state was formed with the feedback given by the nursing staff. Due to limitations, we were unable to go through phases 6 and 7, which would have consisted of measuring outcomes from our intervention while maintaining it and, subsequently, deciding on the project’s continuation based on its efficacy.
Specific Project Aim

The specific project aim was to improve patient triage times by 10% by April 2024 by removing and rearranging triage documentation questions. This goal was based on a pre-intervention survey from ED nurses who shared varying opinions on the current state of their triage documentation.

Section III: Methods

Context

5 P’s Framework

An assessment based on the “5 P’s” framework was conducted to identify areas for improvement within the emergency department. These “5 P’s” are purpose, patients, professionals, processes, and patterns. The purpose of Hospital X’s ED microsystem is to ensure all adult patients have access to quality medical care and to stabilize those who are critically ill or injured. Their primary goal is to provide high-quality emergency care, both in the emergency department and throughout the community (Hospital X, n.d.). The patient population that Hospital X serves include adults who report to the ED from the community. The patient population also includes those who arrive by ambulance and patients who work at Hospital X that experience injuries at work. The professionals who work together in this microsystem include nurses, physicians, respiratory therapists, ED technicians, radiology technicians, unit secretaries, social workers, and phlebotomists. Caregiving and support processes in the microsystem include the triage process where the patient is quickly assessed to determine the severity of their condition, patient admission for specialized care and/or surgery, transfers to other hospitals, financial counseling, psychosocial counseling, and discharges to either a patient’s home, skilled nursing facility, or rehabilitation center. The patterns identified in
Hospital X’s ED microsystem include effective communication facilitated by the nurses during triage, documentation process during triage, and resource optimization to maximize effective, timely, and appropriate patient care within the scope of emergency medicine.

**Fishbone Diagram**

A fishbone diagram (Appendix C) was created to identify and organize possible causes of longer triage times. We first identified adult walk-in patients and adult patient who arrive by ambulance as the people in our microsystem. Subsequently, we delineated key providers encompassing ED nurses, triage nurses, registration, flow facilitators, and ED technicians. Identified policies encompassed pivotal regulations such as the Civil Rights Act, the Emergency Medical Treatment and Labor Act, the Joint Commission regulatory guidelines, infection control, pharmacy, and the triage task force. The procedures for patients unfolded as the following: patient arrival to the ED either by ambulance or walk-in, registration check in, triage, and emergency severity index level assignment.

**Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis**

A strengths, weaknesses, opportunities, and threats (SWOT) analysis (Appendix D) was performed to assess internal and external factors. Strengths identified for this project within Hospital X’s ED include the staff’s openness to change to enhance efficiencies, it’s cost-effectiveness, and ease of implementation. While the project is a straightforward design, there are several challenges and weaknesses that impede its successful implementation. These include inconsistent and unclear expectations for students and the clinical instructor, difficulties in achieving shared governance between departments, tight time constraints, and low prioritization of student projects at Hospital X. Hospital X has the advantage of being a highly resourced, magnet hospital for the Bay Area. Hospital X is also dedicated to establishing its own elevated
benchmark standards that exceed current norms in all aspects of its operations. Hospital X faces threats similar to the weakness of our project. Threats for Hospital X include the need for shared governance for implementing changes, potential bureaucratic hurdles, and the absence of standardized recommendations for triage intake from regulatory bodies.

Gantt Chart

To ensure a precise depiction of the project’s timeline, a Gantt chart was developed (Appendix E). This tool facilitated planning and scheduling of meetings stakeholders while effectively tracking our progress. Entries marked as “TBA” on the chart signify tasks to be done in the future if the project is implemented.

Cost Benefit Analysis

A cost benefit analysis was created to delineate the project’s associated expenses. However, it posed a challenge to monetize triage efficiency in a cost benefit analysis in this project (Appendix F). Our focus centered on the potential impact of reducing triage times, with projections suggesting a possible 10% increase in patient throughput. We identified a team of a clinical nurse leader, senior systems clinical analyst, and a triage task force that would be compensated for their time and effort for this project. We also anticipated that this enhancement would not only lead to expedited patient care but also generate additional revenue for hospitals. By enabling faster patient turnover and minimizing the risk of deteriorating conditions necessitating prolonged hospital stays, we aimed to optimize operational efficiency and financial outcomes.

Intervention

The primary intervention envisioned for this projected entailed a redesign of the triage tabs utilized by the ED nurses, aimed at streamlining documentation processes and consequently
reducing patient triage times (Appendix F). The original layout was observed to contain duplicated questions and numerous unused questions. Leveraging insights from the initial survey feedback from nurses helped guide additional changes. These changes are illustrated in Appendix G with the current state and prototype layout.

**Study of Intervention**

A Plan, Do, Study, Act (PDSA) cycle, was adopted to structure this project into distinct phases (Appendix H). It is important to acknowledge that full implementation of the PDSA cycle was hindered by various limitations and challenges, as detailed in the *Limitations* section. It is only meant to serve a guiding framework for the overarching goal of the original project.

The “plan” phase of this project consists of identifying the problem within the ED by surveying nurses to gain initial insights regarding potential adjustments to the triage layout tabs (Appendix I). Flyers were posted at the triage desk with a QR code to scan (Appendix J) for easy convenience of accessing the survey for nurses. A goal was also set to reduce triage times by 10% of April 2024. The “do” phase entails implementing the changes to the triage tabs with the guidance of nurse feedback and requirements from regulatory affairs. Following this, “study” phase of the project consists of data collection on the impact of these changes, measuring triage times before and after implementation, and analyzing the data to see if there’s been improvement. Based on the results, the “act” phase is where one can either adopt, adapt, or abandon the intervention. Alternatively, if the goal was achieved, these changes would be integrated into the microsystem.

With the guidance of the ED manager, regulatory affairs, and the senior systems analyst of Hospital X a second 23 question Microsoft Form survey was also created to collect feedback from nurses (Appendix I). Each triage question was discussed individually with this team and in
creating the survey had a rationale for each proposed change and a separate comment box was included at the end of the survey for additional comments. An additional flyer was similarly made for this survey with a different QR code (Appendix J) and replaced the other flyer of the shorter survey. Additionally, in-person surveying was also conducted and an email with the survey link was sent out to all ED nursing staff.

**Measures**

The short Google Forum utilized a 5-point Likert scale to gauge nurses’ sentiments towards the current triage questions, the volume of questions within the existing triage workflow, and the potential benefits of delaying non-essential questions to improve the efficiency of triage. The more comprehensive Microsoft Form presented ED nurses with binary choices of either yes or no for each proposed change. Responses from both tools were used to determine the feasibility of implementing these changes among ED nursing staff, their receptiveness to the proposals, and any supplemental suggestions they offered.

**Section IV: Results**

A total of 37 responses were collected from the first initial feedback survey. The most significant findings from the survey were that 51% of responses rated the current state of triage questions a 3 on a 5-point Likert scale of satisfaction (1 being the least satisfied and 5 being the most satisfied), 40% of responses reported rating the amount of questions in the current triage workflow to be a 3 on a 5-point Likert scale of number of questions (1 being too little questions and 5 being too many questions), and 67% of responses reported that they felt that delaying non-essential questions would improve the efficiency of triage on a 5-point Likert scale of agreement (1 being strongly disagree and 5 being strongly agree).
A total of 94 responses on the second and more comprehensive survey were collected. Nurses who had never worked triage were excluded from our data collection. Highlights from this survey showed that 85% of nurses were in favor of moving the interpreter section to be directly after the triage start tab, 96% of nurses were in favor of combing the allergy band verification with the allergy tab rather than having them as stand-alone sections, 74% of nurses were in favor of removing the intervention section in the triage tab, and 75% of nurses were in favor of moving the new order of the primary documentation tabs as triage start, interpreter needs, chief complaint, vitals, allergies, OB/GYN status, covid/viral screen, suicide screening, emergency severity index level, and destination.

Implementation of these changes did not occur due to time constraints and other factors discussed in the Limitations section. However, ED nursing staff was significantly in favor of these proposed changes to improve triage documentation.

Section V: Discussion

The results from our surveys show that the ED staff was in favor of potentially implementing these proposed changes and that they recognized the need for the change. Throughout the in-person survey sessions, numerous ED nurses felt that that there were many duplicated questions that could be removed entirely and expressed their own suggestions in the surveys. Moving forward, the next steps for this project involve the comprehensive implementation of our intervention and ongoing measurement of triage times over the span of several months.

Limitations

Despite strong support from nurses for the proposed changes, we faced considerable obstacles initiating the project. These challenges arose from delayed expectations, time
constraints, regulatory requirements, and the intricate dynamics of navigating shared governance within the hospital across various departments.

Conclusion

We anticipate that this project will contribute to improve triage times and streamline overall throughput in the triage process. With promising preliminary data and strong backing from the ED nursing staff, there is considerable potential for integration of this initiative into the microsystem. Methods that were successful in getting adequate responses for our survey collection included in-person data collection throughout various times of the week to capture responses from different shifts, emailing the surveys to staff, and texting the survey link to the staff’s work cellphone. If integrated in the future, our proposed intervention has the capacity to significantly reduce triage times and overall waiting time in the ED, to ultimately enhance patient outcomes and make nursing workflow more efficient.
Section VI: References


minute at a time: An efficiency and quality improvement project in emergency triage.  


https://www.ncbi.nlm.nih.gov/books/NBK557583/
Section VII: Appendices

Appendix A

Statement of Non-Research Determination

Project: Statement of Determination and Non-Research Determination Form

Student Name: Monica Reynoso-Prieto

<table>
<thead>
<tr>
<th>Title of Project:</th>
<th>Optimization of Triage Documentation in a Large Urban Emergency Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief Description of Project:</td>
<td>North American emergency departments have had a longstanding problem of prolonged waiting times (Stang et al., 2015). This project is prompted by compelling data highlighting the inadequacies in triage times within the emergency department (ED) at Stanford. The identified issue serves as the impetus for the project's aim statement, which outlines a targeted improvement of triage times by 10% by April 2024. The intervention strategy involves conducting pre and post assessments of nurses' perspectives on the current triage workflow. To enhance efficiency, questions deemed &quot;unnecessary&quot; in the triage process will be eliminated, and a more logical order for the remaining questions will be implemented. The overarching goal is to streamline the triage documentation process, thereby reducing overall triage documentation times. The success of the intervention will be measured through diligent tracking and analysis of triage documentation times, providing a tangible metric for assessing the project's impact.</td>
</tr>
</tbody>
</table>

Reference


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). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.
Comments:

**EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST**

**Instructions:** Answer YES or NO to each of the following statements:

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control. The project does NOT follow a protocol that overrides clinical decision-making.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP. The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: “This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”

| X |

**ANSWER KEY:** If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does **NOT** meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

**STUDENT NAME (Please print): Monica Reynoso-Prieto**

________________________
Signature of Student:

DATE 03/06/2024

**SUPERVISING FACULTY MEMBER NAME (Please print): Sierra Dias McEvoy**

________________________
Signature of Supervising Faculty Member

DATE 4/28/2024
### Appendix B

**John Hopkins Evidence Appraisal Table**

<table>
<thead>
<tr>
<th>Journal #</th>
<th>Citation</th>
<th>Evidence Type</th>
<th>Sample, Sample Size, Setting</th>
<th>How Does Article Address Problem?</th>
<th>Quality of Evidence</th>
<th>Other Highlights from Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AlShatarat, M., Rayan, A., Eshah, N. F., Baqes, M. H., Jaber, M. J., &amp; ALBashtawy, M. (2022). Triage Knowledge and Practice and Associated Factors Among Emergency Department Nurses. SAGE Open Nursing. 8, 1-8  <a href="https://doi.org/10.1177/2377960822113058">https://doi.org/10.1177/2377960822113058</a></td>
<td>Cross-sectional, descriptive, and correlational design.</td>
<td>Data collection occurred from February- April 2021, with participation from 147 emergency department nurses. This study encompassed all ED nurses employed at KFMC during the data collection.</td>
<td>The article addresses the problem of triage familiarity and practice among ED nurses in Saudi Arabia by conducting an empirical study to assess these aspects and identify associated factors. The authors recognize the crucial role of ED services in healthcare delivery and the challenges faced in maintaining quality care despite high patient volumes. They highlight the importance of triage in ensuring timely and accurate identification of patients requiring prompt treatment, thus optimizing organizational capacity.</td>
<td>Level III</td>
<td>Outcomes: Too much regulatory data collection with patient assessment at the start of triage makes it challenging for nurses to triage patients quickly and identify patients who are at risk of deterioration. Limitations: Subjective nature of triage which can lead to how nurses...</td>
</tr>
</tbody>
</table>
and patient outcomes

The study aimed to assess ED nurses’ proficiency in triage knowledge and application, while investigating how sociodemographic and organizational factors like educational background, years of nursing experience, and triage training impact this. Ultimately, the goal of the study is to enhance the standard of care within Saudi Arabia’s Eds, leading to better patient outcomes and healthcare quality.

- Nurses’ adaptability on the ever changing ED environment with managing patient volume, high risk situations,

prioritize and assess patients. This subjectivity may affect the accuracy and consistency of triage decisions. Required screening questions required on the triage process can still delay the assessment of patient stability and determination of the level of resource required.
<p>| 2 | De Groot, K., De Veer, A. J. E., Munster, A. M., Francke, A. L., &amp; Paans, W. (2022). Nursing documentation and its relationship with perceived nursing workload: a mixed-methods study among community nurses. BMC nursing, 21(1), 34. <a href="https://doi.org/10.1186/s12912-022-00811-7">https://doi.org/10.1186/s12912-022-00811-7</a> | Mixed methods study- quantitative survey and a qualitative focus group. | Online survey with participants from Dutch national wide research panel, 134 total nurses participated in the survey, 28 in the focus group. | Documentation is perceived as high workload, previous research found that documentation can be burdensome to nurses, however nurses acknowledge that documentation is integral to nursing. Key findings were that electronic health record systems need to be user friendly, duplication of information is a problem and is accompanied with negative views on documentation. | Level III | Authors found that there is a difference between clinical documentation and organizational documentation. They found that the nurses viewed organizational documentation as pointless. | and other interruptions that can impact the triage process. |
| 3  | Johnson, K. D., Punches, B. E., &amp; Smith, C. R. (2021). Perceptions of the Essential Components of Triage: A Qualitative Analysis. Journal of Emergency Nursing, 47(1), 192–197. <a href="https://doi.org/10.1016/j.jen.2020.08.009">https://doi.org/10.1016/j.jen.2020.08.009</a> | Quality descriptive study. | Sample size comprised of 12 emergency nurses, forming three focus groups consisting of ED nurses who routinely are assigned to triage. These groups were convened to deliberate on perceptions regarding triage assessments and related questions. | Defined nurses’ perceptions of triage assessment. Indicated some questions asked in triage are not urgent for triage such as risk behaviors. Identified essential components of triage as “Must Ask” and “Actions of Triage.” | Level III | Findings demonstrated the perspectives of ED nurses on the critical aspects of triage assessment and the challenges they face in managing the balance between personalized patient care and adherence to system protocols and procedures. |
| 4  | Mackway-Mackway-Jones, A., Hornby, R., &amp; Mackway-Jones, K. (2023). Making more nurses, one minute at a time: An efficiency and quality study. | Quasi-experimental study. | Sample size included 300–450 adult patients daily between June 2019-September 2022 | The authors applied the Manchester Triage System which is a 5-level triage system which implements the philosophies of lean waste management in order to reducing waste and waits. | Level II | There is a difference between clinical documentatio n and organizational documentatio n. Nurses view organizational documentatio |</p>
<table>
<thead>
<tr>
<th></th>
<th>Authors</th>
<th>Study Design</th>
<th>Sample Size/Details</th>
<th>Healthcare and Time Management</th>
<th>Outcome: Problems and Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Migdal, V. L., Harper, K., Haqqani, N., &amp; Janiak, B. (2019). Time Cost of Standardized Nursing Screens in the Emergency Department. The western journal of emergency medicine, 20(6), 851–854. <a href="https://doi.org/10.5811/westjem.2019.9.44">https://doi.org/10.5811/westjem.2019.9.44</a></td>
<td>Prospective observational study. Sample size included 200 triage assessments at one ED.</td>
<td>Healthcare is a business and time is money. This study addresses the problem in that the more time spent in triage, the more it can cost a hospital. This article puts a price tag on the amount of time it takes to ask specific questions. Limitations: Time was recorded with a stop clock, so probably not very accurate. Also this was done at only one hospital. More research needed about the cost but...</td>
<td>Level III</td>
<td>n more problematic and pointless.</td>
</tr>
</tbody>
</table>
| 6 | **Murrell, K. L., Offerman, S. R., & Kauffman, M. B. (2011). Applying Lean: Implementation of a Rapid Triage and Treatment System. *Western Journal of Emergency Medicine, 12*(2), 184–191.** | **Retrospective observational study** | **Lean principles were originally crafted by Japanese auto manufacturers and can be applied to other settings, including healthcare. It's aim is to enhance efficiency, reduce wastage, and facilitate smooth workflow within systems. In this study, authors utilized Lean principles to redesign the ED process. As part of the improvement process, a “quick registration,” procedure was implemented, involving the input of the patient’s name and medical record number into the computer system, placement of an armband, and obtaining** | **Authors found a significant decrease in patient wait times and decrease in patients who weren’t seen but left.** | **Level III** | **Outcomes:** Significant decrease to patient wait times  
**Limitations:** those associated with retrospective data collection, time limitations (authors would have preferred a longer data collection time), no data collecting regarding patient satisfaction, |
<table>
<thead>
<tr>
<th></th>
<th>Consent form signatures. Full registration processes are then completed after patients have been seen by a physician. Addresses the problem by shortening wait times in this manner</th>
<th>ED return rates, collection of copays, physician job satisfaction, Authors note a decrease in admission rates after the introduction of the RTT system and they cannot account for this.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Ouellet, S., Galliani, M. C., Gélinas, C., Fontaine, G., Archambault, P., Mercier, É., Severino, F., &amp; Bérubé, M. (2022). Strategies to improve the quality of nurse triage in emergency departments: A realist review protocol.</td>
<td>The review makes a contribution to the current body of knowledge that is concerned with quality improvement for nursing triage.</td>
</tr>
<tr>
<td>Nursing Open, 10(5), 2770–2779. <a href="https://doi.org/10.1002/nop2.1550">https://doi.org/10.1002/nop2.1550</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>That generate an outcome. Outcomes: The review makes a contribution to the current knowledge that is concerned with quality improvement for nursing triage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre and post intervention analysis. Sampling included 6 years worth of data from 2005-2011, with average annual ED census of ~30,000 patients (estimate is at 180,000 total records included). Initial registration process was streamlined to it’s essential elements. The new abbreviated registration involved asking three questions: the patient’s name, social security number (or date of birth), and chief complaint. A comprehensive bedside registration was conducted following nursing and physician assessments, patient stabilization, and</td>
<td>Level III Outcomes: ED total length of stay decreased from 204 minutes to 132 minutes, rate of patients leaving without being scene dropped from 4.1% to 0.9%, patient satisfaction increased</td>
<td>Limitations: findings from</td>
</tr>
<tr>
<td>9</td>
<td>Weber EJ, McAlpine I, &amp; Grimes B. (2011). Mandatory triage does not identify high-acuity patients within recommended time frames.</td>
<td>Cross-sectional study</td>
</tr>
<tr>
<td>Page</td>
<td>Study Reference</td>
<td>Study Description</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>32</td>
<td>Annals of Emergency Medicine, 58(2), 137–142. <a href="https://doi.org/10.1016/j.annemergmed.2011.02.001">https://doi.org/10.1016/j.annemergmed.2011.02.001</a></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Wolf, L., Delao, A., Clark, P., Mizerek, E., &amp; Moon, M. D. (2024). The Effect of Mandatory Triage Questions on Triage Processes: A Qualitative Study Approach. Journal of Emergency Nursing, 50(1), 84-94. <a href="https://10.1016/j.jen.2023.06.011">https://10.1016/j.jen.2023.06.011</a></td>
<td>This was a qualitative descriptive study.</td>
</tr>
<tr>
<td>of the level of resources required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) The complexity of triage process can impact how triage nurses adapt to the constantly shifting ED environment. Managing patient volume, high risk situations, and interruptions can be challenging and may impact the efficiency and effectiveness of the triage process.</td>
<td></td>
<td></td>
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Appendix C

Fishbone Analysis

Abbreviations
ED: emergency department
Appendix D

SWOT Analysis

<table>
<thead>
<tr>
<th>SWOT ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNAL FACTORS</td>
</tr>
<tr>
<td><strong>STRENGTHS +</strong></td>
</tr>
</tbody>
</table>
| - Financial Resources - low cost  
  - Easy to implement  
  - Staff is empathetic/open to change; easy to recruit, staff buy-in  
  - Improved quality metrics | - Bureaucracy  
  - Time  
  - No access to EPIC  
  - Inconsistent & unclear expectations  
  - Student projects are low priority |

| EXTERNAL FACTORS |
| **OPPORTUNITIES +** | **THREATS –** |
| - Sets higher standards than current standards “Stanfordize”  
  - Highly resource hospital  
  - Magnet Hospital  
  - Leverage existing resources | - Bureaucracy  
  - Shared Governance  
  - No current standardized/recommendations for triage intake from regulatory institutions |
## Appendix E

GANTT Chart

<table>
<thead>
<tr>
<th>TASK TITLE</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Change Theory</td>
<td>1/25/2024</td>
<td>1/28/2024</td>
</tr>
<tr>
<td>Evaluate the 5 P's</td>
<td>2/2/2024</td>
<td>2/4/2024</td>
</tr>
<tr>
<td>Develop PICOT Question &amp; AIM Statement</td>
<td>2/9/2024</td>
<td>2/11/2024</td>
</tr>
<tr>
<td>Literature Review</td>
<td>2/22/2024</td>
<td>3/3/2024</td>
</tr>
<tr>
<td>Statement of Determination</td>
<td>3/7/2024</td>
<td>3/8/2024</td>
</tr>
<tr>
<td><strong>Project Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preintervention survey</td>
<td>2/13/2024</td>
<td>2/21/2024</td>
</tr>
<tr>
<td>Meeting with Regulatory Affairs &amp; Department Leadership</td>
<td>2/21/2024</td>
<td>2/21/2024</td>
</tr>
<tr>
<td>Project Poster &amp; Create QR Code</td>
<td>2/21/2024</td>
<td>2/23/2024</td>
</tr>
<tr>
<td>Collect Preintervention Data</td>
<td>2/23/2024</td>
<td>4/3/2024</td>
</tr>
<tr>
<td><strong>Project Implementation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create Mock Triage Navigator</td>
<td>3/11/24</td>
<td>3/11/2024</td>
</tr>
<tr>
<td>Meet with Clinical System Analyst and Department Leadership to finalize changes</td>
<td>4/17/24</td>
<td>4/17/2024</td>
</tr>
<tr>
<td>Create Final Triage Navigator</td>
<td>4/17/24</td>
<td>4/26/2024</td>
</tr>
<tr>
<td>Intervention Implementation</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td><strong>Project Evaluation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postintervention survey</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>Data Evaluation</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>Final Paper Submission</td>
<td>4/28/24</td>
<td>4/28/2024</td>
</tr>
<tr>
<td>Project Presentation</td>
<td>4/30/24</td>
<td>4/30/2024</td>
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</tbody>
</table>

**GANTT Chart**

Department: Hospital X Emergency Department
Appendix F

Cost-Benefit Analysis Table

<table>
<thead>
<tr>
<th>Costs</th>
<th>Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Nurse Leader- Hourly</td>
<td>$100 \times 200 \text{ hr} = $20,000</td>
</tr>
<tr>
<td>Senior Clinical Systems Analyst- Hourly</td>
<td>$63 \times 3 \text{ hr} = $189</td>
</tr>
<tr>
<td>Triage Task Force Training</td>
<td>$70 \times 1 \text{ hr} \times 5 \text{ nurses} = $350</td>
</tr>
<tr>
<td>Printing of Flyers</td>
<td>$0.30 \times 30 = $3.00</td>
</tr>
<tr>
<td></td>
<td><strong>Total $20,542</strong></td>
</tr>
</tbody>
</table>
Appendix G

Prototype Changes of Triage Tabs

<table>
<thead>
<tr>
<th>Room Precaution</th>
<th></th>
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<tbody>
<tr>
<td>Respiratory</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Disaster Patient</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S A L T Triage</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Mixed=6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-Delayed=7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-Immediate=0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-Expectant=10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ESI Level</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires immediate life-saving intervention?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

| High risk situation? or Confused/Lethargic/Disoriented? or Severe acute pain/distrss? | Yes | No |

| How many resources are needed? | None | One | Many |

<table>
<thead>
<tr>
<th>Resources</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV fluids</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Danger Zone Vital Signs | H R > 100, RR > 20, sCaO < 90% | Yes | No |

![Triage Plan Diagram]
OPTIMIZATION OF TRIAGE DOCUMENTATION IN A LARGE URBAN EMERGENCY DEPARTMENT

ED Navigator

Expected Patient
Create Note
See All Notes
No notes of this type filed.

Incoming Patient Information
New Reading
No data found.

Care Plan FYI
Care Plan FYI
No FYI flag for this patient.

Visit Contacts
Event-Triggered Messages
Recipients
None

Arrival Info
Status: Roomed
Arrived: 03/07/2024 2115
Room: A03
Bed: A103
Escorted by: Self
Means of arrival: CanBus

PROPOSED STATE
Appendix H

PDSA Cycle

**PLAN**
- Identify the problem with survey to ED nurses
  - Set objectives to reduce triage times by 10% by April 2024
  - Optimize triage documentation requirements through reorganizing triage tabs

**DO**
- Implement change to triage documentation requirements as per the plan

**STUDY**
- Collect data on the impact of the changes
- Measure triage times before and after implementation
- Analyze data to see if there's been improvement

**ACT**
- Based on the results, decide whether to adopt, adapt, or abandon changes.
- If successful, integrate
Appendix I

Pre-Intervention Surveys

USF/Stanford Quality Improvement Project in ED Triage

Hi there! We're a group of graduate nursing students from the University of San Francisco working on a quality improvement project in the Stanford ED. Our aim is to optimize triage documentation to improve patient throughput. Your responses are essential in improving workflow and future patient outcomes.

Thank you!

mreynosoprieto@dons.usfca.edu Switch account
Not shared

* Indicates required question

What shift do you work? *

- [ ] Day Shift
- [ ] Mid Shift
- [ ] Night Shift

How do you feel about the current triage questions? *

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
USF/Stanford Quality Improvement Project in ED Triage

37 responses

What shift do you work?

- Day Shift: 29.7%
- Mid Shift: 13.5%
- Night Shift: 56.8%

How do you feel about the current triage questions?

- 1: 0 (0%)
- 2: 2 (5.4%)
- 3: 19 (51.4%)
- 4: 12 (32.4%)
- 5: 4 (10.8%)

37 responses
How do you feel about the amount of questions in the current triage workflow?

- 0 (0%)
- 1 (0%)
- 15 (40.5%)
- 13 (35.1%)
- 9 (24.3%)

Do you feel that delaying non-essential questions would improve the efficiency of triage?

- 2 (5.4%)
- 1 (2.7%)
- 2 (5.4%)
- 7 (18.9%)
- 25 (67.6%)

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USF/Stanford ED Triage Navigator QI Project

94 responses  17:20 Average time to complete  Active Status

1. What shift are you?
   - Days 44
   - Mids 7
   - Nights 43

2. How long have you worked at Stanford?
   - Less than one year 17
   - 1-3 years 33
   - 3-5 years 13
   - 5-10 years 18
   - 10+ years 11

3. How long have you been a nurse in the emergency department?
   - Less than 1 year 3
   - 1-2 years 19
   - 2-3 years 20
   - 3-4 years 27
   - 4-5 years 28
   - 5-10 years 27
   - 10+ years 23

4. Are you in favor of moving the interpreter section to be directly after triage start?
   - Rationale: To establish interpreter needs at the very beginning of triage to facilitate effective communication with patients with a language barrier.
   - Yes 80
   - No 2
   - Maybe 10
   - Other 2
5. If you chose "other" and would like to elaborate on your response or make a suggestion, comment below.

More Details

8 Responses

Update

3 respondents (43%) answered interpreter for this question.

quick call for interpreter nice present from the beginning easy
bc registration interpreter info
MRN portion section
line interpreter services triage portion
trick interpreter number
epic helpful language of preference not sure
long it takes

6. Are you in favor of combining the Allergy ID and verification question with the allergy section rather than having them as stand-alone sections?

Rationale: To condense related sections into one to de-clutter the list.

More Details

- Yes: 91
- No: 2
- Maybe: 0
- Other: 1

7. If you chose "other" and would like to elaborate on your response or make a suggestion, comment below.

More Details

2 Responses

8. Are you in favor of removing the Interventions section in the triage tab? This section includes a list of interventions (c-collar application, protocol orders, antipyretics, ice, etc.).

Rationale: This section was identified as a source of double charting and doesn’t function to place protocol orders for labs, medication, or imaging.

More Details

- Yes: 70
- No: 19
- Maybe: 5
- Other: 0
9. If you chose "other" and would like to elaborate on your response or make a suggestion, comment below.

10. Are you in favor of adding a check box to the Chief Complaint section asking if a C-collor was applied instead of having to click to an intervention tab for this?

**Rationale:** Cervical collar needs are typically identified when determining the chief complaint. Having a checkbox within the chief complaint section would serve as a reminder and allow for efficient documentation of this critical intervention, when necessary.

![Pie chart showing responses to question 10]

11. If you chose "other" and would like to elaborate on your response or make a suggestion, comment below.

12. Are you in favor of removing the Room Precautions section?

**Rationale:** This section does not place an order from the provider and does not add value to determining an ESI level.

![Pie chart showing responses to question 12]

13. If you chose "other" and would like to elaborate on your response or make a suggestion, comment below.

14. Are you in favor of taking the ESI Tab out of the triage plan section and making it a stand-alone section?

**Rationale:** Creating a stand-alone ESI section to be placed at the very end of the section list will serve as a clear end point for triage.

![Pie chart showing responses to question 14]
15. If you chose “other” and would like to elaborate on your response or make a suggestion, comment below.

2 Responses

Latest Responses
“Prefer not to have the esis algorithm and rather type es i level. Add another hi...”

16. Are you in favor of removing the Triage Destination selection in the triage plan section and making it a stand alone section at the very end?

Rationale: Creating a stand alone triage destination section at the end of the list is the most logical location as this should be decided after an ESI is assigned.

5 Responses

Latest Responses
“Move triage destination up because it’s important to click adult”

17. If you chose “other” and would like to elaborate on your response or make a suggestion, comment below.

6 Responses

Latest Responses
“Remove disaster and moving to bottom”

18. Are you in favor of adding a section, which has not yet been titled, for EKG Documentation, Disasters, and Treatment PTA sections to be placed after the triage end?

Rationale: These sections were identified to be valuable, but not required to be within the primary sections for triage. While seemingly unrelated, placing them in a category together just below the primary triage section list would still allow for easy accessibility, when needed.

4 Responses

Latest Responses
“Move triage destination up because it’s important to click adult”

19. If you chose “other” and would like to elaborate on your response or make a suggestion, comment below.

6 Responses

Latest Responses
“Remove disaster and moving to bottom”

2 respondents (4%) answered places for this question.
20. Are you in favor of removing the Triage data section which includes: Tetanus, Medication Pump, Domestic Abuse, Harm to Others, Treatment PTA, and Suicide Screening?

**Rationale:** This section includes several categories which would be more effectively utilized in sections more appropriately labeled. For example, the Suicide Screening will be its own section. To PTA will be in a category with XGI documentation and Disaster. The domestic abuse section will be moved to risk assessment to be asked by the primary nurse as it has no basis in determining an ED level.

![Pie chart showing responses: Yes 53, No 27, Maybe 13, Other 1)](image)

21. If you choose “other” and would like to elaborate on your response or make a suggestion, comment below.

![Add a response](image)

22. The new order of the primary triage documentation tabs in the ED Navigator starting at Triage Start would be:

- Triage Start
- Interpreter Needs
- Chief Complaint
- Vital Signs
- Allergies
- OB/Gyn status
- Covid/Viral screen
- Suicide Screening
- ESI Level
- Destination

Are you in favor of this change?

**Rationale:** This list serves as the most logical order of sections that are essential and/or required by law for triage. This would be the default order. You can still customize it in EPIC if you prefer it ordered differently.

![Pie chart showing responses: Yes 71, No 3, Maybe 15, Other 5)](image)
23. If you chose “other” and would like to elaborate on your response or make a suggestion, comment below.

4 respondents (40%) answered sections for this question.

- use of antipyretics
- data selections
- Covid screening
- Covid symptoms
- interpreter data
- destination
- triage start
- patient
- ESI triage team
- no one has Covid
- section with emphasis febrile state
Appendix J

Survey QR Posters

Hi there! We're a group of graduate nursing students from the University of San Francisco working on a quality improvement project in the Stanford ED. Our aim is to optimize triage documentation to improve patient throughput. Your responses are essential in improving workflow and future patient outcomes.

Thank you!

In partnership with
Hi there! We’re a group of graduate nursing students from the University of San Francisco working on a quality improvement project in the Stanford ED. Our aim is to optimize triage documentation to improve patient throughput. Your responses are essential in improving workflow and future patient outcomes.

Thank you!