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Implementing ESI Education Project for Nurses in the Triage Process

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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MSN, George Mason University, 2002

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Project Submitted in Partial Fulfillment

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Abstract

Triage nursing assessment supports nursing professionals in delivering safe and effective patient care in emergency departments. This staff education project was driven by an observation of inconsistencies in triage among emergency department (ED) nursing staff. The purpose of the project was to improve the triage assessment knowledge of ED nurses. Specifically, the aim was to determine if educating ED nursing staff about using the Emergency Severity Index (ESI), a 5-level triage algorithm and a previously developed tool, would improve nurse knowledge in the triage process. Following discussion with the ED nursing manager at a hospital, a presentation on the ESI was developed and pre- and posttest questions were used to assess and enhance the nursing staff members triage knowledge. The 16 members of the ED nursing staff attended the ESI education session, which was preceded by a pretest and followed by a posttest. The pretest results ranged from 68% to 96% on the 25 items, and the posttest resulted in an increase in test scores. The *p* value on the sample *t* test was 0.000, which demonstrated that the training was effective. The outcomes of this project might promote positive social change by helping to ensure that nurses in the ED can improve triage assessment

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Section 1: Nature of the Project

Introduction

Emergency department (ED) triage aims to prioritize patient care management based on patient needs and health conditions. It is a time-sensitive process during which ED nursing staff rapidly categorize patients. However, the triage process also creates opportunities for errors. Mistry et al. (2018) explained that an accurate and reliable triage assessment process is necessary for ensuring safety and prioritizing care, because triage errors can increase mortality and morbidity rates.

It is vital that ED nurses understand the Emergency Severity Index (ESI) triage tool because the triage process directly affects patient care in the ED. Afaya, Azongo, and Yakong, (2017) reported that it is critical for nurses in ED to prioritize patients by performing efficient assessments in triage. It is also important that nurses accurately categorize patients based on their clinical conditions because errors and delays in triage assessments can result in negative patient outcomes.

ESI staff education is important in health care systems because triage assessment knowledge is a vital part of safe care. Nurses and health care professionals at every level must maintain their knowledge levels and should attend continuing education regularly in order to ensure high levels of knowledge and effectiveness in responding to health care needs. Moreover, it is vital that nurses maintain their levels of nursing knowledge in order to anticipate and provide safe care throughout patients' life spans. For this project, I implemented a staff education project for ED nursing staff using the ESI triage tool with

the aim of improving nursing knowledge in using the ESI triage tool and providing safe triage.

The American Nurses Credentialing Centers (ANCC, 2015) explained the importance of designing and implementing staff education projects aimed at measuring nurses' knowledge and abilities in practice settings. The ANCC (2015) noted that nurses need to work efficiently in order to support changes in the advancement in nursing practice. In addition, nurse leaders and nurse educators must work collaboratively to promote staff education projects that meet requirements for ensuring nurses are competent in their nursing practice.

Problem Statement

I made the decision to implement the staff education project during ED staff meetings based on inconsistencies that I observed in triage assessments of selected EDs. A lack of knowledge results in patients' being categorized, and subsequently treated, incorrectly. Moreover, triage competency is vital for providing safe patient care. In conjunction with the ED manager, I also reviewed the hospital's ED throughput data and the number of patients noted as "left without being seen" (LWBS). According to hospital data for 2017, 28,122 patients visited the ED, with 2.6% of them noted as LWBS.

It is to improve knowledge of ED nurses during the triage assessment, thereby reducing the potential for unsafe care and decreasing mortality and mortality rates. The ED manager and I determined that it was important to implement an ESI staff education project that would improve knowledge of ED nurses by training them to accurately use the ESI triage tool as a means of ensuring safe practice. Mistry et al. (2018) reported that

the accuracy of determining patients' ESI levels is important, because ineffective triage resulted in higher admission rates and more critical outcomes. Ineffective triage has the potential to increase mortality rates. Moreover, ED visits are increasing worldwide, resulting in increased waiting times to see health care providers in the ED. Therefore, it is important to implement an ESI education project that will improve nurses' triage knowledge.

Purpose Statement

This project addressed the observed gap in nurses' triage consistency by improving nurses' knowledge in using the ESI as a triage tool for ED care. Through this staff education project, nurses were better prepared to perform triage assessment and will be able to accurately categorize patients based on their clinical needs and their acuity levels. The purpose of the project was to educate ED nursing staff on the ESI as a vital triage tool. I hoped to train nurses in skills that would aid them in appropriately categorizing patients according to their individual health conditions and to prevent patients from leaving the ED without being seen by a provider. Moreover, the impact of ESI training will ensure safer care and reduce negative health outcomes.

This education project followed the format of the Walden University Staff Education Manual. The objective of this project is to improve nursing knowledge in using the ESI triage tool to accurately categorize patients for treatment. For this project, I asked this practice question: "Will an ESI education project improve the triage knowledge of ED nurses?"

Staff education is one of the nursing practices that supports nursing professionals in delivering safe and effective patient care. With rapid changes in the U.S. health care system, it is important that nursing education and staff development projects keep abreast of those changes. Based on my observations during triage process in the ED, I was able to make recommendations for promoting nursing best practices. In addition, this ESI education project has the potential to address the gap in ED nursing practice by improving the knowledge of ED nurses.

Nature of the Doctoral Project

The source of evidence for the staff education project was the inconsistency of triage assessment in the ED. In discussion with the ED manager, I identified the need for this project to benefit ED staff and patients alike. It is vital to implement an ESI education project that will improve knowledge of ED nursing staff in triage process.

Before implementing the capstone project, I reviewed existing literature regarding current evidence-based practices, searching databases including: CINAHL, Medline, PubMed, and ProQuest. The keywords in the search included, but were not limited to, the following terms: *triage process, emergency severity index* AND *nursing, education* AND *emergency room* AND *nursing, emergency department* AND *education* AND *triage, emergency department* AND *education* AND *training, triage nursing assessment, ESI education, nursing triage tools, ED waiting times,* AND *ED throughput*. In addition, I also reviewed the hospital database for the past three years of emergency visit and LWBS data.

For this education project, I administered pretest questions to ED staff to identify their baseline knowledge of ESI triage assessment. I then provided an education session using the *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care*, version 4, 2012 edition. After the education session, I administered posttest questions to ED staff to evaluate their knowledge and understanding of the ESI triage tool. The pre- and posttest questions were selected from ESI information and competency cases in the ESI handbook. I describe the ESI education project in more detail in Section 3.

Significance of the Project

Stakeholders who were affected by this project were all ED nursing staff, ED manager, and nurse educators. I implemented the project in an ED in the Southeastern United States that serves a diverse and largely low-income population in the local community. Successful implementation of the ESI education project would benefit nursing staff members as well as patients of the ED.

The ESI triage tool has been used as a foundation for nursing practice in many EDs. Most nurses and health care providers at the project facility are familiar with the triage system. However, additional training and education are always needed to increase consistency and knowledge. Incorrect categorization of patients leads to unsafe care and treatment delays. It is critical, therefore, that nurses be able to verify and categorize patient in triage appropriately.

Through this project, I intended to improve nursing knowledge in using the ESI triage tool. In order to ensure proficient education and competent care, nurse leaders must

assess areas where staff need more training and develop education tools to meet those deficiencies. This ESI staff education project had the potential to strengthen knowledge in nursing practice at many levels.

The nursing implication for this staff education project is the expected improvement in nurses' knowledge regarding accurately prioritizing ED patient using the ESI triage assessment tool. The aim was that the project would yield positive social changes as a result of ensuring that nurses stay abreast of health care changes. It was imperative to implement this ESI staff education project in order to improve nursing knowledge for nurses in the ED.

Summary

Existing literature and scholarship support the need to accurately identify triage acuity levels and reveal that the process has been handled inconsistently. Many hospitals have implemented a variety of different triage assessment and education tools to address this problem. For this project, I trained triage nurses in the ED to use the ESI as a tool for accurately categorizing levels of care and appropriately managing care. The triage nurses gained competency in determining patients' conditions and acuity levels, thereby aiding them in determining which patients have the most immediate needs to be seen by health care providers. In addition, the ESI education project facilitated safe practice and patient flow in the ED as nurses gained knowledge about moving patients to appropriate areas of treatment.

Section 2: Background and Context

Introduction

The observed gap in practice addressed by this project was nursing inconsistency in triaging ED patients. Nurses must be equipped for the challenging work of rapidly assessing patients and quickly gathering patient information in the triage process. Nurses must be able to perform accurate health assessments and participate in the management of care. To that end, this project supported nursing knowledge in the triage assessment process.

Support from administrators and nurse leaders benefits ED nurses. It is important for nurse leaders to encourage purposeful staff education projects and to provide support for efforts to address learning needs. Moreover, it is crucial that nurse leaders and educators promote personal and professional empowerment in order to enhance the learning abilities of the staff. This ESI education project was developed in accordance with the Walden University DNP Staff Education Manual. The project focused on an overarching practice question: "Will an ESI education project improve the triage knowledge of ED nurses?"

Concepts, Models and Theories

Adult Learning Theory

It is vital to understand learners' needs in order to aid educators in determining appropriate teaching content and teaching technique. Malcolm Knowles's adult learning theory (1980) provided appropriate support for this education program. Knowles (1980) explained that five assumptions should be applied to an adult education program:

- Assumption 1: Self-concept
- Assumption 2: Adult learning experience
- Assumption 3: Readiness to learn
- Assumption 4: Orientation to learning
- Assumption 5: Motivation to learn

The first assumption of the adult learning theory, self-concept, addresses the reality that nurses must respond to their own learning and maintain a level of competency. It is important that nurses engage to the greatest extent possible in regular continuing education and training in order to ensure patient safety and improve quality care. Knowles's (1980) second assumption, adult learning experience, addresses nurses' previous experiences that can be used and applied in current practice. Previous experiences are important tools in helping nurses deal with current, related situations. The third assumption, readiness to learn, focuses on the need for nurses to willingly engage in lifelong learning and be ready to absorb new skills and knowledge for providing effective care for the community. The fourth assumption, an orientation to learning, refers to learners' seeking to understand the education program and being able to apply their knowledge to real situations. The goal in the case of this project was to ensure that nurses were able to use the ESI tool efficiently. Knowles's (1980) final assumption is the motivation to learn. Throughout this education project, nurses were asked to participate and to receive input from the education project and class activities.

Zepeda, Parylo, and Bengtson (2014) stated that adult learning theory supports educators and learners by identifying the problems and clarifying the needs of the

learners. Moreover, it addresses the needs of the learners and enhances knowledge based on professional learning opportunities. As a result, adult learning theory is an appropriate theory for application to this professional development practice and staff education project.

Definition of Terms

Emergency department: A hospital's emergency department responds and provides care to patients suffering from acute illnesses or injuries and in need of acute treatment. The ED is the first choice for many people who need health care services (Gilboy, Tanabe, Travers, & Rosenau, 2012).

Emergency Severity Index: The ESI is a five-level triage guideline developed by Dr. Wuerz and Dr. Eitel in 1999. Gilboy et al. (2012) reported that the purpose of the ESI is to help nurses and health care professionals communicate and efficiently prioritize their plans of care. In addition, the ESI aids nurses in identifying the right resources and the right dispositions for patients.

ESI level: Gilboy et al. (2012) noted the five ESI levels of the ESI triage assessment tool, specifically: resuscitation, emergent, urgent, less urgent, and nonurgent. The levels are detailed below:

- Level 1-Resuscitation: Patients who are in critical condition who need immediate life-saving interventions.
- Level 2-Emergent: Patients who have high-risk conditions and could deteriorate easily, such as patients with chest pain and shortness of breath.

- Level 3-Urgent: Patients who are stable but need further evaluation and require multiple resources, with patients with abdominal pain being an example of this category.
- Level 4-Less urgent: Patients who need only one resource, such as an X-ray.
- Level 5-Non-urgent: Patients who do not need any resources or further testing, such as patients with dental pain.

Triage: Triage is the initial assessment process used to identify patients' health care needs and to initiate assessments and treatments to respond to patients' health conditions (ENA, 2017).

Professional development: Professional development is the ongoing learning processes that strengthen nursing knowledge and skills (Zepeda et al., 2014).

Relevance to Nursing Practice

The observed gap in practice addressed by this project was nurses' inconsistency in triaging ED patients. Implementing this ESI staff education project promoted nursing best practices throughout the ED. Additionally, this project enabled nurses and health care providers to keep abreast of health care changes. Maintaining levels of knowledge and competency requires nurses to continue to engage in professional development regularly and to consistently attend continuing opportunities. ENA (2017) noted the necessity of ED nurses participating in ongoing professional development, and in this project, I focused on a single practice question: "Will an ESI education project improve triage knowledge of ED nurses?" Through this ESI staff education project, I aimed to

help nurses provide safe practice for triage patients in the ED. It was important, therefore, to develop an education project that would ensure knowledge of ED nurses.

Literature Review

It was critical to develop an ESI education project that would help improve nursing knowledge and maintain current levels of education and competency. Existing literature was collected regarding current evidence-based practice from databases including: CINAHL, Medline, PubMed, and ProQuest. The keywords in the search included the following: *triage process*, *emergency severity index* AND *nursing*, *education* AND *emergency room* AND *nursing*, *emergency department* AND *education* AND *triage*, *emergency department* AND *education* AND *training*, *triage nursing assessment*, *ESI education*, *nursing triage tools*, *ED waiting times*, AND *ED throughput*. The inclusion criteria limited the literature review to articles in English published within the past five years.

ESI Staff Education Implementation

ENA (2017) noted ESI as a triage tool that will aid nurses in categorizing, prioritizing, and initiating care in response to patients' health care needs. At the close of this project, ED nurses benefited from attending this ESI education project because they improved their triage assessment knowledge. It is important that the nurse leader provide appropriate education and training to ensure professional standards in nursing practice among nursing staff members.

Researchers have reported the effectiveness of the ESI education guidelines. Mirhaghi, Heydari, Mazlom, and Hasanzadeh (2015), for example, explained that by

using the ESI education guidelines, nurses were able to identify high-risk patients and were able to refer patients to the appropriate treatment areas efficiently. Mirhaghi et al. (2015) also stated that ESI is a valid assessment tool that can be used to assist nurses and other health care professionals in improving patient health outcomes.

Other researchers have focused on ESI implementation in a triage context. Mistry et al. (2018) agreed that ESI is a reliable assessment program that helps triage nurses identify health care resources for patients. The authors also indicated the need to understand how to prioritize patient care and provide care for patients after being triaged. Moreover, Mistry et al. (2018) demonstrated that an ESI education project could also help to decrease wait times, reduce lengths of stay, and improve patient flow.

Furthermore, Martin et al. (2014) explained that it is important for triage nurses to perform the brief initial assessments accurately in order to facilitate the process of getting patients to the appropriate treatment areas. Patients are assigned to different treatment areas such as a quick-care area or the main ED treatment area, based on clinical findings and ESI levels. It is also important for nursing staff and health care providers in EDs to understand the various ESI levels.

Triage Process

ENA (2017) explained that triage assessment is a critical aspect of nursing practice. Appropriate education and training will enhance triage assessment knowledge and safe practices in EDs. Researchers have focused on the importance of the triage process. Zhao (2017), for example, recommended that using an efficient triage tool helped nurses to provide timely and safe patient care in EDs. Implementing a rapid triage

protocol would promote throughput and decrease the number of patients who leave EDs without being seen. Large patient populations require an efficient triage process, making it critical to implement triage training to improve nurses' triage assessment skills, thereby increasing accuracy and improving patient outcomes.

Other researches have mentioned the importance of successful triage processes. Mirhaghi et al. (2014) mentioned that delays in recognizing patients' conditions result in high mortality rates. Therefore, it was vital to identify and implement efficient triage systems that benefit health care systems. Mirhaghi et al. (2014) demonstrated the validity of ESI triage tool for improving patient outcomes as a result of more rapidly identifying life-threatening conditions and engaging in timely treatment.

Patient Safety in Emergency Department

Several researchers have focused on patient safety in EDs. Brown (2015) reported that it is vital to educate ED health care professionals, since such education increases engagement and empowerment among nurses in the department. In addition, education positively affects job performance and work environments for health care professionals. Brown (2015) implemented a workplace violence prevention program in the ED in responses to data revealing that more than 50% of nurses nationwide had experienced violence in the workplace. The project showed that the program improved nurses' perceptions of safety and created a safe workplace environment.

Managing ED Patient Flow

A number of researches have focused on how to manage EDs successfully by improving throughput. Baker and Esbenshade (2015) reported that addressing ED

throughput is important for ensuring safety and quality care. Every process in the ED needs to be evaluated. In addition, Sayah, Rogers, Devarajan, Kingsley-Rocker, and Lobon (2014) explained that it is vital for nurses to use ESI levels to improve ED throughput, explaining that the resulting improvements will help facilitate patient care in EDs. By using ESI, nurses will be able to evaluate and treat patients based on their individual conditions and levels of severity. Inefficiency in the triage process will delay patient care and affect patient health outcomes.

Local Background and Context

Inconsistency in triaging ED patients has raised some concern regarding quality care and patient health outcomes. In December 2016, the number of pre-triage LWBS patients increased to 0.61%, with the number of post-triage LWBS patients increasing to 1.64%. Hospital data indicates that approximately 2,000 patients visited the ED each month in 2016. The inconsistency in triaging ED patients and the lack of an understanding regarding comprehensive triage tools increased patient wait time and increased the number of LWBS patients in the ED. It was imperative, therefore, to develop an ESI education project that could improve nurse knowledge in triage assessment. In implementing this ESI class, I aimed to strengthen knowledge in nursing practice at many levels.

The hospital ED serving as the project site for this project is a freestanding ED owned by a large organization that serves six states, operating with the belief that helping people in the community is part of the healing ministry of the Catholic tradition. The stated mission of the organization is to provide compassionate care to patients and to

serve the vulnerable populations in the community. Therefore, successful implementation of this ESI staff education project would trigger social changes in addition to positively affecting the nurses in the ED.

Role of the DNP Student

As a nurse educator and a registered ED nurse for many years, I have observed an issue of inconsistency in triage assessment at the project hospital. Given the significant and rapid changes in patient condition typical of the ED environment, it is important that this inconsistency be addressed, and a nursing educator is in a position to develop an education project aimed at solving this problem. It is critical that ED nurses understand the ESI triage assessment tool in order to improve triage knowledge and understanding. Through this ESI staff education project, I explored how the nursing community could use the ESI triage tool to better identify and categorize patients in triage and in the ED.

As a DNP student, I developed this staff education project aimed at training nurses to use the ESI triage tool. I designed a PowerPoint presentation to educate nurses about the tool during ED staff meetings. I first administered a pretest to assess the nurses' current operating knowledge before I conducted the education session, and I gave a posttest, which consisted with the same set of question following the education session. The pre- and posttest questions were selected from the practice cases and competency cases in *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care*.

Summary

The observed gap in nursing practice addressed by this project was nurses' inconsistency in triaging ED patients. To address this gap, I implemented a staff education project to train ED nurses to use the ESI triage tool to improve their triage knowledge. Nurses should regularly participate in continuing education and professional development in order to improve their abilities to provide safe patient care. It is vital that nurses maintain the high levels of clinical competency and nursing knowledge that are necessary for ensuring efficient patient care.

Section 3: Collection and Analysis of Evidence

Introduction

This project was designed to address nurses' inconsistency in triaging patients in the project hospital ED. The purpose of implementing this ESI staff education project was to improve the ED nurses' knowledge by using the ESI triage tool to improve triage processes, thereby ensuring the delivery of safe, quality care. My expectation was that this ESI staff education project would benefit patients, nurses, and the larger health care organization. The results could also have had positive social change implications for health care practice in general as a result of improving nursing knowledge in the triage assessment process.

Practice-Focused Question

The practice question that was the focus of this project was as follows: "Will an ESI education project improve triage knowledge of ED nurses?" I had observed some inconsistency in determining ESI levels of patients during the triage assessment process at the project hospital, and undercategorizing patients can lead to delays in care and unsafe medical practices. Moreover, inconsistent training in ESI determinations can result in nurses' taking too long to triage patients, potentially leading to negative health outcomes. To address this issue, this ESI staff education project aimed to improve the knowledge of ED nurses by assisting them in consistently learning and applying the ESI triage tool for categorizing patients in the ED.

Source of Evidence

The literature search comprised material collected from the following databases: CINAHL, Medline, PubMed, and ProQuest. The literature review consisted primarily of articles on ESI education tools, triage assessment, improving nursing knowledge, and improving ED throughput. The inclusion criteria limited the literature to articles published in English within the past 5 years, from 2014 to 2019. The literature search revealed many articles that support ESI education and training as a means of helping nurses to better prioritize and manage patient assessment in triage.

I based the decision to implement the ESI staff education project during ED monthly staff meetings on observed inconsistencies in the triage assessment process. Discussion with the ED manager led to the conclusion that an ESI staff education project would improve nurses' triage knowledge to ensure safer care. In fact, it was imperative to develop effective ESI education opportunities for nurses in order to improve knowledge levels in triage assessment. Developing this ESI education project aimed to strengthen nursing knowledge and competencies in nursing practice, with the session material focused on ESI acuity levels, the triage assessment process, ESI health care resources, and methods for categorizing the needs of patients based on their health conditions. In order to answer the practice question, I measured the impact and effectiveness of the staff education project using pre-/post-intervention tests; I selected the questions from the ESI triage tool handbook (see Appendix A). Both the pre- and posttest consisted of the same 25 questions.

Evidence Generated for the Doctoral Project

The purpose of this ESI staff education project was to strengthen nurses' knowledge in triage assessment. This section is a step-by-step outline of the process for developing a staff education project based on Walden University's manual. I discuss the participants, the procedures for developing the project, how I evaluated learning and the protections put in place for the participants.

Participants

This ESI staff education project was intended for all registered nurses in the ED to attend during monthly ED staff meetings. Participants included the ED manager and nurse educators as well. The practice question that served as the focus for this project was as follows: "Will an ESI education project improve triage knowledge of ED nurses?"

Procedures for Developing a Staff Education Project

The ESI staff education project consisted of the following steps: planning, implementation, and outcome. Discussions with the ED manager resulted in the conclusion that ED nurses inconsistently triaged ED patients. I then determined the need to implement a program of staff education regarding the ESI triage tool as a means of addressing the observed gap in practice. The ED manager agreed that ESI staff education would be a vital part of strengthening knowledge in nursing practice and also agreed to my implementation of this ESI staff education project during ED staff meetings.

This education project followed Walden University's *DNP Manual for Staff Education*. I reviewed and gathered all materials from *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care*, using version 4, the 2012 edition. I

prepared the ESI education project by identifying research on the influence of ESI education projects on nurses and patients in EDs. I also gathered literature, supportive evidence, statistical data, and evidence-based practices related to the ESI triage assessment tool. I presented the ESI education session during monthly ED staff meetings using a PowerPoint presentation, a tool I created from the information in the ESI manual (see Appendix B). I evaluated the project based on comparing the participants' pre- and posttest scores on a test I utilized from the ESI manual. Separately, I obtained Walden University Internal Review Board (IRB), approval number 04-11-19-0361333 before implementing the education project.

I presented the ESI education session after receiving approval from Walden University IRB. The ED manager signed a letter of cooperation from Walden University, fully agreeing to support this project. The ED manager informed all nursing staff about the project and required their attendance. I presented the 60-minute ESI education session at the ED staff meetings in June. I provided all participants with the PowerPoint presentation in Appendix B, and I led the educational session.

The ESI education content included the history and background of the ESI, and I outlined its relevance in nursing practice, presenting key assessment points. In addition, I explained the differences among the five ESI levels and provided examples of each. Finally, I explained ESI-related nursing resources and the benefits of applying the ESI in nursing practice. The ESI education session consisted of three sections: (a) a 10-minute pretest; (b) a 30-minute teaching session; (c) a 10-minute group discussion and activity; and (d) a 10-minute posttest.

Evaluation

I administered a pretest and a posttest, before and after the education session, using test questions selected from *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care*, version 4 (2012). The participants had 10 minutes at the beginning of the session to complete the 25 pretest questions and then 10 minutes at the end to complete the 25 posttest questions. I used the anonymous results of both tests to measures the participants' existing knowledge and the impact of the ESI education.

I subsequently shared the project findings with the ED manager including results, limitations, and barriers. I also made recommendations to the ED manager based on the findings. Through this project, I aimed to understand the effectiveness of ESI staff education and to aid nurses in the hospital ED in more consistently applying the ESI triage assessment tool. To answer the practice question, I measured the impact of the ESI staff education project based on the ED nurses' post-intervention test scores.

Protections

I obtained a letter of cooperation from the facility in addition to approval from the Walden University IRB. I included no identifiable participant data, thereby maintaining confidentiality of participants. I also did not require or discuss any patient information during the process.

Analysis and Synthesis

I implemented this ESI staff education project based on *Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care*. The project site's ED registered

nurses and other staff members attended the education session. All participants completed anonymous pretest and posttest questions (see Appendix B).

Summary

This education project on using the ESI for triage assessment aimed to improve nurses' triage knowledge and in turn their ED triage processes at the project site. Improved knowledge ensures patient safety and positively affects the overall health care organization, and this project meets the ongoing need for programs and tools that improve ED nurses' triage knowledge and competency. The primary implication for social change from this project was that educating ED staff on using the ESI as an effective triage tool would improve their abilities to deliver safe and effective care to the underserved hospital community.

Section 4: Findings and Recommendations

Introduction

The fourth section of this project report contains the findings and recommendations established from the analysis of the raw data collected from the 16 participants. The purpose of the project was to educate ED nursing staff on the ESI as a vital triage assessment tool. The project participants were 16 ED registered nurses. The practice question that served as the focus for this project was: "Will an ESI education project improve triage knowledge of ED nurses?" To address the project question, I analyzed the participants' pre- and posttest scores using a paired *t* test in SPSS to assist in establishing the results and addressing the project question. This section of the project also contains the following parts: findings and implications, recommendations, and the strengths and limitations of the project.

Findings and Implications

The comparison of the participants' pre- and posttest scores indicated that the participants had gained knowledge in triage assessments following the ESI education project. In fact, all 16 participants achieved perfect scores on the exam after the ESI education session. Table 1 contains the breakdown of the participants' individual pretest and posttest scores.

Table 1

Breakdown of Each Participant's Test Score

Participant Number	Pretest	Posttest
Participant 1	68%	100%
Participant 2	68%	100%
Participant 3	76%	100%
Participant 4	76%	100%
Participant 5	76%	100%
Participant 6	80%	100%
Participant 7	88%	100%
Participant 8	88%	100%
Participant 9	84%	100%
Participant 10	88%	100%
Participant 11	88%	100%
Participant 12	88%	100%
Participant 13	88%	100%
Participant 14	96%	100%
Participant 15	96%	100%
Participant 16	96%	100%

The pretest results of the participants had 68% as the lowest score and 96% as the highest score. There were six participants (37.5% of participants) had 22 correct answers (scoring 88% on the pretest) of the total 25 questions. Another three participants (18.8% of participants) had 19 correct answers (scoring 76% on the pretest) and another three participants (18.8% of participants) had 24 correct answers (scoring 96% on the pretest). Two participants (12.5% of participants) received the lowest scored with 17 correct answers (scoring 68% on the pretest). Finally, one participant (6.3% of participants) had an 80% score on the pretest and another one participant had an 84% score on the pretest. Table 2 contains the breakdown of the pretest results. Their test results can be used as key

sources or pieces of evidence on how education can aid the emergency department nurses to increase their triage knowledge accordingly.

Table 2

Breakdown of the Pretest Results

Overall Score	Frequency	Percent
68% (17/25)	2	12.5
76% (19/25)	3	18.8
80% (20/25)	1	6.3
84% (21/25)	1	6.3
88% (22/25)	6	37.5
96% (24/25)	3	18.8
Total	16	100.0

Table 3 contains the breakdown of the posttest results. All 16 participants were able to apply their knowledge from the ESI education session successfully. Based on the results above, it can be concluded that the ESI staff education project is an effective tool that can be employed to improve the triage knowledge of the ED nurses. Considering the limited exposure (60 minutes) of the participants to the knowledge sharing during the project, their test scores still improved significantly. The positive change in the test results of the participants after an education session indicates the probable benefits that the nursing staff can receive upon longer and more targeted exposure to the ESI education project in the future.

Table 3

Breakdown of the Posttest Results

Overall Score	Frequency	Percent
100% (25/25)	16	100.0
Total	16	100.0

Table 4 demonstrates paired-samples *t* test. The SPSS software helped me in comparing the results of the two variables on the pretest and posttest data as completed by 16 participants. Paired-samples *t* test was used as the method of analysis which allowed me to determine the mean of .8400 (84%) for the pretest and 1.0000 (100%) for the posttest. In conclusion, it was found that there was a significant difference in the scores for the pretest (*M*=.8400, *SD*=.09121) and posttest (*M*=1.0000, *SD*=.00000)

Table 4

Paired Samples Statistics

		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	Pretest	.8400	16	.09121	.02280
	Posttest	1.0000	16	.00000	.00000

The ESI education project has potential implications for positive social change. The current project can be of great value to the key stakeholders and policymakers of hospitals that provide emergency services to patients. The results of the test scores can serve as concrete pieces of evidence on why triage education should be given priority and should be provided to the ED nurses. A multitude of advantages is foreseen not only for the medical organizations and staff members but more so to the patients they are serving. With the incorporation of the ESI triage tool to the practices and training activities of nurses, improved patient care should be achieved. Furthermore, emergency departments can enjoy a more systematized and organized manner of managing their patients. Finally, with the improved knowledge of the nurses, their confidences should increase as well. As a result, the patients should recognize enhanced service and quality of care.

Recommendations

The gap in nursing practice addressed by this project is nursing inconsistency in triaging ED patients. It has been established that nurses must be equipped for the challenging work of rapidly assessing of and caring for patients in triage. The analysis and final results of my project demonstrated that ESI staff education had a significant impact on the knowledge of nurses in triage patient in the ED. With the findings, I formed five recommendations:

The first recommendation is for the ED nurse manager to constantly communicate and follow-up with the nurses at least 6 months after the initial ESI education. I plan to work closely with the nurse manager and nurse educator to ensure that ESI education is part of the ED annual competency as it is vital for nurses to categorize patients accurately. Consistency in the project implementation is vital in guaranteeing the continuity of knowledge sharing and improvement of the ED nurses. Moreover, it will increase their level of competence in triaging patients.

The second recommendation is to create more training activities and programs that would encourage the professional development of the ED nurses. Specifically, these training programs and activities must center on their triage competency. Again, implementation of the programs must be scheduled regularly to ensure that all ED nurses are constantly aware and updated of any changes in the triage protocol.

The third recommendation is to have evaluation and assessment tools before and after each education project and triage education activities in order to ensure the knowledge of the ED nurses. These evaluation tools (e.g. questionnaire, tests) should also help in

determining which topics or parts of the triage tool must be focused on and recapitulated to the nurses in the next meetings or sessions. Questions with the most mistakes (similar to the current project) must be given more attention to and be discussed in detail for the nurses' understanding going forward.

The fourth recommendation is to consider the schedule and availability of the ED nurse and other staff members. The nurse leaders must offer various classes in different timeframes during the week and provide classes at different locations throughout the hospital. It is important to develop an effective education project to respond to the nurses' need and be more appropriate for their schedule. Moreover, administrators and nurse leaders must focus on health care cost and ensure cost effectiveness of the education project.

The final recommendation is to conduct future project studies. To increase the validity of their results, it is recommended to incorporate another data source to triangulate the findings of the project. In this case, the results of the pretest and posttest can be corroborated with qualitative data using interviews with the ED nurse manager and the nurses themselves to gather their firsthand perceptions and experiences. Their responses will help future researchers to determine how the education project positively or negatively affected their triage knowledge.

Strengths and Limitations of the Project

I identified strengths and limitations to this project. One of the strengths of the project was I was able to learn and identify the needs of the education project at the receptor site by administering the staff education module and analyzing the staff's

response to the content given. The ED nurse manager communicated regularly and provided me with information from the hospital database that helped to support my project. Numerous meeting sessions were held which allowed me to develop the relationship that I have with the nurse leader, nurse educator, and nursing staff in the ED.

Secondly, collaboration with the nursing staff was vital. Nurse educator and nursing staff members also offered me various crucial information and suggestions with regard to triage assessment process and ESI triage tool. Moreover, I was able to find and utilize literature reviews and evidence-based practices related to ESI triage assessment. There were many literature reviews that supported this ESI education project. As a result, it was important to understand evidence-based practice in order to develop an effective education project that can actually improve the knowledge of ED nurses in using ESI triage tool.

Time was the first limitation of the ESI education project. I carefully discussed the appropriate time and schedule to hold the education sessions with the ED manager and nursing staff. However, it was still challenging to mandate the class for everyone to attend. Not all ED members could attend staff meetings and the education session due to limited staffing and their workload. Regardless, the education sessions were maximized, the time and interactions with the ED members were employed to gather as much data as possible that can be used for the current project.

Additionally, one of the limitations of my education project was the small sample size. There were 16 nurses participated the ESI education project. Two ESI education sessions were provided to cover nurses from both day shift and night shift. However, not

all ED nursing staff could attend ESI education session. Based on the finding, it is vital to emphasize that the ESI education project is important to improve triage assessment knowledge for ED nurses.

Section 5: Dissemination Plan

This current project is vital in enlightening the key stakeholders of different hospitals and health care organizations on the importance of equipping the ED nurses with the proper triage assessment knowledge. Their knowledge and confidence are imperative in creating a positive change within the emergency departments of every hospital. In the long run, triage education can lead to quality care and better patient health outcomes.

Now that I have disseminated the education project at the practicum site in the ED, I am also planning to present my project at the Tidewater Emergency Nurses Association and the Philippine Nurses Association meeting this year. The final paper will be revised and sent to the nurse manager and nurse educator. I also plan to seek publication in a nursing journal such as the *Journal of Emergency Nursing* or *American Nurse Today*.

As a nurse educator and emergency room nurse, I believe it is important for me to attend continuing education regularly to ensure the presence of nursing knowledge to respond to the different health care needs. Continuing education and training are significantly important in health care because they directly affect patient safety and health outcomes. Nurses at every level need to work effectively to respond to health needs and to have well-positioned leaders who are open to supporting changes in advance nursing practice. I proposed this ESI education project to address one of the gaps in meeting the health care needs of patients in EDs.

Analysis of Self

The DNP program has increased my knowledge and enhanced my leadership skills, and I have learned much throughout this process. The main challenge I encountered was the time it took me to get approval to implement my project and also to complete it; I learned that time management is vital, especially when you are working full time in raising a family and going to school. In addition, I recognized through this project process that scholarly language can be challenging for me.

Nevertheless, I was touched by the enormous support that I received from my family and friends, my ED manager and my coworkers, my preceptor and my professors. I had opportunities to attend many leadership meetings and education conferences. I had opportunities to learn and develop an education project to address specific needs in the health care system. Moreover, I was able to implement an ESI education project that will increase the knowledge of ED nurses to maintain patient safety.

Summary

Emergency department triage has the main goal of prioritizing patient care management based on the patients' needs and health conditions. However, the process can be challenging for ED nurses given the frantic and stressful environment of the ED and the workload that they have. The purpose of this project was to educate ED nursing staff on the ESI as a vital triage tool. The project was implemented in an ED in the southeast United States that serves a diverse low-income population in the local community. A total of 16 participants participated in the project, completing a pretest before my education session, attending the session, and completing a posttest following

the session. I established from my data analysis that the participants' knowledge had indeed increased following the education session: Once receiving the education session, all participants scored 100% on the posttest, which indicated that all participants had better understanding of ESI triage assessment.

I presented the results of this ESI education project to the ED nurse manager at the project site. The paired *t* test showed that the education significantly improved the nurses' triage knowledge. I also demonstrated that continuing education is vital for nurses because it strengthens nursing knowledge to ensure patient safety and health outcomes. I will also discuss with the ED nurse manager the potential to conduct a follow-up with the ED nurses at 6 months to ensure consistency of ESI triage assessment and their continued competency after the ESI education project. My goal and recommendation for my ESI education project are implementing the education session at the hospital's annual ED competency. I will assist the nurse educator and nurse manager with this ESI presentation and I will help them create educational poster for annual ED competency. This DNP staff education project has taught me to be a better nurse, a better nurse educator and a better nurse leader.

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Appendix A: ESI Education Project Pre- and Posttest Evaluation Tool

1. **Which statement does not describe ESI level 1?**
    A. Patient requires immediate lifesaving interventions
    B. Patient is critically ill.
    C. Patient does not need immediate physician evaluation
    D. Patient requires immediate medications or hemodynamic intervention
2. **Which statement is not used in the four decision points of the ESI algorithm?**
    A. Does this patient require immediate life-saving intervention?
    B. What are the patient's medications?
    C. How many resources will this patient need?
    D. What are the patient's vital signs?
3. **Which of the following best describes four levels of the AVPU scale?**
    A. Alert, Verbal, Painful, and Unresponsive
    B. Agonal breathing, Verbal, Painful Stimulus and Unresponsive
    C. Alert, Verbal, Pinpoint pupils and Unresponsive
    D. Alert, Verbal, Painful and Unequal pupils
4. **Which statement does not describe ESI level 2 criteria?**
    A. Is this a high-risk situation?
    B. Is the patient confused, lethargic or disoriented?
    C. Is the patient in pain?
    D. Is the patient weak and dizzy with heart rate of 30?
5. **Which statement best describe ESI level 5?**
    A. Patient will not need any resources
    B. Unstable patient who needs medication refill
    C. Patient will need two resources or more
    D. Patient can not be evaluated in fast track area

6. **Which statement best describes ESI level 3?**
    A. Patient is unstable with altered mental status
    B. Patient will need 2 or more resources and requires in-depth evaluation
    C. Patient can be evaluated for quick exam or fast track area
    D. A stable suicidal and homicidal patient
7. **Which statement best describes ESI level 5?**
    A. Patient will need one resource
    B. Stable patient who needs medication refill
    C. Patient will need 2 or more resources
    D. Patient will need to be evaluated immediately
8. **Which statement is an example of ESI level 1?**
    A. Overdose patient with respiratory rate of 6
    B. Hypoglycemia with no change of mental status
    C. Trauma patient with gunshot wound to the left leg
    D. Stable patient who complaint of near syncope episode
9. **Which statement is an example of ESI level 2?**
    A. 28-year-old female with severe lower abdominal pain and vaginal bleeding
    B. 35-year-old female with sudden onset of palpitations, anxious, heart rate160 bpm
    C. 32-year-old male with abscess.
    D. 42-year-old male, right lower quadrant (RLQ) abdominal pain with nausea and vomiting since early this morning

10. Which statement is an example of ESI level 3?

A. 45-year-old obese female with left lower leg pain & swelling which started 2 days ago, after driving in a car for 12 hours.
B. 14-year-old male brought in by EMS who was injured while playing football. He has an obvious deformity to his right lower leg.
C. Hypoglycemic patient (accucheck of 45) with altered mental status
D. 13-year-old male walks into the ED with his mother. Mom states, "I didn't realize he was out of his medications for his ADHD

11. Which statement is an example of ESI level 4?

A. Healthy, 19-year-old female who twisted her left ankle playing soccer.
B. Healthy, 29-year-old female with UTI symptoms, appears well, afebrile, denies vaginal discharge.
C. 12-year-old female brought into the ED by mother. Claims she cut her thumb while washing dishes with 2 cm superficial laceration to her right thumb.
D. 17-year-old male, history of suicidality, found unresponsive by parents.

12. Which statement is an example of ESI level 5?

A. Healthy 10-year-old child with rash on upper and lower extremities.
B. Healthy 52-year-old who ran out of blood pressure medication for a week. BP 170/84, complains of severe headache starting this morning.
C. Healthy 19-year-old with sore throat and fever.
D. 16-year-old male brought in by parents who report patient was out of control, screaming obscenities, and threatening to kill the family.

13. **Which of the following does not describe the ESI resources?**

A. IV or IM medications
B. Point of care testing
C. Nebulizer treatment
D. Specialty consultation

14. How many different resources are needed for ESI level 3?

A. None C. Two

B. One D. Two or More

15. How many different resources are needed for ESI level 5?

A. None C. Two

B. One D. Two or More

INSTRUCTIONS:

For items numbers 16-25, please circle the number on each statement that reflects the particular ESI level, using the scale below.

1- Resuscitation

2- Emergent

3- Urgent

4- Less Urgent

5- Non urgent

16. 22-year-old male with generalized abdominal pain, nausea, vomiting, and diarrhea for three days, with vital signs stable.
    1 2 3 4 5

17. 52-year-old male with sudden onset of pain to left foot; a history of diabetes requiring insulin therapy; left foot is cold to touch; and nurse is unable to palpate a pulse in the foot.
    1 2 3 4 5

18. 6-year-old male fell from the top of the monkey bars; reporting a one-minute loss of consciousness at the time; patient is vomiting; and patient was sent by pediatrician for head scan.
    1 2 3 4 5

19. 40-year-old female with lymphoma, currently receiving chemotherapy, temperature is 102.2.
    1 2 3 4 5

20. 45-year-old obese female with left lower leg pain and swelling that started two days ago after driving in a car for 12 hours.
    1 2 3 4 5

21. 14-year-old female; brought in by EMS after diving into the pool and hitting her head; awake, alert, and moving all extremities; currently immobilized on a backboard with c-collar in place; vital signs recorded as BP 118/72, HR 76, RR 14.
    1 2 3 4 5

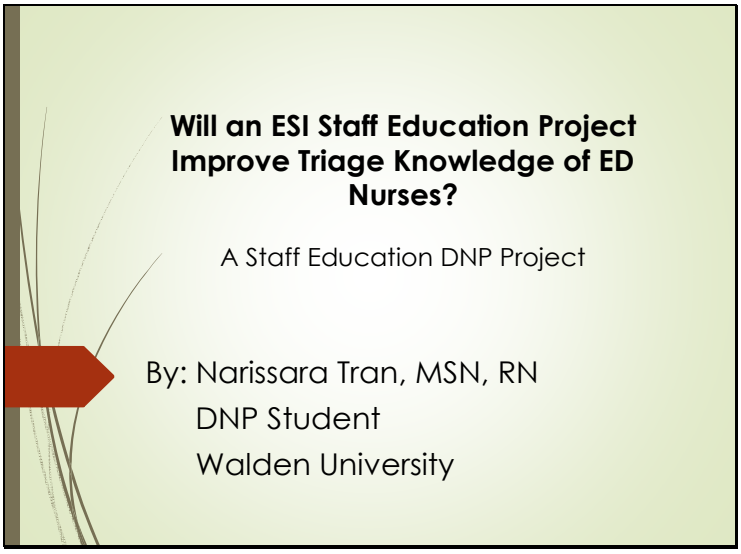
22. 17-year-old male, history of suicidal behavior, found unresponsive by parents with several bottles of liquor and unidentified empty pill bottles next to bed.
    1 2 3 4 5

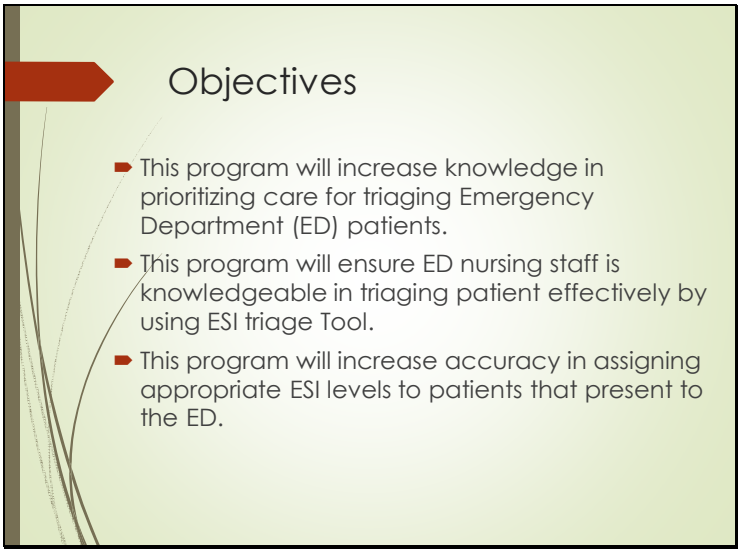
23. 69-year-old male who is weak and dizzy and undergoes regular kidney dialysis.
    1 2 3 4 5

24. 19-year-old healthy female who twisted her ankle playing soccer; swelling noted on the left ankle and the ankle hurts to bear weight.
    1 2 3 4 5

25. 52-year-old healthy man; ran out of blood pressure medication yesterday; BP 150/84
    1 2 3 4 5

Appendix B: ESI Education PowerPoint Presentation





At the completion of this program, learners will:

- 1. be able to discuss the purpose of triage;
- 2. be able to describe ESI levels;
- 3. be able to identify and estimate the resource needs of the patient;
- 4. be able to discuss the four decision points of the ESI algorithm.

Introduction and Background

- The Centers for Disease Control and Prevention (2016) reported that ED wait time has increased nationwide from 46.5 minutes to 58.1 minutes between 2003 and 2009.
- Gindi et al. (2016) reported that approximately 20% of the adult population in the United States visited emergency departments each year in 2013 to 2014.
- EDs saw 28,122 patients in 2017, with approximately 2.6% of patients leaving the ED without being seen (LWBS).

Problem Statement

The problem identified was two-fold:

- a lack of knowledge in triage assessment among nurses; and
- and inconsistency of the triage assessment process in EDs.

Relevance to Nursing Practice

- The project will address the observed gap in practice – specifically nurses' inconsistency in triaging ED patients due to lacking ESI knowledge
- Implementing the ESI education program should be a priority of the ED staff education to ensure that nursing staff is knowledgeable in triaging patient effectively

The Practice Question

Will an ESI staff education project improve triage knowledge of ED nurses?

Emergency Severity Index

- The Emergency Severity Index (ESI) is the five-level triage guideline developed by Dr. Wuerz and Dr. Eitel in 1999. The version used in this project is "Emergency Severity Index (ESI): A Triage Tool for Emergency Department Care." version 4, 2012 edition .
- The purpose of using ESI is to help nurses and healthcare professionals communicate and prioritize their plans of care in triage efficiently.

History: Emergency Severity Index

- Five-level and three-level triage scales
- 1998: Dr.Wuerz and Dr. Eitel developed the concept and initiated the study
- 1999: Initial ESI implementation
- 1999-2001: Revision and implementation in 7 emergency departments in 3 states
- 2003: First ESI handbook was released
- 2010: ESI web course was released

Nursing Theory

The Adult Learning Theory by Malcolm Knowles (1980) would appropriately support the education program. Knowles(1980) explained that five assumptions could be applied:

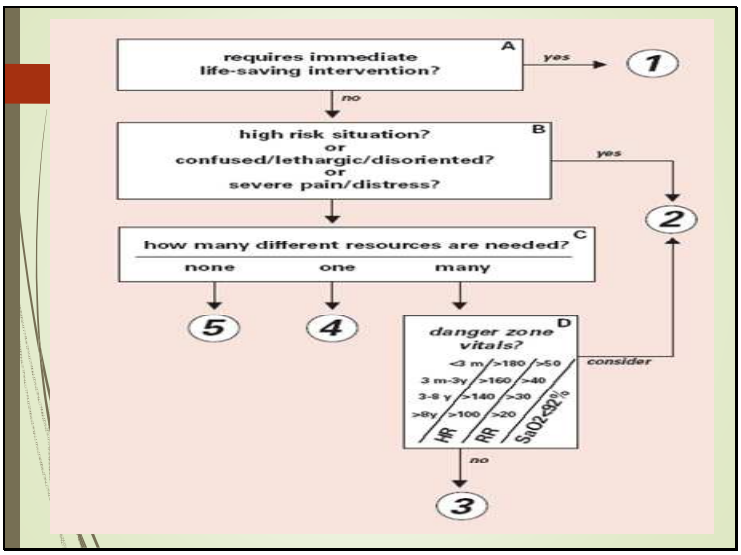
- Assumption 1: The self-concept
- Assumption 2: Adult learning experience
- Assumption 3: Readiness to learn
- Assumption 4: An orientation to learning
- Assumption 5: The motivation to learn

Triage History

RED	• See immediately
AMBER	• See within 10 minutes
YELLOW	• See within 60 minutes
GREEN	• See within 120 minutes
BLUE	• See within 240 minutes

Emergency Severity Index:
Four Key Points of ESI algorithm

- 1.Does this patient require immediate life saving intervention?
- 2.Can this patient wait? (Is the patient's condition stable or unstable?)
- 3.How many resources will the patient need?
- 4.Are the patient's vital signs stable or unstable?



Immediate Intervention

Requires immediate life-saving interventions:

- Airway, severe respiratory distress
- Emergency medication
- Pulseless
- Acute mental status changes
- Unresponsive/non verbal (not following commands, and requires noxious stimulus)

ESI Level 1

- Does the patient require an immediate airway, medication, or other hemodynamic intervention?
- Does the patient present to the ED with an unstable condition?
- Does the patient meet any of the criteria: already intubated, apneic, pulseless, severe respiratory distress, SaO_2 < 90%, acute mental status changes, or unresponsive?

ESI Level 1

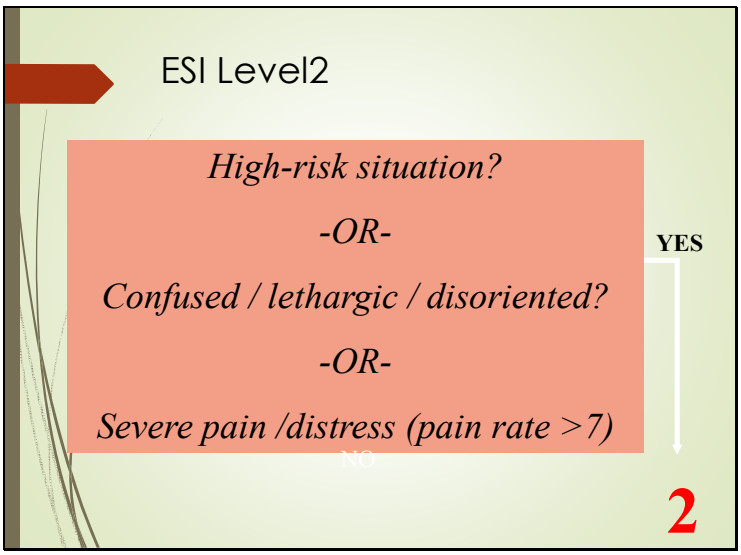
- Placement in a treatment area should not be delayed in order to gather vital signs.
- The need for care is immediate and an appropriate bed needs to be found.
- Triage Manual: *Vital signs and a comprehensive nursing assessment should be completed, but this does not have to occur at triage.*

ESI Level 1

- Confusion = inappropriate response to stimuli, decrease in attention span & memory
- Lethargic = drowsy, sleeping more than usual, responds appropriately when stimulated
- Disoriented = patient unable to answer questions correctly about time, place or person

Examples of ESI Level I

- Cardiac arrest
- Respiratory arrest
- Critically injured trauma patient who presents unresponsive
- Overdose with a respiratory rate of 6
- Weak & dizzy with heart rate of 30
- Severe respiratory distress with agonal
- Anaphylactic reactions
- Baby with an obstructed airway
- Unresponsive
- Hypoglycemia with change in mental status



High Risk 2

- High-risk situation is a patient you would put in your last open bed
- Severe pain/distress is determined by clinical observation as well as patient rating greater than 7/10
- Observations
  - Distressed facial expression(s)
  - Diaphoresis
  - Body posture
  - Alterations in vital signs

ESI Level 2: High Risk

- High risk patient and high risk situation
- Unsafe to wait
- Changes in vital signs
- **Nurse can initiate intervention while waiting for physician to evaluate patient**

Level 2: High Risk

- Active chest pain suspicious for coronary syndrome (stable condition)
- Signs of a stroke
- A patient on chemotherapy with a fever, immuno-compromised
- A suicidal or homicidal patient
- Syncope, near-syncope
- Electrolyte abnormalities

ESI Level 2: Complaints

- **Cardiovascular**
  - Acute coronary syndromes (ACS) is not always specific
  - Cardiovascular related situations: hypertensive crisis, acute vascular arterial occlusions, fever post valve replacement
- **Abdominal & gastrointestinal**
  - Tachycardia or respiratory distress
  - Age, previous medical history
  - Vomiting or bright red blood per rectum

ESI Level2: Complaints

- **General**
  - Immunocompromised patients
  - Oncology patients
- **Ocular**
  - Trauma to the eye
  - Sudden, partial or complete loss of vision
- **Abdomen**
  - Appendicitis
  - GI bleed
- **Orthopedic**
  - Compartment syndrome
- **Mental health**
  - Danger to themselves or community

ESI Level 2

- Severe headache, associated with mental status changes, high blood pressure, lethargy
- Acute onset of speech/motor deficit
- Sudden onset of headache, especially during a "straining" exertion
- Cocaine use
- Epistaxis secondary to a posterior bleed (usually due to hypertension)

Level 2

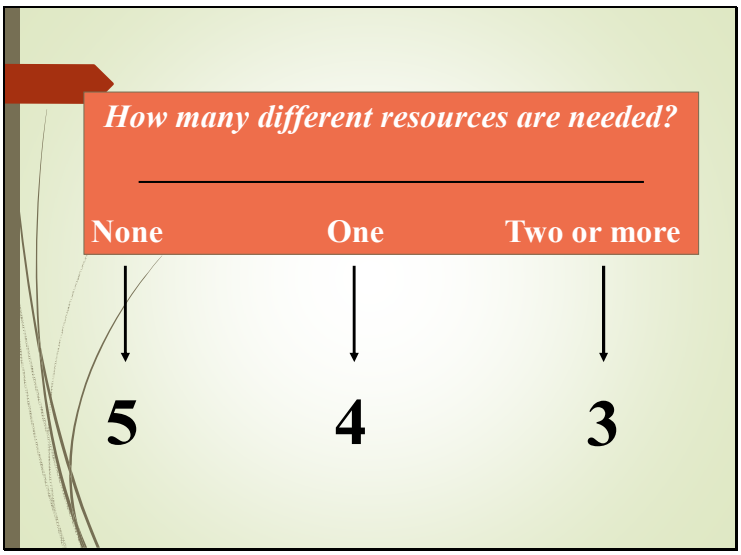
- Epiglottitis, peri-tonsilar abscess represent potential airway compromise
- Acute onset unilateral testicular pain
- Post operative patient unable to void
- Renal dialysis patients that have missed their last appointment(s)

ESI Level 2

- Seizures
- Sepsis, severe dehydration
- Child abuse, burns
- Head trauma
- Vitamin / iron or other overdose/ingestions
- Asthma with nasal flaring, and/or retractions
- Diabetic ketoacidosis, Stable patient with Hyper or Hypoglycemia

ESI Level 2

- Vital sign evaluation between newborn-36 months
- Febrile infant < 28 days is high risk & should be at least ESI Level 2
- Infant < 28 days of age with a fever of 100.4^0 (F) or 38^0 (C), or greater.
- Immunization status?



ESI Level 3

- How many different resources this patient is going to consume in order for the physician to reach a disposition decision
- **Need 2 or more resources**
- The past experience of triage nurses in caring for similar ED patients in the past
- An experienced nurse was able to accurate identify number of tests, therapeutic interventions, and consultations that a given presenting problem might need.

ESI Level 3

- ESI level 3 patients make up 30% - 40% of ED visits.
- They often require a more in-depth evaluation but are felt to be stable in the short-term, and certainly may have a longer length of stay in the ED.
- Appropriately trained mid-level providers with the right skills could care for these patients in an urgent care or fast track setting.

Resources

- **How many different resources are needed: none, one or many?**
- Count the number of different types of resources, not individual tests
- Labs: blood test/urine
- ECG, X-Ray, CT, MRI
- Simple procedures: laceration repair, foley insertion

Resources

Resources

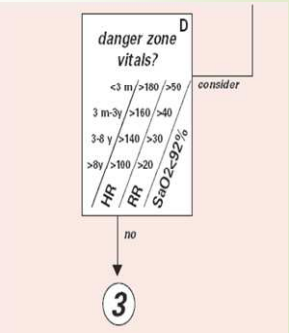
- Lab: blood, urine
- EKG, X-ray
- CT, MRI, Ultrasound
- IV fluid
- IV, IM or nebulized medications
- Specialty consultation
- Simple procedure: Laceration repair, Foley catheter insertion

Not Resources

- History & Physical (Including Pelvic
- Point-of-care testing
- Saline lock
- PO meds, Tetanus Immunization
- Medication refills
- Phone call to PCP
- Simple wound care: crutches, wound recheck

Danger Zone Vital Signs

- **Danger zone up triage to level 2**
- Fever: 1day-3mos if temp >100.4
- Sao2<92%



ESI Level 4

- **Only use 1 resource**
- Ankle pain patient: need X-Ray, need wrap or crutch walking instruction
- Sore throat: need throat culture
- UTI symptoms with no vaginal problems: urine specimen

ESI Level 4

- Superficial laceration on the right thumb: will require suturing (1 resource)
- Stable asthma patient: will need hand held nebulizer treatment (1 resource)
- Abscess with pus noted on the back: will require incision and drainage and PO antibiotic(1 resource)

6

ESI Level 5

- **No resources needed**
- Medication refills with stable vital signs
- Dental pain
- URI Symptoms with stable vital signs
- Poison Ivy on extremities

ESI Level 5

- Contusion and abrasions
- Runny nose, mild cough and low grade fever
- Ear pain
- Back pain, denies injury or UTI symptoms
- Rash

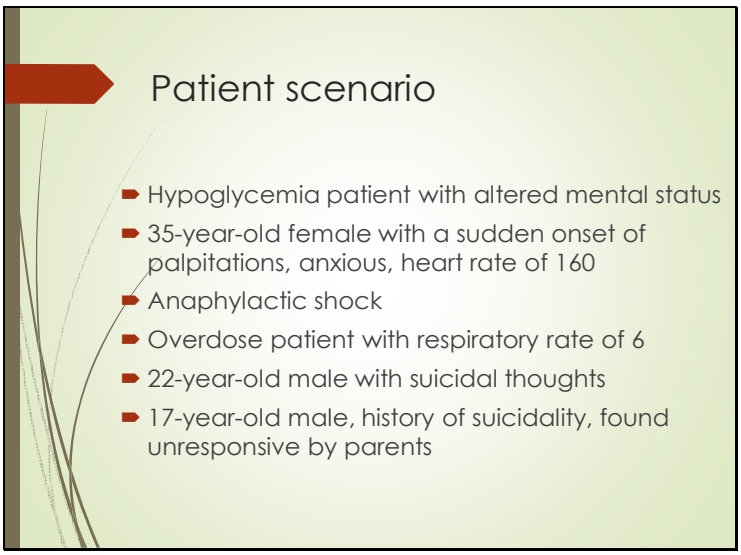
Benefit of ESI

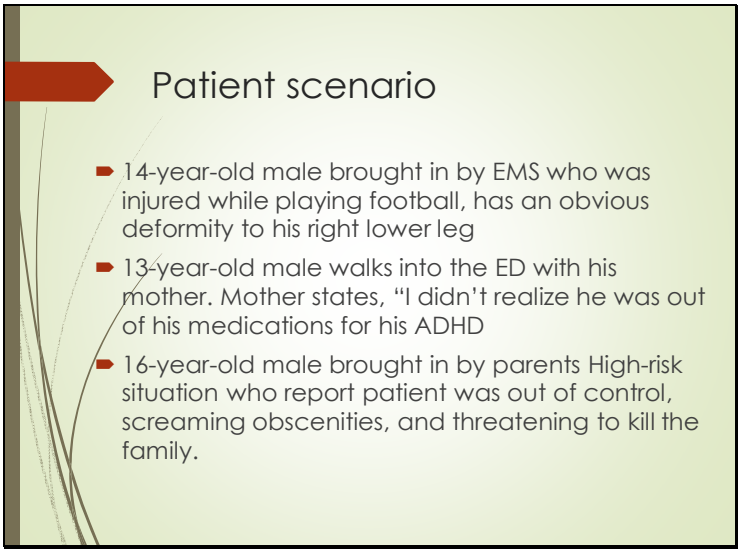
- Provide rapid identification of patients
- Reduce subjectivity of triage decision
- Determine patient with fast-track or urgent care area
- More accurate
- Provide better communication
- Easy to use

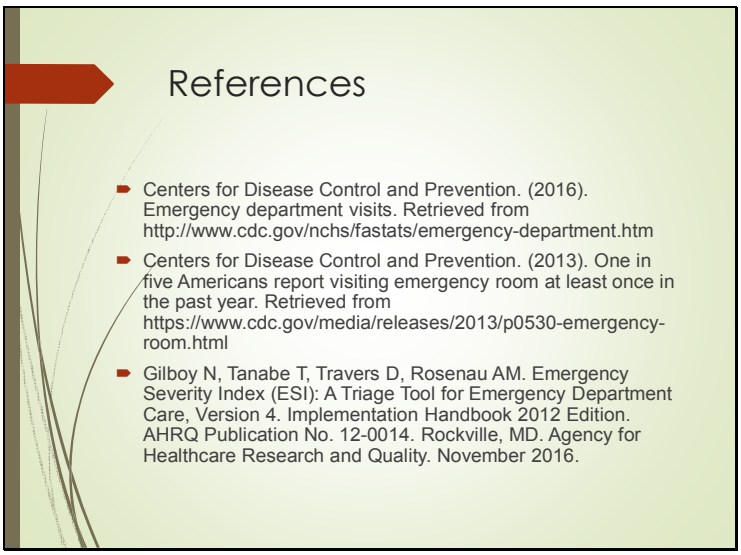
ESI Education Scenario

- Please identify the number on each statement that reflects of ESI level

- **ESI Level**
  - 1-Resuscitation
  - 2-Emergent
  - 3-Urgent
  - 4-Less Urgent
  - 5-Non urgent


Patient scenario
Hypoglycemia patient with altered mental status
35-year-old female with a sudden onset of palpitations, anxious, heart rate of 160
Anaphylactic shock
Overdose patient with respiratory rate of 6
22-year-old male with suicidal thoughts
17-year-old male, history of suicidality, found unresponsive by parents


Patient scenario
14-year-old male brought in by EMS who was injured while playing football, has an obvious deformity to his right lower leg
13-year-old male walks into the ED with his mother. Mother states, "I didn't realize he was out of his medications for his ADHD
16-year-old male brought in by parents High-risk situation who report patient was out of control, screaming obscenities, and threatening to kill the family.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