

# Implementing a Five Level Triage in the Emergency Department

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## Enhancing Safety and Satisfaction

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# Objectives

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- ❖ **Discuss the implementation of a five level triage system that utilizes the Emergency Severity Index (ESI) triage algorithm and replacement of the current three level triage system.**
- ❖ **Explain the Role of Triage, and Responsibilities of the Triage Nurse.**
- ❖ **Evaluation of triage nurse satisfaction levels pre/post ESI system implementation**
- ❖ **Examine the Nursing Triage Survey Results.**

# Background and Significance

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- ❖ **Emergency Department(ED) overcrowding is a health care crisis nationwide.**
- ❖ **Treatment delays threaten patient safety & public health.**
- ❖ **Triage nurses report increased stress while considering safety and prioritizing patients.**
- ❖ **Overcrowded EDs increase need for a valid and reliable triage acuity system.**
- ❖ **Current studies question the reliability and validity of the three-level acuity rating scale used by the majority of the EDs in the United States.**

# Triage- Role and Responsibility

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- ♦ **Triage- derived from the French verb “trier”. To sort or choose.**
- ♦ **Originally used by the military to sort soldiers wounded in battle in order to establish priorities.**
- ♦ **Soldiers were sorted by severity of their injuries ranging from those that were severely injured and not salvageable, to those that can wait to be treated.**
- ♦ **ED’s recognized the need to implement a method to sort patients and identify those needing immediate care, and those that could safely wait to be treated.**

# Methods

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- ❖ **ED nurses participated in a two hour educational introduction to the ESI system.**
- ❖ **Triage nurses participated in a pre & post-test measuring satisfaction prior to and three months following implementation of ESI.**
- ❖ **Implementation of ESI required the support of ED nursing leadership.**
- ❖ **Physicians and Physician Assistant were also provided with the education available to the triage nurses.**

# Emergency Severity Index Algorithm

## ❖ ESI Four Main Decision Points.

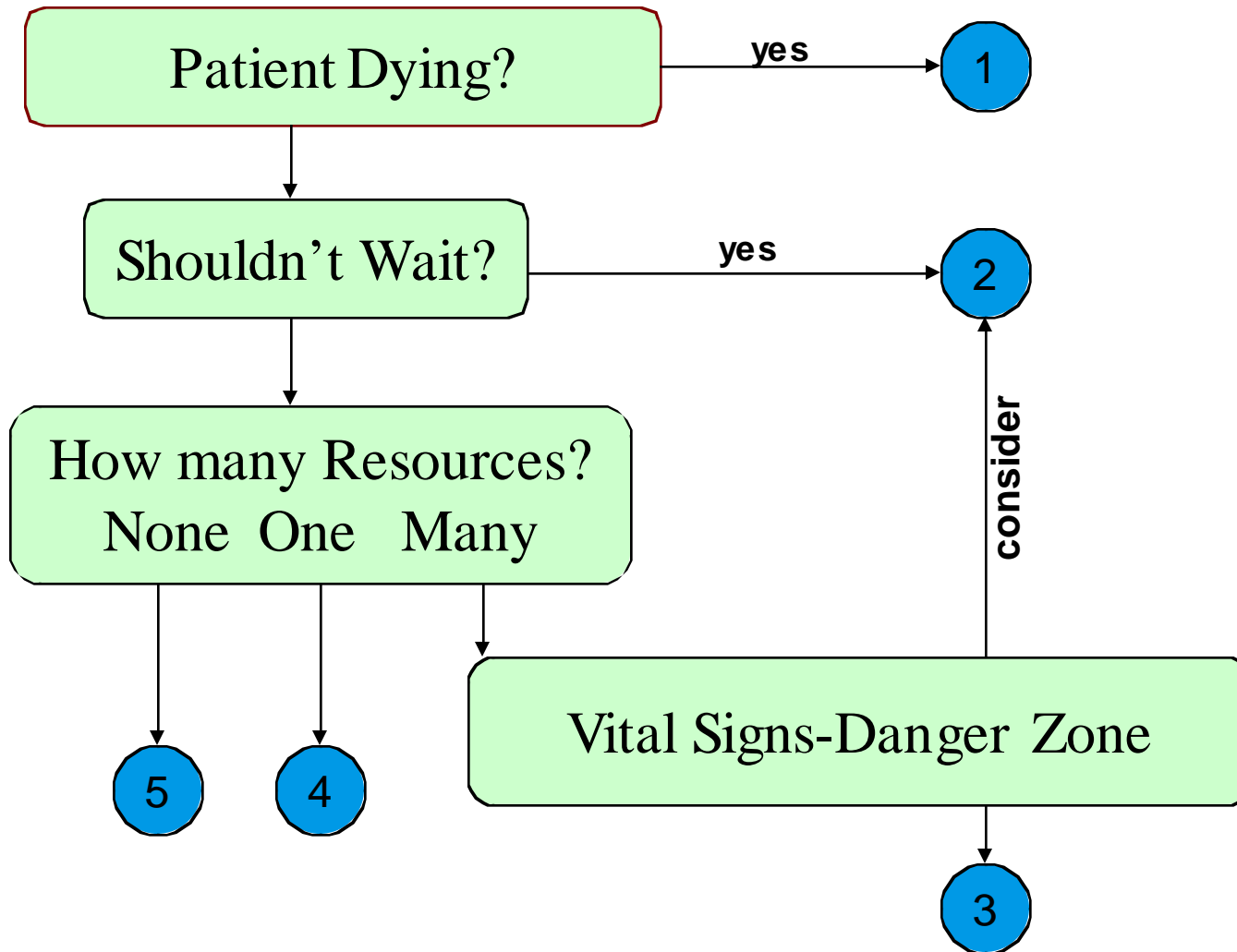
**-Decision Point A: Does the patient require immediate life saving intervention?**

**-Decision Point B: Is this patient a high-risk?**

**-Decision Point C: How many different resources will this patient consume?**

**-Decision Point D: What are the patient's vital signs?**

# Emergency Severity Index Algorithm



# Research Findings: The Reliability of the ESI Triage System

- ❖ **Inter-rater reliability with kappas ranging from 0.70 to 0.80 in study of triage nurses (N=200) rating 40 cases.**
- ❖ **Patient (N=386) triage decisions were evaluated and found to have high interrater reliability; kappas ranging from 0.69 to 0.87 in subsequent study.**
- ❖ **Third study measuring ESI patient triage (N=403) reliability found a kappa of 0.89.**



# Benefits of Implementing the ESI Triage System

- ❖ **Rapid identification of patients requiring immediate attention.**
- ❖ **Rapid identification of patients deemed high risk.**
- ❖ **Identification of patients appropriate for utilization of fast-track resources.**
- ❖ **Improvement in effective communication of patient acuity.**

# Educational Program

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- ❖ **Revision of triage policies and procedures completed by CNS- included in ESI training.**
- ❖ **Two hour educational sessions developed.**
- ❖ **Participation of all ED nurses in sessions.**
- ❖ **ED nursing leadership provided additional resources during training session.**

# Educational Program

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- ❖ **Practice cases encompassing 20 patient scenarios including a variety of age groups, diagnoses and triage levels.**
- ❖ **Competency testing consisted of 20 cases.**
- ❖ **Nurse must correctly triage 18 out of 20 cases to be deemed competent.**
- ❖ **Re-education is mandatory for any staff falling below the standard.**

# ESI Triage Evaluation

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- ❖ **Triage nurses will participate in a pre-test evaluating satisfaction with current triage system at least one week prior to implementation of ESI system.**
- ❖ **Triage nurses will participate in a post-test three months after implementation of ESI system.**
- ❖ **Nursing staff's competency of the ESI system will be tested annually. (Skills Fair)**

# Pre-Test/Post-Test

<b>Triage Registered Nurses</b>	<b>Strongly Disagree  1</b>	<b>Disagree  2</b>	<b>Neither Agree or Disagree 3</b>	<b>Agree  4</b>	<b>Strongly Agree  5</b>
<b>1. I feel confident when I assign a triage level to patients in the ED</b>					
<b>2. I provide safe care to the patients I triage</b>					
<b>3. The current triage system accurately and safely identifies patient acuity.</b>					

# Pre-Test/Post-Test Outcomes

## ♦ Question #1:

***“I feel confident when I assign a triage level to patients in the ED”.***

<u><b>Pre-Test Responses</b></u>	<b>(n=19)</b>
<b>Strongly Disagree</b>	<b>5.2%</b>
<b>Disagree</b>	<b>5.2%</b>
<b>Neither Agree or Disagree</b>	<b>5.2%</b>
<b>Agree</b>	<b>21.05%</b>
<b>Strongly Agree</b>	<b>63.15%</b>

# Pre-Test/Post-Test

## ♦ Question #2:

*“I provide safe care to the patients I triage”.*

<u>Pre-Test Responses</u>	(n=19)
Strongly Disagree	5.2%
Disagree	0.0%
Neither Agree of Disagree	0.0%
Agree	21.05%
Strongly Agree	73.68%

# Pre-Test/Post-Test Outcomes

## ♦ Question #3:

*“The current triage system accurately and safely identifies patient safety”.*

<u>Pre-Test Responses</u>	(n=19)
Strongly Disagree	10.5%
Disagree	26.31%
Neither Agree or Disagree	21.05%
Agree	26.31%
Strongly Agree	15.78%



# Pre-Test/Post-Test

## ♦ Question #1:

***“I feel confident when I assign a triage level to patients in the ED”.***

### **Post-Test Responses**

<b>Strongly Disagree</b>	<b>0.0%</b>
<b>Disagree</b>	<b>0.0%</b>
<b>Neither Agree of Disagree</b>	<b>0.0%</b>
<b>Agree</b>	<b>26.31%</b>
<b>Strongly Agree</b>	<b>73.69%</b>

# Pre-Test/Post-Test

## ♦ Question #2:

*“I provide safe care to the patients I triage”.*

### Post-Test Responses

Strongly Disagree	0.0%
Disagree	0.0%
Neither Agree of Disagree	0.0%
Agree	21.05%
Strongly Agree	78.95%

# Pre-Test/Post-Test

## ◆ Question #3:

*“The current triage system accurately and safely identifies patient safety”.*

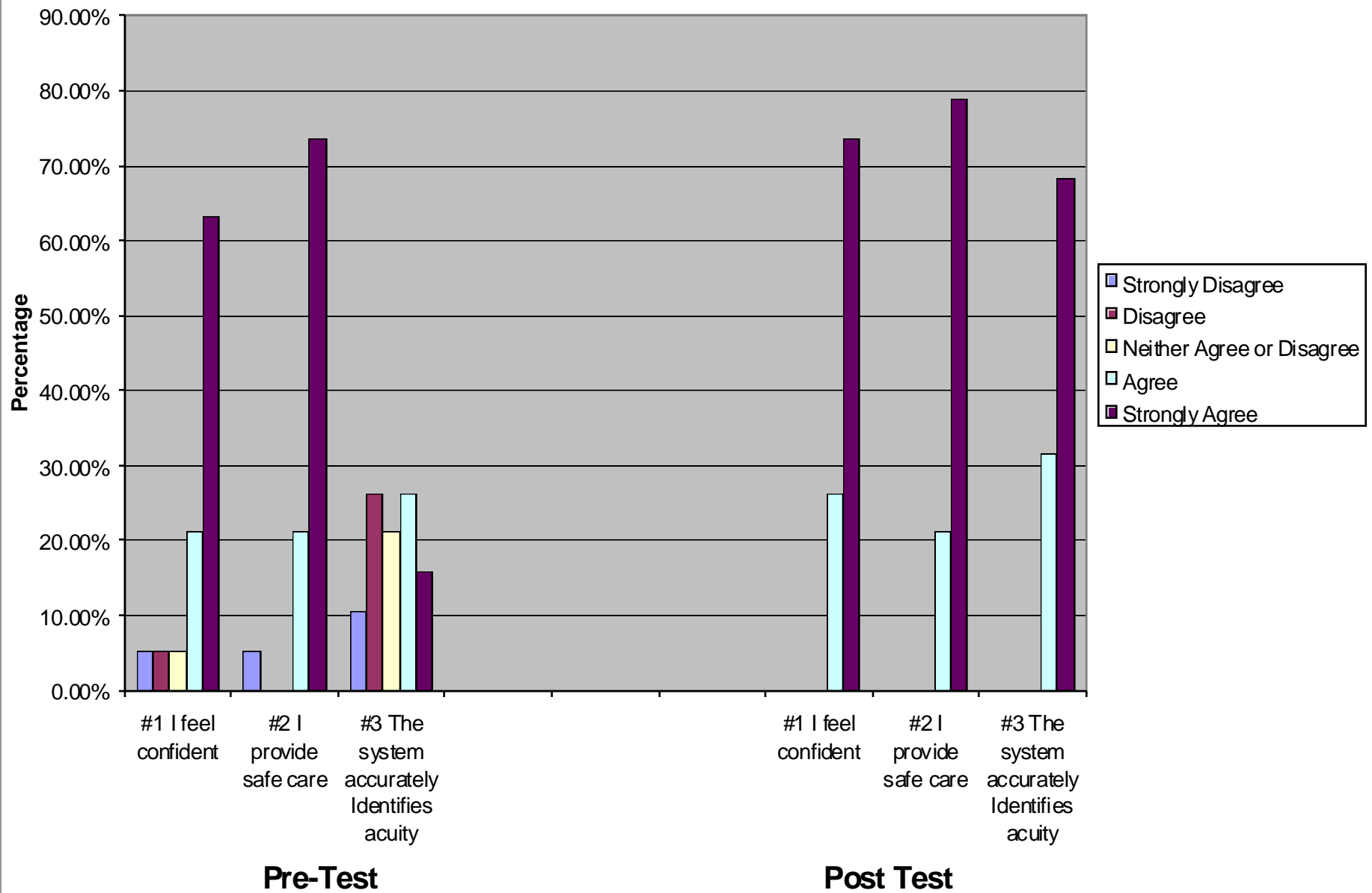
### Post-Test Responses

Strongly Disagree	0.0%
Disagree	0.0%
Neither Agree or Disagree	0.0%
Agree	31.57%
Strongly Agree	68.43%

# Pre-Test/Post-Test Data

	Pre-Test				
	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
#1 I feel confident	5.20%	5.20%	5.20%	21.05%	63.15%
#2 I provide safe care	5.20%	0.00%	0.00%	21.05%	73.68%
#3 The system accurately Identifies acuity	10.50%	26.31%	21.05%	26.31%	15.78%
	Post-Test				
	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
#1 I feel confident	0.00%	0.00%	0.00%	26.31%	73.65%
#2 I provide safe care	0.00%	0.00%	0.00%	21.05%	78.94%
#3 The system accurately Identifies acuity	0.00%	0.00%	0.00%	31.51%	68.42%

## Pre-Test Vs. Post Test



## In Conclusion...

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- ◆ **Triage nurses in the ED feel the current five level triage system accurately identifies patient acuity.**
- ◆ **There is an improvement in the perception of safe care delivery to patients in the ED.**
- ◆ **There is an improvement in the feeling of confidence in triage acuity assignment by the nurses in the ED.**

# References

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