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Catherine Nicholson

University of Tennessee, Knoxville, [cnicho40@vols.utk.edu](mailto:cnicho40@vols.utk.edu)

Lindsey Lakas

University of Tennessee, Knoxville, [lkenne13@vols.utk.edu](mailto:lkenne13@vols.utk.edu)

Marian Malone

University of Tennessee, Knoxville, [mmalon39@utk.edu](mailto:mmalon39@utk.edu)

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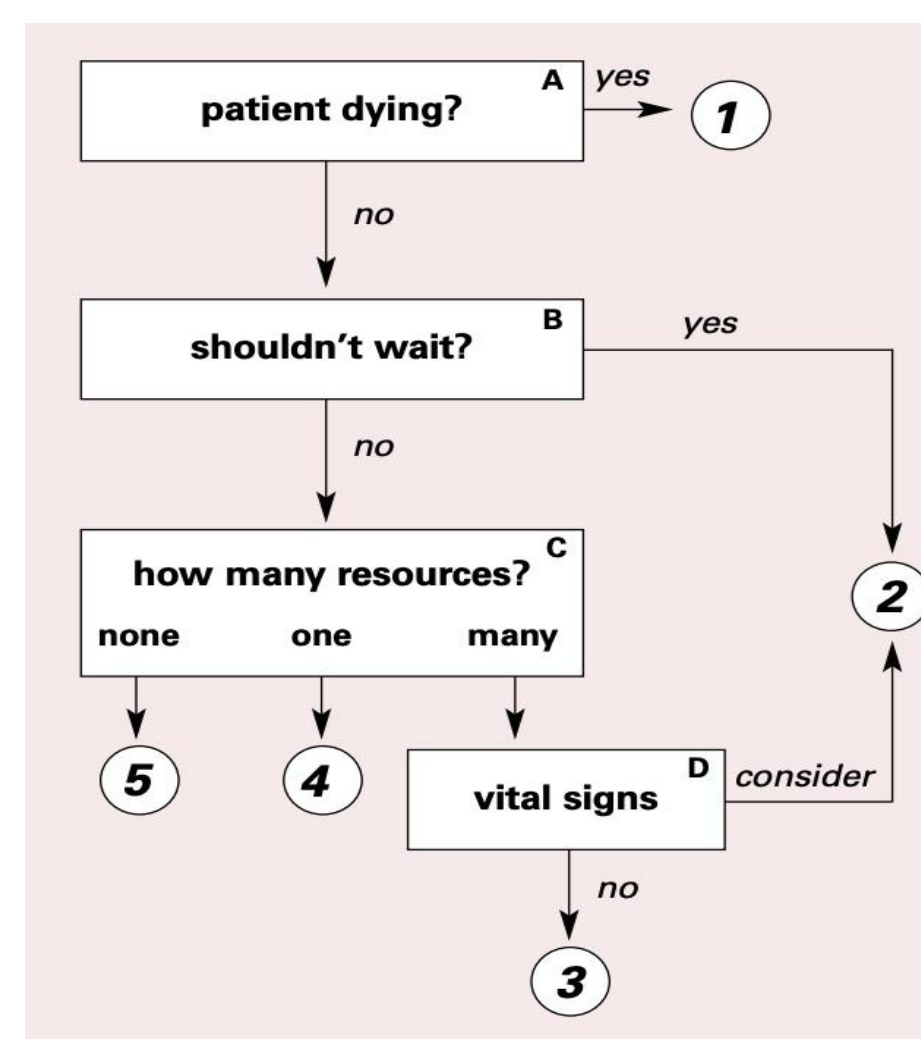
# Implementation of a Continuing Education Module on Triage Practices for Pediatric Emergency Room Nurses

CATHERINE P. NICHOLSON BSN, RN; LINDSEY N. LAKAS BSN, RN; MARIAN MALONE DNP, APRN, CPNP-PC/AC;  
STEPHANIE GUYMON BSN, RN, CPEN

## BACKGROUND

- More than 35 million children visit the emergency department each year.
- Triage is the first interaction with the ED healthcare team.
- Pediatric patients have unique healthcare needs that must be considered by the triage RN.
- Studies support the use of standardized triage protocols and algorithms, such as the Emergency Severity Index (ESI) algorithm, when assigning an acuity level to a patient.

ESI 1	Life-threatening
ESI 2	High risk
ESI 3	2+ resources
ESI 4	1 resource
ESI 5	0 resources



Emergency Severity Index Conceptual Algorithm, v. 4. From *Emergency Severity Index, Version 4: Implementation Handbook* (p.10), by N. Gilboy, P. Tanabe, D. A. Travers, A. M. Rosenau, and D. R. Eitel, 2005, Agency for Healthcare Research and Quality. Copyright 2005 by The ESI Triage Research Team, LLC.

## LOCAL PROBLEM

- Patients at a local pediatric ED are being triaged inaccurately - assigned a lower or higher acuity level than their condition warrants.
- Inaccurate triage leads to patient decompensation while waiting for evaluation by a provider, increased ED wait times, and decreased family satisfaction.
- The purpose of this project is to improve triage accuracy by implementing a CBL module for pediatric ED nurses on facility triage practices and protocols.
- This project aims to aid in improving family satisfaction and decreasing incidences of avoidable patient safety events due to patient decompensation.
- Additionally, this project aims to aid in mitigating ED overcrowding and decreasing ED wait times by improving department efficiency.

## METHODS

- The Plan-Do-Study-Act (PDSA) model for improvement was used to guide project development and implementation.
- Patient charts were audited using an EMR scoring tool developed by the project team.
- Components of the scoring tool include: anticipated department resources based on chief complaint, vital signs (stable versus unstable), and patient decompensation in the ED.
- Physiological changes in vital signs due to fever and uncooperation were considered by the project team when auditing charts.
- 300 charts were audited for triage accuracy prior to implementation and an additional 300 charts were audited post-implementation

Pediatric emergency department patients *were more likely to be triaged accurately* using the standardized ESI triage algorithm following RN completion of a CBL module on triage practices and protocols.

			Time 1	Time 2	Total
ACCURACY	Accurate	Count	251	263	514
		% within time	83.6%	87.7%	85.6%
	Not accurate	Count	49	37	86
		% within time	16.4%	12.3%	14.4%
Total	Count	300	300	600	
	% within time	100.0%	100.0%	100.0%	

	Time 1	Time 2
Average wait time	119 minutes	25 minutes
MD/ DO with accurate ESI	87.6%	90.3%
NP/ PA with accurate ESI	75%	83.9%



Scan for References



COLLEGE OF NURSING

## INTERVENTIONS

- A continuing education module on pediatric triage practices and protocols was developed for nurses at the project site.
- All ED nursing staff invited to participate.
- **CBL module outline:**

- I. Introduction
- II. Objectives
- III. Triage Process
  - A. Focused assessment
  - B. Vital signs
  - C. Resources
- IV. ESI Algorithm
  - A. Overview
  - B. Assigning an appropriate ESI level
  - C. Significance
- V. Special Considerations
  - A. Pediatric-specific conditions
  - B. Additional considerations
- VI. Case studies to test knowledge

## RESULTS

- Emergency department triage accuracy rates increased from 83.6% to 87.7%; this 4.1% increase demonstrates clinical significance of practice improvement.
- Patient wait time decreased from 119 minutes to 25 minutes post-intervention.
- Triage accuracy of patients that were seen by a midlevel provider increased by 8.9%.
- Triage accuracy of patients that were seen by a physician increased by 2.3%.

## CONCLUSIONS

- Clinical significance suggests that the implementation of triage education programs may increase nursing triage accuracy.
- Improved triage accuracy may lead to a decrease in patient wait times and improve ED efficiency.
- Potential for project expansion through VR triage simulation with ED physicians.