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Literature search results

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Search details

Emergency patients who self-present/self-refer/minor injuries. Which is best: see & treat, triage or navigation? Is there a reduction in waiting times, increase in patient satisfaction, patient experience, efficiency, safety?

Resources searched

NHS Evidence; TRIP Database; Cochrane Library; BNI; CINAHL; HMIC; Health Business Elite; MEDLINE; Google Scholar

**Database search terms:** ("emergency department" OR "accident and emergency" OR ED OR “A and E” OR A&E), ("emergency medicine" OR "emergency nurses"), ("see and treat" OR see-and-treat), (navigator OR "patient navigator"), navigation, triage*, "nurse triage", ("fast track8" OR fast-track*), "patient experience"*, "patient satisfaction", efficien*, "waiting time"*, exp PATIENT SATISFACTION, exp PATIENT SAFETY, "patient safety", ("self referr" OR self-referr*), ("self-present" OR self-present*), "minor injur"

**Evidence search string(s):** emergency (triage OR “see and treat” OR navigator OR navigation)

**Google search string(s):** emergency (nurse OR nursing) (triage OR “see and treat” OR navigator OR navigation)

Summary

There is far more information about triage within emergency departments by nurses than See and Treat and Navigation.

Guidelines and Policy
Title: Effectiveness of using the front door score to enhance the chest pain triage accuracy of emergency nurse triage decisions.

Citation: Journal of Cardiovascular Nursing, November 2013, vol./is. 28/6(E55-64), 0889-4655;1550-5049 (2013 Nov-Dec)

Author(s): Ho JK, Suen LK

Language: English

Abstract: BACKGROUND: Nurses lack a standard tool to stratify the risk of chest pain in triage patients. The type of risk stratification may correspond to the type of acuity rating of the 5-level triage scale adopted by nurses for chest pain triage, based on the Front Door Score, simplified from the Thrombolysis in Myocardial Infarction Risk Score for unstable angina or non-ST-segment elevation myocardial infarction.

AIM: This study aimed to evaluate the ability of using the Front Door Score to enhance the accuracy of emergency nurse triage decisions for patients who present with chest pain.

DESIGN: A cross-sectional descriptive design was used.

METHODS: A convenience sample of 200 subjects was obtained from an emergency department in Hong Kong. Data were collected via a questionnaire. The final physician diagnoses were used as the gold standard in justifying the appropriateness of the risk stratification of chest pain. The agreement rates among the final physician diagnoses, Thrombolysis in Myocardial Infarction Risk Score for unstable angina or non-ST-segment elevation myocardial infarction, nurses using the triage scale, and nurses using the Front Door Score were computed using k statistics.

RESULTS: A significant substantial agreement was observed between the final physician diagnoses and nurses using the Front Door Score. In comparison, the agreement between the final physician diagnoses and nurses using the triage scale was poor.

CONCLUSION: The chest pain triage reliability of nurses using the Front Door Score was found to be much more credible than that of nurses using the triage scale. A suggested conversion of the scales of Front Door Score was established.

CLINICAL IMPLICATIONS: The Front Door Score should be considered as a standard tool to enhance the chest pain triage accuracy of emergency nurse triage decisions.
At Presbyterian Healthcare Services in Albuquerque, NM, emergency department navigators refer patients with minor ailments to primary care providers or urgent care centers. All patients are triaged by nurse in ED. - Appropriate patients are sent to the hospital's Lean Track area where they are evaluated by a physician or mid-level provider. - Patients who can safely be treated in 12-24 hours are referred to the navigator, who obtains an appointment for them with a primary care provider or urgent care center.

Title: ED navigators prevent unnecessary admissions.
Citation: Hospital Case Management, February 2012, vol./is. 20/2(22, 27), 1087-0652;1087-0652 (2012 Feb)
Author(s): anonymous
Language: English
Abstract: RN Navigators in the emergency department at Montefiore Medical Center work with social workers to prevent unnecessary admissions. Program targets the homeless and patients with tenuous living situations. CMs work with the emergency department staff to identify patients who don't meet admission criteria but can't be safely discharged. The hospital collaborates with a local housing assistance agency which sends a van to transport appropriate patients to a shelter.

Title: Navigating triage to meet targets for waiting times.
Citation: Emergency Nurse, June 2013, vol./is. 21/3(20-6), 1354-5752;1354-5752 (2013 Jun)
Author(s): Diaz Alonso I
Language: English
Abstract: An initial assessment process, called navigation, has been introduced at Medway Maritime Hospital emergency department (ED) to address problems with the triage system and to meet the latest ED quality clinical indicators. This article explains the rationale for introducing the new assessment process, describes the system and discusses the change-management process needed to implement it.

Title: "See and Treat": spreading like wildfire? A qualitative study into factors affecting its introduction and spread.
Citation: Emergency Medicine Journal, August 2005, vol./is. 22/8(548-52), 1472-0205;1472-0213 (2005 Aug)
Author(s): Lamont SS
Language: English
Abstract: OBJECTIVES: The aim of this paper was to explore key factors that influenced the spread of "See and Treat" in a range of accident and emergency (A&E) departments.METHODS: The study adopted a qualitative approach, and semi-structured interviews were undertaken with 21 key individuals working across
10 A&E departments operating See and Treat. Participants included clinicians, managers, and chief executives. RESULTS: Many factors influenced the spread of See and Treat. The initiative was well supported and monitored by external agencies, patients benefited and no staff groups lost out, waiting times were reduced, and Department of Health targets were achieved. However, this study indicates there were also a range of factors that limited the spread of See and Treat, including lack of additional resources and suitably experienced staff, impact upon quality of care, and no prior evaluation of its benefits. An interesting additional factor that may be both facilitating and limiting is the complexity of the A&E culture, in particular staff perspectives about working with minor injuries. CONCLUSIONS: See and Treat was promoted as a solution to waiting times problems in A&E, without evidence from any national evaluation. However, many staff members referred to its usefulness as a tool to reduce waiting times and enhance the patient journey, although resource, quality, and staffing issues may mean such an initiative may be difficult to sustain in its present form.

**Publication Type:** Journal Article, Multicenter Study

**Source:** MEDLINE

**Full Text:**
Available from *Highwire Press* in *Emergency Medicine Journal*
Available from *National Library of Medicine* in *Emergency Medicine Journal: EMJ*

**Title:** Making see and treat work for patients and staff.

**Citation:** Emergency Nurse, February 2004, vol./is. 11/9(16-7), 1354-5752;1354-5752 (2004 Feb)

**Author(s):** Parker L

**Language:** English

**Abstract:** Every department is at a different stage in the development of see and treat. Teams have been established in various ways and are experiencing different dilemmas in making see and treat work best. It is not enough to pick up an established see and treat model, place it in an emergency department and sit back and watch the results. There is no 'magic wand'; no single determining factor to make see and treat work well. Influencing factors need to be understood, applied locally and reviewed regularly to assess success. The NHS Modernisation Agency publishes its survey report, See and Treat: Making it work for patients and staff, on February 4. For further details, access www.modern.nhs.uk/emergency

**Publication Type:** Journal Article

**Source:** MEDLINE

**Full Text:**
Available from *EBSCOhost* in *Emergency Nurse*

**Title:** Evaluation of a 'See and Treat' pilot study introduced to an emergency department.

**Citation:** Accident & Emergency Nursing, January 2004, vol./is. 12/1(24-7), 0965-2302;0965-2302 (2004 Jan)

**Author(s):** Rogers T, Ross N, Spooner D

**Language:** English

**Abstract:** OBJECTIVE: To assess the effectiveness of a 'See and Treat' system on waiting times for patients attending an Emergency Department with minor injuries and illnesses. METHODS: Retrospective analysis of statistics collected during two study periods and compared for evaluation. RESULTS: The percentage of patients assessed within 15 min increased from 82% to 98%. The percentage of patients seen within 1 h of arrival rose from 63% to 90% using 'See and Treat'. The percentage of patients discharged within 1 h rose from 16% to 41%. The average wait to see a doctor or emergency nurse practitioner dropped from 56 to 30 min. The total average time in the department dropped from 1 h 39 min to 1 h 17 min. During 'See and Treat' the waiting times for all patients within the department were also reduced. CONCLUSION: 'See and Treat' reduces waiting times for patients
with minor injuries and illnesses and has a positive effect on waiting times for patients elsewhere in the department.

**Publication Type:** Evaluation Studies, Journal Article  
**Source:** MEDLINE

**Greet and treat: 12 months on.**  
**Author(s):** Dancocks A, Shrimpling M  
**Citation:** Emergency Nurse, 01 May 2003, vol./is. 11/2(11-11), 13545752  
**Publication Date:** 01 May 2003  
**Abstract:** Department of Health officials often cite Kettering General Hospital A&E as a template that other emergency departments can use to implement the government's 'see and treat' initiative. Angela Dancocks and Marisa Shrimpling examine the progress made over the past year.  
**Source:** CINAHL  
**Available in fulltext from Emergency Nurse at EBSCOhost**  
**Available in print at Pilgrim Hospital Staff Library**

**Nurse triage**

**Title:** Provider in triage: is this a place for nurse practitioners?.  
**Citation:** Advanced Emergency Nursing Journal, October 2013, vol./is. 35/4(332-43), 1931-4485;1931-4493 (2013 Oct-Dec)  
**Author(s):** Bahena D, Andreoni C  
**Language:** English  
**Abstract:** The role of nurse practitioners (NPs) in emergency care continues to evolve. A new and exciting role is the provider-in-triage (PIT) role. This innovative role has been implemented in many emergency departments (EDs) across the country. It was developed primarily as a front-end strategy to improve throughput of patients receiving emergency care. The PIT process uses a provider, physician, NP, or physician assistant in the triage area. Patient satisfaction, quality measures, and financial improvements have been attributed to using a PIT. The emergency NP is an optimal choice for this role. Advanced emergency nursing knowledge, skills, and decision making confer the NP a cost-effective provider to improve throughput in the ED while providing quality emergency care.  
**Publication Type:** Journal Article  
**Source:** MEDLINE

**Title:** Safety and efficiency of triaging low urgent self-referred patients to a general practitioner at an acute care post: an observational study.  
**Citation:** Emergency Medicine Journal, November 2012, vol./is. 29/11(877-81), 1472-0205;1472-0213 (2012 Nov)  
**Author(s):** van der Straten LM, van Stel HF, Spee FJ, Vreeburg ME, Schrijvers AJ, Sturms LM  
**Language:** English  
**Abstract:** OBJECTIVE: To assess the safety and efficiency of triaging low urgent self-referred patients at the emergency department (ED) to a general practitioner (GP) based on the Manchester triage system (MTS).METHODS: All self-referred patients in the evening, night and weekends were included in this prospective observational study. Patients were triaged by an ED nurse according to the MTS and allocated to a GP or the ED according to a predefined care scheme. For patients treated by the GP, assessments were made of safety as measured by hospitalisation and return to the ED within 2 weeks, and efficiency as measured by referral to the ED. RESULTS: In 80% of cases allocation of the self-referrals to the ED or GP was according to a predefined scheme. Of the 3129 low urgent self-refferred patients triaged to the GP, 2840 (90.8%) were sent home, 202 (6.5%) were directly referred to the ED, 36 (1.2%) were hospitalised. Within a random sample of low urgent patients sent home by the GP (222 of 2840), 8 (3.6%)
returned to the ED within 2 weeks. Against the agreed MTS scheme, the ED also directly treated 664 low urgent patients, mainly for extremity problems (n=512). Despite the care agreements, 227 urgent patients were treated by the GP, with a referral rate to the ED of 18.1%, a hospitalisation rate of 4.0% and a 4.5% return rate to the ED within 2 weeks.

CONCLUSIONS: Low urgent self-referrals, with the exception of extremity problems, were shown to be treated efficiently and safely by a GP. A selected group of more urgent patients also seem to be handled adequately by the GP. Triage of low urgent patients with extremity problems and reasons for nurses not following a predefined triage allocation scheme need further elaboration.

Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE

Title: Triage nurse prediction of hospital admission.
Citation: Journal of Emergency Nursing, May 2012, vol./is. 38/3(306-10), 0099-1767;1527-2966 (2012 May)
Author(s): Stover-Baker B, Stahlman B, Pollack M
Language: English
Abstract: INTRODUCTION: Numerous factors affect patient flow in the emergency department. One important factor that has a negative impact on flow is ED patients waiting for an inpatient bed. It currently takes approximately 5 hours from triage to a request for an inpatient bed in our emergency department. Knowledge of patients requiring admission early in their ED evaluation could speed up the process of securing a bed. The objective of this study was to determine if an ED triage nurse (TRN) can determine at triage if a patient will be admitted to an inpatient unit. A secondary objective was to measure the confidence of the TRN prediction.
METHODS: A prospective, non-consecutive study was conducted during an 18-day period in 2010 in a community hospital emergency department treating 76,000 patients. Experienced TRNs were trained in the evaluation tool. Immediately after the initial TRN evaluation, a determination was made in writing by the TRN regarding the likelihood of hospital admission and level of confidence in this decision. Patients who did not enter the emergency department through triage (ambulance) or were younger than 18 years were excluded.
RESULTS: A total of 3514 patients approached triage. Of these patients, 1866 were eligible for the study and 1164 (62%) were enrolled. We excluded 25 subjects because of missing data, resulting in 1139 subjects. Missed subjects had the same baseline characteristics. A total of 287 (25.2%) hospital admissions occurred. TRN predicted 217 admissions, with a sensitivity of 75.6% (95% confidence interval [CI] 71.3-79.5) and a specificity of 84.5% (95% CI 83.1-85.8). The TRN reported being extremely confident in the prediction 50.1% of the time. In these cases, the TRN demonstrated an admission sensitivity of 81.6% (95% CI 76.5-85.8) and specificity of 93.1% (95% CI 91.8-94.3).
CONCLUSIONS: The TRN demonstrated a high sensitivity and specificity in admission prediction at triage and could potentially save many hours in requesting an inpatient bed. This increased efficiency could result in a more rapid ED throughput and decreased ED boarding. Copyright 2012 Emergency Nurses Association. Published by Mosby, Inc. All rights reserved.

Publication Type: Journal Article
Source: MEDLINE

Title: "RAPID" team triage: one hospital's approach to patient-centered team triage.
Citation: Advanced Emergency Nursing Journal, April 2012, vol./is. 34/2(177-89), 1931-4485;1931-4493 (2012 Apr-Jun)
Author(s): Shea SS, Hoyt KS
Language: English
Abstract: Patients who present to the emergency department want definitive care by a health care provider who can perform an initial assessment, initiate treatment, and implement a disposition plan. The traditional "nurse triage" model often creates barriers to the process of rapidly evaluating patients. Therefore, innovative strategies must be explored to improve the time of patient arrival to the time seen by a qualified provider in order to complete a thorough medical screening examination. One such approach is a rapid team triage system that provides a patient-centered process. This article describes the implementation of a rapid team triage model in an urban community hospital.

Title: A pivot nurse at triage.

Citation: Journal of Emergency Nursing, January 2012, vol./is. 38/1(104-5), 0099-1767;1527-2966 (2012 Jan)

Author(s): Martin M

Language: English

Abstract: According to Drs Thom Mayer and Kirk Jensen, widely recognized experts in leadership, management, and customer service, "Improving patient flow essentially means patients spend exactly the right amount of time at every juncture in their journey through an organization, when you improve flow, you can serve more patients, with less effort and you can serve them better." Recognizing that backups in the emergency department are a result of broken processes throughout the hospital is the first step in solving these problems. The most significant challenges are the prevailing attitudes that team triage and immediate bedding could not be done. Another challenge is the broad reaching nature of the issue. ED throughput is truly a system problem. As ED crowding worsens, it is important for departments to improve operations to promote patient throughput. No doubt, operational bottlenecks at the back end of the emergency department will ultimately lead to front-end delays. However, proficient patient processing at the ED front end can minimize the time to physician evaluation, increase patient satisfaction, and decrease total ED length of stay.

Title: Applying lean: implementation of a rapid triage and treatment system.

Citation: The Western Journal of Emergency Medicine, May 2011, vol./is. 12/2(184-91), 1936-900X;1936-9018 (2011 May)

Author(s): Murrell KL, Offerman SR, Kauffman MB

Language: English

Abstract: OBJECTIVE: Emergency department (ED) crowding creates issues with patient satisfaction, long wait times and leaving the ED without being seen by a doctor (LWBS). Our objective was to evaluate how applying Lean principles to develop a Rapid Triage and Treatment (RTT) system affected ED metrics in our community hospital.METHODS: Using Lean principles, we made ED process improvements that led to the RTT system. Using this system, patients undergo a rapid triage with low-acuity patients seen and treated by a physician in the triage area. No changes in staffing, physical space or hospital resources occurred during the study period. We then performed a retrospective, observational study comparing hospital electronic medical record data six months before and six months after implementation of the RTT system.RESULTS: ED census was 30,981 in the six months prior to RTT and 33,926 after. Ambulance arrivals, ED patient acuity and hospital admission rates were unchanged throughout the study periods. Mean ED length of stay was longer in the period before RTT (4.2 hours, 95% confidence interval [CI] = 4.2-4.3; standard deviation [SD] = 3.9) than after (3.6 hours, 95% CI = 3.6-3.7; SD = 3.7). Mean ED arrival to physician start time was 62.2 minutes (95% CI = 61.5-63.0; SD = 58.9) prior to RTT and 41.9 minutes (95% CI = 41.7-42.1; SD = 68.9) after RTT.
CI = 41.5-42.4; SD = 30.9) after. The LWBS rate for the six months prior to RTT was 4.5% (95% CI = 3.1-5.5) and 1.5% (95% CI = 0.6-1.8) after RTT initiation. CONCLUSION: Our experience shows that changes in ED processes using Lean thinking and available resources can improve efficiency. In this community hospital ED, use of an RTT system decreased patient wait times and LWBS rates.

**Publication Type:** Journal Article  
**Source:** MEDLINE  
**Full Text:** Available from National Library of Medicine in Western Journal of Emergency Medicine

**Title:** Do triage systems in healthcare improve patient flow? A systematic review of the literature.  
**Citation:** Australian Health Review, August 2011, vol./is. 35/3(371-83), 0156-5788;0156-5788 (2011 Aug)  
**Author(s):** Harding KE, Taylor NF, Leggat SG  
**Language:** English  
**Abstract:** OBJECTIVES: Triage processes are often used by Emergency Departments to sort patients according to urgency or type of service required. Triage may also be used in a broad spectrum of other health services and not just emergency departments. Triage systems may be used to ensure the most urgent patients get timely service, but do they have an effect on patient flow? METHODS: We conducted a systematic review by searching five electronic databases (until August 2009) combining the elements 'triage' and 'patient flow', complemented by hand searching reference lists and citation tracking. We identified and assessed the quality of 25 articles that met inclusion criteria. Population, setting, design and results were extracted and a process of descriptive synthesis applied. Effect sizes for waiting time were compared for seven studies in which sufficient data could be extracted. RESULTS AND CONCLUSION: Moderate evidence exists from a range of health services that the ability to combine triage and initial treatment in less resource intensive cases can have a positive effect on patient flow. There is conflicting evidence that triage systems that only prioritize patients, without providing any treatment, improve overall patient flow, although tailoring triage criteria more specifically to the patient population or using triage to prioritize treatable cases may be of benefit.

**Publication Type:** Journal Article, Review  
**Source:** MEDLINE

**Title:** A systematic review of triage-related interventions to improve patient flow in emergency departments.  
**Citation:** Scandinavian Journal of Trauma, Resuscitation & Emergency Medicine, 2011, vol./is. 19/(43), 1757-7241;1757-7241 (2011)  
**Author(s):** Oredsson S, Jonsson H, Rognes J, Lind L, Goransson KE, Ehrenberg A, Asplund K, Castren M, Farrohknia N  
**Language:** English  
**Abstract:** BACKGROUND: Overcrowding in emergency departments is a worldwide problem. A systematic literature review was undertaken to scientifically explore which interventions improve patient flow in emergency departments. METHODS: A systematic literature search for flow processes in emergency departments was followed by assessment of relevance and methodological quality of each individual study fulfilling the inclusion criteria. Studies were excluded if they did not present data on waiting time, length of stay, patients leaving the emergency department without being seen or other flow parameters based on a nonselected material of patients. Only studies with a control group, either in a randomized controlled trial or in an observational study with historical controls, were included. For each intervention, the level of scientific
evidence was rated according to the GRADE system, launched by a WHO-supported working group. RESULTS: The interventions were grouped into streaming, fast track, team triage, point-of-care testing (performing laboratory analysis in the emergency department), and nurse-requested x-ray. Thirty-three studies, including over 800,000 patients in total, were included. Scientific evidence on the effect of fast track on waiting time, length of stay, and left without being seen was moderately strong. The effect of team triage on left without being seen was relatively strong, but the evidence for all other interventions was limited or insufficient. CONCLUSIONS: Introducing fast track for patients with less severe symptoms results in shorter waiting time, shorter length of stay, and fewer patients leaving without being seen. Team triage, with a physician in the team, will probably result in shorter waiting time and shorter length of stay and most likely in fewer patients leaving without being seen. There is only limited scientific evidence that streaming of patients into different tracks, performing laboratory analysis in the emergency department or having nurses to request certain x-rays results in shorter waiting time and length of stay.

Publication Type: Journal Article, Review
Source: MEDLINE
Available from BioMedCentral in Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine

Title: Delays in response and triage times reduce patient satisfaction and enablement after using out-of-hours services.
Citation: Family Practice, December 2010, vol./is. 27/6(652-63), 0263-2136;1460-2229 (2010 Dec)
Author(s): Kelly M, Egbunike JN, Kinnersley P, Hood K, Owen-Jones E, Button LA, Shaw C, Porter A, Snooks H, Bowden S, Edwards A
Language: English
Abstract: BACKGROUND: several different models of out-of-hours primary care now exist in the UK. Important outcomes of care include users' satisfaction and enablement to manage their illness or condition, but the determinants of these outcomes in the unscheduled care domain are poorly understood. Aim. To identify predictors of user satisfaction and enablement across unscheduled care or GP out-of-hours service providers in Wales. The design of the study is a cross-sectional survey. The setting of the study is nine GP out-of-hours services, three Accident and Emergency units and an all Wales telephone advice service in Wales.METHODS: postal survey using the Out-of-hours Patient Questionnaire. Logistic regression was used to fit both satisfaction and enablement models, based on demographic variables, service provider and treatment received and perceptions or ratings of the care process.RESULTS: eight hundred and fifty-five of 3250 users responded (26% response rate, range across providers 14-41%, no evidence of non-response bias for age or gender). Treatment centre consultations were significantly associated with decreased patient satisfaction and decreased enablement compared with telephone advice. Delays in call answering or callback for triage and shorter consultations were significantly associated with lower satisfaction. Waiting more than a minute for initial call answering was associated with lower enablement.CONCLUSIONS: giving users more time to discuss their illness in consultations may enhance satisfaction and enablement but this may be resource intensive. More simple interventions to improve access by quicker response and triage, and keeping users informed of waiting times, could also serve to increase satisfaction and ultimately impact on their enablement.
Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE
Full Text:
Title: A patient survey on emergency department use of nurse practitioners.
Citation: Advanced Emergency Nursing Journal, July 2009, vol./is. 31/3(228-35), 1931-4485;1931-4493 (2009 Jul-Sep)
Author(s): Hart L, Mirabella J
Language: English
Abstract: The purpose of this descriptive study was to determine the willingness of emergency department patients, triaged to fast track areas, to be treated by an advanced practice registered nurse. A survey was distributed to a convenience sample of patients triaged to fast track areas in three southeastern emergency departments. The survey contained basic demographic information, four multiple-choice questions, and a section for comments. A majority of patients (65%) responded that they were willing to be treated by a nurse practitioner. Patients who had been treated by a nurse practitioner in the past were more willing to be treated by a nurse practitioner during this visit. Implications for practice: The results of this study support the addition of nurse practitioners to fast track emergency department teams. Additional studies that focus on public and professional education regarding the role of the emergency nurse practitioner are warranted.
Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE

Title: Effect of introduction of nurse triage on waiting times in a South African emergency department.
Citation: Emergency Medicine Journal, July 2008, vol./is. 25/7(395-7), 1472-0205;1472-0213 (2008 Jul)
Author(s): Bruijns SR, Wallis LA, Burch VC
Language: English
Abstract: BACKGROUND: In a resource poor setting with poverty, a high burden of disease and critically low medical staff numbers, triage could potentially improve the long waiting times experienced at South African public hospital emergency departments (ED) and render timely emergency care to those in most need.AIM: To evaluate the impact of introducing nurse triage (using the Cape Triage Score (CTS)) on waiting times for patients presenting to a South African public hospital ED.METHODS: Pre-triage waiting times were collected retrospectively through accessing hospital records of four randomly chosen months of the preceding year. This was compared with data collected prospectively over a 3 month period using nurse triage and the CTS triage tool. Captured data included CTS priority category, time of nurse triage and time of attendance by ED doctor.RESULTS: Waiting times were significantly reduced in all but the lowest priority category. The introduction of nurse triage, using the CTS, resulted in an overall reduction in waiting time from 237 min to 146 min (p<0.001). Patients triaged "red" (highest priority) demonstrated a mean reduction in waiting time from 216 min to 38 min (p<0.001).CONCLUSIONS: The results demonstrate that use of the CTS, as implemented by trained nurses, dramatically reduced the waiting time of patients attending a busy public hospital ED in South Africa.
Publication Type: Journal Article
Source: MEDLINE

Title: Team triage improves emergency department efficiency.
Citation: Emergency Medicine Journal, September 2004, vol./is. 21/5(542-4), 1472-0205;1472-0213 (2004 Sep)
Author(s): Subash F, Dunn F, McNicholl B, Marlow J
Language: English
**Abstract:** OBJECTIVE: To see whether three hours of combined doctor and nurse triage would lead to earlier medical assessment and treatment and whether this benefit would carry on for the rest of the day when normal triage had resumed. METHOD: Eight days were randomly selected; four for team triage and four for the normal nurse led triage. Team triage was coordinated by a middle grade or consultant from 9 am to 12 noon. Times to triage, to see a doctor, radiology, admission, and discharge were recorded. No additional medical or nursing staff were used and staffing levels were similar each day. All patients including blue light emergencies and minor injuries were included. RESULTS: Median times were significantly reduced (p<0.05) during the intervention to triage (2 min v 7 min, p = 0.029), to see a doctor (2 min v 32 min, p = 0.029), and to radiology (11.5 min v 44.5 min, p = 0.029). Waiting times at midday were longer for patients in the non-intervention group. More patients were seen and discharged within 20 minutes in the intervention group (18 of 95 (19%) v 2 of 69 (3%) p = 0.0043). No significant knock on effect was demonstrable for the remaining 21 hours after the intervention ceased. CONCLUSION: Three hours of combined doctor and nurse triage significantly reduces the time to medical assessment, radiology, and to discharge during the intervention period. Waiting times at midday were shorter in the triage group. There was no significant knock on effect the rest of the day.

**Publication Type:** Journal Article  
**Source:** MEDLINE  
**Full Text:** Available from *Highwire Press* in *Emergency Medicine Journal*  
Available from *National Library of Medicine* in *Emergency Medicine Journal: EMJ*

**Title:** Patient satisfaction with triage nursing in a rural hospital emergency department.  
**Citation:** Journal of Nursing Care Quality, July 2004, vol./is. 19/3(263-8), 1057-3631;1057-3631 (2004 Jul-Sep)  
**Author(s):** Elder R, Neal C, Davis BA, Almes E, Whitledge L, Littlepage N  
**Language:** English  
**Abstract:** This study examined what relationships or differences exist between patient and nurse characteristics, satisfaction with triage nurse caring behaviors, general satisfaction with the triage nurse, and intent to return to a rural hospital emergency department (ED). The ED, located at a 401-bed teaching hospital in a small southern city, averages 28,000 visits annually. Samples of ED nurses (N = 11) and ED patients (N = 65) were asked to respond to demographic forms and the Consumer Emergency Care Satisfaction Scale (CECSS) Adapted. Findings indicated that the nurse's acuity rating and the patient's perception of condition had a positive relationship. The patient's perception of condition, patient satisfaction, and caring satisfaction were predictors of intent to return. When patients perceived themselves as seriously ill or injured, they expressed less intent to return to that ED.  
**Publication Type:** Evaluation Studies, Journal Article  
**Source:** MEDLINE  
**Full Text:** Available from *EBSCOhost* in *Journal of Nursing Care Quality*

**Title:** Nurse triage, diagnosis and treatment of eye casualty patients: a study of quality and utility.  
**Citation:** Accident & Emergency Nursing, October 2003, vol./is. 11/4(226-8), 0965-2302;0965-2302 (2003 Oct)  
**Author(s):** Buchan JC, Saihan Z, Reynolds AG  
**Language:** English  
**Abstract:** INTRODUCTION: Patients presenting to the Accident and Emergency department of a district general hospital with an eye problem are referred directly to
a dedicated eye casualty service. They are then triaged by a staff nurse from the eye department. This eye casualty sees around 8000 patients per annum. This study assesses whether the nurse triage of eye casualty patients forms an effective filter of problems which do not require the attention of the doctor on duty. The incidence of cases of misdiagnosis and inappropriate discharge of patients resulting in a delay in diagnosis and treatment was also assessed. METHODS: All patients presenting in a 3-month period managed solely by the triage nurse, were identified from the casualty register, and the hospital records retrieved and examined. RESULTS: Four hundred and forty of a total 1976 patients (22%) were seen exclusively by triage nurses; eight (2.5%) of these 440 patients returned unplanned to the eye department. In all cases it was considered that the return of the patient would not have been preventable by initial attention of the ophthalmologist on duty. DISCUSSION: With appropriate threshold for referral, nurses trained in slit lamp examination can offer a successful service to safely diagnose and treat common eye casualty presentations.

**Publication Type:** Journal Article

**Source:** MEDLINE

**Title:** An advance triage system.

**Citation:** Accident & Emergency Nursing, January 2002, vol./is. 10/1(10-6), 0965-2302;0965-2302 (2002 Jan)

**Author(s):** Cheung WW, Heeney L, Pound JL

**Language:** English

**Abstract:** This paper describes the redesign of the triage process in an Emergency Department with the purpose of improving the patient flow and thus increasing patient satisfaction through the reduction of the overall length of stay. The process, Advance Triage, allows the triage nurse to initiate diagnostic protocols for frequently occurring medical problems based on physician-approved algorithms. With staff and physician involvement and medical specialist approval, nine Advance Triage algorithms were developed—abdominal pain, eye trauma, chest pain, gynaecological symptoms, substance abuse, orthopaedic trauma, minor trauma, paediatric fever and paediatric emergent. A comprehensive educational program was provided to the triage nurses and Advance Triage was initiated. A process was established at one year to evaluate the effectiveness of the Advance Triage System. The average length of stay was found to be 46 min less for all patients who were advance triaged with the greatest time-saving of 76 min for patients in the 'Urgent' category. The most significant saving was realized in the patient's length of stay (LOS) after the Emergency Physician assessed them because diagnostic results, available during the initial patient assessment, allowed treatment decisions to be made at that time. Advance Triage utilizes patient waiting time efficiently and increases the nurses' and physicians' job satisfaction.

**Publication Type:** Journal Article

**Source:** MEDLINE

**Title:** Triage nurses' decisions using the National Triage Scale for Australian emergency departments.

**Author(s)** Considine J, Ung L, Thomas S

**Citation:** Accident & Emergency Nursing, 01 October 2000, vol./is. 8/4(201-209), 09652302

**Publication Date:** 01 October 2000

**Abstract:** The initiation of emergency care primarily depends on the decisions made by the triage nurse. Triage decisions can therefore have a profound effect on the health outcomes of patients who present for emergency care. If the National Triage Scale (NTS) was effective in providing a standardized approach to triage, a patient with a specific problem should be allocated to the same triage category, irrespective of the institution to which they present or the personnel performing the role of triage. This study examines triage nurses' level of agreement in their
allocation of triage categories to patients with specific presenting problems using the NTS. Relationships between demographic characteristics of participants and triage decisions are examined and implications of any variation for triage practice and patient outcomes are explored. Copyright 2000 Harcourt Publishers Ltd

Source: CINAHL

Title: Patient satisfaction with emergency department triage nursing care: a multicenter study.

Citation: Journal of Nursing Care Quality, August 1999, vol./is. 13/6(11-24), 1057-3631;1057-3631 (1999 Aug)

Author(s): Raper J, Davis BA, Scott L

Language: English

Abstract: This descriptive, correlational study examines relationships between (1) individual patient and nurse characteristics and (2) patient satisfaction with triage nursing care, patient satisfaction with the triage nurse, and patient's intention to return to a specific Emergency Department. The convenience sample consisted of Urgent/Delayed patients (N = 378) triaged in an urban academic medical center, a public hospital in a small city, and a Catholic hospital in a small city. Analysis of variance revealed significantly higher levels of patient satisfaction at the academic medical center, whereas higher levels of intent to return were reported by subjects from the Catholic-affiliated hospital. Educational preparation of the triage nurse was identified as a significant predictor of both patient satisfaction with triage nursing care and loyalty to a specific.

Publication Type: Journal Article, Multicenter Study, Research Support, Non-U.S. Gov't

Source: MEDLINE

Full Text: Available from EBSCOhost in Journal of Nursing Care Quality

Advanced triage/advanced interventions: improving patient satisfaction.

Author(s) Kokiko J, Mayer TA

Citation: Topics in Emergency Medicine, 01 June 1997, vol./is. 19/2(19-27), 01642340

Publication Date: 01 June 1997

Abstract: Process management tools are useful for streamlining emergency department operations. The article describes the utilization of process management principles to provide effective nurse triage with predetermined physician orders/guidelines, which will expedite patient flow and increase customer satisfaction. (C) 1997 Aspen Publishers, Inc.

Source: CINAHL

Title: The nursing triage process: a video review and a proposed audit tool.

Citation: Journal of Accident & Emergency Medicine, November 1996, vol./is. 13/6(398-9), 1351-0622;1351-0622 (1996 Nov)

Author(s): Williams JC, Jones NL, Richardson FJ, Jones C, Richmond PW

Language: English

Abstract: OBJECTIVE: To review the activity of the nurse triage process. SETTING: The triage room for adults attending the accident and emergency department of the Cardiff Royal Infirmary. METHODS: 226 triage processes were videotaped over 31 h during July 1994. Activities were subsequently analysed using a specially designed chart. RESULTS: Areas for improvement in staff communication skills and patient privacy were identified. CONCLUSIONS: The use of video in the triage room allows assessment of the triage process and is a valuable aid to training. Additionally, a potential visual audit tool has been identified.

Publication Type: Journal Article

Source: MEDLINE
Title: Report of an audit of nurse triage in an accident and emergency department.
Citation: Journal of Accident & Emergency Medicine, June 1994, vol./is. 11/2(91-5), 1351-0622;1351-0622 (1994 Jun)
Author(s): Wong TW, Tseng G, Lee LW
Language: English
Abstract: The nurse triage process in an accident and emergency (A&E) department was audited as part of the nursing quality assurance programme. It was found that in most cases documentation was adequate and guidelines had been adhered to. Triage decisions were accurate in most cases using the discharge diagnosis as a benchmark. Waiting time improvements were also seen. Triage audit was a useful tool in the continuous quality improvement effort.
Publication Type: Comparative Study, Journal Article
Source: MEDLINE
Full Text: Available from National Library of Medicine in Journal of Accident and Emergency Medicine

Title: Nurse triage in theory and in practice.
Citation: Archives of Emergency Medicine, September 1993, vol./is. 10/3(220-8), 0264-4924;0264-4924 (1993 Sep)
Author(s): George S, Read S, Westlake L, Williams B, Pritty P, Fraser-Moodie A
Language: English
Abstract: 'Nurse Triage' refers to the formal process of early assessment of patients attending an accident and emergency (A&E) department by a trained nurse, to ensure that they receive appropriate attention, in a suitable location, with the requisite degree of urgency. The benefits claimed for nurse triage include better patient outcomes, through clinical management reaching those in greatest need of it first. A recent study of nurse triage in a British A&E department failed to demonstrate the benefits claimed: patients undergoing triage were delayed, especially those in the most urgent groups. No differences were noted between the two study groups in levels of satisfaction with the A&E process. The results brought forth criticism from all quarters. In this paper the points made by the critics are considered, and an attempt to answer them is made.
Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE
Full Text: Available from National Library of Medicine in Archives of Emergency Medicine

Title: Piloting an evaluation of triage.
Citation: International Journal of Nursing Studies, August 1992, vol./is. 29/3(275-88), 0020-7489;0020-7489 (1992 Aug)
Author(s): Read S, George S, Westlake L, Williams B, Glasgow J, Potter T
Language: English
Abstract: This paper takes a broad view of the work involved in pilot studies of evaluation research. Drawing on their experience of preparation for a field experiment in a British Accident and Emergency department, which was to evaluate the effectiveness of a nurse triage system, the authors stress the importance of careful observation of the system to be studied, in the environment in which it is to be studied. In addition, the usual evaluations of research instruments which comprise formal pilot studies are included.
Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE
Title: Evaluation of nurse triage in a British accident and emergency department.

Citation: BMJ, April 1992, vol./is. 304/6831(876-8), 0959-8138;0959-535X (1992 Apr 4)

Author(s): George S, Read S, Westlake L, Williams B, Fraser-Moodie A, Pritty P

Language: English

Abstract: OBJECTIVE: To compare formal nurse triage with an informal prioritisation process for waiting times and patient satisfaction. SETTING: Accident and emergency department of a district general hospital in the midlands in 1990. DESIGN: Patients attending between 8:00 am and 9:00 pm over six weeks were grouped for analysis according to whether triage was operating at time of presentation and by their degree of urgency as assessed retrospectively by an accident and emergency consultant. PATIENTS: 5954 patients presenting over six weeks. MAIN OUTCOME MEASURES: Time waited between first attendance in the department and obtaining medical attention, and patient satisfaction measured by questionnaire. RESULTS: Complete data on waiting time were collected on 5037 patients (85%). Only 1213 of the 2515 (48%) patients presenting during the triage period were seen by a triage nurse. Patients in the triage group waited longer than those in the no triage group in all four retrospective priority categories, though differences were significant for only the two most urgent categories (difference in median waiting time 10.5 (95% confidence interval 3.5 to 14) min for category 1 and 8.5 (3 to 12) min for category 2). Responses to the patient satisfaction questionnaire were similar in the two groups except for the question relating to anxiety relating to pain. CONCLUSIONS: This study fails to show the benefits claimed for formal nurse triage. Nurse triage may impose additional delay for patient treatment, particularly among patients needing the most urgent attention.

Publication Type: Comparative Study, Journal Article, Research Support, Non-U.S. Gov't

Source: MEDLINE

Full Text: Available from Highwire Press in BMJ

General “fast track” measures

Title: Evaluating the quality of care delivered by an emergency department fast track unit with both nurse practitioners and doctors.

Citation: Australasian Emergency Nursing Journal, November 2012, vol./is. 15/4(188-94), 1574-6267;1574-6267 (2012 Nov)

Author(s): Dinh M, Walker A, Parameswaran A, Enright N

Language: English

Abstract: AIMS: This paper is a report of a study of quality of care delivered by an emergency department fast track unit where both doctors and an emergency nurse practitioner treated patients. BACKGROUND: Fast track units were established in Australian emergency departments to meet the needs of low complexity emergency department patients. Few studies have reported on the overall quality of care delivered by these units. METHODS: A convenience sample of adult patients triaged to an Australian emergency department fast track unit between April 2010 and April 2011 were randomised to care by a doctor or an emergency nurse practitioner. Quality of care was measured using patient satisfaction, follow up health status using Short Form 12 and adverse event rate (missed fractures or unplanned representations). RESULTS: A total of 320 patients were enrolled into the study. Of the 236 patients who submitted completed survey forms, median satisfaction scores were 22 out of 25 with 84% of patients rating care as "excellent" or "very good". At two week follow up, health status score was comparable to normal healthy populations. When comparing study groups, patient satisfaction scores were significantly higher in the ENP group compared to DR group. CONCLUSIONS: Patients received high quality of care in this fast track unit where both nurse practitioner and doctors treated patients. Emergency nurse
practitioners were associated with higher patient satisfaction. Copyright 2012 College of Emergency Nursing Australasia Ltd. All rights reserved.

**Publication Type:** Journal Article, Randomized Controlled Trial

**Source:** MEDLINE

**Title:** Fast Track: one hospital's journey.

**Citation:** Accident & Emergency Nursing, October 2006, vol./is. 14/4(197-203), 0965-2302;0965-2302 (2006 Oct)

**Author(s):** Combs S, Chapman R, Bushby A

**Language:** English

**Abstract:** This paper is the first of two articles discussing the implementation and evaluation of an innovative Fast Track process. This current paper explains how one metropolitan hospital identified the need to establish Fast Track in their Emergency Department and the journey that was taken to implement the initiative. The other paper presents the findings of the evaluation of the Fast Track process over a twelve month time frame. Fast Track is the treatment of minor injuries and illnesses by designated clinicians within the Emergency Department. The model was based upon the available literature from studies on Fast Track and "See and Treat" conducted in the United Kingdom, North America and Australia, and was adapted to address the type of presentations arriving at the hospital's Emergency Department. The initial change management process lasted twelve months and as a result Fast Track has revolutionised the way many patients are treated in the Emergency Department. Furthermore, Fast Track has provided nurses with the opportunity to achieve advanced skills in the areas of suturing and plastering.

**Publication Type:** Evaluation Studies, Journal Article

**Source:** MEDLINE

**Title:** Fast Track in the emergency department: a one-year experience with nurse practitioners.

**Citation:** Journal of Emergency Medicine, May 1992, vol./is. 10/3(367-73), 0736-4679;0736-4679 (1992 May-Jun)

**Author(s):** Wright SW, Erwin TL, Blanton DM, Covington CM

**Language:** English

**Abstract:** The use of a Fast Track system in the emergency department is becoming increasingly popular in order to provide fast and efficient service to patients with minor emergencies. In this paper we describe the one-year results of our system staffed by nurse practitioners. During the first year of operation, a total of 4468 patients were seen in Fast Track. Approximately 28% of patients are triaged to Fast Track during its hours of operation. The average patient seen in Fast Track was ready for discharge 94.4 minutes after presentation. Fewer than 1% of patients required admission to the hospital. Overall, patients and medical staff were highly satisfied with the Fast Track system. Our experience demonstrates that nurse practitioners can effectively and efficiently staff a Fast Track in an academic emergency department.

**Publication Type:** Journal Article

**Source:** MEDLINE

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*From 1st fifty results:*

**Triage nurses' decisions using the National Triage Scale for Australian emergency departments**

J Considine, L Ung, S Thomas - Accident and Emergency Nursing, 2000 - Elsevier
The initiation of emergency care primarily depends on the decisions made by the triage nurse. Triage decisions can therefore have a profound effect on the health outcomes of patients who present for emergency care. If the National Triage Scale (NTS) was effective...

**Care of minor injuries by emergency nurse practitioners or junior doctors: a randomised controlled trial**

M Sakr, J Angus, J Perrin, C Nixon, J Nichol... - The Lancet, 1999 - Elsevier
... The costs of training the nursing staff are not included... but this cost might be best viewed as a one-off cost, because the nurse practitioners are... The experienced emergency physicians who undertook the research assessment might have known if the initial examination had been...

**Current triage practice and influences affecting clinical decision-making in emergency departments in NSW, Australia**

M Fry, G Burr - Accident and emergency nursing, 2001 - Elsevier
In Australia, as elsewhere, the nature of triage decision making, patient referral, investigations, physical resources, triage policies, educational requirements and clinical expertise is often unclear and differs between organizations (Gerdtz & Bucknell 2000; ... Cited by 33 Related articles All 5 versions Cite Save

**Australian triage nurses' decision-making and scope of practice.**

M Gerdtz, T Bucknall - ... publication of the Royal Australian Nursing ..., 2000 - ncbi.nlm.nih.gov
... Emergency Nursing/standards; Humans; Job Description*; Nurse's Role*; Nursing Assessment/methods*; Nursing ... Nursing Staff, Hospital/education; Nursing Staff, Hospital/organization & administration*; Nursing Staff, Hospital/psychology*; Practice Guidelines as Topic; ...

**Emergency department triage: is there a link between nurses' personal characteristics and accuracy in triage decisions?**

KE Göransson, A Ehrenberg, B Marklund... - ... and emergency nursing, 2006 - Elsevier
INTRODUCTION: A common task of registered nurses is to perform emergency department triage, often using an especially designed triage scale in their assessment. However, little information is available about the factors that promote the quality of these decisions. This ...

**Effectiveness of nurse triage in the emergency department of an urban county hospital**

J Mills, AL Webster, CB Wofsy, P Harding... - ... College of Emergency ..., 1976 - Elsevier
SNOII VldnOIENOO QNV'S. LN g NODi410O'SJ. d -7ONO0 patients into illness categories of varying acuteness. When a patient presents at MEH for care, his first contact is with the triage nurse on duty. Ambulatory patients with nonemergent problems are sent to the Walk...

**Do triage nurse-initiated X-rays for limb injuries reduce patient transit time?**

W Parris, S McCarthy, AM Kelly... - ... and emergency nursing, 1997 - Elsevier
Patients with isolated limb injuries are often required to wait a long time for treatment and investigation in emergency departments. It was hypothesized that allowing triage nurses to initiate X-rays would reduce transit times for these patients. A prospective, randomized
Decision making by emergency nurses in triage assessments

J Cioffi - Accident and Emergency Nursing, 1998 - Elsevier

Triage assessment of patients on arrival at emergency departments involves complex decision making, resulting in categories being assigned to prioritize patients' needs for attention. The actual process of triage decision making has received limited attention. The

Effect of introduction of nurse triage on waiting times in a South African emergency department

SR Bruijns, LA Wallis, VC Burch - Emergency Medicine Journal, 2008 - emj.bmj.com

Background: In a resource poor setting with poverty, a high burden of disease and critically low medical staff numbers, triage could potentially improve the long waiting times experienced at South African public hospital emergency departments (ED) and render ...

The Australasian Triage Scale: examining emergency department nurses' performance using computer and paper scenarios


... Triage experience, 6.8±5.1. Level of appointment, %, Registered nurse, division 1 grade 2, 47. Clinical nurse specialist, 20. Associate nurse unit manager, 25. Nurse unit manager, 5. Other, 3. Educational preparation, %, Postgraduate qualification in emergency nursing (graduate

An educational framework for triage nursing based on gatekeeping, timekeeping and decision-making processes

M Fry, C Stainton - Accident and emergency nursing, 2005 - Elsevier

INTRODUCTION: The role of the triage nurse has emerged in response to growing community demand for a more accessible and efficient emergency department (ED) service. The focus of triage research has been on measuring outcomes and improving the delivery

Cited by 32 Related articles All 5 versions Cite Save

[CITATION] Nurse triage in the accident & emergency department

DW Yates - The Journal of the Royal Society for the Promotion of …, 1987 - rsh.sagepub.com

INTRODUCTION HERE IS no clear evidence that there is an increasing incidence in the UK of sudden illness or personal injury. Indeed industrial and trans-port injuries are in decline, although the number of assaults may be rising. It is surprising therefore that the number of .

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