Unscheduled care

February 2025

This monthly current awareness bulletin aims to highlight relevant reports and peer-reviewed literature in emergency and unscheduled care. The bulletin focuses on efforts to improve patient flow, reduce waiting times and alternative care models.

If you require specific information, please contact us via email.

References

Angell, M. (2025) 'Delivering Safe, Person-Centred Care for Acutely Unwell Older People on Virtual Wards.' *Nursing Older People* (pagination), Date of Publication: 08 Jan 2025.
A virtual ward can provide hospital-level care for older people in their usual place of residence during an episode of acute illness. Care on a virtual ward may be delivered through a mix of in-person home visits, telephone or video calls and remote monitoring. This model of care can prevent unnecessary inpatient admissions, which in turn can prevent the development of associated complications in this patient population, such as deconditioning, delirium and hospital-acquired infections. However, there are barriers to the use of virtual wards in the care of older people. This article provides an overview of technology-enabled virtual wards and discusses some of the barriers to their use in older people's care as well as ways in which these can be addressed. The author also considers how nurses can help ensure that the care provided to an older person admitted to a virtual ward is person-centred and safe.

Belk, K. W., et al. (2025) 'Mortality and Length of Stay Implications of Deterioration-Associated Transfer to the Intensive Care Unit Over Different Time Frames.' *Health Services Insights 18*, 1178632924131287.
Background: Quality improvement initiatives in the acute care setting often target reduction of mortality and length of stay (LOS). Unplanned care escalations are associated with increased mortality risk and prolonged LOS, but may be precipitated by different factors, including appropriate triage, bed availability, and post-admission deterioration. **Objectives**: This work evaluates different transfer timeframes to

quantify the impact of deterioration-associated unplanned transfers to intensive care (ICU) on mortality and LOS, informing evidence-based interventions to improve patient care. **Design**: This retrospective analysis examined 519 181 adult inpatients discharged from 15 hospitals in the United States. A propensity matched cohort analysis compared mortality and overall hospital LOS for patients admitted to routine and intermediate care units who did and did not have an unplanned ICU transfer within 12, 12-48, or 48 hours from admission. **Methods**: Population cohorts were matched on age, sex, admitting unit type, admission type, and admission acuity. Multivariable regression analysis was used to estimate the impact of unplanned transfer on mortality and LOS. Sensitivity sub-analyses compared direct ICU admissions to unplanned ICU transfers using the same transfer timeframes and endpoints. **Results**: Patients with unplanned transfers in each of three timeframes had statistically higher mortality rates and longer LOS than matched cohorts without unplanned transfer. Differences between cohorts was greatest in patients transferring 48 hours post-admission for both mortality (25.1% vs 1.9%, P : Patients with unplanned transfers in each of three timeframes had statistically higher mortality rates and longer LOS than matched cohorts without unplanned transfer. Differences between cohorts was greatest in patients transferring 48 hours post-admission for both mortality (25.1% vs 1.9%, P : Patients with unplanned transfers in each of three timeframes had statistically higher mortality rates and longer LOS than matched cohorts without unplanned transfer. Differences between cohorts was greatest in patients transferring 48 hours post-admission for both mortality (25.1% vs 1.9%, P **Conclusion**: The association of later transfers with elevated mortality and LOS underscores the importance of timely intervention on patient deterioration. Copyright © The Author(s) 2025.

Birgy C., et al. (2025) [Assessment of Non-Inferiority of a Hospital-at-Home Care Pathway for Patients with Acute Heart Failure: FIL-EAS-Ic](#) (Archives of Cardiovascular Diseases. Conference: JESFC 2025. Paris France. 118(1 Supplement) (pp S26-S27); Elsevier Masson s.r.l.). Published in: Arch.Cardiovasc.Dis.(JESFC 2025.)
Introduction: Acute heart failure (AHF) is a common cause of hospitalization and is associated with high mortality rates, long hospital stays and high economic costs worldwide. Novel care pathways are increasingly being considered to address these burdens. FIL-EAS-ic a mixed French conventional hospitalization and hospital-at-home (HaH) care pathway, under the responsibility of a multidisciplinary HF hospital team managing the city-hospital transition has been designed to reduce the length of hospital stay without compromising HF outcomes for patients.

Brainard J., et al. (2025) ['Service Evaluation of 'GP at Door' of Accident and Emergency Services in Eastern England.'](#) *Primary Health Care Research & Development 26*, e5.
AIM: We describe activity, outcomes, and benefits after streaming low urgency attenders to General practice services at Door of Accident and Emergency departments (GDAE). BACKGROUND: Many attendances to A&Es are for non-urgent health problems that could be better met by primary care rather than urgent care clinicians. It is valuable to monitor service activity, outcomes, service user demographics, and potential benefits when primary care is co-located with A&E departments.

Brossard C., et al. (2025) ['Predicting Emergency Department Admissions using a Machine-Learning Algorithm: A Proof of Concept with Retrospective Study.'](#) *BMC Emergency Medicine 25*(1) (pagination), Article Number: 3. Date of Publication: 01 Dec 2025.

Introduction: Overcrowding in emergency departments (ED) is a major public health issue, leading to increased workload and exhaustion for the teams, resulting poor outcomes. It seems interesting to be able to predict the admissions of patients in the ED.

Deglise A., et al. (2024) ['SAFEty Assessment of a REdirection Process After TRIage (SAFE RETRI) by a Triage Nurse in an Emergency Department: A Monocentric Cohort Study.'](#) *Swiss Medical Weekly 154*(12) (pagination), Article Number: 4030. Date of Publication: 01 Dec 2024.

AIMS OF THE STUDY: As emergency department consultations rise across Europe, patients must be guided to obtain appropriate care at the right time and place.In Switzerland, the absence of a unique health number that would enable the avoidance of emergency services through telephone medical advice, and the shortage of general practitioners, redirecting low-severity patients from the emergency department before medical consultation to other healthcare facilities could help reduce emergency department overload. This study assessed the safety of a newly implemented redirection process by examining the rate of unexpected returns to any healthcare facility.

Giunta D.H., et al. (2024) ['Development and Validation of a Multivariable Predictive Model for Emergency Department Overcrowding Based on the National Emergency Department Overcrowding Study (NEDOCS) Score.'](#) *Internal and Emergency Medicine* (pagination), Date of Publication: 30 Dec 2024.

Background Predicting potential overcrowding is a significant tool in efficient emergency department (ED) management. Our aim was to develop and validate overcrowding predictive models using accessible and high quality information. Methods Retrospective cohort study of consecutive days in the Hospital Italiano de Buenos Aires ED from june 2016 to may 2018. We estimated hourly NEDOCS score for the entire period, and defined the outcome as Sustained Critical ED Overcrowding (EDOC) equal to occurrence of 8 or more hours with a NEDOCS score >= 180. We generated 3 logistic regression predictive models with different related outcomes: beginning, ending or occurrence of Sustained Critical EDOC. We estimated calibration and discrimination as internal (random validation group and bootstrapping) and external validation (different period and different ED). Results The main model included both the beginning and occurrence of NEDOCS, including weather variables, variables related to NEDOCS itself and patient flow variables. The second model considered only the beginning of Sustained Critical EDOC and included variables related to NEDOCS. The last model considered the end of Sustained Critical EDOC and it included variables related to NEDOCS, weather, bed occupancy and management. Discrimination for the main model had an area under the receiveroperator curve of 0.997 (95% CI 0.994 - 1) in the validation group. Calibration for the model was very high on internal validation and acceptable on external validation. Conclusion The Sustained Critical EDOC predictive model includes variables that are easily obtained and can be used for effective resource management in situations of overcrowding.

Goh W.X., et al. (2024) 'Patients' Perspectives on a Programme to Reduce Emergency Department use for Low Acuity Conditions.' *Proceedings of Singapore Healthcare 33*(pagination), Date of Publication: 01 Jan 2024.

Background: Emergency Department (ED) crowding is a global public health issue with low-acuity ED attendances (LAA) being widely identified as contributors to the issue. A primary care partnership programme, GPFirst, was developed to encourage low-acuity patients to visit their General Practitioners (GP) first, instead of the ED. We utilised a qualitative approach to gain an understanding of participants' perceptions of GPFirst, their health-seeking behaviours, and explore recommendations for enhancing GPFirst.

Goktekin M.C., et al. (2025) 'PRISMA-7 (for Frailty Assessment) and SARC-F (for Evaluation of Sarcopenia Risk) in Predicting Emergency Department Readmission and Mortality.' *Signa Vitae 21*(1), 97–105.

Background: Frailty scores can predict hospitalization and other related adversities. The frailty status determination is thus useful in clinical decisions regarding elderly patients. This study was aimed to evaluate the potential of PRISMA-7 (Program on Research for Integrating Services for the Maintenance of Autonomy 7 item questionnaire) and SARC-F (A Simple Questionnaire to Rapidly Diagnose Sarcopenia) scores in predicting hospitalization following the emergency department (ED) admission, readmission at 1, 3 and 6 months, and mortality within 6-month follow-up period.

Jun J.H., et al. (2025) 'Impact of Emergency Department Overcrowding on the Occurrence of in-Hospital Cardiac Arrest.' *PLoS ONE 20*(1) (pagination), Article Number: e0317457. Date of Publication: 01 Jan 2025.

We aimed to determine whether emergency department (ED) overcrowding affects the occurrence of in-hospital cardiac arrest (IHCA) requiring resuscitation in the ED. This retrospective study was conducted in the ED of a single hospital. We applied the propensity score-matching method to adjust for differences in clinical characteristics in patients who visited the ED during overcrowded conditions. The indicators of overcrowding were: the total number of patients, number of patients undergoing treatment, and number of boarded patients awaiting hospital admission at the time of a patient's arrival. We defined the existence of ED overcrowding based on the 75%, 80%, and 90% thresholds of each indicator. We included 153,353 patients, and 160 cases of IHCA occurred, showing an incidence rate of 0.10%. The IHCA incidence rate increased during overcrowding, as indicated by the total number of patients and the number of boarded patients rising to 0.15% and 0.17%, respectively, at the 90% threshold (p = 0.0407 and 0.0203, respectively). The IHCA incidence rate did not increase during overcrowding based on the number of patients undergoing treatment. In the comparison conducted after propensity score matching, the incidence of IHCA was significantly higher in the overcrowding group than in the non-overcrowding group, indicated by 80% boarded patients (0.15% vs. 0.08%, p = 0.0222). The logistic regression results indicated that both the full-study and propensity score-matched cohorts showed a tendency for increased IHCA during overcrowding, as indicated by the total number of patients and number of boarded patients. The number of patients undergoing treatment did not affect the occurrence of IHCA. Although this needs to be confirmed in larger studies, we found in this study that ED overcrowding, particularly blocked access, tends to increase the incidence of IHCA requiring resuscitation in the ED. This suggests that to protect patient safety in

ED overcrowding, it is essential for the entire hospital to make concerted efforts to maintain the flow of patients in the ED.

Kirby J.J., et al. (2024) ['Maximizing Efficiency in Emergency Care: Triple Interventions to Minimize Left without being seen: An Observational Study.'](#) *Medicine (United States) 103*(52), e40763.

Left without being seen (LWBS) is a quality care metric associated with patient-centered outcomes. The risks affecting LWBS are complex and interventions targeting certain risks have diverse effects. We aimed to use different artificial intelligence and machine learning (AI/ML) algorithms to identify the risks affecting LWBS, implement triple interventions specifically targeted at such risks, and compare daily LWBS rate changes before and after the intervention. This is a retrospective observational study. Single urban Emergency Department (ED) daily throughput data from March 1, 2019, to February 28, 2023, were used for AI/ ML model prediction. Model performance including accuracy, recall, precision, F1 score, and area under the receiver operating characteristics (AUC) were reported. The top risks affecting the LWBS were identified using the important function of the AI/ML feature. Triple interventions were implemented. The average daily LWBS rate was compared before (March 1, 2019, to February 28, 2023) and after (June 1, 2023, to May 31, 2024). A total of 1919 daily throughput metrics were analyzed, including 1461 daily metrics before the intervention, 92 daily metrics during the wash period, and 366 daily metrics after the intervention. Using data before the intervention, the Extreme Gradient Boosting (XGBoost) and Random Forest AI/ML algorithms predicted LWBS with a similar favorable performance. The 3 common factors influencing the increased daily LWBS rate were triage-to-bed (wait time), boarding time, and door-to-triage in the ED. Rapid triage, direct bedding, and boarding reduction (triple intervention) were implemented on March 1, 2023. We found 4.82% of daily LWBS before the triple intervention compared to 1.93% of daily LWBS after the triple intervention (P < .001). AI/ML approaches can identify common factors that are highly related to LWBS with favorable performance. Triple interventions targeting these factors can reduce the daily LWBS rate by approximately 60%, indicating the efficiency of the ED operational management.

Lindsay, R. K., et al. (2025) ['Why is Implementing Remote Monitoring in Virtual Wards (Hospital at Home) for People Living with Frailty so Hard? Qualitative Interview Study.'](#) *Age & Ageing 54*(1)

BACKGROUND: There is relatively low uptake of remote monitoring on frailty virtual wards (Hospital at Home) compared to virtual wards caring for people with other medical conditions. However, reasons for low uptake are poorly understood. **OBJECTIVES**: To explore the views and experiences of frailty virtual wards stakeholders involved in implementing remote monitoring. **METHODS**: We conducted qualitative interviews with 42 stakeholders involved in delivery, design or evaluation of frailty virtual wards based in the UK. Analysis was based on the constant comparative method. **RESULTS**: Many participants perceived that remote monitoring was only useful for a small sub-group of patients with frailty for a range of medical, practical and social reasons. Remote monitoring required new ways of working from patients, staff and carers. The nature of this work was not always sufficiently well understood, designed or supported. Procurement practices were also seen to be misaligned with service needs, resulting in provision of equipment that was not fit for purpose. A further challenge in implementing remote monitoring in frailty virtual wards lay in tensions between national-level standardisation and

enabling local flexibility. **CONCLUSIONS**: Implementing remote monitoring in frailty virtual wards is challenged by lack of consensus on its suitability for this population, the extent and nature of change in clinical practices and work systems design required, and issues relating to equipment and standardisation. More co-design effort is needed to inform decision-making on remote monitoring for those with frailty.

MacIsaac, M., and Peter, E. (2025) **'Emergency Department Crowding: An Examination of Older Adults and Vulnerability.'** *Nursing Ethics 32*(1), 99–110. Emergency departments in many nations worldwide have been struggling for many years with crowding and the subsequent provision of care in hallways and other unconventional spaces. While this issue has been investigated and analyzed from multiple perspectives, the ethical dimensions of the place of emergency department care have been underexamined. Specifically, the impacts of the place of care on patients and their caregivers have not been robustly explored in the literature. In this article, a feminist ethics and human geography framing is utilized to argue that care provision in open and unconventional spaces in the emergency department can be unethical, as vulnerability can be amplified by the place of care for patients and their caregivers. The situational and pathogenic vulnerability of patients can be heightened by the place of the emergency department and by the constraints to healthcare providers' capacity to promote patient comfort, privacy, communication, and autonomy in this setting. The arrangements of care in the emergency department are of particular concern for older adults given the potential increased risks for vulnerability in this population. As such, hallway healthcare can reflect the normalized inequities of structural ageism. Recommendations are provided to address this complicated ethical issue, including making visible the moral experiences of patients and their caregivers, as well as those of healthcare providers in the emergency department, advocating for a systems-level accounting for the needs of older adults in the emergency department and more broadly in healthcare, as well as highlighting the need for further research to examine how to foster autonomy and care in the emergency department to reduce the risk for vulnerabilities.

Mani Z., and Albagawi, B. (2024) **'AI Frontiers in Emergency Care: The Next Evolution of Nursing Interventions.'** *Frontiers in Public Health 12*, 1439412. This scoping review explores the utilization of artificial intelligence in emergency nursing, assessing its impact, potential benefits, and the obstacles faced in its adoption. It covers the scope of AI from advanced triage protocols to continuous monitoring of patients, assistance in diagnosis, and providing support for clinical decisions. The review notes that AI in emergency healthcare can lead to more efficient care and timely, data-driven actions, but also highlights significant issues such as safeguarding patient data, the necessity for dependable infrastructure, and concerns over discriminatory algorithms. The promise of AI in improving emergency healthcare practices and patient care is clear, yet the identified challenges must be carefully navigated to promote safe and ethical use. Further empirical research is called for to confirm the effectiveness of AI applications in the dynamic environment of emergency care setups.

Nagashima R., et al. (2025) **'Utilisation of Outpatient Care Immediately before Emergency Admission for Ambulatory Care-Sensitive Conditions in Japan: A**

[Retrospective Observational Study.'](#) *BMJ Open 15*(1) (pagination), Article Number: e086714. Date of Publication: 08 Jan 2025.

Objective This study assessed whether patients with potentially preventable emergency admissions had limited access to outpatient care immediately before admission and whether they received appropriate outpatient care during their outpatient visits. Design Retrospective observational study. Setting Linked outpatient and inpatient care records obtained from a nationwide claims database in Japan. Participants Patients who experienced emergency admissions for ambulatory care-sensitive conditions between April 2005 and March 2020. Patient and regional characteristics were examined to assess the types of patients who faced difficulties with outpatient visits and receiving outpatient care related to the disease that resulted in admissions (hereafter referred to as admission-related outpatient care). Main outcome measures (1) Whether patients had an outpatient visit during the 2 weeks preceding admission and (2) whether patients received admission-related outpatient care during the 2 weeks before admission. Results This study included 18 449 emergency admissions for ambulatory care-sensitive conditions, representing 16.3% (18 449/113 669) of all emergency admissions in our data. Among patients with emergency admissions for ambulatory care-sensitive conditions, 37.4% did not have an outpatient visit within the 2 weeks preceding admission and 29.9% did not receive admission-related outpatient care despite having an outpatient visit. In total, 67.4% did not receive admission-related outpatient care during the 2 weeks preceding admission. Patients in their 40s and 50s were less likely to have outpatient visits and receive admission-related outpatient care before admission. No evidence associates regional characteristics with outpatient visits and receiving admission-related outpatient care before admission. Conclusion Most patients who underwent emergency admissions for ambulatory care-sensitive conditions did not have an outpatient visit or receive admission-related outpatient care, despite having an outpatient visit immediately before admission. Our findings suggest that emergency admissions may be prevented by improving access to timely and effective outpatient care.

Nevanlinna J., et al. (2025) ['Forecasting Mortality Associated Emergency Department Crowding with LightGBM and Time Series Data.'](#) *Journal of Medical Systems 49*(1), 9.

Emergency department (ED) crowding is a global public health issue that has been repeatedly associated with increased mortality. Predicting future service demand would enable preventative measures aiming to eliminate crowding along with its detrimental effects. Recent findings in our ED indicate that occupancy ratios exceeding 90% are associated with increased 10-day mortality. In this paper, we aim to predict these crisis periods using retrospective time series data such as weather, availability of hospital beds, calendar variables and occupancy statistics from a large Nordic ED with a LightGBM model. We predict mortality associated crowding for the whole ED and individually for its different operational sections. We demonstrate that afternoon crowding can be predicted at 11 a.m. with an AUC of 0.82 (95% CI 0.78-0.86) and at 8 a.m. with an AUC up to 0.79 (95% CI 0.75-0.83). Consequently we show that forecasting mortality-associated crowding using time series data is feasible.

Ong, C. Y., et al. (2025) ['Savings through Telemedicine: Initial Data from a Hospital-at-Home Program.'](#) *Value in Health Regional Issues 45*, 101046.

OBJECTIVE: We aimed to estimate travel-related time and cost savings from the

use of telemedicine for an inpatient hospital-at-home program. **METHODS**: This was a retrospective study on the initial data obtained from a newly implemented hospital-at-home program from June 26, 2023, to March 31, 2024. Time cost savings were calculated based on difference between time spent on teleconsultation versus time needed to travel a round trip to patients' homes to conduct physical consultation via home visit. Travel distances were calculated based on the distance of patient's homes from the hospital. **RESULTS**: There were 505 teleconsultations (497 scheduled, 8 unscheduled) delivered throughout 132 enrollments. Total travel distance saved was 4022 km. Total time savings was 18 707 minutes or 13.0 days. Total trip cost savings were Singapore dollars 4618.70. **CONCLUSIONS**: Despite being a newly introduced program, utilization of telemedicine in delivery of hospital-at-home showed time savings for the clinicians, cost savings from the distance needed to travel otherwise. Incorporation of telemedicine in hospital-at-home delivery demonstrated time and distance savings even at the pilot phase of program. Copyright © 2024 The Authors. Published by Elsevier Inc. All rights reserved.

Pahlevani M., et al. (2025) ['Developing a Decision Support Tool to Predict Delayed Discharge from Hospitals using Machine Learning.'](#) *BMC Health Services Research 25*(1), 56.
BACKGROUND: The growing demand for healthcare services challenges patient flow management in health systems. Alternative Level of Care (ALC) patients who no longer need acute care yet face discharge barriers contribute to prolonged stays and hospital overcrowding. Predicting these patients at admission allows for better resource planning, reducing bottlenecks, and improving flow. This study addresses three objectives: identifying likely ALC patients, key predictive features, and preparing guidelines for early ALC identification at admission.

Porto, B. M., and Fogliatto, F. S. (2024) ['Enhanced Forecasting of Emergency Department Patient Arrivals using Feature Engineering Approach and Machine Learning.'](#) *BMC Medical Informatics & Decision Making 24*(1), 377.
BACKGROUND: Emergency department (ED) overcrowding is an important problem in many countries. Accurate predictions of ED patient arrivals can help management to better allocate staff and medical resources. In this study, we investigate the use of calendar and meteorological predictors, as well as feature-engineered variables, to predict daily patient arrivals using datasets from eleven different EDs across three countries. **METHODS**: Six machine learning (ML) algorithms were tested on forecasting horizons of 7 and 45 days. Three of them - Light Gradient Boosting Machine (LightGBM), Support Vector Machine with Radial Basis Function (SVM-RBF), and Neural Network Autoregression (NNAR) - were never before reported for predicting ED patient arrivals. Algorithms' hyperparameters were tuned through a grid-search with cross-validation. Prediction performance was assessed using fivefold cross-validation and four performance metrics. **RESULTS**: The eXtreme Gradient Boosting (XGBoost) was the best-performing model on both prediction horizons, also outperforming results reported in past studies on ED arrival prediction. XGBoost and NNAR achieved the best performance in nine out of the eleven analyzed datasets, with MAPE values ranging from 5.03% to 14.1%. Feature engineering (FE) improved the performance of the ML algorithms. **CONCLUSION**: Accuracy in predicting ED arrivals, achieved through the FE approach, is key for managing human and material resources, as well as reducing patient waiting times and lengths of stay. Copyright © 2024. The Author(s).

Scottish Government. (2025) *Health - redesign of urgent care: evaluation - main report.*
https://www.gov.scot/publications/main-report-redesign-urgent-care-evaluation

Shapiro S., et al. (2025) ['Same-Day Emergency Care: A Retrospective Observational Study of the Incidence and Predictors of Venous Thromboembolism Following Hospital-Based Acute Ambulatory Medical Care.'](#) *Journal of Thrombosis and Haemostasis 23*(1), 97–107.
Background: Same-day emergency care (SDEC) is an expanding area of hospital acute medical care. It aims to minimize delays and manage medical emergency patients within the same day, enabling hospitalization to be avoided; the expectation is that the patients would have required inpatient hospitalization in the absence of the SDEC service. Venous thromboembolism (VTE) prevention is a key medical inpatient safety measure. Whether VTE prevention should be considered for SDEC patients is unknown.

Story, L., et al. (2025) ['The Role of Virtual Wards in Maternity in the United Kingdom.'](#) *European Journal of Obstetrics, Gynecology, & Reproductive Biology 305*, 228–231.
Virtual wards are an initiative which aims to provide hospital care from the comfort of the patient's own home. Monitoring and additional services, such as intravenous drugs and fluids and blood tests can be undertaken through this system. Although virtual wards have been used in the UK since 2005 in specialties such as General Medicine, General Surgery and Paediatrics, their use in maternity has been more limited. This article aims to review their current use in the UK and beyond as well as to discuss some of the advantages and challenges they may pose to a maternity population. Copyright © 2024 Elsevier B.V. All rights reserved.

Van Herwerden M.C., et al. (2024) ['Emergency Department Triage, Transfer Times, and Hospital Mortality of Patients Admitted to the ICU: A Retrospective Replication and Continuation Study*.'](#) *Critical Care Medicine 52*(12), 1856–1865.
OBJECTIVES: This study aimed to provide new insights into the impact of emergency department (ED) to ICU time on hospital mortality, stratifying patients by academic and nonacademic teaching (NACT) hospitals, and considering Acute Physiology and Chronic Health Evaluation (APACHE)-IV probability and ED-triage scores. DESIGN, SETTING, AND PATIENTS: We conducted a retrospective cohort study (2009-2020) using data from the Dutch National Intensive Care Evaluation registry. Patients directly admitted from the ED to the ICU were included from four academic and eight NACT hospitals. Odds ratios (ORs) for mortality associated with ED-to-ICU time were estimated using multivariable regression, both crude and after adjusting for and stratifying by APACHE-IV probability and ED-triage scores. INTERVENTIONS: None. MEASUREMENTS AND MAIN RESULTS: A total of 28,455 patients were included. The median ED-to-ICU time was 1.9 hours (interquartile range, 1.2-3.1 hr). No overall association was observed between ED-to-ICU time and hospital mortality after adjusting for APACHE-IV probability (p = 0.36). For patients with an APACHE-IV probability greater than 55.4% (highest quintile) and an ED-to-ICU time greater than 3.4 hours the adjusted OR (ORsadjApache) was 1.24 (95% CI, 1.00-1.54; p < 0.05) as compared with the reference category (< 1.1 hr). In the academic hospitals, the ORsadjApache for ED-to-ICU times of 1.6-2.3, 2.3-3.4, and greater than 3.4 hours were 1.21 (1.01-1.46), 1.21 (1.00-1.46), and 1.34 (1.10-1.64), respectively. In NACT hospitals, no association was observed (p = 0.07).

Subsequently, ORs were adjusted for ED-triage score (ORsadjED). In the academic hospitals the ORsadjED for ED-to-ICU times greater than 3.4 hours was 0.98 (0.81-1.19), no overall association was observed (p = 0.08). In NACT hospitals, all time-ascending quintiles had ORsadjED values of less than 1.0 (p < 0.01).

Verzelloni P., et al. (2025) 'Emergency Department Crowding: An Assessment of the Potential Impact of the See-and-Treat Protocol for Patient Flow Management at an Italian Hospital.' *International Emergency Nursing 78*, 101569.
BACKGROUND: Crowding and patient flow management are among the most relevant issues for emergency departments (EDs). This results in delayed treatment, adverse outcomes and increased costs. For these reasons, nurse-independent treatment protocols were developed aimed at managing non-emergency patients outside EDs thus improving patient flow. Our objective was to assess the potential impact of the implementation of the "See-and-Treat" protocol on eligible patients and related healthcare costs at an Italian ED.

Welsh Government. (2025) *Hospital discharge guidance.*
https://www.gov.wales/sites/default/files/publications/2025-01/hospital-discharge-guidance-january-2025.pdf

Yi, N., et al. (2025) 'The Effects of Applying Artificial Intelligence to Triage in the Emergency Department: A Systematic Review of Prospective Studies.' *Journal of Nursing Scholarship 57*(1), 105–118.
INTRODUCTION: Accurate and rapid triage can reduce undertriage and overtriage, which may improve emergency department flow. This study aimed to identify the effects of a prospective study applying artificial intelligence-based triage in the clinical field. **DESIGN**: Systematic review of prospective studies. **METHODS**: CINAHL, Cochrane, Embase, PubMed, ProQuest, KISS, and RISS were searched from March 9 to April 18, 2023. All the data were screened independently by three researchers. The review included prospective studies that measured outcomes related to AI-based triage. Three researchers extracted data and independently assessed the study's quality using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) protocol. **RESULTS**: Of 1633 studies, seven met the inclusion criteria for this review. Most studies applied machine learning to triage, and only one was based on fuzzy logic. All studies, except one, utilized a five-level triage classification system. Regarding model performance, the feed-forward neural network achieved a precision of 33% in the level 1 classification, whereas the fuzzy clip model achieved a specificity and sensitivity of 99%. The accuracy of the model's triage prediction ranged from 80.5% to 99.1%. Other outcomes included time reduction, overtriage and undertriage checks, mistriage factors, and patient care and prognosis outcomes. **CONCLUSION**: Triage nurses in the emergency department can use artificial intelligence as a supportive means for triage. Ultimately, we hope to be a resource that can reduce undertriage and positively affect patient health. **PROTOCOL REGISTRATION**: We have registered our review in PROSPERO (registration number: CRD 42023415232). Copyright © 2024 The Author(s). Journal of Nursing Scholarship published by Wiley Periodicals LLC on behalf of Sigma Theta Tau International.

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