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Unscheduled care

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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

Auditor General. (2026) Delayed discharges: A symptom of the challenges facing health and social care. Audit Scotland.

Bayram F., et al. (2026) 'External Validation of the International Early Warning Score in Non-Traumatic Emergency Department Patients: A Prospective Cohort Study.' *BMC Emergency Medicine 26*(1) (pagination), Article Number: 15. Date of Publication: 01 Dec 2026.
Background: Emergency department (ED) overcrowding has become a global public health concern, underscoring the importance of rapid and reliable risk stratification tools. Early warning scores are widely used to identify patients at risk of deterioration and mortality. The recently developed International Early Warning Score (IEWS), which incorporates age and sex adjustments into the National Early Warning Score (NEWS) model, has shown promising results and has undergone initial external validation in a Danish cohort; however, no prospective external validation has yet been conducted, and broader international validation remains limited. This study aimed to evaluate the performance of IEWS compared with NEWS in predicting in-hospital mortality, 30-day mortality, and ICU admission among adult ED patients. Method(s): This prospective observational cohort study was conducted between July and August 2024 in a tertiary university hospital ED with an annual census of ~ 70,000 visits. Adult patients presenting to the ED were included, while trauma cases,

patients without vital signs on arrival, interhospital transfers, and cases with incomplete data were excluded. IEWS and NEWS were calculated at presentation. The primary outcome was all-cause in-hospital mortality; secondary outcomes included 30-day mortality and ICU admission.
Result(s): A total of 8,666 patients were analyzed. The median age was 40 years (IQR: 26-58), and 51.5% were female. In-hospital mortality was 1.5% (n = 134), and 30-day mortality was 1.9% (n = 163). IEWS demonstrated excellent discriminative ability for in-hospital and 30-day mortality (AUC: 0.944 and 0.930, respectively), and good performance for ICU admission (AUC: 0.876). In contrast, NEWS showed good performance for in-hospital and 30-day mortality (AUC: 0.884 and 0.848, respectively) and moderate performance for ICU admission (AUC: 0.781). IEWS consistently outperformed NEWS across all outcomes ($p < 0.05$, DeLong's test).
Conclusion(s): IEWS outperformed NEWS in predicting in-hospital mortality, 30-day mortality, and ICU admission among non-traumatic ED patients. Given its high sensitivity, specificity, and overall discriminative performance, IEWS may serve as a reliable bedside tool for patient risk stratification in the ED. Large-scale multicenter studies are needed to confirm its generalizability across diverse populations. Clinical trial number: Not applicable.

Cha H., and Kim, J. (2025) **'Ethical Considerations of Artificial Intelligence in Emergency Medicine for Triage and Resource Allocation: A Scoping Review.'** ***Clinical and Experimental Emergency Medicine 12*****(4), 306–319.**
Objective This study aims to systematically review the ethical and legal discussions regarding the utilization of artificial intelligence (AI) for patient triage and resource allocation in emergency medicine, and to identify the current state of discussions, their limitations, and future research directions. Methods A comprehensive literature search was conducted following scoping review methodology. Relevant literature published after January 2020 was searched in the Web of Science, Scopus, CINAHL, PubMed, and Cochrane Library databases. Based on a PCC (population, concept, and context) framework (emergency patients/medical staff; triage, resource allocation; and emergency medicine with AI application), a final selection of 27 articles was analyzed. Results The selected literature raised various ethical and legal issues related to the introduction of AI triage systems and AI utilization in emergency medicine, including data privacy, algorithmic bias, automation dependency, accountability, and explainability. In response to these issues, human-centered design, implementation of explainable AI, establishment of regulatory frameworks, continuous verification and evaluation, and ensuring human-in-the-loop were discussed as major solutions. However, discussions on the risks of "persuasive AI" that could mislead users, ethical issues of generative AI, and social validation and patient and public involvement were found to be insufficient. Conclusion Ethical and legal discussions regarding AI in emergency medicine are evolving toward seeking

concrete solutions at technical, institutional, and relational dimensions. However, in-depth research on ethical challenges, such as reflecting the specificity of rapidly developing AI and the values of emergency medicine, is urgently required.

Chrusciel J., et al. (2026) **'Factors Associated with the Phenomenon of Overcrowding in the Emergency Department: A Retrospective Cohort Study.'** ***BMC Emergency Medicine*** **(pagination), Date of Publication: 03 Jan 2026.**

Edmunds K., et al. (2026) **'Enhancing the Psychiatric Emergency Department Triage Process to Optimize Patient Care.'** ***Journal of Emergency Nursing 52*****(1), 93–101.**
Introduction: Emergency departments have seen a steady increase in patients presenting with mental health and substance use disorders, leading to overcrowding, prolonged length of stay, patients leaving without being seen, and diminished staff satisfaction. To address these issues, a behavioral health psychiatric emergency department redesigned its triage process to include a fast-track protocol for low-complexity patients, eliminate treatment redundancies, and incorporate a provider in triage to improve patient outcomes and staff satisfaction.
Method(s): Using the Plan-Do-Study-Act methodology, a revised triage process was implemented to streamline workflows and reduce waste. Time metrics from pre- and postintervention periods were compared.
Result(s): Reductions were observed in all phases of the ED encounter. The median total length of stay decreased by 110 minutes (38% reduction; P<.001). Time from rooming to provider was reduced from 98 to 43 minutes (56% reduction; P<.001), and the median time from arrival to provider was halved, from 152 to 76 minutes (52% reduction; P<.001). The leaving without being seen rate dropped from 10.5% to 6.3% (40% reduction; P<.001).
Discussion(s): The findings suggest that a fast-track triage system, combined with provider in triage, can improve length of stay, reduce leaving without being seen, and enhance staff satisfaction. This model could be beneficial for other emergency departments managing patients with behavioral health concerns.

Fitzpatrick J.J., et al. (2026) **'The Impact of Nurse Practitioner Full Practice Authority on Chronic Condition-Related Readmissions and Emergency Department Visits in the United States.'** ***Medical Care*** **(pagination), Date of Publication: 14 Jan 2026.**
BACKGROUND: Chronic conditions affect over 60% of US adults and drive nearly 90% of the nation's $4.9 trillion in annual health care costs. Nurse practitioners (NPs), particularly in Full Practice Authority (FPA) states, may be critical to improving outcomes and reducing health care burdens.

OBJECTIVE(S): To evaluate whether nurse practitioner FPA reduces hospital readmissions and emergency department visits related to chronic conditions across the United States. RESEARCH DESIGN: A secondary data analysis using restricted Medical Expenditure Panel Survey (MEPS) data (2010-2019) was performed on site at the Agency of Health Research and Quality. We applied incidence rate ratios (IRRs) and difference-in-difference (DiD) models. MEASURES: Primary outcomes included readmission and emergency visit rates for five chronic conditions: high cholesterol (n=33,409), high blood pressure (n=38,858), diabetes (n=13,075), emphysema (n=2,509), and asthma (n=17,018). Covariates included county-level socioeconomic factors and rurality.
RESULT(S): States with FPA had modestly lower IRRs for high cholesterol (0.9863), high blood pressure (0.9758), diabetes (0.9746), and asthma (0.9710) compared with restricted states. DiD models showed inconsistent effects, with most FPA*Post coefficients lacking statistical significance. However, rural FPA counties frequently showed significantly lower readmission rates, notably for diabetes and high cholesterol.
CONCLUSION(S): NP FPA is associated with slight reductions in chronic condition readmissions, particularly in rural areas. While DiD models showed limited policy-specific impact, IRR findings support FPA as a promising strategy to enhance chronic disease management and access to care. Future research should address model limitations and explore causal pathways.

Hession E., et al. (2025) **'A Million Patient Minutes Saved: Using Real-Time Data and Teamwork to Reduce Emergency Department Triage Delays.'** ***Irish Journal of Medical Science 194*****(6), 2471–2473.**

Jennings N., and Clothier, V. (2026) **'Urgent Care in Australia: Unblocking Nurse Practitioner Capacity to Address Systemic Access Issues.'** ***International Emergency Nursing 85*****(pagination), Article Number: 101741. Date of Publication: 01 Mar 2026.**

Petrica A., et al. (2026) **'Artificial Intelligence in Emergency Department Triage: Perspective of Human Professionals.'** ***Frontiers in Digital Health 7*****(pagination), Article Number: 1693060. Date of Publication: 2026.**
Background: The triage process in emergency departments (EDs) is complex, and AI-based solutions have begun to target it. At this pivotal stage, the challenge lies less in designing smarter algorithms than in fostering trust and alignment among medical and technical stakeholders. We explored professional attitudes towards AI in ED triage, focusing on alignments and misalignments across backgrounds.
Method(s): An anonymous online cross-sectional survey was distributed through professional networks of healthcare providers and IT professionals, between May 2024 and February 2025. The questionnaire covered four areas: (a) the General

Attitudes towards Artificial Intelligence Scale (GAAIS); (b) professional background and career level; (c) challenges and priorities for AI applications in triage; and (d) the AI Attitude Scale (AIAS-4). Constructs from the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) were also applied. Cluster analysis (KMeans) was conducted based on GAAIS-positive, GAAIS-negative, and AIAS-4 scores.
Result(s): From a total of 151 professionals, Kmeans identified three clusters: K0 (cautious/critical, n = 39), K1 (enthusiastic/optimistic, n = 35), and K2 (balanced/pragmatic, n = 77). Approximately two-thirds of K2 (47/77; 61%) were healthcare providers. Six out of 20 (30%) medical professionals in K0 reported that AI could play no role in ED triage, but only 1/15 (7%) and 1/47 (2%) of healthcare providers gave this response in K1 and K2, respectively. Lack of knowledge of AI tools was also most frequent in K0 (14/39; 36%). Recognition of necessity of constraints showed marked contrasts in their mean +/- SD scores: (a) for data availability/quality, 2.95 +/- 1.98 (K0), 4.27 +/- 1.1 (K1), and 4.20 +/- 0.94 (K2); (b) for the integration of AI-based applications into existing workflows, 2.95 +/- 1.05, 4.20 +/- 0.94, and 3.47 +/- 1.02 in K0, K1, and K2, respectively. Among the UTAUT2 constructs, hedonic motivation differed most significantly, with mean +/- SD values of 3.41 +/- 1.0 (K0), 6.86 +/- 0.97 (K1), and 5.07 +/- 1.08 (K2).
Conclusion(s): Stakeholders' perspectives on AI in ED triage are heterogeneous and not solely determined by professional background or role. Hedonic motivation emerged as a key driver of enthusiasm. Educational strategies should follow two directions: (a) structured AI programs for enthusiastic developers from diverse fields, and (b) AI literacy for all healthcare professionals to support competent use as consumers.

Tayyari N., et al. (2025) **'Feasibility of Micro-Costing for Hospital-at-Home in Danish Municipalities: A Prospective Pilot Study.'** ***BMJ Open 15*****(12) (pagination), Article Number: e106799. Date of Publication: 25 Dec 2025.**
Objectives To test the feasibility of identifying and quantifying resource use for a Hospital-at-Home (HaH) model in Danish municipalities, we used a micro-costing approach. Additionally, we aimed to generate a transparent activity and time dataset. This dataset will support subsequent tariff development with time-driven activity-based costing and feed into the economic evaluation of an ongoing randomised controlled trial (RCT). Design Prospective pilot feasibility study. Setting Three municipalities in the Central Denmark Region in collaboration with emergency department specialists and general practitioners. Participants 56 elderly acute patients treated in HaH during the pilot phase. Outcome measures Feasibility of micro-costing data collection (completeness, consistency and acceptability to staff) and descriptive resource-use quantities by activity and provider group. No price

assignment or cost estimates are reported. Results Patients received a mean of 3.8 HaH treatment days with 7.8 acute team visits and 3.9 municipal-staff visits per treatment course. The acute team spent a mean of 742min per patient across treatment activities, communication, documentation and transport, while municipal care staff recorded a mean of 213min. Intravenous medicine administration and vital sign assessments were the most frequent activities. Data completeness and consistency improved over time through co-design and feedback. Conclusions Detailed resource-use measurement using provider logs was feasible in a municipal HaH model and produced an activity and time dataset suitable for tariff development. Findings are context-specific and not generalisable due to the small sample. The micro-costing log refined through the pilot will be applied in an RCT, where time and activity data will be used to construct a tariff using time-driven activity-based costing.

Timm N., et al. (2026) **'Development and Implementation of the Modified Pediatric Emergency Department Overcrowding Scale in Two Large Academic Pediatric Centers.'** ***Journal of Emergency Nursing 52*(1), 72–80.**
Emergency department crowding is a chronic problem within health care systems. The consequences of crowding are well documented with negative impacts on patient outcomes, patient/family satisfaction, staff stress, and medical errors. This study describes the implementation of the Pediatric Emergency Department Overcrowding Scale in 2 emergency departments, a 45-bed and a 22-bed, within a large pediatric academic medical center. Initial work revealed the scale worked well at a 45-bed emergency department but significantly underreported crowding at the 22-bed emergency department. A bed capacity correction factor was developed and incorporated in the Pediatric Emergency Department Overcrowding Scale formula, thus standardizing the view of crowding in each emergency department. The modified Pediatric Emergency Department Overcrowding Scale provided real-time visualization of crowding in both emergency departments and health care system capacity management systems. The modified Pediatric Emergency Department Overcrowding Scale was shared with a pediatric emergency department within another large academic pediatric medical center. Implementation of the bed capacity correction factor into their system resulted in a similarly improved demonstration of emergency department crowding through the Pediatric Emergency Department Overcrowding Scale.

Truong L.K., et al. (2026) **'Evidence for Digital Health Tools Designed to Support the Triage of Musculoskeletal Conditions in Primary, Urgent, and Emergency Care Settings: Scoping Review.'** ***Journal of Medical Internet Research 28*(pagination), Article Number: e81578. Date of Publication: 2026.**
Background: The digital health research field is growing rapidly, and a summary of

the available digital tools for triaging musculoskeletal conditions is needed. Effective and safe digital triage tools for musculoskeletal conditions could support patients and clinicians in making informed care decisions and may contribute to reducing emergency department overcrowding and health care costs.
Objective(s): The aim of the study is to identify and describe digital health tools for use by adults to triage musculoskeletal conditions across primary, urgent, or emergency care settings.
Method(s): Our scoping review was conducted following the Johanna Briggs Institute recommendations for scoping reviews and Arksey and O'Malley's framework. Systematic searches in MEDLINE (OVID), CINAHL (EBSCO), PsycINFO (EBSCO), Embase (OVID), Cochrane Library, Web of Science, OpenGrey, Google Scholar, arXiv, medRxiv, and an extensive gray literature search were conducted with a librarian scientist from inception to September 18, 2025. Studies had to recruit adults (aged 18 years and older) with musculoskeletal conditions that identified a digital health tool designed to triage or diagnose in primary, urgent, or emergency care settings and report primary data to be included. In total, 2 reviewer pairs independently screened abstracts and full-text papers. Relevant data were extracted in duplicate, and results were summarized descriptively.
Result(s): The search yielded 5695 records, and we screened 189 full-text papers. In total, 34 studies (n=37,509 patients) met the inclusion criteria. The most common musculoskeletal conditions reported were rheumatoid or inflammatory arthritis (13/34, 38%). In total, 19 (19/34, 56%) studies reported on symptom checkers, 13 (13/34, 38%) studies on triage or diagnosis tools, and 2 (2/34, 6%) were studies of diagnostic predictor tools. There were 16 unique digital health tools. A total of 2 tools were built for triaging musculoskeletal conditions and were not publicly available outside the UK National Health Service. Most tools were generic tools designed to screen for general health problems, including musculoskeletal conditions. The most common approach to evaluating performance (eg, accuracy) of the tools was to compare the concordance of the tool to a clinician diagnosis or triage recommendation. Sensitivity and specificity ranged from 39% to 91% and 23% to 80%, respectively. The reported accuracy of the included tools ranged from 33% to 98%.
Conclusion(s): Musculoskeletal conditions remain a blind spot for people designing, implementing, and evaluating digital health for triage: few tools were specifically designed for musculoskeletal conditions, and most existing tools performed poorly when applied to musculoskeletal populations. We recommend health systems and clinicians use a multimodal approach, integrating both digital health tools and clinical decision-making to safely triage and diagnose until a more robust tool for musculoskeletal conditions is available. Future tool developers need to use transparent, standardized processes that prioritize tool safety, clinical value, and trustworthiness when designing for clinicians and patients.

Jamon L Couch, Ellen Wang, Cobie Starcevich, Dean Giustini, Alex Haagaard, Elena Lopatina, Niels van Berkel, Michael Skovdal Rathleff, Clare L Ardern.

Vukovic A.A., et al. (2026) **'Improving Emergency Department Boarding Time: Balancing Efficiency and Safety.'** ***Pediatrics 157*****(1) (pagination), Date of Publication: 01 Jan 2026.**
BACKGROUND AND OBJECTIVE: Emergency department (ED) crowding and prolonged boarding times negatively impact care. Our objective was to decrease the average ED boarding time for patients admitted from the ED to any inpatient (IP) acute care unit at our main campus by 35% over 24 months.
METHOD(S): Our multidisciplinary team used the Model for Improvement to identify inefficiencies within the existing admission process and created a key driver diagram to guide intervention design. Serial Plan-Do-Study-Act cycles tested and refined interventions initially piloted on one high-volume IP unit before implementation across the institution. Interventions focused on creating shared knowledge of the admission process, optimizing IP room preparation, improving communication between process stakeholders, and streamlining the admission process. We used statistical process control charts to measure the impact of our interventions over time. Our outcome measure was ED boarding time. Very rapid transfer rate, or patients transferred to an intensive care unit within 3 hours of admission, and ED length of stay (LOS) were balancing measures. Our left without being seen (LWBS) rate served as a measure of care access.
RESULT(S): Our average ED boarding time decreased by 40% from 169 to 102 minutes, accompanied by a decrease in ED LOS and LWBS rate. There was no change in our very rapid transfer rate.
CONCLUSION(S): Engaged institutional and site of care leadership was integral to our project success. By understanding our system, creating clear expectations for process timelines, and streamlining communication, we were able to meaningfully improve transitions of care.

Williams R, Tsantani M, Lloyd L, Wood M, Bessant C, Takana H. (2026) **Unmet Needs, Unplanned Admissions The critical link between social care and hospitalisations in later life****. National Centre for Social Research.**

Wren J., et al. (2026) **'How is Same Day Emergency Care (SDEC) being Implemented Across England?.'** ***Emergency Medicine Journal 43*****(1), 33–40.**
Background In 2019, the National Health Service (NHS) England announced the implementation of same day emergency care (SDEC) in every hospital with a type 1 emergency department (ED). SDEC aims to provide timely and appropriate specialist care to patients on the same day, expediting their investigations and avoiding unnecessary hospitalisation. There is limited evidence for SDEC adoption and its

effectiveness. This mixed-method study identifies and analyses SDEC implementation methods and describes subjective workforce views through both surveys and interviews. Methods An electronic survey was developed and distributed via email to 60 randomly selected hospitals in England with type 1 EDs. Follow-up interviews were conducted to contextualise survey responses and explore perceptions of SDEC and subjective barriers to efficiency. Results In total, 39 responses (including dual responses from SDEC and ED staff) were received from 34 hospitals (57%). All hospitals had an acute medical SDEC, with more limited implementation of surgical (53%) and frailty SDECs (29%). The SDECs opened on average 12 hours on weekdays and 10 hours on weekends. Referral and patient selection models varied. 79% of hospitals used their SDECs as emergency bed spaces. 85% of units assessed between 31 and 50patients/day, with no unit admitting >10 patients/day. Although interviews were generally positive regarding SDEC efficiency, issues included differing perceptions of SDEC purpose, variability in models of patient selection, unclear referral pathways and inconsistent staffing levels. Conclusions Since its introduction, SDEC has been implemented and developed with great variability across England. While the introduction of the NHS SAMEDAY guidelines in 2024 may assist in mitigating these discrepancies nationally, more research is vital to identify optimal methods of service delivery and evaluation of this new healthcare system.

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