



ABSTRACTS IN URGENT CARE

Web-Based Pediatric Point-of-Care Ultrasound Cases

Take Home Point: Implementation of a web-based point-of-care ultrasound (POCUS) educational intervention was associated with improved learning outcomes and favorable participant evaluations among clinicians working in resource-limited settings.

Citation: Ricci A, Lindsay D, Schwanfelder C, et al. Web-Based Deliberate Practice of Pediatric Point-of-Care Ultrasound Cases in Resource-Limited Settings: A Multicenter Implementation and Effectiveness Study. *J Ultrasound Med.* 2025;44(7):1231-1244. doi:10.1002/jum.16679

Relevance: POCUS is an increasingly valuable tool in clinical practice, providing rapid bedside diagnostic and procedural support. For clinicians working in resource-limited settings, including many urgent care centers (UCCs), training in POCUS may improve the ability to deliver safe and efficient patient care.

Study Summary: This multicenter prospective cohort study evaluated clinicians working with the Médecins Sans Frontières (MSF) organization in resource-limited settings across Africa and the Middle East. Participants were recruited through convenience sampling and completed a standardized MSF curriculum that was adapted to each site's clinical experience, diagnostic scope, existing protocols, and common disease presentations. Training included individualized, intensive sessions lasting 6–8 days, supplemented by web-based deliberate practice cases covering 4 POCUS applications: soft tissue, cardiac, lung, and focused assessment with sonography in trauma (FAST). Two MSF coordinators reviewed participant performance for quality assurance.

A total of 110 clinicians began the program and completed 82,206 web-based cases. Of these, 93 (84.5%; 95% confidence interval [CI], 76.4%–90.7%) completed at least 60 cases, the threshold used to assess learning outcomes. Participants demonstrated significant improve-

ments in diagnostic accuracy (delta 14.2%; 95% CI 13.1%–15.2%), sensitivity (delta 13.2%; 95% CI 12.1%–14.2%), and specificity (delta 13.8%; 95% CI 12.7%–15.0%) across the 4 POCUS applications. Overall, 90 participants (81.8%; 95% CI 73.3%–88.5%) achieved the mastery learning standard in at least 1 application. Mastery standards were achieved by: 90 of 107 participants (84.1%; 95% CI 75.8%–90.5%) for soft tissue; 75 of 100 (75.0%; 95% CI 65.3%–83.1%) for cardiac; 88 of 100 (88.0%; 95% CI 74.2%–89.8%) for lung; and 89 of 110 (80.9%; 95% CI 72.3%–87.8%) for FAST.

Editor's Comments: Selection bias is possible because participants were highly motivated clinicians working with MSF. As a result, the findings may not be fully generalizable to other practice settings. Nonetheless, the study demonstrates that a structured, web-based POCUS educational program can produce meaningful learning gains and may be a practical model for larger urgent care organizations or those with limited resources seeking to expand clinician education and skills development. ■

Absorbable Sutures for Adult Facial Lacerations

Take Home Point: Absorbable sutures are an effective option for definitive closure of adult facial lacerations, providing cosmetic outcomes, complication rates, and patient satisfaction comparable to those of non-absorbable sutures.

Citation: Kelly M, Horner D. Absorbable sutures appear clinically effective and may be more cost-effective than non-absorbable sutures for definitive closure of adult facial lacerations. *Emerg Med J.* Published online April 22, 2026. doi:10.1136/emered-2026-216075

Relevance: Facial lacerations requiring suture closure are commonly encountered in UCCs. Identifying the most appropriate suture material to achieve favorable cosmetic outcomes while minimizing follow-up care can help optimize patient management.

Study Summary: This Best Evidence Topic report reviewed the highest-quality available evidence addressing the following clinical question: In adults with facial lacerations requiring definitive closure, do absorbable sutures provide



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better clinical and/or cost-effective outcomes than non-absorbable sutures? The authors searched MEDLINE, the Cochrane Library, and Embase for relevant studies.

Only 2 studies met the inclusion criteria, and the authors concluded that both the quantity and quality of the available evidence were limited. Overall, the findings suggest that absorbable sutures provide cosmetic outcomes comparable to those of non-absorbable sutures without increasing complications. They are also associated with high patient satisfaction. The available evidence likewise suggests the potential for reduced downstream healthcare utilization and lower overall treatment costs by eliminating the need for suture removal.

Editor's Comments: The available evidence is limited by the small number of studies, small sample sizes, and the predominance of procedures performed by surgical specialists, which may limit generalizability to the urgent care setting. Nevertheless, the findings support absorbable sutures as a reasonable option for selected adult facial lacerations and highlight an opportunity for urgent care clinicians to generate setting-specific evidence. ■

Risk of Heart Rhythm Abnormalities From Vaping in Adolescents and Young Adults

Take Home Point: Electronic cigarette (e-cigarette) use was associated with an increased risk of heart rhythm abnormalities among adolescents and young adults (AYA).

Citation: Tsalatsanis A, Johnson J, Abou-Assali O, et al. Increased Risk of Heart Rhythm Abnormalities in Adolescents and Young Adults Who Vape. *J Pediatr*. 2026;296:115183.

Relevance: Vaping, or the use of e-cigarettes, is common among AYA populations, yet its potential cardiovascular effects remain incompletely understood.

Study Summary: This retrospective study analyzed deidentified electronic health records from more than 150 million patients across 106 healthcare institutions in the United States. The authors identified adolescents and young adults aged 11–24 years who had interacted with a healthcare system and classified them into 2 groups based on International Classification of Diseases, Tenth Revision (ICD-10) codes: those who used e-cigarettes; and those

who did not. All eligible patients who vaped were included and propensity score matched 1:1 with controls. The primary outcome was the association between vaping and the development of heart rhythm abnormalities, defined by ICD-10 diagnosis codes.

The study included 57,202 patients who vaped and who were matched to 57,202 control patients. Patients who vaped had 82% higher odds of being diagnosed with a heart rhythm abnormality than those who did not vape (odds ratio [OR] 1.82; 95% CI 1.74–1.91; $p < 0.001$). They also had nearly twice the hazard of developing a heart rhythm abnormality during follow-up (hazard ratio [HR] 1.97; 95% CI 1.88–2.06; $p < 0.001$).

Editor's Comments: Because of its observational design, this study cannot establish a causal relationship between vaping and heart rhythm abnormalities. In addition, reliance on ICD-10 codes may have resulted in misclassification, and important confounding factors, such as illicit substance use, were not included in the analysis. Nevertheless, the study indicates a possible correlation between vaping and cardiac arrhythmias. Clinically, the findings underscore the importance of routinely assessing e-cigarette use during urgent care encounters, particularly in adolescents and young adults. When clinically indicated, appropriate diagnostic testing, such as electrocardiography, may help guide evaluation and management. ■

Delayed Presentation and Diagnosis In Patients With Subarachnoid Hemorrhage

Take Home Point: Patients who delayed seeking care for symptoms of subarachnoid hemorrhage (SAH) were more likely to experience a subsequent delay in diagnosis after presenting for medical evaluation.

Citation: Hall S, Suresh V, Bandyopadhyay S, et al. Prospective patient-reported reasons for delayed diagnosis of spontaneous subarachnoid haemorrhage. *Emerg Med J*. 2026;43:390–396.

Relevance: Although SAH often presents with dramatic symptoms, timely diagnosis can be challenging, particularly in patients with atypical presentations or those who delay seeking medical attention.

Study Summary: This prospective quality improvement project used structured interviews with patients to evaluate

their presentations with spontaneous SAH at the Wessex Neurological Centre in the United Kingdom. Eligible patients had a diagnosis of spontaneous SAH confirmed by computed tomography (CT) or lumbar puncture. A delay was defined as a conscious or unconscious decision by the patient not to seek immediate medical attention after symptom onset.

The authors identified 550 patients with spontaneous SAH and identified 107 with a delayed diagnosis. Among these patients with delay, 80% attributed the delay in diagnosis to postponing their initial presentation for medical care. The most commonly reported reason for delaying care was waiting to see whether symptoms would resolve, despite most patients describing a classic thunderclap headache. Patients frequently attributed their symptoms to migraine or believed they were not severe enough to warrant medical evaluation. Among those who eventually sought care, 45% reported additional diagnostic delays due to misdiagnosis or errors in diagnostic testing.

Editor's Comments: The study's single-center design may limit the generalizability of its findings. In addition, the absence of outcome data prevented assessment of the clinical consequences associated with delayed diagnosis. Nevertheless, the findings reinforce the importance of obtaining a thorough history in patients presenting with headache. A history of thunderclap headache or neurological changes should prompt consideration of SAH even when presentation is delayed. ■

Multimodal Intervention to Reduce CT Use in Blunt Head Injury

Take Home Point: A multimodal intervention that combined evidence-based guidance, clinician education, feedback, and an electronic health record (EHR)-integrated clinical decision support tool was associated with a modest reduction in CT use for blunt head injury without reducing the detection of traumatic brain injury.

Citation: Berlyand Y, Smith Shain R, Savarino J, et al. A multimodal intervention reduces computed tomography use in blunt head injury. *Am J Emerg Med.* 2026;109:148-154. doi:10.1016/j.ajem.2026.07.005

Relevance: CT is the imaging modality of choice for evaluating blunt head injury. However, unnecessary imaging increases healthcare costs, radiation exposure, and oper-

ational inefficiencies. Thus, utilizing clinical decision tools to identify patients at sufficiently low risk to avoid unnecessary CT may be clinically and operationally beneficial.

Study Summary: This retrospective pre-post analysis evaluated the implementation of a multimodal intervention across 3 academic emergency departments (EDs) within a single United States health system. An interdisciplinary team of emergency physicians and trauma surgeons developed institutional guidance recommending use of either the National Emergency X-Radiography Utilization Study (NEXUS) Head CT decision instrument or the Canadian CT Head Rule (CCHR) when evaluating adults younger than 65 years with blunt head injury. Physicians, residents, and advanced practice providers received a brief educational session and follow-up email reminders. An optional clinical decision support tool integrated into the EHR was also utilized.

The analysis included 194,655 ED encounters, comprising 93,393 encounters before and 101,262 encounters after implementation of the intervention. CT utilization decreased from 9.6% before the intervention to 9.0% afterward. Logistic regression demonstrated a significant reduction in the odds of obtaining a head CT after implementation (adjusted OR 0.91; 95% CI 0.89–0.94). The proportion of CT examinations demonstrating radiographic traumatic brain injury remained unchanged at 1.9% during both study periods, with no significant difference in the odds of identifying traumatic brain injury after the intervention (OR 0.95; 95% CI 0.78–1.14).

Editor's Comments: The study did not assess clinician engagement with individual components of the intervention, making it difficult to determine which elements were most effective. In addition, 1 of the 3 participating sites did not experience a reduction in CT utilization, which may limit the generalizability of the findings. Nevertheless, the study illustrates how combining education, evidence-based guidelines, feedback, and clinical decision support can influence clinician behavior. Similar multimodal quality improvement strategies may be beneficial in urgent care settings. ■

AI-Powered Scribes Modestly Decrease Documentation Time

Take Home Point: Adoption of artificial intelligence (AI)-powered scribes was associated with a modest but statistically significant reduction in EHR documentation time and a small increase in weekly visit volume.

Citation: Rotenstein L, Holmgren A, Thombly R, et al. Changes in Clinician Time Expenditure and Visit Quantity With Adoption of Artificial Intelligence–Powered Scribes: A Multisite Study. *JAMA*. 2026;335(16):1408-1417. doi:10.1001/jama.2026.2253.

Relevance: AI tools are increasingly being integrated into clinical practice. Whether AI-powered scribes meaningfully reduce clinician workload while improving patient interaction remains an unanswered question.

Study Summary: This multisite longitudinal cohort study evaluated AI scribe adoption across 5 academic healthcare institutions in the United States. Sites provided data for clinicians who adopted AI scribes as well as clinicians who did not. The study population included ambulatory attending physicians, fellows, nurse practitioners, physician assistants, and resident physicians. Outcomes included changes in total EHR time, documentation time per 8 hours of work (DocTime), work outside of scheduled work hours (WoW), and weekly visit volume.

The study included 8,581 clinicians, including 1,809 AI scribe adopters and 6,772 nonadopters. AI scribe adoption was associated with 13.4 fewer minutes (95% CI 9.1–17.7) of total EHR time and 16.0 fewer minutes (95% CI 13.7–18.3) of DocTime. Changes in WoW were not statistically significant. AI scribe adoption was also associated with an increase of 0.49 additional weekly visits (95% CI 0.17–0.81). Relative reductions in total EHR time and DocTime were 3.0% and 10.0%, respectively. The authors estimated that AI scribe adoption was associated with a statistically significant small increase in evaluation-and-management revenue of \$167.37 per month.

Editor's Comments: Important limitations included the lack of randomization and inconsistent AI scribe use among some adopters. The findings also suggested that clinician workflow patterns impacted how efficiently these tools were used. As the associated revenue gains were relatively small, additional research is needed to determine organizational benefit. ■

A Shifting Paradigm for Acute Coronary Syndrome Diagnoses

Take Home Point: An occlusion-focused diagnostic approach to patients presenting with chest pain may facilitate earlier recognition of coronary artery occlusion and timelier

reperfusion in patients with acute coronary syndrome (ACS) compared with diagnosis based on electrocardiographic ST segment findings.

Citation: Umit T, Sogut O, Arslan M, et al. Diagnostic challenges in acute coronary syndrome: reconciling the STEMI–NSTEMI and OMI–NOMI paradigms. *BMC Cardiovasc Disord*. 2026;26:228. doi:10.1186/s12872-026-05612-3

Relevance: The diagnostic framework for ACS is evolving from the traditional classification of ST-elevation myocardial infarction (STEMI) and non-ST-elevation myocardial infarction (NSTEMI) toward an occlusion-based approach that distinguishes coronary vessel occlusion myocardial infarction (OMI) from non-occlusion myocardial infarction (NOMI).

Study Summary: This retrospective, single-center observational cohort study included adults aged 18 years and older who presented to the ED with ACS. Eligible patients were diagnosed with STEMI, NSTEMI, or unstable angina and subsequently underwent coronary angiography. At presentation, each electrocardiogram (ECG) was independently interpreted by both an emergency medicine physician and a cardiologist and classified as STEMI-positive (STEMI+) or STEMI-negative (STEMI–). Following coronary angiography, patients were classified as having either OMI or NOMI and stratified into 4 groups: STEMI–/OMI; STEMI–/NOMI; STEMI+/OMI; and STEMI+/NOMI.

The study included 482 patients: 222 (46.1%) were classified as STEMI–/OMI; 61 (12.7%) as STEMI–/NOMI; 193 (40.0%) as STEMI+/OMI; and 6 (1.2%) as STEMI+/NOMI. Patients with NOMI were significantly younger than those with OMI. Patients in the STEMI+/OMI group underwent coronary intervention sooner than those in the STEMI–/OMI group. Among patients with STEMI+/OMI, 80.3% had complete occlusion of the culprit artery, and 19.7% had near occlusion. In the STEMI–/OMI group, 45.9% had complete occlusion, and 54.1% had near occlusion.

Editor's Comments: This retrospective study from a single tertiary care center may have limited generalizability to other practice settings. In addition, classification of OMI and NOMI relied on angiographic findings and troponin concentrations, which may introduce interobserver variability. Nevertheless, the findings support the emerging OMI–NOMI framework, which emphasizes identification of coronary artery occlusion rather than relying solely on electrocardiographic criteria. Urgent care clinicians should be aware of this evolving concept when evaluating patients with suspected ACS, given that most centers only utilize electrocardiograms. ■