



Chest X-rays for Abdominal Pain: Physicians' Perspectives

Take Home Point: In this study, emergency medicine physicians expressed favorable attitudes toward evidence-based medicine (EBM), although their clinical practices did not always fully align with the available evidence.

Citation: Evans B, Giannotti N, Ekpo E. Examining emergency doctors' perspectives and attitudes regarding evidence-based medicine and chest radiograph request for abdominal pain. *Emerg Med Australas.* 2025;37(6):e70178. doi:10.1111/1742-6723.70178

Relevance: Prior literature shows that chest radiographs (CXR) contribute little to the diagnosis of abdominal pain. Despite this evidence, guideline adoption to avoid CXRs in this scenario remains inconsistent. This study examined factors in physicians' attitudes that may contribute to challenges in utilizing EBM guidance.

Study Summary: This cross-sectional online survey included emergency medicine physicians in New South Wales, Australia. The validated EBM questionnaire contained 41 items: 28 Likert-scale questions, 10 multiple-choice questions, and 3 open-ended short-answer questions. Sections included participant demographics, attitudes toward evidence-based medicine, current evidence-based medicine practices (focused on utilization of CXR for abdominal pain), and perceived ability to implement evidence-based medicine in the workplace.

Forty-eight physicians completed the survey, including 28 consultants (attending physicians). Approximately 90% of respondents agreed or strongly agreed that patients benefited from the use of EBM. However, use of chest radiographs for abdominal pain was common with only 1 respondent reportedly never ordering them. Specifically, 96% reported recommending CXRs "sometimes" or less to colleagues or trainees in this scenario. Only 23% agreed or strongly agreed that they relied solely on scientific ev-

idence when making clinical decisions. Respondents did not believe that having to comply with guidelines undermined their clinical judgment, with only 17% agreeing or strongly agreeing that this was the case. Most respondents (94%) indicated that their organization supported EBM implementation, and 65% reported being able to change practice in response to new evidence.

Editor's Comments: The generalizability of this study is limited as the survey had a small number of participants in a single geographic region. As a cross-sectional survey, results reflect a single time point and may be influenced by response bias, including acquiescence bias, and social desirability bias. Although respondents expressed support for evidence-based medicine, ordering practices suggest that clinical behavior does not always align with physician attitudes. For urgent care clinicians seeking to strengthen professional recognition and provide excellent patient care, consistent application of evidence-based medicine is critical. ■

Methoxyflurane for the Treatment of Acute Trauma-Related Pain in Children and Adolescents

Take Home Point: Methoxyflurane significantly improved pain in children and adolescents with acute trauma and demonstrated a safety profile consistent with prior studies.

Citation: Hartshorn S, Barrett MJ, Bloom B, et al. Paediatric Emergency Research in the United Kingdom & Ireland (PE-RUKI). Treatment of acute trauma-related pain in children and adolescents with methoxyflurane compared with placebo (MAGPIE): A randomized clinical trial. *Injury.* 2025;56(12):112830. doi:10.1016/j.injury.2025.112830

Relevance: Methoxyflurane is an inhaled analgesic with rapid onset that has been used for more than 40 years in adults. Evidence of effectiveness and safety in pediatric populations has been limited.

Study Summary: The MAGPIE study is a randomized, double-blind, multicenter, placebo-controlled trial conducted across 11 emergency departments in the United Kingdom and Ireland. Participants ages 6-17 years with minor trauma



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and moderate to severe pain (Visual Analogue Scale score 60 to 80 millimeters or Wong-Baker FACES score 6 to 8) were randomized 1:1 to receive 3 milliliters of methoxyflurane or 5 milliliters of normal saline (0.9%) via inhaler. A few drops of the methoxyflurane were placed into the wristbands of children receiving the placebo to mask the smell of the active agent.

The primary endpoint was change in pain intensity on the Visual Analogue Scale from baseline to 15 minutes. Rescue analgesia was permitted based on site specific standard practice and included nitrous oxide and oxygen mixture, intranasal fentanyl, diamorphine, or intravenous or oral morphine.

A total of 249 participants were randomized (127 methoxyflurane; 122 placebo), and 192 received treatment (92 methoxyflurane; 100 placebo). A greater proportion of participants in the methoxyflurane group achieved at least a 30% reduction in pain at all time points, reaching statistical significance at 5 minutes (odds ratio [OR] 2.77; 95% confidence interval [CI] 1.33–6.06; $P = 0.006$) and 20 minutes (OR 1.94; 95% CI 1.07–3.58; $P = 0.029$). Median time to first pain relief was shorter with methoxyflurane (5.0 minutes; 95% CI 4.0–6.0;) compared with placebo (8.5 minutes; 95% CI 5.0–17.0; $P = 0.003$). Rescue medication was used more frequently in the placebo group (30%) compared with the methoxyflurane group (9.8%). Methoxyflurane was well tolerated, and the safety profile was consistent with prior data.

Editor's Comments: Enrollment did not reach the planned sample size because of screening exclusions and consent challenges. The setting of the study in emergency departments and the pain medications utilized may limit generalizability to many urgent care settings. Nonetheless, these findings support the effectiveness, tolerability, and safety of methoxyflurane in children and adolescents with acute pain from trauma. ■

Artificial Intelligence Recommendations For Minor Ailments

Take Home Point: ChatGPT-4o mini demonstrated greater accuracy and patient-centeredness than comparator artificial intelligence platforms in recommendations for minor ailment scenarios, though clinical oversight remains necessary.

Citation: ZainAlAbdin S, Kendakji S, Alrahbi F, et al. Assessment of artificial intelligence–powered self-care rec-

“As with many artificial intelligence studies, findings are based on controlled scenarios rather than real patient interactions.”

ommendations for management of minor ailments: A comparative analysis. *Pharmacotherapy*. 2026;46(2):e70089. doi:10.1002/phar.70089

Relevance: Artificial intelligence (AI) platforms are increasingly used by the public for health information and advice. The reliability of these recommendations remains an area of active investigation.

Study Summary: This cross-sectional exploratory study entered 91 standardized minor ailment case scenarios requiring over-the-counter medication into 3 AI platforms (ChatGPT-4o mini, Gemini, and Copilot). Scenarios represented conditions including allergic rhinitis, nasal congestion, common cold, cough, heartburn, flatulence, nausea and vomiting, menstrual cramps, hemorrhoids, constipation, diarrhea, headache, musculoskeletal pain, acne, rash, tinea infections, dry eye, red eye, conjunctivitis, and supplement-related inquiries. The AI responses were graded using a 5-point Likert scale for accuracy, patient-centeredness, and comprehensiveness by 3 study investigators.

ChatGPT-4o mini performed significantly better than Gemini ($P = 0.037$) and Copilot ($P < 0.001$) for accuracy. Gemini also outperformed Copilot ($P < 0.001$) for accuracy. For patient-centeredness, ChatGPT-4o mini again scored higher than Gemini ($P < 0.007$) and Copilot ($P < 0.001$), with no significant difference between Gemini and Copilot ($P = 0.163$). All 3 platforms differed significantly in comprehensiveness, with ChatGPT-4o mini surpassing both Gemini ($p = 0.014$) and Copilot ($p < 0.001$), while Gemini outperformed Copilot ($p < 0.001$). Overall, AI responses showed substantial similarity to standard self-care guidance.

Editor's Comments: As with many artificial intelligence studies, findings are based on controlled scenarios rather than real patient interactions. This limits the generalizability to all variations of patient interactions with AI tools. Further research is needed in more clinical scenarios to ensure safety and accuracy before widespread integration occurs into urgent care workflows. However, structured artificial intelligence tools may potentially support triage and self-care education when used with clinician oversight. ■

Triage for Adults With Urinary Tract Infections

Take Home Point: The Ann Arbor triage recommendations aim to standardize evaluation and promote appropriate empirical antibiotic prescribing and urine testing in adults with suspected urinary tract infection (UTI).

Citation: Meddings J, Chrouser K, Fowler K, et al. Ann Arbor guide to triaging adults with suspected urinary tract infection for in-person and telehealth settings. *JAMA Netw Open*. 2026;9(1):e2556135. doi:10.1001/jamanetworkopen.2025.56135

Relevance: UTIs are commonly diagnosed and treated in urgent care centers. The Centers for Disease Control and Prevention estimates that 1 in 3 antibiotic courses prescribed for a suspected UTI is unnecessary. This guideline aims to standardize triage for empiric antibiotics, urine testing, and referral for in-person evaluation.

Study Summary: This guideline was developed using the RAND/UCLA Appropriateness Method and consensus from a multidisciplinary panel of experts following review of scientific evidence regarding triage and management of suspected UTI symptoms in outpatient settings. The panel included 13 clinical experts (5 men; 8 women) representing primary care, urgent care, infectious disease, geriatrics, obstetrics-gynecology, emergency medicine, urogynecology, and urology.

The panel’s recommendations for triaging patients in telehealth and in-person settings included:

- Same-day in-person evaluation for symptoms concerning for pyelonephritis, complicated cystitis, or urinary obstruction
- In-person evaluation if additional nonurinary symptoms were present (such as diarrhea, genital discharge, or cough)
- Avoidance of urine testing and empirical treatment if only change in urine color or appearance is present in the absence of bladder (cystitis) symptoms
- Empirical treatment without testing or an in-person visit for women with new, classic cystitis symptoms (dysuria, urinary frequency, urgency, or suprapubic pain) and no risk factors for antibiotic resistance
- Urinalysis with culture prior to initiation of antibiotics for women at risk of antibiotic resistance (for example, recent antibiotic treatment for UTI or recurrent UTIs) and for all men
- Consideration of empirical treatment for patients who

face barriers to obtaining timely urine testing or in-person visits

Editor’s Comments: A major limitation of this study is the literature review demonstrated the lack of high-quality evidence and randomized controlled trials conducted in outpatient settings for patients presenting with UTI symptoms. Additionally, the guideline has not yet undergone validation regarding its appropriateness and practical application in clinical environments. However, these criteria can likely help standardize and improve the appropriateness of empiric antibiotics prescribing, urine testing, and visit type triage for patients with urinary tract infection symptoms. ■

Accuracy of Empirical Treatment for Vaginitis Symptoms in the United States

Take Home Point: High rates of empirical treatment and misdirected therapy highlight the need for rapid, accurate diagnostic testing for vaginitis, particularly in cases of coinfection.

Citation: Tse J, Chen J, Shi L, et al. Prevalence and accuracy of empiric treatment among patients with vaginitis symptoms in the United States. *Sex Transm Dis*. 2025; 52(11):690-698. doi:10.1097/OLQ.0000000000002197

Relevance: Vaginitis is a leading cause of outpatient visits for women with gynecologic concerns. Although generally treatable, some patients experience persistent or refractory infections that do not respond to initial therapy, due to misdiagnosis or coinfections.

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Study Summary: This retrospective study utilized linked outpatient medical claims (Dx) and longitudinal prescription claims (LRx) databases from more than 800 ambulatory practices across the United States. The dataset included more than 100,000 physicians and more than 82 million patients. Patients were eligible for inclusion if they

had at least 1 International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis code for vaginitis and/or vaginitis symptoms documented in the medical records. All patients were required to be female and to have 12-month baseline data and 30-day follow-up data available in both databases. Vaginitis treatments were identified through prescription fills recorded in LRx and drug administrations documented in Dx.

The authors found high rates of empiric treatment among both pregnant and nonpregnant patients presenting with vaginitis symptoms. This occurred even while results of highly accurate nucleic acid amplification testing (NAAT) for bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis were pending. Empiric treatment was observed in 35.5–67.6% of pregnant patients and in 52.2–74.3% of nonpregnant patients. For pregnant patients who tested positive for bacterial vaginosis, 6.5–8.2% received empiric antibiotics targeting other conditions; whereas this occurred in 11.7–13.0% of nonpregnant patients. Patients with coinfections had the highest rates of inappropriate treatment, which was often incomplete treatment for all causative organisms. Furthermore, 21% of patients with positive trichomoniasis results did not receive treatment within the 7-day follow-up period.

Editor's Comments: Limitations of this study included reliance on diagnosis and coding accuracy which may have been incomplete. Additionally, there was an inability to confirm medication adherence. Care outside of the clinical setting including over-the-counter treatments were not captured. Despite these limitations, the findings emphasize the importance of utilization of diagnostic testing and appropriate treatment prescribing for vaginitis in the urgent care setting to reduce persistent infection and minimize antimicrobial resistance. ■

Patient Safety: 4-Step Model in Anesthesiology

Take Home Point: Application of a structured, proactive 4-step model consisting of patient safety leadership rounds, simulation-based training, patient safety awareness initiatives, and clinical risk management strategies can improve teamwork and the safety climate among physicians, contributing to a stronger patient safety culture.

Citation: Carstensen S, Olsen S, Lehmkuhl L, et al. A four-step model for improving patient safety culture in anesthesiology: A prospective cross-sectional study. *Acta Anaesthesiol Scand.* 2026;70(1):e70136. doi:10.1111/aas.70136

Relevance: Patient safety culture (PSC), defined as the normative and social environment in which healthcare professionals (HCPs) work, plays a central role in ensuring high-quality care and minimizing adverse events.

Study Summary: This prospective cross-sectional study used the Safety Attitudes Questionnaire–Danish version to measure perceptions before and after implementing a 4-step patient safety model which included patient safety leadership rounds, simulation-based training, patient safety awareness initiatives, and clinical risk management strategies. This was implemented over 5 years in the Departments of Anesthesiology and Intensive Care Medicine at a hospital in Southern Denmark with questionnaire administration prior to model implementation and annually thereafter for a 5 year period.

A total of 114 physician questionnaires were included in the analysis, consisting of 34 junior physicians and 80 specialist physicians. Over 5 years, patient safety culture scores showed a significant improvement in perception of patient safety culture regarding safety climate and teamwork climate among physicians in both groups. Stress recognition improved, more so in the junior physician group, but did not reach statistical significance.

Editor's Comments: The small sample size and high physician turnover, particularly among junior physicians, may have influenced responses and may limit generalizability. Junior physicians, being earlier in their careers, may also be more susceptible to influence from organizational culture and prevailing attitudes toward patient safety, potentially affecting their responses. Additionally, this study included specialists, and findings may not generalize beyond those areas. However, these findings provide valuable insights for urgent care organizations, particularly regarding the integration of simulation training and clinician risk management practices, to strengthen patient safety culture. ■