

# Investigating at-home outcomes will improve paediatric emergency care

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Emergency care for children has evolved over the past 50 years, focusing on optimising their evaluation and treatment in EDs. Research focusing on the unique needs of children and their families has improved patient outcomes in the ED, outpatient and inpatient settings.

In the ED setting, research on improving sedation and procedural care for paediatric patients has emphasised medication efficacy and safety, standardised protocols, incorporating non-pharmacological interventions and reducing acute adverse events. However, little research has been done on optimising patient outcomes after ED discharge. In fact, the vast majority of children are discharged home after receiving ED care, but there are very few investigations of patient outcomes in the at-home setting to ensure optimal post-ED patient outcomes. The study by Martin and colleagues<sup>1</sup> highlights the frequency of poor outcomes following ED discharge. The high rate of maladaptive behavioural changes they observed underscores the urgent need to investigate at-home outcomes, ensuring that emergency care truly benefits children's long-term well-being.

Technological advancements in patient outcome reporting such as the use of electronic outcome measures, leveraging computer-adaptive questionnaire design, applications downloaded to a mobile device, and texting ensure reliable and efficient methods of communicating patient-reported data about at-home experiences in a cost-effective and feasible manner.<sup>2</sup> Current assessments of low-quality emergency care after ED discharge rely on measures that are only sensitive enough to identify the most severe outcomes, such as return visits to the ED or subsequent hospitalisation. These measures do not account for the patient-oriented outcomes that are typically prioritised by patients, their families and healthcare providers after ED care. For instance, it is unlikely that these children will return to the ED for the described maladaptive behaviours, yet few families would describe the experience as ideal. Adapting ED care to reduce

post-discharge suffering is the path to true holistic optimisation of emergency care for children. Additionally and intuitively, understanding disease-specific outcomes that are linked to ED evaluation and treatment practices could further advance the quality of ED care delivered.

The majority of children treated in the ED either seek emergency care due to a painful condition or during the course of their ED visit undergo a painful procedure.<sup>3</sup> Not enough is known about the pain trajectories children experience when they return home after ED discharge, and the impact of that pain on their function and behaviours is not understood. Further, little is known about the effect of emergency care or ED discharge prescriptions/instruction on these patient outcomes. Martin and colleagues highlight an association between post-discharge pain and persistent maladaptive behaviours in the weeks following an ED visit. Other studies have shown children experience pain at home after emergency care.<sup>4-6</sup> In my practice and own work there are cases where children's pain is underestimated, labelled as exaggerated, or worse, dismissed as a rite of passage. At the same time, there are children discharged home who receive too much pain medication and go on to have complications associated with opioid prescription such as struggles with substance abuse/misuse. For acute ED pain management and sedation, immediate feedback and clinical experience are vital for optimal outcomes. However, research often neglects at-home pain, leaving providers unaware of patients' experiences after discharge. This lack of feedback hampers practice refinement. The evidence to inform best and safest pain treatment recommendations requires research performed in the home setting after ED discharge, as these investigators have shown. Additionally, there is a growing appreciation for the influence of the anxiety felt by children and their parents during healthcare encounters on the pain experienced. The impact of anxiety on short-term outcomes also requires further investigation.

The authors of this study have taken a rigorous approach to capturing the home experiences of children after ED discharge. Similar studies are needed to

comprehensively evaluate the full patient experience from the ED to the home for other conditions treated in the ED setting. An understanding of how ED care, ED discharge prescriptions and ED discharge instructions/recommendations are associated with short-term patient outcomes is necessary to determine the ED management practices that result in the best possible outcomes for children.

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## REFERENCES

- Martin SR, Heyming TW, Fortier MA, *et al*. Pediatric laceration repair in the emergency department: post-discharge pain and maladaptive behavioral changes. *Emerg Med J* 2024;41.
- Zigler CK, Adeyemi O, Boyd AD, *et al*. Collecting patient-reported outcome measures in the electronic health record: lessons from the NIH pragmatic trials collaboratory. *Contemp Clin Trials* 2024;137:107426.
- Anderson JL, Oliveira J E Silva L, Funni SA, *et al*. Epidemiology of paediatric pain-related visits to emergency departments in the USA: a cross-sectional study. *BMJ Open* 2021;11:e046497.
- Hanson A, Drendel AL. A qualitative study of the at-home pain experience for children with an arm fracture. *Paediatr Child Health* 2017;22:207-10.
- Stevens MW, Drendel AL, Hainsworth KR. Pediatric minor injury outcomes: an initial report. *Pediatr Emerg Care* 2011;27:371-3.
- Cozzi G, Cortellazzo Wiel L, Bassi A, *et al*. Need for pharmacological analgesia after cast Immobilisation in children with bone fractures: an observational cross-sectional study. *Emerg Med J* 2022;39:595-600.

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