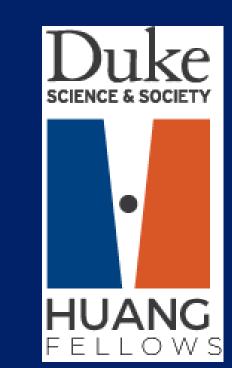


Can electronic medical record (EMR) based strategies be used to identify child maltreatment?

Kristin Ankoma-Sey





Background

Child maltreatment is a pervasive problem. In the United States, 1 in 8 children will experience maltreatment before the age of 18.¹ Clinical settings provide important opportunities during which medical personnel can note and intervene in cases of suspected or confirmed child maltreatment. One of the ways in which medical providers in this area could improve care is to reduce the amount of missed child abuse cases. Current clinical care is based on the efficient use of electronic medical records (EMR). EMR-based strategies may help identify child maltreatment.

How can EMRs be used to identify child maltreatment?

- EMR-based tools can include provider alerts, trigger systems, standardized order sets, and/or universal screenings embedded into EMRs.
- EMR-based tools can provide medical personnel with clinical decision support tools to guide child abuse evaluation, standardize care, and improve adherence to guidelines for referrals.

Recent literature suggests that it is feasible and beneficial to use EMR-based tools to identify children at risk for maltreatment.^{2,3} The purpose of the current study was to conduct qualitative interviews with emergency department physicians and child maltreatment experts in order to determine if EMR-based strategies can identify child maltreatment.

Research Questions

- 1) Are EMR-based tools useful in identifying children who are at risk for or who have experienced maltreatment?
- 2) What are the barriers and facilitators of the effective use of EMR-based tools by medical personnel?
- 3) What ethical implications must we consider when using these tools?

Methods

Participants: Emergency department physicians and child maltreatment experts were identified by literature searches and Internet searches of hospitals and universities with a focus on child maltreatment.

Procedures: Participants were interviewed for 30-60 minutes on Zoom. Audio transcripts of the interviews provided by Zoom were corrected by research assistants. A coding system was developed based on themes that emerged during the interviews. Transcripts of the interviews were coded using NVivo.

Interview Questions: Is your hospital (or other medical setting) currently using any EMRbased strategies to identify children who have been or who are at risk for maltreatment? What key features are What strategies is included in the your hospital setting screening system? currently using to screen for child maltreatment? How, why, and when was it decided to bring EMRbased strategy changes to your hospital setting Is your organization considering or in planning stages of using EMR-based strategies? What are the barriers and facilitators to using **EMR-based strategies?** What are the How do you think the barriers and implementation of EMRfacilitators to using based strategies has **EMR-based** changed care in your strategies? medical setting? What concerns do you How do you think the have about using EMRimplementation of EMRbased strategies in your based strategies might medical setting? change care in your medical setting? Do you think EMRbased strategies in What concerns do you main emergency department hospital have about using EMRsettings could be used based strategies in your

medical setting?

in other settings?

Preliminary Results

N=11

Barriers:

- Lack of support from medical providers
- Alert fatigue
- Amount of IT work

Facilitators:

- Engagement
- Physician champion
- Missed child abuse case

Ethical Implications: Most believe that an EMR could reduce biases while few argue that the tool itself could be biased.

Conclusions

EMR-based strategies used to identify child maltreatment or risk of child maltreatment are present in some medical settings. The existence and success of these tools in some settings depend on the presence of facilitators. Various barriers impede the presence of these type of tools in other settings. Ethical implications to consider are whether EMR-based strategies reduce or increase biases. Overall, interviews conducted demonstrate how EMR-based strategies may be an effective tool to screen for child maltreatment and improve care. However, there are many barriers to the successful dissemination of this tool. The implications of the potential widespread use of EMR-based strategies could include successful early intervention when a child is potentially at risk for maltreatment. Additionally, other potential implications could include over-reporting of child abuse cases.

References & Acknowledgements

- 1) Wildeman C, Emanuel N, Leventhal JM, Putnam-Hornstein E, Waldfogel J, Lee H. The Prevalence of Confirmed Maltreatment Among US Children, 2004 to 2011. JAMA Pediatr. 2014;168(8):706–713. doi:10.1001/jamapediatrics.2014.410 2) Berger RP Saladino RA. Fromkin J. Heineman F. Suresh S. McGinn T. Developmen
- 2) Berger RP, Saladino RA, Fromkin J, Heineman E, Suresh S, McGinn T. Development of an electronic medical record-based child physical abuse alert system. *J Am Med Inform Assoc*. 2018;25(2):142-149. doi:10.1093/jamia/ocx063
- 3) Kuang, X., Aratani, Y., & Li, G. Association between emergency department utilization and the risk of child maltreatment in young children. *Injury epidemiology.* 2018;5(1), 46.

Thank you to Elizabeth Gifford, Megan Golonka, and Madeline Yancy for their help. Funding provided by the Huang Fellows Program at Duke University.