

Adaptation of a Clinical Decision Support Tool for Child Abuse Detection and Evaluation in the Emergency Department

Thaddeus Schmitt, MD¹, Joshua Ross, MD¹, Nicholas Kuehnel, MD¹, David Feldstein, MD², Benjamin Eithun, MSN^{3,4}, Emily Heineman, MA⁶, Amanda Palm, PA-C⁶, Jessica Wipperfurth, MSW, APSW⁶, Rachel Berger, MD, MPH⁵

1. Department of Emergency Medicine, University of Wisconsin, Madison, WI 2. Department of Internal Medicine, University of Wisconsin, Madison, WI 3. American Family Children's Hospital, University of Wisconsin School of Medicine and Public Health, Madison, USA 4. School of Nursing, University of Wisconsin-Madison, MI 5. Department of Pediatrics, Children's Hospital of Pittsburg of UPMC, Pittsburg, PA 6. University of Wisconsin Child Protection Program, University of Wisconsin American Family Children's Hospital, Madison, WI

OBJECTIVE

- Improve **recognition** and **evaluation** of injuries resulting from **non-accidental trauma** in the Emergency Department (ED)
- Adapt into EPIC a clinical decision support (CDS) tool originally developed in Cerner at the University of Pittsburgh
- Implement the CDS in the Pediatric ED within the BerbeeWalsh Emergency Department (UW Health/AFCH)

METHODS

CDS Tool Design

- The CDS tool has four independent triggers:
- Nurse child abuse screen (children <10)
- 2. Chief complaint
- 3. Encounter diagnosis
- 4. Order of a skeletal survey outside of the CDS ordersets

Best Practice Alert (BPA)

- Fires when CDS triggers
- Informs provider of reason for trigger
- Provides access to ordersets for evaluation

<u>Ordersets</u>

- 8 ordersets provider can choose based on presentation (e.g. bruise, fracture, neglect)
- Individualized by patient's age
- Includes key lab, radiology, and consult orders

Development and Education

- Multidisciplinary interviews to determine workflow
- Usability testing to adapt CDS to clinical practice
- Online and in-person training of nurses and providers

Post-Implementation Monitoring

- Biweekly data collection including:
- Child abuse screen completion
- 2. BPA firing rate
- 3. Order-set usage

RESULTS



- Significant increase noted in July, when the screen's location was moved in Epic to be visually prioritized
- An 85% screening rate is **comparable with other nursing screens**
- CAS Trigger Rates: steadily decreased from intake
- BPAs Fired: BPAs triggered for 3-5% of all ED visits throughout implementation
- Order-Set Use: average of 1.3 ordered per week

- Ideal timing of additional education to maintain CDS usage
- Refining triggers and ordersets

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- **Contact Information:** For more information contact Thaddeus Schmitt (TSchmitt@uwhealth.org)

• Through careful consideration of **workflows**, rigorous usability testing, and pre- and postimplementation **education**, a child abuse CDS can be successfully implemented in the **Emergency Department**

• Close monitoring after implementation is necessary to determine success of CDS and optimize for clinical practice

 Additional education and small changes in the child abuse screen dramatically increased screening rates from implementation

• Further projects will focus on the impact of the CDS on Child Protective Services

- reporting and guideline-based evaluation of possible child abuse
- Future considerations include: