Reducing Disparities in Child Abuse Evaluations

Health Equity

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In the United States, infants and young toddlers are more likely to suffer from child abuse and neglect than any other age group of children, accounting for nearly three-quarters of all deaths due to child maltreatment. Among those physically abused, abusive head trauma (AHT) is the leading cause of death. Prompt recognition and accurate diagnosis of AHT is vital to providing appropriate medical treatment and protecting victims from further abusive injuries.

Research and clinical experience has shown that cases of AHT are often not initially recognized by medical providers. Furthermore, there is tremendous variation across hospitals as well as racial and socioeconomic disparities in which children with intracranial hemorrhage (bleeding inside the skull) undergo an evaluation for child abuse using a tool called skeletal survey. A skeletal survey is a series of X-rays of the entire body that look for hidden fractures that may show signs of abuse. Discovering fractures on a skeletal survey that conflict with the caregiver's report of the trauma can confirm suspicions of AHT in children with intracranial hemorrhage. Just as under-evaluation of high-risk children may lead to missed cases of abuse, over-evaluation of low-risk children using a skeletal survey may lead to unnecessary exposure to radiation, stress and costs.

Detailed, evidence-based guidelines that are successfully implemented have great potential to decrease variation and disparities in care and decrease missed cases of abuse. In an effort to standardize and improve the quality of care provided to this vulnerable population, our research team aimed to develop guidelines that aid clinicians in determining which young children with intracranial hemorrhage should undergo skeletal survey. To do so, we asked a diverse panel of physician experts from various medical fields to combine evidence from the literature with their clinical experience and iteratively rate the appropriateness and necessity of skeletal survey for children younger than 2 years of age in different developmental stages and with various intracranial hemorrhage types, symptoms and histories of trauma. The resulting guidelines call for near universal skeletal survey screening in infants less than 1 year of age with any intracranial hemorrhage. The recommendations for skeletal survey in children 1-2 years old, however, are much more dependent on the type of injury and history of trauma, reflecting the decreased risk for AHT in this population due to their increased mobility and risk for accidental head injury.

Looking forward, future evaluations are needed to monitor the effectiveness of the guidelines to ensure decreased disparities in care and missed cases of abuse. Evidence shows that simply implementing clinical guidelines may not be enough for them to be followed. Therefore, we are currently studying how clinical decision support tools, including clinical pathways (standardized steps for how to care for a patient with a specific chief complaint or diagnosis), may best support the implementation of skeletal survey guidelines. So far, the Cincinnati Children's Hospital Medical Center has demonstrated success in decreasing disparities in child abuse evaluation by implementing clinical pathways that mandate skeletal survey use in infants with unwitnessed head trauma. Similar success has been shown at a children's hospital in Austin, Texas. By

implementing clinical pathways for infants with skeletal fractures, the study team found a reduction in disparities of child abuse evaluation. Case-specific clinical guidelines for skeletal survey use implemented with evidence-based methods show promise for decreasing disparities in care and improving detection of child abuse across the United States.

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