NAT On My Watch: Universal Child Abuse Screening in Colorado Springs Pediatric Emergency Department

Kelly Wigglesworth, MS3, Kelly Beach, MSN, RN, David Listman, MD

School of Medicine
UNIVERSITY OF COLORADO
COLORADO SPRINGS BRANCH

Children's Hospital Colorado
Colorado Springs

BACKGROUND

- Non-accidental trauma (NAT) is a tragic and preventable cause of morbidity and mortality in children.
- Abusive Head Trauma (AHT) is the leading cause of death from physical abuse in children.
- In one study, 31.2% of children with AHT had a prior missed opportunity where they were seen by a medical provider and with signs or symptoms that were suggestive of abuse in retrospect.
- The estimated 4,824 incidents of AHT cases in 2010 had an estimated lifetime cost of $13.5 billion.
- Organizations have developed standard NAT screening tools.
- TEN-4 FACES is a pneumonic for NAT injuries.
- Currently our academic affiliated children's hospital ER, does not have a standardized approach for screening for NAT in every patient that presents to our ER.

OBJECTIVE

By April 2021, we will increase utilization of a standard NAT screening tool from 0% to 90% in the CHCO Colorado Springs Emergency Department

PROGRAM DESCRIPTION

- Children <5 years old presenting to Colorado Springs ED will undergo standard screening for NAT.
  - Standard nurse questionnaire at triage
- Complete skin exam for children <2 years (TEN-4 FACES)
- Screening to be documented in the EMR and positive nurse screen to trigger an alert to the provider
- Provider component includes assessment for sentinel injuries
- Provider to make decision for NAT order set, full bone scan, referral to DHS, and social work consult

Screening Questions

For children presenting for evaluation of a possible injury, was there a possible or definite delay in seeking medical attention given the severity of the injury/injuries?

Are you concerned that the history may not be consistent with the injury or illness?

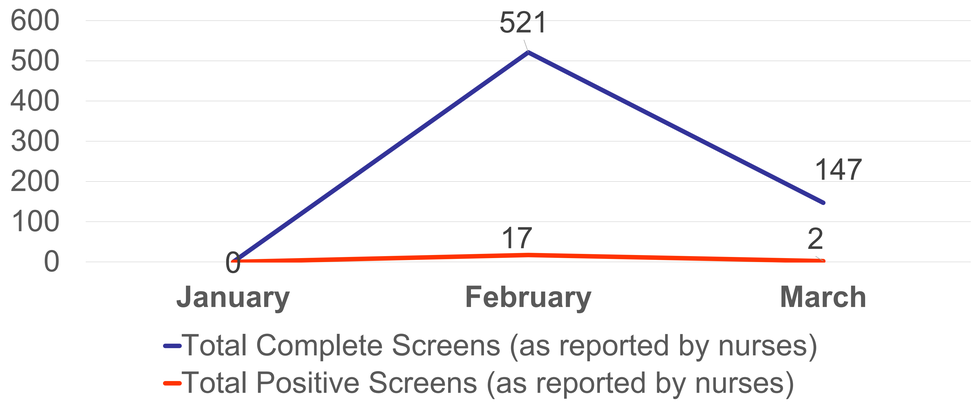
Are there findings that might reflect poor supervision, care or nourishment?

Are there any additional comments or concerns related to child abuse or neglect?

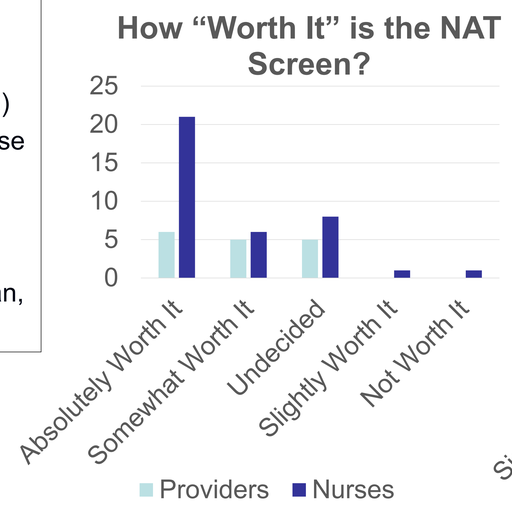
TEN-4 FACES

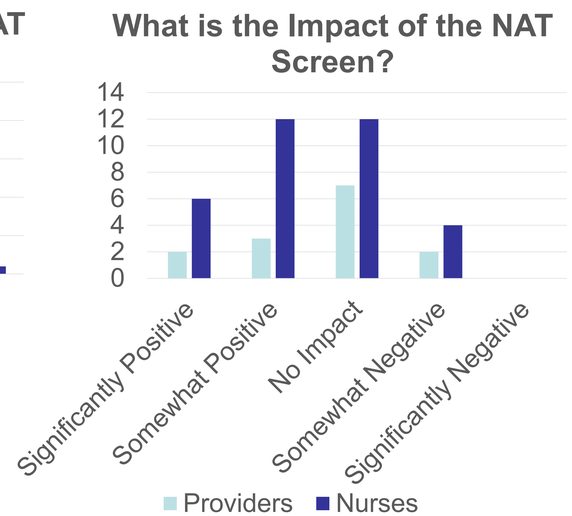
Bruising to the Torso, Ears, or Neck in a child
Any bruise in a child <4 months old
Bruising or injury to the:
Frenulum, Angle of the jaw, Cheeks, Eyelids, Sclera, Patterned bruising or injury

Number of Screens Completed and Positive



Nurse and Provider Involvement





DISCUSSION

- Although it is important to examine every child for the signs of NAT, it is not routinely done and especially not in emergency departments.
- Many of the children who have fatal injuries were seen in a medical care setting prior.
- Financially beneficial to treat NAT before fatalities—rationale for hospital administration.
- Successful implementation is possible.
- Though we have not yet measured number of Social Work/DHS referrals, missed opportunities, or number of true positive screens (of cases determined to be NAT).
- Overall providers and nurses view the standard NAT screen as "neutral" to "positive" and worth it.
- Nurses feel that they have the knowledge to complete the screen and describe it as easy.
  - Yet, there are still barriers to undressing every child <2 years old and completing screen.
  - Some barriers were identified, some still unknown.

FUTURE DIRECTIONS

- Continue to screen all patients <5 years.
- Measure as a % of eligible patients.
- Analyze data to understand balancing measures, such as time in ED, false positive, social work burden.
- Improve flow of including screening and skin exam into routine triage (baby gowns).
- Conduct focus groups
- Address barriers:
  - Undressing children <2 years old
  - Discussing legal implications of positive screens that are not reported to DHS or social work more thoroughly to nurses and providers
- Expand to direct admits.
- Consider expanding to primary care settings.

REFERENCES

1. Gould B, Grey M, Huntington C, et al. Improving Patient Care Outcomes by Teaching Quality Improvement to Medical Students in Community-based Practices. Acad Med. 2002;77: 1011-1018.
2. Lifetime Cost of Abusive Head Trauma at Ages 0-4, USA. Miller et al. Prevention Science 2017

Anschutz