



Ohio Children's Hospital Association

Saving, protecting and enhancing children's lives



**Timely Recognition
of Abusive Injuries**
(TRAIN) Collaborative

PROJECT FACT SHEET – August 2016

WHAT IS THE TRAIN COLLABORATIVE?

Physical abuse of a child is rarely an isolated event, rather more commonly it is experienced recurrently within a family environment. Research suggests that recurrent child abuse is associated with increased morbidity and mortality, including analysis of the Ohio trauma registry which indicates that child victims of recurrent abuse have significantly higher mortality rates (24.5% vs. 9.9%) compared to victims of a single episode of abuse. A recent study in *Pediatrics* reported one hospital's experience with nearly 200 abused children and found that almost 1 in 3 had been seen previously by a medical provider with a "sentinel injury" - an injury known to the medical provider that should have prompted concern for abuse. These injuries are often minor – an isolated bruise or a small lesion to the mouth.

Because they often appear so minor, however, these sentinel injuries may not be recognized as abuse. The child potentially returns home to an abusive environment and may experience recurrent harm.

To address this issue, in December 2014, Ohio Attorney General Mike DeWine provided a \$1 million dollar medical research grant to the Ohio Children's Hospital Association (OCHA) to study "sentinel injuries" in children from children aged zero to six months, establishing the Timely Recognition of Abusive Injuries Collaborative (TRAIN).

WHAT ARE THE GOALS & AIM OF TRAIN?

The goals of this collaboration are as follows:

- to establish a baseline frequency of missed sentinel injuries in the state of Ohio
- to develop and disseminate interventions to reduce the frequency of missed sentinel injuries
- to measure the impact of interventions on the recurrence of abuse

Work is consisting of three waves, each lasting 12 months. Currently, we are halfway through wave two.

- The first wave of the project in year included work within the six OCHA children's hospitals.
- The second wave, year two, includes outreach to regional hospitals throughout Ohio that provide care for children.
- The third and final wave, year three, will include large primary care pediatric practices throughout the state

The AIM of the Collaborative is to reduce the rate of re-injury within 12 months among ≤ 6 month olds with sentinel injury from 10% of baseline by 6/2017, and 50% reduction from baseline by 6/2018, and sustain that decrease for ≥ 12 months.

WHAT HAVE WE LEARNED & ACHIEVED SO FAR?

Through the baseline analysis, we have learned that:

- 1 in 10 children seen for child abuse has been seen previously with an injury
- 1 in 15 children seen with an injury returns with a 2nd injury within 12 months
- Less than 1 in 3 children receive the recommended workup when presenting with an injury
- A majority of infants ≤ 6.0 months of age present to a non-OCHA hospital with injury

Critical achievements include:

- Identification and recruitment of the Executive Planning Group, including content experts, improvement advisors and project staff
- Identification and recruitment of practice teams from each of the six OCHA hospitals, which participated in learning sessions and action period calls throughout the last 18 months
- Development of a common vision for the work being completed, a change package outlining the essential changes necessary to accomplish the goals and aim of TRAIN, and the key measures used to track improvement
- Development of a prescribed "bundle of care" to better identify sentinel injuries that outlines the critical elements of evaluation for injuries in infants
- Determination of baseline frequency of sentinel injuries at each of the six OCHA hospitals
- Identification and recruitment of practice teams from Ohio regional community hospitals

WHAT ARE THE NEXT STEPS?

For wave two of TRAIN, the collaborative's strategy is to implement a specific bundle of care in 18 Ohio Hospital Association (OHA) hospitals to both improve the recognition of sentinel injuries as well as increase the completion of evidence-based recommendations when injuries are identified.

The collaborative has recruited a group of focused volunteer hospitals, identified based on volume of infants seen with injury, to implement this bundle of care. The 18 OHA hospitals will include the following:

- Promedica Toledo Children's: Bay Park Community Hospital, Memorial Fremont, Wood County Hospital
- UH/Rainbow Babies & Children's: St. John's Westshore, Elyria, UH Geauga
- Akron Children's: St. Joseph Warren Hospital, St. Elizabeth Boardman Hospital, Aultman Medical Center
- Nationwide Children's: Fairfield Medical Center, Adena Regional, Marion General
- Dayton Children's: Springfield Regional, Upper Valley Medical Center, Atrium Medical Center
- Cincinnati Children's: Clinton Memorial, Mercy Fairfield, Fort Hamilton

These hospitals have all agreed to the following requirements of participating in TRAIN:

- Strong clinical leadership & commitment to implementing the bundle of care
- Hospital data infrastructure designed to collect and report the necessary data
- Participation in quarterly meetings to share lessons learned
- Transparency of hospital results and overall progress
- Perform Plan-Do-Study-Act (PDSA) cycles to test and measure change in their hospitals.

The community hospitals will begin data collection in October and will have baseline data compiled by January 2017.