Abstract:

Background:

The surgical time-out is standard practice in the operating room. Time-out protocols have been associated with improved care and decreased complications in nonurgent care. However, the use of time-outs in trauma settings is not well studied and no standardized time-out exists.

Early trauma time-out studies have found that these time-outs are perceived as effective and help reduce complications. The goal of this study was to draft a pre-arrival time-out protocol at Riley Hospital for Children (RHC), emphasizing introductions, patient details, and the patient's plan upon arrival.

Methods:

In this study, pre-hospital preparation for trauma resuscitations were retrospectively reviewed using trauma video review (TVR). Resuscitations took place in one of four trauma bays at RHC. The TVR analyzed pre-hospital preparations before a formal time-out plan was drafted for items related to the trauma time-out. Twenty-four resuscitations with pre-arrival interactions were available in the TVR for analysis. At the conclusion of this project, a pre-arrival time-out plan was drafted and implemented by invested healthcare professionals.

Results:

Before intervention, time-outs occurred 29.2% (7/24) of the time. Attendance at time-outs was 76.2±11.7%. The average length of time-outs was 59.6±19.4 seconds and the average time between the end of the time-out and patient arrival was 4 minutes 53.7 seconds ± 3 minutes 37.0 seconds. Introductions were fully completed in 16.7% (4/24) of all scenarios and 57.1% (4/7) of all scenarios with time-outs. A clear leader was identified in 29.2% (7/24) of cases. Discussions about the case occurred 83.3% (20/24) of the time. A stated need for an item occurred in 50.0% (12/24) of pre-hospital preparations.

Conclusion and Potential Impact:

The rates of time-outs, introductions, stating patient details, and stating equipment needs before patient arrival is less than desirable. The pre-arrival time-out intervention could be effective in increasing these rates. More data for post-intervention is needed.

Results: (need to update with new cases when MRNs are available)

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Discussions about the case occurred 83.3% (20/24) of the time. When breaking the discussions down, age was stated in 50.0% (10/20) of discussions, weight was stated in 25.0% (5/20) of discussions, gender was stated in 40.0% (8/20) of discussions, vitals were stated in 45.0% (9/20) of discussions, mechanism of injury was stated in 75.0% (15/20) of discussions, and pre-hospital interventions were stated in 40.0% (8/20) of discussions. Of the six items analyzed in a discussion about the case, the average number of items discussed was 2.3 ± 1.8.

A stated need for an item occurred in 50.0% (12/24) of pre-hospital preparations. It was used 91.7% (11/12) of the time.

EMS gave a verbal report upon arrival in 100% (24/24) of cases. Vitals were stated in 95.8% (23/24) of reports and EMS pre-hospital interventions were stated in 100% (24/24) of reports. EMS was interrupted by a member of the trauma team in 16.7% (4/24) of presentations. The interruptions happened in an average of 27.0 ± 30.1 seconds. EMS reports lasted 61.7 ± 22.9 seconds on average.

85.0% (17/20) patients required imaging in radiology. Regarding post-ED disposition, 60.0% (12/20) patients were moved to the ICU, 15.0% (3/20) were moved to the floor, 15.0% (3/20) expired in the ED, 1 patient was sent to the OR, and 1 patient was discharged.

Abstract:

Background:

Time out checklists are commonplace throughout procedural specialties and have been associated with improved care and decreased errors. The WHO has recommended a checklist for trauma care particularly focused on the trauma resuscitation in an effort to decrease missed injuries and facilitate an efficient resuscitation. However, this checklist does not address pre-arrival patient preparation that might facilitate a shared mental model for an upcoming trauma resuscitation. The goal of this study was to draft a pre-arrival time-out protocol at Riley Hospital for Children (RHC), emphasizing provider role introductions, patient details, potential care needs upon patient arrival and patient disposition.

Methods:

In this study, pre-arrival preparation for trauma resuscitations were retrospectively reviewed using trauma video review (TVR). All resuscitations took place in one of four trauma bays at the RHC Emergency Department. Recordings were captured for most of the highest trauma activations. The TVR recordings were abstracted for important factors which researchers felt would facilitate strong team dynamics and a shared mental model. A REDCap database was created to capture deidentified data for each resuscitation.

Results:

Twenty-four resuscitations were available for analysis and time-outs occurred 29.2% (7/24) of the time. There were 13.9 ± 2.0 members present at time outs and 18.6 ± 4.0 members present at patient arrival. The average length of time-outs was 59.6 ±19.4 seconds and the average time between the end of the time-out and patient arrival was 4 minutes 53.7 seconds ± 3 minutes 37.0 seconds. Introductions were fully completed in 16.7% (4/24) of all recordings and in 57.1% (4/7) of all scenarios with time-outs. A clear team leader was identified in 29.2% (7/24) of cases. Discussions about the case occurred 83.3% (20/24) of the time. A stated need for an item (equipment/medication) occurred in 50.0% (12/24) of recorded pre-hospital discussions.

Conclusion and Potential Impact:

The rates of time-outs, introductions, stating patient details, and stating equipment needs before patient arrival was low in many cases. A formalized pre-arrival time-out discussion prior to pediatric trauma resuscitations could be effective in increasing these rates.