**Prehospital Trauma Activation by EMS**
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**Purpose:** In October 2018, the hospital’s EMS Liaison received critical feedback from the leadership of one Fire/EMS agency citing a specific incident with perceived missed trauma activation. Thorough case review revealed no indication for trauma activation; in fact, the patient was discharged home from the ED. However, following a tense meeting among hospital and pre-hospital leaders, the fact remained that the EMS agency felt they had not been heard. The PI Trauma Clinician then considered the other disease specific activations which EMS has gained acceptance to request, including STEMI, stroke, and sepsis. Although the hospital’s trauma activation criteria included “EMS provider judgement”, criteria were not shared with EMS agencies, nor was the option for EMS providers to request trauma activation encouraged. Beginning November 1, 2018, there would be a process in place for prehospital and ED staff to clarify expectations for trauma team activation prior to patient arrival.

**Resources:** Several resources/relationships were critical, particularly in the early stages of this process change. The hospital’s EMS Liaison and PI Trauma Clinician worked closely as a team to develop initial prehospital trauma activation rollout information, continuing education, and monthly/quarterly outcome data. The ED Manager was supportive of the process change and allowed for immediate staff education. The communication center through which many of our EMS agencies communicate prehospital report was also willing to implement our process change, which was critical to success. The Trauma Program Manager and Trauma Medical Director, as well as hospital leadership also supported the initiative. Fire/EMS leadership, including EMS Medical Directors, fully embraced the process change.

**Description:** Previous Process: ED received prehospital report for an injured person and activated level 1 or 2 trauma team if prehospital report met hospital trauma activation criteria. Current Process: ED receives prehospital report for an injured person and EMS requests trauma activation. ED immediately activates minimum level 2 trauma, but will activate level 1 if prehospital report meets level 1 criteria. If EMS provider does not request trauma activation for an injured person, recipient of report utilizes clarifying question, “Are you requesting trauma activation?” If EMS provider declines trauma activation, ED applies hospital trauma criteria and activates as appropriate prior to patient arrival. The empowerment of EMS providers to activate hospital trauma teams prior to ED arrival at this single hospital is changing the way prehospital trauma care is delivered in the region. EMS providers now proactively request and decline trauma activation for injured patients on a daily basis.

**Effectiveness:** Because EMS providers in the region were not empowered to request trauma activation, it is felt the baseline documentation rate of 15% for activation by EMS is higher than reality; more likely reflective of decision to transport to a trauma center. However, within six months of implementing the process change, the average rate of prehospital trauma activation by EMS providers rose to 65-70%. Mechanisms of injury with the least specific criteria for trauma activation received the highest volumes for activation by EMS providers: MVC, ground level falls, and other falls from non-ground-level height. December 2019: Hospital Level 2 fall from height trauma activation criteria was lowered from >20 feet to >10 feet as a result of data analysis from this project.

**Lessons Learned:** We did not provide specific trauma activation education to EMS prior to changing the process. Our goal was to increase comfort of EMS providers requesting trauma activation, as this is a new concept throughout our region, without complicating the process by projecting hospital-specific criteria. The PI Trauma Clinician began teaching EMS CE for prehospital trauma activations 10 months after the process change. Earlier education is recommended, specifically resources allocated for trauma activation and types of injuries admitted to Trauma. Avenues for feedback continue to evolve in order to reach appropriate audiences: monthly emails and reporting at Trauma Committee; quarterly reporting at EMS Luncheon; and rolling 4-week trauma activation outcome spreadsheet posted in EMS breakroom.

**Cons:** Within 1 year of implementation, ED staff relied on EMS to request trauma activation to extent that several missed activations were identified in which ED did not activate because EMS declined.
Conclusions: Level 1 trauma activation volume/rate was not affected. The hospital experienced year over year 10% increase in Level 2 ED discharged activations; however, this is not directly attributed to EMS-requested activations. During the 10 month period utilized for post-intervention analysis, the discharged activation rate for EMS-requested activations was 44.5% compared to 55.2% for activations initiated by the ED. The overall discharged activation rate trended downward during the final 3 months of the analysis period. MVCs contributed to the greatest number of discharged activations, although it is noteworthy that 80% of MVC activations declined by EMS but then activated by the ED resulted in discharge. Despite an initial pendulum swing toward over-activation, ongoing data collection and analysis is being utilized to strengthen the value and accuracy of EMS provider judgment to benefit trauma patients.