Quality Improvement Initiative to Improve Abuse Screening Among Infants With Extremity Fractures

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The aim of this study was to evaluate the effectiveness of clinical pathway implementation and quality improvement (QI) interventions to increase the percentage of infants with extremity fractures undergoing evaluation for suspected physical abuse, including skeletal survey (SS), and consultation with social work, and/or Child Protection Team. Charts were retrospectively reviewed to establish percentage of infants less than 12 months old with extremity fractures undergoing an SS and consultation during the prepathway (January 1, 2012 to December 31, 2013) and postpathway (January 1, 2014 to June 30, 2015) periods. Using an Ishikawa framework, key process drivers were identified and additional QI interventions (clinical decision support and provider education) were developed and implemented. Impact of QI interventions on study metrics during active QI (July 1, 2015 to June 30, 2016) and post-QI periods (July 1, 2016 to December 31, 2016) was monitored using statistical process control charts. Logistic regression assessed predictors of obtaining an SS, consultation use, and occult fracture detection. Skeletal survey use pre- and postpathway averaged 40%, surpassing 60% on average during active QI and post-QI periods. Consultation performance averaged 46% pre- and postpathway, increasing to nearly 67% during active QI; consultation performance decreased during post-QI to 60%. A lack of trauma history and presence of femur or humerus fracture were associated with increased SS use and consultation (both $P < 0.001$). Overall 20% of SS revealed occult fractures.

Journal:

Pediatric Emergency Care
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