Interdisciplinary Efforts to Improve the Timeliness of Pain Medication Administration for Patients with Long Bone Fractures in the Emergency Department

Glenn K. Geeting, MD, Gail R. Rudnitsky, MD, Sang Y. Won, MS1, Rachel Dishong, RN

Introduction

The timely management of pain in the Emergency Department (ED) is a high priority and poorer performance has been linked to ED crowding. The Centers for Medicare and Medicaid Services (CMS) has designated the time to give pain medication to patients with long bone fractures as an outpatient quality reporting metric OP-21 because they believe that “pain management in patients with long bone fractures is undertreated in emergency departments.” The goal of this interdisciplinary effort was to reduce time to pain medication below 60min and increase the number of patients that received pain medication prior to x-rays.

Methods

This interdisciplinary quality improvement effort was executed in the ED of an academic medical center and a retrospective cohort study was performed to evaluate its effectiveness. The Provider Directed Queuing (PDQ) methodology facilitated rapid communication between Triage Nurses and Advanced Practice Clinicians. Breakdown of the time intervals and interdisciplinary education helped guide accountability and interventions.

Results

A breakdown of time intervals revealed that the two primary sources of delay were the provider’s evaluation and medication administration. A total of 349 patients were included in the study, 291 before and 58 after the interventions. The percentage of patients receiving pain medication prior to x-ray improved from 19% to 25% and the median time to treatment improved from 91 minutes to 66 minutes.

Discussion

So many quality of care challenges are multi-disciplinary in origin and their solutions require a team approach. This effort to improve pain management brought together Emergency Physicians, Emergency Nurses, Advanced Practice Clinicians, and an enterprising Medical Student researcher.

The median time to pain management shows a downward trend and less variability following the intervention.

The two times intervals that were most amenable to intervention were the provider evaluation and nursing administration of the medication. The Provider Directed Queuing (PDQ) function in the ED’s Arrival Queue was well designed to help these evaluation and treatment phases to occur simultaneously and with a minimum of movement.

References