Introduction

This study is a quality improvement initiative to identify patient demographics and patterns associated with Rapid Response Team (RRT) consultations for patients on the acute pain service (APS) at a large, tertiary care children’s hospital. The goal is to identify pain management related RRT consultations as a means to implement interventions to reduce the number of preventable events in the future.

Methods

A retrospective review of all patients on the APS from 2011-2015 was cross-referenced with inpatients requiring consultation from the RRT. Two independent practitioners reviewed electronic medical records to determine which events were associated with pain management. If both reviewers agreed, these patients were categorized as having a pain management related RRT consultation.

Results

- 27 of 160 RRT consults were related to pain management
- 13 events were related to insufficient pain control
- 14 events were related to too much pain medication
- 22 events involved nurse or patient controlled analgesia pumps (NCA/PCA) - 15 had basal rates
- 15 of 27 incidents required escalation of care

Bimodal age distribution
Incidents clustered around shift changes at 7 AM or 7 PM

Etiology of events included:
- Respiratory – opioid-induced respiratory depression or tachypnea
- Cardiovascular – bradycardia or hypotension secondary to sepsis
- Neuropsychiatric – Uncontrolled pain, withdrawal, altered mental status, elevated intracranial pressure

Discussion

This study identifies clinical gaps of care and specific patterns leading to RRT consultations on APS patients. Specific drivers are being identified as a way to intervene and work towards reducing the number of preventable RRT consultations on our patients. Interventions such as the addition of a night float nurse practitioner for the acute pain service are actionable items that we hope will improve the quality of care we provide patients and reduce future RRTs.