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Background

- The pediatric asthma patient presenting to the Emergency Department (ED) requires prompt and reliable assessment leading to timely treatment. Our current Emergency Severity Index (ESI) triage system is not specific to pediatric asthma assessment. Relying on ESI score alone leads to inadequate and delayed treatment of many asthma flare-ups. Evidence has shown that timing of steroid administration is associated with decreased time to clinical improvement, shorter ED length of stays, and reduced inpatient admission rates (Zemek, 2012). In our suburban pediatric ED, a four month chart review showed delayed time to steroid and bronchodilator administration.
- The Pediatric Respiratory Assessment Measure (PRAM) is evidence based, reliable, validated, internally consistent, has good inter-rater reliability, is responsive to clinical change, and includes asthma patients from age 1-17. (Ducharme, 2008)

Purpose

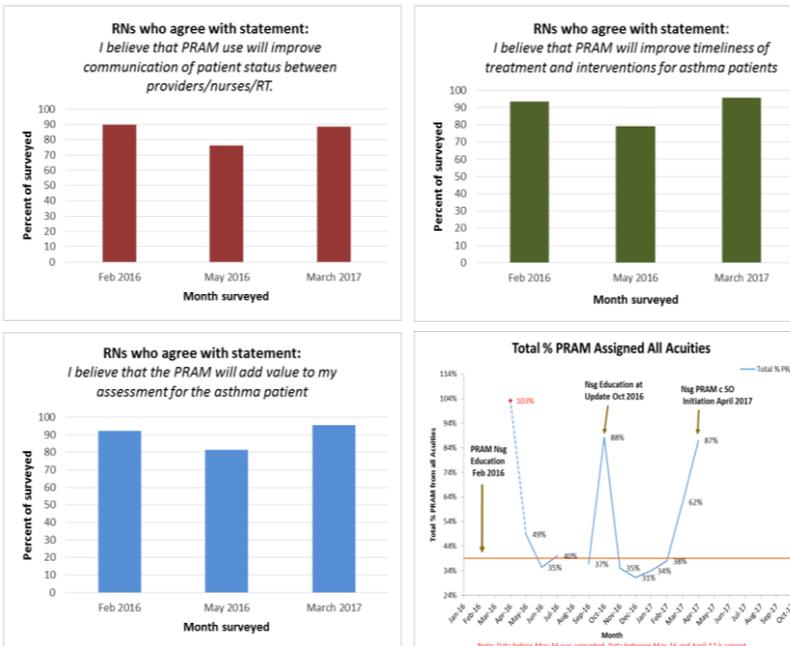
- Standardize the assessment of asthma severity between nurses, providers, and respiratory therapy.
- Educate departmental RN's on the use of the PRAM tool.
- Reduce time to administration of steroids in acute asthma exacerbations to less than 30 minutes in 80% of critical and emergent (ESI 1-2) triage level patients.
- Reduce time to administration of inhaled bronchodilators in acute asthma exacerbations to less than 30 minutes in 80% of emergent and urgent (ESI 2-3) triage level patients.

Implementation

This evidence-based quality improvement project and prospective study involved the training of all ED staff nurses in the use of the PRAM over a 6 month period. Job aids included nursing badge cards and helpful reminders attached to departmental computers. Power point learning modules and practice scenarios tested nursing knowledge. Super users acting as change agents were charged with mentoring other staff members. Nursing knowledge was refreshed at unit updates. Training included knowledge sharing with Respiratory Therapy and Providers. PDSA cycles were performed over 16 months questioning nursing attitudes towards the use of the PRAM. Retrospective chart audits demonstrated and substantiated nurses' actual PRAM use.



Outcomes



Implications for Nursing Practice & Future Considerations

- The introduction, implementation, and evolution of our Time to Steroid Administration project has empowered our nurses to standardize asthma patient assessment and to implement standing orders to improve patient outcomes.
- This project started out as a departmental QI project to decrease time to steroid administration in order to better clinical improvement outcomes for the sickest asthma patients. However, it developed into a process change allowing nurses to use the PRAM to order steroids and inhaled bronchodilators as part of a nursing standing order for all asthma patients. Our suburban ED (Children's Mercy-Kansas) is part of the larger, Bi-State Children's Mercy Hospital System. The intention is to allow the ED asthma standing order to be used system wide.

References

- Ducharme F, Chalut D, Plotnick L, Savdie C, Kudricka D, Zhang X, Meng L, McGillavray D. (2008) The Pediatric Respiratory Assessment Measure: a valid clinical score for assessing acute asthma severity from toddlers to teenagers. J Pediatrics;152:476-80.
- Zemek R, Plint A, Osmond MH, Kovesi T, Correll R, Perri N, Barrowman N. (2012). Triage Nurse Initiation of Corticosteroids in Pediatric Asthma Is Associated With Improved Emergency Department Efficiency. Pediatrics; 129:671-680.