Introduction/Background

Project ‘BREATHE’ is a performance improvement project for pediatric asthma in-patients in the pediatric unit, started in March 2010. Pediatric staff recognized high asthma-related readmissions in a high-risk-high-volume patient population. There were 105 asthma-related pediatric admissions and readmissions from January-September 2009 at Cohen Children’s Medication Center (CCMC) of New York at North Shore University Hospital (NSUH).

Asthma Prevalence 2009 for Children Under 18 Years in Long Island:
- Total population under 18 = 671,407
- 11% Asthma Prevalence or 1 in 9 children with Asthma

There is a significant reduction in the hospital readmissions period previous year (p = 0.0001)

Methodology/Intervention

BREATHE is an inter-disciplinary project involving physicians, nurses, respiratory therapists, child life specialists, case management, social work, and Asthma Coalition of Long Island community resources.

- Comprehensive asthma education programs are delivered to patients and their families from admission to discharge. These programs are provided by the RNs, MDs, Respiratory Therapists, and Child Life Specialists using bilingual health literate handouts and flipcharts.
- Patients are discharged with an Asthma Action Plan which has detailed information about their medications. The Asthma Action Plan aids parents in early recognition of signs/symptoms of worsening asthma.
- Parents are strongly encouraged to allow home visits from home care nurses to provide reinforcement to the educational support and to increase medication and environmental control compliance.
- Follow-up phone calls are made after discharge at 72 hours, three months, six months, and one year to measure outcomes. These calls also reinforce asthma self-management skills.

Design/Instruments

This is a Performance Improvement project for the Pediatric floor and Pediatric ICU

The instruments used in this project are:
- Asthma Admission Questionnaire for Patients (RN)
- “Asthma: Caring for Your Child at Home” reviewed with parent(RN)
- Flipchart for patient/parent education (Child Life)
- Medication education for patient/parent (RN/RT)
- Device training for parent/parent (RT)
- School re-entry protocol for child-aged patient (Child Life)
- Asthma Action Plan (RN/MD)
- KBC Discharge Sheet (RN/MD)
- Discharge Reconciliation Sheet (RN/MD)

Results

Project BREATHE became the standard of practice in the pediatric unit for asthma patients

Thus far 238 patients are enrolled in the program

- Of the 238 patients, 92 patients completed one year post enrollment
- There is a significant reduction in the hospital readmissions and ER revisits for the 92 patients compared to the same period previous year (p = 0.0001)

Conclusion

- Consistent, comprehensive asthma care and education, using a multi-disciplinary team approach (with help from community partnerships and regular follow up) will improve outcomes and quality of life for children with asthma.
- After one year of enrollment, 50% of patients (N=92) reduced revisits to the ER at least by one visit (p<0.0001).
- After one year of enrollment, 87% of patients (N=92) reduced readmissions to the hospital at least by one admission (p<0.0001).

Future Plans

1. Continue the project as it is “The golden standard of care for all pediatric asthma patients” (JC quote, 2011).
2. Formulation of a ‘physician Information’ letter for all participating pediatricians to improve continuity of care
3. Improve the process of follow up after discharge.
4. Spread the project to: NSUH Pediatric ER and CCMC @ South Campus and other Health System pediatric units. (Project BREATHE implemented at CCMC South Campus in June 2012).

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