AGAP: Asthma Group Appointment Project, Bridging 'a gap' in the Care of the Asthmatic Child

Introduction

Asthma burden is well known in the pediatrics population. It is the most common chronic disease of children affecting over 6.8 million. It is the leading cause of missed school days, and parents' loss of productivity from asthma related school absences is estimated at $719 million annually[1]. To decrease this burden of disease guidelines were established by the National Asthma Education and Prevention Program Expert panel report 3 (EPR-3[2]). Even with these established guidelines, there is 'a gap' between what providers do and what they ideally should do in following these recommendations[3]. In assessing the 96MDG Pediatric Clinic population, there were several elements from the EPR-3 guidelines that were not being consistently followed. Some of these were obtaining annual Pulmonary Function Test (PFT) in children 5 years old and above, conducting allergy testing in persistent asthmatics, giving written asthma plans to families, and using the guidelines to step-up or step-down medications. We were also not enrolling families in the Exceptional Family Membership Program (EFMP) as directed per Department of Defense Instruction (DoDI) 1315.19[4].

To bridge these gaps, the 96 MDG pediatric clinic staff developed after-hours group appointments and invited families with asthma for education and sharing. Our objectives were to meet the EPR-3 guidelines, the DoDI 1315.19, decrease Emergency Department (ED) visits and acute care clinic usage for asthma related visits. Through intake questions for families and patients from the Asthma Control Test (ACT) questionnaire[5], EPR-3, and EFMP DD2792 form p8, we saw an improvement in meeting these guidelines and instruction. Furthermore, our medication survey, group lecture/discussion, PFTs, RAST testing; personalized asthma action plan and adjusting medications according to EPR-3 guidelines we recognized a measurable difference. When, querying the Electronic Medical Record (EMR) database, there was a dramatic reduction in ED utilization of 28.5% and acute clinic utilization of 40% for acute asthma related visits in the year following the attendance of the asthma group appointments.

Methods

The 96 MDG pediatric clinic staff developed a group appointment that would maximize key elements of the EPR-3 guidelines and DoDI. We called it "AGAP"(Asthma Group Appointment Project) playing off the idea that there was 'a gap' between what we were doing and wanted to do with the care of childhood asthma. We wanted it to be after-hours, so it would not interfere with children's school and parents work hours; and not disrupt our already busy pediatric clinic. We sharpened the lecture to drive home the most important aspects of asthma care. We were mindful of the target audience- they were already diagnosed with asthma- and I knew many families had different understanding of their child's chronic medical condition. We were careful to not make the educational dialogue too medical and instead integrated humor and past lessons-learned from other families.

We collaborated with key members and teams throughout the medical group, including the hospital commander, the chief physician, cardio-pulmonary staff, pharmacy, coders, EFMP office, Group Practice

Managers (GPM), Health Care Integrators (HCI), allergist, medical legal and HIPAA offices, Physician Assistant student leaders/Family Practitioner residence leaders. After we had 'buy-in' from key staff in the facility, we set August 30 2010 as our start date for AGAP.

We developed a standard message for our nurses to invite and explain the group appointment to our asthmatic families over the phone. We developed intake forms that contained asthma questionnaires and a medication survey. For the common different coding scenarios we developed standard templates for EMR entry. We coordinated these after-hours group appointments with the cardiopulmonary lab who agreed to do the pulmonary function tests in children 5y/o and older. With the expected increase in demand for appropriate aerochambers, we gave advance notice to the pharmacy. We ran a computer query of children diagnosed with asthma twice in the previous year- to avoid the 'over-diagnosed'/'one time wheezer' child. The list contained 407 (407 out of 5800 enrolled) children with asthma; we felt this was an accurate list, matching the expected asthmatic rate in the US at 8% of children. We divided that list of known asthmatics between the Primary Care Manager (PCM) nurses, who then called and scheduled the families in the new group appointments.

We wanted to maximize participation and PCM matching with the asthma group appointments. Initially, appointments were offered every Tuesday and Thursday. We coordinated these appointments with their PCM teams- inviting the teams to lecture or just attend. At each group appointment various family practice residents, physician assistant students, and medic trainees were invited to assist, learn, and teach with this alternative approach to teaching patients. We labeled the AGAP attendees 8/30/2010 through 10/20/2010 as "Phase 1 Attendees". After 2 months of the Asthma Group Appointment Project, we saw a drop in demand for these appointments. We decreased the frequency of the group appointment offering to monthly. Patients seen after 10/20/2010 were labeled "Phase 2 Attendees".

Prior to each group appointment, a nurse called and reminded families a few days before to optimize attendance and ask them to bring their medications. The nurse would then print a medication query for each child from the EMR. The nurse and provider discussed the current dosing of inhaled corticosteroid (ICS)- placing them in the low/medium or high dosing ICS step in the stepwise approach to managing asthma (EPR-3 p314/fig 4-4b and p349/fig4-8 with cross reference to p306/fig4-1b and p343/fig 4-5).

At each group appointment the family was greeted by pediatric clinic staff who assisted with intake paperwork and getting the family settled into the classroom setting. We wanted to minimize the paperwork, so we made readily available, the intake form, blank asthma action plan, ACT questionnaire, and exiting customer survey for evaluation and improvement suggestions. Introductions were made, we outlined the nature of the group appointment and lead a HIPAA/PHI discussion. We respectfully invited them to share their experiences in this group setting but supported their desire to remain quiet, if that was their preference. Children 5 years old and older were invited to have their PFTs done and then brought back to the family group setting after testing. The provider guided the group through approximately 50 minutes of essential asthma topics and encouraged family and staff members present to share their experiences. After the formal slideshow, families were invited to remain behind for one-on-one discussions with staff, with a focus on encouraging families with low ACT scores. Most often, the entire group would stay back, each asking about details specific to their family's asthma issues. We

reviewed all their paperwork with them. Based on our findings, we would step-up and, on occasion, step-down the child's therapy based on the intake and subsequent discussion.

The following day, after each group appointment, we reviewed intake paperwork and our notes on each patient. We assessed asthma control and adjusted therapy, if indicated per guidelines (EPR-3 p309/10/345 fig 4-3a/b and p345 fig 4-7 with cross reference to p305/6 fig 4-1a/b and p343 fig 4-5). If indicated, per EPR-3 guidelines, DoD instruction, and a set of recommendations from a local allergist, we ordered RAST, referred to appropriate specialists, submitted EFMP paperwork. Documented and coded the encounter in the EMR. Lastly, the staff printed the encounter form and discussed with the child's PCM to optimize continuity of care.

Our data for this paper extends 2 years, going from 1 September 2009 through September 2011.

Results

The pediatric clinic staff evaluated 147 patients in these new group appointments. Out of these 147 patients, 94 were in our phase 1 (8/30/10-10/30/10) and 53 were in our phase 2 (2/2011-9/30/11). All received the ACT questionnaire, personalized asthma action plan, refills of medications if appropriate, and an asthma "goody-bag".

With all AGAP attendees we received 116 ACT questionnaires completed (age 4yo and older). Of these 116, 48 (41.3%) scored <20 (abnormal/asthma not controlled), stepped up 64 (43.5%), ordered 28 RAST testing (21/28 or 75% of those tested showed allergy to at least one allergen in panel), 22 severe persistent asthmatics were identified and if not already seeing an asthma specialist, they were referred to one. Additionally, 68 moderate or severe persistent asthmatics were diagnosed, 62 of these were enrolled in the EFMP (6 were dependents of retirees and are ineligible). We did 81 PFTs in 5yo and older attendees. Of the 81 PFTs performed, we discovered 20 PFTs showing obstruction. We encouraged families to turn in expired medications and inappropriate medications (oral liquid albuterol and inappropriate medications for age). All families that attended were asked to complete an anonymous survey- 44 were collected. All scored 'satisfied' to 'very satisfied' except one family was 'somewhat dissatisfied' in the length of the presentation.

We did 2 callback spot checks on patients scoring low on their ACT. March 2011 we called Phase 1 attendees and October 2011 on all attendees. Of the Phase 1 attendees over 4yo and had an initial abnormal low ACT score (n=29) -contacted 17 and each improved their ACT score (average increase 5.88 points). In Oct 2011, callbacks of all low ACT attendees showed similar improvements (n=48) -contacted 25, average increase 5.44 points.

With October 2011 callbacks of all AGAP attendees 96% (99 out of 103 contacted) would recommend the group appointment for other asthmatic families. Families were asked in these callbacks if they thought there were more/less or the same numbers of missed school or emergency room visits since attending the asthma group appointment. 65% (43 out of 66) of the responders reported they had missed less school and had less visits to the emergency room due to asthma.

Using the electronic medical records with the Phase 1 attendees, we saw a dramatic drop of 28.5% (21 to 16) emergency department usage and 40% (100 to 60) drop in clinic usage for acute asthma related visits comparing 1 year before and after the asthma group appointments. A control group of known pediatrics asthmatics that did not attend the asthma group appointments were found to have a reduction of 9.5% ER and 9.3% clinic usage, respectfully, with asthma related usage over the same period of time. We believe even the non-attendees benefited from the change in our clinic culture with how we care for childhood asthma.

Influenza vaccination rates were found with the AGAP attendees in October 2011 to be 23%. This was comparable to the general population in the pediatric clinic enrollees. This is disappointing since getting vaccinated against the flu was strongly recommended in the group appointments for all asthmatics and family members around asthmatics.

A pleasant surprise during the course of this project was having the pediatric provider with the least initial buy-in becoming the provider with the most referrals to the asthma group appointments!

Conclusion

Besides the obvious improvement in meeting the EPR-3 asthma guidelines and DoDI 1315.19, reducing the asthma related burden on the families with reduced emergency department and acute clinic visits for asthma related conditions; our families enjoyed the group appointments. The families reported their children missed less school and they felt more confidence in caring for their child with asthma. The pediatric staff has shared they feel this group approach to caring for the asthmatic patient is better than seeing them in a whirlwind hectic clinic visit.

We strongly believe this program is sustainable within our facility having a core cadre and buy-in from the entire medical group. We believe this is a 'best practice' and are excited to share with the Military Health Service. We are interested in sharing the success of our project and designed it so that it is a 'turn-key' program for other MTFs.

References:

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