P075

PARTNERING WITH SCHOOL-BASED HEALTH CENTERS: A SUSTAINABLE MODEL OF COMMUNITY-BASED ASTHMA CARE

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Introduction: There are many models of treating asthma in the community setting; most rely on grant monies to cover operating costs. When grant periods end and are not renewed, partnerships usually dissolve, to the detriment of the community. We sought to transition work with a community partnership from grant-funded to sustainable funding,

Methods: Partnership with a School-based Health Center (SBHC) consisted of a grant-funded allergist visiting schools to identify and treat patients with asthma. As grant funding priorities shifted, we shifted to contracts. Between 2016 and 2020, the allergist contracted with one school system to provide comprehensive asthma care one half-day each week, rotating between three SBHCs. Consent was obtained via a consent for treatment form at the beginning of the academic year. Schools billed students' insurances for the services rendered. Financial records were reviewed at the end of the 2019 academic year.

Results: Reimbursements from E&M codes and CPT codes would have provided a completely cost-neutral situation, however, the cost of adding the allergist as a licensed EMR user ultimately resulted in a small financial loss for the school system. This was offset by the fact that services by the allergist were provided for free for a period of six months prior to formalizing the contract. On an individual level, SBHCs that treated larger numbers of uninsured children experienced the most difficulty in achieving financial neutrality.

Conclusion: Partnership between an allergist and SBHCs can be a sustainable and cost-neutral community endeavor.

P076

PEDIATRIC TO ADULT HEALTH CARE TRANSITION PREPARATION AND TRANSFER IN YOUNG ADULTS WITH ASTHMA

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Introduction: The period of transition from pediatric to adult care is a medically vulnerable time for asthma patients. This study explored transitional planning provided to adolescents and young adults with asthma and their subsequent transfer to adult care.

Methods: Participants aged 18-30 years with a diagnosis of asthma completed a survey regarding their experience with transition planning while receiving pediatric care. Two cohorts were evaluated: 19 participants previously treated at a tertiary care pediatric hospital and 27 who were current students or staff of a university system.

Results: Participants in the hospital cohort (HC) received their asthma care from an asthma specialist while the majority of participants in the university cohort (UC) received their asthma care from a general provider. Half of all respondents did not recall being introduced to concepts of transitioning care, including asthma self-management, by their pediatric asthma provider, and only 17.4% reported receiving information about an adult provider to transfer their care. More HC participants have not established with an adult asthma provider compared to UC participants (63.2% vs. 18.5%, p=0.0045). Significantly more HC participants without any current asthma provider reported "some college" as their highest level of education achieved (p=0.0198). Associations between current asthma provider and asthma control among the cohorts were not found.

Conclusion: Most participants did not receive sufficient transition preparation from their pediatric asthma providers. Current undergraduate students may be at higher risk for having inadequate asthma care, highlighting the importance of a clear transition plan for patients prior to starting college.

P077

PERIPHERAL AIRWAY IMPAIRMENT AND DYSANAPSIS DEFINE RISK OF UNCONTROLLED ASTHMA IN OBESE ASTHMATIC CHILDREN

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Introduction: Factors that determine the relationship between obesity and poor outcomes in asthmatic children are not well understood. Dysanapsis and peripheral airway impairment (PAI) could provide an explanation in the obese asthmatic. Our goal is to determine the effect of obesity on dysanapsis and PAI and establish the effect of obesity, dysanapsis, and PAI on risk of uncontrolled asthma.

Methods: We evaluated 206 moderate to severe asthmatics, 4-18 years to determine the relationship of BMI to increased dysanapsis and PAI, using reference values. We examined the probability of obesity, dysanapsis, and PAI increasing the risk of uncontrolled asthma by BMI categorically and BMI z-scores using GLM analyses.

Results: Compared to normal weight, obesity increased odds of dysanapsis 2.32, p=0.040, while PAI showed an age-dependent effect, with increased odds for <12 years of 2.09, p=0.08, for ≥12 years 54.14, p=0.003. For each unit increase in BMI z-score, there was an increased OR for dysanapsis of 1.57, p=0.009; for PAI, <12 years of 1.39, p=0.042 and ≥12 years of 4.60, p=0.002. Obesity's relationship to uncontrolled asthma was indirect and not significant when adjusted for the direct effect of dysanapsis and PAI, which were highly significant predictors, with increased odds for dysanapsis <12 years of 28.01, p=<0.001 and for PAI 3.09, p=0.005. Adding PAI to dysanapsis increased the percentage of patients with uncontrolled asthma from 50% to 81.5%.

Conclusions: Overweight and obesity significantly increase odds of dysanapsis and PAI, in an age specific manner, greatly enhancing the probability of uncontrolled asthma.

P078

REAL WORLD OUTCOMES OF BIOLOGIC AGENTS IN AN ADOLESCENT, MEDICAID, ASTHMATIC POPULATION

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Introduction: Currently available biologics for the treatment of asthma have all demonstrated in randomized controlled trials to decrease the frequency of asthma exacerbations. There are few data on real world efficacy, especially in underserved populations.

Methods: This study was a retrospective cohort analysis of all high-risk asthmatics aged 6-18 receiving a biologic agent for asthma through Medicaid at a single center. Patient data was collected one year prior to and one year on therapy. The primary outcome was total asthma exacerbations (clinically significant to require oral steroids, ED visit, or hospitalization). Secondary outcomes included spirometry values, FeNO values, and total clinic visits.

Results: A total of 22 patients met criteria for enrollment. The mean age of patients enrolled was 10.8 years, receiving an average of 10.3 doses of biologic treatment per year. Biologic agents included omalizumab (N=19), benralizumab (N=2), and mepolizumab (N=1). Total exacerbations in the year prior to therapy was 5.36 and while on therapy was 1.73 ($p < 0.001$). Oral steroids, ED visits, and hospitalizations demonstrated individual, statistically significant reductions, as did FeNO levels. There was no statistically significant change in FVC, FEV1, FEV1/FVC ratio. Clinic visits prior to and while on biologic therapy were not statistically significantly different.

Conclusion: This study demonstrated a clinically and statistically significant reduction in asthma exacerbation in a high-risk, adolescent asthmatics on Medicaid when started on biologic therapy. This was despite no change in the number of clinic visits. This encourages future studies to investigate cost effective treatment strategies of both financial and clinical significance.