Using Increased Access and Improved Parent Education to Decrease Low Acuity Pediatric Emergency Room Visits

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Introduction

Patient overutilization of the Emergency Department (ED) has been a long-standing issue in all medical communities. This is especially prominent for low socioeconomic status families with children. Our family medicine residency clinic cares for a large percentage of our community’s children with Medicaid coverage due to the fact that there are very few providers in New Hanover and its neighboring counties that accept new Medicaid pediatric patients. Over the last three years, this access issue has led to an increase in pediatric patients in our practice panel from 22% of our overall panel (1078 patients) to 32% (1414 patients), with 88% of those patients having a payer source of Medicaid.

With this significant increase in pediatric population, the issue of ED overutilization for low acuity visits grew in importance for our clinic. Multiple studies have shown that patients with Medicaid are the highest users of the ED (Miller 2013). A 2012 study showed that pediatric patients with Medicaid had a rate of ED utilization of 25%, whereas uninsured patient’s rate of ED use was 13% and privately insured was 12% (NHCS 2012). An overview of our practices in 2015 pediatric ED visits showed a payer source of 97% Medicaid.

The low acuity of these patients is indicated by the fact that 95.5% of these patients “treat and release”, meaning they do not require hospitalization (Merrill 2005). Studies show that the most common pediatric ED diagnoses are URI, fever, and otitis media, which are well within the scope of an ambulatory setting (Health 2015). National ED utilization data further indicates that the highest pediatric utilizers of the ED are the 0-3 age range (Grossman 1998). This is the area where our clinic has seen the greatest increase in pediatric panel patients over the last two years. Taking all of this into consideration our project was started to decrease avoidable low acuity pediatric ED visits by increasing patient access to the clinic and improving parent education.

This project aligns with both current Atrium and Medicaid initiatives. Through Medicaid’s “Meaningful Measures”, this project aims at making healthcare more affordable by optimizing the utilization of health care resource use. The walk-in clinic at Coastal Family Medicine also improves access for same day appointments which had been identified as an area of focus. Our project also fits with Atrium current initiative “Destination 2020”. Two of the three major points of this initiative are directly met by implementing sustainable, value-based models of care and reducing the cost of medical care by redesigning our current process.

In addition to cost savings, there are multiple benefits for patients when bringing those with low acuity health issues to their primary care medical home instead of the emergency room. Studies show that the primary care setting provides better continuity, less unnecessary or duplicative testing, and decreased wait time (Alpern et al 2014). The addition of value-based reimbursement and capitated Medicaid reimbursement further adds to the importance of seeing pediatric patients in the ambulatory setting.

Results

- There has been a 284 visit decrease in total pediatric ED visits (29.77%) from our clinic 12 months since interventions started.
- This calculates to approximately $300,000 saved to the Medicaid system in that time compared to the year prior when adding up the cost to the system of these patients being seen in the ED vs the clinic. This strikes directly at both CHS and Medicaid initiatives to reduce cost of care by optimizing resources and is a respectable amount of money saved given that the project focused solely on pediatric patients from a single clinic.
- There was a 41.1% (82 to 48) decrease in low acuity level 3 (urgent) visits to the ED and a 16.7% (120 to 100) decrease in level 4 (less urgent) visits in the 3 measured months (Figure 3).
- There was a 43.7% decrease in URI diagnosis (71 to 40 visits) and a 50.0% decrease in fever diagnosis (14 to 7 visits) from the year prior during the 3 measured months in 2016. This decrease was sustained in the same three months of 2017 with ED visits for URI down 62.0% from pre-intervention data (Figure 4).
- Examining the relationship between our ED vs Clinic use in October-December 2015, 47.5% (64 patients) were seen in our clinic vs the ED for the diagnosis of URI. In 2017, with our walk-in clinic and improved parent education, 78.2% (97 patients) were seen in the clinic vs the ED. This was statistically significant (P<0.001), (Figure 5).

Discussion

The standardized changes in our clinic access policies and utilization of walk-in sick child slot during business hours has improved outpatient access on a same day basis. In combination with increased parent education we have also seen a decrease in low acuity ED utilization. This can be seen through our increased walk in clinic use with a corresponding decrease in ED usage in our pediatric population. By making these changes to eliminate patient identified barriers to care, analyzing national and local data, taking into account the ideas and input from all areas of clinic operation, and using Lean methodology, we noted this change despite an increase in panel size by 17.5% from the year prior. The decrease in ED utilization has been sustained for over a year since initiation. The initial changes were built into the pre-existing clinic template which made for a quick adjustment in access with minimal changes to the overall clinic setup.

Contact Info

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Resources