

Decreasing Healthcare Utilization with Parent/Caregiver Asthma Education: An Evidence-Based Practice Improvement Project in Pediatric Primary Care

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BACKGROUND

- Poorly managed asthma results in increased healthcare utilization, higher healthcare costs, and millions of missed school days every year^{1,3,37}
- In 2020, 42.7% of children with an active asthma diagnosis reported an asthma exacerbation within the last 12 months¹¹
- Multiple studies have found a decrease in healthcare utilization following caregiver-focused asthma education^{1,26,30,32}

LOCAL PROBLEM

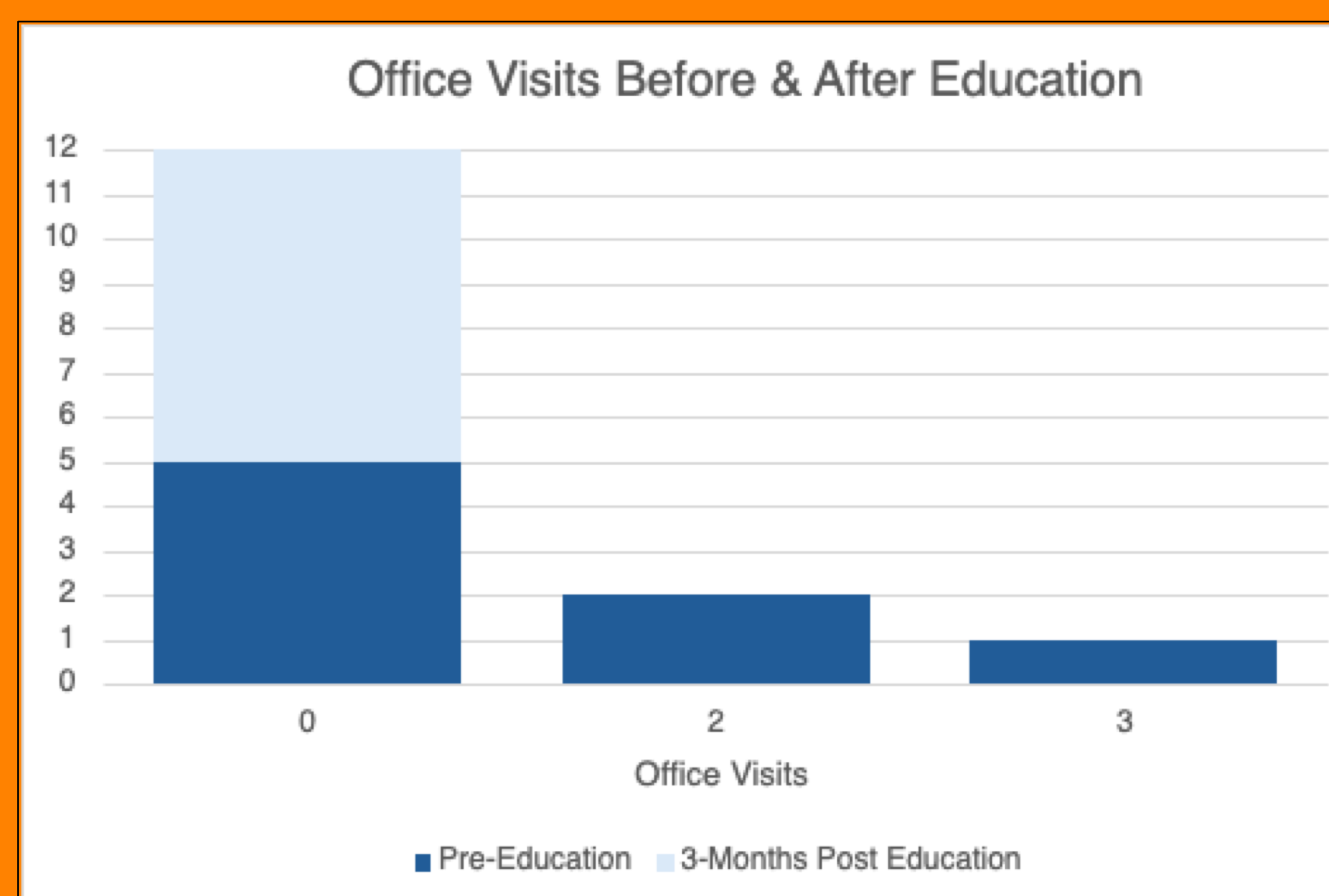
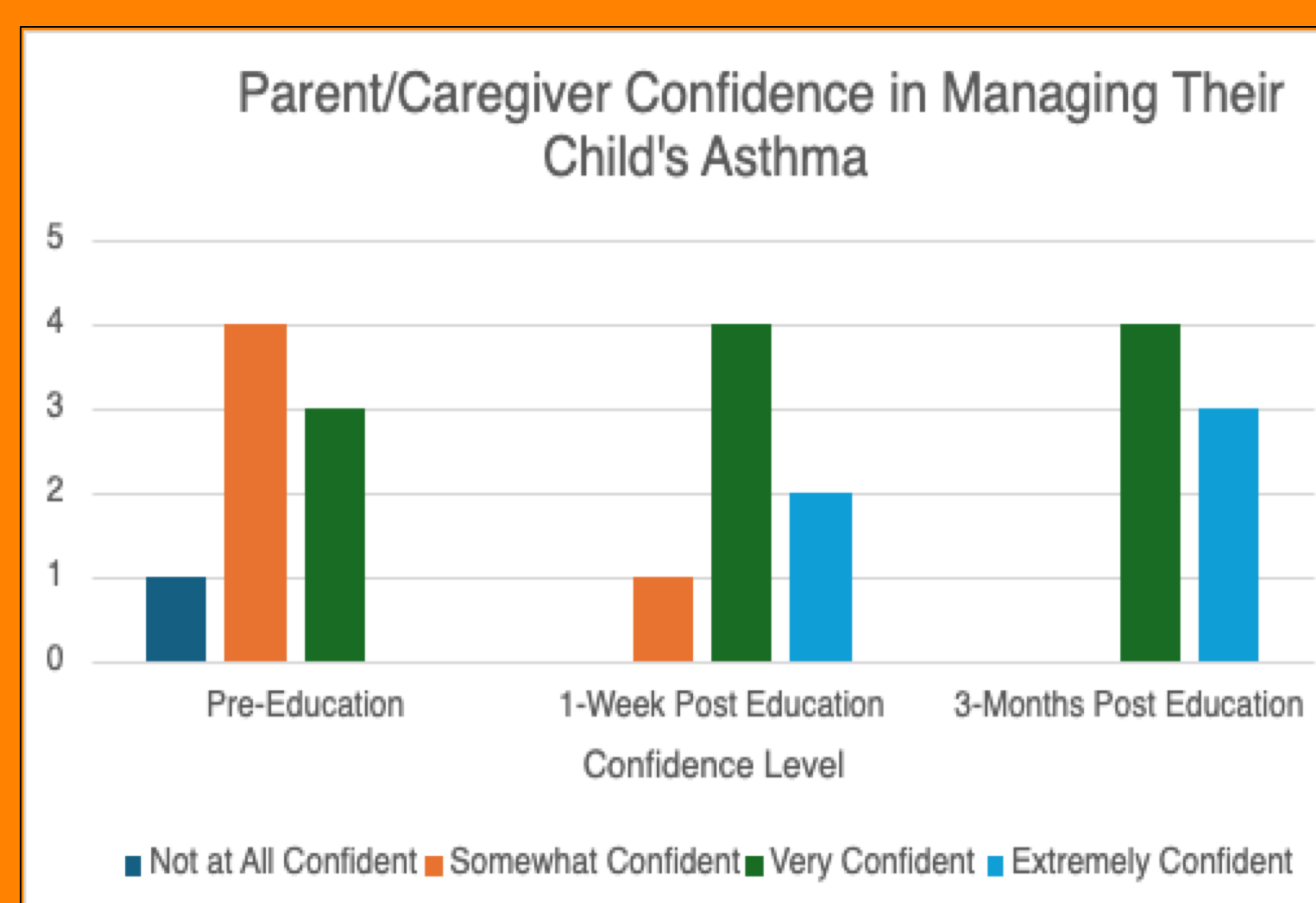
- The site for this project is a pediatric primary care clinic in middle Tennessee
- Purpose is to implement a detailed asthma education intervention designed for parents/primary caregiver of children who have been diagnosed with asthma, in pediatric primary care. Goals include:
 - Decrease asthma-related healthcare utilization
 - Increase parent/caregiver knowledge and confidence in asthma management
- Specific aim: there will be a 25% decrease in healthcare utilization due to asthma by June 30, 2024 for patients under 18 with a current asthma diagnosis

METHODS

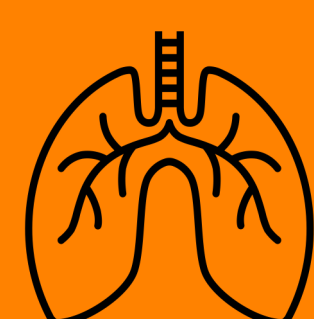
- The framework for the project is the Evidence-Based Practice Improvement Model
- Literature search and appraisal process supported parent or primary caregiver focused asthma education to decrease healthcare utilization^{1,16,18,26,30,32}
- Education handout & process developed in collaboration with participating pediatricians and supported by literature^{1,16,18,26,28,30,32}
 - Pathophysiology, triggers, clinical manifestations, medications, administration techniques, asthma action plan, when to seek medical care
- Data Collection
 - Demographics
 - Parent/caregiver confidence pre-education, one week post-education, and three months post-education
 - Office visits, ED visits, & hospitalizations for asthma pre-education & three months post-education

Parent's confidence in managing their child's asthma was significantly increased following face-to-face asthma education.

Asthma office visits were decreased 3 months post-education when compared to the previous year.



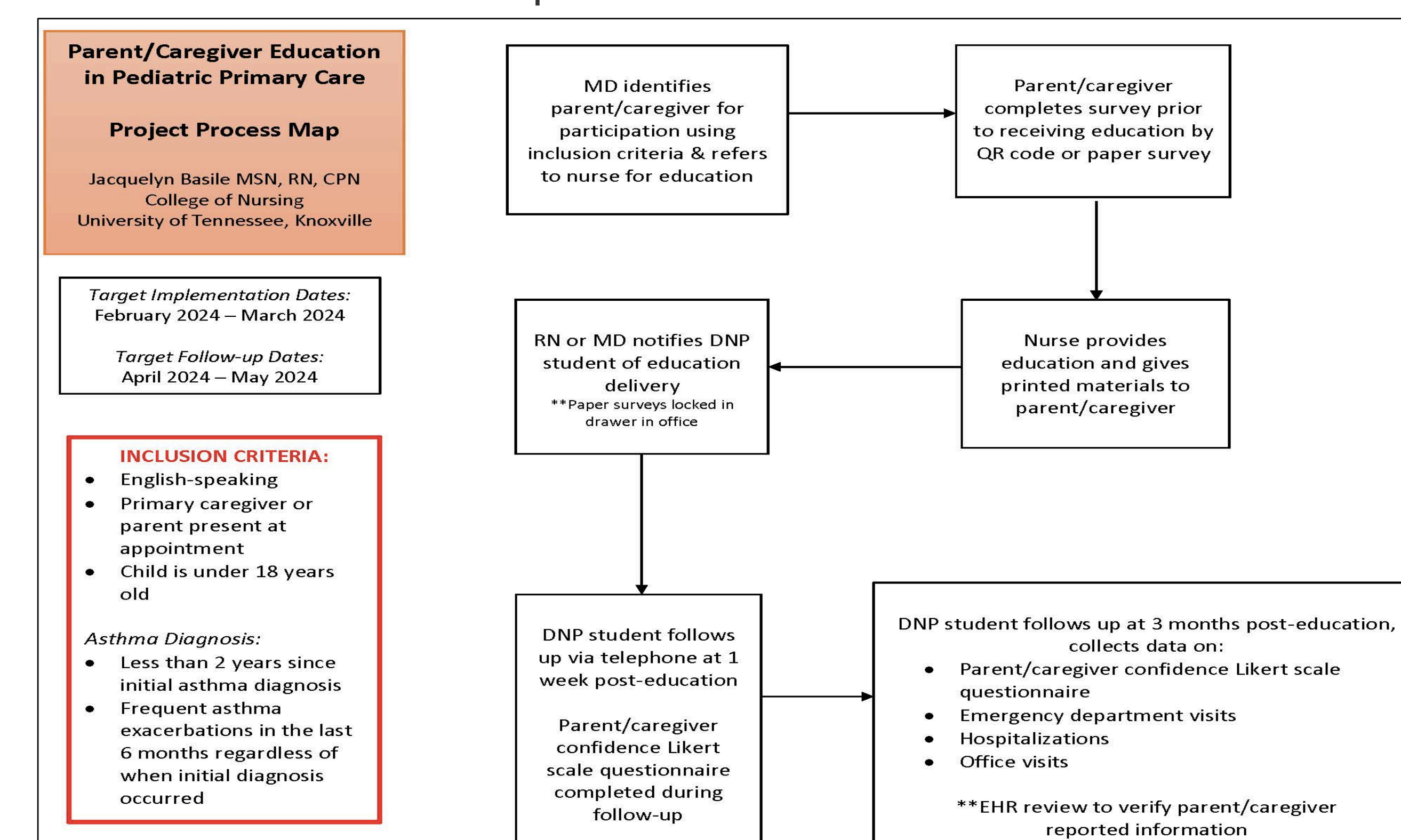
Scan here for full list of references



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INTERVENTIONS

- MD or trained clinical staff identified parent/caregiver and patient that qualified for the project
 - Pre-education survey completed
- Nurse provided verbal, face-to-face education with review of education handout
- Follow-up completed at:
 - One week post-education
 - Three months post-education



RESULTS

- Participants were mostly female ($n=7$; 87.5%), white ($n=7$; 75%), & had a high school education ($n=5$; 62.5%).
 - 50% of parents ($n=4$) reported having a personal history of asthma
- Clinical staff asthma knowledge had a statistically significant increase from pre- to post-training ($p=0.043$)
 - Mean pre-test score = 44 (SD = 4.35), Mean post-test score = 47.4 (SD = 2.07)
- Office visits were decreased but not statistically significant ($p=0.157$)
 - 3 parents (37.5%) reported one or more office visits for asthma before education; no office visits were reported in the three months post-education
 - No change in urgent care/walk-in clinic visits, emergency room visits, or hospitalizations from pre/post-education
- Statistically significant increase in parent/caregiver confidence from pre-education to 1 week post-education ($p=0.014$)
 - Confidence level was maintained at 3 months post-education

CONCLUSIONS

- Face-to-face education directed towards parent/caregivers decreased office visits for asthma and increased parental confidence in managing their child's asthma
- Formal education process with written asthma materials in place at project site
 - Additional providers in the practice can utilize the process and educational materials
 - Sustainability plan includes training of champions in clinic who will continue staff training and update materials when necessary
- Implications for practice
 - Can be implemented in any setting that cares for pediatric asthma patients
 - Educational intervention and written materials can be adapted