Rady Children's Hospital San Diego
Center for Healthier Communities

Community Health Brief

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Community Approach to Severe Asthma (CASA): Testing a Multidisciplinary Approach to Child Asthma Including a Home Visit and Social Determinants of Health Assessment.

BACKGROUND: Asthma is the leading cause of chronic disease among US children; healthcare costs exceed $82 billion annually. Ethnically diverse children living in poverty have higher rates and increased morbidity/mortality compared with white children. In San Diego, asthma-related emergency department visits are five times higher for black and two times higher for Hispanic children compared with white. Complex social and environmental factors, called social determinants of health (SDH), shape these disparities. The Severe Asthma Clinic (SAC) at Rady Children's Hospital San Diego (RCHSD) provides multidisciplinary care to children with difficult-to-control asthma. Community Approach to Severe Asthma (CASA) is an evidence-based pilot project utilizing a community health worker model with the goal of improving asthma management and outcomes.

METHODS: A group of high utilization patients seen in the SAC were invited to participate in CASA. Community Health Workers (CHWs) who serve as part of the SAC's multidisciplinary care team were recruited and trained to conduct home visits with CASA families. The goal of the home visit is to 1) implement environmental assessments, 2) reinforce clinician instructions, 3) assess asthma control, 4) set behavioral/environmental change goals and 5) facilitate a link with 211-San Diego (211). Staff at 211, a centralized referral organization, assess SDH or unmet social, health, environmental and behavioral needs and link families with appropriate services. 2-1-1 tracks referrals made, services accessed and changes in vulnerability over time based on their risk rating score.

RESULTS:

- In 2017, 74 patients were seen in SAC, providing one year of pre/post intervention data. Twelve SAC patients also participated in CASA.
- Significant reductions were seen in ED visits among SAC participants (75% in >2-ED visits p<0.001) (See Figure 1) and the CASA & SAC participants (90% in >2-ED visits p= 0.002) (See Figure 2).
- Significant reductions were also seen in hospitalization days among SAC participants (73% reduction in >2 hospitalization days p<.001) (See Figure 1). A decreasing trend in hospitalization days was seen in CASA participants. (See Figure 2).
- Among the 12 CASA participants contacted by 211-San Diego, 89 SDH-related needs were identified. "Basic Needs" (food, shelter, utilities) were most commonly indicated (37%), with "utilities" ranking top. Of those who completed a pre and post risk assessment (6), 86% experienced a decrease in their risk rating score or vulnerability.

Figure 1.
Severe Asthma Clinic (SAC)

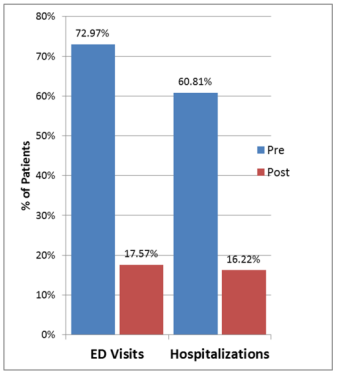
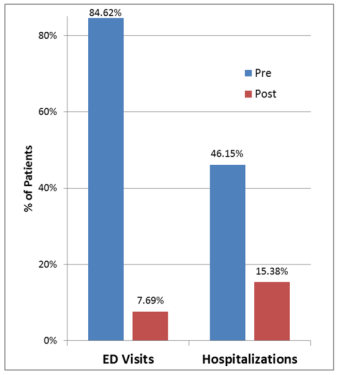


Figure 2.
CASA (Home Visit) & SAC



Analysis evaluated pre/post changes in ED visits and hospitalization days of subjects who participated in SAC and/or CASA. Both pre and post record contains each patients visit/hospitalization during a one year period.

CONCLUSIONS: Findings from this small-scale pilot project are encouraging and indicate that a multidisciplinary approach to asthma including a home visit and comprehensive assessment of SDH, may decrease healthcare utilization in a pediatric population with difficult-to-control asthma. Future efforts should include scaling up, or further testing this model of care with a larger a larger group of participants.

CASA is a collaboration of Rady Children's Hospital's Center for Healthier Communities, Division of Allergy/Immunology, Care Redesign and Social Work Departments

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