



## Case Studies in Capturing Health Care Savings Through Population Health

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### Name of project or collaborative

Boston Children's Hospital Community Asthma Initiative

### Geography

Boston, MA

### Brief description

The Community Asthma Initiative (CAI) was developed in October 2005 to address health disparities in Boston neighborhoods most impacted by asthma by providing an enhanced model of care, including asthma education and home visiting for families with children ages 2-18 living in the Greater Boston area, who were previously seen in the Emergency Department (ED) or hospitalized due to asthma. CAI works with partners and coalitions to address asthma health disparities through changes in policies at the local and state levels.

### Relevance of project to this breakout session

The Community Asthma Initiative provides home visit services and asthma education for patients identified from logs of ED visits and hospitalizations, or referred by primary care providers, as a part of the patient-centered medical home. Its success has stimulated development of a Medicaid asthma bundled payment pilot which is about to be launched in Massachusetts.

### Results/outcomes

Cumulatively as of June 30, 2014, case management was provided to 1329 patients. Of the 1329 enrolled patients, 76.4% of the families had one or more home visits. Of the patients enrolled thus far (October 2005–June 2014), the average age of the patients was 7.3 + 4.4 years (SD); 56.7% male; and 43.8% Hispanic, 46.8% black, 4.5% white, and 4.9% other ethnicities/races; and 75.4% have MassHealth. Of the families served, 62.9% have a household income <\$25,000. As of March 31, 2014, from parental reports at 12 months compared to baseline, there were significant reductions in the percent of children with any ( $\geq 1$ ) ED visits (57% reduction; 53.6% to 22.9%,  $p < 0.001$ ), hospitalizations (79% reduction; 62.9% to 13.0%,  $p < 0.001$ ), days of limited physical activity (33% reduction; 58.5% to 39.4%,  $p < 0.001$ ), missed school days (43% reduction; 91.8% to 52.5%,  $p < 0.001$ ), missed work days for parents (43% reduction; 91.8% to 52.5%,  $p < 0.001$ ), and an increase in up-to-date asthma action plans (47% increase; 62.6% to 91.8%,  $p < 0.001$ ). Excluding Quality of Life benefits and accounting only for direct benefits from cost savings resulting from decreased hospitalizations and ED visits, the ROI was 1.39 at two years and 2.08 at three years. The Social Return-On-Investment with hospital costs and an estimate of the social benefits was calculated as 1.77 at two years and 2.63 at three years.

### Funding

CAI is supported in part by grants, philanthropy, and internal support including: Health Resources in Action's Center for Medicare and Medicaid Services Innovation grant, Maternal and Child Health Bureau's Health Tomorrows and LEAH grants, CDC REACH US program, American Academy of Pediatrics, several foundations, and the Office of Community Health at Boston Children's Hospital.

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<http://www.childrenshospital.org/centers-and-services/community-asthma-initiative-program/overview>.