



Asthma in southern Worcester county: Impact and interventions

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Background

The health needs assessment completed by Harrington Hospital (Southbridge, MA) indicates a higher rate of asthma related emergency department visits in South Central Worcester county. The increased rates were particularly in the pediatric population (<14 yo). We are analyzing qualitative and quantitative data to find potential causes and solutions for asthma diagnosis, treatment, and management.

Population of Focus

Asthma patients (particularly pediatric asthma patients) in the Catchment Area (Brimfield, Brookfield, Charlton, Douglas, Dudley, East Brookfield, Holland, North Brookfield, Oxford, Palmer, Southbridge, Spencer, Sturbridge, Wales, Warren, Webster, West Brookfield), with a census project based at Harrington Hospital in Southbridge, MA.

Based on feedback from physicians, the formal diagnosis of asthma can range from a history/physical to PFTs and methacholine challenge tests. Asthma patients tended to also show these common findings:

- Decreased level of understanding asthma severity
- Misunderstanding of treatment regimen (noncompliance)
- Insurance restrictions of treatment supplies
- Hispanic/Latino descent
- Residence with frequent smoking
- Sub-standard housing conditions

What can we do?

- Incorporate smoking cessation into more OB visits
- Health fair education booths to demonstrate proper inhaler/nebulizer use
- Having translation services at the pharmacies to reinforce proper medicine use
- Educate parents about corticosteroids vs anabolic steroids
- Create an asthma page on the Harrington Hospital website with videos about proper medication use

Findings and Outcomes

Goals: Provide information on current issues of asthma control, prevention and treatment in the South Central Region.

Progress: Over the past two weeks we completed a series of interviews with different members of the healthcare team to better understand asthma issues and interprofessional communication. We also identified issues that would lead to increased asthma related incidents in the ED.

Interprofessional networks: The doctors in the ED have good communication with the respiratory team and nurses within the hospital, but their contact with PCPs seems limited. The PCPs are in contact with their nurses and the pulmonary specialists that they refer their patients to. Patient education seems to be uncoordinated and disjointed within this network.

Lessons learned: The increased asthma rates in South Central Worcester county is a multifactorial problem including problems with access to care, asthma education, poor housing conditions, and problems with compliance.

Recommendations: We are hoping to update the Harrington Hospital website with a patient portal page on asthma. We hope to include videos about proper medication use in English and Spanish to educate patients and increase compliance.

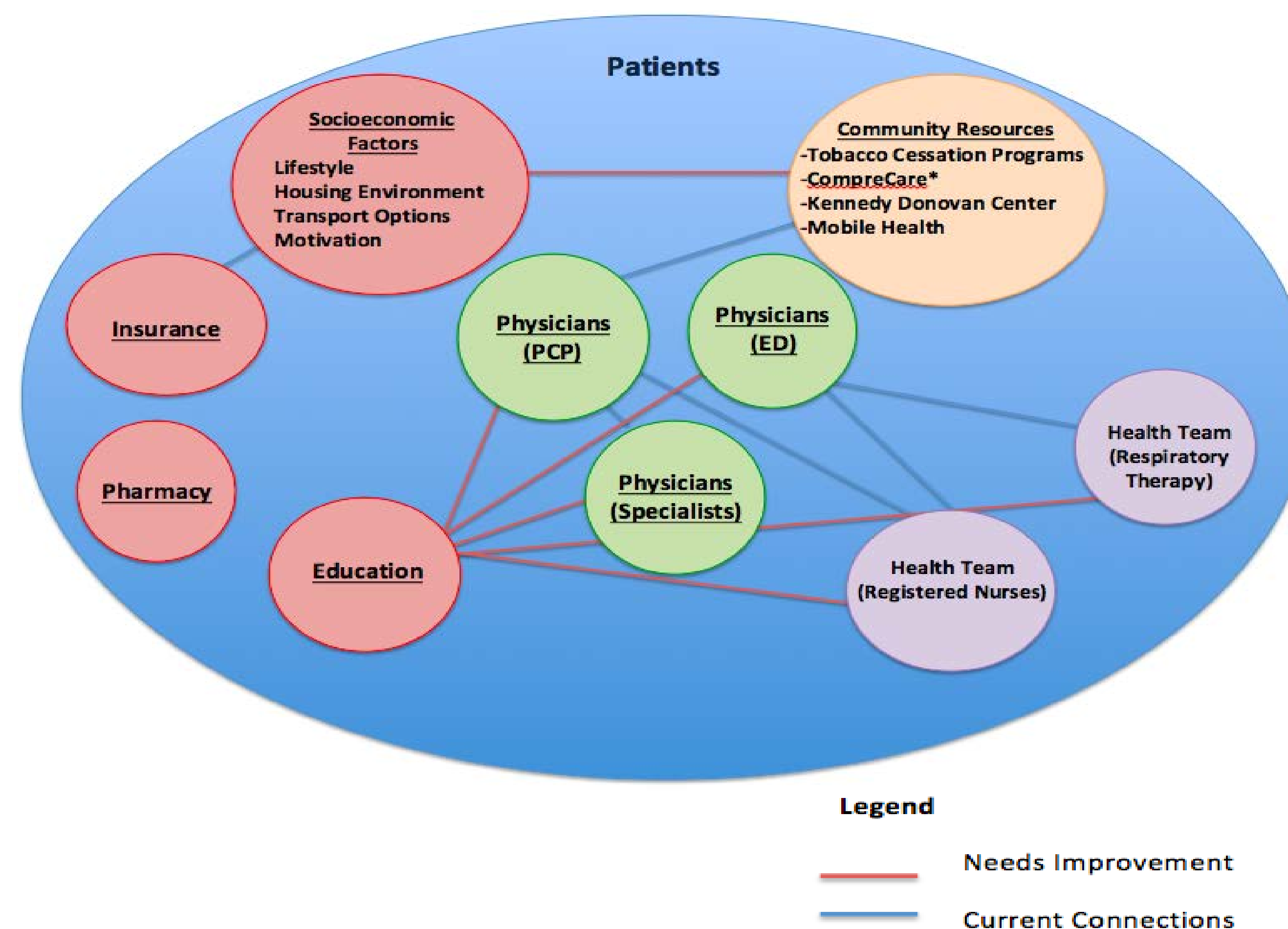
Statistics

Harrington Hospital (Southbridge, MA) completed a Health Needs Assessment survey in January 2014 and the data results showed an increased prevalence of asthma in the pediatric population (< 14 yo) (991.5 asthma-related cases per 100,000 pediatric ED visits in the Catchment area vs. 901.4 in all of Massachusetts, page 31 of the Final HNA report).

Asthma rates in Southbridge Public Schools for 2013-2014

1. 616 or 2239 students (27.5%) diagnosed with asthma
 2. Eastford Road School: 288 students in school - 228 asthma-related visits to nurse.
 3. West Street School: 415 students total - 540 visits (144 students formally diagnosed with asthma)
 4. Charlton Street School: 474 students total - (138 students diagnosed with asthma)
 5. Southbridge Middle School : 560 students total - 327 visits (109 diagnosed with asthma)
- Compared to the state, the Catchment Area tends to have lower income levels (median household income of \$61,906 compared to \$65,981 statewide),
 - Lower levels of educational attainment (46.3% of residents with a high school diploma or less, compared to 37.4% statewide) **(secondary report pg 6)**
 - Higher unemployment rate (8% vs. 6.9% statewide). **(secondary report pg 5)**
 - Slightly higher dropout rate (7.4% vs. 6.9% statewide)
 - Lower rate of graduates attending college/university (68% vs. 74% statewide **(secondary report pg 6)**).

Schematic



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