Saint Barnabas Medical Center
Hospital Based Educators Teach Optimal Asthma Care

DSRIP Learning Collaborative
Sean Cox, RN, MSN, MAS, CPHQ
Saint Barnabas Medical Center

New Jersey’s oldest nonprofit, nonsectarian hospital.
Major teaching affiliate
  University of Medicine and Dentistry
  New Jersey Medical School
  Drexel University
  Saint George’s University SOM
Clinical Campus
  New York College of Osteopathic Medicine.
1,500 physicians and dentists
100 specialties
597-beds
35,000 inpatients
>90,000 adult and pediatric E.D.
300,000 outpatients SBMC & BHACC
DSRIP—Impact on Barnabas Health

- $29,038,415 is the HSRF subsidy received by Barnabas Health which will be affected with a pay for performance DSRIP program.
- Funding will be based on a weighted factor methodology after the hospitals have met the required performance metrics.
- Each hospital’s project will be evaluated and given a Percentage Achievement Value (PAV) score.
- Approximately $450,000 at risk for SBMC.
Community Needs Assessment

- Based on SBMC’s Community Health Needs Assessment (CHNA) Asthma was identified as an appropriate project
- The CHNA highlights the impact of asthma on Essex County residents:
  - 8.3% of Essex County residents reported having asthma in 2010, up slightly from 2004 (8.2%). The prevalence of asthma in Newark, the County’s largest city, was 16%.
Asthma

<table>
<thead>
<tr>
<th>Year</th>
<th>New Jersey</th>
<th>Essex County</th>
<th>Newark-Union, NJ-PA MMSA</th>
<th>Union County</th>
<th>Middlesex County</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>7.6%</td>
<td>8.2%</td>
<td>6.1%</td>
<td>7.1%</td>
<td>8.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>2010</td>
<td>8.7%</td>
<td>8.3%</td>
<td>6.3%</td>
<td>7.5%</td>
<td>8.7%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

New Jersey: 2006 - 8.0%, 2010 - 7.5%
Essex County: 2006 - 8.2%, 2010 - 8.3%
Newark-Union, NJ-PA MMSA: 2006 - 6.1%, 2010 - 6.3%
Union County: 2006 - 7.1%, 2010 - 7.5%
Middlesex County: 2006 - 7.5%, 2010 - 7.5%
United States: 2006 - 8.4%, 2010 - 9.1%
Asthma

Asthma, an ambulatory sensitive condition, ranks second overall as a reason for ED visits among residents in Saint Barnabas’ service area. For children, ranks 2nd in the hospital’s primary and secondary service areas; for adults, asthma ranks 5th in its primary service area and 2nd in its secondary service area.
Asthma

- The inpatient use rate for asthma in the hospital’s primary service area was 23.1 per 1,000 population, higher than the State rate (22.7/1,000). Asthma was one of the top 5 ambulatory care sensitive conditions for inpatient utilization.

<table>
<thead>
<tr>
<th>ACSC Condition</th>
<th>ED PSA</th>
<th>ACSC Condition</th>
<th>ED SSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF</td>
<td>1,074</td>
<td>CHF</td>
<td>3,780</td>
</tr>
<tr>
<td>Bacterial Pneumonia</td>
<td>812</td>
<td>Diabetes</td>
<td>2,673</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>620</td>
<td>Bacterial Pneumonia</td>
<td>2,371</td>
</tr>
<tr>
<td>Kidney/Urinary Inf.</td>
<td>578</td>
<td>Asthma</td>
<td>2,277</td>
</tr>
<tr>
<td>Diabetes</td>
<td>576</td>
<td>Cellulitis</td>
<td>2,146</td>
</tr>
</tbody>
</table>
## Asthma Costs

<table>
<thead>
<tr>
<th>Financial Class Name</th>
<th>Asthma Cases -18+</th>
<th>Asthma Direct Cost 18+</th>
<th>Asthma Indirect Cost 18+</th>
<th>Asthma - Total Cost</th>
<th>Asthma 18+ Total Cost / Case</th>
<th>Asthma Cases -0-17</th>
<th>Asthma Direct Cost 0-17</th>
<th>Asthma Indirect Cost 0-17</th>
<th>Asthma Total Cost 0-17</th>
<th>Asthma 0-17 Total Cost / Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charity Care</td>
<td>20</td>
<td>55,458</td>
<td>54,976</td>
<td>110,435</td>
<td>5,522</td>
<td>2</td>
<td>4,816</td>
<td>7,175</td>
<td>11,992</td>
<td>5,996</td>
</tr>
<tr>
<td>Managed Care Mcaid - Americchoice</td>
<td>4</td>
<td>10,379</td>
<td>10,051</td>
<td>20,430</td>
<td>5,107</td>
<td>25</td>
<td>90,760</td>
<td>133,253</td>
<td>224,013</td>
<td>8,961</td>
</tr>
<tr>
<td>Managed Care Mcaid - Horizon Mercy</td>
<td>2</td>
<td>8,510</td>
<td>8,058</td>
<td>16,568</td>
<td>8,284</td>
<td>48</td>
<td>173,915</td>
<td>254,827</td>
<td>428,742</td>
<td>8,932</td>
</tr>
<tr>
<td>Managed Care Mcaid - Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>26,737</td>
<td>32,224</td>
<td>58,961</td>
<td>9,827</td>
</tr>
<tr>
<td>Medicaid</td>
<td>1</td>
<td>14,358</td>
<td>11,324</td>
<td>25,682</td>
<td>25,682</td>
<td>4</td>
<td>11,532</td>
<td>16,413</td>
<td>27,946</td>
<td>6,986</td>
</tr>
<tr>
<td>Mcare Primary w Mcaid / Charity Second</td>
<td>9</td>
<td>35,540</td>
<td>34,319</td>
<td>69,859</td>
<td>7,762</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
<td><strong>124,245</strong></td>
<td><strong>118,729</strong></td>
<td><strong>242,974</strong></td>
<td><strong>6,749</strong></td>
<td><strong>85</strong></td>
<td><strong>307,760</strong></td>
<td><strong>443,893</strong></td>
<td><strong>751,653</strong></td>
<td><strong>8,843</strong></td>
</tr>
</tbody>
</table>
Project Population

• The target population for the project are males and females ages 5 to 64 years residing in Essex County, New Jersey with a primary diagnosis of asthma (using AHRQ definition) and who are low-income (i.e., Medicaid, CHIP, or charity care).

• The target population is estimated at **7,973** based on the following assumptions:

• Asthma prevalence data from the Behavioral Risk Factor Surveillance System for Essex County – 8.3% for adults; 9.1% for children

• The percentage of New Jersey residents who receive medical assistance – 14.7%. Source: New Jersey Division of Medical Assistance and Health Services
SBMC DSRIP Team

- Rick Davis, CFO  Executive Sponsor
- Maria Dimi, RRT, MBA  Director of Respiratory Therapy
- Tara Morella, RRT, BS  Respiratory Therapy Clinical Coordinator
- Sean Cox, RN, MSN, MAS, CPHQ  Director of Quality & Standards
- Vincent Silvestri, RN, MSN, CPHQ  Director of Performance Improvement and TQM
- Jeanne Kraft, MD, FACP  Physician Champion
- Margie Heller, Administrative Director, Community Health and Outreach
Goals/Outcomes

The expected patient outcomes are:

• Reduced Emergency Department visits for Asthma
• Reduced hospital admissions for Asthma
• Reduced hospital readmissions for Asthma
Certified Asthma Educators

- Eight staff were selected to complete a test preparation course and sit for the National Asthma Educator Certification Board (NAECB) examination.
- All were qualified to be admitted to the examination based on holding the RRT or CRT credential.
- Six successfully passed the exam on the first attempt.
Patient Education

• Asthma Education – The asthma educators will be available, upon request of the patient, family member/caregiver, social worker, or staff nurse, to provide additional training to asthma patients prior to discharge, in addition to a 45-minute bedside session that will be provided earlier during the patient’s stay. The patient’s action plan will be reviewed again with the patient, recommendations will be reinforced, and any new questions addressed.

• Asthma Action Plan – The patient’s asthma action plan, developed by the asthma educators after their bedside asthma training session, will be reviewed by the staff nurse with the patient and family/caregiver in the final discharge planning meeting on the unit prior to discharge. At that time, the staff nurse will confirm the post-discharge medications and call or send the prescription to the patient’s pharmacy. Copies of patient self-management tools, such as the peak flow tracking sheet, will also be provided to facilitate compliance with Asthma Action Plan.

• Follow-Up Visit – Staff nurses or social workers will schedule the patient’s follow-up appointment with either their primary care physician or pulmonologist prior to discharge and confirm details with patient and their family/caregiver at the final discharge planning meeting. The goal is for the patient to be seen within 7 days of their hospital discharge. Patients will be asked if they have transportation needs or other obstacles that would prevent them from attending their follow-up appointment and referred to a hospital social worker to resolve.

• Home Care Support – For patients who have home care support in their Asthma Action Plan, the asthma educators (who are also respiratory therapists) will participate in the final discharge planning meeting. Case management care coordination processed documented
Patient Education Tools

- **Ask About Asthma** – A 13-page patient booklet on asthma explaining the disease, taking medications, lifestyle issues, provider visits, and obtaining asthma support.
- **Using a Peak Flow Meter** – Written and graphic instructions for using a peak flow meter and recording your reading.
- **Peak Flow Tracking Sheet** – Provides a weekly record of patient’s daily peak flow readings for the week. Patients will be encouraged to bring this record with them to their follow-up appointments.
- **Your Personal Best Peak Flow Number** – Interprets peak flow readings to help the patient determine how well they are managing their asthma and identifies their asthma “danger” zones.
- **Peak Flow Diary** – Maintains a record of peak flow readings to evaluate patient progress and help determine triggers.
- **Asthma Action Plan** – Identifies patient’s asthma triggers, necessary medications, and asthma danger zones (based on peak flow readings), and provides instructions for obtaining help during emergencies.
Partners

- SBMC initially targeted schools and Day Care centers for delivering Asthma education.
- Sessions delivered at these sites were very well received.
- Realized we would need to secure partners who could share clinical data with SBMC.
- Due to SBMC’s payer mix it is a challenge to find DSRIP target partners.
## Payer Mix

<table>
<thead>
<tr>
<th>V. Payor Mix % (Patient Days)</th>
<th>Actual</th>
<th>Budget</th>
<th>Prior Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>32.9%</td>
<td>34.0%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>3.2%</td>
<td>2.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Managed care - Medicare</td>
<td>6.4%</td>
<td>6.0%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Managed care - Medicaid</td>
<td>7.9%</td>
<td>6.7%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Total Managed care - Other</td>
<td>20.0%</td>
<td>21.3%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Total NJ Blue Cross</td>
<td>22.1%</td>
<td>21.3%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Commercial insurers</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Self-pay/Charity</td>
<td>3.3%</td>
<td>4.3%</td>
<td>3.4%</td>
</tr>
<tr>
<td>All Others</td>
<td>3.2%</td>
<td>3.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Zufall Health Center

- Zufall Health Center the first FQHC in SBMC’s primary service area
- Initial meetings occurred Summer 2014
- MD’s will receive appointment to SBMC Medical Staff (Community Staff)
- Concerns about Data Sharing
Moving Forward

- Secure Data Sharing Agreement with Zufall
- Secure additional reporting partners
- Explore alternative patient satisfaction survey methods
- Continue to provide community Asthma Education