Despite the development of more effective treatments for asthma, we have not seen a corresponding decrease in asthma morbidity.

What are best practices for asthma management?
Implementing Best Practices

• “Abundant scientific evidence that asthma self-management programs reduce urgent care visits and hospitalizations and improve overall health status,” (EPR-3).

• **Five key elements** of a successful asthma program (U.S. EPA):
  1. Committed Leaders and Champions
  2. Strong Community Ties
  3. High-Performing Collaborations & Partnerships
  4. Integrated Health Care Services
  5. Tailored Environmental Interventions
Asthma Network of West Michigan

- **Date established:** January 1994, as the grassroots asthma coalition serving West Michigan
- **Location:** Grand Rapids, Michigan
- **Population:** 121,764 people with asthma - 3 counties
- **Target population:** children (<18 years) with uncontrolled asthma from low-income families (we also serve adults)
- **Population served:**
  - 33% African American, 32% Hispanic/Latino, 15% Caucasian
  - 82% children; 78% covered by Medicaid; 20% uninsured/under-insured
- **Original funding:** Local foundations & hospital systems
  - Created direct service arm in 1996 (20 year anniversary!); obtained non-profit status in 1997
Institutionalize the focus on outcomes:

- Community collaborative guided by a physician champion and partners in key positions of leadership, able to parlay that partnership into action.
- "Leave your badges at the door" –
  - Partnered to achieve a shared goal and for any organizational advantage.
  - Tried to ensure mission/program alignment and didn’t just “follow the money”.
- Designed a comprehensive program, which would provide direct service and would target the most at-risk children with asthma in our community.
Building a Better Program: Strong Community Ties (#2)

• Included our community in program planning
• Engaged our community “Where it Lives”
• Recruited asthma champions

• Collaborated with:
  – Hospital systems
  – School districts
  – Health care providers/clinics
  – Local universities
  – Foundations
  – Corporations

• Engaged health plans
Building a Better Program: High Performing Collaborations (#3)

• Collaborated to build credibility – we wanted to become indispensable to our community
  • Medical home pilot
  • Research studies

• Engaged health plans
  • Offered a trial period
  • “Payer Summit” for sister communities replicating our model
  • Responsive and flexible – Muskegon, COPD
Integrated Health Care Services Goals (#4)

- Identify and **address systems barriers** that prevent patients from optimally managing asthma
- **Increase access** to, availability, and coordination of asthma services for children on Medicaid
- **Standardize asthma management** in Kent County
- **Reduce emergency department use and hospitalizations** related to asthma among target population
Tailored Environmental Interventions (#5)

• Home-Based Case Management:
  – Home visits conducted by:
    o AE-Cs, LMSW and CHWs
  – School/daycare visits
  – Physician care conferences
  – Licensed masters social worker (LMSW who is also AE-C) assists with psychosocial barriers

• Health professional education / technical assistance
  – In-services for providers and office staff
    o Spirometry, asthma medications & devices, asthma guidelines, Asthma Action Plans, etc.
Referral Sources

- Health Net
- Inpatient population/ED
- Physician practices/clinics
- School nurse
- Public Health Nurse
- Self-referral
- Managed Care Organizations
- “No wrong door” for referrals!
Case Management Model

- 5 AE-C Home Visits in 3 months
- 3 monthly visits thereafter
- 1 visit to medical home
- 1 visit to school or daycare
- 2 LMSW visits
- Target: 6 - 12 visits over 6 - 12 months
- CHW enroll patients and conduct follow-up visits after discharge
Staffing – Case Managers

• Nurse (RN) or Respiratory Therapist (RRT)
• Must be AE-C when hired or become a certified asthma educator within one year of employment
• Expertise in asthma & home care desirable
• ANWM covers cost of review course, Self-Assessment Exam (SAE), as well as cost of the exam and then re-certification by exam or CEUs
Staffing – Licensed Masters Level Social Worker

- Dually certified as an AE-C so can function as a case manager as well as LMSW
- Conducts psychosocial screening with each family enrolled to assess for needs
- Provides psychosocial support for families
- Refers to community agencies/resources as indicated
- Can engage in short-term counseling
- Resident expert in CPS cases
Home Visit

- Asthma education lessons
- Review medication adherence
- Review medication technique
- Environmental assessment
- Basic needs/psychosocial assessment
- Connect to community resources
- Connect to medical home
- Address barriers to asthma control
- Reimbursable visit – either AE-C or LMSW
Care Conference

• Conducted with PCP (and possibly specialist as well) with or without family present

• Goals:
  – Elicit a written asthma action plan
  – Discuss adherence issues, including psychosocial barriers to asthma management
  – Discuss access to care issues - PCP visits, devices, medication refills, etc.

• Reimbursable visit
School/Daycare Visit

- Scheduled with key school personnel:
  - principal, school nurse, classroom teacher, phys. ed. teacher, and/or school secretary
- May provide in-service for entire staff if requested
- Discuss key issues concerning child’s asthma and psychosocial or learning barriers identified by school
- Provide with copy of AAP - ensure school staff understands how to implement
- Reimbursable visit
Partnerships with Health Plans

- First asthma coalition in the nation to contract with health plans for home-based asthma case management
- Some health plans authorize 18 visits, others authorize fewer and AE-C must call and justify the need for more visits
- Target members with uncontrolled asthma
- Signed contracts with 4 health plans
- Reimbursement (~$100,000) covers ~1/4 of our operating budget ($400,000)
Leveraging Assets and Resources

• Primary expenses are staff salaries, mileage, and supplies

• Current Funding Sources
  – Secured sustainable funding from Community Benefits or operating funds from 2 largest hospital systems
  – Reimbursement from contracts with 4 health plans
  – Foundation /grant funding, including Amway Corp. and United Way
  – Expanded services to members with COPD at the request of our largest payer
  – Technical assistance revenue for replication of model
**Outcomes: Reduced Hospital Charges**

<table>
<thead>
<tr>
<th>Total ED Charges</th>
<th>Pre-study</th>
<th>Study</th>
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<tbody>
<tr>
<td>Total Hospital Charges</td>
<td>$86,329</td>
<td>$31,064</td>
</tr>
<tr>
<td>Decrease from pre-study year to study year</td>
<td>$55,265</td>
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</tbody>
</table>

**Total Inpatient Charges**

<table>
<thead>
<tr>
<th>Total Inpatient Charges</th>
<th>Pre-study</th>
<th>Study</th>
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<tr>
<td>$18,357</td>
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<td>$67,972</td>
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</tbody>
</table>
Managing Asthma Through Case Management in Homes (MATCH)

- Three established Michigan MATCH programs
  - Asthma Network of West Michigan
  - Hurley Medical Center
  - St. Joseph Mercy Health System
- Children and adults with asthma
- MATCH model
  - ≥ 6 visits
  - ≥ 5 months between Intake and Discharge visits
MATCH Outcomes: Utilization

Percentage of Individuals with Asthma related Medical Care Usage in last 6 months By Intake/Discharge

- ≥ 3 ED visit: -78.95%Δ
- ≥ 1 ED visit: -60.34%Δ
- ≥ 1 Hospitalization: -83.33%Δ
MATCH Outcomes: Quality of Life

Numbers of Days/Nights Affected in last 6 months By Intake and Discharge

- **Wake:** Intake 7.49, Discharge 1.29, -82.20%Δ
- **Miss Work:** Intake 3.76, Discharge 0.82, -78.23%Δ
- **Miss School:** Intake 6.00, Discharge 1.74, -71.01%Δ
Major Achievements & Results

The results we’re most proud of:

• Designed and implemented a comprehensive home-based asthma case management model
• First asthma coalition in the nation to partner with a health plan and obtain reimbursement for services
• Long-term partnership with health plans who report cost savings and positive return on investment (ROI)
• 40% decrease in hospitalizations (Priority Health, 2014)
• 25% decrease in ED visits
• Two national U.S. EPA awards:
  • “National Model Asthma Program” (2006)
  • National Environmental Leadership Award in Asthma Management (2008)
Our Value Proposition: The Business Case for an Asthma Program

For $400,000, the Asthma Network will improve asthma outcomes for 300 at-risk children with poorly controlled asthma by achieving reductions in ER visits and hospital admissions, through our in-home asthma case management program.

We estimate that our work will deliver $212,000* per year in net cost savings to the healthcare system through 40% fewer hospital admissions and 25% fewer ER visits.

* $1.53 return for every $1 invested (2012) so $612,000 - $400,000 = $212,000 net savings
Thank You!

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