Asthma Case Management and Care Coordination

Karen Meyerson, MSN, RN, FNP-C, AE-C
April 21, 2009
Overview

- Asthma case management program components
- Successful collaborative model
- Replication of Model: Managing Asthma Through Case Management in Homes (MATCH) Program
Population Management

- Identify members with asthma through registries and patient profiles
- Stratify the population based on risk and care opportunities
- Develop clinical programs and provider partnerships to provide the highest quality asthma care
- Individualize member interventions, referrals, and education to meet specific health needs
Outpatient Case and Disease Management

- Member Identification
- Member Stratification
- Case Management Process
  - Assessment
  - Plan of Care
  - Intervention
  - Evaluation
Member Identification

- Strat Report / DM Alerts
- Inpatient or ER Utilization
- Member or Physician Referral
- Predictive Modeling
- Internal Referral
- Web-based Referrals
Member Stratification

- Missed services
  - PCP visits, lab tests, eye exams
- Utilization
  - ER, Inpatient
- Co-morbidities
  - DM, CAD, CHF, ERSD
- Medication Adherence
  - Rescue/control for asthma, ACE/ARB/BB for CHF
**Member Details**

- **Member Name**: Schaefer, Deborah
- **DOB**: 11/16/2007
- **Sex**: M
- **ID**: WEST
- **PCP**: N/A
- **Risk Group**: N/A
- **Emp Group(s)**: N/A

**Case Details**

- **Case Description**: Asthma, Adult (PH 06)
- **Case Status**: Active

**Stratification Details**

<table>
<thead>
<tr>
<th>Stratification</th>
<th>Strat Risk Level</th>
<th>Score</th>
<th>Percent Change</th>
<th>New Strat?</th>
<th>Open Case?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>High</td>
<td>4</td>
<td></td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Strat Item</td>
<td>Measurement</td>
<td>Score</td>
<td>Date</td>
<td>Change %</td>
<td></td>
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<td>------------------------</td>
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<tr>
<td>ER count</td>
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<tr>
<td>IP count</td>
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<td></td>
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<tr>
<td>LTC count</td>
<td>1</td>
<td></td>
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<tr>
<td>QR count</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Oral Steroid count</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma total score</td>
<td>3</td>
<td>4</td>
<td></td>
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</tr>
</tbody>
</table>
Member Education

- Disease process
- Evidenced-based standards of care
- Community resources
- Treatment options
- Plan benefits
- Self-management techniques
Asthma Assessment Goals

The Case Management plan includes the following:

**Asthma Goals:**
- Member has no IP/ED visits for Asthma within the last six (6) months
- Use of rescue medication is less than twice per week
- Member's asthma does not prevent member from participating in desired activities

**Asthma Interventions**
- A "Yes" response to any of the following questions will create a goal.
- If you are copying an assessment, check "No" to clear the goals, then check "Yes" to answer new goals.

  - Member is compliant in use of controller Rx.
  - Member is not overusing short-acting beta agonist.
  - Member verbalizes understanding of known triggers and need for avoidance of triggers.
  - Member has been referred to ANWM, or other asthma education, as appropriate, based on geographical area.

Add Reminder  OK  Cancel
Asthma Interventions

A "Yes" response to any of the following questions will create a goal.

If you are copying an assessment, check "No" to clear the goals, then check "Yes" to answer new goals.

Member is compliant in use of controller Rx.
Member is not overusing short-acting beta agonist.
Member verbalizes understanding of known triggers and need for avoidance of triggers.
Member has been referred to ANWM, or other asthma education, as appropriate, based on geographical area.
Member verbalizes correct inhaler use.
Member has a written asthma action plan, and understands how to adjust Rx based on symptoms and/or peak flow.
Member has a peak flow meter.
Member knows their personal best peak flow reading.
Provider Partnerships

- **Tools and Data**
  - Interactive web portals
  - Registries
- **Incentives for Quality Performance**
Search Criteria: ASTHMA

You can view all patients by clicking on the VIEW PATIENTS button below, or conduct an advanced search based on the selections in the box below.

**YOUR PROVIDER SEARCH**

You Selected the Following Provider: MARCUS, KEITH D

**REFINE YOUR ASTHMA SEARCH**

- Display ALL patients with this health condition
- Display patients with this health condition and ALL of the selected filters
- Display patients with this health condition and ANY of the selected filters

**Care Opportunities**

- No Asthma PCP visits in the past 12 months
- LTC/Quick-Relief Rx Optimal Ratio (2 to 1) not met

**Utilization in Past 12 Months**

- No Asthma Specialist visits
- 1+ Asthma ER visits
- 1+ Asthma IP admissions

**Physician Incentive Program**

- Eligible patients with Optimal Ratio not met

[VIEW PATIENTS] [CANCEL]
Health Condition Search Results

Results 1 - 1 of 1

- Care Opportunity
- PIP Opportunity
- Care and PIP Opportunity

<table>
<thead>
<tr>
<th>Doc, John C.</th>
<th>PCP MARCUS, KEITH D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOME (616) 748-0134 WORK (616) 233-3428</td>
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<tr>
<td></td>
<td>BIRTH DATE 07/24/56 AGE 48</td>
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</table>

Most Recent Visits:
- PCP 05/10/04
- SPEC 07/08/03
- ER 04/28/04
- IP ADMITS 01/07/00

Rx Counts Over 12 Months:
- LTC 1 QUICK-REL 4
- LTC 1 QUICK-REL 4

LTC : QR RATIO 1:4 SUBOPTIMAL

Rx Counts Year-To-Date:
- LTC 1 QUICK-REL 4
- LTC 1 QUICK-REL 4

LTC : QR RATIO 1:4 SUBOPTIMAL

Most Recent Rx:
- LTC 04/25/04 QUICK-REL 05/20/04 ORAL STER 04/29/04 RX COVERAGE Yes

Results 1 - 1 of 1

Note: Click on the underlined patient name to view details.

To change the filter(s) for this search, click MODIFY SEARCH on the left-hand side of the screen. To conduct a different search, select the new criteria from the appropriate boxes, and click REFRESH.
**CARDIOVASCULAR**

**Vital Signs**
Blood Pressure: 

**Encounter Counts Over 12 Months**
<table>
<thead>
<tr>
<th>PCP:</th>
<th>Specialist:</th>
<th>ER:</th>
<th>IP Admissions:</th>
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**Most Recent Visits**
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**Most Recent Lab Results**
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<th>LDL (Date):</th>
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**Rx Counts Over 12 Months**
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<thead>
<tr>
<th>ACE or ARB:</th>
<th>Beta Blocker:</th>
<th>Other Anti-HTN:</th>
<th>Anti-Hyperlipid:</th>
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</thead>
</table>

**Most Recent Rx**

**Related Health Conditions**
HTN, CHF

---

**ASTHMA**

**Encounter Counts Over 12 Months**
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<th>Long Term Control:</th>
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**Rx Counts Year-To-Date**
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<th>Rx Coverage:</th>
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A community based model
Community Partnership: A Model for Collaboration

- First introduced in West Michigan
  - Asthma Network of West Michigan (ANWM) and Priority Health
- First partnership between managed care organization and an asthma network
Asthma Program Goals

- Improve the health status, quality of life, and the clinical outcomes for all members with asthma by engaging them in the DM program.
- Increase physician awareness of current asthma treatment modalities and available covered services.
- Improve the rate of inhaled anti-inflammatory prescriptions.
- Decrease ER visits and inpatient admissions for exacerbations of asthma.
Partnership: Roles

**Health Plan**
- Identify the asthma population and stratify those that will benefit from program
- Commitment to provide coverage for asthma education in benefit design
- Commitment to partner with asthma coalition to provide those services

**Asthma Network**
- Ability to contract with plan and bill for services
- Adequate staff; all certified as asthma educators
- Internal processes and program components
Partnership: Collaboratively Defined:
- Goals, responsibilities, billing processes
- Education of members and providers about program

Established outcome evaluation:
- Clinical Outcomes – Medication compliance
- Cost Outcomes – Decreased Utilization (ER and Inpatient)
- Quality of Life - Survey
Partnership: Outcome Goals

- Evidence-based standards of care promoted to all asthmatic members
- Effective CM services
- Reimbursement for home-based program
- Physician driven education and incentives
- Increased use of asthma action plans
- Community collaboratives
- Data driven, evidenced-based outcomes
Proper Medication Use and ER Visits

- 1999: 76 ER Visits/1000 with 69% of Members using proper medication
- 2006: 41 ER Visits/1000 with 96% of Members using proper medication
Proper Medication Use and Inpatient Admissions

- 1999: 26 inpatient admits/1000 members, 69% of members using proper medication
- 2006: 14 inpatient admits/1000 members, 96% of members using proper medication
Impact: Health Plan Case Management

● Additional expertise available for education/home-based services
● Evidence-based interventions for members at highest risk
● Additional opportunity to coordinate care with PCP
● Foundation for providing high quality asthma care
Asthma Network of West Michigan

- Established in 1994
  - West-Michigan based, multi-organizational, community partnership that brings together the wisdom and experience of many disciplines involved in pediatric asthma
  - Case management program established in 1996
  - Obtained 501 (c)(3) status in 1997
  - Expanded coalition to serve adults May 2001
The Asthma Network’s Two Overall Goals

- Community educational resource for professional and lay public
- Case management of children and adults with moderate to severe asthma from predominantly low-income families
Case Management

- Services are unique
  - Home visits
  - School in-services
  - Physician care conferences to elicit a written asthma action plan
  - Medical social worker to assist with psychosocial barriers

- Reimbursed by 5 health plans – first in nation

- Significant outcomes presented at national conferences
Asthma Network of West Michigan Staff

- Asthma Educators/Case Managers
  - 3.0 FTEs
  - RN or RRT with interest/experience in asthma management
  - Encourage attendance at Asthma Information Review (AIR) course to prepare for national certification exam (ANWM covers the cost)
  - Sit for exam within within 12 months of employment (ANWM covers the cost)
Asthma Network of West Michigan

Staff

- Asthma Network of West Michigan Manager (1.0 FTE)
- Medical Social Worker (1.0 FTE)
  - MSW prepared with experience in medical social work and extensive knowledge of community resources
  - Responds to psychosocial needs of patients
- Clerical (1.0 FTE)
  - Office assistant/biller with billing, database experience
  - Assists with scheduling appointments, correspondence
Program Design

- Twelve months of case management - to allow for adequate follow-up, reinforcement of education and seasonal changes
  - Baseline assessment and goal development
  - Environmental assessment
  - Medical education and care
  - Psychosocial interventions
- Visits occur bi-weekly for first 3 months, then monthly thereafter, or after an exacerbation/encounter
Referral Sources

- Inpatient population
- PCP/clinic
- School nurse
- Public Health Nurse
- Self-referral
- Managed Care Organizations
Managed Care Organizations

- Receive authorization prior to enrollment
- Some authorize 18 visits, others authorize fewer and AE must call and justify the need for more visits
- Target: patients with moderate to severe asthma as defined in the NAEPP guidelines, from low-income families
- Will often authorize after an encounter (ED visit or hospitalization)
- Signed contracts with 5 MCOs
Caseload Size

- Goal of 225 families - promise to our funders
- 175 reimbursable slots
- 50 non-reimbursable slots (waiting list) – supported by grant $
- Provided service to over 400 families in past 12 months
- Accomplished over 2,000 home visits in past year (70% rate of accomplished visits)
Goals of Case Management

- Target behavior modification to promote prevention rather than crisis care
- Appropriate utilization of the health-care system
- Access to medications and primary care physician (obtain “medical home” if necessary)
- Address barriers - encourage problem-solving strategies
Goals (continued)

- Improved asthma knowledge
- Improved quality of life
- Resolving psychosocial issues allows AE to focus on asthma management issues
- Enhanced communication with school and medical personnel
- Ensure asthma management in accordance with NAEPP guidelines
Care Conference

- Conducted with PCP (and possibly specialist as well) with or without family present
- Bring copy of NIH guidelines
- Elicit a written asthma action plan
- Discuss compliance issues - psychosocial barriers to asthma management
- Discuss access to care issues - PCP visits, devices, medications, etc.
- Reimbursable visit
School/Daycare In-service

- Scheduled with key school personnel:
  - principal, school nurse, classroom teacher, phys. ed. teacher, and school secretary
- May provide in-service for entire staff
- Discuss (in private) key issues concerning child’s asthma and psychosocial barriers/learning problems identified by school
- Provide with copy of AAP - ensure school staff understands
- Reimbursable visit
There was an average charge reduction of $1,625 per subject for the 34 subjects.
Case Management Demonstrating Reduced Hospital Charges

Total hospital charges decreased by $55,265 from pre-study year to study year.
Case Management Demonstrating Improved Clinical Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Cohort Group Pre-study</th>
<th>Cohort Group Post-study</th>
<th>Control Group - Year 1</th>
<th>Control Group - Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td># of ED Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Hosp. **</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td># of Days Hosp.***</td>
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Cohort vs. Control P-value:
* 0.0040
** <0.0001
***<0.0001
Case Management Demonstrating Decreased Facility Charges

<table>
<thead>
<tr>
<th>Facility Charges - Hospital Days</th>
<th>Facility Charges - ED Visits</th>
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<tbody>
<tr>
<td>Cohort Group Pre-study</td>
<td>Cohort Group Post-study</td>
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<tr>
<td>Decreased facility charges of</td>
<td></td>
</tr>
<tr>
<td>$119,816/45 children/year</td>
<td></td>
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</table>

$2,663/child/year
Current Sources of Revenue

- Grants – almost $2,000,000 in past 12 years
- Managed Care Contracts (fee-for-service) – covers 1/3 of annual operating budget
  - Priority Health
  - CareSource Michigan
  - Blue Care Network
  - Molina Healthcare of Michigan
  - Health Plan of Michigan
- Corporate Sponsorships
- Annual operating budget: ~$500,000
In-Kind Contributions

- Home for the Asthma Network and administrative oversight
  - Donated by Saint Mary’s Health Care
- Asthma Tools (spacers and peak flow meters)
  - Donated by pharmaceutical companies
- Speaker’s Bureau/committee work
  - Board and general membership - our valued volunteers
Future Projects

- Establish more service agreements with area providers
- Achieve long-term financial sustainability
- Support asthma educator certification
- Expand comprehensive case management services to other counties
- Replicate our model around the state – respond to the needs of our payers
- Replicate our model nationally
Michigan Replication Activity

- Managing Asthma Through Case Management in Homes (MATCH) Program
  - Genesee County Asthma Network (GCAN): CM program similar to ANWM
    - Working on 501c3 status
    - Current contracts with three Medicaid health plans
    - Working on reimbursement
Michigan Replication Activity

- Saginaw: initial phase, leadership/partnership-building
  - Challenges in identifying physician champion, right mix of partners
- Comprehensive Asthma Program (CAP), Washtenaw County: school-based program converted to a home-based program
  - Currently contracted with one health plan
  - Working on reimbursement
  - Anticipate future contracts with health plans
Selected Intervention Communities in Michigan

- Gray shaded areas indicate Asthma Coalition Covered
- Asterisk (*) indicates Case Management Activity
- Double asterisks (**) indicate Potential Case Management Site
Replication in Michigan
Lessons Learning/Learned:

- Each community is different
- Level of coalition sophistication, interest, capacity and involvement varies
- Physician leadership/champion
- Lead organization
- Address health plan issues
What are the results?

Patient outcomes, along with cost savings, have been achieved with asthma education provided by certified asthma educators throughout the country.
Where Do You Begin?

- Assess your community’s need and capacity for an asthma program
  - Maintain/develop strong partnership with community agencies
  - Identify disparities and address cultural competencies
  - Be innovative in addressing needs/Removing barriers/Seeking solutions

- Develop an evaluation plan before you begin
  - Track outcomes
  - Assure that all members with asthma are educated according to the most recent evidenced based standards of care