Neighborhood Health Plan's Asthma In-Home Environmental Intervention

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Global Strategy for Asthma Management and Prevention

- November 2006 revision: www.ginaasthma.com
- Asthma **control** vs. Asthma **severity**:

  The new report bases its asthma management strategy on three levels of control: Controlled, Partly Controlled, or Uncontrolled. This is a departure from the 2002 strategy, which was based on disease severity. By emphasizing control, the new strategy recognizes that asthma management should be based not only on the severity of the underlying disease but also on the patient's response to treatment. Furthermore, severity is not an unvarying feature of an individual patient's asthma but may change over months or years. The previous classification of asthma by severity into Intermittent, Mild Persistent, Moderate Persistent, and Severe Persistent is **now recommended only for research purposes.**
- Environmental control recommended for all levels of control

REDUCE ← → INCREASE

TREATMENT STEPS

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
asthma education				
environmental control				
as needed rapid-acting β_2-agonist	as needed rapid-acting β_2-agonist			
CONTROLLER OPTIONS	SELECT ONE	SELECT ONE	ADD ONE OR MORE	ADD ONE OR BOTH
	low-dose ICS*	low-dose ICS *plus* long-acting β_2-agonist	medium- *or* high-dose ICS *plus* long-acting β_2-agonist	oral glucocorticosteroid (lowest dose)
	leukotriene modifier**	medium- *or* high-dose ICS	leukotriene modifier	anti-IgE treatment
		low-dose ICS *plus* leukotriene modifier	sustained-release theophylline	
		low-dose ICS *plus* sustained-release theophylline		

*inhaled glucocorticosteroids

** receptor antagonist or synthesis inhibitors

Environmental Control for Asthma

- Strong recommendation for avoidance of smoking, ETS exposure, occupational exposures, foods/additives/drugs known to trigger asthma
- Indoor allergens: little evidence of effectiveness of interventions that target reduction of single allergens
- Multidimensional interventions promising in reducing asthma morbidity (Inner City Asthma Study)

Inner City Asthma Study

(N Engl J Med 2004;351:1068-80)

- Enrolled 937 inner city, low income, minority 5-11 year olds with atopic asthma
- All had >=1 asthma hospitalization or >=2 unscheduled asthma visits in past 6 mos.
- Significant symptom burden at baseline
- Less than 50% on controllers at baseline
- One year study of non-clinician, home-based environmental intervention to reduce exposure to ETS and allergens

Inner City Asthma Study: Interventions

- Skin testing and home evaluation conducted at baseline
- >=5 monthly home educational visits
- Targeted provision of allergen-impermeable bedding covers, Miele HEPA vacuum, Holmes Products HEPA air purifier, Terminex pest extermination
- Outcome determined at 12 and 24 months

Inner City Asthma Study: Outcomes

- Bedroom dust mite and cockroach levels declined significantly
- Intervention group had >23 fewer days with asthma symptoms in Year 1; >15 fewer days in Year 2; 4.4 fewer missed school days
- Reductions in allergen levels correlated with reduction in asthma morbidity
- Symptom-reduction evident within 2 months and sustained for 24 months

From Research to Managed Care

- Medicaid members do not have the resources to make home environmental modifications as in ICAS
- Primary asthma care does not include comprehensive environmental assessment, teaching, or intervention
- Asthma specialty services underutilized
- Anti-IgE therapy (Xolair) offers specialists an intervention for uncontrolled atopic asthma patients

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About Neighborhood Health Plan

- 150,000 members: Medicaid, commercial and CCHIP; 10% asthma prevalence
- Multi-faceted, mature asthma program
- HEDIS Asthma rates 88-89%; >80% increase in controller-to-reliever ratio, >15% reduction in hospitalizations, >40% decrease in bronchodilator overuse
- Unique 1-2% cohort identified with control issues q 2 wks; >60% of these with a controller in past 4 months

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*NHP **Enhanced** Asthma Home Visit Program (EAHVP)*

- Translate environmental components of ICAS as covered health plan benefit
- **Clinician** home visitor; social care management, tobacco treatment specialist enhancements
- Available to asthma population of all ages
- Must be under care of asthma specialist, compliant with controller medication, nonsmoking

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Implementation Challenges

- No vendor with whom to contract for full range of services or that covers our entire service area
- VNA skill set not inclusive of home environmental assessment and teaching
- Equipment delivery not coordinated with home visits
- Timely, appropriate referrals from clinicians versus recruiting research subjects

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If You Build It Will They Come?

- Targeted roll-out to allergists and pulmonologists with follow-up letters
- <25% of 'HEDIS' persistent asthmatic members see an asthma specialist in prior year
- NHP is small plan and only payer offering this benefit
- Initially dependent upon active referrals

Expanding the Scope, Maintaining the Focus

- Allow PCPs to refer, provided allergy evaluation has occurred and pharmacotherapy maximized
- Proactive recruitment to PCPs of members with claims evidence of poor control despite use of combination therapy
- Empower NHP asthma care managers to identify and refer members: case study

I have opened a case on a member EW, he is a 49yo male with h/o uncontrolled asthma, DM, neuropathy and obesity. He is also being followed by an NHP social care manager and diabetes care manager. He meets all requirements for EAHVP, ACT 14, being followed by Allergy/Asthma clinic at BMC, allergic to ash, grass, ragweed, mold, dogs and cats. Compliant with all asthma meds (flovent 220mcg and advair 500/50 BID), also using rescue inhaler 4-5x per week and has a CPAP machine on at night. EW lives in a basement apt that has had water damage in the past d/t flooding and most likely has mold. He also has approx. 10 stairs in which he has to climb up/down a couple of times daily which he states makes him very sob. He said that he tries to sit and rest for a few minutes during these episodes instead of using his albuterol. Member was previously involved in an asthma study at BWH and they have asked him to participate in another study (xolair/advair trial) in which he will be compensated. I called the asthma nurse at BMC and the current plan for member is to have a f/u with pulm/allergist in September to discuss xolair option. I spoke to member last week and he is interested in xolair but has not decided if he will participate in study. Also, member had PFT's done at BWH a few weeks ago but does not know results and is a non-smoker and has no pets. Do you think member is a good candidate for EAHVP?