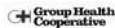


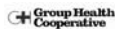
Respiratory Therapy Asthma Program

Tim Ballweg RRT, CPFT, AE-C
Group Health Cooperative of
South Central WI



Today's Discussion

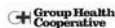
- Asthma Opportunities for RT
- Components of a clinic asthma program
- Program development
- Program details and strategies
- Program tools
- Outcome studies



Scope of the Problem

- Approximately **23.4 million** Americans have asthma
- **6.8 million** children under 18
- **3,884** deaths in 2005
- Asthma accounts for approximately **24.5 million** missed work days annually
- **13 million** school days are also missed each year

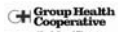
National Vital Statistics Reports, Volume 56, Number 10, April 24, 2008
National Center for Health Statistics. Asthma Prevalence, healthcare use and mortality.
United States, 2003-2006 accessed February 11, 2009



Program Opportunities

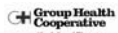
DISEASE MANAGEMENT

- Clinic
- Hospital
- Specialty care



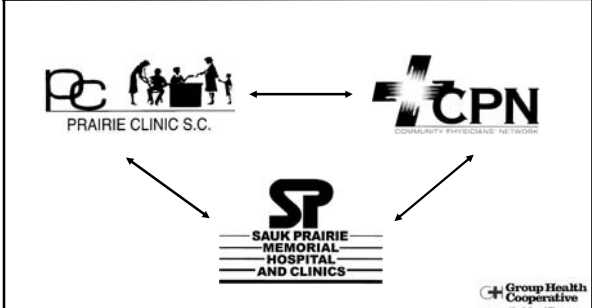
Initial Outreach Idea

- Telephone follow-up of patients seen in the urgent care or emergency room for asthma
- Help to clarify discharge instruction and assist with medication questions and plan
- Encouraged to follow-up with primary care
- May need to seek more emergent follow-up



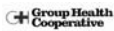


Asthma Program



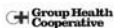
Program Foundation

- NAEPP (EPR-3)
- Specific disease management training & skills
- Effective communicator to empower patients to make lifestyle changes
- Individual instruction with education material tailored to meet their needs.
- Individualized asthma plan



AAE Certification

- Why is this important?
 - Reimbursement
 - Mastery of asthma education skills
 - Increased influence in local asthma concerns
 - Program accreditation
 - Professional growth



Asthma Program Outcomes

- ER visit reduction
- Decreased hospitalization
- Increased lung function
- Improved patient quality of life
- Less rescue medication need
- Improved use of controller medication
- Missed days from school or work



What should you measure?

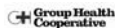
- Focus on one or two measures
- Decide if data can be obtained prior to beginning asthma program
- Translate your results into savings gained and project savings long term from asthma education program
- Analyze your results and present to administration or board
- Educate/Advocate!



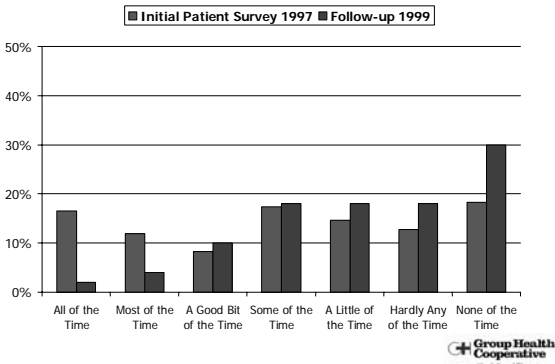
Asthma Quality of Life Questionnaire (AQOQ)

- 15 question asthma specific AQOL tool completed at the initial asthma encounter
- Asthma encounter equals phone or office encounter
- Up to two years after initial asthma encounter mail out survey completed

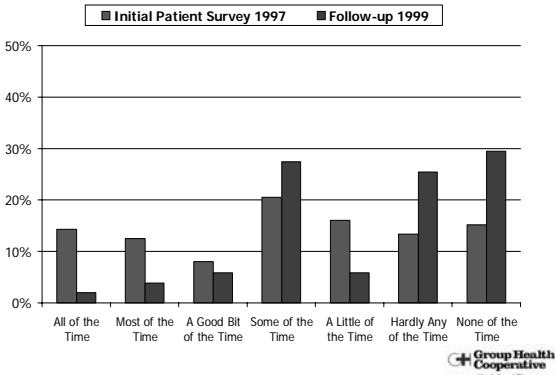
E. Juniper, G. Guyatt, P. Ferrie, L. Griffith



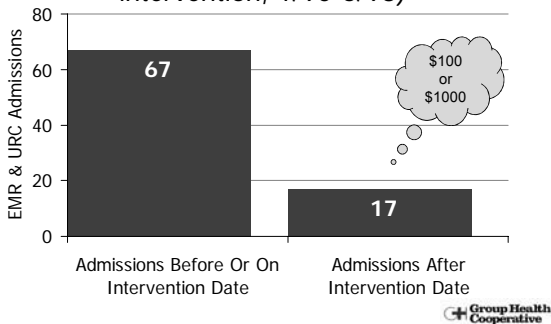
Feel FRUSTRATED as a result of your asthma?



Feel CONCERNED ABOUT HAVING ASTHMA?

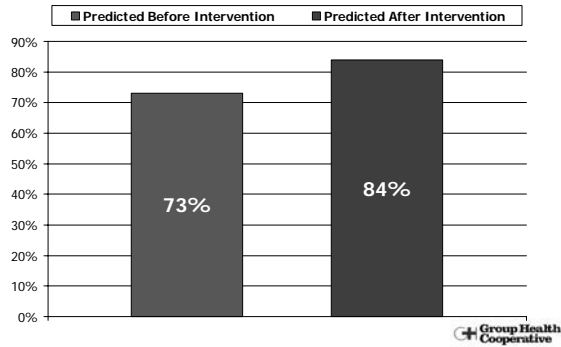


SPMH EMR & URC Admissions for Asthma
(44 patients, 119 weeks before and after intervention, 1/90-6/98)



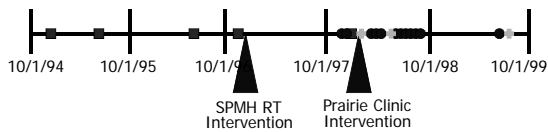
Improvement in FEV1, Before and After Intervention

Low FEV1 is associated with increased risk of severe asthma exacerbations
Fuhlbrigge et al. 2001



Asthma History: Patient A

- ER Admission
- Phone Call
- ◆ Office Visit

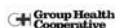


"Our lives have changed -- I have so much more energy now"
 -- Patient A

Goals of Asthma Control

- Reducing impairment
 - Prevent chronic and troublesome symptoms
 - Require infrequent use of SABA for symptoms
 - Maintain (near) "normal" pulmonary function
 - Maintain normal activity levels
 - Meet patients' and families' satisfaction with care
- Reducing risk
 - Prevent recurrent exacerbations of asthma (ED/inpatient)
 - Prevent progressive loss of lung function; in children reduced lung growth
 - Provide optimal pharmacotherapy with no side effects

Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma
 p 55, 56



Asthma Classifications

- Classify initially with;
 - Severe, Moderate, Mild Persistent
 - Intermittent
- Classify afterwards;
 - Well Controlled
 - Not Well Controlled
 - Very Poorly Controlled



Setting and Achieving Goals

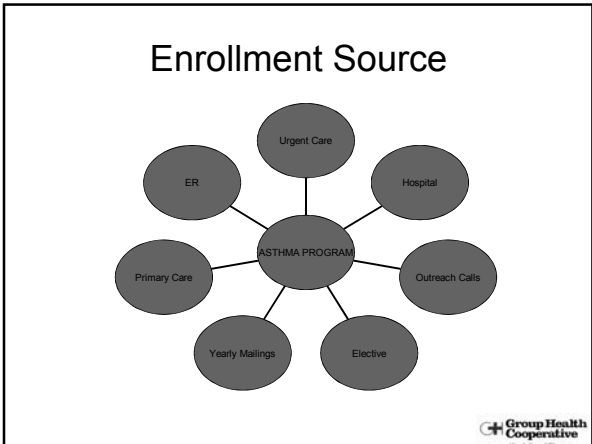
- Address medication safety concerns
- Define good asthma control
- Simplify dosing regimens
- Tailor communications to health literacy, health beliefs, and culture
- Explain the benefits of medication in way that patients find both meaningful and personal



Messages

- Deliver important messages up front and re-state at end of appointment
- ICS are not the same as anabolic steroids
- Shared Goals
- Tailor and personalize the plans
- I will intend to follow up





Office Visit

SETTING
Individual or Family

TIME
Initial visit 60 minutes with 30 minute follow-up

STAFFING
Respiratory Therapist w/translators if needed

EDUCATION
Address asthma anatomy & physiology, medical self-management, and control of triggers

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Office Visit – continued

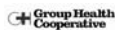
SERVICES
Smoking cessation and referrals to other specialties such as allergy, pulmonary, ENT

SUPPLIES
Spirometer, patient education material, peak flow meters, spacers, environmental supplies as needed

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Details

- Asthma Control Test (ACT)
- Medication Protocol
 - Ensure prescription continuity
 - Adjust meds within a pharmacy class
 - Initiate new prescription with diagnosis of asthma
 - Meds not listed
 - Systemic corticosteroids
 - Methylxanthines
 - Epinephrine - injectible
 - Co-signature of provider
- Clear typed instructions + education material
- Follow-up visit identified + contact information to reach you



ASTHMA CONTROL TEST SCORES IMPROVE AFTER ASTHMA EDUCATION INTERVENTION

Tim Bultweg, RRT, CPFT, AACE | Group Health Cooperative of South Central Wisconsin | Madison, Wisconsin

DOES PATIENT EDUCATION ACTUALLY IMPROVE ASTHMA CONTROL?

INTRODUCTION

The National Asthma Education and Prevention Program (NAEPP) 2007 asthma treatment guidelines advise the health care provider to improve patient asthma control. To improve the delivery of this education, a National Asthma Control Test (ACT) score could improve the quality of asthma education and compliance.

What is ACT?

ACT is a simple, validated, questionnaire that has been used in numerous peer-reviewed studies to assess asthma control. ACT is a validated 5-point scale for patients 12 years of age and older. The patient rate response questionnaire, ACT scores 17 and below indicate uncontrolled asthma, whereas scores range 18-24.

The education used to improve ACT scores will increase the quality of asthma education and compliance.

METHODOLOGY

- Population was identified through a retrospective chart review of patients who had completed their last ACT.
- ACT score was calculated to compare their initial score and end of the year of their follow-up and during a second period.
- All patients received a structured educational intervention at the end of the first period.
- A paired test was used to test for differences pre and post ACT score.

STRUCTURED ASTHMA EDUCATION PROGRAM

The Asthma Education Program demonstrated that the program included the following components:

- Asthma Control Test (ACT)
- Medication Review
- Spirometry
- Trigger Assessment
- Inhalation Technique
- Home Asthma Plan
- Follow-up Assessment (initial)

FIGURES & TABLES

DEMOGRAPHICS

Demographic	N	%
Male	21	40%
Female	31	58%
Children	21	38%
Adolescents	9	16%
Adults	7	13%
Older	1	2%

RESULTS & CONCLUSIONS

INCREASE IN ACT SCORE SHOWN FOR EACH QUARTER

ACT SCORE IMPROVEMENT

ASTHMA EDUCATION IMPROVED ACT SCORES AFTER ONE PATIENT ENCOUNTER, DESPITE PREEXISTING USE OF ASTHMA EDUCATION AND MEDICATION.

Reimbursement

CPT Billing Codes

- 94010 Spirometry “pre”
- 94060 Spirometry “post”
- 94010 Spirometry “exercise”
- Procedure Codes:
 - 99211 for face to face education
 - 94664 for instruction on mdi’s, nebulizer, etc.



Reimbursement – continued

- NEW CODES in 2006
- 98960: Education & training for patient self-management by a qualified, non-physician health care professional using a standardized curriculum, face to face with patient or family teaching, each 30 min
- 98961: teaching with two to four patients
- 98962: teaching with five to eight patients



Guidelines For Referral To Asthma Specialist

- Patient has had a life-threatening asthma exacerbation or not meeting goals after 3-6 months of treatment.
- Atypical symptoms, other diagnosis VCD, GERD, COPD, sinusitis, severe rhinitis.
- Additional diagnostic testing is indicated
- Excessive oral steroid use, immunotherapy, step up care required...

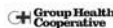
Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma p 68



Respiratory Medications and Risk of Asthma Death 1994-1998

- A study done in UK using 96,258 people with a diagnosis of asthma looked at 43 deaths as a result of their asthma.
- The largest relative risk estimates were for at least 13 prescriptions of SABA, then 7 oral steroids in previous year.
- For those who used excessive SABA they found that 7+ prescriptions for inhaled steroids were associated with a 60% reduction in risk of asthma death.

Thorax, Aug 2002 Vol 57 p683-686



Adherence Barriers

- Providers not prescribing controller medications
 - Misunderstanding asthma severity level
 - Inadequate patient direction
- Non adherence by patient
 - Hesitance to use daily therapy, “don’t want my child on steroids”
 - Patient does not feel response
 - Steroid fears, addictive, inconvenience, cost
 - Lack of understanding or complexity of plan
 - Patient belief system, cultural



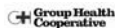
Additional Barriers

- Lack of school nurse or health professionals
- Access to school medications or plan
- Community resource availability
- Resources available for home environmental changes
- Chaotic living situation



Strategies to Improve Adherence

- Add DM Programs, reduce co-pays, add \$ incentives, initiate provider performance card
- Improve provider-patient communication
- Address patient concerns
- Provide information about
 - Why and how medications are used
 - Why medications must be taken every day
 - Possible side effects
- Call the patient to find out why not complying
- Refer out for smoking cessation, sleep quality or depression



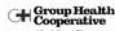
Program Adherence Strategies

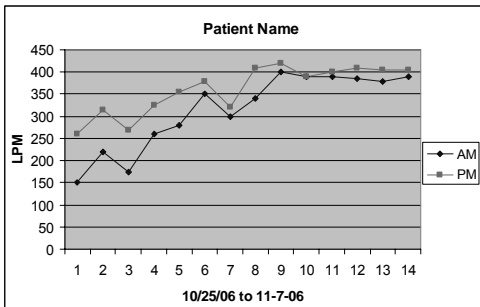
- Peak Flow Monitoring
- Symptom Diary
- Asthma registry
- Stratification
- Interactive tools, hands on models
- Educational teaching devices
- Written direction
- Asthma plan



Peak Flow Monitoring

- Good trending tool for use at home.
- Recommended for moderate to severe persistent or having a history of severe exacerbations.
- May be helpful for patient who does not recognize asthma symptoms well





Green Zone: ≥ 320
 Yellow Zone: 200-319
 Red Zone: < 200



Symptom Diary

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REGISTRY REPORT	Daily	Weekly	Quarterly	Semi-Annual	Annual
Urgent Care		x			
Emergency Room		x			
Hospitalizations	x				
HEDIS				x	
Risk Registry				x	
Quick Acting				x	
Oral Steroids				x	
Provider Care Index				x	
Member Mail Out					x

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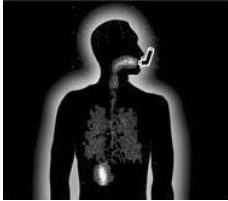
Stratification by Risk

- **3 points** for hospitalization within the last 12 months
- **2 points** for an emergency room visit in the last 12 months
- **2 points** for an acute care visit in the last 12 months
- **2 points** for having ≥ 3 dispensations of short acting beta₂ antagonists within the last 12 months
- **1 point** for having ≥ 3 dispensations of controller medications within the previous calendar year and not being on them currently (currently is defined as a refill within the 60 days prior to running of report)
- **1 point** for not having an ICD9 coded diagnosis of asthma within the calendar year
- **1 point** for having low-income insurance

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Interactive Tools

Computer graphics



High quality pictures/posters



Hands on models

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Medication not working?

- If patient says therapy not working
 - question diagnosis
 - Is dose correct
 - Is delivery correct? Demonstrate technique
 - Adherence

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Patient Instructions

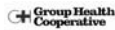


- “Here’s your new medication.”
- “All you have to do is breathe it into your lungs.”

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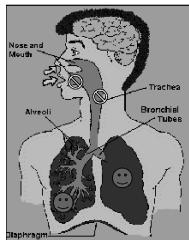
Maybe there's a little more to it!

- Each device has unique features
- Each imposes resistance to airflow
- "Breathe it into your lungs" ... means?
 - Exhale first?
 - Breathe in how fast?
 - Should I hold my breath? How long?
 - Rinse my mouth?
 - You do need to shake the inhaler again?
 - I was never told to hold it in that position!



Inspiratory Flow Influences Drug Deposition

		Particle size
		Specific resistance



Twisthaler 30-60 LPM Inhaler 25-60 LPM Turbuhaler 60-90 LPM
 Diskus 30-90 LPM *Slide adapted from Ben Francisco, PhD, PNP, AE-C*



Teaching Devices In-Check Dial®



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