

# *Model NHLBI funded NACI programs addressing disparities*



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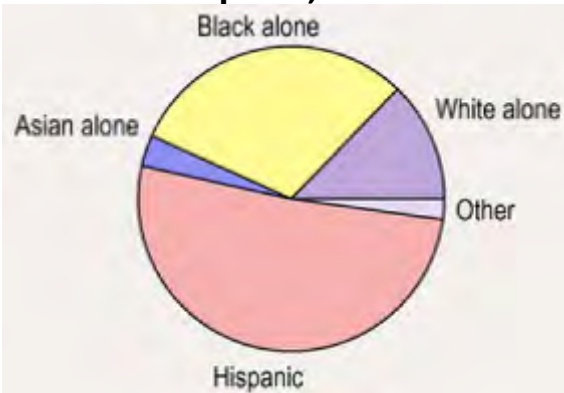
South Bronx Asthma Partnership



Helping the South Bronx breathe easy.

# The South Bronx Community

**57% Hispanic, 37% Black**



- Homelessness
- Poor housing
- Poor access to health care
- Low educational levels
- Discrimination
- Immigration-related issues
- Poor nutrition
- Low literacy
- Poor health outcomes

- 32% born outside of the U.S.
- 56% non-English at home
- 68% high school diploma



**Mamta Reddy, MD**  
Director



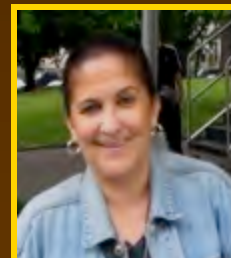
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**In partnership with**

**NATIONAL ASTHMA  
CONTROL  
INITIATIVE**

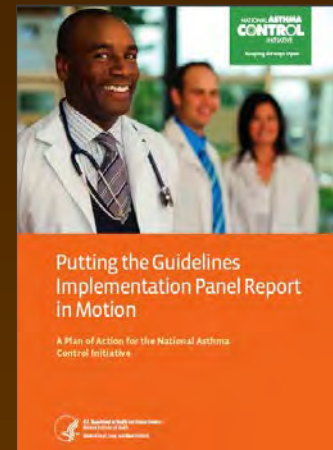
**Keeping Airways Open**



NAEPP releases  
Expert Panel  
Report-3 guidelines



NAEPP Guidelines  
Implementation Panel  
priorities six messages




NACI Plan of Action  
provides framework  
for implementation



NACI Action Guide  
engages diverse  
stakeholders





Keeping Airways Open

## National Asthma Control Initiative

The National Heart, Lung, and Blood Institute Launches New Effort to Put What Works into Action

**The Challenge**

Today, 23 million people in the United States have asthma, including seven million children under 18 years of age. More than half of these individuals had at least one asthma attack in the previous year.

Asthma accounts for more than 10 million missed work days and almost 13 million missed school days each year. Moreover, ethnic and racial disparities in asthma morbidity and mortality persist, as does the disproportionate burden of asthma on individuals who live in lower-income, inner-city environments.

Implementing evidence-based clinical practice guidelines for asthma has demonstrated effectiveness. Yet, getting most clinicians to implement guidelines-based care for their patients with asthma and getting patients to adhere to their treatment plan remain a challenge.

**Moving from Evidence to Action**

The National Asthma Control Initiative (NACI) is a new initiative of the National Asthma Education and Prevention Program (NAEPP), coordinated by the National Heart, Lung, and Blood Institute (NHLBI). The NACI aims to use the recommendations of the NAEPP's Expert Panel Report 3 (EPR-3)—Guidelines for the Diagnosis and Management of Asthma and its companion Guidelines Implementation Panel (GIP) Report to mobilize multisector stakeholders and bring about meaningful change in asthma clinical care practices and quality of life for people who have asthma.


The NHLBI is committed to supporting five overarching action items that are based on the GIP Report.

**NACI Action Items**

- Develop a communication infrastructure for information sharing and accessing resources
- Convene and energize national, regional, state, and local leaders
- Mobilize champion networks to implement and integrate clinical and community-based interventions with emphasis on sustainability
- Demonstrate evidence-based and best practice approaches for specific audiences in various settings with emphasis on closing the asthma disparity gap
- Monitor and assess NACI progress toward its goals by measuring outcomes and sharing lessons learned

**GOAL:** Improved asthma care, asthma control, and quality of life for all people with asthma

**Get Involved:**  
To learn more about the NACI, sign up for NACI updates, or become a NACI champion, go to the NACI Web site at <http://naci.nhlbi.nih.gov>



# GIP Priority Messages

1. Use inhaled corticosteroids
2. Use asthma action plans
3. Assess asthma severity
4. Assess and monitor asthma control
5. Schedule follow-up visits
6. Control environmental exposures

# NACI Mission

- Institutionalize GIP Priority Messages/EPR-3 Recommendations
- Build capacity through health professionals engaged in asthma improvement work
- Evaluate impact
- Use technology to bring state-of-the-art practice into medically underserved communities
- Integrate practice and decision support tools into routine practice

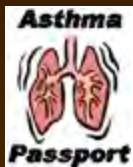


# Asthma



# Passport





# Demonstration Projects

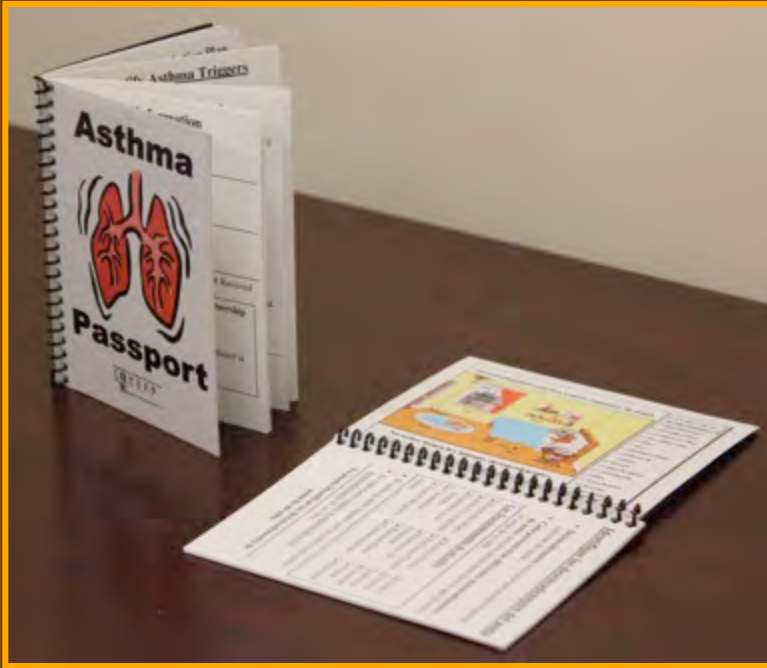


# The Asthma Passport

A palm-sized, wire-bound guide that includes 10 key educational messages:



# The Asthma Passport



1. Set asthma self-management goals
2. Learn asthma basics
3. Identify my asthma symptoms
4. Understand my asthma medicines
5. Follow my Asthma Action Plan
6. Use my inhaler properly
7. Keep a symptom diary
8. Identify my asthma triggers
9. Schedule a follow-up every 2-6 weeks
10. Ask my doctor specific questions



# Clinical Asthma Champions Leadership Training Program







# Clinical Champion Projects





*Model NHLBI funded NACI programs addressing disparities*

## Redesigning the Practice Delivery System





# Clinical Asthma Champions Leadership Training Program



Clinical Asthma Champions Leadership Training

## CALL FOR NOMINATIONS

*South Bronx Asthma Partnership*

**S O B R A P**



Helping the South Bronx breathe *easy*.

In partnership with

**NATIONAL ASTHMA  
CONTROL  
INITIATIVE**

**Keeping Airways Open**

A free professional development opportunity for young physician leaders  
Become a champion for quality asthma care

Application deadline: 5 p.m. Eastern Time on Tuesday, August 2, 2011



# Clinical Asthma Champions Leadership Training



## CONGRATULATIONS !



### Workshop Dates and Participants

#### CHAMPIONS GROUP #1: FRIDAY, SEPTEMBER 9TH AND SATURDAY, SEPTEMBER 10TH

Champion	Institution	City
Traci A. Downs, MD	Stony Brook Children's Hospital	East Setauket, NY
Anil Gogineni, MBBS	Bronx-Lebanon Hospital Center	Bronx, NY
Jason Hughes, DO	Koolauloa Community Health and Wellness Center	Kahuku, HI
Edward Nwanegbo, MD	Michigan State University	East Lansing, MI
Megan Pierce, MD	Children's Hospital at Erlanger	Chattanooga, TN
Anele Slesinger, MD	Bronx-Lebanon Hospital Center	Bronx, NY

#### CHAMPIONS GROUP #2: FRIDAY, SEPTEMBER 16TH AND SATURDAY, SEPTEMBER 17TH

Champion	Institution	City
Sheba Alexander, MD	Morris Heights Health Center	Bronx, NY
Elliott S. Attisha, DO	Henry Ford Health System, School-Based & Community Health Program	Detroit, MI
Kenneth Etokhana, MBBS	Bronx-Lebanon Hospital Center	Bronx, NY
Tabasum Imran, MBBS	UAMS Ahec Fort Smith	Fort Smith, AR
Aarti Kapoor, MBBS	Bronx-Lebanon Hospital Center	Bronx, NY
Sheila Krishan, MD	Morris Heights Health Center	Bronx, NY
Nader J. Nakhleh, DO	Jersey Shore University Medical Center	Neptune, NJ
Jamie M. Pinto, MD	K. Hovnanian Children's Hospital	Neptune, NJ

#### CHAMPIONS GROUP #3: FRIDAY, OCTOBER 14TH AND SATURDAY, OCTOBER 15TH

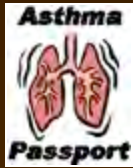
Champion	Institution	City
Shirish Balachandra, MD	Urban Health Plan	Bronx, NY
Kelly Clark, MD	Munson Medical Center	Traverse City, MI
Matthew Grisham, MD	Greenville Hospital System University Medical Group	Greenville, SC
Leon Matsuo, MD	West Hawaii Community Health Center	Kailua-Kona, HI
Sharyn Miskovitz, MD	Montefiore Medical Center	Bronx, NY
Pamela Ponce, MD	Orlando Health	Orlando, FL

#### CHAMPIONS GROUP #4: FRIDAY, OCTOBER 21ST AND SATURDAY, OCTOBER 22ND

Champion	Institution	City
Janice Lichtenberger, MD	The Children's Hospital at Monmouth Medical Center	Long Branch, NJ
Kristin Miller, MD	Sinai Hospital of Baltimore	Baltimore, MD
Vijay Naraparaju, MBBS	Hurley Medical Center	Flint, MI
Jenese Reynolds, MD	McLaren Family Medicine Residency Program	Flint, MI
Lakshmi Uppaluri, MBBS	UMDNJ/ Robert Wood Johnson Medical School	New Brunswick, NJ
Christine Verna, MD	Center for Advanced Pediatrics	Norwalk, CT

#### CHAMPIONS GROUP #5: WEDNESDAY, NOVEMBER 16TH AND THURSDAY, NOVEMBER 17TH

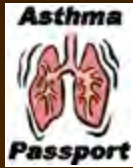
Champion	Institution	City
Annette Cameron, MD	Hospital of Saint Raphael	New Haven, CT
Rhonique Harris, MD	Children's National Medical Center	Washington, D.C.
Ann Sahakian, MD	Hospital of Saint Raphael	New Haven, CT
Justin Sanders, MD	Montefiore Medical Center/Family Health Center	Bronx, NY
Teresa Shinder, DO	Waianae Coast Comprehensive Health Center	Waianae, HI
Karen Thompson, MD	Spectrum Health Medical Group	Grand Rapids, MI



# Redesigning the Practice Delivery System

- Clinical Strategies
- Communication Strategies
- Systems-Improvement Strategies





# Redesigning the Practice Delivery System

- *Clinical Strategies*
- Communication Strategies
- Systems-Improvement Strategies



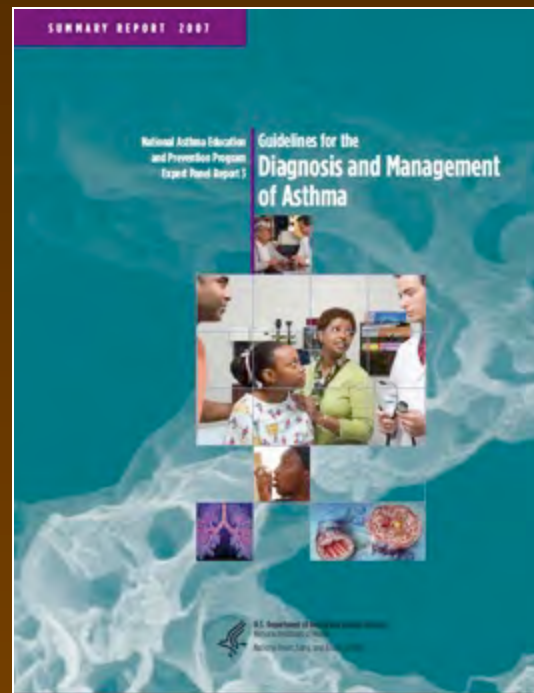


# Workshop Overview

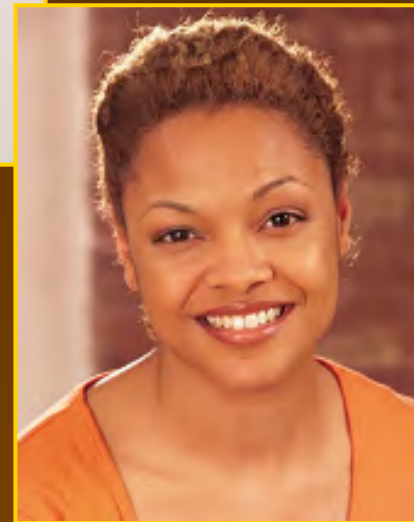
- Part 1: Friday Morning
  - Stepwise approach for long-term asthma management



# The Stepwise Approach for Long-Term Asthma Management



Problem-Based Learning Activity



# EPR-3 Tables

## Age 0-4

## Age 5-11

## Age 12+

## SEVERITY

Components of Severity		Classification of Asthma Severity (0-4 years of age)			
		Intermittent	Mild Persistent	Moderate Persistent	Severe Persistent
Impairment	Symptoms	≤ 2 days/week	≥ 2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	0	1-2x/month	3-6x/month	>1x/week
	Short-acting beta <sub>2</sub> -agonist use for symptom control (not prevention of FEV <sub>1</sub> )	≤ 2 days/week	≥ 2 days/week but not daily	Daily	Several times per day
	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year	≥ 2 exacerbations in 6 months requiring oral systemic corticosteroids or ≥ 2 exacerbations in 1 year requiring ≥ 1 day AND risk factors for persistent asthma		
		← Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time. → Exacerbations of any severity may occur at intervals or in clusters. AND/OR ≥ 2 risk factors			
Recommended Step for Initiating Therapy		Step 1	Step 2	Step 3	Step 4
(See figure 4-1a for treatment steps.)		In 2-4 weeks, depending on response, evaluate level of asthma control that is achieved. If no clear benefit is observed in 4-6 weeks, consider escalating therapy or alternative diagnosis.			

[illegible][illegible]

## CONTROL

Components of Control		Classification of Asthma Control (0-4 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/week	≥2 days/week	Throughout the day
	Nighttime awakenings	≤1x/month	≥1x/month	≥1x/week
	Interference with normal activity	None	Sometimes limited	Extensively limited
	Short-acting $\beta_2$ -agonist use No symptoms control (at least 1 year of 200)	≤2 days/week	≥2 days/week	Several times per day
Risk	Exacerbations requiring oral or systemic corticosteroids	0-1/year	2-3/year	>3/year
	Treatment-related adverse effects	<p>Prevalence of adverse effects can vary in intensity from none to very troublesome and more common. The level of intensity does not correlate to specific levels of control but should be considered in the overall assessment of risk.</p> <ul style="list-style-type: none"> <li>• Masked current treatment</li> <li>• Regular follow-up, monitoring</li> <li>• If no benefit in 4-6 weeks, consider alternative asthma therapy</li> <li>• If no benefit in 4-6 weeks, consider alternative asthma treatment options.</li> <li>• Consider short-acting <math>\beta_2</math>-agonist</li> <li>• Step up (as steps) and stepdown in 2 weeks.</li> <li>• If no benefit in 4-6 weeks, consider alternative treatment.</li> <li>• For side effects, consider alternative treatment options.</li> </ul>		
Recommended Action for Treatment  (See figure 4-1a for treatment steps.)				

[illegible]

Components of Control		Classification of Asthma Control (≥12 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/week	≥3 days/week	Throughout the day
	Nighttime awakenings	≤2/mo	≥3/mo	≥1/week
	Interference with normal activity	None	Some limited	Considerable
	Short-acting beta <sub>2</sub> -agonist use for symptom relief (Asthma prevention of ER, ED, or clinic Rx)	≤2 days/mo	≥3 days/mo	Several times per day
	ER, ED, or clinic Rx	None	≤10% (predominant personal best)	≥50% (predominant personal best)
Risk	Validated questionnaire	0-8	9-20	21-24
	A1-A2 A3 A7	0-12 13-20 21-24	0-12 13-20 21-24	0-12 13-20 21-24
	Exacerbations requiring oral systemic corticosteroids	≤2/year	≥3/year	≥3/year (see note)
	Progressive loss of lung function	Consider severity and interval since last exacerbation		
	Treatment-related adverse effects	Evaluate frequency long-term follow-up		
Recommended Action for Treatment	Indication: step therapy for severity from none to very troublesome exacerbations. The level of severity does not correspond to specific levels of control but should be considered in the overall assessment of a patient.			
	Consider current status and individual factors in treatment control.			
	Consider individual factors in treatment options.			

(see figures 8-5 for treatment steps)

FIGURE 4-1a. STEPWISE APPROACH FOR MANAGING ASTHMA IN CHILDREN 0-4 YEARS OF AGE

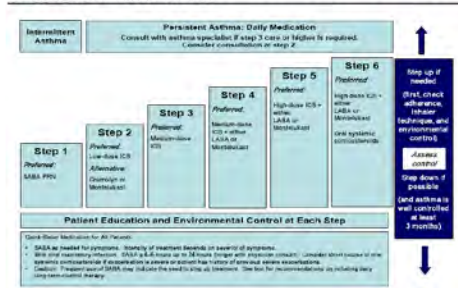


FIGURE 4-1b. STEPWISE APPROACH FOR MANAGING ASTHMA IN CHILDREN 5-11 YEARS OF AGE

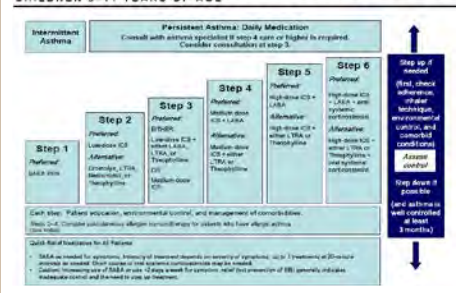
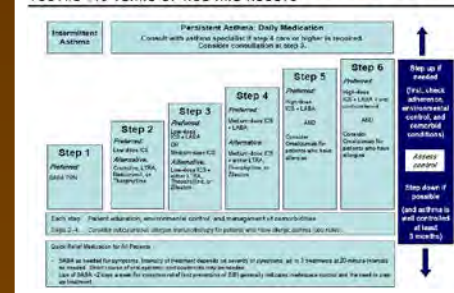
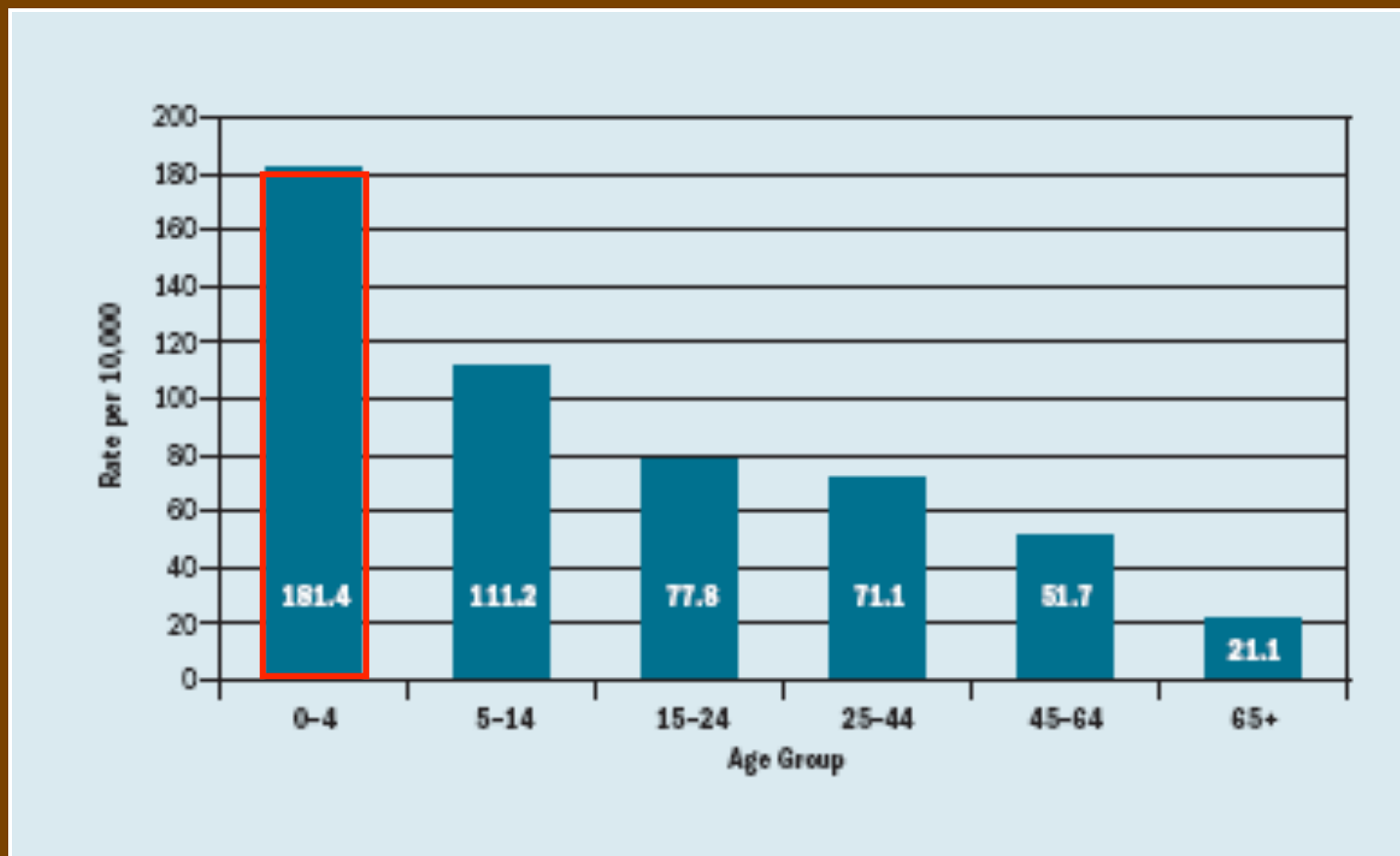


FIGURE 4-5. STEPWISE APPROACH FOR MANAGING ASTHMA IN YOUTHS &gt;12 YEARS OF AGE AND ADULTS



## TREATMENT

### Asthma Emergency Department Visit Rate per 10,000 Residents by Age Group, New York State, 2005



New York State Asthma Surveillance Summary Report, p 65; October 2007



# Clinical Guideline for the Diagnosis, Evaluation and Management of Adults and Children with Asthma

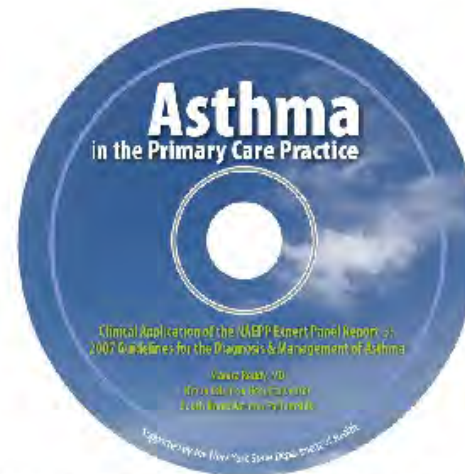
## Color Key

- Four Components of Asthma Care
- Classifying Asthma Severity, Assessing Asthma Control and the Stepwise Approach for Managing Asthma in Children Aged 0–4 years
- Classifying Asthma Severity, Assessing Asthma Control and the Stepwise Approach for Managing Asthma in Children Aged 5–11 years
- Classifying Asthma Severity, Assessing Asthma Control and the Stepwise Approach for Managing Asthma in Children  $\geq 12$  Years of Age & Adults
- Long-Term Control Medications:  
Estimated Comparative Daily Dosages
- Long-Term Control Medications:  
Usual Dosages
- Quick Relief Medications

*Guidelines are intended to be flexible. They serve as recommendations, not rigid criteria. Guidelines should be followed in most cases, but depending on the patient, and the circumstances, guidelines may need to be tailored to fit individual needs.*

# New York State Asthma Provider Toolkit

## NYS Consensus Asthma Guideline Expert Panel



**SOBRAP's Case-based DVD-Tutorial**  
**Hosted on IPRO's "Joint Effort NY" Website**  
<http://jeny.ipro.org/files/Asthma>



AAFP/IPRO-sponsored CME

Date: \_\_\_\_\_

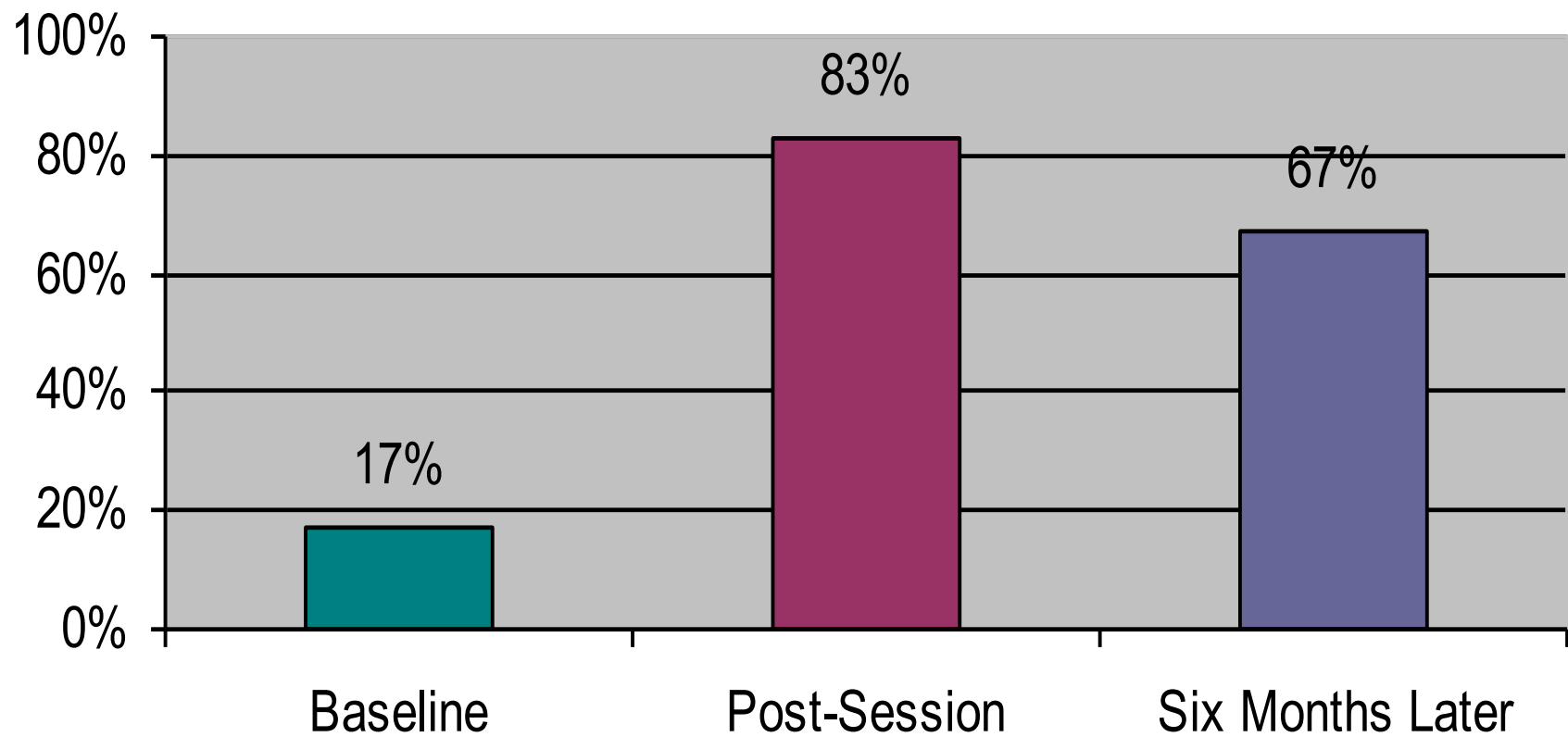
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### Managing Asthma in the Primary Care Practice

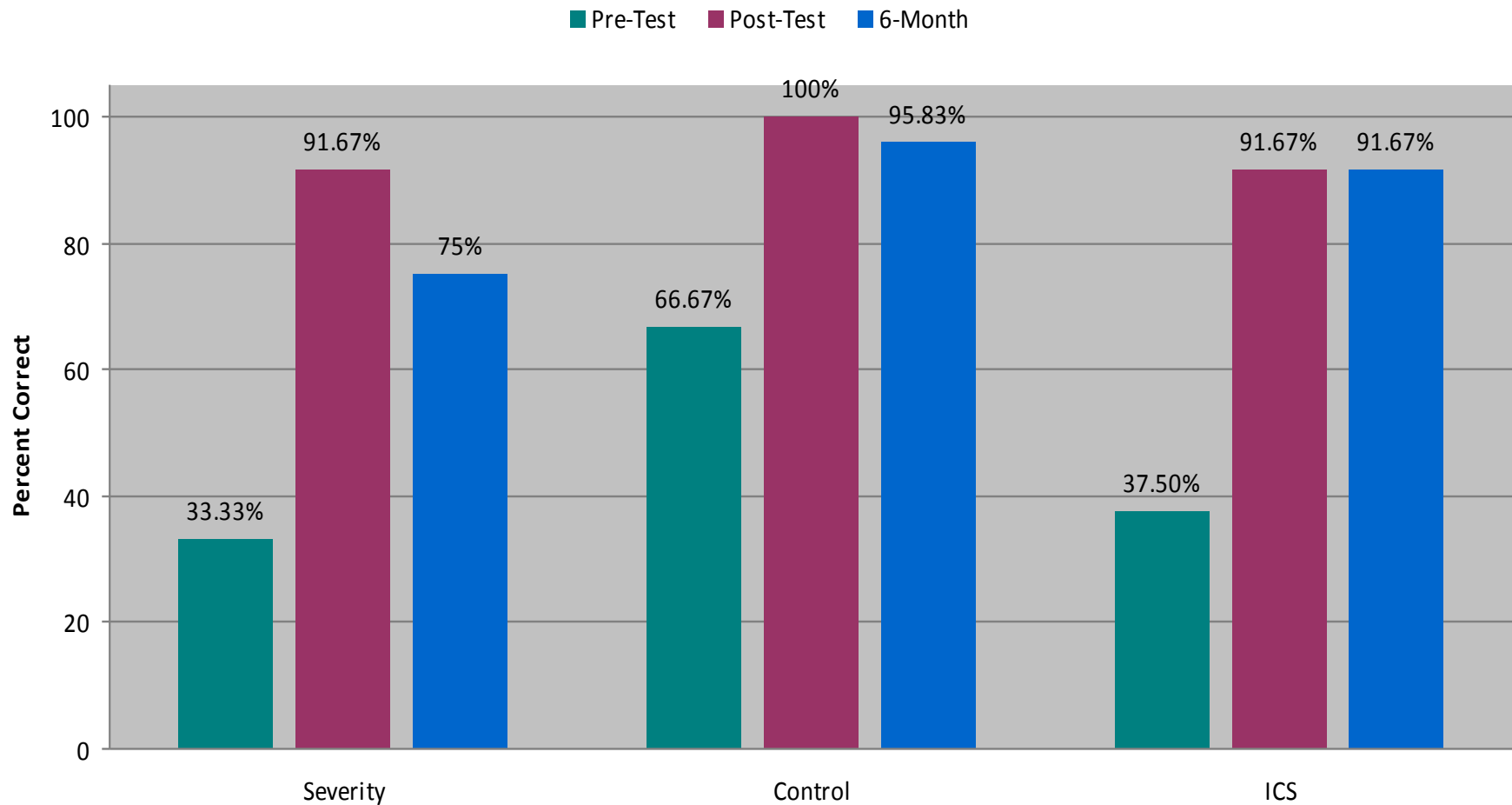
#### Pre-Test

1. In the past six months, a 10-month old male has required systemic steroids twice for isolated episodes of wheezing. In between these episodes his mother reports nighttime cough only about once per week. The **BEST** treatment choice for this patient would be:
  - A. A leukotriene receptor antagonist (based on "Step 2" care)
  - B. A low-dose inhaled corticosteroid (based on "Step 2" care)
  - C. A medium-dose inhaled corticosteroid (based on "Step 3" care)
  - D. At this time, I would not treat with asthma medications
2. A 6-year old female with mild persistent asthma was started on "Step 2 Care" about six weeks ago. Today, her mother now reports that her SABA use frequency has improved to less than twice per week and her nocturnal symptoms have improved to about three times per week. The next BEST step would be to:
  - A. Maintain her at "Step 2" care
  - B. Step down to "Step 1" care
  - C. Step up to "Step 3" or "Step 4" care
  - D. Recommend more frequent SABA use before bedtime
3. A 15-year-old girl who has been taking a medium-dose inhaled corticosteroid and a leukotriene modifier for about one year presents to your clinic today for follow-up. She denies any report of daytime or nighttime asthma symptoms for the past four months. This patient's asthma severity classification today is:
  - A. Intermittent Asthma (Step 1)
  - B. Mild Persistent Asthma (Step 2)
  - C. Moderate Persistent Asthma (Step 3 or 4)
  - D. Severe Persistent Asthma (Step 5 or 6)

### Champions Answering all 3 Vignettes Correctly



## Asthma Champions - Managing Asthma in the Primary Care Practice - Test Results



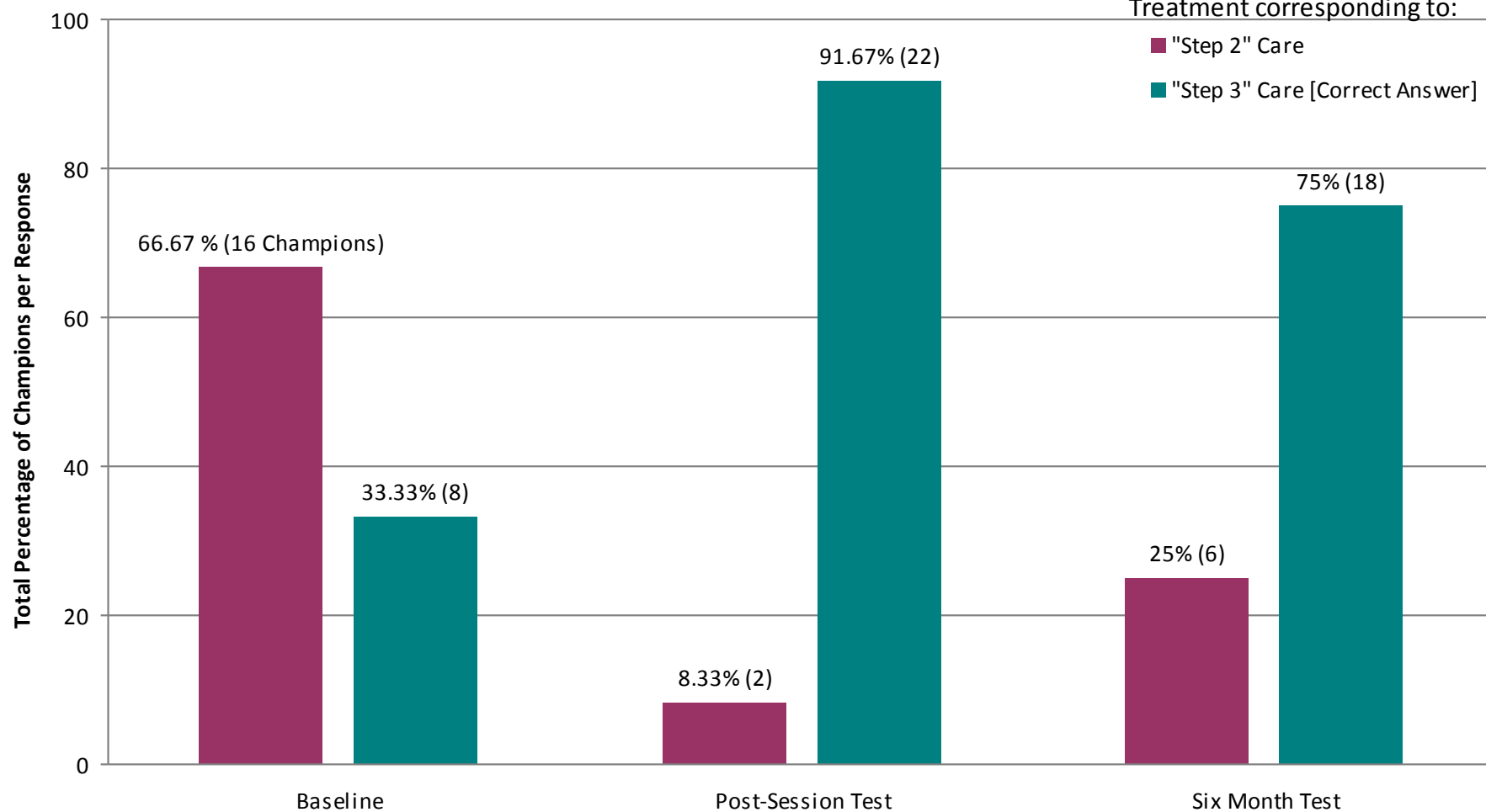
## Asthma Champions - Classifying Asthma Severity

Treatment based on NAEPP Criteria

Treatment corresponding to:

■ "Step 2" Care

■ "Step 3" Care [Correct Answer]





Abstract  
 Asthma severity classification is a critical component of asthma management. However, many physicians, particularly in underserved populations, may not have the resources or training to accurately classify asthma severity. This study aimed to evaluate the impact of a training program on the accuracy of asthma severity classification among primary care physicians in the Bronx, New York. The program, called 'Asthma Champions', involved a series of interactive workshops and case-based discussions. The study found that the program significantly improved the accuracy of asthma severity classification among participants, particularly in the use of stepwise therapy. These findings suggest that interactive, case-based education can be an effective way to improve asthma management in underserved populations.

# Asthma Champions: Empowering future physician leaders to improve their accuracy in classifying asthma severity

N Kolluru, T Jimenez, M Reddy, MD; I Krinsky; L Brown; D Strom, LCSW; J Jacobs, LMSW; R Kairam, MD; Y Persaud, MD, MPH; R Neugebauer, PhD.

Bronx-Lebanon Hospital Center, Department of Pediatrics, Bronx, New York; affiliated with the Albert Einstein College of Medicine



Presented at the 2011 Annual Scientific Meeting of the American College of Allergy, Asthma & Immunology  
 Poster # P14

## BACKGROUND

- Studies show that using a system for classifying asthma severity increases the likelihood that physicians will consider the long-term management of asthma, and not just acute treatment.<sup>1,2</sup>
- Funded by the National Asthma Control Initiative (NACI-HLEI), this project implemented interactive, allergist-delivered workshops to cultivate "Asthma Champions" across the United States who will improve the clinical application of key NAEPP concepts, including the classification of asthma severity.

## METHODS

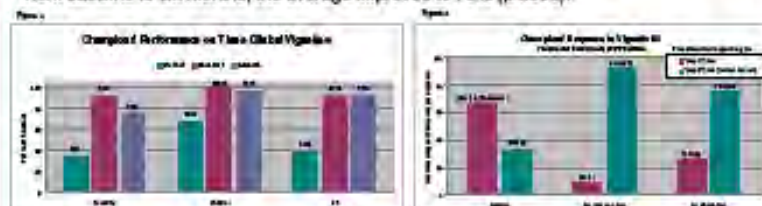
- National recruitment targeted 32 early career physicians (27 practice teams) caring for children with asthma residing in medically underserved populations.
- Champions traveled to the Bronx in New York to attend one of five 1-1/2 day workshops in the fall of 2011.
- A problem-based learning session outlined key NAEPP practices, including vignettes about: 1) severity classification; 2) control assessment; and 3) prescribing stepwise therapy.
- A knowledge-based assessment with three clinical vignettes (Figure 1) was completed by 24 of the 27 practice teams at baseline, immediately following the session and six months later.
- Performance after the session and six months later was compared with baseline.
- This study was approved by Bronx-Lebanon Hospital Center's Institutional Review Board.

## RESULTS

- All Champions were recruited from geographic areas with high childhood asthma prevalence: 56% reported practicing in urban settings and 70% supervise residents-in-training. (Figure 2)
- At baseline, 17% of Champions answered all three vignettes correctly; 83% (p<.000) and 67% (p<.001) answered all three vignettes correctly on the post-session test and six months later, respectively. (Figure 3)



- Regarding the vignette that assessed Champions' ability to accurately classify asthma severity (Figure 4), a 33% average at baseline improved to 92% (p<.000) on the post-session test; from baseline to six months, the average improved to 75% (p<.008).



- Of particular note, those Champions who answered this vignette incorrectly all chose the treatment option corresponding to "Step 2 Care" when the correct answer was "Step 3 Care" (Figure 5), representing under-treatment resulting from misclassification of asthma severity.

## CONCLUSION

- These results show the importance of interactive, case-based discussion using clinical vignettes in empowering physicians to translate NAEPP recommendations into quality clinical practice.
- Therefore, interactive provider education opportunities are vital, particularly in underserved populations where under-classification and under-treatment must be overcome to improve asthma outcomes.

## DISCUSSION

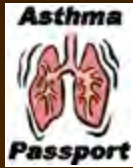
- The 32 Champions trained through this initiative collectively educated 1,286 providers over the past six months and anticipate the opportunity to educate 1,676 providers over the coming 12 months.
- Empowering future physician leaders using "train-the-trainer" programs can have a widespread effect on long-term asthma outcomes.



## REFERENCES

- Yawn, B., Brannaman, S., Allen-Ramsey, F., Cabana, M., & Markson, L. (2008). Assessment of asthma severity and asthma control in children. *Pediatrics*, 121, 122.
- Cabana, M. (2002). Documentation of asthma severity in pediatric outpatient clinics. *Clinical Pediatrics*, 41(2), 121-123.

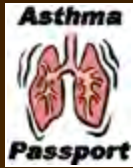
Interactive provider education opportunities are vital, particularly in underserved populations where under-classification and under-treatment must be overcome to improve asthma outcomes.



# Redesigning the Practice Delivery System

- Clinical Strategies
- Communication Strategies
- Systems-Improvement Strategies





# Redesigning the Practice Delivery System

- Clinical Strategies
- ***Communication Strategies***
- Systems-Improvement Strategies



***Health Education***  
***vs***  
***Health Literacy***



# How Does This Play Out in Our Daily Lives?

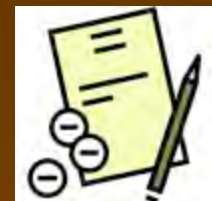
How do you read a thermometer and what does the number mean?



A doctor tells a mother that her baby has an ear infection. How does she know that the liquid prescription she's given goes in his mouth?



A patient is told to take his pill three times a day. Is it OK to take them at dinner at 6 PM, watching TV at 8 PM and at bedtime at 10 PM?



**An early assumed solution (1990s) was  
to “simplify the language”**

- Visually easy to read
- Linguistically appropriate
- Culturally relevant

Clear language is necessary...  
but not sufficient

# Understanding the Context of the Patient's Experience



# Asthma & Health Literacy

steroids CFC Ventolin daytime symptoms  
peak flow meter  
night time symptoms diskus Xopenex HFA  
triggers spacers only as needed  
asthma action plan quick-relief  
prevention albuterol moderate persistent  
asthma diary nebulizers metered-dose inhaler  
b.i.d. controller medicines two puffs twice daily  
intermittent severe persistent Pro-Air  
MDI Proventil spirometry inhaled corticosteroids

# Workshop Overview

- Part 1: Friday Morning

- Stepwise approach for long-term asthma management
- Communication strategies that promote asthma self-management





# Communication Strategies to Promote Asthma Self-Management

Interactive Role-Play Activity

# NAEPP Guidelines: every patient with asthma should have a written home management plan, regardless of severity

## Asthma Action Plan

Name	Date
Doctor	Medical Record #
Doctor's Office Phone #	Day Night/Weekend
Emergency Contact	
Doctor's Signature	



The colors of a traffic light will help you use your asthma medicines:

**Green means Go Zone!**  
Use preventive medicine.

**Yellow Means Caution Zone!**  
Add quick-relief medicine.

**Red means Danger Zone!**  
Get help from a doctor.

## Plan de Acción para el Asma

Nombre	Fecha
Médico	# Record médico
Médico Día #	Noche/Fin de semana
En caso de emergencia #	
Firma del Médico	



Los colores de un semáforo le ayudarán a usar sus medicamentos para el asma.

**Verde** representa la **Zona de Proceder!**  
Use medicinas preventivas.

**Amarillo** representa la **Zona de Precaución!**  
Añada medicinas para alivio rápido.

**Rojo** significa la **Zona de Peligro!**  
¡Inmediatamente ayude de un médico!

Su mejor marca es el mejor de capacidad pulmonar.

**GO**

You have all of these:

- Breathing is good
- No cough or wheeze
- Sleep through the night
- Can exercise freely

**Respiración libre**

**Use these daily preventive anti-inflammatory medicines:**

MEDICINE	HOW MUCH	HOW OFTEN/WHEN

For asthma with exercise, take:

MEDICINE	HOW MUCH	HOW OFTEN/WHEN

**PROCEDER**

Usted tiene todas estas:

- Respira bien
- No hay tos ni sibilos
- Duermes toda la noche
- Puedes hacer ejercicio como

**Respiración libre**

**Use estas medicinas anti-inflamatorias preventivas diariamente.**

MEDICINA	CUÁNTO	CUÁNTAS VECES/CUÁNDO

Para el asma cuando practica ejercicio, tome:

MEDICINA	CUÁNTO	CUÁNTAS VECES/CUÁNDO

**CAUTION**

You have any of these:

- First signs of a cold
- Exposure to known trigger
- Cough
- Tight chest
- Wheezing or sighs

**¡Puede ser Asma!**

**Continue with green zone medicine and add:**

MEDICINE	HOW MUCH	HOW OFTEN/WHEN

**CALL YOUR PRIMARY CARE PROVIDER.**

**PRECAUCIÓN**

Usted tiene cualquiera de estas:

- Los primeros signos de un resaca
- Se ha expuesto a algo que provoca el asma
- Tos
- Pecho apretado
- Sibilos leve
- Tos por la noche

**Méjora un poco de**

**Continúe con su medicina de zona verde, y AÑADA:**

MEDICINA	CUÁNTO	CUÁNTAS VECES/CUÁNDO

**LLAME A SU PROVEEDOR DE ATENCIÓN PRIMARIA.**

**DANGER**

Your asthma is getting worse fast:

- Medicine is not helping
- Breathing is hard and fast
- Noise comes when you sleep
- Ribs hurt
- Can't talk

**¡Puede ser Asma!**

**Take these medicines and call your doctor now.**

MEDICINE	HOW MUCH	HOW OFTEN/WHEN

**GET HELP FROM A DOCTOR NOW! Do not be afraid of causing a fuss. Your doctor will want to see you right away. It's important! If you cannot contact your doctor, go directly to the emergency room. DO NOT WAIT.**

Make an appointment with your primary care provider within two days of an ER visit or hospitalization.

**PELIGRO**

Se asma empeora rápidamente:

- Las medicinas no ayudan
- Ses respiración es fuerte y rápida
- La nariz se abre ampliamente
- Pecho va sacando
- No puede hablar

**Respiración difícil**




**Tome estas medicinas y llame a su médico inmediatamente.**

MEDICINA	CUÁNTO	CUÁNTAS VECES/CUÁNDO

**¡OBTENGA AYUDA DE UN MÉDICO AHORA MISMO! No tenga miedo de causar un alboroto. Su médico querrá verle inmediatamente. ¡Es importante! Si no se puede poner en contacto con su médico, vaya directamente a la sala de emergencia. ¡NO ESPERE!**




Haga una cita con su médico dentro de dos días a partir de una visita a la sala de emergencia o de una hospitalización.

## Understanding Asthma Medicine and Treatment

The Three Types of Asthma Medicine	 What does it do?	 When do I take it?	 Be Careful!	Medicines:
<b>1. Long-Term Control</b>	This medicine controls the swelling and mucus build-up in your airways to <b>prevent</b> asthma symptoms.	Take this medicine <b>everyday</b> , even when you feel well and have no asthma symptoms.  Take this medicine <b>everyday</b> until your doctor tells you to stop.	This medicine does <u>not</u> stop asthma symptoms once they start!  It does <u>not</u> relieve symptoms now. It does not make you feel better today.  It may take up to 4 weeks to feel the benefits.	<b>My long-term control medicine is:</b>  Flovent      Pulmicort QVAR      Asmanex Alvesco      Advair Symbicort      Dulera  <b>I will take this medicine:</b> _____
<b>2. Quick-Relief</b>	This medicine relaxes the muscles around the airways. This helps more air get to the lungs.	Take this medicine at the first sign of asthma symptoms. It will help you feel better <b>now</b> .  This medicine might be prescribed for use <u>before</u> exercising or gym class.	This medicine does <u>not</u> prevent symptoms. It only relieves current symptoms.  If you use this more than twice a week, you should talk to your doctor.	<b>My quick-relief medicine is:</b> (Albuterol) Ventolin      Pro-Air Proventil      Xopenex  <b>I will take this medicine:</b> _____
<b>3. Emergency</b>	This medicine brings back control of serious asthma symptoms. It might take several hours to start working.  It is taken as a pill or liquid.	Take this medicine <b>only</b> for serious symptoms.  <b>ONLY</b> take this medicine for as long as your doctor tells you to.	This medicine can cause serious side effects in other parts of the body.  If you need this medicine more than twice a year, you should talk to your doctor.	<b>Examples of Oral Steroids:</b>  Prednisone Orapred Prelone Prednisolone






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My Asthma Diary

Date	Peak Flow	Wheezing	Coughing	Stuffy/runny nose	Medication	What happened
Sunday /						
Monday /						
Tuesday /						
Wednesday /						
Thursday /						
Friday /						
Saturday /						
Sunday /						
Monday /						
Tuesday /						
Wednesday /						
Thursday /						
Friday /						
Saturday /						
Sunday /						
Monday /						
Tuesday /						
Wednesday /						
Thursday /						
Friday /						
Saturday /						
Sunday /						
Monday /						
Tuesday /						
Wednesday /						
Thursday /						
Friday /						
Saturday /						



## My Asthma Diary: \_\_\_\_\_

Answer these questions every day:

1. Did I cough last night?
2. Did I need my quick-relief inhaler?
3. Did I have difficulty with exercise or activity?



Remember to bring this  
Asthma Diary to your next  
doctor's appointment!

Use these symbols to record any other symptoms you had:

 Day Wheezing
  Night Wheezing
  Day Coughing
 ☐ Stuffy Nose
  Runny Nose
  Sneezing
  Itchy Eyes

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

## HOW TO USE A SPACER



**Step 1.** Remove the caps from the inhaler and the spacer.



**Step 2.** Shake the inhaler well for 5 seconds.



**Step 3.** Insert the inhaler into the open end of the spacer.



**Step 4.** Breathe slowly and deeply through the mouth.



**Step 5.** Wrap your lips around the mouthpiece of the spacer so that no air leaks out.



**Step 6.** Push the inhaler down once. This will release one puff of medicine into the spacer.



**Step 7.** Breathe in and out slowly and deeply as you slowly count to 10. Now relax and breathe normally.



**Step 8.** How many puffs did your doctor say to take? Wait 1 minute between each puff. Follow steps 5-8 for every puff.



**Step 9.** Rinse your mouth out with water. Clean the spacer once a week with soap and warm water and then let them air dry. Replace caps on inhaler and spacer.

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## HOW TO USE A SPACER WITH A FACEMASK



**1** Remove the caps from the inhaler and the spacer.



**2** Shake the inhaler well for 5 seconds.



**3** Attach the mask to the mouthpiece of the spacer. Now insert the inhaler into the open end of the spacer.



**4** Put the facemask up to your child's face. Make sure that it is tight around the child's nose and mouth so that no air leaks out.



**5** Push the inhaler down once. This will release one puff of medicine into the spacer.



**6** Hold the facemask to your child's face for enough time to allow at least 6 breaths. This may take 10-15 seconds.



**7** Remove the facemask from your child's face.



**8** How many puffs did your doctor say to take? Wait 1 minute between each puff. Follow steps 4-8 for every puff ordered by your doctor.



**9** Rinse your child's mouth with water. Clean the spacer and facemask once a week with soap and warm water and then let air dry. Replace caps on inhaler and spacer.



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# **Environmental Assessment & Recommendations for Reducing Exposure to Triggers**

## How To Control Things That Make Your Asthma Worse

This guide suggests things you can do to avoid your asthma triggers. Put a check next to the triggers that you know make your asthma worse and ask your doctor to help you find out if you have other triggers as well. Then decide with your doctor what steps you will take.

### Allergens

#### ☐ Animal Dander

Some people are allergic to the flakes of skin or dried saliva from animals with fur or feathers.

The best thing to do:

- Keep furred or feathered pets out of your home.

If you can't keep the pet outdoors, then:

- Keep the pet out of your bedroom and other sleeping areas at all times, and keep the door closed.
- Remove carpets and furniture covered with cloth from your home. If that is not possible, keep the pet away from fabric-covered furniture and carpets.

#### ☐ Dust Mites

Many people with asthma are allergic to dust mites. Dust mites are tiny bugs that are found in every home—in mattresses, pillows, carpets, upholstered furniture, bedcovers, clothes, stuffed toys, and fabric or other fabric-covered items.

Things that can help:

- Encase your mattress in a special dust-proof cover.
- Encase your pillow in a special dust-proof cover or wash the pillow each week in hot water. Water must be hotter than 130° F to kill the mites. Cold or warm water used with detergent and bleach can also be effective.
- Wash the sheets and blankets on your bed each week in hot water.
- Reduce indoor humidity to below 60 percent (ideally between 30–50 percent). Dehumidifiers or central air conditioners can do this.
- Try not to sleep or lie on cloth-covered cushions.
- Remove carpets from your bedroom and those laid on concrete, if you can.
- Keep stuffed toys out of the bed or wash the toys weekly in hot water or cooler water with detergent and bleach.

#### ☐ Cockroaches

Many people with asthma are allergic to the dried droppings and remains of cockroaches.

The best thing to do:

- Keep food and garbage in closed containers. Never leave food out.
- Use poison baits, powders, gels, or paste (for example, boric acid). You can also use traps.
- If a spray is used to kill roaches, stay out of the room until the odor goes away.

#### ☐ Indoor Mold

- Fix leaky faucets, pipes, or other sources of water that have mold around them.
- Clean moldy surfaces with a cleaner that has bleach in it.

#### ☐ Pollen and Outdoor Mold

What to do during your allergy season (when pollen or mold spore counts are high):

- Try to keep your windows closed.
- Stay indoors with windows closed from late morning to afternoon, if you can. Pollen and some mold spore counts are highest at that time.
- Ask your doctor whether you need to take or increase anti-inflammatory medicine before your allergy season starts.

### Irritants

#### ☐ Tobacco Smoke

- If you smoke, ask your doctor for ways to help you quit. Ask family members to quit smoking, too.
- Do not allow smoking in your home or car.

#### ☐ Smoke, Strong Odors, and Sprays

- If possible, do not use a wood-burning stove, kerosene heater, or fireplace.
- Try to stay away from strong odors and sprays, such as perfume, talcum powder, hair spray, and paints.

### Other things that bring on asthma symptoms in some people include:

#### ☐ Vacuum Cleaning

- Try to get someone else to vacuum for you once or twice a week, if you can. Stay out of rooms while they are being vacuumed and for a short while afterward.
- If you vacuum, use a dust mask (from a hardware store), a double-layered or microfilter vacuum cleaner bag, or a vacuum cleaner with a HEPA filter.

#### ☐ Other Things That Can Make Asthma Worse

- Sulfites in foods and beverages: Do not drink beer or wine or eat dried fruit, processed potatoes, or shrimp if they cause asthma symptoms.
- Cold air: Cover your nose and mouth with a scarf on cold or windy days.
- Other medicines: Tell your doctor about all the medicines you take. Include old medicines, aspirin, vitamins and other supplements, and nonselective beta-blockers (including those in eye drops).



U.S. Department of Health and Human Services  
National Institutes of Health



National Heart  
Lung and Blood Institute

For More Information, go to: [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

NIH Publication No. 07-5251  
April 2007





## The Asthma-Friendly Bedroom



### Dust Mites

A dust mite is a tiny bug that is too small to see but can cause breathing trouble for children with asthma. They are everywhere, even in the cleanest homes.

They live in things that collect dust like pillows, bedding, chairs and sofas with cloth covers, mattresses, and rugs.

The best way to kill them is by washing items in hot water.



### Bedroom/Sleep Space

Sheets and cloth on sofas and chairs can be full of dust mites.

Wash all bedding in hot water once a week.

Wash pillows once a month.

Cover mattresses, box springs, and pillows in a dust-proof cover.

If your child sleeps on a sofa, cover the sofa with a clean sheet or slip cover that can be washed.

Vacuum the sofa every week.

Keep windows closed; use air conditioner if possible in warmer months.

Children under the age of one should **never** sleep on a sofa.



### Toys

Toys, books, and stuffed animals can also be full of dust mites.

Keep stuffed toys off the child's bed, if possible.

Wash them monthly in hot water and dry them completely. Washing is best but if they can't be washed, put them inside a plastic bag and close it tight for two days. This helps kill dust mites but doesn't remove their droppings.

Dust other toys, furniture, walls, and books with a damp cloth or a cloth that traps dust once a week.



### Rugs

Rugs can also be full of dust mites.

Children with asthma should not have rugs in their rooms. If the rug must stay, vacuum it once a week with a HEPA vacuum, if possible. A HEPA vacuum has a special filter that traps dust so it doesn't go back into the air.

Curtains should be washed regularly or vacuumed with a HEPA vacuum.

Avoid vacuuming when your child is around, if possible.



### Pets

Children with asthma can be allergic to animals with fur, such as cats, dogs, and hamsters.

Pets should stay outside, if possible.

Do not allow pets in the child's sleep area.

Pets should stay off sofas and chairs with cloth covers.



### Smoke

Cigarette smoke makes asthma worse and may cause children who do not have asthma to develop it.

Nobody should ever be allowed to smoke in the house or car.

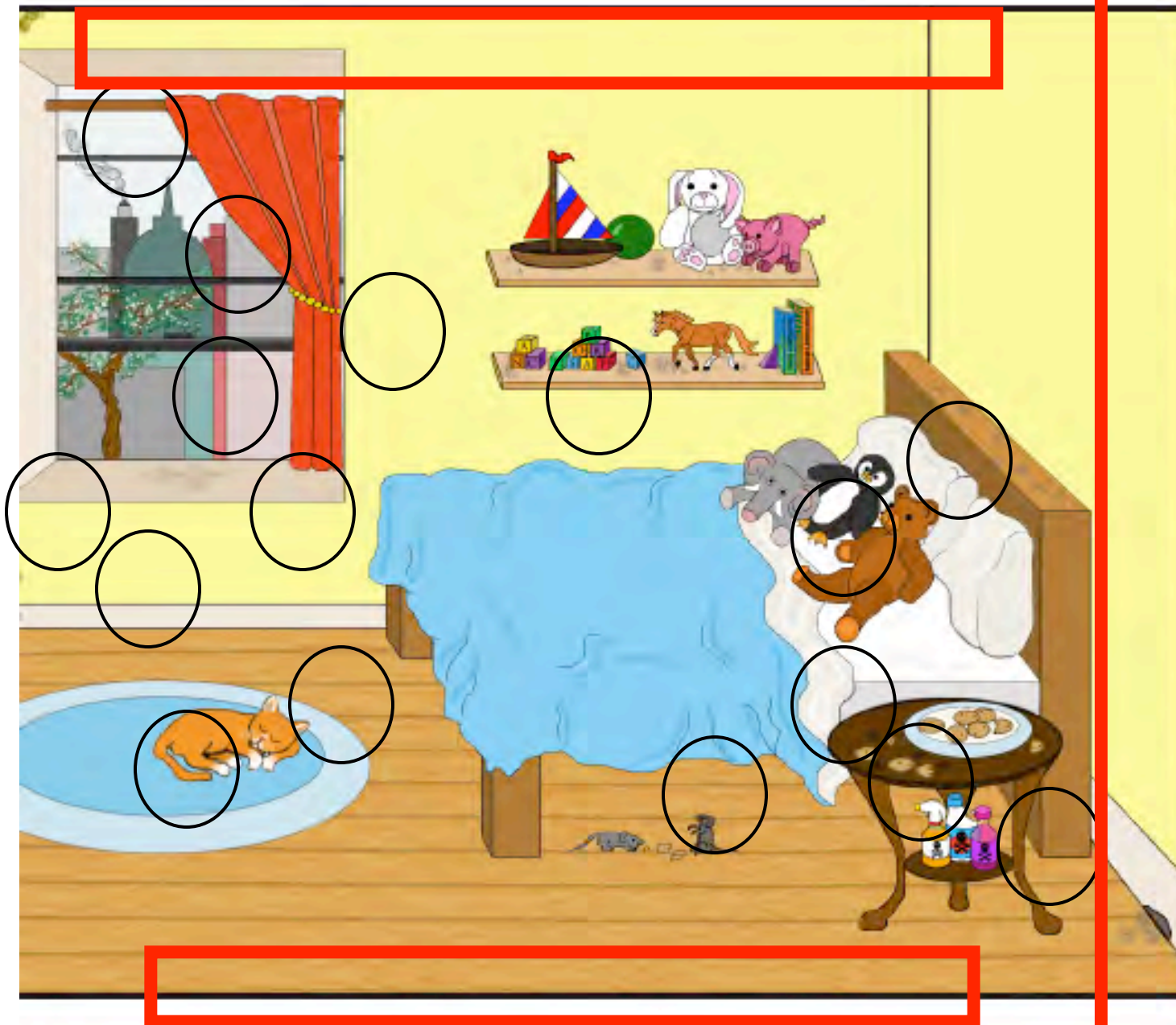


### Pests

Many children with asthma are allergic to cockroaches, mice, and rats.

Because these pests need food to live, they like to live in places where there is lots of food left around.

Do not allow anyone to eat where your child sleeps.



- ☐ Cigarette
- ☐ Colds & V
- ☐ Weather C
- ☐ Hot Air on
- ☐ Cats
- ☐ Dogs
- ☐ Odors & P
- ☐ Cleaning
- ☐ Exercise
- ☐ Mold
- ☐ Pollution
- ☐ Pollen
- ☐ Dust Mite
- ☐ Cockroaches

Most common health problems



food into the

out of the bedroom

and cracks in  
rners

pets and rugs  
droom

it regularly with a

a dust-collecting  
he bedroom

uffed animals and  
or box

ncased, allergy-  
g and pillowcases

ains with shades

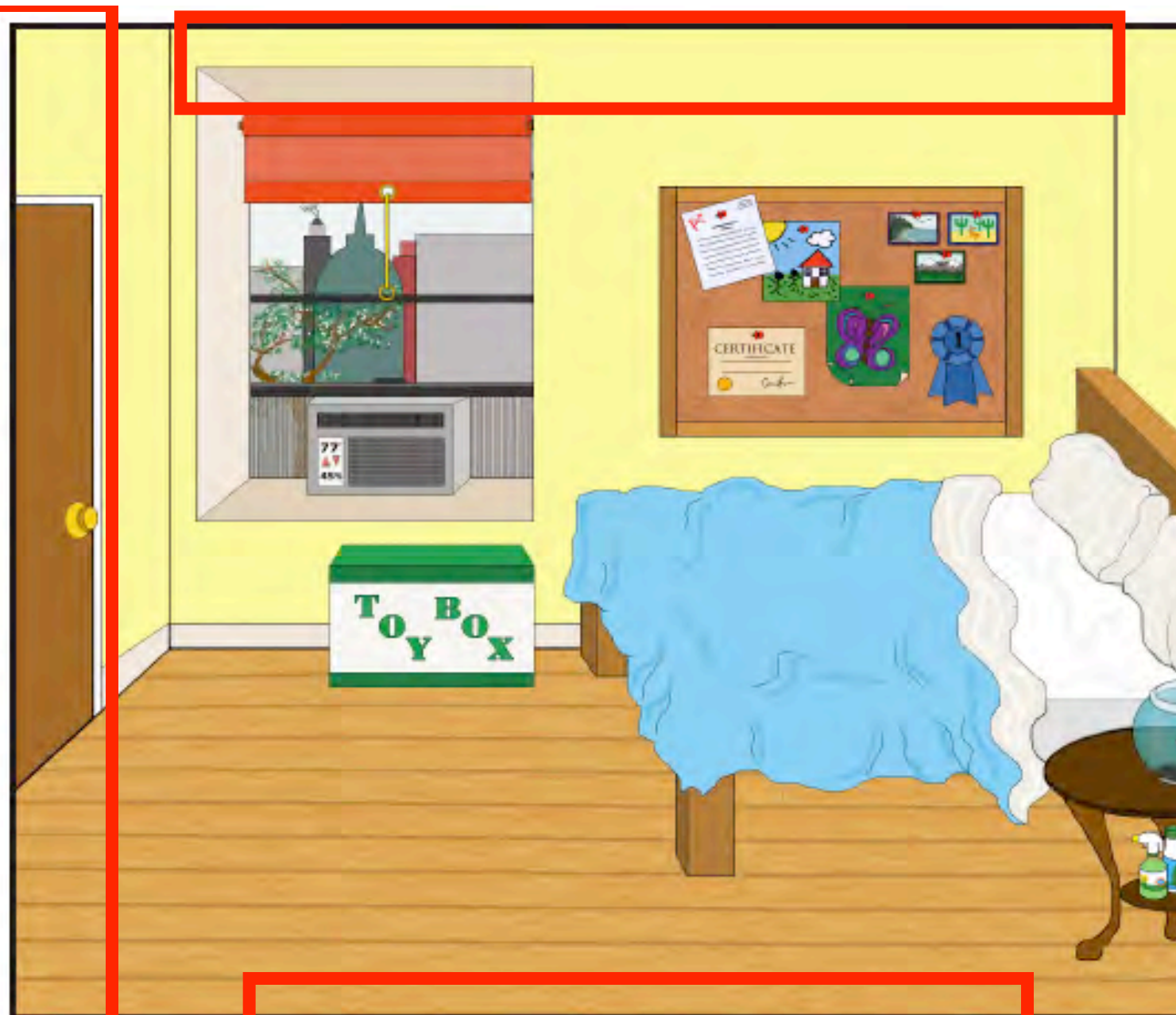
inside the house

ndows closed  
y season

humidity under

PA vacuums and

dlord (or call 311)



Make your bedroom trigger free

<b>Understanding Asthma Medication and Treatment</b>					
<b>The Three Types of Asthma Medicine</b>	 What does it do?	 When do I take it?	 Be Careful!	<b>Medicines:</b>	
<b>1. Daily Preventer</b>	This medicine controls the swelling and mucus build-up in your airways to prevent asthma symptoms.	Take this medicine everyday, even after you feel well and have no asthma symptoms.  Take this medicine everyday and your doctor tells you to stop.	This medicine will give you long-term asthma control from day one through!  It will give asthma symptoms little or make you feel better today!	<b>My daily preventive medication is:</b>  Fluticasone Inhaler Singular	<b>My daily preventive medication is:</b>  Fluticasone Inhaler QVAR
<b>2. Quick-Relief</b>	This medicine relaxes the muscles around the airway. This helps move air past the lungs.	Take this medicine at the first sign of asthma symptoms. It will help you feel better now.  This medicine might be prescribed for you before exercising or going home.	This medicine will give prompt symptoms. It will only relieve current symptoms.  If you use this more than twice a week, you should talk to your doctor.	<b>My quick relief medication is:</b>  (Albuterol) Ventolin Inhaler Pro Air	<b>My quick relief medication is:</b>  (Albuterol) Ventolin Inhaler Pro Air
<b>3. Emergency</b>	This medicine brings back control of serious asthma symptoms. It won't last several hours, so start working.  It is taken as a shot or syrup.	This medicine should only be used for serious symptoms.  ONLY take this medicine if you are having your doctor tell you to.	This medicine can cause serious side effects in other parts of the body.  If you need this medicine more than twice a year, you should talk to your doctor.	<b>Serious Prescription Drug Problems</b>	<b>Serious Prescription Drug Problems</b>

(Developed by the University of Maryland Center for AIDS, by NIDA/NIAID researchers. Project created by Dr. David Bragstad, MD)



# Self-Management Tools

[illegible]

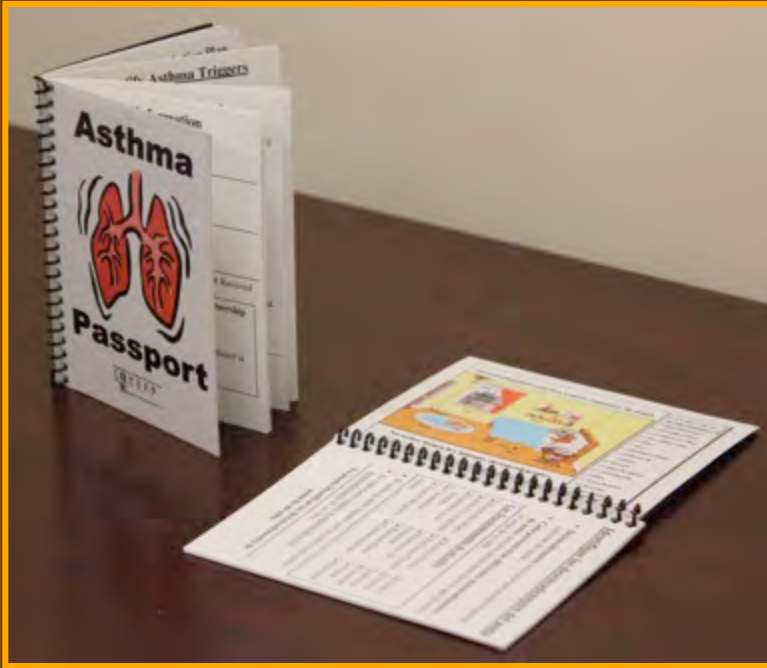
# Asthma



# Passport



# The Asthma Passport



1. Set asthma self-management goals
2. Learn asthma basics
3. Identify my asthma symptoms
4. Understand my asthma medicines
5. Follow my Asthma Action Plan
6. Use my inhaler properly
7. Keep a symptom diary
8. Identify my asthma triggers
9. Schedule a follow-up every 2-6 weeks
10. Ask my doctor specific questions

# The Asthma Literacy Project





# The Asthma Literacy Project

- **How to Use a Spacer**
- **Understanding Asthma Medicines**
- **Keeping a Symptom Diary**
- **Understanding Asthma Triggers**



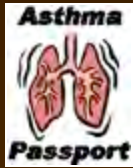




# Redesigning the Practice Delivery System

- Clinical Strategies
- Communication Strategies
- Systems-Improvement Strategies





# Redesigning the Practice Delivery System

- Clinical Strategies
- Communication Strategies
- ***Systems-Improvement Strategies***



# Workshop Overview

## Part 1: Friday Morning

- Stepwise approach for long-term asthma management
- Communication strategies that promote asthma self-management

## Part 2: Friday Afternoon

- Defining the current systems
- Developing, implementing and testing a change

# *Defining the Systems and Implementing a "Change Project" Proposal*



*conducted by*  
**Bronx-Lebanon Hospital Center &  
the South Bronx Asthma Partnership**

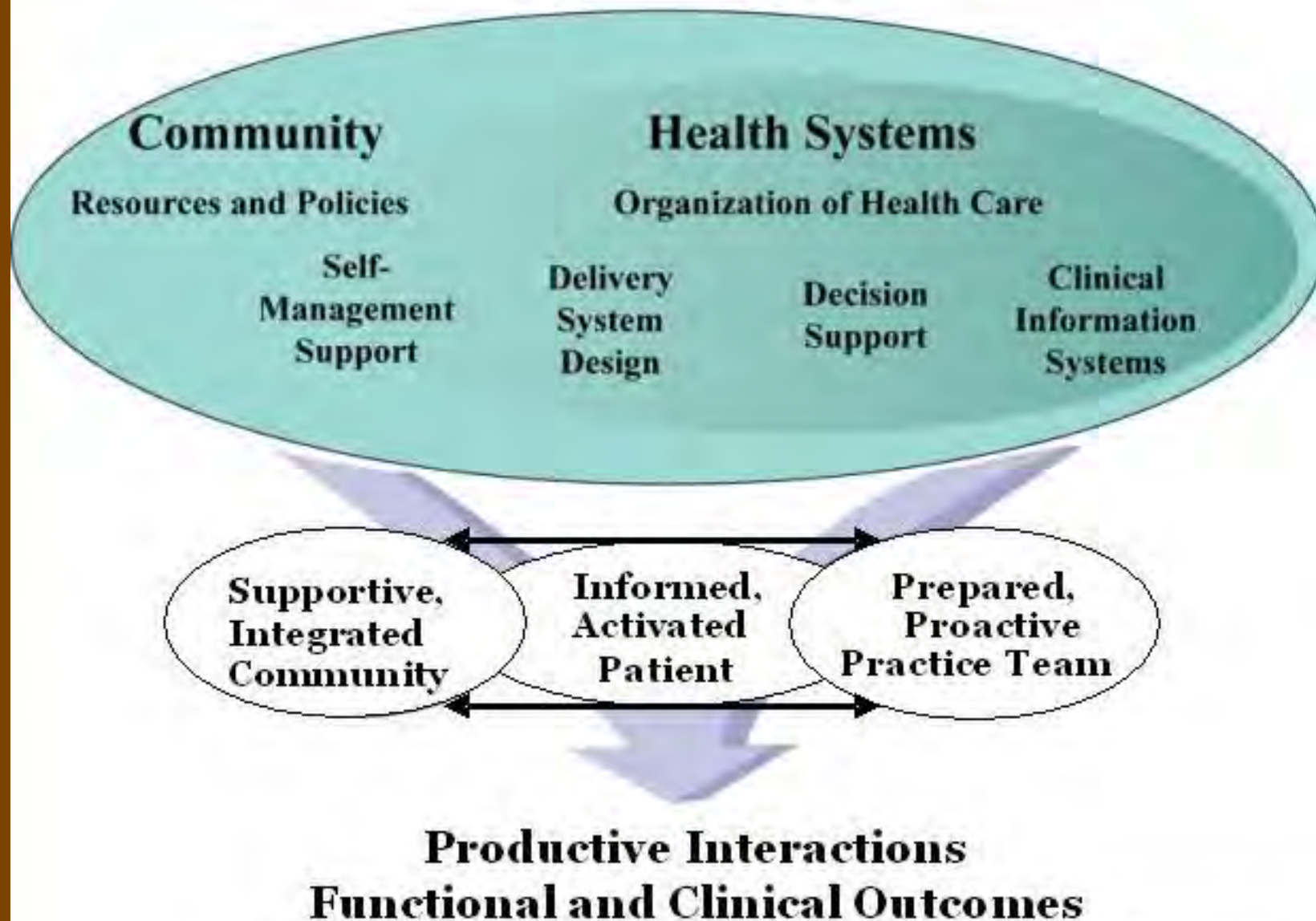


**Clinical Asthma Champions  
Resources and Obstacles Worksheet**

	Resources	Obstacles
Time		
Finances		
Staff		
Data		
Space		
Other		



# The Chronic Care Model





*The Chronic Care Model requires changing practice culture and infrastructure as well as changing specific aspects of patient care.*

**Practice  
Elements**

**System  
Elements**



## The Chronic Care Model: Assessment of Chronic Illness Care Survey

(adapted from ACIC Tool Version 3.5)

<b>Your Name:</b>	<b>Date:</b> /     / 2011
<b>Organization Name:</b>	<b>Names of Other Persons Completing the Survey with You:</b>
_____	1. _____
	2. _____
	3. _____

**Briefly describe the process you used to fill out this form:**

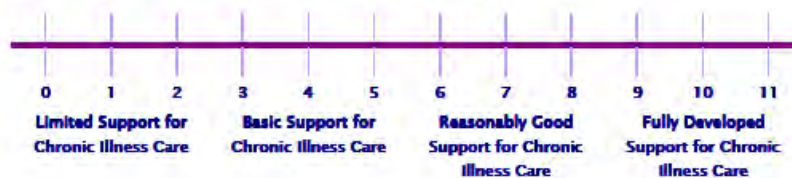
- ☐ Reached consensus in a face-to-face meeting
- ☐ Filled out by the team leader in consultation with other team members
- ☐ Team members filled out separate forms and the responses were averaged
- ☐ Other: \_\_\_\_\_

**Instructions:** Please use the following adaptation of the Assessment of Chronic Illness Care (ACIC) survey to evaluate your organization's efforts in improving chronic care for patients with asthma. The ACIC was derived from specific evidence-based interventions for the six components of the Chronic Care Model. Like the Chronic Care Model, the ACIC addresses the basic elements for improving chronic illness care at the Coalition, community, practice and patient level. This survey is designed to help systems and provider practices move toward the "state-of-the-art" in managing chronic illness. The results can be used to help your team identify areas for improvement.

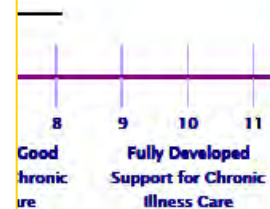
### Component 1: Health Care Organization (HCO)

**Definition:** *Facilitate care coordination within and across organizations by creating ongoing linkages and interventions between providers of health care, caregivers for children and their families.*

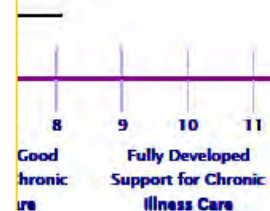
**ACIC Section Subscale Score for your organization:** \_\_\_\_\_



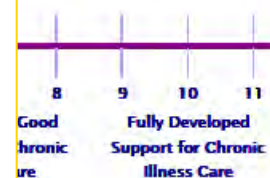
patient and population data to facilitate



scientific evidence (NAEPP guidelines) and



clinical care and self-management, and families.





## PROBLEM AND POPULATION DEFINITION WORKSHEET

Describe the problem you are planning to address.

Who is affected by this problem?

What is the target population for your change project?





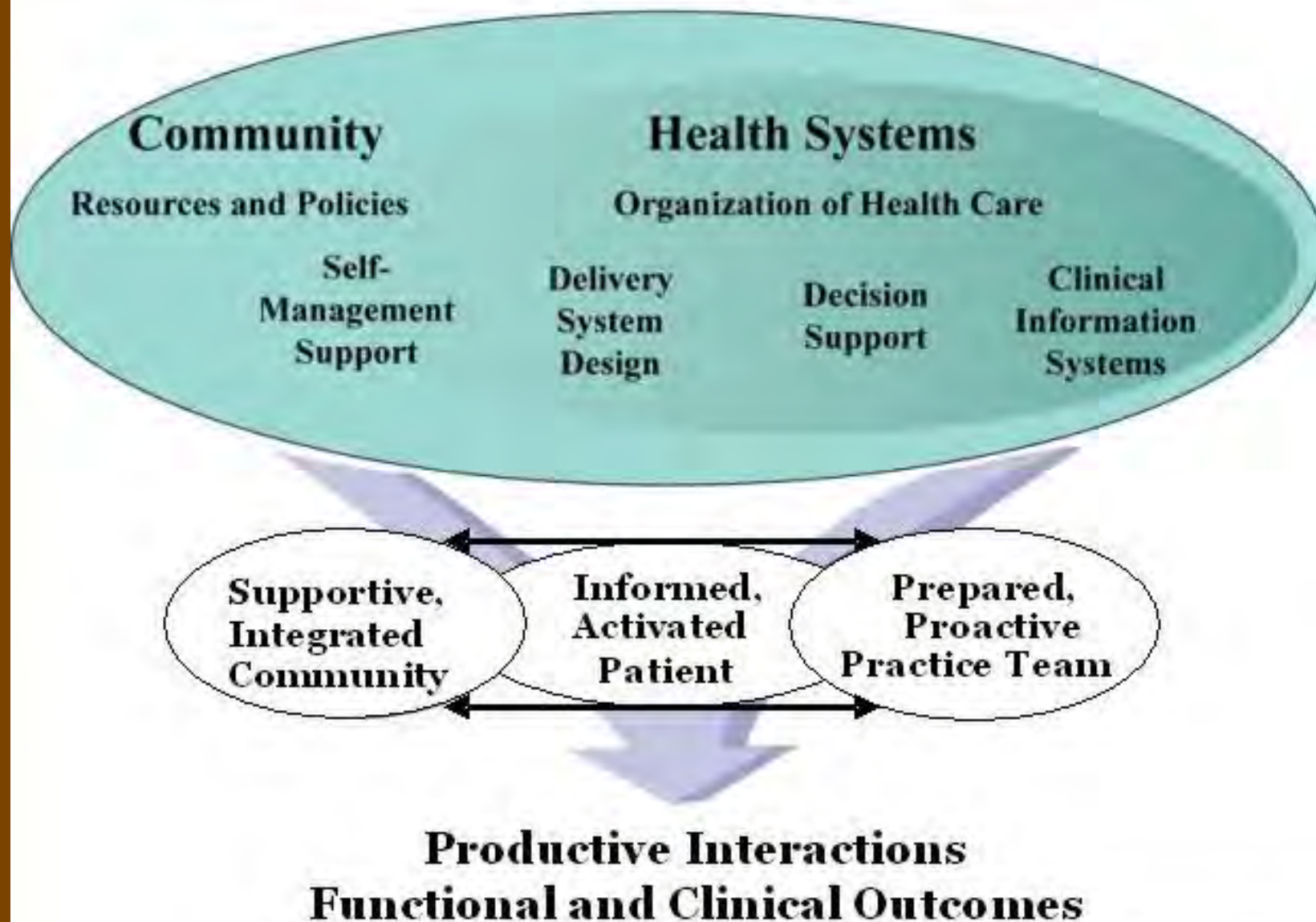
## Aim Statement Worksheet

**Organization Name:** \_\_\_\_\_

1. Create an aim statement for improvement. Include numerical goals.
2. Who (by role or title) would be included on the improvement team to accomplish this aim?
3. Given your aim, what are some of the changes that will help you reach your aim?



# The Chronic Care Model





### Using the "Chronic Care Model" to Redesign Practice Delivery Systems

Self-Management	Decision Support	Clinical Information System	Delivery System Design	Health Care Organization	Community
Collaborate with patient and family to set and document shared management goals: short-term (impairment) and long-term (risk).	Embed evidence-based guidelines into structured encounter forms/EMR prompts to guide decision-making, ensure compliance with documentation and support performance tracking.	Establish a registry/database of asthma patients for which the health care system assumes responsibility.	Establish multi-disciplinary clinical teams for planned care (i.e., identify provider champion, nurse champion and asthma care team).	Make improving chronic care a part of the organization's vision/mission and performance improvement and business plans.	Establish linkages with community organizations to develop support programs and policies.
Use self-management education and tools that are based on evidence of effectiveness, such as the Asthma Action Plan.	Promote the use of inhaled corticosteroids as the first-line of long-term controller therapy for patients of all ages with "persistent" asthma.	Designate staff for data entry.	Define roles/ delegate tasks to optimize staff efficiency (i.e., train/cross-train office staff to assist clinicians in maintaining the demands of quality planned care visits).	Ensure that senior leadership and staff visibly support and promote the effort to improve the delivery of quality asthma care.	Raise community awareness through networking, outreach, and education (i.e., health fairs, PTA meetings).
Emphasize the patient/family's central role in managing their health and communicating with providers (i.e., symptom diaries, questions).	Invite providers to participate in interactive workshops that promote evidence-based practices and communication strategies that enhance self-management skills.	Develop processes for use of the registry (i.e., reminders for seasonal influenza vaccine and proactive care-planning).	Promote planned care interactions that support evidence-based care (i.e., assessing severity/control, frequent monitoring of impairment/risk, stepwise therapy).	Promote effective improvement strategies for comprehensive system change; provide report cards and performance incentives.	Partner with schools, workplaces, faith-based organizations, and other community organizations to promote awareness and encourage coordination.
Provide patients with literacy-appropriate tools and materials that equip them with the skills that change behavior and encourage self-advocacy.	Educate patients about EPR-3 recommendations and GIP priority messages to empower them to participate in their care and be pro-active consumers of the health care system.	Delineate an "Asthma Care Map" to code for prompts and ensure comprehensive entry-to-exit asthma care and documentation.	Provide clinical case management services for complex patients; mental health support/referral when needed.	Embed measurement and monitoring in workflow in order to track quality and provide feedback to providers and leadership.	Provide a list of community resources to patients, families, and staff.
Use group visits to teach self-management skills and facilitate peer support.	Establish linkages to assure that primary care providers have access to expert consultation and specialty support (allergy skin testing, spirometry).	Monitor provider compliance with documentation of defined quality asthma care indicators.	Promote the patient-provider partnership to ensure scheduled follow-up that supports planned care visits.	Facilitate care coordination within and across partnering organizations.	Facilitate the linkage of potential community resources with providers (specialists, smoking cessation programs).
Spend time dispelling myths and addressing cultural health beliefs and readiness-to-change.	Help patients identify potential allergen and irritant triggers and provide specific guidance on reducing exposure.	Use the registry to provide feedback to providers and leaders about results and outcomes over time.	Provide literacy and linguistically appropriate care that fits with their cultural background.	Maintain linkages with leadership of local health plans (i.e., data collection and client services).	Recruit student volunteers/summer interns to research community asthma resources.



### Using the "Chronic Care Model" to Redesign Practice Delivery Systems

Self-Management	Decision Support	Clinical Information System	Delivery System Design	Health Care Organization	Community







## DATA MANAGEMENT AND COLLECTION SHEET

Project Aim:

Type of Measure	Name of Measure	Definition	Numerator	Denominator	Data Collection Strategy

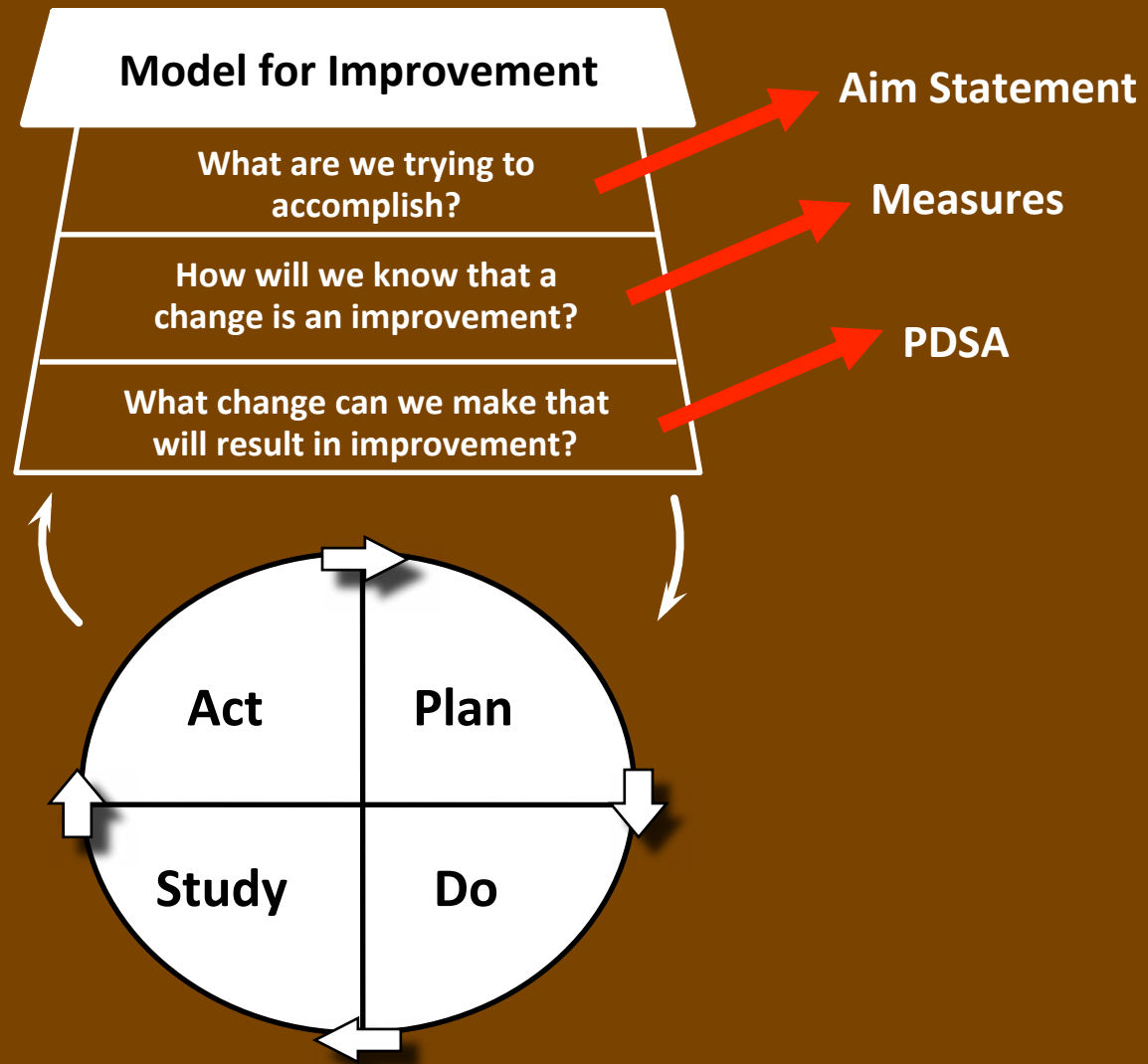




# ***The Model For Improvement***



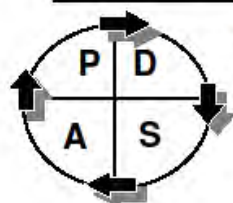
# Three Fundamental Questions







## MODEL FOR IMPROVEMENT Cycle \_\_\_\_ Date \_\_\_\_



Objective for this PDSA Cycle

### PLAN

Questions

Predictions

Plan for change or test: who, what, when, where - who is responsible

---

**DO** - Carry out the change or test; collect data and begin analysis.

---

**STUDY** - Complete analysis of data; summarize what was learned.

---

**ACT** - Are you ready to make a change? Plan for the next cycle.



# Change Projects

- Embedding guidelines into routine care
- Using non-clinical team members more effectively
- Planned pro-active encounters for preventive asthma care
- Using brief educational encounters to provide structured self-management support
- Coordinating case management for high risk patients
- Linkages to effective community resources
- Enhancements to clinical information systems (registries)



## CHANGE PROJECT PROPOSAL WORKSHEET

	Discussion	
Project Name		
Problem		
Team Members		
Who is Affected		
Target Population		
Aim		
List of Measures	1.	4.
	2.	5.
	3.	6.
PDSAs Planned	1.	3.
	2.	4.





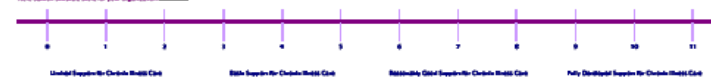
## The Chronic Care Model: Assessment of Chronic Illness Care Survey

(adapted from ACIC Tool Version 3.5)

### Component 1: Health Care Organization (HCO)

**Definition:** Facilitate care coordination within and across organizations by creating ongoing linkages and interventions between providers of health care, caregivers for children and their families.

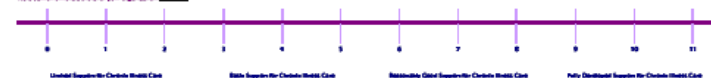
AACN Standard 3-4-2015: Facilitate care coordination within and across organizations by creating ongoing linkages and interventions between providers of health care, caregivers for children and their families.



### Component 2: Clinical Information System (CIS)

**Definition:** Enhance the organization and coordination of patient and population data to facilitate efficient communication and effective care.

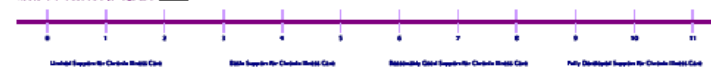
AACN Standard 3-4-2015: Enhance the organization and coordination of patient and population data to facilitate efficient communication and effective care.



### Component 3: Decision Support (DS)

**Definition:** Promote clinical care that is consistent with scientific evidence (NAEPP guidelines) and patient preferences.

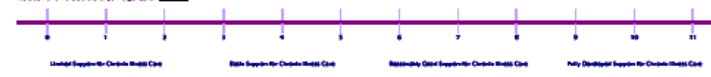
AACN Standard 3-4-2015: Promote clinical care that is consistent with scientific evidence (NAEPP guidelines) and patient preferences.



### Component 4: Delivery System Design (DSD)

**Definition:** Support the delivery of effective and efficient clinical care and self-management, including case management services for high-risk children and families.

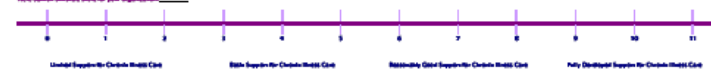
AACN Standard 3-4-2015: Support the delivery of effective and efficient clinical care and self-management, including case management services for high-risk children and families.



### Component 5: Self-Management Support

**Definition:** Empower and prepare children and their families to improve knowledge, skill and confidence in managing their asthma.

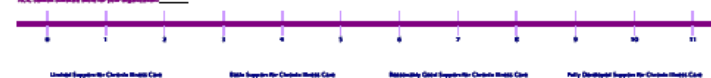
AACN Standard 3-4-2015: Empower and prepare children and their families to improve knowledge, skill and confidence in managing their asthma.



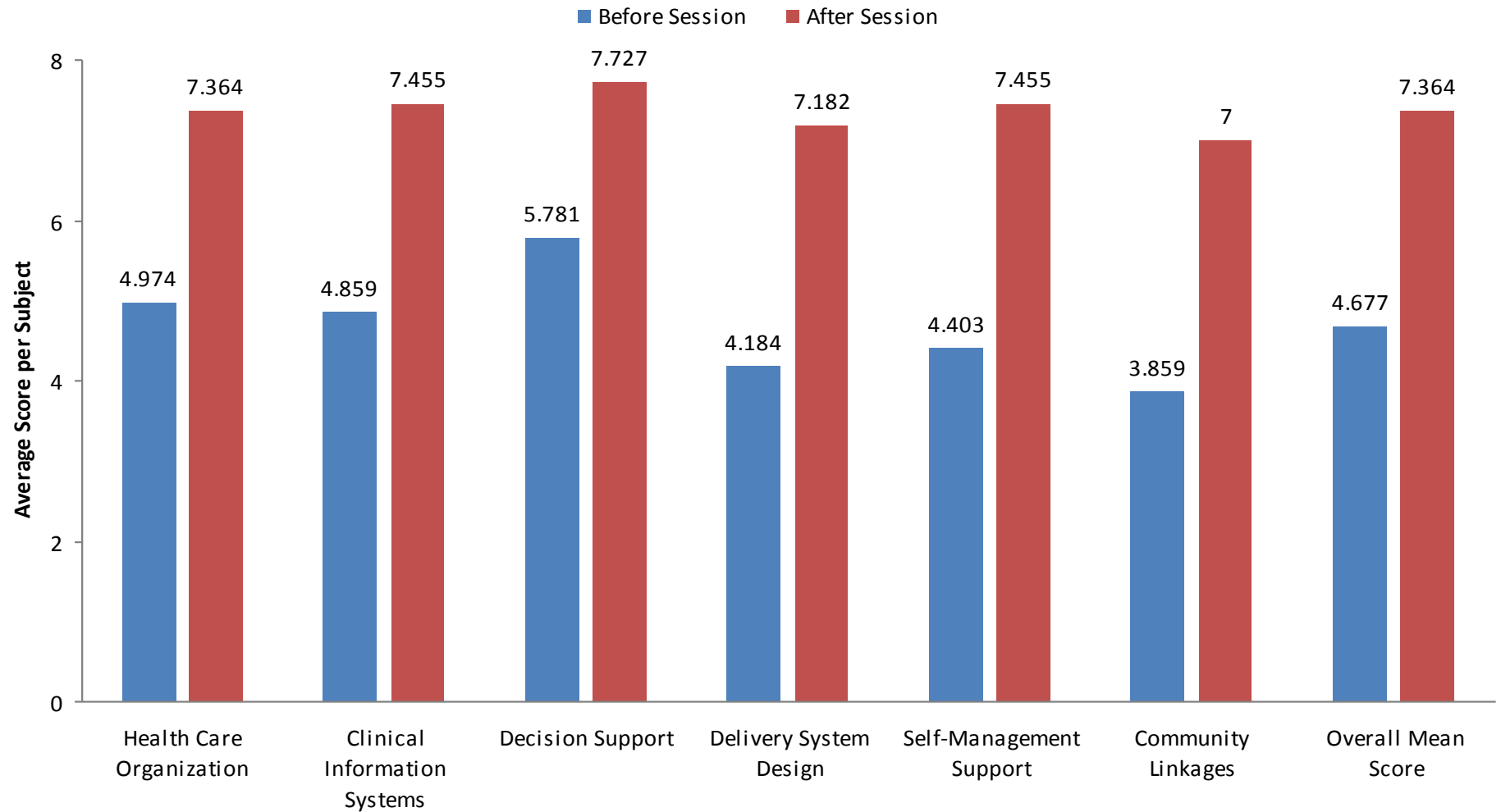
### Component 6: Community Linkages

**Definition:** Mobilize community resources to fill gaps in needed services for children and families with asthma.

AACN Standard 3-4-2015: Mobilize community resources to fill gaps in needed services for children and families with asthma.



## Asthma Champions - Model for Improvement





# Asthma Champions: Defining the system and implementing a "change project" proposal

N Kolhuru, T Jimenez; M Reddy, MD; D Strom, LCSW; L Krinsky; J Jacobs, LMSW; L Brown; R Kairam, MD; Y Persaud, MD, MPH; R Neugebauer, PhD.

Bronx-Lebanon Hospital Center, Department of Pediatrics, Bronx, New York.  
affiliated with the Albert Einstein College of Medicine



Presented at the 2012 Annual Scientific Meeting of the American College of Allergy, Asthma & Immunology, March 1-4, 2012

## BACKGROUND

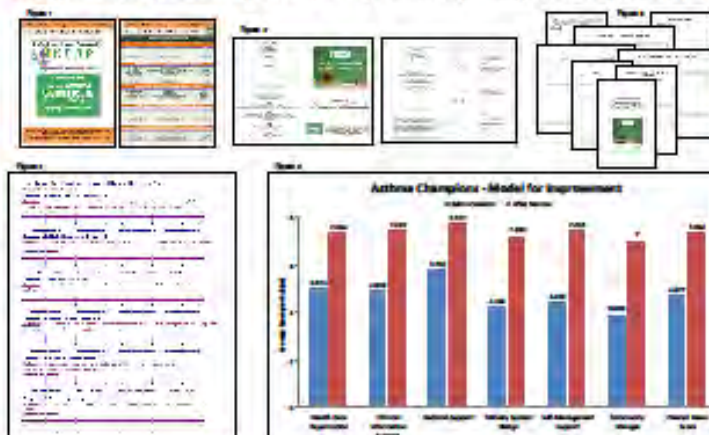
Funded by the National Asthma Control Initiative (NIH/NHLBI), this project implemented interactive, allergist-delivered workshops to cultivate "Asthma Champions" to lead guideline-based, practice delivery improvement within their health care organization (HCO).

## METHODS

- National recruitment targeted 32 early career physicians (27 practice teams) caring for children with asthma in medically underserved populations. [Figure 1]
- Champions traveled to the Bronx in NY to attend one of five 1-1/2 day workshops in the fall of 2011. [Figure 2]
- A major component of the workshop trained Champions on developing, testing and implementing a system change within their HCO. [Figure 3]
- Based on current NAEPP recommendations, the curriculum focused on elements of the Chronic Care Model and the Model for Improvement.<sup>1,2</sup>
- The Assessment of Chronic Illness Care Survey (ACIC)<sup>3</sup> is organized such that the highest score of "11" on any individual item/subscale or the overall score (an average of the six ACIC subscale scores) indicates "optimal support for chronic illness"; the lowest possible score on any item/subscale of "0" corresponds to "limited support for chronic illness care." [Figure 4]
- The ACIC was completed by 11 national practice teams at baseline and six months later.
- Bronx-Lebanon Hospital Center's IRB approved this study.

## RESULTS

- All Champions were recruited from areas with high childhood asthma prevalence: 56% reported practicing in an urban setting and 70% supervise residents-in-training.
- The difference in Champions' mean ACIC subscale scores from baseline to six months were: 1) Health Care Organization: 2.167 ( $p < .028$ ); 2) Clinical Information Systems: 2.630 ( $p < .007$ ); 3) Decision Support (DS): 1.686 ( $p < .102$ ); 4) Delivery System Design: 2.833 ( $p < .013$ ); 5) Self-Management Support: 2.704 ( $p < .004$ ); and 6) Community Linkages: 2.408 ( $p < .044$ ). [Figure 5]

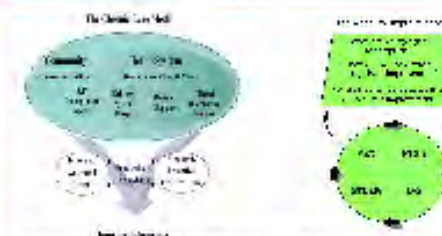


- The DS component was the only component that did not show a significant improvement.
- The average difference between overall mean scores from baseline to six months showed an improvement of 2.405 ( $p < .008$ ), suggesting a significant improvement in overall support for chronic illness care.

## CONCLUSION

- This initiative demonstrates the importance of professional development opportunities in preparing future physician leaders to take on the critical work of redesigning practice delivery systems to improve the quality of care for patients with asthma.
- Furthermore, there is evidence that additional work is needed in improving "decision support" for providers in understanding and applying the NAEPP guidelines to clinical care.

## DISCUSSION



Interactive workshops utilizing the Chronic Care Model<sup>1</sup> and the Model for Improvement<sup>2</sup> can facilitate improvement in systems that support quality-focused, guidelines-based asthma care.

## REFERENCES

- Institute for Healthcare Improvement. Chronic care model. (2003).
- Rungtong, G.J., Moore, R.D., Nolan, K.M., Nolan, T.W., & Norman, C.L. (2002). The improvement guide. San Francisco, CA: Jossey-Bass.
- Robert Wood Johnson Foundation's "Improving Chronic Illness Care" program.

- Professional development opportunities are important in preparing future physician leaders to take on the critical work of redesigning their practice delivery systems.
- Additional work is needed in improving “decision support” for providers in understanding and applying the NAEPP guidelines to clinical care.

# Workshop Overview

## Part 1: Friday Morning

- Stepwise approach for long-term asthma management
- Communication strategies that promote asthma self-management

## Part 2: Friday Afternoon

- Defining the current systems
- Developing, implementing and testing a change

## Part 3: Saturday Morning

- Your change project proposal
  - Making the business case

Date:\_\_\_\_\_

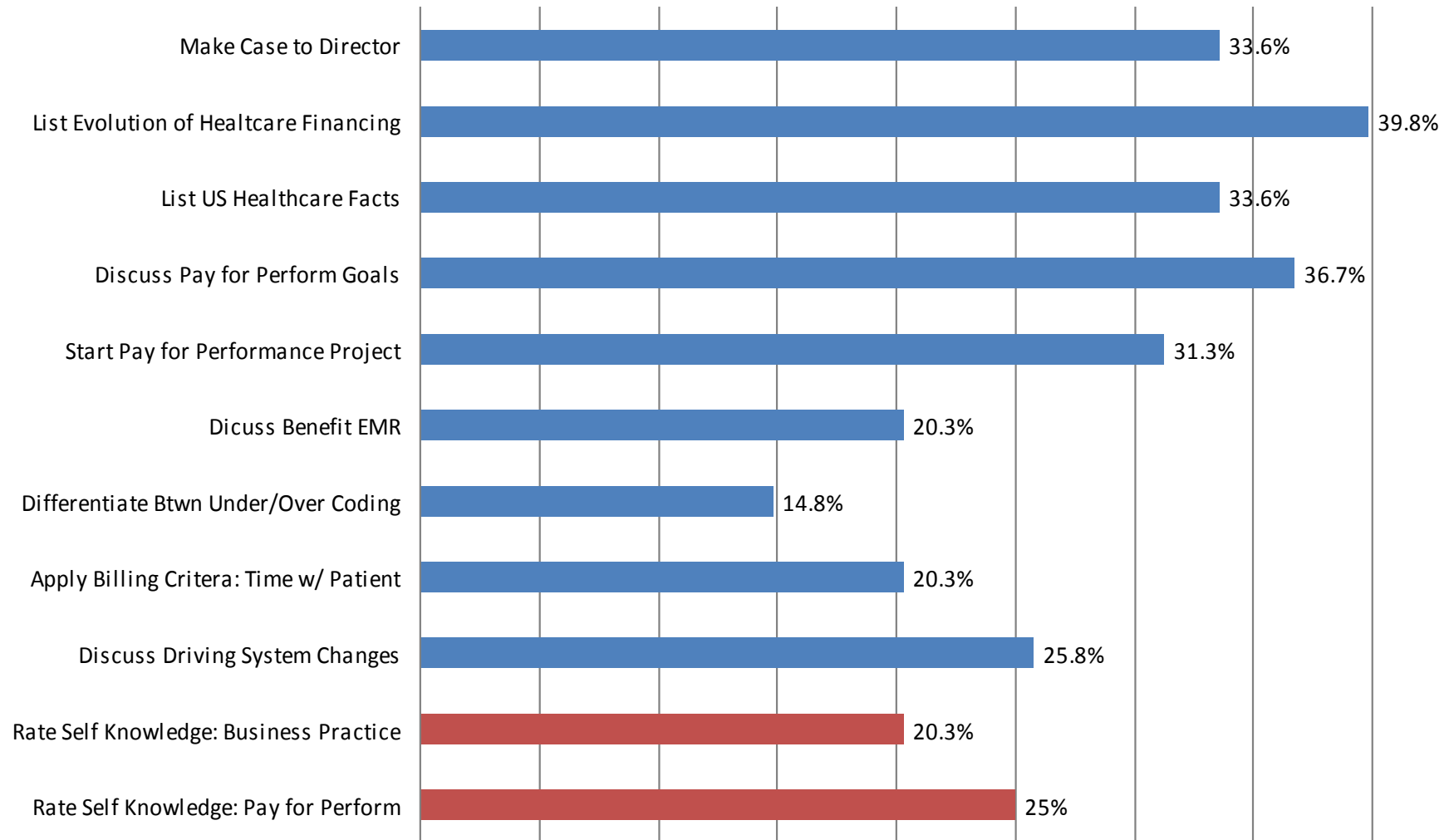
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**“NOW VS BEFORE” SURVEY**  
**Making the Business Case**

We would like to know your opinions on a variety of business and reimbursement strategies that could have an impact on improving asthma outcomes. Please tell us how confident you are in your understanding of or ability to:

NOW					STRATEGIES	BEFORE TODAY				
Not at all confident	Slightly confident	Somewhat confident	Moderately confident	Extremely confident		Not at all confident	Slightly confident	Somewhat confident	Moderately confident	Extremely confident
					Make the business case to your clinical director that justifies how you will utilize your administrative time					
					List the evolution of 20th century healthcare financing					
					List facts about the cost of healthcare in the United States					
					Discuss the goals of pay-for-performance methodologies					
					Start a pay for performance project					
					Discuss the advantages of electronic health record					
					Differentiate between the elements of undercoding and overcoding					
					Apply the criteria for billing based on time spent with the patient					
					Discuss how driving systems changes at the provider level will lead to improvements in patient outcomes					
NOW					OTHER QUESTIONS	BEFORE TODAY				
Not at all	Slightly	Somewhat	Very	Extremely		Not at all	Slightly	Somewhat	Very	Extremely
					How knowledgeable concerning the business aspect of your practice would you rate yourself					
					How knowledgeable about pay for performance would you rate yourself					

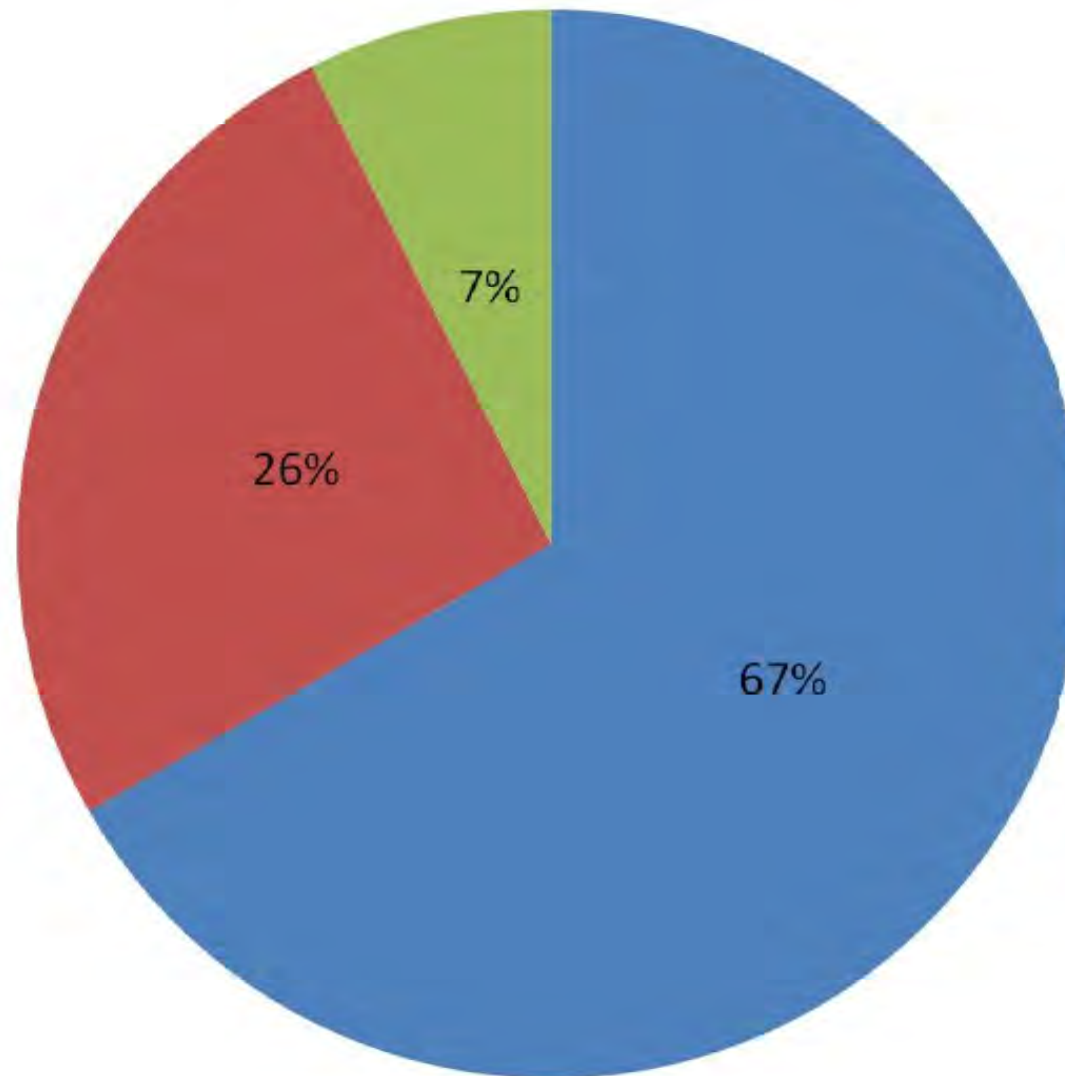
## "Now vs Before" Making the Business Case- Total Improvement per Subject





### How related is "Making the Business Case" to your practice?

■ Very Related ■ Somewhat Related ■ Slightly Related



## Making the Business Case: Importance of educating physicians about future healthcare models

N Kolluru, MD, MPH; Y Persaud, MD, MPH; M Reddy, MD; R Kairam, MD; Siddarth Hanumanthu, D Strom, LCSW; L Krinsky; T Jimenez; J Jacobs, LMSW; R Neugebauer, PhD.

Bronx-Lebanon Hospital Center, Department of Pediatrics, Bronx, New York  
affiliated with the Albert Einstein College of Medicine



Presented at the 2012 Annual Scientific Meeting of the American College of Allergy, Asthma & Immunology  
Poster # 25.3

### BACKGROUND

Funded by the National Asthma Control Initiative (NIH/NHLBI), this project implemented interactive, allergist-delivered workshops to cultivate "Asthma Champions" to lead guideline-based, practice delivery improvement within their health care organization (HCO).

### EDUCATIONAL OBJECTIVES

Upon completion of this session, participants should be able to:

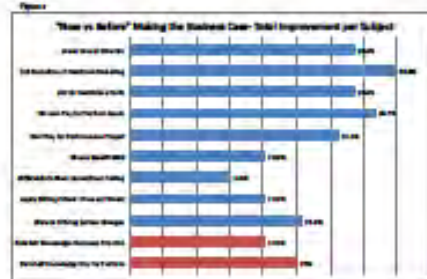
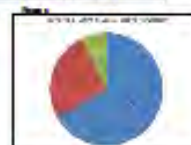
- (1) discuss the importance of understanding various evolving health care models;
- (2) summarize strategies for "making the business case" in support of engaging in activities related to systems improvement.

### METHODS

- National recruitment targeted early-career physicians who care for children with asthma in medically underserved populations.
- Champions (n=32) traveled to the Bronx in New York to attend one of five 1-1/2 day workshops on developing, testing and implementing a systems change within their HCO.
- A segment of the curriculum focused on "making the business case" in support of such activities related to fostering systems improvement.
- Champions self-reported their confidence and knowledge on a retrospective before-and-after survey related to future healthcare models, based on a 5-point Likert-scale. [Figure 1]
- This study was approved by Bronx-Lebanon Hospital Center's Institutional Review Board.

### RESULTS

- Nine business strategies covered included:
  - 1) "Make the business case to your clinical director justifying how you will utilize your administrative time" (p<.003);
  - 2) "List the evolution of 20th century healthcare financing" (p<.001);
  - 3) "List facts about U.S. healthcare costs" (p<.002);
  - 4) "Discuss the goals of pay-for-performance methodologies" (p<.000);
  - 5) "Start a pay-for-performance project" (p<.000);
  - 6) "Discuss the advantages of electronic health record" (p<.004);
  - 7) "Differentiate between the elements of under-coding and over-coding" (p<.003);
  - 8) "Apply the criteria for billing based on time spent with the patient" (p<.002); and
  - 9) "Discuss how driving systems changes at the provider level will lead to improvements in patient outcomes" (p<.001). [Figure 2]
- Additionally, Champions were asked how knowledgeable they felt they were regarding:
  - 1) "the business aspect" (p<.002) of their practice; and
  - 2) "pay for performance" (p<.001). [Figure 2]
- This figure displays variances in levels of improved confidence in the above topics, and in their personal knowledge.



- Finally, 67% reported that the lecture was "very related" to their own practice and an additional 26% reported it was "somewhat related." [Figure 3]

### CONCLUSION

- Allergists are recognized as experts in the field of asthma and should take the lead in helping physicians make this important transition with evolving health care models.
- More focused small groups like those in this initiative can improve the future of asthma care delivery, from both a clinical as well as a business perspective.

### DISCUSSION

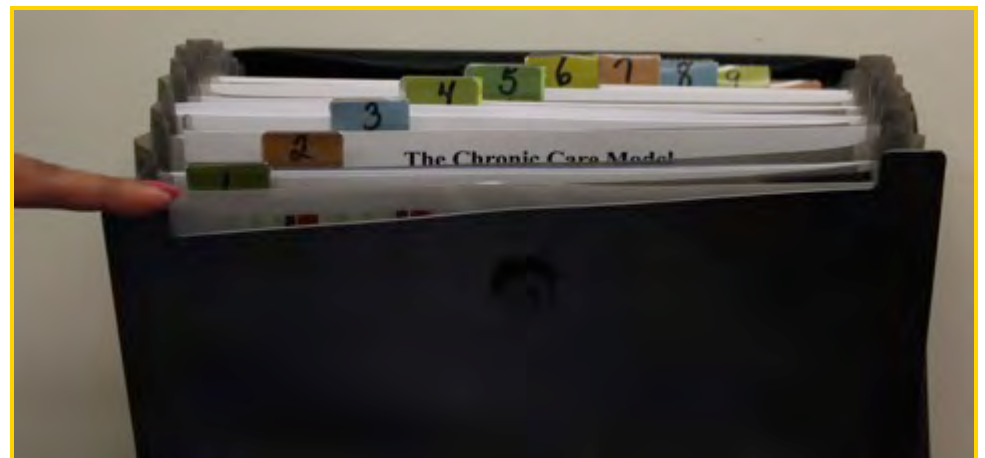
- Engaging senior leadership and hospital administrators is an important step in successfully transforming the health care system.
- In order to increase the likelihood of achieving project goals, participating Champions were equipped with a convincing business case to present to their institution, particularly to their non-clinical leadership.
- This plan emphasized the bottom-line benefits of allocating resources toward improvement efforts and practice delivery redesign, including:
  - 1) Reducing uncompensated care
  - 2) Improving outpatient care
  - 3) Streamlining practice delivery systems
  - 4) Achieving prominence in the medical field
  - 5) Achieving prominence in the public sphere
  - 6) Developing leadership in health care change
  - 7) Generating performance indicators
  - 8) Adapting to evolving reimbursement methodologies.

### REFERENCES

- Toolkit for Implementing the Chronic Care Model in an Academic Environment. AHRQ Publication No. 04-0010, January 2004. Rockville, MD: Agency for Healthcare Research and Quality; <http://www.ahrq.gov/publications/chroniccaremodel>

- More efforts should be directed at fostering improved understanding of evolving health care models among clinicians.
- More focused small groups like those in this initiative can improve the future of asthma care delivery, from both a clinical as well as a business perspective.





# Champion Toolkit Flash Drive Contents

## TOOLKIT FLASH DRIVE Contents



### NAEPP/EPR-3: Guidelines for the Diagnosis and Management of Asthma

- Full Report (440 pages)
- Summary Report (90 pages)
- Journal of Allergy and Clinical Immunology, Vol. 120, No. 5 (45 pages)
- City Health Information "Managing Asthma" (12 pages)
- NYS Expert Panel Decision Support Pocket Guide (16 pages)
- Power Point of EPR-3 Tables

### Provider Education Tools

- Order Form for NYS Asthma Materials
- Sign-in Sheet for Provider Education Sessions
- IPRO link for DVD tutorial
- IPRO 2011-2012 CME Forms for DVD
- Evaluation
  - Self-Assessment (word bank)
  - Pre-Test (3-Q, 9-Q)
  - Post-Test (3-Q, 9-Q)
  - AFTERthenBEFORE Survey
  - Power Point Template for Pre-Test vs Post-Test Feedback
- Coaching providers on how to Promote Patient Self-Management
  - Role Play Scenario Cards
  - Narrative PowerPoint for Role Play Scenarios
  - 8-Minute Asthma Visit
  - 5-Minute Influenza Counseling Visit
- 17x14 Poster/Wall Chart of EPR-3 Tables
- PACE Binder & Power Point
- The Planned Asthma Visit Checklist
- AAAAI Asthma IQ

### Behavior Theory

- The Health Belief Model
- The Stages of Change
- Health Literacy
- Training on Tobacco Cessation Counseling (Theory/Stages of Change)
- Communication Strategies (PACE)
- Remain standing if...

### Performance Improvement Theory and Tools

- The Chronic Care Model
- Evidence-Based Change Concept Chart
- The Model for Improvement
- Data tracking tools
- Asthma Care Map
- Asthma Documentation Sticker/Template
- Performance Improvement Indicators
- Structured Encounter Forms
- QI Chart Review Example

### Presenting a PI Project

- Presenting a PI Project.pdf
- PI Info

### Patient Education Tools

- Priority Messages & Patient Education (PACE)
- Key Educational Messages (2)
- Asthma Literacy Project Tools
  - Understanding Asthma Medicines (English, Spanish)
  - How to use a Spacer or a Spacer with Facemask (English, Spanish)



- Keeping a Symptom Diary, Child/Adult (English, Spanish)
- Understanding Asthma Triggers (English, Spanish)
- Asthma Friendly-Bedroom (Capital Region, NY)
- The Asthma Passport
  - Asthma Passport Power Point
  - The Asthma Passport (English)
  - The Asthma Passport Script (English)
  - The Asthma Passport (Spanish)
  - The Asthma Passport Script (Spanish)
- The Asthma Action Plan
  - Electronic Asthma Action Plan
  - Interactive Asthma Action Plan (IAAP)
  - Sample Action Plans (PACE)
- Advair Diskus Technique
- Link to Arizona Website for pictures of inhalers (inhaled corticosteroids and bronchodilators)
- Link to AANMA website to order posters of inhalers and other asthma tools

### Asthma Literacy Training for Volunteers and Lay Staff

- Health Literacy
- Asthma Basics

### Asthma Literacy Assessment Tools

- BEFOREthenAFTER Survey for staff assessment of patients
- Patient Survey and Phone follow-up

### Making the Business Case

- Documentation and Coding (PACE)
- NCQA Patient-Centered Medical Home
- Integrating Chronic Care and Business Strategies in the Safety Net
- Integrating Chronic Care Practice Coaching Manual
- The Healthcare of Business/Making the Business Case

### Asthma Screening Forms

- ACAAI (7 and under, 8-14, 15+)
- Brief Respiratory Questionnaire (Bonner Article, validation)

### Pre-Workshop Reading Materials

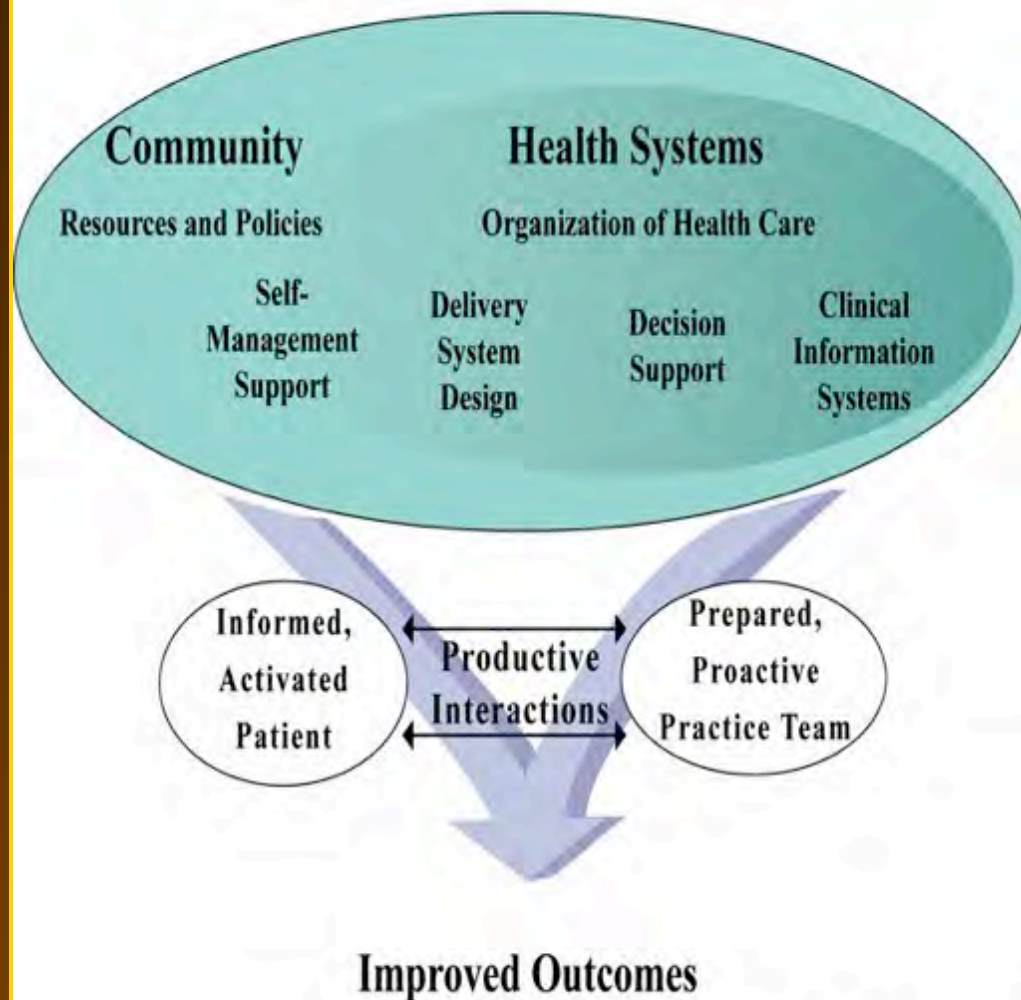
- MANAGING ASTHMA-CHI- Nov/Dec 2008
- The Improvement Guide (Table of Contents, Chapter One)
- Evidence-based change concepts of the Chronic Care Model (Chart)
- Integrating the Chronic Care Model (Patti Simino Boyce)

### Upcoming Due Dates

- Change Project Proposal (Example)
- Longterm Roadmap
- Upcoming Due Dates
- Project Proposal Worksheet (Due Oct 4<sup>th</sup>)
- Chronic Care Model Components Worksheet (Due Oct 4<sup>th</sup>)
- ACIC Survey Modified (Due Oct 4<sup>th</sup>)
- Monthly Reporting Template (First Report due Oct 15th for Sep Activities)

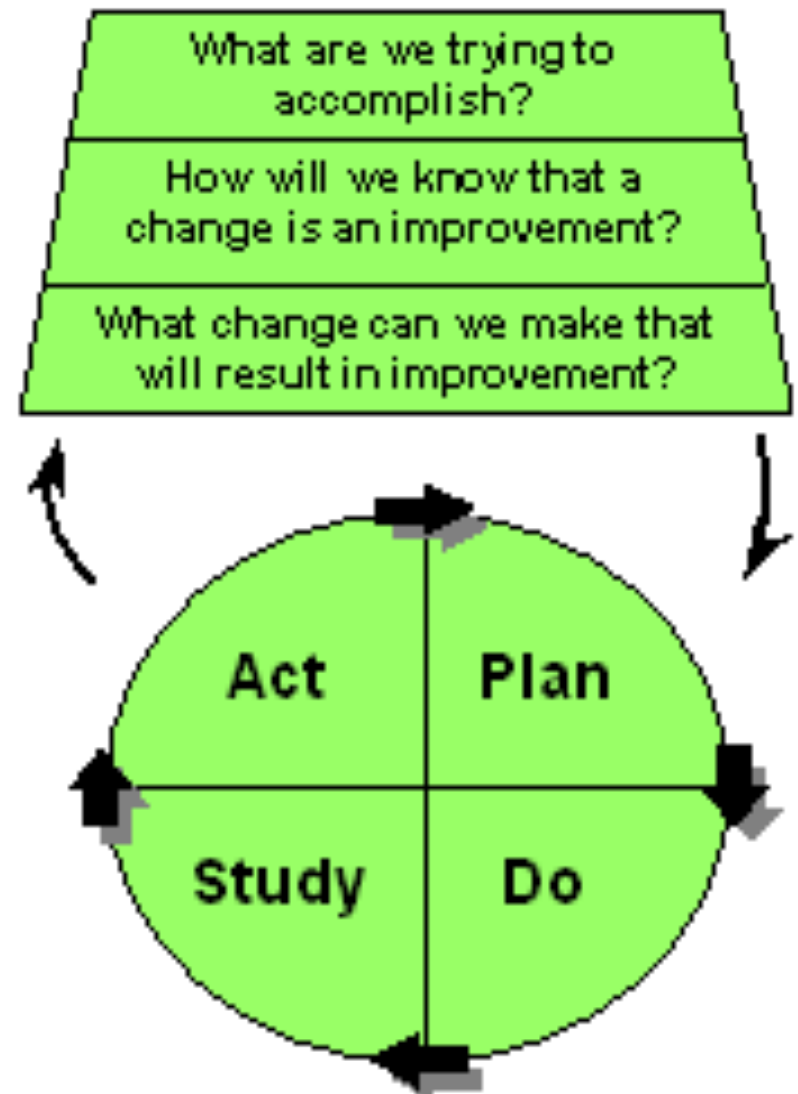


## The Chronic Care Model

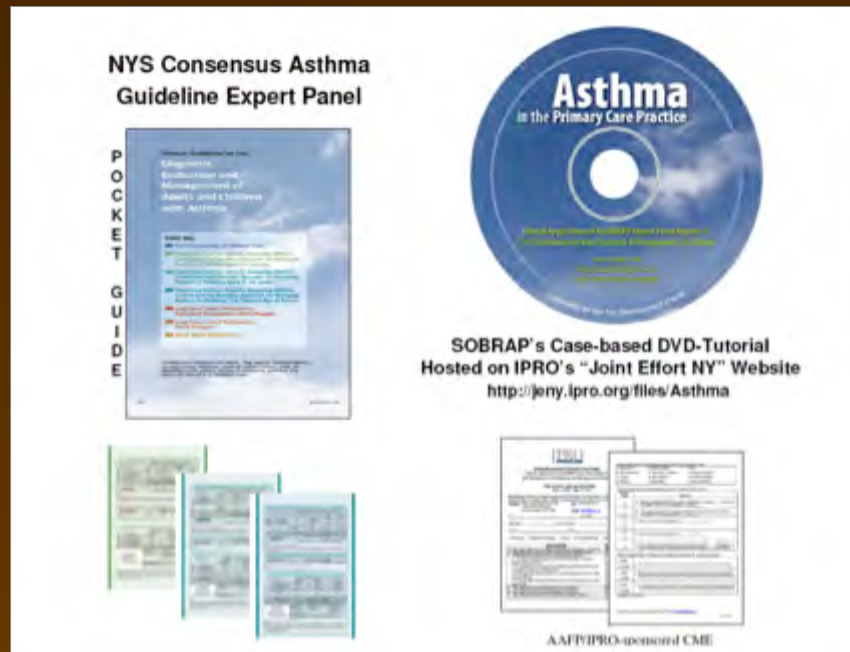


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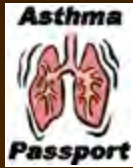
## The Model for Improvement



# Collective Impact of these 32 Champions



- 1,286 providers over the past six months
- 1,676 providers over the coming 12 months.



# Redesigning the Practice Delivery System

- Clinical Strategies
- Communication Strategies
- Systems-Improvement Strategies



*Model NHLBI funded NACI programs addressing disparities*

## Redesigning the Practice Delivery System







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