

SIM Pediatric Office Hours Practical Pediatric Asthma

JUNE 26, 2019



Housekeeping: Webinar Toolbar Features



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Open and close your control panel

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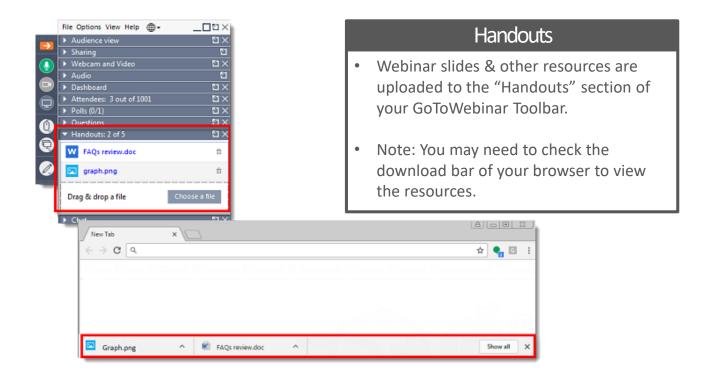
Submit questions and comments via the Questions panel

Note: If time allows, we will unmute participants to ask questions verbally.

 Please raise your hand to be unmuted for verbal questions.



Housekeeping: Webinar Resources/Handouts







Tisa Vorce RRT, MA

ASTHMA PREVENTION & CONTROL PROGRAM

MI DEPARTMENT OF HEALTH & HUMAN SERVICES



PCMH Initiative Introduction

KATIE COMMEY, MPH CARE DELIVERY LEAD LYNDSAY TYLER
PROJECT COORDINATOR

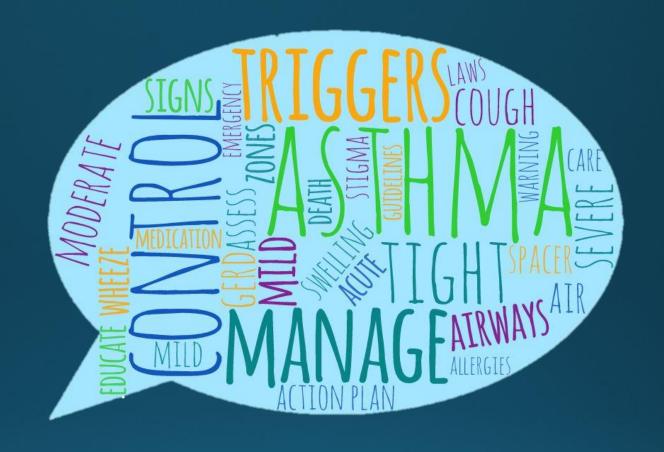
SIM Pediatric Office Hours: Practical Pediatric Asthma



June 26, 2019 Michigan Care Management Resource Center

Tisa Vorce RRT, MA
Asthma Prevention & Control Program
MI Department of Health & Human Services

Today



- Not too clinical
 Keeping it real and practical
- Focusing on elements of self-management
- Can't possibly cover everything

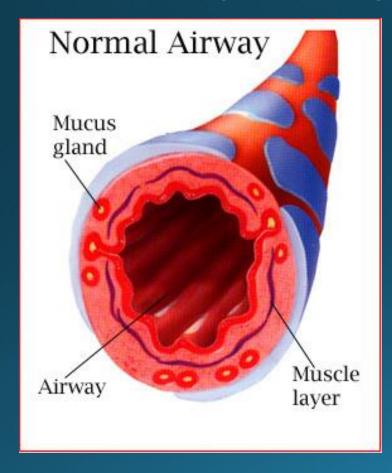
Michigan's Asthma Burden

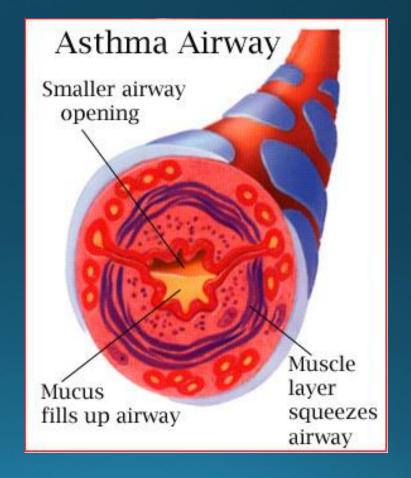
- 849,000 adults and 192,000 children with current asthma
- In children with asthma
 - o 15% had asthma symptoms on 9 or more days in the past month
 - 43% missed 1 or more
 days of school in the past
 12 months due to asthma
- Chippewa, Genesee, Saginaw, and Wayne Counties have hospitalization rates higher than the state average
- GetAsthmaHelp.org click on Resources/Data



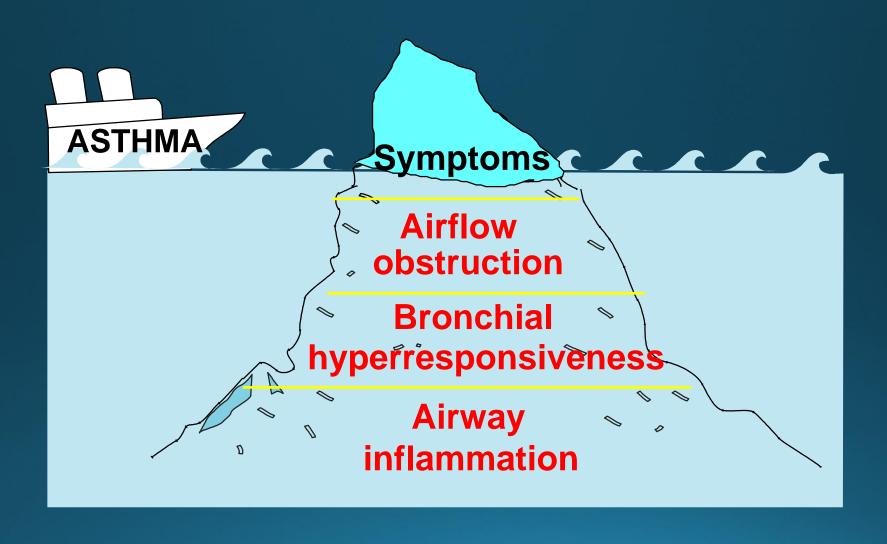
What is Asthma?

Asthma is a serious chronic disease of the lungs that is caused by swelling (inflammation) in the airways. There is no cure for asthma, and you can't outgrow it! It can go into "remission"...





The Tip of the Iceberg





ASTHMA DIAGNOSIS TOOL Consider the diagnosis of asthma if patient states any of the following:

Family history of asthma, allergies or eczema		Symptoms occur seasonally	0	Symptoms when near	chemicals,	dusts,	fumes at work
Symptoms worsened by URI lasting longer than	n te	n days, smoke, allergens or e	xen	cise			

AND SPIROMETRY DEMONSTRATES OBSTRUCTION AND/OR REVERSIBILITY BY AN INCREASE IN FEV1 OF 12% OR MORE AFTER BRONCHODILATOR. Rule out co-morbid conditions. If in doubt, consult with an asthma specialist.

HIGHEST LEVEL OF CHECKED BOX = SEVERITY LEVEL / FOLLOW SEVERITY LEVEL DOWN TO FIND TREATMENT STEP - SEE TREATMENT STEPWISE APPROACH

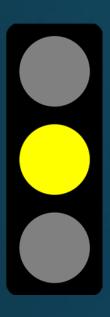
	INTERMITTENT	MILD PERSISTENT	MODERATE PERSISTENT	SEVERE PERSISTENT
IMPAIRMENT	SYMPTOMS: 2x/week or less NIGHTTIME AWAKENINGS: 2x/month or less INTERFERENCE W/NORMAL ACTIVITY: None SHORT-ACTING B2-AGONIST USE: 2 days/week or less LUNG FUNCTION: FEV1 more than 80% pred.	SYMPTOMS: More than 2x/week, not daily NIGHTTIME AWAKENINGS: More than 2x/month INTERFERENCE W/NORMAL ACTIVITY: Minor limitation SHORT-ACTING B2-AGONIST USE: More than 2 days/week but not daily or more than 1x/day LUNG FUNCTION: FEV1 more than 80% pred.	SYMPTOMS: Daily NIGHTTIME AWAKENINGS: About 1x/week, not nightly INTERFERENCE W/NORMAL ACTIVITY: Some limitation SHORT-ACTING B2-AGONIST USE: Daily LUNG FUNCTION: FEV1 60-80% pred.	SYMPTOMS: Throughout the day NIGHTTIME AWAKENINGS: More than 1x/week, often nightly INTERFERENCE W/NORMAL ACTIVITY: Extremely limited SHORT-ACTING B2-AGONIST USE: Several times/day LUNG FUNCTION: FEV1 less than 60% pred.
		C) 1211 more dian cost piece.		I.
RISK	EXACERBATIONS REQUIRING ORAL STEROIDS: All ages: 0-1/year	EXACERBATIONS REQUIRING ORAL STER Age 0-4: more than 2 in 6 months or m episodes/year lasting more than 1 day	OIDS: consider severity and interval since last ore than 4 wheezing All ages: more the patients in any severity category. • Prequency	an 2/year
5006	ORAL STEROIDS:	EXACERBATIONS REQUIRING ORAL STER Age 0-4: more than 2 in 6 months or m episodes/year lasting more than 1 day	ore than 4 wheezing	an 2/year
TREATMENT STEP RISK	ORAL STEROIDS:	EXACERBATIONS REQUIRING ORAL STER Age 0-4: more than 2 in 6 months or m episodes/year lasting more than 1 day	ore than 4 wheezing	an 2/year



Warning Signs

- ✓ Itchy chin
- ✓ A cough that doesn't go away, especially at night
- ✓ Itchy, scratchy, or sore throat
- ✓ Waking up at night
- ✓ Dark circles under eyes
- Runny, stuffy or congested nose
- ✓ Increased tiredness
- ✓ Mood change grouchy or extra quiet
- ✓ Thirst

- ✓ Itchy, glassy or watery eyes
- ✓ Rubbing nose a lot
- ✓ Sneezing
- ✓ Stomach ache
- ✓ Headache
- ✓ Feeling restless
- ✓ Change in face color pale or flushed
- ✓ Throat clearing
- ✓ Eczema flare-up



Symptoms

- ✓ Cough
- ✓ Wheeze
- ✓ Hard to breathe out

- ✓ Chest tight, hurts
- ✓ Breathing fast
- ✓ Get out of breath easily

Medical emergency!!

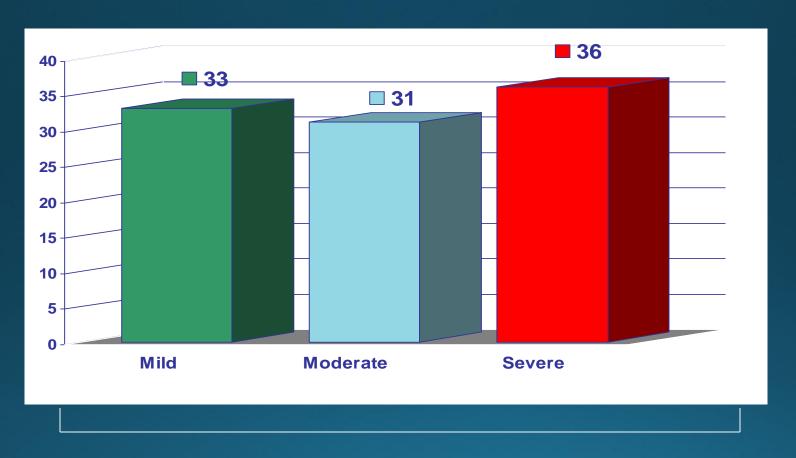


- ✓ Bluish, gray or dusky color to lips and nail beds
- ✓ Trouble walking
- ✓ Trouble talking, can't speak in whole sentences
- Skin between ribs or above breastbone sucks in when breathing

- ✓ Peak flow reading in the red zone
- ✓ Fast heartbeat
- ✓ Nostrils flare when breathing
- Quick-relief medications don't work

Pediatric & Adolescent Asthma Deaths:

33% of asthma-related fatalities occurred in patients classified as having MILD disease



Physician Assessment of Patient Asthma Severity

Rules of Two™

- Take your quick-relief inhaler more than two times a week?
- Awaken at night with asthma more than two times a month?
- Refill your quick-relief inhaler more than two times a year?

NOT CONTROLLED

Other Control Tests

- Asthma Control Test[™] (ACT [™])
- Test for Respiratory and Asthma Control in Kids™
 (TRACK™)

ACTTM

- Free to download www.asthma.com
- 4-11 and adult versions
- English & Spanish
- Score <19 means asthma isn't wellcontrolled

Childhood Asthma Control Test for children 4 to 11 years old. Know the score.

This test will provide a score that may help your doctor determine if your child's asthma treatment plan is working or if it might be time for a change.

How to take the Childhood Asthma Control Test

Step 1 Let your child respond to the first four questions (1 to 4). If your child needs help reading or understanding the question, you may help, but let your child select the response. Complete the remaining three questions (5 to 7) on your own and without letting your child's response influence your answers. There are no right or wrong answers.

Step 2 Write the number of each answer in the score box provided.

Step 3 Add up each score box for the total.

Step 4 Take the test to the doctor to talk about your child's total score.

If your child's score is 19 or less, it may be a sign that your child's asthma is not controlled as well as it could be. No matter what the score, bring this test to your doctor to talk about your child's results.

Have your child complete these questions.

1. How is your asthma today? 2. How much of a problem is your asthma when you run, exercise or play sports? It's not a problem. It's a big problem, I can't do what I want to do. It's a problem and I don't like it. It's a little problem but it's okay. 3. Do you cough because of your asthma? 4. Do you wake up during the night because of your asthma? Yes, all of the time. Yes, most of the time. Yes, some of the time No, none of the time Please complete the following questions on your own. 5. During the last 4 weeks, on average, how many days per month did your child have any daytime asthma symptoms? Not at all 1-3 days/mo 4-10 days/mo 11-18 days/mo 19-24 days/mo Everyday 6. During the last 4 weeks, on average, how many days per month did your child wheeze during the day because of asthma? Not at all 1-3 days/mo 4-10 days/mo 11-18 days/mo 19-24 days/mo 7. During the last 4 weeks, on average, how many days per month did your child wake up during the night because of asthma? Not at all 1-3 days/mo 4-10 days/mo 11-18 days/mo 19-24 days/mo Everyday Please turn this page over to see what your child's total score means.

TRACK™

- Google it from AAP and AAN
- For kids
 - <5 years old</p>
 - O Hx of ≥2 SOB or wheezing/cough episodes >24 hrs
 - Already diagnosed
 - English only
- Score <80 means asthma isn't well-controlled</p>

TRACK™ Test for Respiratory and Asthma Control in Kids

Who should use TRACK?

This simple test can help determine if your child's breathing problems are not under control.

The test was designed for children who

- Are under 5 years of age AND
- Have a history of 2 or more episodes of wheezing, shortness of breath, or cough lasting more than 24 hours AND
- Have been previously prescribed bronchodilator medicines, also known as quick-relief medications (eg, albuterol, Ventofin®, Proventil®, Maxair®, ProAir®, or Xopenex®), for respiratory problems
 OR have been diagnosed with asthma

For kids under 5 years of age

How to take TRACK

- Step 1: Make a check mark in the box below each of your selected answers.
- Step 2: Write the number of your answer in the score box provided to the right of each question.
- Step 3: Add up the numbers in the individual score boxes to obtain your child's total score.
- Step 4: Take the test to your child's health care provider to talk about your child's total TRACK score.

Score

t at all	Once or twice	Once every week	2 or 3 times a week	4 or more times a week
20	15	1 0	0 5	0
	st 4 weeks, how ofter breath) wake him or h		athing problems (whe	ezing, coughing,
ot at all	Once or twice	Once every week	2 or 3 times a week.	4 or more times a week
20	15	1 0	5	0
	ities that a child shoul Slightly	Moderately 10	Quite a lot	Extremely 0
lot at all 20 During the pa	Slightly 15 sst 3 months, how ofte	Moderately 10 an did you need to tre	Quite a lot 5	0 ning problems
ot at all 20 Ouring the pay	Slightly	Moderately 10 an did you need to tre breath) with quick-rel	Quite a lot 5 at your child's breath	0 ning problems
ot at all 20 Ouring the pay wheezing, co	Slightly 15 sst 3 months, how after	Moderately 10 an did you need to tre breath) with quick-rel	Quite a lot 5 at your child's breath	0 ning problems
ot at all 20 Ouring the pay wheezing, co	Slightly 15 15 ast 3 months, how often	Moderately 10 en did you need to tre breath) with quick-rel ex*, or Primatene* N	Quite a lot 5 at your child's breath lef medications (albu Aist)?	ning problems terol, Ventolin®,
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out at all 20 During the payment of	Slightly 15 sst 3 months, how ofte bughing, shortness of laxair*, ProAir*, Xoper Once or twice 15 sst 12 months, how of prednisolone, Orapred	Moderately 10 an did you need to tre breath) with quick-rel ex*, or Primatene* N Coca every week 10 ten did your child nee *, Prelone*, or Decar	Quite a lot 5 at your child's breath lef medications (albu Alst)? 2 or 3 times a week 5 at to take oral cortico	ing problems terol, Ventolin®, 4 or more times a week 0

Please see reverse side for an explanation of what your child's total TRACK score means.

Control Medications + Trigger Avoidance



Control – Medications

Medications

- Long Term Controllers
 - Must be taken every day in order to work. Keeps breathing tubes from swelling, prevents symptoms
- Rescue or Quick-relief
 - Relaxes the muscles around breathing tubes, should help for about 4 hours. If needed more than 2 times per week, or refilled more than 2 times per year asthma is not under control
- Oral steroids
 - Many side effects, should be avoided if possible

Control – Trigger Avoidance

Common triggers	Avoidance strategies
Pollen ————	Watch pollen count/AC
Dust mites —————	Mattress/pillow encasements
Animals	Don't sleep with furry pets
Cockroaches	Keep food sealed up
Molds —————	Use bathroom/kitchen fans
Tobacco smoke	No smoking in house/car
Strong odors/sprays	Use non-toxic cleaners
Colds/infections	Flu shot, handwashing
Exercise ————	Pre-treat with rescue inhaler
Work-related ————	Change work environment/avoid
	trigger
Stress*	Get help!

NAEPP – EPR-3

Impairment & Risk

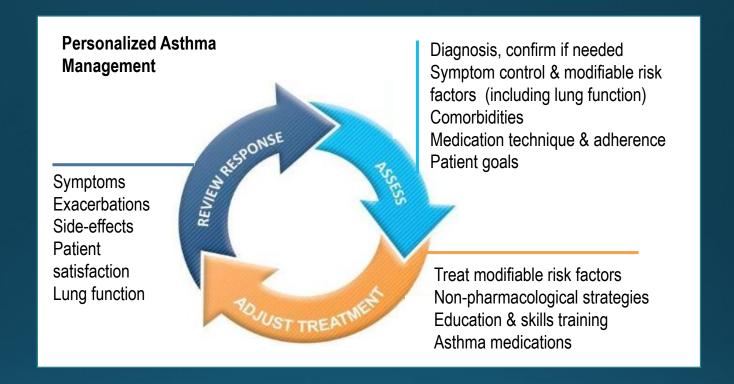
- Symptoms nighttime awakenings, SABA use, QoL
- Exacerbations OCS, ED/hospitalizations

Goals of Therapy

- Reduce impairment and risk
- Patient and family goals!
 - Play whole game of soccer
 - Miss less school parents miss less work
 - Play outside with friends
 - Travel to see grandparents
 - Sing without coughing

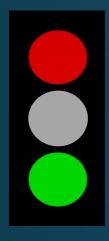
Gain & Keep Control

GINA2019



- ACAAI Yardsticks freely available online!
 - Adult Step up Therapy (2017)
 - Pediatric Step-up Therapy (2018)
 - Step-down Therapy (2019)

Asthma Action Plan



- Green Zone treatment working!
 - o Controller meds (asthma, allergy, GERD)
 - Exercise pre-treatment if needed
- Red Zone treatment really not working!
 - o Emergency meds, get help!

Tricky Yellow Zone

- If impending exacerbation is not recognized and treated, could progress to severe exacerbation, including ED visit, hospitalization, even death
- If instructed to take OCSs and seek medical attention at first sign of loss of control, over-treatment likely

Yellow Zone- What Are Patients/Caregivers Actually Doing?

- Freaking out?
- Dismissing symptoms?
- May be adjusting medications on their own
 - Trying to match dosing to symptom severity
 - Often without direction and inappropriately
- Our goal targeted approach
 - Recognize signs early & treat
 - Minimal side effects & disruption to QOL





Contents lists available at ScienceDirect



Practice Parameter

Management of acute loss of asthma control in the yellow zone: a practice parameter



Chitra Dinakar, MD; John Oppenheimer, MD; Jay Portnoy, MD; Leonard B. Bacharier, MD; James Li, MD; Carolyn M. Kercsmar, MD; David Bernstein, MD; Joann Blessing-Moore, MD; David Khan, MD; David Lang, MD; Richard Nicklas, MD; Christopher Randolph, MD; Diane Schuller, MD; Sheldon Spector, MD; Stephen A. Tilles, MD; and Dana Wallace, MD

Chief Editors: Chitra Dinakar, MD; John Oppenheimer, MD; Jay Portnoy, MD

Members of the Joint Task Force on Practice Parameters: David Bernstein, MD; Joann Blessing-Moore, MD; David Khan, MD; David Lang, MD; Richard Nicklas, MD; John Oppenheimer, MD; Jay Portnoy, MD; Christopher Randolph, MD; Diane Schuller, MD; Sheldon Spector, MD; Stephen A. Tilles, MD; Dana Wallace, MD

Practice Parameter Workgroup: Chitra Dinakar, MD; John Oppenheimer, MD; Jay Portnoy, MD; Leonard Bacharier, MD; James Li, MD; Carolyn Kercsmar, MD

Tricky Yellow Zone

- Step 1: Assess for acute loss of asthma control
 - Early warning signs
 - First sign of URI
- Step 2: Use quick-relief medicine/SABA
 - Usually 2-4 puffs every 4-6 hours as needed
 - Can be every 20 minutes up to 1 hour (3 doses)
 - If use exceeds 12 puffs/day (or 8 puffs/day in young children), contact provider
 - In mild-to-moderate exacerbations, inhaler/spacer as good as nebulizer with appropriate technique and coaching by trained personnel
 - SABA as sole treatment discouraged because it does not consistently prevent progression to Red Zone and may <u>increase</u> risk of progression... so

Tricky Yellow Zone

- Step 3: Add or escalate controller meds
 - o If not on ICS, add med-high dose ICS for 1-2 weeks
 - o If already on ICS, increase triple or quadruple dose
- Step 4: Can proceed to oral steroids if not improving

Isn't that a lot of inhaled steroid??

Inhaled Steroid	Systemic Steroid (oral or IV)
Micrograms	Milligrams
1000 micrograms (mcg)	1 milligram (mg)
Moderate dose ICS baseline ~500 mcg/day	Typical systemic steroids dosed 2 mg/kg/day
500 mcg x 4 (quadruple dose) = 2000 mcg = 2 mg	70 lb = 31 kg x 2mg = max <mark>60 mg</mark>

e-Asthma Action Plans

New e-AAPs – 3 versions Easy-to-use fillable PDF plans feature age-appropriate medications and doses in drop down menus for asthma, GERD and allergy medications

- Adult (12+ years old)
- Student (5-18 years old) options for permission to selfcarry and administer inhalers at school, and to share the AAP
- o-4 years old parents can give permission to administer meds at school or daycare

			1-4/02/50/02/50	na Action Plai (0 - 4 years old	d) www.G	AIM ASTHMA METASTHMAHOLD. etAsthmaHelp. Is free to downloar	
Child's Name			Age	Birth Date	Today Date	's	
Parent/ Guardian			Doctor		Phone		
Phone	Phone		Specialist		Phone		
GO! (GREEN Zone)	Use th	ese controller me	dicines every	day			
Child has ALL of these:	As	thma, Allergy and GERI	D/Acid Reflux Medi	cines I	low much to take	& when to take	it
→ Breathing is good							
 No cough or wheeze 				•			
✓ Sleeps through ✓	λ						-
the night Able to play	<i>-</i>						Ī
, vibic to bid)							-
a. A				<u> </u>			
	-						
WATCH OUT! (YELL	OW Zon	e) Keep using G	reen Zone med	dicines and AD	D this quick-ı	relief medic	ine
Child has ANY of these:		Asthma Re	scue Medicine	,	low much to take	& when to take	it
→ First sign of a cold	First:	1000 1000 10		•	036		- 1
 Trouble playing 		May repeat treatm	ent every 20 m	ninutes, if neede	ed.		
✓ Exposure to	Next:	If not breathing be				RED ZONE.	
✓ Exposure to known trigger ✓ Cough	Next:	•	etter after 2 trea	tments, 20 minut	es apart, GO TC		ıc
known trigger	805,4130	If breathing better	etter after 2 trea r, take treatment	tments, 20 minut ts every 4 to 6 ho	es apart, GO TC urs as needed f	or up to 2 day	rs.
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Learn more at GetAsthmaHelp.org/actionplans

Education with AAP

- Review Green, Yellow and Red Zones
 - Trigger section if available
 - Sharing AAP section if available
 - Spend lots of time in Tricky Yellow
 - Teach back
- Tricky Yellow
 - Ask situational questions: "What would you do if..." or "How will you decide if s/he can go to school?"
 - Teach back
- When does your office want them to call in?
- Permission to self-carry MDI in school
 - All schools should participate it's the law
 - Need parent, school and provider permission

Medications & Devices

So many!

- Do you know how to use them all and teach them all?
 - COPD Foundation has great videos
- Best to teach with their own meds & devices
- Check inspiratory effort with In-Check Dial, and just watch them breathe
- Few reasons to use nebulizer anymore



But I only get 15 min!

At Check-in:

- Asthma Intake
 Form (SABA
 use, day/night
 symptoms, ED
 visits & admits)
- о АСТтм
- PFT, FeNo, peak flow

*Find form templates and other resources at GetAsthmaHelp.org/15 Review Check-in Materials & Assess Control: ACT™, breathing tests, impairment MINUTES · Risk: number of ED visits, hospitalizations, Tx Plan & Educate systemic steroids in past 12 months Choose or adjust · How often control & rescue medications medications based on are taken step therapy approach · Barriers to self-management Review rescue vs. controller medications & device technique -11 refills for controllers MINUTES 1 refill for rescue meds **Physical Exam** Give trigger guidance & update flu vaccine May be normal Troubleshoot self-management barriers · Look for signs of allergy and · Create and review asthma action plan, including eczema when to call the doctor - patient repeats back Complete school permission to carry medication form, if needed · Set goals and decide on a follow-up visit based on control/medication plan

Adherence vs. Compliance

Adherence is an active choice of patients to follow through with the prescribed treatment.

Compliance is a passive behavior in which a patient is following a list of instructions from the doctor.

- Patients live in the Real World
 - Nobody is perfect
 - Many patients have challenging barriers
- How can we help overcome barriers to adherence?
 - Listen, listen, listen
 - Motivational Interviewing
 - Know/recommend local resources

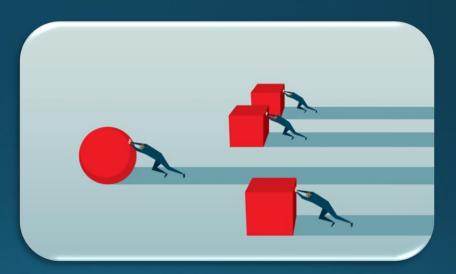
Poll #1

What barriers do you see to medication adherence in your practice?

- A. Transportation to pharmacy
- B. Only take medications for symptoms
- C. Cost of prescriptions
- D. Hard to remember every day
- E. All of the above!

Common Self-management Barriers

- Chronic vs. acute
- Partnership with provider/asthma educator
 - Poor communication between pt and provider/AE
 - Inconsistent messages
- Competing priorities
 - Behavioral health
 - Legal, housing
 - Food insecurity
 - Other health concerns
- Medication Issues
 - Beliefs (unsafe, side effects, dependence)
 - Getting it (cost, transportation)
 - Taking it (remembering, deciding not to, devices)



Motivational Interviewing Case study

You see Jordie, a 7 year old boy with poorly controlled asthma in clinic. He has been to the ED 2 times in the past 6 months for asthma. He was prescribed ICS twice daily a month ago. During a follow-up visit his mom tells you that she stopped the ICS because the symptoms resolved.

Clarify: "What do you remember about the instructions for Jordie's asthma medicine? Do you have any concerns about it? Tell me what you know about steroids."

You learn: Mom does remember that she was told to continue the medication even after he was breathing better but she stopped because she "doesn't like giving them to him." When asked why: "I just don't like it!"

Motivational Interviewing (cont'd)

Sensing discord, empathize and summarize: "It sounds like lots of us have been telling you what you should do, and not listening to what <u>you</u> would like to do for Jordie."

Empower: "Of course you know, it's up to you what you would like to do with his care- you're his mom."

Elicit-Provide-Elicit Mode

Elicit: "Sometimes people have concerns about steroids. If you're interested..."

Provide: "... some of our patients find this handout about the kind of steroids used for asthma helpful."

Elicit: "Would you like to learn more?"



Poll #2

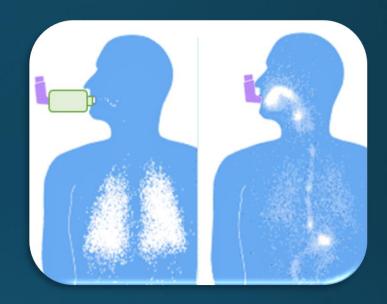
What tools or resources do you need to be a better asthma educator?

- A. Fact sheets for patients
- B. More time with asthma patients
- C. More support from my practice
- D. Education about medications/devices
- E. All of the above!

Spacers/Valved-holding Chambers

- For everyone with asthma
- Use with metered dose inhalers
- Improved medication delivery
- Life-saving!

Medicaid Managed Plan Members



- Up to 4 spacers/valved-holding chambers per year <u>at the</u> <u>pharmacy</u>, no prior auth needed
- Many spacers (and masks) are included on the Medicaid common formulary

Learn more at GetAsthmaHelp.org/spacers

Managing Asthma Through Case Management in Homes (MATCH)

- Intensive case management for adults and children
 - o ≥ 3 home visits

 - ≥ 1 physician care conferences (joint visit with patient, primary care provider, and case manager)
 - ≥ 1 school/daycare as appropriate, work visit if requested by client, with case-manager
 - Case manager providing service is AE-C, usually RN or RT
- Many health plans provide this as a benefit to their clients
- Reduced: ED visits and hospitalizations, need for quick relief meds & oral steroids, missed school/work days
- Counties: Wayne/Macomb/Oakland, Ingham, Kent+, Genesee+
- www.GetAsthmaHelp.org/MATCH

Certified Asthma Educator (AE-C)

An asthma educator is an expert in counseling individuals with asthma and their families how to manage their asthma and to minimize its impact on their quality of life. www.naecb.org

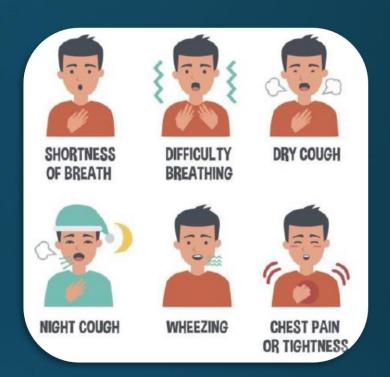
- Over 200 AE-Cs in Michigan
- AE-C Exam
 - o 1000 hours experience, license/credential needed
 - 175 multiple choice questions, 3.5 hours allowed
 - \$350 fee for new candidates
 - o Good for 7 years, 5 if renewing with CE credits
 - \$350 scholarships awarded to 8 candidates yearly
- National pass rate 66%

Resources

- www.GetAsthmaHelp.org Guidelines-based patient, clinician and practice information
- Demo devices check with manufacturer, MDI inhaler at www.pocketnurse.com
- How to use (almost all) med/device COPD Foundation Inhaler Training Videos
- Medication posters
 - Allergy & Asthma Network (\$)
 - Minnesota Asthma Program (download/print for free)
- Asthma News listserv weekly digest of news, research and opportunities (email Tisa to be added)
- Asthma Educator Sharing Day Oct. 18, Lansing
 - For anyone who does asthma education, free, CEUs
 - Agenda: Obesity, COPD, Devices, Case Studies, Vit D

Final thoughts...

- Children shouldn't manage their own asthma – it's too serious and complicated
 - Asthma Mortality Review Project: children get up at night, start nebulizer treatment and die- while parents slept nearby



- Easy to assume child is taking his/her medications, taking them correctly
- Strong link between ACEs and asthma: 1 ACE increases odds of developing asthma by 28%, 4 ACEs by 73%
 - "Stress should be viewed as a risk factor for asthma development and asthma exacerbations, much like tobacco smoke and dust mites." Dr. Robyn Wing

Questions?

Tisa Vorce MA, RRT
Michigan Department of Health & Human Services

Phone: 517.335.9463 Email: VorceT@michigan.gov

www.GetAsthmaHelp.org