



ACEs LA

Lunch and Learn

Asthma and Managing the Social and Psychological Components of Asthma Management

March 19, 2025

Agenda

- *Introduction*
- *Sande Okelo MD, PhD*
- *Q&A Session*
- *Closing Statements*

Sande Okelo, MD, PhD



BS, Stanford University
MD, Case Western

PhD, John's Hopkins University
Pediatrics : Children's Hospital Oakland
Pediatric Pulmonary : Johns Hopkins

- Division Chief Pediatric Pulmonology, UCLA
 - Pediatric Asthma Center x10 years
 - Asthma Specialist Clinic x20 years
 - Develop clinical asthma tools 40+ pubs
- As a pediatric pulmonologist and researcher, Dr. Okelo is interested in improving asthma care for children, particularly those children at risk for poor care and poor asthma outcomes. He has developed an asthma specialist clinic for children. The clinic incorporates clinical care, patient education and clinical research. Dr. Okelo's research interests include physician decision-making regarding asthma treatment to the development of strategies to improve asthma care.

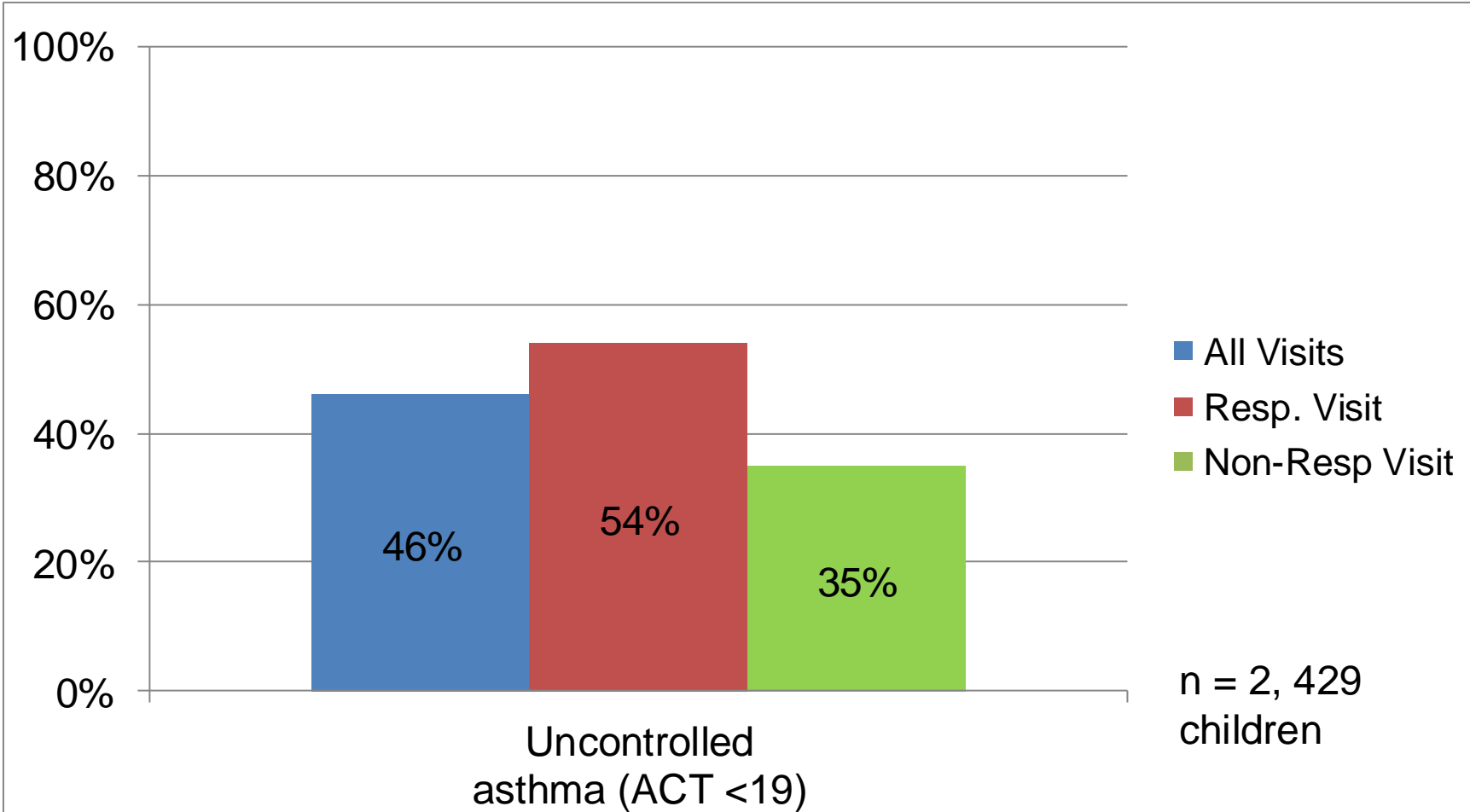
Outline

1. Asthma statistics & diagnosis
2. Intro to Asthma Guidelines
3. Using a validated asthma survey to guide treatment
4. Social considerations: the home environment
5. Discussion/Questions

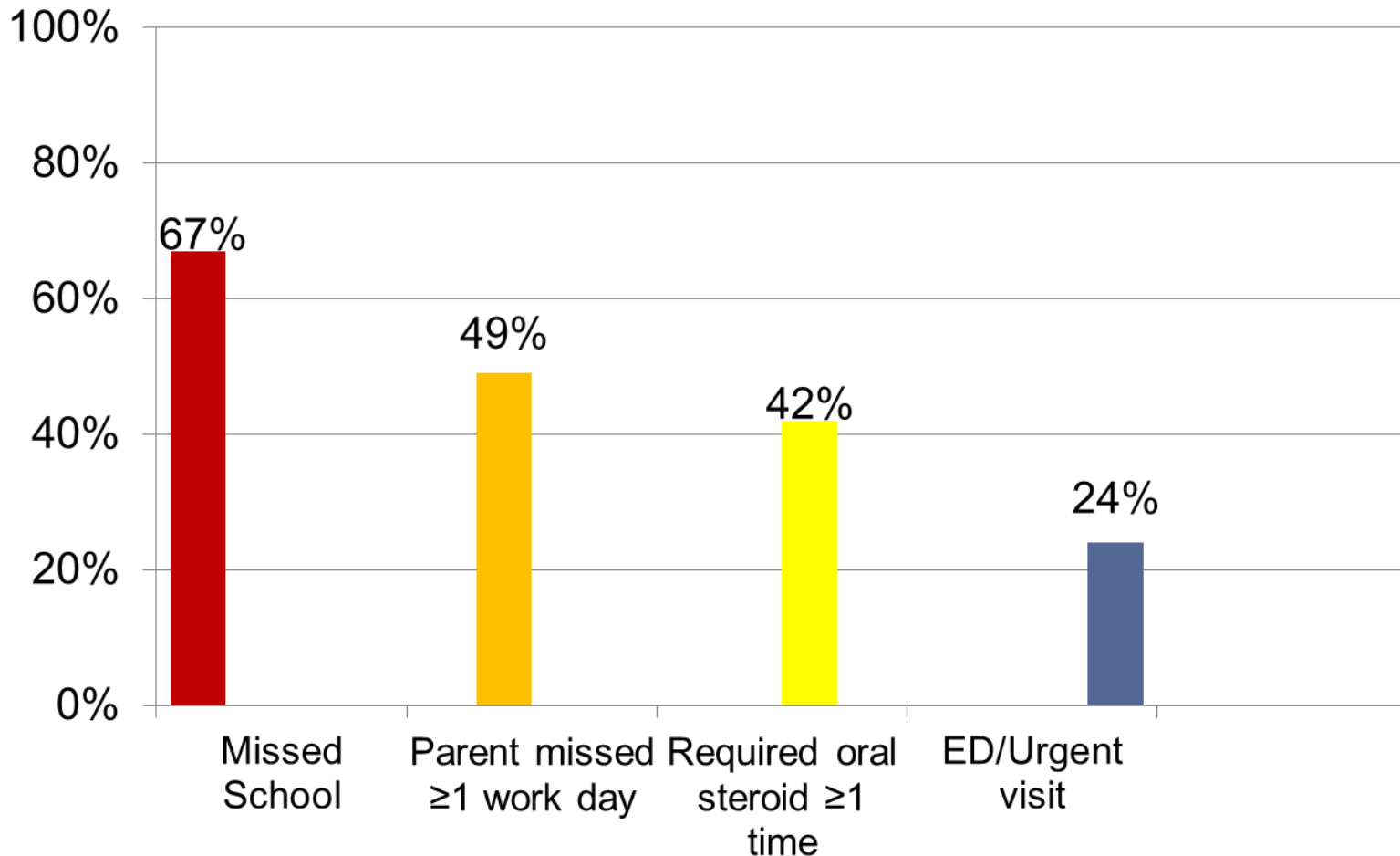
ASTHMA IN THE U.S.

- 25 million affected
 - 5 million children
 - 1 million in CA
 - 200K in LA County
 - 63K in LAUSD
- 60% miss school (#1 cause)
 - \$0.5 - \$1 billion
 - \$80 per missed school day per child (LAUSDE)
 - \$3+ million/year
- 2,000, 000 ED visits
 - 800, 000 peds
- 400, 000 hospitalizations
 - 200,000 peds
- \$20+ billion/year
 - \$5 billion peds

Uncontrolled asthma common in primary care visits



High morbidity for those with uncontrolled asthma



Diagnosis

To establish a diagnosis of asthma, determine that:

- Asthma-like symptoms are recurring
 - Cough
 - Wheeze
 - Chest pain/tightness
 - Shortness of breath (exertional)
 - Decreased stamina
 - (especially with URIs, exercise and/or at night)
- Symptoms improve with asthma medicines
 - ↓sx duration, frequency and/or intensity
 - meds: adequate dose, duration and technique
- Alternative diagnoses are excluded
 - Habit cough; GERD; vocal cord dysfunction

AGE IS NOT A
CRITERION!

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NIH Asthma Guidelines: Expert Panel Reports: Systematic Review of Evidence + Expert Opinion





SHORT-ACTING BETA₂-AGONIST BRONCHODILATORS

relax tight muscles in airways and offer quick relief of symptoms such as coughing, wheezing and shortness of breath for 3-6 hours

ProAir® Digihaler™ 117 mcg albuterol sulfate 123 A	ProAir® HFA 100 mcg albuterol sulfate 123 A G	ProAir® RespiClick® 117 mcg albuterol sulfate inhalation powder 123 A	Proventil® HFA 120 mcg albuterol sulfate 123 A	Ventolin® HFA 90 mcg albuterol sulfate 123 A G	Xopenex HFA® 59 mcg levalbuterol tartrate A G
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LONG-ACTING BETA₂-AGONIST BRONCHODILATORS

relax tight muscles in airways and offer lasting relief of symptoms such as coughing, wheezing and shortness of breath for at least 12 hours

Arcapta™ Neohaler™ 75 mcg indacaterol inhalation powder C	Serevent® Diskus® 50 mcg salmeterol xinafoate inhalation powder 123 A C	Striverdi® RespiMat® 2.5 mcg olodaterol hydrochloride 123 C
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INHALED CORTICOSTEROIDS

reduce and prevent swelling of airway tissue; they do not relieve sudden symptoms of coughing, wheezing or shortness of breath

Alvesco® HFA 80, 160 mcg ciclesonide 123 A	ArmonAir™ RespiClick® 55, 113, 232 mcg fluticasone propionate inhalation powder 123 A	Arnuity® Ellipta® 100, 200 mcg fluticasone furoate inhalation powder 123 A	Asmanex® HFA 100, 200 mcg mometasone furoate 123 A	Asmanex® Twisthaler® 110, 220 mcg mometasone furoate inhalation powder 123 A	Flovent® Diskus® 50, 100, 250 mcg fluticasone propionate inhalation powder 123 A	Flovent® HFA 44, 110, 220 mcg fluticasone propionate 123 A	Pulmicort Flexhaler® 90, 180 mcg budesonide inhalation powder 123 A	QVAR® Redihaler™ 40, 80 mcg beclomethasone dipropionate 123 A
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COMBINATION MEDICATIONS

contain both inhaled corticosteroid and long-acting beta₂-agonist (LABA)

Advair Diskus® 100/50, 250/50, 500/50 mcg fluticasone propionate and salmeterol inhalation powder 123 A C G	Advair® HFA 45/21, 115/21, 232/21 mcg fluticasone propionate and salmeterol inhalation powder 123 A G	AirDuo™ RespiClick® 55/14, 113/14, 232/14 mcg fluticasone propionate and salmeterol inhalation powder 123 A G	Breo® Ellipta® 100/25, 200/25 mcg fluticasone furoate and vilanterol inhalation powder 123 A C	Dulera® 100/5, 200/5 mcg mometasone furoate and formoterol fumarate dihydrate 123 A	Symbicort® 80/4.5, 160/4.5 mcg budesonide and formoterol fumarate dihydrate 123 A C	Wixela™ Inhub™ 100/50, 250/50, 500/50 mcg fluticasone propionate and salmeterol xinafoate 123 A C
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contain both long-acting beta₂-agonist (LABA) and long-acting muscarinic antagonist (LAMA)

Anoro® Ellipta® 62.5/25 mcg umecidinium and vilanterol inhalation powder 123 C	Bevespi Aerosphere® 9/4.8 mcg glycopyrrolate and formoterol fumarate 123 C	Stiolto™ RespiMat® 2.5/2.5 mcg tiotropium bromide and olodaterol 123 C	Utibron™ Neohaler® 27.5/15.6 mcg indacaterol and glycopyrrolate inhalation powder C	Trelegy® Ellipta® 100/62.5/25 mcg fluticasone furoate, umecidinium and vilanterol inhalation powder 123 C
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MUSCARINIC ANTAGONIST (ANTICHOLINERGIC)

relieve cough, sputum production, wheeze and chest tightness associated with chronic lung diseases

Short-acting Atrovent® HFA 17 mcg ipratropium bromide 123 C	Long-acting Incruse® Ellipta® 62.5 mcg umecidinium inhalation powder 123 C	Seebri™ Neohaler® 15.8 mcg glycopyrrolate inhalation powder C	Spiriva® HandiHaler® 18 mcg tiotropium bromide inhalation powder C	Spiriva® RespiMat® 1.25 mcg tiotropium bromide 123 A C	Tudorza™ Pressair™ 400 mcg acclidinium bromide inhalation powder 123 C
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COMBINATION

muscarinic antagonist and beta₂-agonist

Short-acting Combivent® RespiMat® 20/100 mcg ipratropium bromide and albuterol 123 C

BIOLOGICS

target cells and pathways that cause airway inflammation, delivered by injection or IV

Cinqair® reslizumab A	Dupixent® dupilumab A	Fasenra™ benralizumab A	Nucala® mepolizumab A	Xolair® omalizumab A
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BRONCHIAL THERMOPLASTY

A minimally invasive procedure that uses mild heat to reduce airway smooth muscle, leading to fewer severe asthma flares, ER visits, and days lost from activities.
www.btforasthma.com



PDE4 INHIBITORS

ease lung inflammation and reduce exacerbations

Daliresp® 250, 500 mcg roflumilast C

Outline

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Pediatric Asthma Control & Communication Instrument

Asthma Symptoms

7. Over the **past week**, how many days has your child had asthma symptoms? For example:

- Cough
- Chest tightness
- Shortness of breath
- Sputum (spit, mucous, phlegm when coughing)
- Difficulty taking a deep breath
- Wheezy or whistling sound in the chest



Reliever use

8. Over the **past week**, how many days have you had to give your child medicine to quickly relieve asthma symptoms? For example:

- Albuterol
- Inhaler
- Spray
- Pump
- Machine
- Nebulizer



Attacks

9. Over the **past week**, how many days did your child have an asthma attack? For example:

- When it is harder for your child to breathe
- When you give your child more asthma medicine
- When the asthma medicine does not work



Activity Limitation

10. Over the **past week**, how much has asthma limited your child's activities?



Nighttime Symptoms

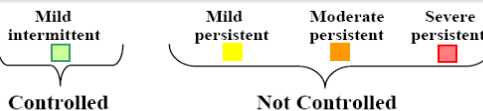
11. Now for this question, please answer about the **past 2 weeks**.

How many nights did **your child's asthma** keep your child from sleeping or wake him/her up in the **past 2 weeks**?







































For clinician use only – Asthma Control Assignment

Assign patient's current level of asthma control by looking at box checked farthest to the right on questions 7-11 and match color of this box to level of asthma control in this section and circle and/or document in patient's chart



Pediatric Asthma Control & Communication Instrument

Asthma Symptoms													
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Controlled		Not Controlled											

Patient and/or Parent
Completes in
Waiting/Exam Room

Complete at every
encounter

Clinic, Urgent Care,
ED, Hospital

Enlist team members
to use systematically

Lack of use risks
inaccurate estimation
of asthma control/
severity

If unable to use,
consider lower
threshold for
specialist referral

Use to drive care

When to start Rescue Medication?

Pediatric Asthma Control & Communication Instrument

		Asthma Symptoms															
7. Over the past week , how many days has your child had asthma symptoms? For example:	0	1-	3-6	Every day (not all day long)	Every day (all day long)												
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
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Controlled		Not Controlled															

Follow-up in 2-6 wks to confirm asthma is controlled

When to Follow-up?

Pediatric Asthma Control & Communication Instrument

	Asthma Symptoms				
<p>7. Over the past week, how many days has your child had asthma symptoms? For example:</p> <ul style="list-style-type: none"> ▪ Cough ▪ Chest tightness ▪ Shortness of breath ▪ Sputum (spit, mucous, phlegm when coughing) ▪ Difficulty taking a deep breath ▪ Wheezy or whistling sound in the chest 	0	1-	3-6	Every day (not all day long)	Every day (all day long)
Reliever use					
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	Controlled		Not Controlled		

Follow-up in 2-6 wks to confirm asthma is controlled

Follow-up in 2 – 3 months to confirm asthma remains controlled

When to start Daily Controller Medications?

Pediatric Asthma Control & Communication Instrument

		Asthma Symptoms				
7. Over the past week , how many days has your child had asthma symptoms? For example:	0	1-2	3-6	Every day (not all day long)	Every day (all day long)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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Follow-up in 2-6 wks to confirm asthma is controlled

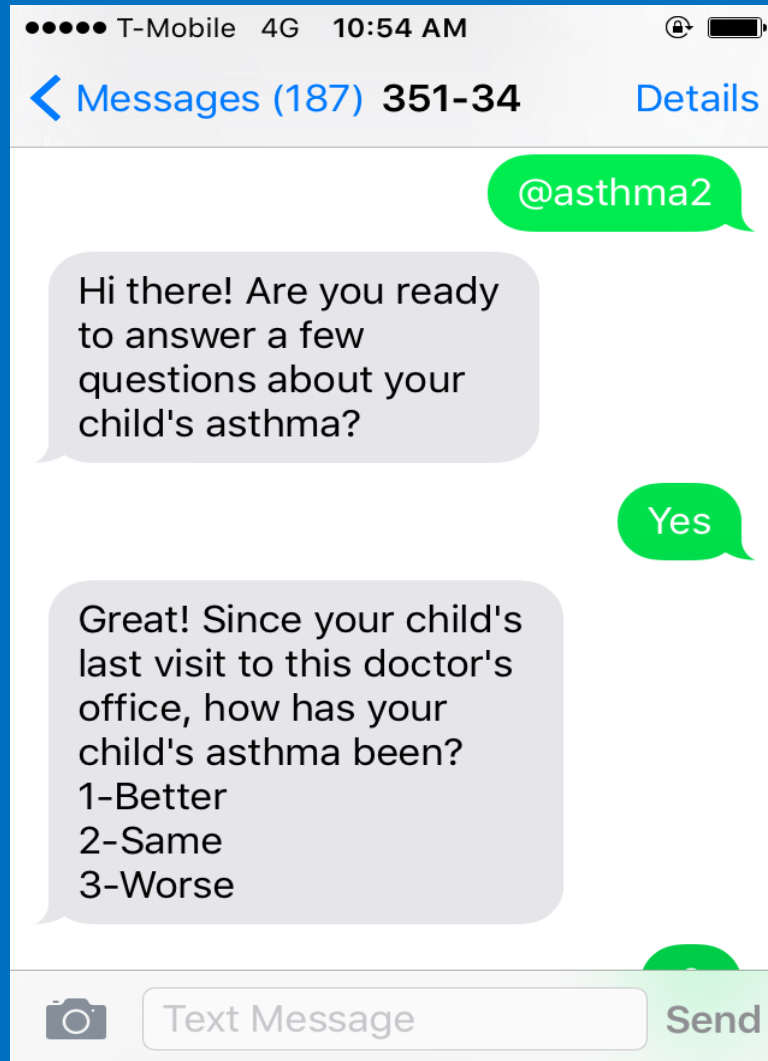
When to start oral steroids?

Pediatric Asthma Control & Communication Instrument

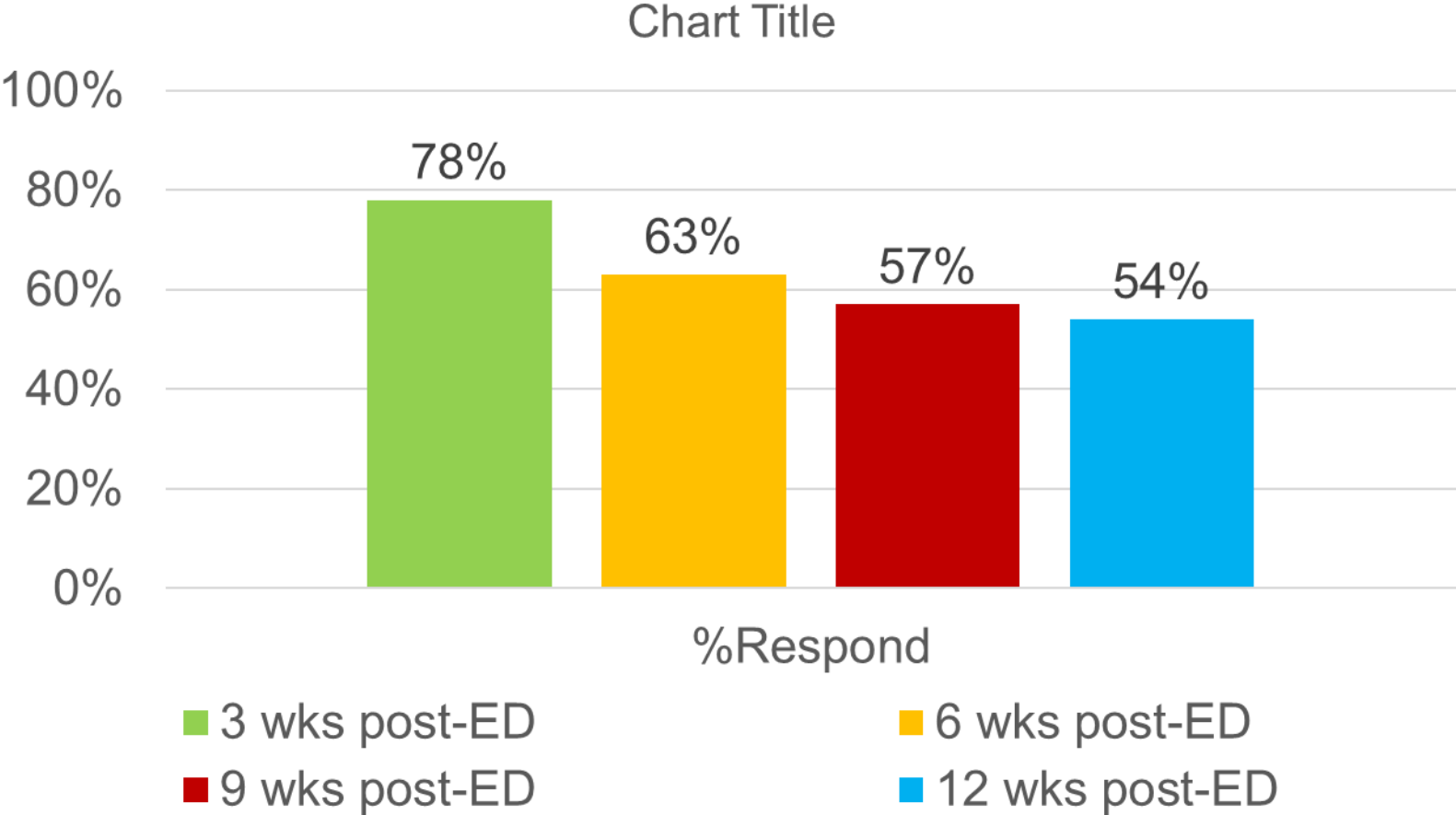
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Follow-up in 2-6 wks to confirm asthma is controlled

Text Messaging the PACCI: 1 month after ED visit



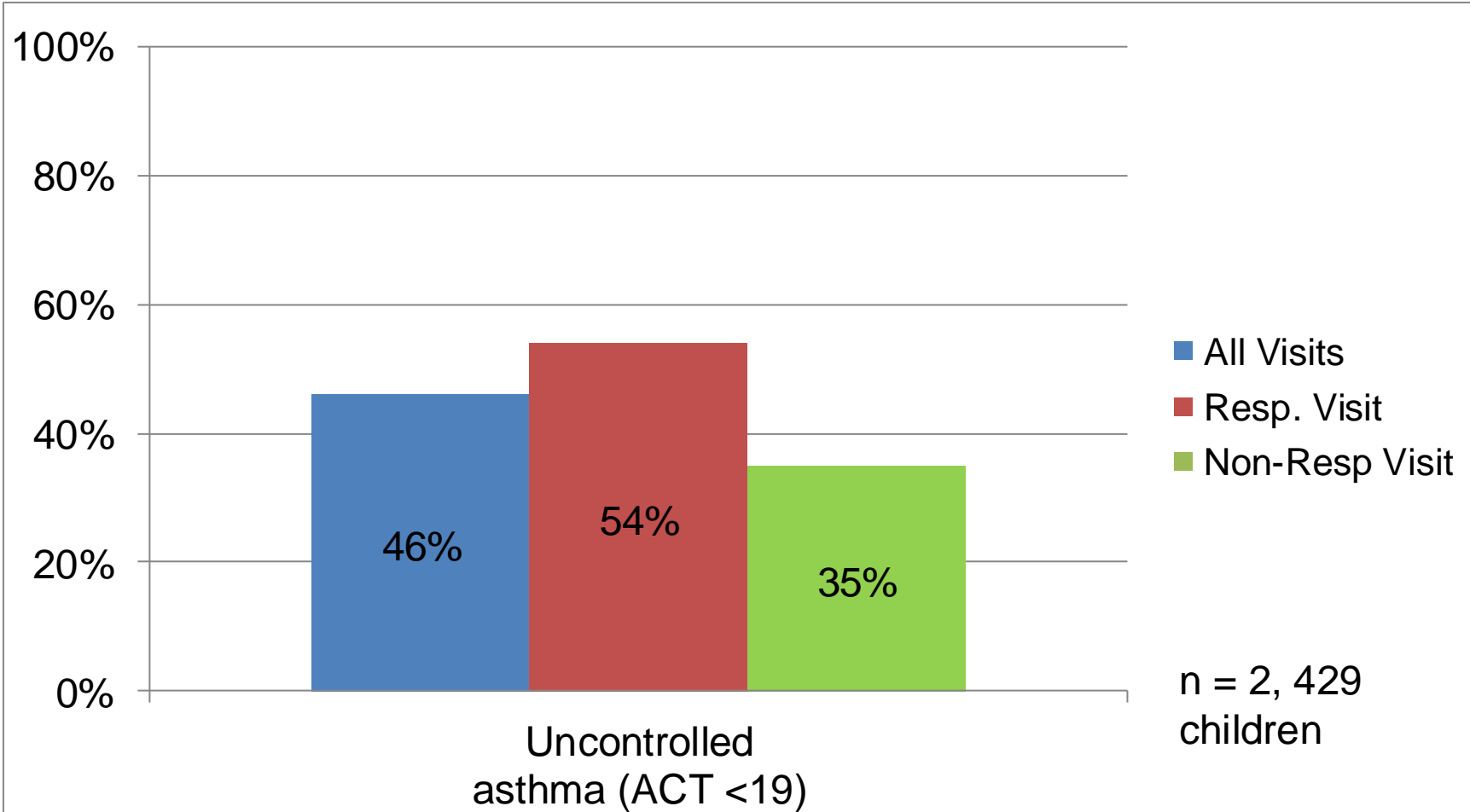
Response Rate to Text Message Surveys After ER Visit for Asthma



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Uncontrolled asthma common in primary care visits



What are the 6 causes of uncontrolled asthma?

- Non-adherence
- Poor inhaler technique
- Environmental exposures
 - tobacco smoke (ETS)/indoor pollutants; allergens
- Inter-current illness (e.g., URI)
- Co-morbidities
 - Allergic rhinitis
 - Obesity
 - Sinusitis
- Under-treatment (need to step-up treatment)

Environmental Exposures

- Environmental tobacco smoke (ETS)
- Indoor allergens (e.g., dust mite, cockroach, etc.)
- Exposure + Allergy = increased asthma morbidity
- *“Children with asthma who are allergic and exposed to indoor allergens have worse asthma control and lung function and greater airway inflammation and morbidity...”*
 - <http://pediatrics.aappublications.org/content/138/5/e20162589>

Query for exposures

2. Is your home a:

single family house rowhouse townhouse apartment mobile home

Other:

3. Does your home have: (check all that apply)

central of forced warm air heating damp areas plants
 radiator heating cockroaches birds
 central air-conditioning mice hot tub/ jacuzzi
 window air-conditioning unit cat(s) How many? _____ wood-stove
 humidifier dog(s) How many? _____ None of these

4. Does your child's bedroom have (check all that apply):

wall-to-wall carpet hardwood floors area rugs stuffed toys None of these

5. Does your child use (check all that apply):

dust mite-proof pillow covers dust mite-proof bed covers None of these

Smoking History

6. How is cigarette smoking handled as far as your home is concerned?

Smoking is not allowed in the home
 Smoking is sometimes allowed in the home
 Smoking is always allowed in the home

7. Please indicate the smoking status of each of the following people/places your child may be present.

	Mother	Father	Any Other Relative (e.g., aunt, uncle, grandparent, etc.)	Daycare provider
Does this person live with your child?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is this person a CURRENT SMOKER?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Consider exposures that cause asthma symptoms

15. What trigger your child's breathing problems (e.g., wheezing, cough, noisy breathing)? Check all that apply:

aspirin/ ibuprofen

cold air

summer season

None of these

dust

changes in weather

exercise

Others. Describe below

grass

hot weather

colds/respiratory viruses

Don't know

trees

changes in season

sinus infections

molds

fall season

allergy/ hayfever symptoms

tobacco smoke

spring season

cats

fumes or perfumes

winter season

dogs

Other triggers #1

Other triggers #2

House Dust Mite Exposure Control

- Allergen-impermeable cover: mattress/pillow
- Wash sheets and blankets weekly water >130 F
 - cooler water, detergent and bleach
- Indoor humidity ≤ 60 percent (30-50%)
- Remove carpets from the bedroom
- Avoid sleeping or lying on upholstered furniture
- Minimize stuffed toys, and wash them weekly

Effectiveness of Environmental Control Practices

- 21 fewer asthma symptom days/year (6 studies)
- 12 fewer missed school days/year (5 studies)
- 0.6 fewer acute care visits/year (10 studies)
 - 0.4 fewer hospitalizations/year
 - 0.2 fewer ED visits/year
 - 0.5 fewer unscheduled office visits/year

Outline

1. Asthma diagnosis
2. 2020 Asthma Guideline Updates: intermittent inhaled steroids and SMART therapy
3. Using a validated asthma survey to guide treatment: case studies
4. Environmental considerations
5. Discussion/Questions

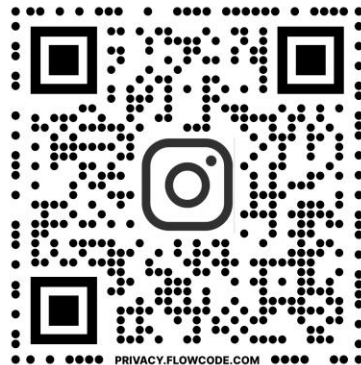
Thank You!

Upcoming Lunch and Learn:
Summer Resources for LA County Families

Wednesday, April 16, 2025

Noon – 1pm

Follow us on
Instagram!
@aces.la



PRIVACY.FLOWCODE.COM

