IMPROVING ASTHMA SELF-MANAGEMENT IN PEDIATRICS USING A SIMPLIFIED WRITTEN ASTHMA ACTION PLAN

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BACKGROUND: ASTHMA

- #1 chronic disease of childhood
- 7 million children are affected in the US
- Approximately 9% of children in South Carolina have a diagnosis of asthma
- Leading cause of disability in children < 18 years of age

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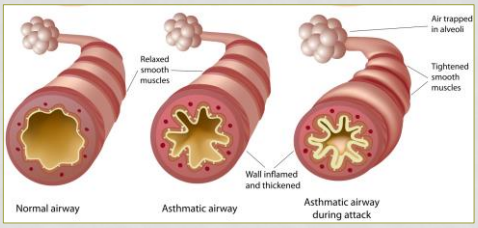
BACKGROUND: SIGNIFICANCE

- Uncontrolled asthma can lead to:
  - Increased symptoms
  - Activity limitations
  - Permanent airway remodeling
  - Increased unscheduled provider visits and hospitalizations
  - Missed school days
  - Morbidity and Mortality
  - Economic burden



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BACKGROUND: MANAGEMENT

- Medication
- Trigger or risk factor reduction
- Asthma self-management:
  - Self monitoring of symptoms
  - Regular review with a health care provider
  - Written asthma action plan (WAAP)

- Reduced unscheduled health care visits
- Improved asthma control

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BACKGROUND: WAAP

Written asthma action plan (WAAP):

- An individualized asthma care plan
- The gold standard tool for asthma self-management
- Incorporates:
  - Daily asthma management instructions
  - Lists daily and rescue medications
  - How to recognize and treat worsening asthma
  - Identifies triggers for exacerbations
- Nationally: possession 50.7%
- South Carolina's QTIP: possession 60% (2018)

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BACKGROUND: LOCAL PROBLEM

At the project site:

- 46% of patients, with asthma, had an asthma exacerbation in the past year
- Patient WAAP ownership is 63%; (below benchmark of 100%)

The existing WAAP is:

- Poorly formatted
- Difficult to comprehend
- Written above the 5th grade reading level; standard for written health material

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BACKGROUND: TARGET POPULATION

Asthmatic Patients:

- 77% are racial and ethnic minorities
- 41% speak Spanish as a primary language

General Population:

- 69% are Medicaid, Medicaid subsidiary, uninsured, or self pay

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BACKGROUND: LITERATURE REVIEW

Simplified WAAPs can:

- Foster self-efficacy in managing one's asthma care
- Increase parental comprehension of asthma management
- Improve information retention
- Prevent asthma exacerbations
- Reduce unscheduled healthcare visits
- Lessen morbidity related to asthma
- Improve provider and caregiver acceptability of the tool
- Facilitate thoughtful provider counseling
  - (Duncan et al., 2018; Gillette et al., 2018; Lakupoch et al., 2018; Yin et al., 2017; Yin et al., 2016)

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PURPOSE & CLINICAL QUESTION

Purpose:

- To decrease asthma exacerbations, improve patients' asthma control, and to increase patient possession and use of the WAAP.

Clinical question:

- Will the implementation of evidenced based multifactorial interventions, including a simplified WAAP, at a pediatric primary care office, decrease the incidence of asthma exacerbations and improve patients' overall asthma control?

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METHODS

- **Setting:** Pediatric Primary Care Office, Southeast US, Urban location
- **Staff:** 2 Pediatricians, 1 FNP
- **Population:** Patients aged 5-18, Diagnosis of asthma
- **Data Collection:** EMR chart audits, Asthma Control Test scores, Pre and Post intervention surveys
  - Retrospective: October- December, 2018, n=82
  - Pre-QI: February - May, 2019; n=76
  - Post-QI: March - July, 2019; n=44
    - Post- QI: July 2019 - January 2020; n= 54

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INTERVENTION

- Created a new WAAP using:
  - Evidenced based guidelines
  - Revision and simplification of the current WAAP (PACNJ)
  - Provider preference
- Increased the applicability of the new WAAP, for the patient population
  - Racial and ethnic minorities
- Conducted a provider and staff educational in-service
- Provided the simplified WAAP to patients
- Changed the administrative process

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FIGURE 1

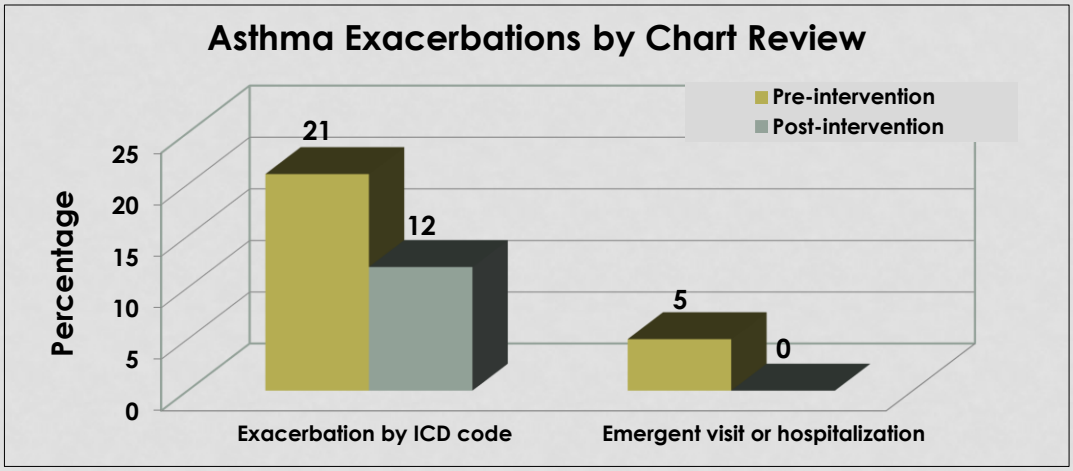

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FIGURE 2

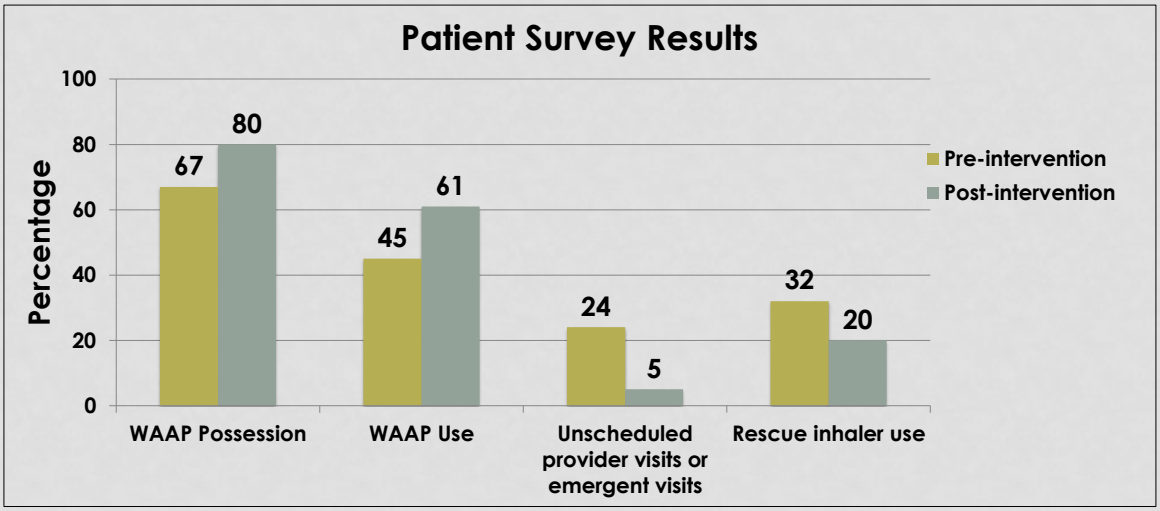

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FIGURE 3

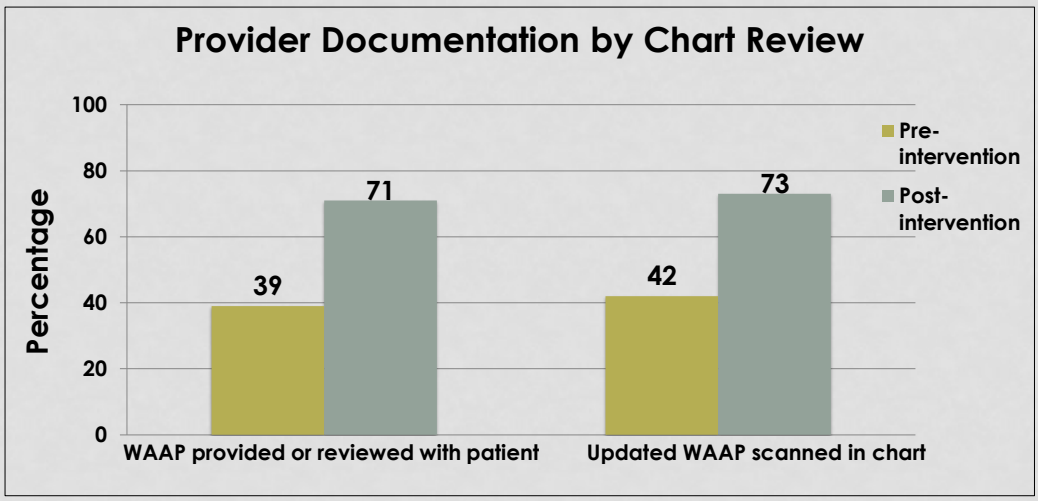

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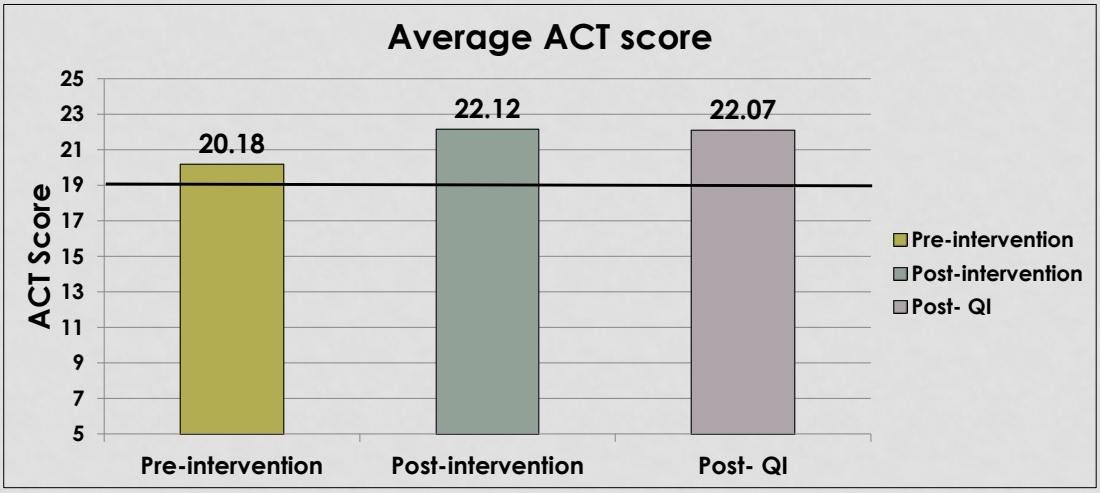
FIGURE 4



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CONCLUSIONS: SUMMARY

The implementation of a simplified WAAP, at a pediatric primary care office:

- Decreased the incidence of asthma exacerbations
- Improved patients' overall asthma control

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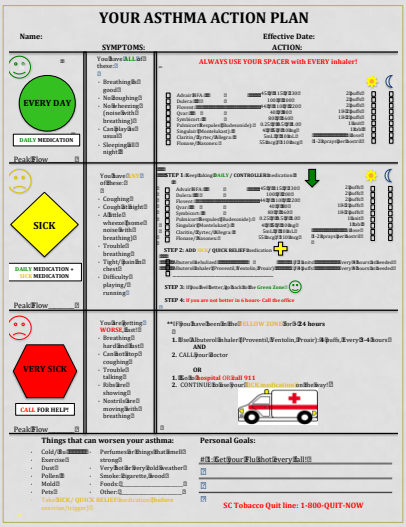
CONCLUSIONS: STRENGTHS

- Provider and staff buy-in
- Ease of integrating WAAP into practice
- Low literacy, child friendly, bilingual tool
- Sustainability of intervention


YOUR ASTHMA ACTION PLAN

Name: Effective Date:

SYMPTOMS: ACTION:

ALWAYS USE YOUR SPACER with EVERY inhaler!

EVERY DAY

DAILY MEDICATION

Peak Flow

SICK

DAILY MEDICATION + SICK MEDICATION

Peak Flow

VERY SICK

CALL FOR HELP!

Peak Flow

Things that can worsen your asthma:

Personal Goals:

SC Tobacco Quit line: 1-800-QUIT-NOW

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CONCLUSIONS: LIMITATIONS

- Limited project time frame
- Inadequate post-intervention patient follow-up
- Results based on subjective or self-reported responses
- Lacks generalizability
- Small sample size

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CONCLUSIONS: FUTURE RECOMMENDATIONS

- Longer project time frame
- Implement additional appointment reminder systems
- Monitor medication adherence
- Conduct in-service for patients and caregivers to introduce the new WAAP

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IMPLICATIONS FOR PRACTICE

Low literacy, population specific, evidenced based written asthma action plans should be implemented in all pediatric primary care offices to:

- Improve patients' asthma control
- Decrease asthma related morbidity
- Reduce associated healthcare costs

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QUESTIONS?

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