EVALUATION OF A VIRTUAL SHARED DECISION MAKING PROGRAM FOR PEDIATRIC ASTHMA MANAGEMENT USING A VIRTUAL HEALTH COACH

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BACKGROUND

- Pediatric asthma is one of the most common chronic conditions in the US with over 10 million children currently diagnosed
- Knowledge gaps lead to problems with medication adherence, leading to poor outcomes
- Two million emergency department (ED) visits a year are attributed to pediatric asthma yet there are currently no reported uses of shared decision making (SDM) for asthma in the ED
- SDM decision aids empower patient-provider collaboration in the treatment plan

OBJECTIVES OF CAROLINAS ASTHMA COACH

- We piloted and evaluated a virtual SDM health solution, originally designed for ambulatory use, Carolinas Asthma Coach in the pediatric ED of a large healthcare system
- The virutal coach engages patients and caregivers through a user-friendly interface that facilitates SDM
- The pilot study evaluated usability, feasibility, and efficacy of the virtual SDM coach

METHODS

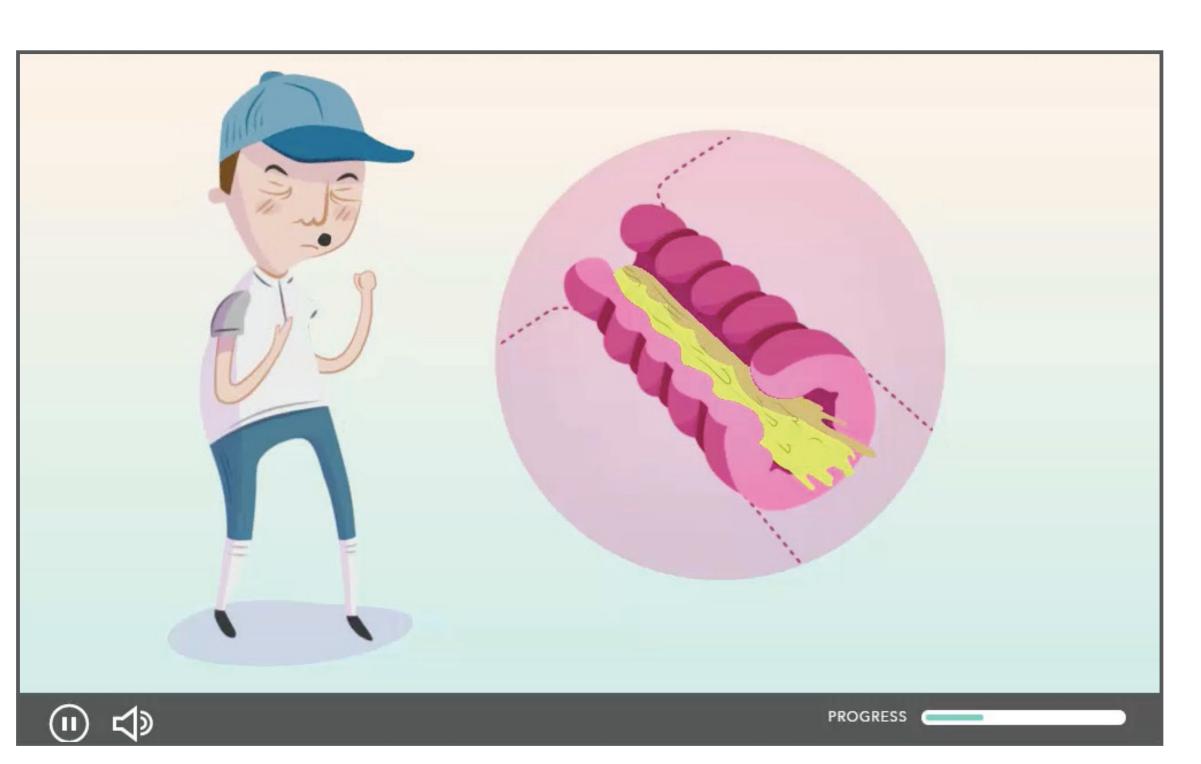
- Patients and caregivers recruited in ED and ambulatory care settings
- Participants given a knowledge test pre- and post- using Carolinas Asthma Coach
- Perception of SDM collected at the end of the appointment or encounter

KNOWLEDGE ASSESSMENT

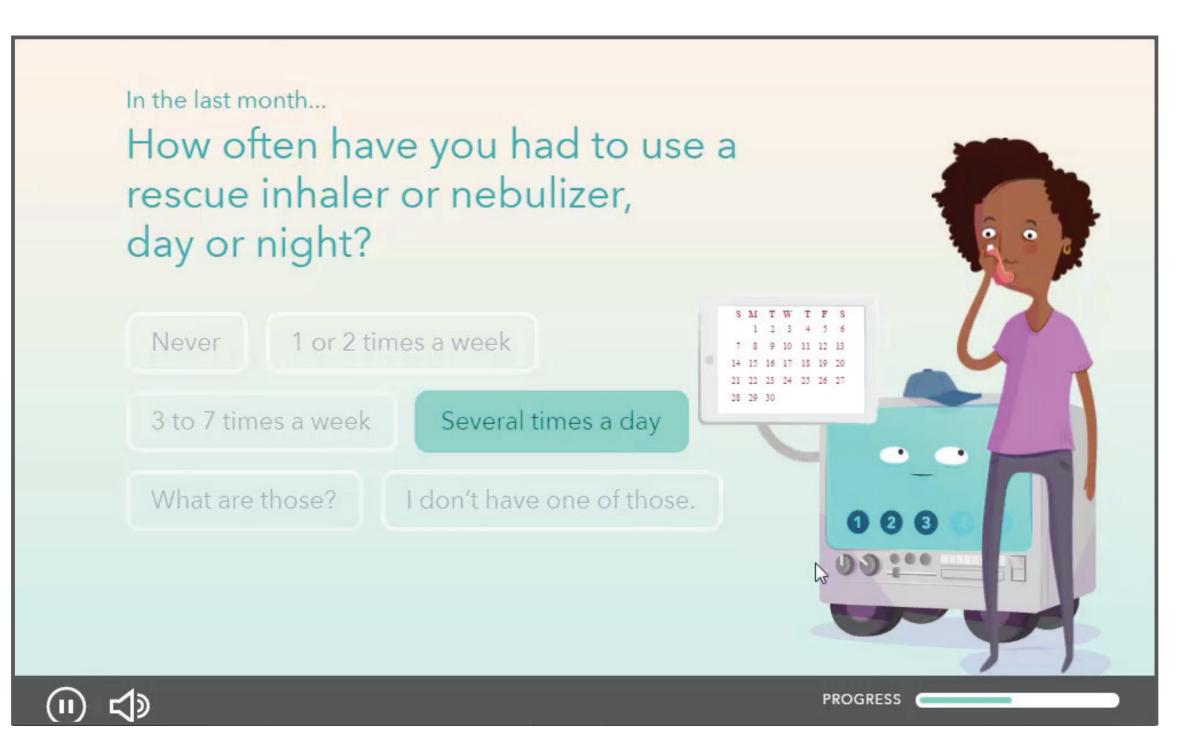
- Eleven question survey given before and after using asthma coach
- Questions about general asthma knowledge, inhaler technique, symptom recognition, trigger identification, and medication types
- Nine multiple choice and two free response questions



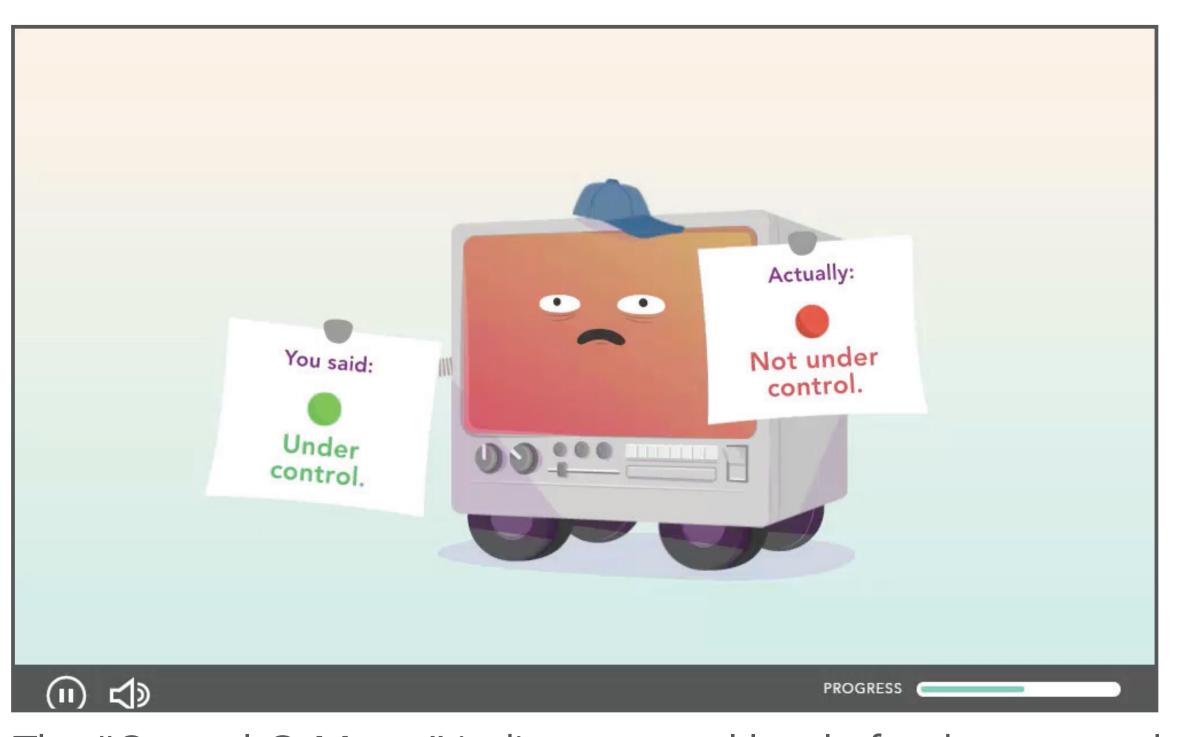
Start screen



What's going on inside the lungs



Symptoms assessment



The "Control-O-Meter" indicates actual level of asthma control

KNOWLEDGE ASSESSMENT RESULTS

- In both settings, caregivers' post-knowledge test scores (82% in ED, 84% in ambulatory) were higher than the patients' post-knowledge test scores (76% in ED, 81% in ambulatory)
- In both settings, patients' scores increased from pre- to post-knowledge test by greater amounts than caregivers' scores increased

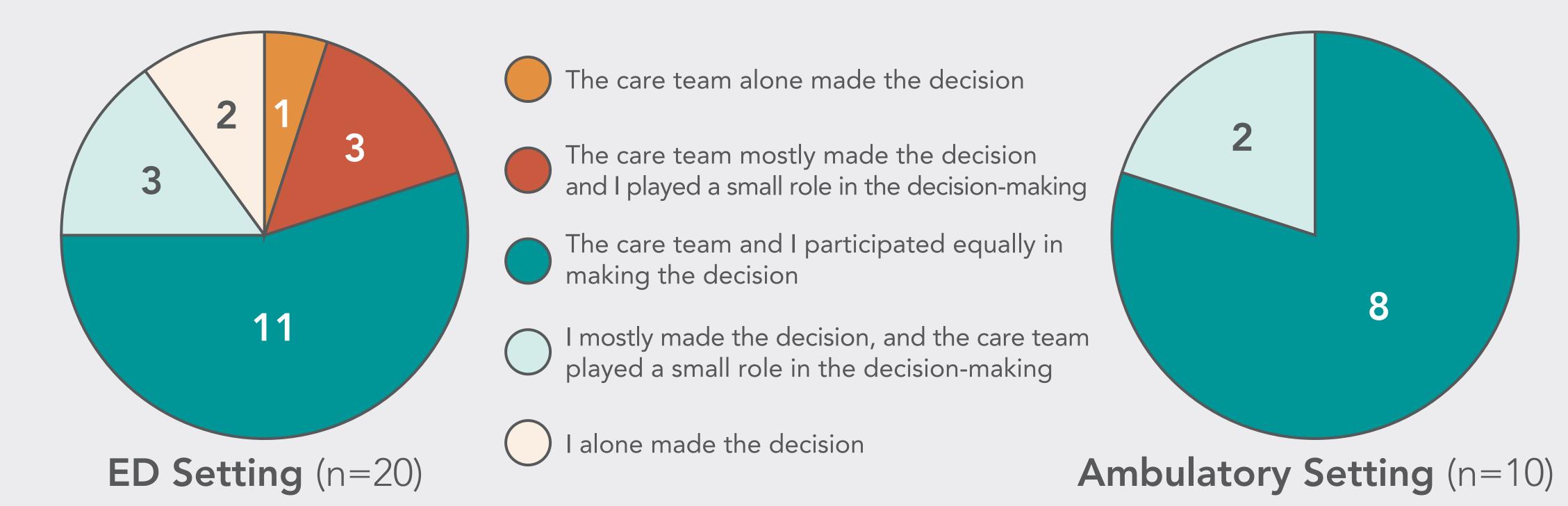
Knowledge Assessment Scores

	Emergency Department		Ambulatory Care	
	Patients n=21	Caregivers n=21	Patients n=10	Caregivers n=10
Pre-Test Average	51%	67%	54%	68%
Post-Test Average	76%	82%	81%	88%
Average Increase	25%	15%	27%	20%
p-value	<0.001	=0.01	<0.001	<0.001

SHARED DECISION MAKING RESULTS

- In the ambulatory setting, 80% (8 of 10) of participants perceived having participated equally in their care decision
- In the ED setting, 55% (11of 20) perceived having participated equally in their care decision

Who Made The Decision In Your Meeting With The Care Team (Health Coach And Provider) About What Your Asthma Treatment Would Be?



Carolinas HealthCare System

DISCUSSION

- ED patients are suffering from an asthma exacerbation at the time of use and may be less likely to do well on knowledge tests
- The time constraints in the ED and possible workflow disruption may have contributed to lower knowledge scores and lower perception of equally sharing in decision making as compared to the ambulatory care setting
- Patients with a regular source of care may have more exposure to asthma education

CONCLUSIONS

The virtual SDM coach was successfully piloted and evaluated in both ambulatory and acute care settings, demonstrating potential for use in improving outcomes for asthma patients.

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