

HOW HOME ENVIRONMENTS SHAPE ASTHMA OUTCOMES IN MAINE



Presented by: Leigh Riley and Michelle Mitchell

IAQ & Energy 2025

Maine Asthma Self-Management Education Program



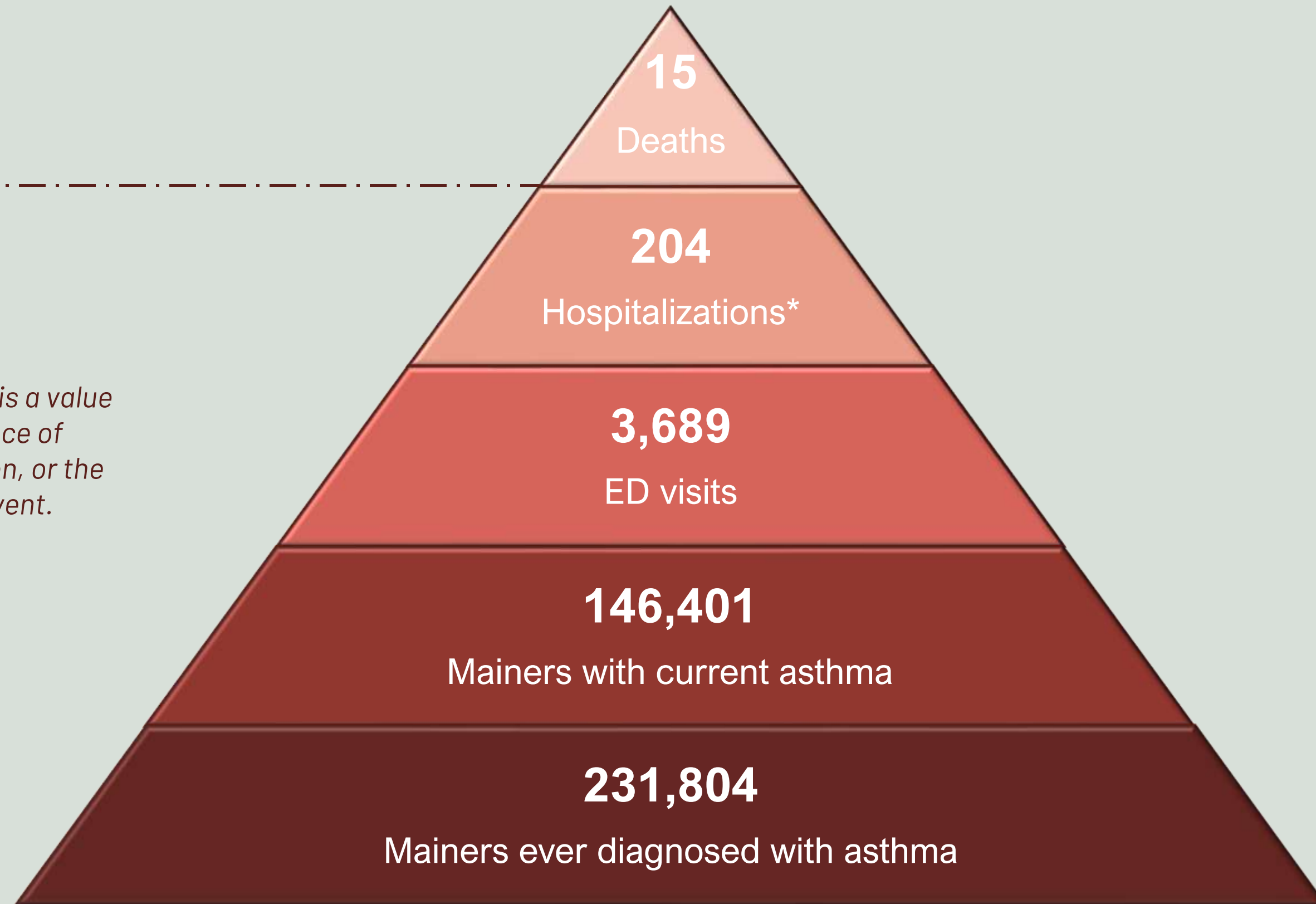
OVERVIEW

ASTHMA IN MAINE (2023)

Mortality

Morbidity

A morbidity indicator is a value describing the presence of disease in a population, or the degree of risk of an event.



* 2023 data for all indicators, except hospitalizations (2021).

A DECADE OF PROGRAM REFINEMENT

Maine In-Home Asthma Education Program

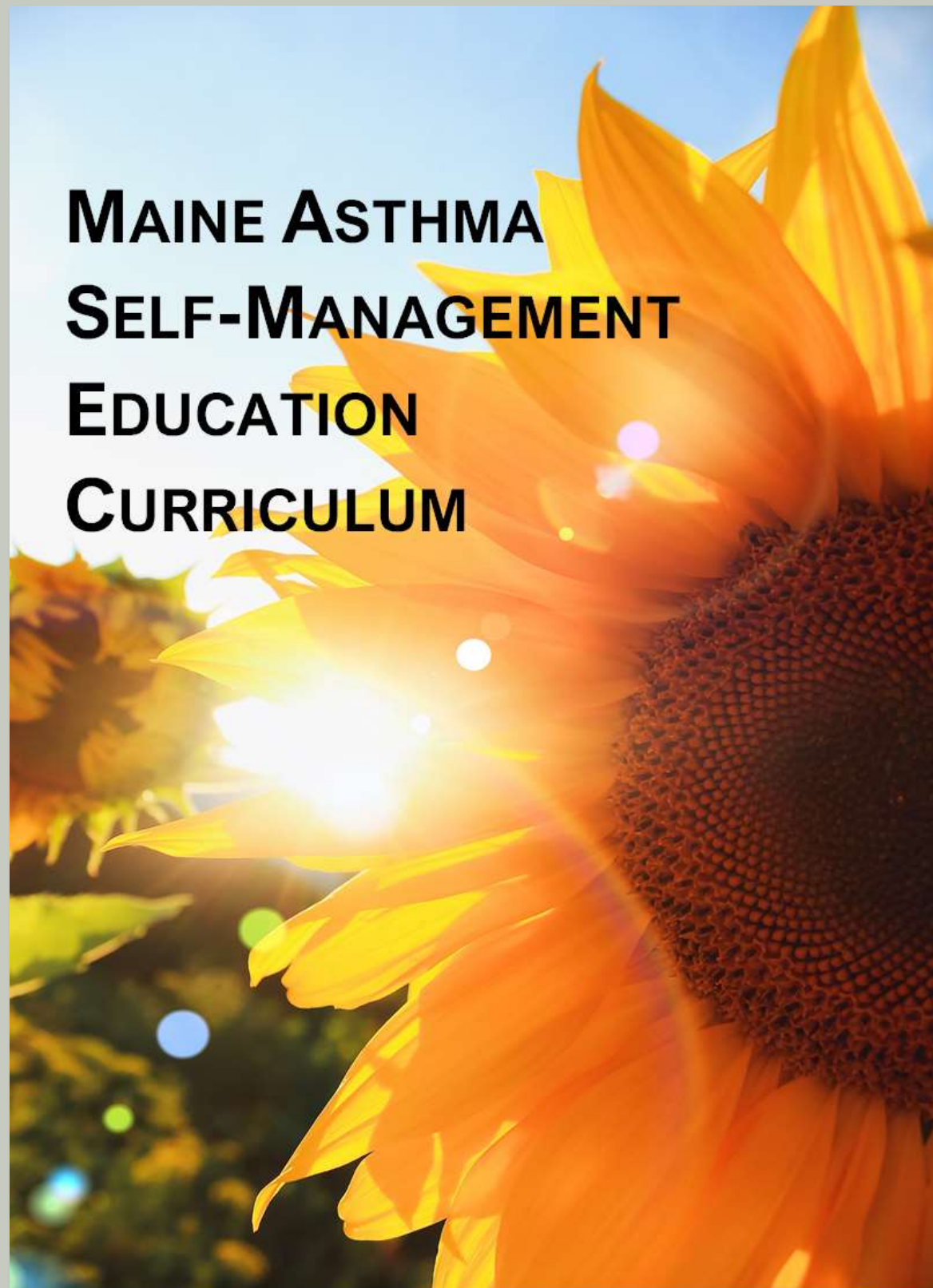
Version 2.2

Funded through the CDC-RFA-EH14-1404: Comprehensive Asthma Control Through Evidence-based Strategies and Public Health – Health Care Collaboration, National Center for Environmental Health.



2014 - 2019

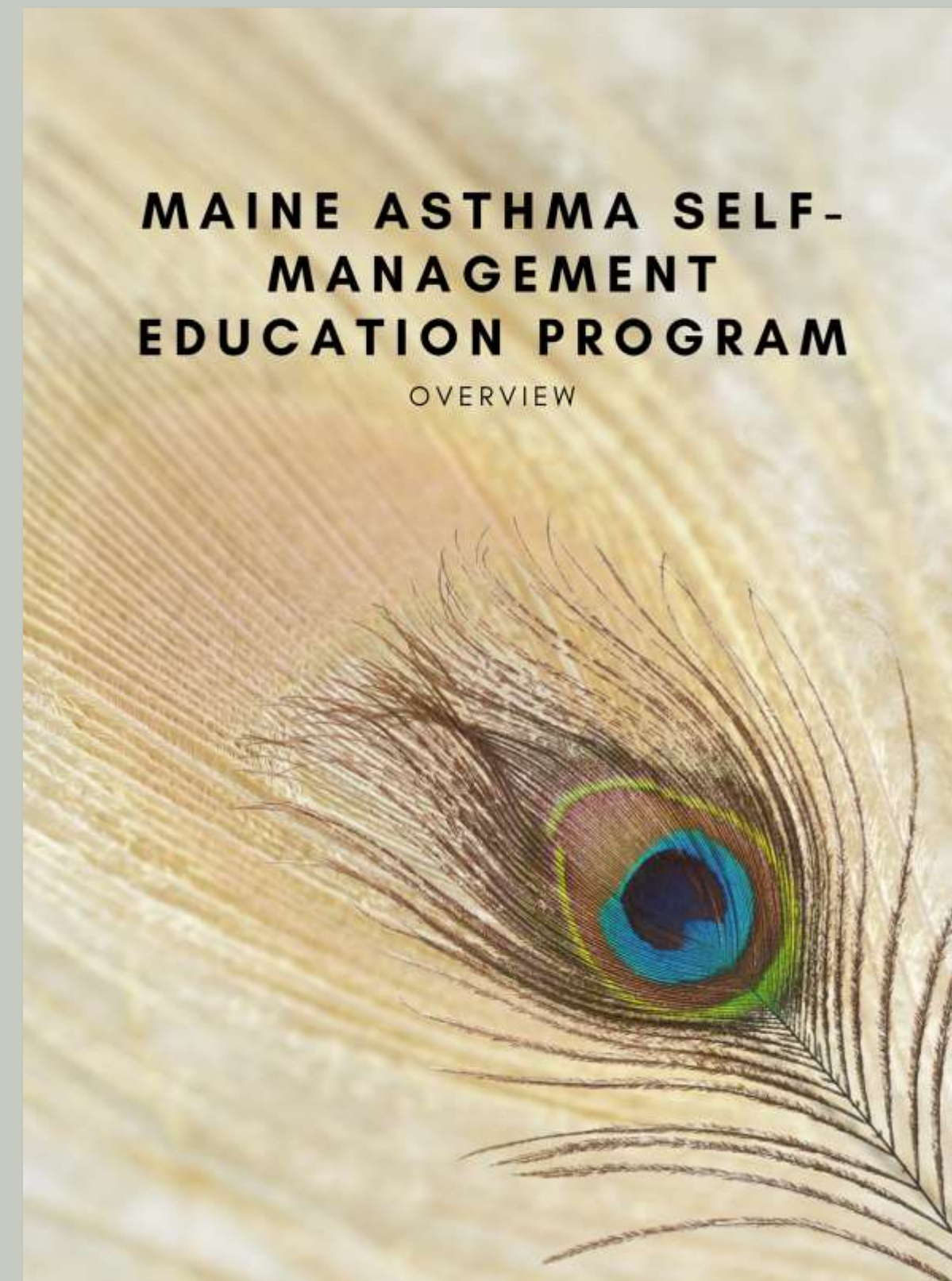
MAINE ASTHMA SELF-MANAGEMENT EDUCATION CURRICULUM



2019 - 2024

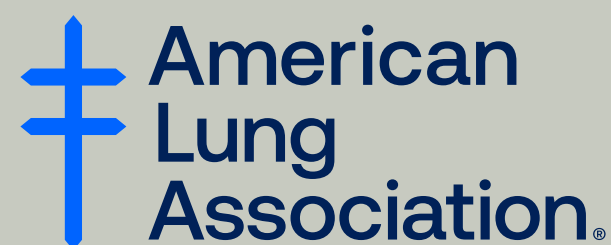
MAINE ASTHMA SELF- MANAGEMENT EDUCATION PROGRAM

OVERVIEW

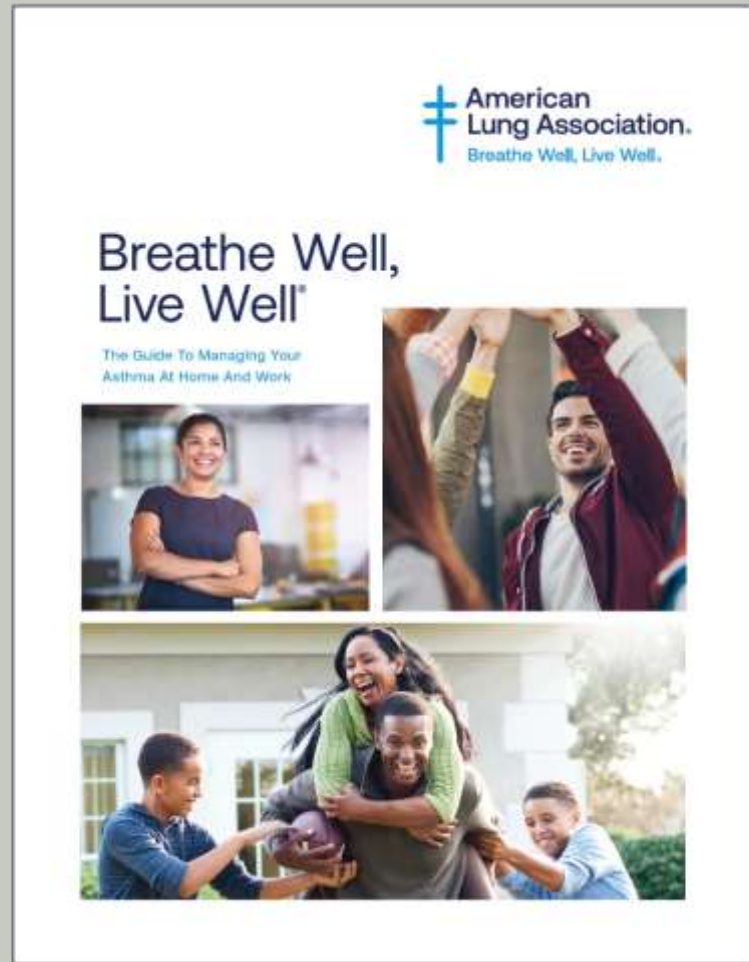


2024 -

MAINE AS-ME PROGRAM



EDUCATION	VISIT 1 Enrollment: Orientation and Introduction 20 mins
	VISIT 2 Lesson 1. Understanding Your Asthma Lesson 2. Building Your Asthma Support Team Lesson 3. Indoor Air Quality 90 mins
	VISIT 3 Lesson 4. Taking Asthma Medicines Lesson 5. Using Tools for Daily Self-Management Lesson 6. Following Good Health Habits 90 mins
	VISIT 4 Lesson 7. Home Assessment Lesson 8. Indoor Air Quality Review & Recommendations 90 mins
CLIENT GRADUATES AT THE END OF LAST EDUCATION VISIT	
ASSESSMENT	VISIT 3 / 4 Client's satisfaction with the Program. 10 mins
	MONTH 1 Client's asthma self-management 1 month after graduation. 15 mins
	MONTH 6 Client's asthma self-management 6 months after graduation. 15 mins
	MONTH 12 Client's asthma self-management 12 months after graduation. 15 mins

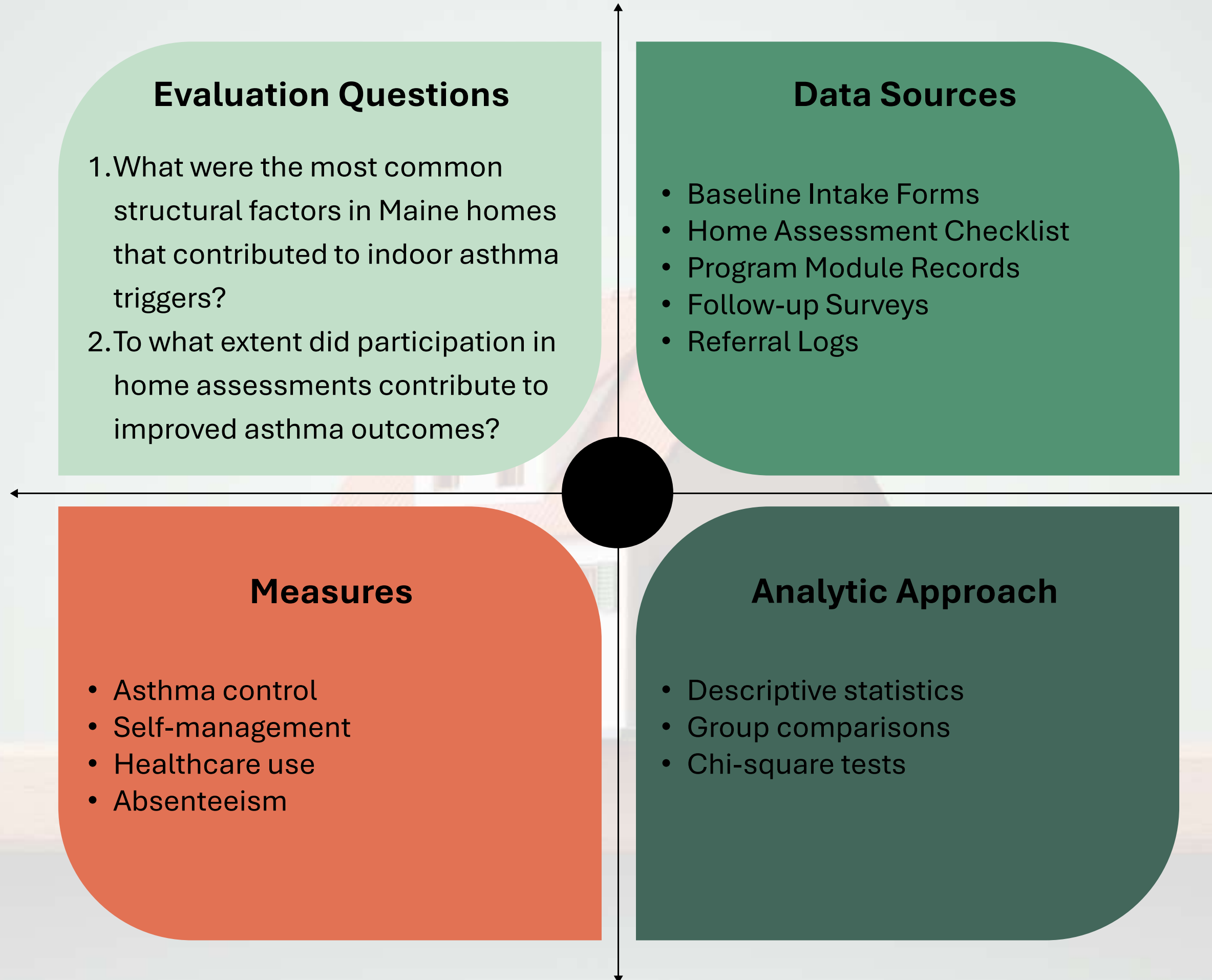


Structural Triggers & Impact of Home Assessments



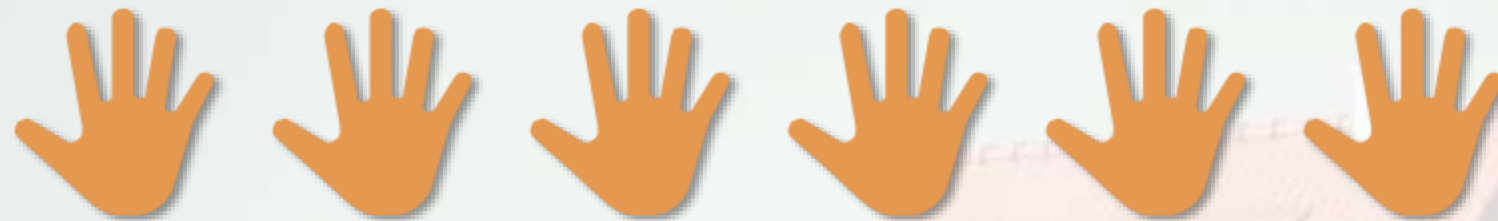
METHODOLOGY

METHODOLOGY



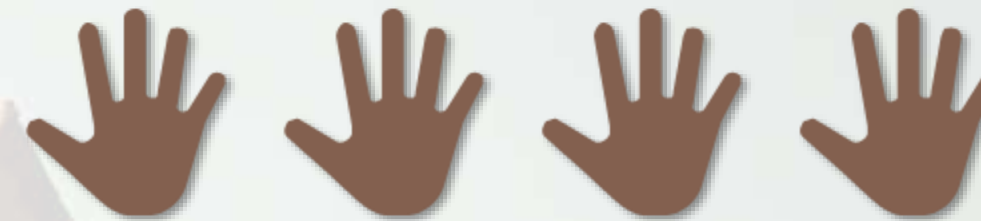
172 PARTICIPANTS (2022 – 2024)

62% children



47.2% female
52.8 % male

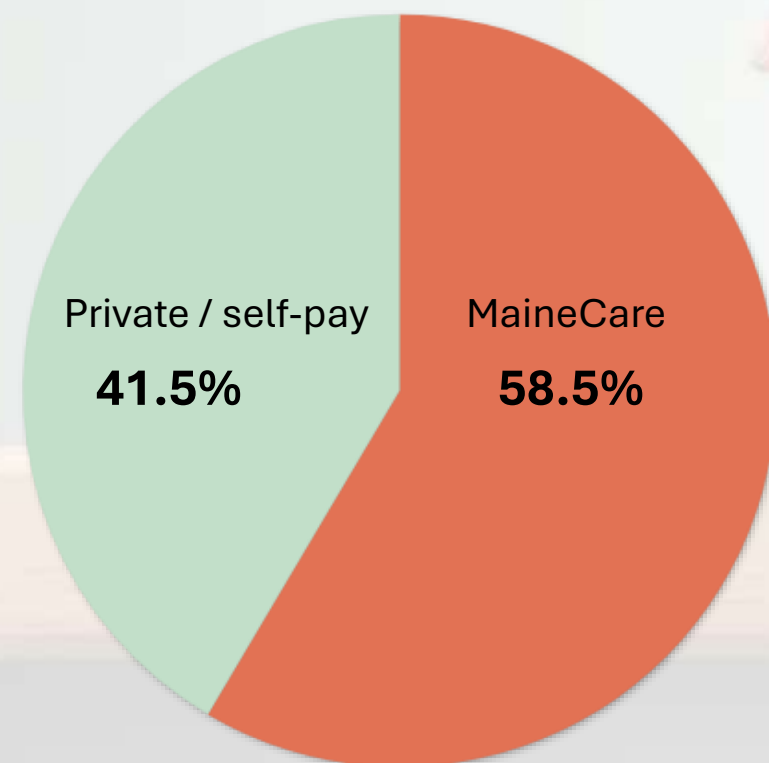
38% adults



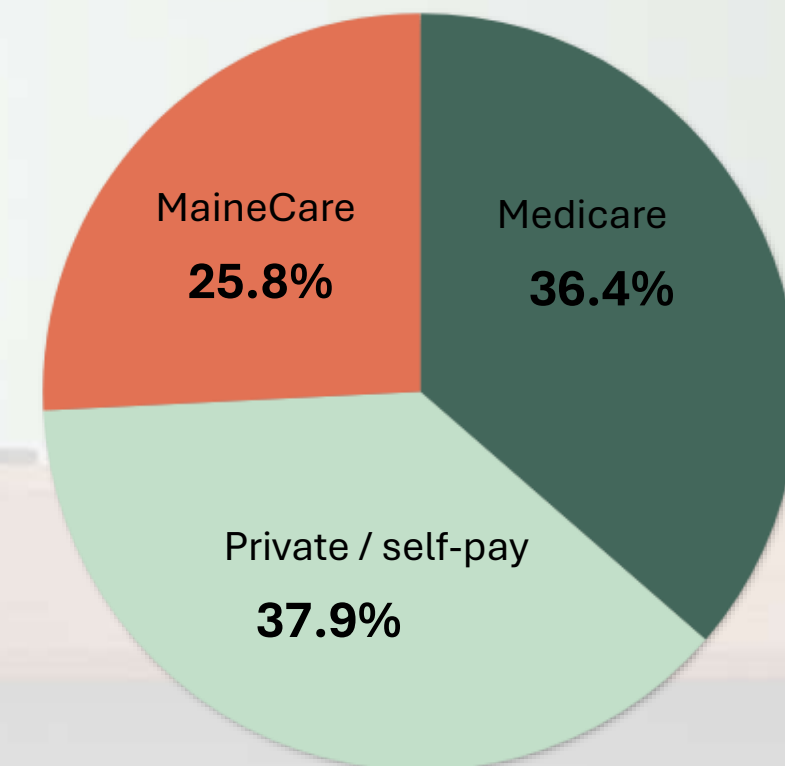
74.2% female
25.8% male



88.3%
Poorly controlled asthma



Health insurance



Health insurance

Common House Structures and Asthma Triggers



RESULTS

HOUSING CHARACTERISTICS



Manufactured / Mobile Home 39.0%



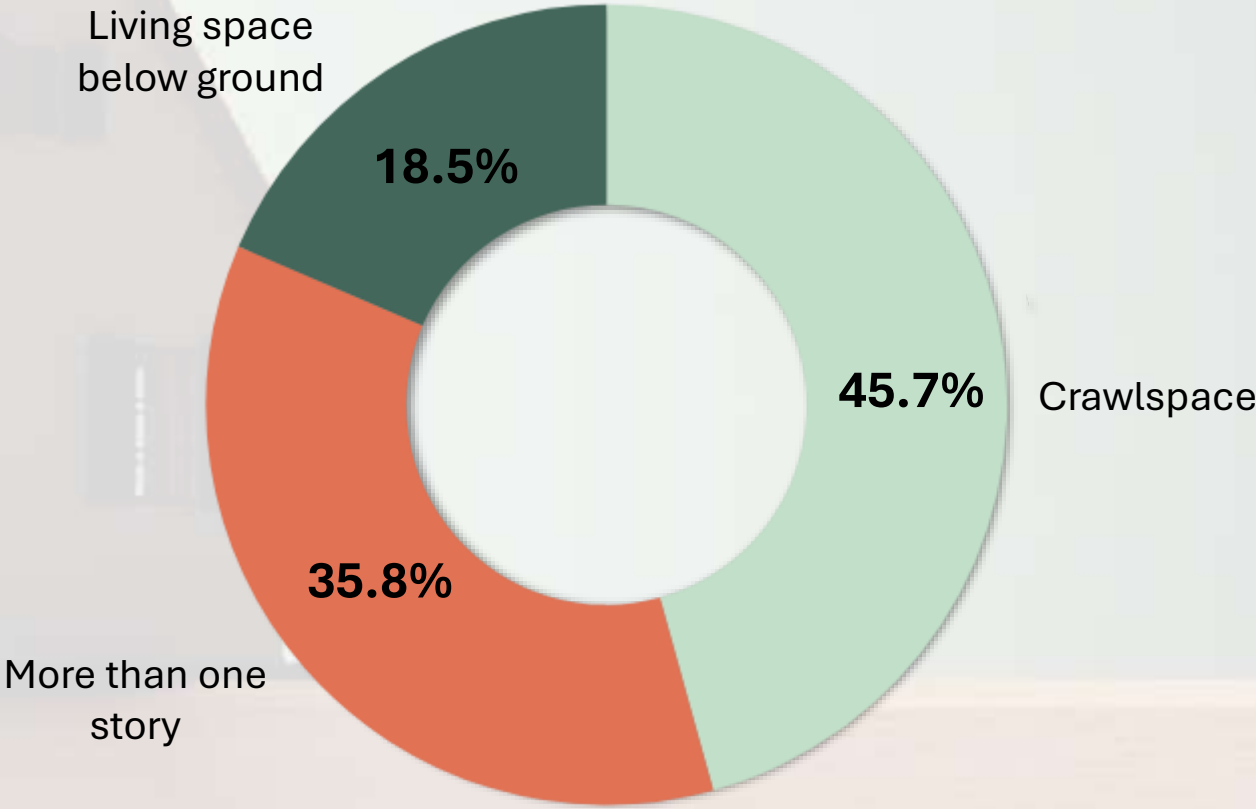
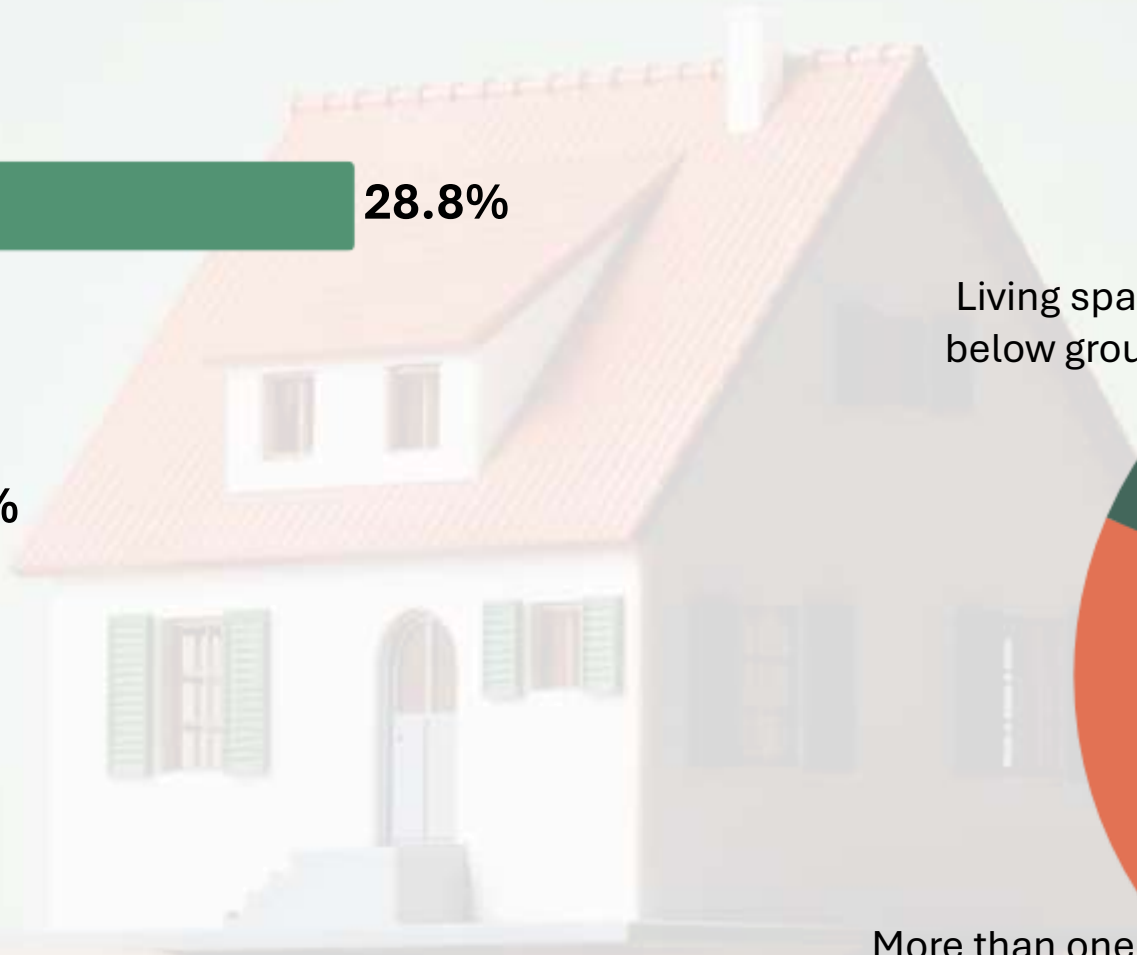
Apartment 28.8%



Attached One-Unit 17.0%



Detached One-Unit 15.3%



ASTHMA TRIGGERS

01



Heating and Cooling Systems

- 95.0% used fans.
- 68.3% used window ACs.
- 38.3% used forced hot air.
- 36.7% used baseboard heaters.

02



Tobacco Exposure

- 38.5% of households were exposed to secondhand smoke daily.
- 8.3% of households allowed tobacco use indoors.

03



Pets

- 78.3% of homes had pets.
- Of those, 53.3% had dogs and 46.7% had cats.

04



Kitchens

- 73.3% used electric stoves.
- 26.7% used gas stoves.
- 92.9% had an exhaust fan.
- 49.1% didn't use exhaust fans while cooking.

05



Moisture and Mold

- 53.3% had visible condensation.
- 43.5% reported musty/mold odors.
- 34.5% had evidence of water damage, moisture, or leaks.
- 30.2% had visible mold.
- 29.3% had active leaks.

06



Pests and Dust Mites

- 74.1% used pest control methods for insects.
- 68.3% had carpet.
- 44.1% had visible dust.
- 44.1% reported infrequent vacuuming.
- 39.7% had evidence of mice/rats.

Impact of Home Assessment on Asthma Outcomes



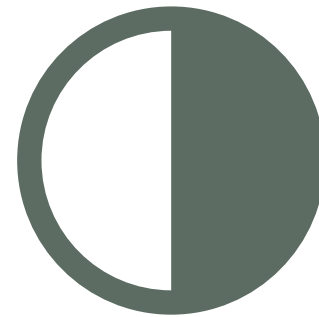
RESULTS

ENGAGEMENT GROUPS



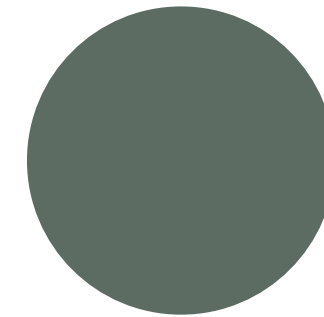
Low-Engagement Group (n=33)

- Fewer than 5 Program modules completed.
- No home assessment conducted.



Engaged Group (n=81)

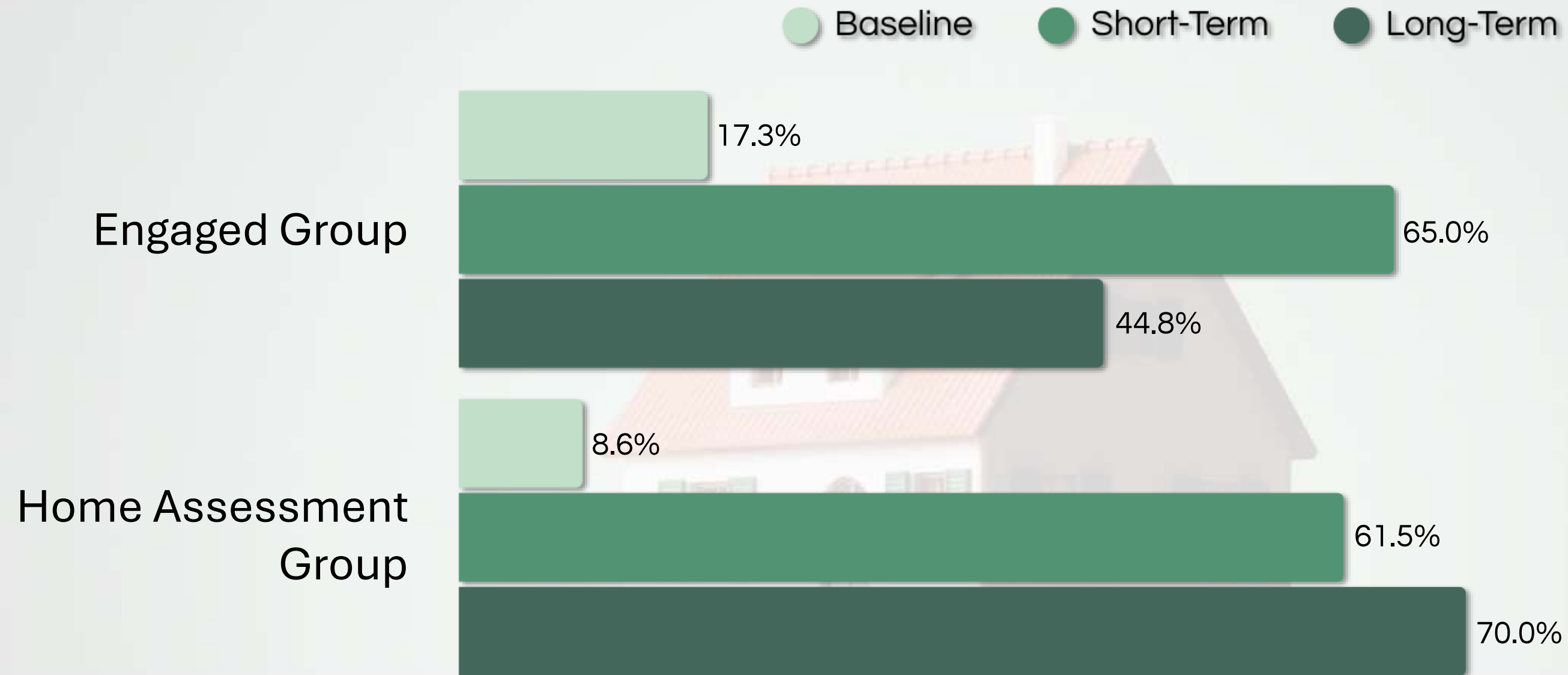
- At least 5 Program modules completed.
- No home assessment conducted.



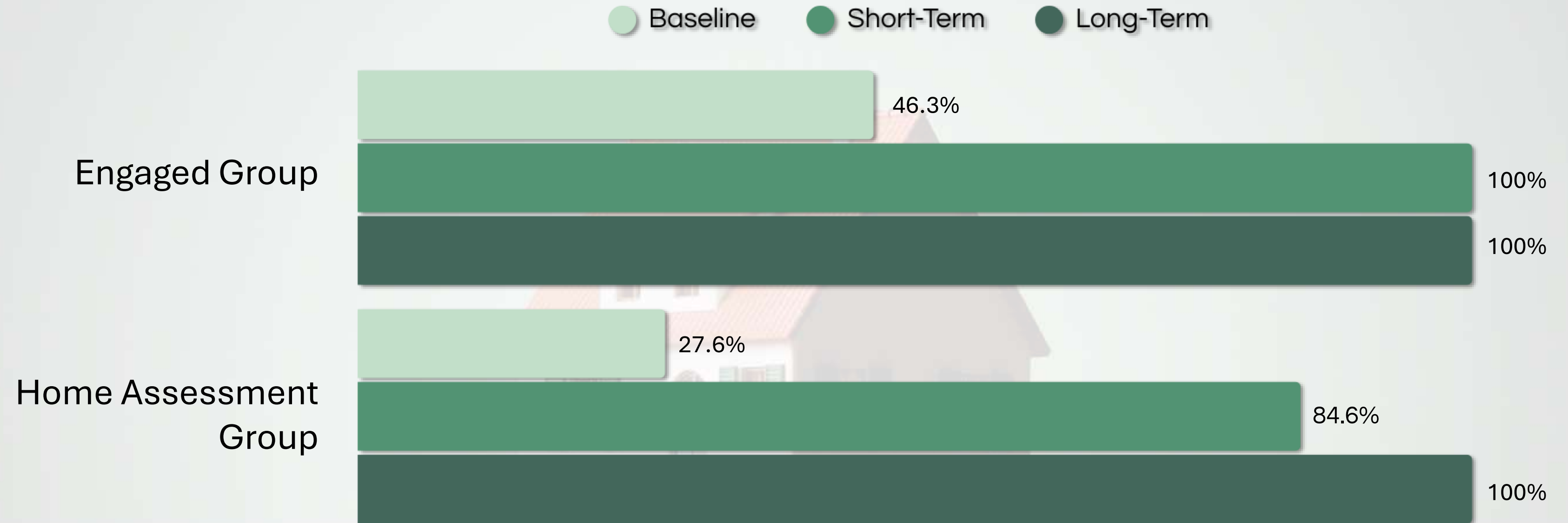
Home Assessment Group (n=58)

- At least 5 Program modules completed.
- Home assessment completed.

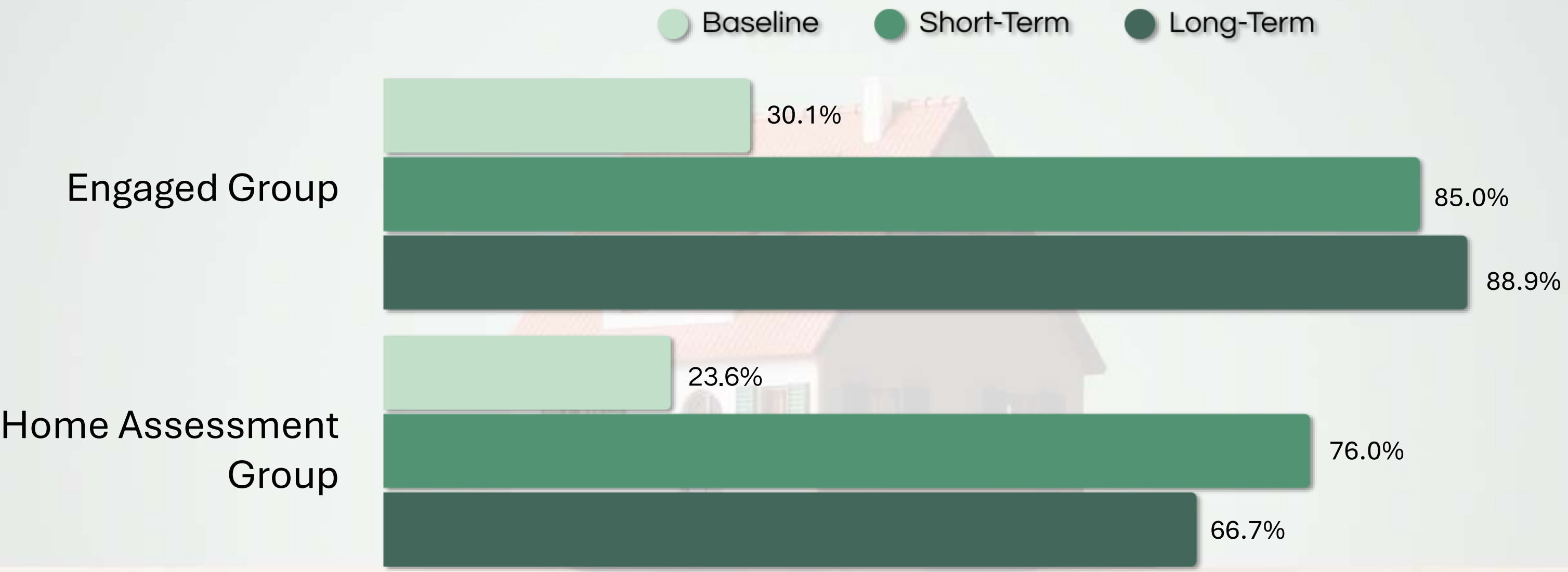
ACHIEVED GOOD ASTHMA CONTROL



USE OF ACTION PLAN

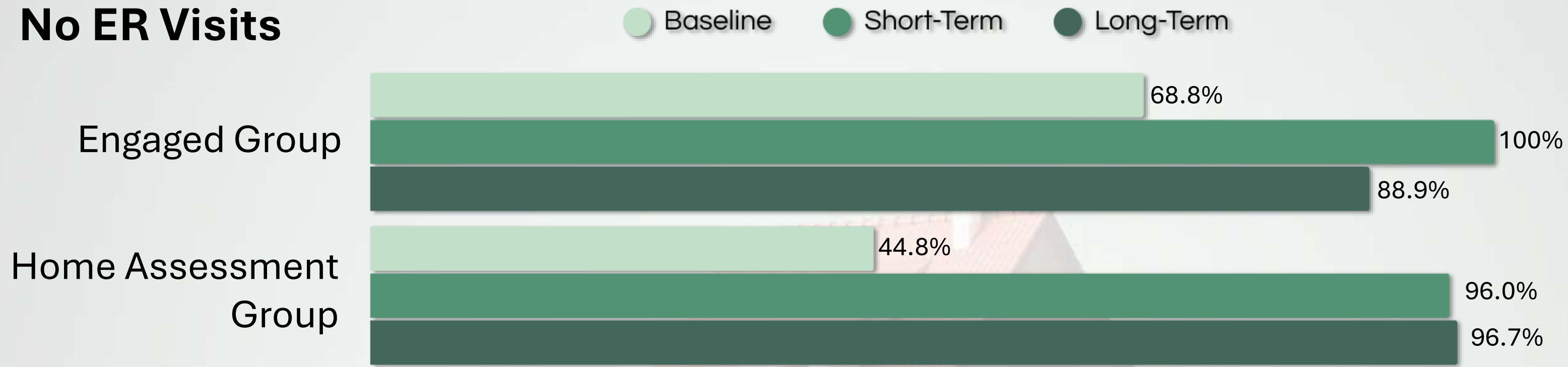


MEDICATION ADHERENCE

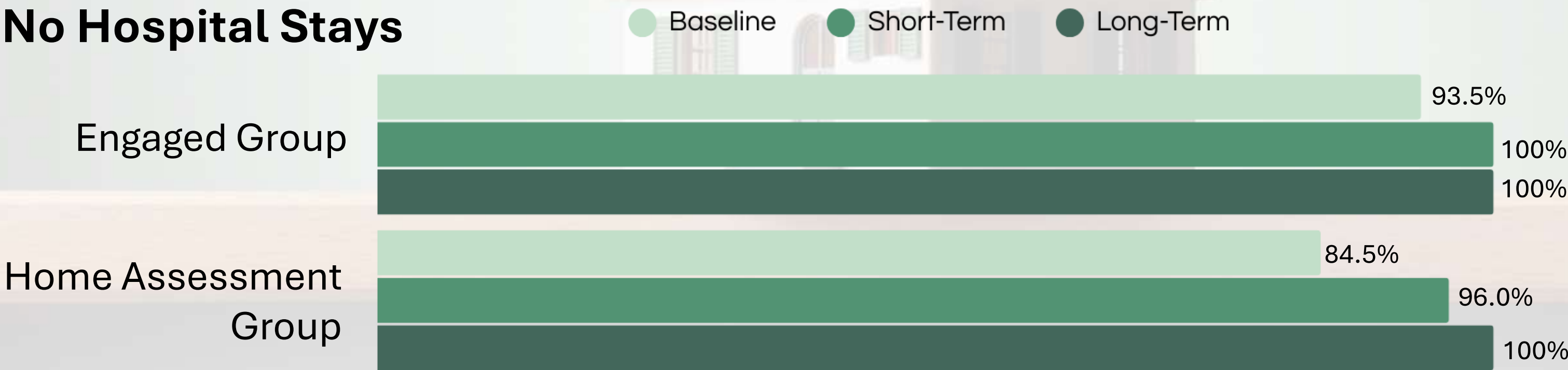


HEALTHCARE UTILIZATION

No ER Visits



No Hospital Stays

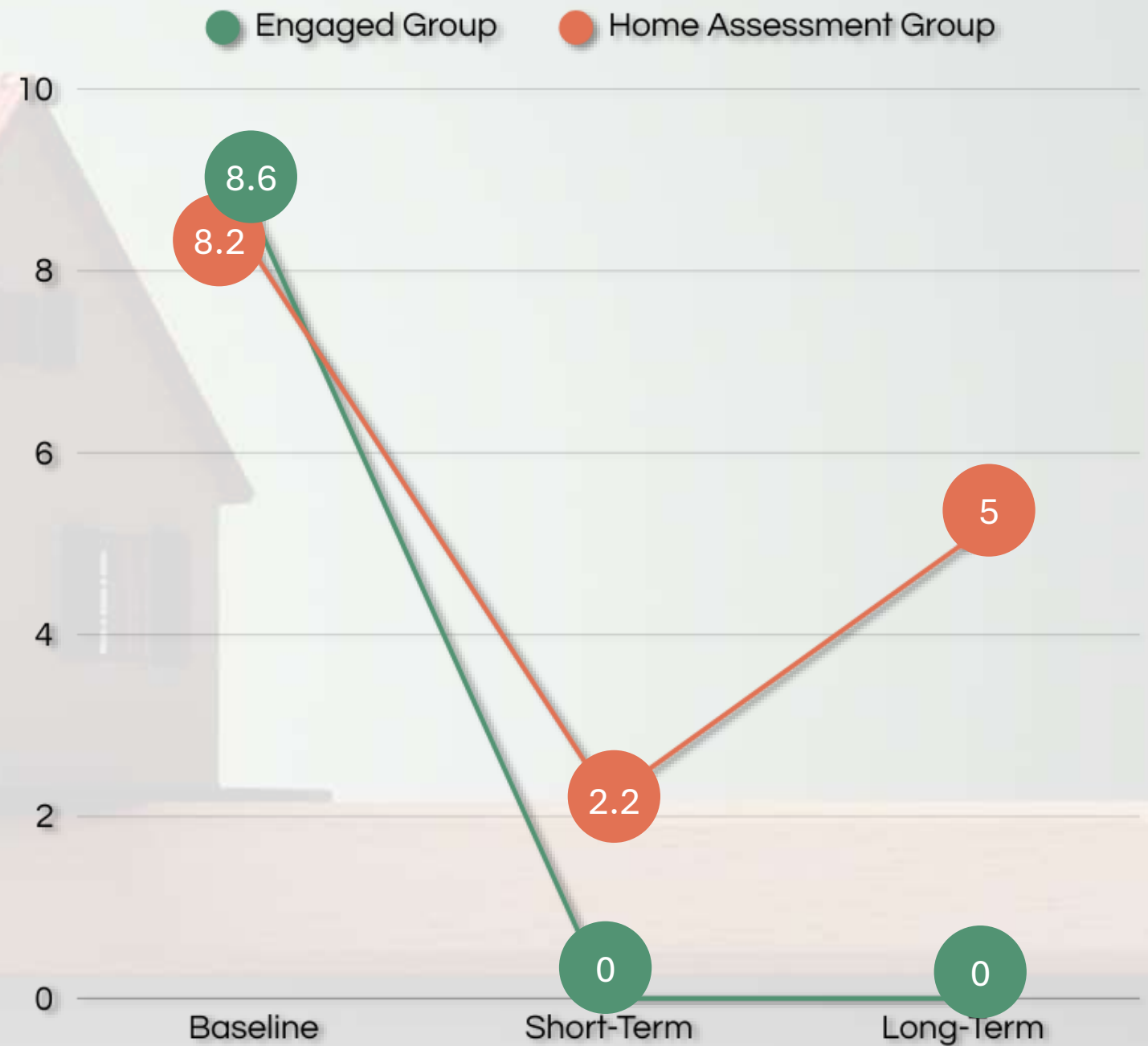


PRODUCTIVITY

Missed Work Days (adult)



Missed School Days (child)



Questions?

Surprises ?

Take away ?

Reflections ?



CONTACT DETAILS

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