Lessons Learned: Asthma Healthy Homes Pilots
Lessons and recommendations for piloting home-based asthma programs

Background
Green & Healthy Homes Initiative is a leading nonprofit, technical assistance provider for asthma and healthy homes programs across the country. An important component of our technical assistance capacity includes designing and implementing asthma home visiting models that include the assessment and remediation of home-based asthma triggers. In many of our projects, we help local partners design pilot projects to test new or improved program models, especially if they include coordination of new service provider agencies.

Although asthma home visiting programs vary from program to program, they usually consist of the following basic components:

- **Referral** from health care entity or agency based on patient’s uncontrolled asthma; this could be due to an asthma exacerbation, medical event, or provider referral.
- **Home visits** performed by a healthcare professional such as a nurse or community health worker; these visits cover basic asthma education, asthma self-care practices, medication management, and discussion of behaviors that may contribute to asthma exacerbation.
- **Environmental assessment** of the home environment performed by an environmental assessor which consists of a room-by-room walk-through to identify potential asthma triggers.
- **Environmental remediation of asthma triggers** is performed if resources are available to do so. Contractors and subcontracts perform home repairs to remove asthma triggers.
- **Follow-up** via phone calls and additional home visits reinforce asthma education, collect data for evaluation purposes, and ensure that program services have a sustained impact.
- **Data collection** throughout the program, including outcomes data (e.g. asthma control test scores) and process evaluation (e.g. efficiency of moving client from intake to first home visit)

Lessons Learned and Recommendations
Through supporting the design and implementation of several asthma-focused pilots, we have collected several lessons learned that should be broadly applicable. Organizations working on non-asthma, healthy homes pilot projects may also consider these recommendations as they move forward.

**Internal communications and decision-making**

- **Establish inter-team communication channels.** Because pilots are often smaller in scale than mature healthy homes programs, services might be delivered by part-time staff or providers with a broad range of responsibilities. As a result, staff members may be working on the pilot at different times of the day or week, making it difficult to align schedules for communication. For example, one pilot included a part-time community health worker who performed most of his home visits during the evening or weekend, making it difficult to connect with the home assessor who worked weekdays 9 to

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**Recommendation #1**
Agree on a regular check-in time and frequency (in-person, phone call, or other), especially with team members who are in the field.
5. Without establishing an expectation for email or call frequency, field staff found it challenging to keep updated about client cases and home visit schedules.

- **It's OK to break the rules.** The service provider team will invariably run into unforeseen challenges or obstacles that will require team-wide discussion about how to move forward. While plans for a full program may include a strict set of eligibility, budget, and procedural guidelines, the team may find that those stipulations are not actually the best way to handle certain situations. The pilot phase is an opportunity for the team to test plans and constantly revisit assumptions made during the planning stage. For example, one pilot project found that owner-occupied home repair costs were far greater than expected in the budgeting process; the team decided to defer the home but began looking into alternatives like relocation for worst-case scenarios.

**Housing stock and tenancy**

- **Analysis of service tier breakdown.** Early pilot homes for one project showed that most families only required less intensive Tier 1 services—provision of supplies without need for home repairs. Further, the team analyzed an extensive list of addresses of referred patients through Google street view, which indicated that only 20 to 30 percent of homes would likely require Tier 2 services—structural home repairs like roof patching and mold remediation. This finding lowered the budget estimate on the average cost per home to $4,000. The team also revised the Tier assumption to a 50:50 split as a conservative assumption.

- **Homeowners or renters.** A key variable related to the identification of Tier 1 and Tier 2 services is whether the home is owner-occupied or tenant-occupied. One pilot team decided that while owner-occupied properties would be eligible for Tier 1 and Tier 2 services, tenant-occupied properties would be eligible for Tier 1 services only. This determination eliminated the need for the Tier 2 provider to negotiate with landlords to perform repairs.

In another pilot, the jurisdiction’s lack of tenant protections meant that tenant families were reluctant to allow home assessments and potential engagement with landlords. This meant that the program team had to pay special attention to how the pilot opportunity was presented: balancing advocacy for the tenant and sensitivity to the landlord relationship to allow for conversations to advance.

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**Recommendation #2**

Continuously revisit process plans and assumptions throughout the pilot phase. Set up a decision-making process to resolve questions.

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**Recommendation #3**

Quality of housing stock, level of homeownership vs. rentals, and landlord-tenant dynamics may play a significant role in how you implement a pilot. Plan accordingly but be prepared to pivot based on what you find.
Home assessments and remediation

- **Streamline assessment tools.** As a grantee of the U.S. Department of Housing and Urban Development (HUD), one service provider was experienced in using the Healthy Homes Rating System (HHRS) as the standard tool for assessing homes for a comprehensive list of health and safety hazards. When assessing apartments specifically for asthma triggers, however, the agency found that the HHRS tool was not always applicable. Instead, the team used a custom-built tool for environmental assessments.

- **Create safe havens when budget-constrained.** Prevalence of dust sinks and dust mites are a common asthma trigger. While it would be ideal to retrofit the entire home to address every dust-related trigger, the pilot team is ultimately working with a limited budget. To accommodate this, one team adopted an approach of creating a “safe haven” for pediatric asthma patients. The team’s goal was to have at least one room (usually the child’s bedroom) free of most triggers—this meant replacing the carpet, reducing the number of stuffed animals, replacing mattress and pillow covers, providing a mobile air filtration unit, etc. as the budget would allow.

Performance management

- **Setting up a data platform is just step one** of effective performance management. One pilot team invested in a data platform to track client information and operational efficiency. However, they lacked a standard process for consistent data entry to enable accurate, automated reporting on a regular basis. Recommitting to a disciplined data entry process allowed the team to realize the added value of their data platform.

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**Recommendation #4**
Comprehensive assessments are ideal when resources are available, but under a pilot, the best option may be focusing on a narrower scope focused on asthma.

**Recommendation #5**
Under a finite budget, consider creating a ‘safe haven’ for the asthma patient by targeting asthma interventions in the room or part of the home where the patient spends most of her time.

**Recommendation #6**
Establish guidelines for data collection (whether using a data platform or manually) and stick to this process as closely as you can.