

Just Keep Breathing

Program Handbook
October 2020



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**Children's Hospital
Colorado**

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Just Keep Breathing is an asthma home visit program based at Children’s Hospital Colorado (Children’s) in which health navigators provide home-based asthma management education and support tailored to each enrolled patient and their family. Just Keep Breathing provides personalized asthma education and support for families beyond what is feasible in an outpatient clinic setting. Navigators help increase patient and family engagement in asthma care and address patient-identified barriers to care by focusing on six primary tasks with families: connection to care; facilitation of communication between primary care providers, specialists, and schools; barrier identification and resource provision; asthma education; home environmental assessment and remediation; and medication adherence.

Children’s began Just Keep Breathing as a pilot program in 2016 with funding from the Cancer, Cardiovascular, and Chronic Pulmonary Disease Program at the Colorado Department of Public Health and the Environment. The program began with home visits for patients seen by an asthma specialist at Children’s and has expanded to include those referred by external partners. Early data show that this evidence-based program significantly improves asthma control, medication device technique, and caregiver self-efficacy and reduces asthma-related emergency department (ED) and inpatient utilization.

This handbook includes program policies and procedures to assist organizations interested in creating their own asthma home visit program. Organizations who would like additional technical assistance should contact Just Keep Breathing leadership.

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Program Recruitment

Eligibility Requirements and Recruitment Criteria

PATIENT ELIGIBILITY REQUIREMENTS

Demographic Referral Criteria (ALL criteria must apply):

1. Ages 2-17
2. Patient and at least one caregiver speak English or Spanish
3. Patient must live within 20 miles of Children's Anschutz Medical Campus
4. Family must not have an active child protection case
5. Patient must not have significant comorbid conditions: cystic fibrosis, neuromuscular disease, chronic lung disease, congenital heart disease

Medical Referral Criteria (ONE of the following must apply):

1. Patient has had two visits to a Pulmonary/Allergy specialist in the previous 24 months
AND
 - a. one asthma-related inpatient admission within the previous 12 months *OR*
 - b. one asthma-related emergency department (ED) visit within the previous 12 months
2. Patient has had one asthma-related hospital admission in previous 12 months
3. Patient has had two or more asthma-related ED visits in previous 12 months

Community Health Navigator-Initiated Recruitment and Enrollment Process

Just Keep Breathing participants are recruited from Children’s Pulmonary or Allergy clinics, Emergency Department, inpatient units, and via direct provider referral. Just Keep Breathing may also begin taking recruits from other community sources. There will be slight variation in the recruitment process depending on the source of the referral.

PROCEDURES FOR RECRUITING FROM PULMONARY/ALLERGY CLINICS

1. Each Friday, Community Health Navigators will review the clinic schedules for Pulmonary/Allergy clinics and the multidisciplinary asthma clinic (MAC).
2. While reviewing each provider’s clinic schedule for the following week, Community Health Navigators focus on ‘new patient’ or ‘asthma follow up’ to avoid looking at patients with non-asthma pulmonary conditions. “Sleep follow up” patients can also be viewed as asthma and sleep conditions are common comorbidities.
3. Community Health Navigators determine if a patient is eligible for Just Keep Breathing. This involves checking all eligibility criteria, including asthma utilization in the past year, specialty clinic visits, geographic location, and language. The Community Health Navigator should also check in REDCap to ensure the patient has not participated in the program before or asked us not to approach them again.
4. If there is question about a patient’s eligibility (comorbidities, non-qualifying criteria) they will discuss with Just Keep Breathing Registered Nurse, Medical Director or Program Manager before recruitment is attempted.
5. If the patient has been involved with the pulmonary social worker that person will also be consulted.
6. If eligible, add the patient to the current ‘Weekly Recruitment’ document in the shared drive.
7. The ‘Weekly Recruitment’ document should include the following information: provider, patient name, MRN, time/date of clinic appointment, and notes. Please fill out the patient’s identifying information before visiting clinic. After recruitment attempt, fill out the Notes section. Examples of notes may include: “did not approach- provider did not think he/she was a good candidate” or “approached- MOC wants to discuss with FOC when she returns home. Please call tomorrow for f/u” or “MOC not interested” or “no show”, etc.
 - a. Add all eligible patients to the ‘Weekly Recruitment’ document. Save the document as “Clinic Recruitment *month *year*” and place in the ‘Monthly Recruitment Files’ folder.
 - b. At this time, update the Just Keep Breathing Enrollment folder in REDCap *and* the Just Keep Breathing shared patient list in the electronic medical record database. These lists should match and reflect all *eligible* patients, regardless if we have/have not attempted recruitment. This step is critical for program evaluation.
8. If a patient meets recruitment criteria, Community Health Navigators will send a note to the provider via electronic medical record to inquire about recruiting the patient. If the provider believes the patient would be a good fit for Just Keep Breathing, the Community Health Navigator will arrive at clinic at the time of appointment with a recruitment pamphlet. The Community Health Navigator will find the provider and ask if they would mention and/or introduce Just Keep Breathing to the family either

before or after their assessment (some providers prefer to do their assessments first before introducing Just Keep Breathing).

9. During Just Keep Breathing introduction, brochures and business cards are given to the family, interest in the program is determined, and, ideally, a date for the first home visit is set (most families prefer to think about it for a day or two). For the families who show interest in Just Keep Breathing but do not schedule a home visit during recruitment, a follow up phone call should be made as soon as possible. If a date for the first home visit is set in the clinic, a confirmation phone call is made 1 week before the home visit and the day of the home visit. (For home visits scheduled in the morning, please confirm with caregiver the day before.)
10. If Community Health Navigators or nurse is not available to recruit from clinic, Community Health Navigators can contact the provider about eligibility and request that we reach out to the patient by phone to determine family interest. Community Health Navigator will attempt to recruit family by phone as soon as possible.
11. Community Health Navigator will attempt three (3) phone calls. If no response after three (3) calls, Just Keep Breathing will assume family is not interested in the program. (Once home visits have begun, Community Health Navigator will allow no more than three (3) visit reschedules or two (2) no-shows. If this occurs the Just Keep Breathing team will review the case at the weekly meeting to determine if continued enrollment in Just Keep Breathing is appropriate.)
12. During clinic recruitment, if the patient/family declines the program, remind them that they may speak with their asthma specialist about joining the program at a later time.
13. Community Health Navigators will always report back to referral source with update on recruitment status.

Community Health Navigators will make two verification calls to the family before home visits. The first call should take place about one week before the home visit. The second call should be made the day of the home visit. When making the final confirmation phone call, Community Health Navigators should complete the *Just Keep Breathing Home Visit Checklist*.

Provider-Initiated Recruitment and Enrollment Process

Just Keep Breathing participants are recruited from Children’s Pulmonary or Allergy clinics, Emergency Department, inpatient units, and via direct provider referral. Just Keep Breathing may also begin taking recruits from other community sources. There will be slight variation in the recruitment process depending on the source of the referral.

PROCEDURES FOR RECRUITING BY DIRECT PROVIDER REFERRAL

1. If a Pulmonary, Allergy or other clinician would like to refer a patient to Just Keep Breathing, she/he should be directed to complete the electronic *Just Keep Breathing Patient Referral Form*.
2. Community Health Navigators determine if a patient is eligible for Just Keep Breathing. This involves checking all eligibility criteria, including asthma utilization in the past year, specialty clinic visits, geographic location, and language. The Community Health Navigator should also check in REDCap to ensure the patient has not participated in the program before or asked us not to approach them again.
3. If there is question about a patient’s eligibility (comorbidities, non-qualifying criteria) they will discuss with Just Keep Breathing Registered Nurse, Medical Director or Program Manager before recruitment is attempted.
4. If the patient has been involved with the pulmonary social worker, he/she will also be consulted.
5. If eligible, add the patient to the current ‘Weekly Recruitment’ document in the shared drive.
6. The ‘Weekly Recruitment’ document should include the following information: provider, patient name, MRN, time/date of clinic appointment, and notes. Please fill out the patient’s identifying information before visiting clinic. After recruitment attempt, fill out the Notes section. Examples of notes may include: “did not approach- provider did not think he/she was a good candidate” or “approached- MOC wants to discuss with FOC when she returns home. Please call tomorrow for f/u” or “MOC not interested” or “no show”, etc.
 - a. Add all eligible patients to the ‘Weekly Recruitment’ document. Save the document as “Clinic Recruitment *month *year*” and place in the ‘Monthly Recruitment Files’ folder.
 - b. At this time, update the Just Keep Breathing Enrollment folder in REDCap *and* the Just Keep Breathing shared patient list in the electronic medical record database. These lists should match and reflect all *eligible* patients, regardless if we have/have not attempted recruitment. This step is critical for program evaluation.
7. If a patient meets eligibility criteria, Community Health Navigator will arrive to clinic at the time of appointment with Just Keep Breathing recruitment pamphlet. Ask the referring provider if they would mention and/or introduce Just Keep Breathing to the family either before or after their assessment.
8. During Just Keep Breathing introduction, brochures and business cards are given to the family, interest in the program is determined, and, ideally, a date for the first home visit is set (most families prefer to think about it for a day or two). For the families who show interest in Just Keep Breathing but do not schedule a home visit during recruitment, a follow up phone call should be made as soon as possible. If a date for the first home visit is set in the clinic, a confirmation phone call is made 1 week before the home visit and the day of the home visit. (For home visits scheduled in the morning, please confirm with caregiver the day before.)

9. If Community Health Navigator or nurse is not available to recruit from clinic, Community Health Navigator will reach out to family by phone to determine interest. Community Health Navigator will attempt to recruit family by phone as soon as possible.
10. The Community Health Navigator will attempt three (3) phone calls. If no response after three (3) calls, Just Keep Breathing will assume family is not interested in the program. (Once home visits have begun, Community Health Navigator will allow no more than three (3) visit reschedules or two (2) no-shows. If this occurs the Just Keep Breathing team will review the case at the weekly meeting to determine if continued enrollment in Just Keep Breathing is appropriate).
11. If the patient/family declines enrollment, thank them for their time and tell them they are welcome to discuss our program with their specialist if they become interested at another time.
12. Community Health Navigators will always report back to referral source with update on recruitment status.

Community Health Navigators trade off recruitments to ensure a relatively equal number of patients is maintained. If the respective Community Health Navigator is not present when a family is to be recruited, the Community Health Navigator who is present will recruit. After initial recruitment, the patient will be handed off to the appropriate Community Health Navigator.

Home Visits

Home Visits: A Preview

Each home visit varies slightly depending on the needs of the family. The first home visit has the most paperwork and also the most in-depth asthma education provided by the nurse. This education is reinforced by the Community Health Navigator throughout the program. During a typical home visit series, the Just Keep Breathing nurse will attend only the first home visit with the primary Community Health Navigator. If the nurse speaks the same language as the guardian, he/she will lead the first home visit. Subsequent home visits will be attended by the primary Community Health Navigator and a secondary Community Health Navigator. If the second Community Health Navigator is unable to attend, the nurse can replace her/him. If the primary Community Health Navigator cannot attend, the home visit should be rescheduled.

INITIAL HOME VISIT

Before home visit

1. Detailed visit information must be in the team calendar (patient name, visit time, address).
2. The first home visit may take place at the patient's home or at a neutral location if preferred by caregiver(s). Subsequent visits should take place at the patient's home.

Arriving at home visit

1. The Community Health Navigator should text the offsite team at time of entry into home. More information on this can be found in the *Safety Protocol*.
2. Team members should put on blue hospital "booties" and explain to the family they are to keep hospital germs out of their home.
3. Team members should not enter if a child opens the door, but should wait for an adult to allow them into the home.
4. Team members should greet the family and introduce themselves.

Nurse's focus while in the home

1. The nurse will sit with the caregiver(s) while the Community Health Navigator sits elsewhere with the patient. The Community Health Navigator and patient should be within sight of caregiver(s).
2. The nurse must ask the caregiver(s) about their goals for the program and any barriers they may be aware of that make it difficult to manage asthma.
3. The nurse should identify knowledge deficits and educate caregiver(s) accordingly using the teach-back method (having the caregiver(s) repeat back information to demonstrate their understanding).
4. The nurse should prepare the caregiver(s) for the substantial amount of paperwork and explain that subsequent home visits will only have a small amount of paperwork and will not take as long to complete. The nurse will complete paperwork with the caregiver(s).
5. The nurse should verify the family's preferred pharmacy. The nurse should ask the family if they receive automatic notifications when their child's monthly controller medication is filled. If not, they should request that the caregiver(s) call the pharmacy to set up auto-refill reminders; this can also be done during the visit. The nurse may also ask the pharmacy about auto-refills and reminders for other medications such as Montelukast, Cetirizine, Flonase, etc.

Community Health Navigator's focus while in the home

1. Community Health Navigator and patient will sit in a location where the caregiver can see them.
2. Community Health Navigator will ask patient and caregiver to gather all asthma medications that are in the house. This includes unopened boxes and medications that may be in the car, kitchen cabinet, backpack, etc.
3. Community Health Navigator will provide a medication box to the family with a visual schedule of medications (printed before home visit) on the inside lid of the box. The community health navigator will use this box to help the family organize all asthma medications. At this time, the community health navigator will also verify medication strengths and expiration dates to ensure the family has the correct medications on hand.
4. Community Health Navigator will record counters for each medication using the *Home Visit Medication Counts* worksheet (which should be used during each home visit).
5. Community Health Navigator should discuss all medications with patient. Depending on the child's age, Community Health Navigator should discuss how the medications work and how often the patient should take them. A thorough description of asthma symptoms should be reviewed so the patient may better recognize the onset of an asthma exacerbation.
6. Depending on the age of the patient, appropriate asthma-related worksheets can be completed (coloring pages, cartoon pages, etc.) or asthma-related games can be played on the tablet.

Wrapping up the home visit

1. Community Health Navigator should schedule the follow up home visit.
2. Just Keep Breathing staff should ask if family has any further questions and encourage them to call Just Keep Breathing if they have questions moving forward. Provide business cards or contact information. Thank them for their time and leave the home.
3. A text should be sent to the offsite team to report the home visit is complete and team members are safely outside of the home.

TO BE COMPLETED AT EVERY HOME VISIT

1. With exception to the first home visit when team nurse is present, primary Community Health Navigator works with the caregiver and secondary Community Health Navigator works with the patient(s).
2. Secondary Community Health Navigator asks caregiver to collect all medications in the home. *Home Visit Medication Counts* worksheet will be completed by secondary Community Health Navigator.
3. Secondary Community Health Navigator educates the patient on asthma medications, medication adherence, triggers/allergies, personal barriers, etc. Age-appropriate learning materials should be used.
4. Primary Community Health Navigator will assess caregiver's understanding of asthma, asthma medications and triggers/allergies. Education will be provided to address gaps in understanding.
5. Discuss other barriers to asthma control and/or medication adherence that the family may be experiencing (lack of transportation to pharmacy, child lives in multiple homes, school or work schedule interfering with medication administration, etc.).
6. Primary Community Health Navigator will discuss with caregiver any community referrals that have been made.

7. Provide remediation supplies as identified in the home environmental assessment performed at second home visit.
8. Review Asthma Action Plan.
9. Observe medication device technique.
10. Complete all necessary data collection.

TO BE COMPLETED AT SECOND HOME VISIT

1. Home environmental assessment is completed.
2. Medication adherence technology may be installed if family desires.
3. *Access Plan Important Phone Numbers* form is provided as a resource for understanding proper healthcare utilization (i.e., who to call when the patient is sick, etc.). This provides contact information for the patient's care team.

TO BE COMPLETED AT FINAL HOME VISIT

1. Review graduation criteria with caregiver and patient; verify asthma and medication knowledge as identified on the *Graduation Criteria Checklist*.
2. Final review of *Access Plan Important Phone Numbers* form with caregiver(s).
3. Provide certificates to patient and caregiver if graduation criteria met.

IF THE PATIENT IS SYMPTOMATIC WHILE IN THE HOME

If the patient is symptomatic while Just Keep Breathing personnel are at the home visit, follow procedures on the Asthma Action Plan as if caregiver(s) were treating the child alone (2-4 puffs of albuterol every 4 hours). Discuss your observations with the caregiver(s) (coughing, tachypnea, retracting, wheezing, abdominal breathing, etc.) and talk through different scenarios that could happen after albuterol is given. Discuss a treatment plan with the caregiver(s) so they know what to do after Just Keep Breathing leaves the home.

Home Visits: Scheduling with Families

Scheduling home visits with families and other team members can be very challenging. Below are guidelines to help Just Keep Breathing team members establish effective practices regarding scheduling

TEAM STANDARDS

1. All team members need to maintain an up-to-date Outlook calendar so Community Health Navigators can coordinate schedules with each family.
2. Since team members need to be able to anticipate their personal schedules ahead of time, new appointments should be scheduled at least one week from the time of booking. Please do not schedule home visits within the current week unless your teammate is agreeable.
3. Once a home visit has been scheduled, the appointment should be entered on the Just Keep Breathing shared calendar and sent to team member calendars with the following information:
 - a. Date and time of the visit
 - b. Patient name
 - c. Address of the home
 - d. Visit number

SCHEDULING INITIAL APPOINTMENTS WITH FAMILIES

1. The Community Health Navigator or nurse will attempt to schedule the first home visit at time of recruitment.
2. If the first home visit cannot be scheduled at time of recruitment, Community Health Navigator or nurse will call the family within two business days.
3. Reminder phone calls are placed the day before the appointment.
4. The patient must be present during each home visit.

SCHEDULING SUBSEQUENT APPOINTMENTS WITH FAMILIES

1. It is best to schedule follow up home visits while in the family's home.
2. Four weeks apart is the ideal time to schedule follow up appointments, unless there is a specific reason to schedule sooner or farther out.
3. Reminder phone calls are placed the day before each home visit.
4. Families are allowed 3 reschedules before being dismissed from the program.
5. Families are allowed 2 no-shows before being dismissed from the program.
6. All extraordinary scheduling issues should be discussed at the weekly team meeting.

Home Visits: Materials/Supplies Needed

Community Health Navigators will be provided a small luggage bag for keeping these materials organized and transportable to home visits. Community Health Navigators will prepare the bag and the home visit paperwork for each visit.

MATERIALS NEEDED

- Data collection paperwork
- Home Visit Medication Counts
- PPE: shoe covers (worn at each visit), masks and gloves (worn as needed)
- Just Keep Breathing team calendar for scheduling future appointments
- Whiteboard (first home visit only, offered to family for organization)
- Stethoscope (nurse visit)
- Pen/Pencil
- Spacer
- Mask for medication administration (small and large)
- Peak flow meter
- Laminated cards of famous asthmatics
- Empty medication box
- Stickers
- Tablet with asthma games
- Crayons/asthma coloring books
- Asthma-related kid-friendly materials

Home Visits: Necessary Paperwork for Each Home Visit

Visit 1

- Just Keep Breathing Home Visit Checklist
- Asthma Action Plan
- Cover Sheet
- Asthma Care Access and Quality
- Missed School/Missed Work
- Triggers
- Medication
- Self-Efficacy
- Social Support
- Demographics
- Inhaler Device Assessment Tool (IDAT)
- Pediatric Asthma Control and Communication Instrument (PACCI New Patient)
- HIPAA forms for permission to contact family member, school, community agencies, etc. (1 form per contact)
- Psychosocial Screener
- Home Visit Medication Counts

Visit 2/Environmental Assessment

- Just Keep Breathing Home Visit Checklist
- Access Plan Important Phone Numbers
- Inhaler Device Assessment Tool (IDAT)
- Pediatric Asthma Control and Communication Instrument (PACCI follow up)
- Pediatric Health Questionnaire (PHQ-4)
- Healthy Homes Environmental Assessment Checklist (HHEAC)
- Home Visit Medication Counts

Visit 3

- Just Keep Breathing Home Visit Checklist
- Inhaler Device Assessment Tool (IDAT)
- Pediatric Asthma Control and Communication Instrument (PACCI follow up)
- Home Visit Medication Counts

Visit 4

- Just Keep Breathing Home Visit Checklist
- Inhaler Device Assessment Tool (IDAT)
- Pediatric Asthma Control and Communication Instrument (PACCI follow up)
- Home Visit Medication Counts

Visit 5/Graduation

- Just Keep Breathing Home Visit Checklist
- Asthma Action Plan
- Cover Sheet
- Asthma Care Access and Quality
- Missed School/Missed Work
- Medication (review side effects)

- Self-Efficacy
- Social Support
- Pediatric Health Questionnaire (PHQ-4)
- Inhaler Device Assessment Tool (IDAT)
- Pediatric Asthma Control and Communication Instrument (PACCI follow up)
- Access Plan Important Phone Numbers
- Certification of Completion (one for caregiver(s), one for patient)
- Graduation Criteria Checklist
- Home Visit Medication Counts

3 Month Follow Up

- Missed School/Missed Work
- Pediatric Asthma Control and Communication Instrument (PACCI follow up)

Home Visits: Supplies/Services Provided to Families

Since many asthma triggers can be found in the home environment, Just Keep Breathing strives to help the family address and/or eliminate these triggers. If the family desires, Just Keep Breathing will provide basic cleaning supplies. After completion of the home environmental inspection, it is possible that additional supplies (or services) will be recommended based on the findings. Just Keep Breathing staff should never promise or hint that these supplies or services will be provided by the program before team discussion at the staff meeting.

SUPPLIES PROVIDED TO EVERY FAMILY IF DESIRED

- Medication box
- Dry erase calendar/marker
- Doormat
- Bucket
- Vinegar
- Baking soda
- Squirt bottle
- Borax
- Cleaning supplies recipe card

SUPPLIES THAT ARE FREQUENTLY PROVIDED TO THE FAMILY

- Air purifier
- Caulking
- CO² detectors
- Furnace filter
- Mattress covers
- Pillow covers
- Pipe filler
- Shower guards
- Window covers
- Vacuum

SERVICES OR NEEDS THAT MAY BE ADDRESSED FOR THE FAMILY

- Pest control/extermination
- Carpet cleaning
- One-time home cleaning service
- Mold mitigation

Home Visits: Getting Clinical Questions Answered

The program staff present at the home visit may include the Just Keep Breathing program nurse and a Community Health Navigator or two Community Health Navigators. If the program nurse is not present at the home visit, the Community Health Navigators can access back up expertise to answer clinical questions as outlined by this protocol.

PROCEDURE

1. The Just Keep Breathing program nurse is expected to attend all initial home visits to provide clinical assessment of the patient's asthma control.
2. If the program nurse is not present at subsequent home visits and a patient has any distress with breathing, the Community Health Navigator should call for guidance using the following clinical ladder. Calls should be made on speaker phone so all staff and family members can hear the instructions.
 - a. Program Nurse
 - b. Medical Director
 - c. Breathing Institute Nurse Triage Line (720-777-6181)
3. If the patient is in extreme distress (unable to speak more than a couple words at a time, is sucking in the skin above the collar bone or between the ribs, is nasal flaring, etc.), the patient should go to the Urgent Care or Emergency Department. Start the patient on 4-6 puffs albuterol every 20 minutes while in transit or upon waiting for assistance from EMS.

Home Visits: Tips and Tricks

KEY CONCEPTS WHEN IN A PATIENT HOME

1. Your first impression can make or break the visit. You may lose them quickly if you don't show openness and acceptance for their home. Earn their trust by being genuinely happy to see them and remaining neutral as you observe their environment. Always thank them for allowing you into their home.
2. Be aware of your own body language, facial expressions, and the tone of voice that you use. Be careful not to let your eyes fix on things in the background. The family may interpret this as "intruding" and perhaps making judgements about their environment.
3. They may be uncomfortable with you in their home. Be especially sensitive if the family has not met you in person.
4. You are a guest in their home and must adapt to their current situation.
5. Show respect for their family unit by asking if they would like to include another family member in the conversation and with the health care decisions they are being asked to make.
6. Accept that people may have other things going on. The home environment may be chaotic.
 - a. Don't get upset if there are multiple kids interrupting or the dog is barking.
 - b. The patient may not be cooperative, especially if they are sick.
 - c. There may be a lot of noise. You can ask them if there is a space that would be quieter for the visit, but it is possible there is not.
 - d. If doing telehealth, try to ignore audio feedback from the connection.
7. People are more comfortable in their homes than in a clinic so they may share more information with you than you expect. You can follow the threads that they volunteer, but do not initiate conversation about things that you see in the background. Do not ask about personal matters that do not relate to patient care (e.g., why do they have 6 people living in one bedroom?).
8. You should focus on the medical issue at hand. Do not ask about personal matters that do not relate to patient care. You are not in their home to investigate - you're there to help.
9. People will volunteer important, perhaps unrelated, information about their lives. Look for cues in the things that they expressing to offer suggestions or resources. Ask if there is anything they need assistance with currently. Do not offer resources for things that the family is not requesting; it may be offensive to them. Do not assume that the situation the family is in is something they want help with.
10. In the case that a family does request resources, be prepared to provide names and phone numbers of people or support teams that may be helpful to the family. You may say, "I can put you in touch with our... would that be helpful to you?"
11. You may discover what seems to be an incongruency between resources a family requests and what you witness in their environment.
12. It may be easier for families to reflect on their barriers while at home than in the clinic. This can be an excellent opportunity to investigate what they perceive their barriers to health to be. Ask questions that allow the patient and caregiver to reflect.
 - a. Ask about the patient's or caregiver's goals regarding treatment.
 - b. Ask what they believe their challenges to accomplishing those goals might be.
 - c. What specific steps will the patient and caregivers take to accomplish that

- goal?
 - d. How does the family plan to monitor symptoms at home? Do they understand what symptoms they are looking for?
 - e. Can the family teach back what the provider recommendations are?
 - f. What can the provider do to help them during treatment?
13. Phrasing sensitive questions:
- a. "Is there anything else you want to share?"
 - b. "Would it be helpful to you or your family if...."
 - c. "What would be most helpful to you..."
 - d. "Is there anything else you can think of that we can do to help you manage your son's medical condition?"
14. Questions that may help you further understand the family and the family's medication routine:
- a. Can you find your medications and show them to me? Where do you keep your medications?
 - b. Can you show me how you use those medications?
 - c. What is your routine for taking them? Does anyone help you take them?
 - d. Do you understand why you take this medicine? Do you understand the difference between these meds?
 - e. Have you noticed any side effects from your medications?

SAFETY ISSUES

Hospital policies and professional standards should apply. If you witness anything that puts someone in the home in imminent danger, 911 may need to be called. If you witness a disturbing social situation but imminent danger is not a concern, notify a social worker to assist the family or escalate care to the correct entity.

1. You may witness physical, emotional or verbal abuse
2. You may see a younger sibling climbing up the balcony rail
3. You may witness poor parental judgment
4. You may witness evidence of drug use in the house. Be aware if drugs are within reach of children.

INTERPRETERS FOR TELEHEALTH

As with in person interpreters, look at the patient and family when you speak, not the interpreter.

UNEXPECTED THINGS YOU MAY SEE

1. Kitchens can be extremely dirty. Days of dirty dishes may be piled up. Animals could be crawling on the countertops.
2. Animal feces may be on the carpet or furniture.
3. Hoarding to the degree that there is no room for the family to sit.
4. Overcrowding
5. Living in a hotel or motel
6. Holes in walls
7. Poor personal hygiene
8. Unhealthy food habits
9. Unhealthy lifestyle choices

Family Outcomes

School Visit Protocol

During home visits, staff will ask the family if they would like Just Keep Breathing to work with the school to improve the patient's asthma care at school. We will obtain consent from the caregiver to speak to school staff and call the school nurse to establish a relationship. The goal of the communication is to ensure school personnel understand the family's concerns and the child's needs.

PROCEDURES

1. Most school communication can be done by phone. This may include conversations with the school nurse or health paraprofessional about the student's asthma control, their medication usage, or faxing medication forms for albuterol and controller medications when applicable.
2. If a school visit by Just Keep Breathing is determined to be needed, the following information should be input into the Just Keep Breathing Outlook calendar:
 - a. Date and time of the visit
 - b. School name, address of the visit, and patient name
 - c. Just Keep Breathing staff and staff phone numbers
 - d. Name of the school staff member Just Keep Breathing is meeting
3. School visits will be made by the Just Keep Breathing program nurse and the primary Community Health Navigator.
4. School visits will be scheduled with the school nurse and will occur during school hours.
 - a. Consent will be faxed to the school at the time the visit is scheduled by phone.
 - b. The school visit should include the school nurse or designated health paraprofessional and, if possible, any other staff who are involved in the student's care.
5. School visits will include the following information:
 - a. The student's current asthma status will be reviewed.
 - b. An up-to-date action plan will be provided and reviewed.
 - c. Any of the following school issues may be addressed:
 - i. Pretreatment for activity
 - ii. Allowing the child to go to the nurse or health paraprofessional for asthma care
 - iii. Ensuring the child has everything they need at school for asthma care
6. If the school voices concern about the family, that information should be recorded on paper and will be taken back to the Just Keep Breathing weekly team meeting. It will be decided at the team meeting if further action should be taken (e.g., inform the PCP, involve social work, etc.).

Protocol for Referral to Social Work

Some families may need a level of social or resource support that exceeds the scope of the Community Health Navigators. This establishes criteria for when Just Keep Breathing should refer the family to a social worker and which social worker should be involved.

PROCEDURES

If a team member observes any of the following issues or is told of one by the patient or family, the team member will inform the program manager, medical director, and clinic social worker as soon as possible. Pulmonary or Allergy clinic patients should be directed to the Pulmonary or Allergy clinic social worker. Patients not seen in the organization's Pulmonary or Allergy departments should be directed to their primary care provider to obtain social work resources. The social worker will follow up on the identified issue. The social worker must be involved prior to any referral to Social Services, per Children's Hospital Colorado policy.

Diagnosis or Illness

- Failure to thrive
- Any question of abuse/neglect/NAT (non-accidental trauma)
- Newly diagnosed patient with serious aspects to diagnosis (life-threatening, acute, developmental impairment, etc.)
- Severe psychiatric condition of patient or caregiver
- SUID (Sudden Unexpected Infant Death) or near SUID case
- Ingestions
- Trauma cases

Family Issues

- Lack of social supports (no family, friends, etc.)
- Language and/or cultural/religious challenges
- Homelessness
- Patient's family does not visit if he/she is hospitalized
- History of violence, abuse, etc.
- Death of significant family member (sibling, grandparent, etc.)
- High levels of stress within the family and/or home environment
- Caregiver has chronic illness
- Concerns about caregiver/child relationship (e.g., parent is rough with child)
- Single or young parent with multiple children or children with chronic illness
- Recent relocation

Psychosocial Issues

- Financial problems (e.g., no transportation, no money to eat, no insurance, no housing, no utility services, telephone, or medical services)
- Repeated hospitalizations
- Caregiver/patient is non-adherent with appointments, treatment, etc.
- Family/patient has history of alcohol or drug abuse
- Family has conflict with hospital staff
- Family is disorganized (e.g., unable to follow-through with medical treatment)
- Patient or sibling is not attending school

- Family/patient is involved in gang activity/street violence
- Maladaptive “extended family” involvement (e.g., interfering with patient’s care)

Legal Issues

- Adoptions, foster care placements and/or relinquishments
- Abandonment of patient
- Custody/guardianship issues or conflicts
- Longstanding history, previous involvement, or verifying if present involvement with Social Services
- Consideration of DNR/termination of life support
- Caregiver is imprisoned, hospitalized, or residing in a drug/alcohol treatment facility
- Religious beliefs are contrary to customary medical practices (i.e., Jehovah’s Witness)

Family Engagement Criteria

Social factors directly affect asthma control, so Just Keep Breathing aims to help families address and/or overcome the social barriers that are impacting their child's health.

FAMILY ENGAGEMENT CRITERIA

A family must:

1. Demonstrate responsibility and initiative for the improvement of their child's asthma
2. Remain engaged in the program and demonstrate cooperation with Just Keep Breathing staff
3. Schedule and attend home visits as agreed upon
 - a. Community Health Navigators will allow no more than three (3) visit reschedules or two (2) no-shows. If this occurs the Just Keep Breathing team will review the case at the weekly meeting to determine if continued enrollment in Just Keep Breathing is appropriate.

FAMILY UNABLE TO MEET ENGAGEMENT CRITERIA

If a family is unable to meet the engagement criteria outlined above, Just Keep Breathing will discuss the details as a team and with social work, if needed. The family may be dismissed from the program at team discretion.

*If a family discontinues the program, either voluntarily or involuntarily, the Just Keep Breathing nurse or Community Health Navigator should make a separate note in electronic medical record stating that Just Keep Breathing services have been discontinued.

Graduation Criteria

Program staff will conduct 4-5 home visits per family to identify their personal barriers to asthma control. After three home visits, the Just Keep Breathing team will determine if graduation criteria have been met. If not, the team will reconsider after the fourth home visit. If so, graduation certificates will be signed by the Medical Director and given to both the caregiver(s) and the patient. A small celebration with a gift to the patient will take place at the final home visit.

GRADUATION CRITERIA

By the end of the Just Keep Breathing program, the caregiver and/or the patient should be able to:

1. Vocalize what controlled asthma looks like
2. Identify patient-specific triggers inside and outside the home
3. Explain the reason for controller medication and why it needs to be taken daily
4. Identify personal barriers (caregiver and/or teenage patient) to giving controller medication daily
5. Display correct technique with inhaler and spacer for quick relief medication and controller
6. Explain how much albuterol usage demonstrates that the patient's asthma is not controlled
7. Verbalize the patient's Asthma Action Plan

IF GRADUATION CRITERIA ARE NOT MET

1. If a family has participated in the Just Keep Breathing program but is still struggling with compliance or general understanding of asthma, a discussion of graduation eligibility should take place before the 5th home visit at the weekly team meeting. See *Protocol for Graduation Criteria Not Met*.

Protocol for Graduation Criteria Not Met

If graduation criteria have not been met, Just Keep Breathing will follow a different protocol for communicating program completion information to the patient's asthma specialist and PCP.

DURING THE FINAL HOME VISIT

1. At the fifth home visit, the Community Health Navigator should ask the family what barriers they continue to face.
2. The Just Keep Breathing interaction with the family will remain the same, however no parent certificate will be awarded.
3. The patient will be given a completion certificate and a small gift for participation in the program.

AFTER THE FINAL HOME VISIT

1. After the final home visit, Just Keep Breathing will send the *PCP Communication-Program Summary Letter* to the patient's PCP and asthma specialist. Specific reasons for not graduating the program should be listed in the letter.
2. Depending on the severity of the situation, there may need to be a focused, in person, discussion amongst Just Keep Breathing and other care team members at this time. Continued barriers and concerns regarding the family's ability to deliver proper healthcare should be discussed at length. The need for this will be determined in the weekly team meeting.

Program Logistics

Safety Protocol

GENERAL SAFETY GUIDELINES

1. Staff will never attend a home visit alone.
2. Initial home visits should be scheduled to start at least 90 minutes before sunset. Once the program team has been to the home, they can schedule follow up visits to finish after dark at their discretion.
3. Program staff will always have a charged cell phone with them at home visits.
4. Staff will wear program uniform and identifying badge at all times.
5. Before entering the home:
 - a. Park in a well-lit area.
 - b. Observe surroundings for potential risks or unsafe situations.
 - c. Know the quickest escape routes before exiting the vehicle.
 - d. Leave valuables and personal belongings in vehicle during the home visit.
 - e. Text team that you are entering the home. Whichever team member responds to the text first should set an alarm for 90 minutes.
6. Upon returning to the car:
 - a. Carry car keys in hand for accessibility.
 - b. Observe surroundings for potential risks or unsafe situations.
 - c. Lock vehicle after returning from home visit.
 - d. Text team that you have safely left the home.

SPECIFIC PROCEDURES

1. Prior to visit
 - a. During confirmation calls made the day prior to the first home visit, Community Health Navigator should complete the *Just Keep Breathing Home Visit Checklist* worksheet, which asks about signs of bed bug infestation. If evidence of bedbugs exists, staff will connect family to extermination services and delay home visit until extermination is complete.
 - i. Do you currently have a bed bug infestation?
 - ii. Have you seen the bugs? (Have you seen a reddish-brown, wingless insect about the size of an apple seed (1/4-3/8 inch long)? When viewed from the side, they are flat, which is why they can fit into such narrow spaces. Newly hatched bedbugs are white or yellowish and resemble the adults, but are smaller in size.)
 - iii. Have any steps been taken to resolve your bed bug problem (pest control, sprays, bombs, washing personal items).
 - iv. Do you currently have any bed bug bites on your body? Have you noticed blood stains, brown spots on your bedding or clothing? Blood stains are caused by the bedbug being crushed while feeding on its host. For example, you may roll over onto the bedbug while it is feeding.
 - b. Program staff will enter patient name and address of each home visit on the Just Keep Breathing team calendar prior to attending the home visit.
2. Arrival at visit
 - a. Prior to entering the home, staff will agree on a signal for discomfort. During the visit, if either staff member gives the signal, both team members will excuse themselves, tell the family they will call to reschedule, and leave the home immediately. Staff will inform the Program Manager (or other pre-

designated team member) immediately. If staff think it is necessary, they will call 911.

- b. Upon entering the home, staff will text the team.
 - c. Staff should enter the home only with permission from an adult.
 - d. Staff may ask adult to restrain pets if not adequately confined upon arrival.
3. During visit
- a. Visits should last no longer than 90 minutes. If a visit must exceed 90 minutes, staff will text team with an updated expected end time.
 - b. Staff should avoid using the restroom, eating or drinking while in patient home if possible.
 - c. If a medical emergency occurs while in the home, staff will call 911. They will also inform the Program Manager (or other pre-designated team member).
 - d. If a mental health emergency occurs while in the home, staff should remain calm and attempt to determine if the patient or family member is a risk to themselves or others. If so, staff will call 911 or the Suicide Hotline at 800-273-TALK (8255).
 - e. If staff see evidence of illegal behavior (e.g., weapons or illicit drugs in the home), they will terminate the visit and notify the Program Manager (or other pre-designated team member) immediately. No additional home visits will be made to that home. The team will also inform the appropriate social worker to discuss next steps.
 - f. To limit potential for contact with insects, staff will follow these general tips:
 - i. Do not wear cuffed pants to home visits.
 - ii. Leave coat in the car.
 - iii. Do not put any personal belongings on the floor during home visit.
 - g. If staff see evidence of bedbugs or lice, they will end the visit and leave the home. If this occurs, they will follow up with the family and connect them to extermination services.
 - h. Staff will never transport patients or families in their private vehicle at any time.
 - i. If staff see anything that falls under the organization's *Mandatory Reporting Guidelines*, they will contact the program manager (or other pre-designated team member) immediately to develop a plan for reporting. Social work will be consulted as soon as possible.
4. After visit
- a. If the team member who responded to the initial text does not hear from home visit staff within 10 minutes of the expected finish time, he/she will call the staff by cell phone. If staff cannot be reached, the Program Manager will contact the non-emergency line for the police in that location.
 - b. If any of the above scenarios occur, the involved staff will complete an incident report within 48 hours.

Communication with Extended Care Team

Just Keep Breathing will communicate, typically through the electronic medical record, to other members of the care team to highlight patient progress in the program as well as to discuss methods of treatment that may/may not be working for the patient. This communication allows each member of the Just Keep Breathing team to understand their role in the communication cycle and will give providers similar expectations between patients

COMMUNICATION UPON PROGRAM ENROLLMENT

1. Within 48 hours of recruitment, the Just Keep Breathing Community Health Navigator will inform the referral source that patient has/has not been enrolled in the home visit program. This communication is done informally through an electronic medical record message. Since some families may not follow through with the first home visit, Just Keep Breathing waits to initiate communication with the PCP until after the first home visit has been completed.
2. After the family completes the first home visit, the respective Just Keep Breathing Community Health Navigator will send the *PCP Communication-Patient Enrollment Letter* to the patient's PCP. This communication is generally done through the electronic medical record. If the PCP does not use a compatible electronic medical record system, the Community Health Navigator will print the *PCP Communication-Patient Enrollment Letter*, give to Medical Director for signature, and then fax to the PCP.

COMMUNICATION THROUGHOUT PROGRAM

1. After each home visit, the Community Health Navigator (or whomever leads the visit) will enter data into REDCap and electronic medical record. Use the same electronic medical record template for all home visits. This note should then be routed to the program nurse for review.
2. The program nurse should review and, if necessary, addend the note before forwarding to the program Medical Director for review.
3. After weekly group discussion of the patient's home visit, the Medical Director can update the electronic medical record note then route to the patient's PCP and asthma specialist. Recommendations for care or concerns can be made at this time.
 - a. If the Medical Director is unavailable, the program nurse can route the electronic medical record communication to the patient's PCP and asthma specialist.

COMMUNICATION UPON PROGRAM COMPLETION

1. The Community Health Navigator will enter visit data into REDCap and the electronic medical record. This note should then be routed to the program nurse for review.
2. The program nurse should review and, if necessary, addend the note before forwarding to the Medical Director for review.
3. After the weekly group discussion of the patient's final home visit, the Medical Director will then update and route the finalized home visit note to the patient's PCP and asthma provider as usual. The Medical Director will then inform the program nurse through the electronic medical record that their review is complete. At this time, the program nurse will complete the *PCP Communication-Program Summary Letter*; this letter and the *Access Plan Important Phone Numbers* form (completed before second

home visit by Community Health Navigator) will be sent to the patient's PCP and asthma specialist by the program nurse.

4. The first paragraph of the final home visit note should include the following verbiage:
"It has been a pleasure for Just Keep Breathing to care for XXX in our asthma home visit program. As per Just Keep Breathing policy, all further care questions and communication will now be directed to his/her PCP and his/her asthma specialist. An *Access Plan Important Phone Numbers* form was provided to the family containing contact information for their specific providers."

COMMUNICATION UPON EARLY DISCONTINUATION OF PROGRAM

1. If a family discontinues participating in the program, either voluntarily or involuntarily, the Just Keep Breathing program nurse should complete the *PCP Communication-Patient Discontinuation Letter* and forward to the Medical Director. After review, the Medical Director will forward to the patient's PCP and asthma specialist.
2. The first paragraph of the final home visit note should include the following verbiage:
"It has been a pleasure for Just Keep Breathing to care for XXX in our asthma home visit program. As per Just Keep Breathing policy, all further care questions and communication will now be directed to his/her PCP and his/her asthma specialist. An *Access Plan Important Phone Numbers* form was provided to the family containing contact information for their specific providers." This paragraph should also state why Just Keep Breathing services have been discontinued prematurely.

Weekly Team Meeting

The Just Keep Breathing team will meet on a weekly basis to discuss current patients. Generally, only the patients from the previous week's home visits will be on the agenda. However, any current issues with other enrolled patients should also be discussed.

PROCEDURES

1. Attendees at the meeting should be:
 - a. Program nurse
 - b. Community Health Navigators
 - c. Program Manager
 - d. Medical Director
 - e. Administrative Assistant (to take meeting minutes)
 - f. Data Analyst
2. The program nurse or Medical Director will lead the team meeting. The Community Health Navigators should bring all pertinent paperwork. Items to be discussed include PACCI, PHQ-4, IDAT, a general overview of the family, the home environment, identified barriers to asthma care, and/or social issues.
3. At the team meeting, the Medical Director or nurse should record patient progress (PACCI score, ongoing barriers, interventions or services provided, etc.) into a concise data collection tool. This data collection tool allows team members to quickly review patient history and progress throughout the Just Keep Breathing program.
4. Each weekly meeting should also include a review of recent patient enrollment.
5. When necessary, this meeting will also be used to update team members on new or changing processes or to discuss general program issues.

Team Roles and Responsibilities

MEDICAL DIRECTOR

The Medical Director provides general oversight and direction for Just Keep Breathing. This includes strategic planning and integration with the clinical asthma program. They also work with the Program Manager to ensure program sustainability through new and continued funding, oversee evaluation of process and clinical outcomes, and work to build collaborative relationships between Just Keep Breathing and relevant community organizations.

Specific responsibilities include:

1. Planning
 - a. Collaborate on program design.
2. Training
 - a. Assess Community Health Navigator knowledge/readiness prior to beginning home visits.
3. Visit Responsibilities
 - a. Serve as physician resource for program nurse.
 - b. Serve as back-up clinical resource for Community Health Navigators.
4. Case Management
 - a. Final decision maker on all clinical issues.
5. Community Collaboration
 - a. Program ambassador to internal departments and external organizations.
6. Financial
 - a. Serve as funder's back-up contact when program manager unavailable.
 - b. Review budget and spending with program manager and grant manager quarterly.
7. Administrative
 - a. Assist with weekly family/visit review.
 - b. Lead Steering Committee meetings (including preparation).
8. Sustainability
 - a. Disseminate program results through local and national conferences and publications.
 - b. Collaborate with program manager to write new grants.

PROGRAM MANAGER

The Program Manager assures smooth implementation of the Just Keep Breathing program by supervising the operations of the program, including grant renewals, budget, hiring staff and assuring proper training and evaluation, overseeing family recruitment, and evaluating visit and outcomes data. They work with the Medical Director to assure the creation of a program based upon best practice and precedent set by other programs and evaluate the process and health outcomes to determine the effectiveness of the program.

Specific responsibilities include:

1. Planning
 - a. Supervise material development and organization.
 - b. Collaborate on program design.
2. Training
 - a. Supervise training of all staff.
 - b. Track staff member competencies.

3. Recruitment
 - a. Serve as back-up to recruit families when program nurse and Community Health Navigators are unavailable.
4. Visit Responsibilities
 - a. Ensure safety of staff at home visits (e.g., track arrival and departure, be primary contact).
5. Community Collaboration
 - a. Collaborate with Medical Director to meet with internal groups and community based organizations.
6. Supervision
 - a. Supervise program staff.
 - b. Supervise all program activities (patient recruitment, data collection, documentation).
 - c. Manage project activities and timeline.
7. Financial
 - a. Review all spending in relation to the budget.
 - b. Approve team member expense reimbursements.
8. Administrative
 - a. Complete funding requirements (e.g., quarterly reports, invoicing).
 - b. Complete evaluation plans.
 - c. Serve as primary contact for funders.
 - d. Collaborate with Medical Director on Steering Committee meetings.
 - e. Supervise all program equipment (e.g., home remediation supplies, laptops, tablets, etc).
9. Sustainability
 - a. Collaborate with Medical Director to write new grants.
 - b. Renew existing grants.

PROGRAM NURSE

The nurse is the day-to-day supervisor of the health of Just Keep Breathing patients. They collaborate with the Community Health Navigators in all aspects of the patients' needs. The program nurse always attends and leads the first home visit (unless the family is Spanish speaking and the nurse is not fluent). The program nurse is frequently the liaison between families and their asthma providers.

Specific responsibilities include:

1. Training
 - a. Teach Community Health Navigators about asthma and assure Community Health Navigator competencies.
2. Recruitment
 - a. Answer recruitment questions concerning eligibility.
 - b. Recruit families in clinic, on inpatient units, and by phone if Community Health Navigators are not available.
 - c. Verify that the shared 'JKB patient list' in the electronic medical record and 'JKB enrollment patient list' in REDCap are updated with all potential recruits.
3. Community Health Navigators do the majority of this data entry during the recruitment process (unless the nurse is doing the recruitment).
4. The recruitment lists both in the electronic medical record and REDCap should be identical. Whether Just Keep Breathing approaches the family or not, it is important

to track the number of patients who meet Just Keep Breathing eligibility criteria for program evaluation purposes.

5. Visit Responsibilities

- a. Thoroughly review the patient chart and prepare for first home visit. If there is incongruity in the chart regarding the patient's plan of care, medication, etc., communicate with appropriate provider(s) for clarity before the home visit.
- b. Update Asthma Action Plan. Print and provide to the family.
- c. Create a current medication list. Print and provide to the family.
- d. Mymedschedule.com is a simple program where medication lists can be created with photos for drug identification and individualized med schedules.
- e. If medication list in the electronic medical record chart is incorrect, bring to the attention of the asthma specialist and request that they make corrections.
- f. Attend first home visit with each family. The program nurse should complete paperwork with the family if same language is spoken.
- g. Assess patient's current lung function, review patient's current asthma routine as reported by guardian or patient, determine caregiver goals for the Just Keep Breathing program, and get an overall impression of the home environment and the barriers to asthma control that the family faces.
- h. Create the note in the electronic medical record after the visit. Community Health Navigators forward their notes to the nurse, who will review and include pertinent information before forwarding the patient record to the Medical Director.
- i. If the patient drops out of the program after home visits have begun, a separate note in the electronic medical record must be completed stating that patient is considered withdrawn from program and state objective reason why (verbal withdrawal, not answering phone calls, more than 2 no-shows, more than 3 visit reschedules, etc.). A *PCP Communication: Patient Discontinuation Letter* will be sent to the patient's PCP.

6. Case Management

- a. Call all families one week after first home visit to answer potential questions. The nurse may set a reminder for this task in the electronic medical record.
- b. Provide asthma case management between visits as needed. Communicate with the patient's asthma specialist and PCP, generally through electronic medical record messages, with plan of care questions. If Just Keep Breathing determines that a change to the plan of care would be beneficial, it is possible this request to the provider may be best communicated by the Medical Director. However, the mode of communication can be discussed between the nurse and the Medical Director.
- c. If necessary and if communication consent has been signed by family, communicate with school nurse and other stakeholders (e.g., Boys and Girls Club).
- d. Before subsequent home visits, review notes from clinic visits, ED visits, pharmacy pick up history, and chart notes since last home visit. Update the *Patient Notes and Tracking Communication* worksheet for Community Health Navigators.
- e. Review clinic visit notes to determine if future appointments should be scheduled. Follow up with the scheduling department to make an appointment.
- f. Send message to the PCP or specialist through the electronic medical record with pertinent updates one week before clinic appointment. The provider can

then review home visit updates before patient appointment. The nurse may set a reminder for this task in the electronic medical record.

- g. If many providers are involved or there are several changes to a patient's plan of care, nurse may make a 'care coordination' note in the electronic medical record to concisely communicate patient updates and streamline plan of care into one note.
7. Supervision and Support
 - a. Review and/or edit Community Health Navigator documentation for all home visits. The nurse should try to accomplish this task before the Medical Director reviews the note. The Medical Director will then forward the note to the patient's PCP and specialist.
 - b. Ensure electronic medical record and REDCap patient recruitment lists are updated.
 - c. Serve as clinical resource for Community Health Navigators during home visits.
 - d. Serve as back-up for safety of home visit staff.
 8. Community Collaboration
 - a. Work with community organizations to improve asthma awareness and care for the patients they serve.
 9. Administrative
 - a. Prepare for and assist with weekly meeting visit reviews.
 - b. Document all program-related adverse events (e.g., safety concerns) and route to appropriate persons.
 - c. Record mileage and report mileage once per month.

COMMUNITY HEALTH NAVIGATOR

The Community Health Navigator is a support for the family within their community. They will identify and address family-specific barriers which keep the family from adhering to recommended asthma care. The Community Health Navigator will also help to identify family-specific barriers which interfere with their ability to prioritize health and healthcare (e.g. food or housing insecurity, caregiver stress, etc.). The Community Health Navigator will summarize the families' needs to the Just Keep Breathing team and, collectively, a plan of care will be determined. This may include making connections to other health care providers, the patient's school, and community organizations that will help the family prioritize healthcare.

Specific Responsibilities Include:

1. Recruitment
 - a. Scan clinic schedules for asthma-related visits. Review patient charts for eligibility. If clinic patient meets criteria, Community Health Navigator will arrive to clinic at time of appointment to discuss with provider if patient is a good candidate for Just Keep Breathing.
 - b. Update electronic medical record and REDCap patient list with all qualifying potential recruits.
2. Visit Responsibilities
 - a. Attend all home visits with families as assigned.
 - b. Accompany other Community Health Navigators to their respective home visits.
 - c. When preparing for home visit, complete the *Just Keep Breathing Home Visit Checklist* worksheet.
 - d. Before each home visit, review electronic medical record chart to:
 - i. Familiarize themselves with recent ED or pulmonary clinic visits.

- ii. Review upcoming appointments. Browse provider notes to identify need for a future appointment. Community Health Navigator can call the scheduling department from the patient's house to coordinate, or relay need for appointment to Scheduling once the Community Health Navigator has returned to the office.
 - e. Before each home visit, call patient's pharmacy to obtain information about medication disbursement (names of meds, date of disbursement, quantity of each med dispensed, refills available) if program nurse unable to do so.
 - f. Collect data during home visit.
 - g. Assess home environment for triggers at the second home visit. Assessment will take place in areas of the house that parent allows. Community Health Navigator may discuss with family potential hazards they discover. Do not make remediation promises to families at that time.
 - h. After home visit #2, remediation options will be discussed at the weekly team meeting. Community Health Navigator can then call caregiver(s) to discuss remediation recommendations and offer a plan to move forward with remediation.
 - i. Provide remediation supplies and facilitate/oversee remediation services provided to family.
 - j. Document home visit data in REDCap and electronic medical record.
 - k. After home visit documentation, route electronic medical record notes to the program nurse.
 - l. If the patient drops out of the program after home visits have begun, a separate note in electronic medical record must be completed stating that patient is considered withdrawn from program and state objective reason why (verbal withdrawal, not answering phone calls, more than 2 no-shows, more than 3 visit reschedules, etc.).
3. Case Management/Navigation
- a. Be available via phone or email to answer follow up questions about home visits.
 - b. Refer families to social work as needed.
 - c. Research and refer families to needed community resources.
 - d. If family indicates that food insecurity is an issue, Community Health Navigator will scan and email the signed Hunger Free Colorado HIPAA form to HIM. Additionally, the flowsheet "Brief Psychosocial Screener" in the electronic medical record should be completed. Follow up with family to ensure food services were provided.
4. Administrative
- a. Review patient charts from previous week and case management activities (phone calls to providers, school, find community resources, etc.) to prepare for weekly meeting.
 - b. Participate in weekly team meeting home visit reviews.
 - c. Document all program-related adverse events (e.g., safety concerns) and route to program manager.
 - d. Record mileage and report mileage once per month.

EVALUATOR

The data analyst assists the Medical Director and Program Manager in data analysis, interpretation, and dissemination.

Specific responsibilities include:

1. Evaluation
 - a. Review data monthly to ensure quality.
 - b. Analyze data.
 - c. Interpret data analysis.
 - d. Assist with dissemination of results (e.g., conference abstract preparation).

GRANT MANAGER

The Grant Manager assists the Medical Director and Program Manager in all budgetary and contracting duties, including ensuring accuracy and timeliness of invoices and documents.

Specific responsibilities include:

1. Financial
 - a. Review budget.
 - b. Review all invoices.
 - c. Follow up on invoice processing and payment.
2. Administrative
 - a. Follow up on contracting.
 - b. Process team member expense reimbursements.

ADMINISTRATIVE ASSISTANT

The Administrative Assistant assists Just Keep Breathing personnel with administrative and logistical tasks as needed to ensure timely progression of the project.

Specific responsibilities include:

1. Financial
 - a. Provide copy of all receipts and reimbursements to Program Manager and Grant Manager.
2. Administrative
 - a. Order supplies as needed by program team.
 - b. Book travel.
 - c. Schedule meetings.
 - d. Assemble meeting agendas.
 - e. Take meeting minutes and save on shared drive.

Differentiating Tasks: Connecting Patients to Community Resources

RESOURCES PROVIDED BY COMMUNITY HEALTH NAVIGATOR

- Community resources
- Transportation
- Housing
- Food insecurity
- Financial assistance
- Connect family to the local SSI/Medicaid office
- Psychosocial assessments

RESOURCES PROVIDED BY SOCIAL WORK

- Emotional support
- Support around barriers to care
- Assess for adherence
- Assess readiness and support around transition of care
- Advocacy
- Support around mental health concerns
- Connect to clinical resources
- Specialized letters (e.g., Letter of Medical Necessity)
- School communication (e.g., specialized education plans)
- Child protection
- Custody/Guardianship
- Violence (domestic and community)

Differentiating Tasks: Registered Nurse and Community Health Navigators

SCOPE OF COMMUNITY HEALTH NAVIGATOR

1. Recruiting patients and scheduling home visits
2. Coordinating with the scheduling team to make clinic visits as needed
3. Securing community resources such as carpet cleaning, Boys and Girls club, securing transportation to clinic appointments, etc.
4. If family would like to be enrolled in remote adherence monitoring, set up a patient account and educate on program at second home visit
5. Tracking remote medication adherence monitoring if family is utilizing technology; taking data to home visit
6. Primary family liaison

SCOPE OF REGISTERED NURSE

1. Communicating with providers to clarify existing orders, provide updates regarding changes in patient status, and give notification of upcoming appointments
2. Serving as liaison between different departments to coordinate care of patient
3. Coordinating medications and care plan with the school nurse
4. Communicating with pharmacy to follow up on medication pick-ups and refills before each home visit
5. Answering clinical questions for Community Health Navigators

COMMUNICATION AMONGST TEAM MEMBERS

1. Send communication via email for consistency and to facilitate future review of information
2. Before first home visit, program nurse will review the patient chart and print both the Asthma Action Plan and the visual medication plan.
3. Before subsequent home visits, program nurse should complete the *Patient Notes and Tracking Communication* worksheet and store in patient folder.

Program Nurse Weekly Tasks

PREPARATION FOR WEEKLY HOME VISITS

Before the First Home Visit

1. Complete *Patient Notes and Tracking Communication* worksheet for every new patient. This worksheet provides a thorough chart review, organizes patient health information and has a designated space for nurse communication regarding topics to be addressed at each home visit. It should be taken to and from home visits, updated accordingly, then returned to patient file.
2. Maintain a dedicated file for each patient with an updated *Patient Notes and Tracking Communication* worksheet. The nurse should print an Asthma Action Plan for each patient file. The Asthma Action Plan should be provided to the family at first home visit, last home visit, or if any changes have been made by providers.
3. During first home visit, verify the family's preferred pharmacy. The program nurse can have all medications pulled to the pharmacy of choice and, if the family approves, erase other pharmacies in the patient's chart to streamline medication pick up for the family. With family approval, the nurse may also request that the pharmacy automatically refill ongoing controller medications. The pharmacy may send a text message or phone call to the caregiver when auto-refill medications are ready for pick up.
4. If the patient is symptomatic at the first home visit, follow instructions on the Asthma Action Plan (generally 2-4 puffs of albuterol every 4 hours). Discuss your assessment with the caregiver (coughing, tachypnea, retracting, wheezing, abdominal breathing, etc.) and talk through different scenarios that could happen after albuterol is given. Discuss a treatment plan with the caregiver so they know what to do after Just Keep Breathing leaves the home.

Before Follow-up Home Visits

1. Update *Patient Notes and Tracking Communication* worksheet before each home visit. This should include any questions or areas of concern the program nurse has for the family. At the home visit, Community Health Navigator should make notes on the *Patient Notes and Tracking Communication* worksheet and return to the nurse, who may include this information into the patient chart.
2. If caregiver allows, program nurse may contact the patient's school nurse or health aide. Ensure the patient has albuterol, spacer, proper paperwork, and Epi-pen (if applicable) at the school. Discuss patient's pattern of albuterol use at school. Speaking with the school nurse/health aide may not be necessary between every home visit.

Between Home Visits

1. Discuss any issues with current patients or recent home visits with Community Health Navigators.
2. Review/addend Community Health Navigator home visit notes in patient charts. After reviewing, route home visit notes to the Medical Director, who will then route to PCP and asthma specialist.
3. Follow up on any current needs of Just Keep Breathing patients (review recent office visit notes, school health aide, community resources, pharmacy or medication issues, communicate with providers, etc.).
4. After the final home visit note has been routed to the Medical Director by the program nurse, the Medical Director will notify the nurse that he/she has reviewed and routed

the note to the PCP. The nurse will then complete the *PCP Communication- Program Summary Letter* and route to the PCP. The *Access Plan Important Phone Numbers* form, completed by the Community Health Navigator and given to family at second home visit, should be saved in the patient chart.

WEEKLY TEAM MEETING

1. Attend and help facilitate weekly team meeting.
2. Before team meeting, be prepared with the *Patient Notes and Tracking Communication* worksheet. Generally, the only patients reviewed are from the previous week's home visits, but nurse should come prepared with concerns regarding other patients in the program.

WEEKLY HOUSEKEEPING

1. Set electronic medical record reminders to notify Pulmonary/Allergy providers of upcoming appointments with Just Keep Breathing patients. Alert provider to current issues or give a general summary of patient progress in Just Keep Breathing (percentage of controller medication compliance, identified barriers, etc.).
2. Ensure medication lists and Asthma Action Plans in patient chart are up-to-date and reflect providers' most recent notes. If necessary, contact provider or provider's nurse regarding discrepancies in patient's plan of care or medication list so that it accurately reflects most recent clinic visit notes.
3. Review upcoming appointments for the patient.
4. Ensure patient lists in electronic medical record and REDCap are updated and identical. May need to review monthly recruitment document to reconcile lists.

Community Health Navigator Weekly Tasks

HOME VISITS

1. Collect home visit paperwork.
2. Confirm home visit appointments twice: the week before and the day before the home visit.
3. Prepare for weekly home visits.
4. Call patient's pharmacy to verify dates and quantity of medication pick up (only necessary after first home visit unless compliance is an issue). Notify program nurse if refills are needed or if medication errors are noted. Record this information on the *Patient Notes and Tracking Communication* worksheet.
5. Complete the *Access Plan Important Phone Numbers* form (to be provided to family at second home visit).
6. Make follow up calls after the home visit as needed.

PATIENT MANAGEMENT

1. Make follow up phone calls to previously recruited families. Attempt to schedule first home visit.
2. If patient is enrolled in remote adherence monitoring, check patient adherence.
3. Research resources each family may need (e.g., carpet cleaning, pest extermination, etc.).
4. Make three-month follow up calls as scheduled.

WEEKLY TEAM MEETING

1. Prepare patient presentation for Just Keep Breathing weekly team meeting for each patient seen since the last team meeting.
2. Attend weekly team meeting.

HOUSEKEEPING

1. Open emails every morning.
2. Check voicemail for parent calls.
3. Check electronic medical record for referrals.
4. Update and sync electronic medical record patient list and REDCap patient list.
5. Keep calendars current with personal work schedule and home visit schedule.
6. Order supplies as needed.
7. Look for educational opportunities (professional development, departmental meetings, steering committee, etc.).
8. Calculate mileage and submit reimbursement (at least monthly).

Telehealth

Preparing Caregivers for a Telehealth Home Visit

SETTING UP THE VIDYOCONNECT APP

1. Before moving forward, find out if the caregiver has internet access or if they will be using a data plan. If they do not have internet or an unlimited data plan they should be made aware that the telehealth visit will use their smartphone data. If this is not possible for the family, explore other possible locations that have accessible internet. If smart phone data and internet are not options, it is possible that telehealth will not work for this family.
2. In a phone conversation with the caregiver, provide instructions for downloading the VidyoConnect application on their device. Sending the VidyoConnect application icon to the caregiver can help them find the correct application.
3. Once the caregiver has downloaded the application, the home visit team should send an invitation to the telehealth meeting (including the link) via email.
4. In order to connect to the home visit, the caregiver needs to open the invitation by clicking on the hyperlink. This should be done at time of the home visit.
5. The caregiver should be sent a new hyperlink for each home visit.
6. Remind the caregiver to keep VidyoConnect installed on their device until end of HV program.
7. If guardian is unable to log onto VidyoConnect at the time of the home visit, troubleshoot by phone. If the caregiver reports that the link does not work, the same hyperlink may be resent in another email.

PREPARATION BEFORE THE HOME VISIT

1. Confirmation calls should be made the week prior to the home visit *and* the day before the home visit. If the home visit occurs on Monday, confirmation calls should be made on Friday.
2. During the confirmation call, home visit team should request that the family collect all asthma medications *before* the home visit. This includes unopened boxes of medications and inhalers that are stored in the car, backpack, purse, etc. This will save time and be least disruptive to the family during the home visit.
3. Remind the caregiver that the child should be present during the home visit.
4. Complete as much paperwork as possible before beginning the home visit.

HELPFUL TIPS DURING THE HOME VISIT

1. Telehealth home visits often feel longer than in-person home visits. Try to keep telehealth home visits to one hour or less. Be mindful of time as you progress through the interview and paperwork.
2. The patient may be more helpful at the beginning of the visit. This may be the best opportunity to observe the patient's inhaler technique (IDAT) and to complete basic asthma education with both patient and caregiver. If the child is not cooperative, do not push caregiver to make them cooperate. This will be stressful and unproductive.
3. During the IDAT demonstration, be prepared to have the caregiver reposition the camera. Getting a good look at the technique can be tricky.
4. Before the telehealth visit is complete, try to schedule the next home visit. Let the caregiver know what to expect at the next home visit.

Telehealth Environmental Assessment

Home environmental assessments done by telehealth should utilize the same checklist used during in-person home assessments. However, some items are not possible to assess (e.g., smell) and telehealth visits should be shorter than in-person visits if possible. The most important areas of focus are highlighted below along with general tips.

GENERAL

1. Tell the caregiver ahead of time that they will be walking around with their device and ask them to ensure the camera works and the device is fully charged.
2. Ask the caregiver to have a flashlight with them to facilitate viewing under sinks, etc.

LIVING ROOM

1. Inspect the carpet and furniture for dirt, soilage, and evidence of animal hair and waste.
2. Inspect the windowsills, blinds and curtains for dust, mold and water damage.
3. Ask how often the family typically vacuums and dusts.

KITCHEN

1. Observe the general condition of the kitchen. Are the countertops and floors clean or dirty? Is there open food? Is there evidence of pests?
2. Inspect the cooking appliances. Are they in good working condition? Is the stove vented to the outside of the residence?
3. Inspect under the kitchen sink. Assess for water or chemical leaks, mold, and gaps between the wall and the pipes that could allow pests to enter.

PATIENT BEDROOM

1. Is there upholstered furniture in the child's room?
2. Does the child sleep with pets? Are pets allowed in the child's room?
3. Does the child have stuffed toys in his/her room? If so, how many?

FAMILY BEDROOMS

1. Inspect the carpet for dirt, soilage, and evidence of animal hair and waste.
2. Inspect the windowsills, blinds and curtains for dust, mold and water damage (moisture inside the windows during the winter months can cause mold).

ALL BATHROOMS

1. Inspect for mold inside the shower and around the bathtub.
2. Look for water stains on the walls and baseboards. Is there mold or warping? Does the shower leak water onto the floor or walls?
3. Inspect under the sink. Assess for water or chemical leaks, mold, and gaps between the wall and the pipes that could allow pests to enter.
4. Ask caregiver to test the exhaust fan to ensure that it works properly.

LAUNDRY ROOM

1. Is the clothes dryer vented to the outside?
2. Ask the caregiver if they smell any mildew.

GARAGE

1. Look for chemicals that may be stored in the garage, may include gas, cleaners, or paints.
2. Ask the caregiver if they smell any chemicals.

ASK QUESTIONS

1. Do you see mold or smell mildew anywhere in the home?
2. Are there pets in the home? Where are they allowed to go?
3. Have you seen or noticed evidence of pests?

LOOK FOR

1. General cleanliness of home.
2. Evidence of cockroach and rodent droppings.
3. Are there candles burning? Incense?
4. Are there holes in the walls?
5. Is the house overcrowded with people or things?

Training and Competencies

Getting Started

TOUR CHILDREN'S BREATHING INSTITUTE

1. Meet Breathing Institute Social Worker.
2. Meet Breathing Institute Patient Navigator.
3. Meet Scheduling team.
4. Meet Administrative Assistants.

TOUR PULMONARY CLINIC

1. Meet Pulmonary/Allergy providers.
2. Meet clinic nurses.
3. Shadow clinic nurses and providers.
4. Shadow Respiratory Therapist in clinic. During second time shadowing with Respiratory Therapist, new team members should request to provide the inhaler technique teaching to the family.
5. Shadow Just Keep Breathing recruitment in clinic.
6. Shadow Just Keep Breathing Medical Director in clinic.
7. Shadow Pulmonary asthma providers in Network of Care clinics.

Non-clinical Competencies for Registered Nurse and Community Health Navigator

TECHNICAL AND ADMINISTRATIVE

- Organization orientation
- Effort certification
- REDCap data management system
- Electronic medical record Just Keep Breathing patient list
- Set up voicemail
- Mileage reimbursement protocol

ELECTRONIC MEDICAL RECORD

- Set up desktop
- Just Keep Breathing patient list
- Phone encounters
- Patient outreach encounters
- Messaging through electronic medical record
- Set reminders through electronic medical record
- Asthma Action Plan and School Asthma Action Plan
- Documenting home visits in electronic medical record

Clinical Competencies for Registered Nurse and Community Health Navigator

ASTHMA

- Know what asthma control looks like
- Know what an asthma exacerbation looks like
- Symptoms and presentation of acute illness
- Who to call and when
- Inflammation vs. bronchoconstriction
- Common co-morbidities (allergies, eczema, sleep disturbance, obesity, etc.)
- Difference between allergic and non-allergic triggers

MEDICATIONS

- Quick Relief vs. Controllers
- Know which medications are quick-relief and which are controllers (important to know colors of each medication)
- How medications work

MEDICATION ADMINISTRATION TECHNIQUES

- MDI
- Nebulizer
- Diskus
- Twisthaler
- Respimat

ASTHMA ACTION PLAN

- Difference between zones
- Peak flow meter

Home Visit Competencies for Registered Nurse and Community Health Navigator

HOME VISITS

- Understand how eligible patients are identified
- Shadow Community Health Navigator through clinic recruitment process
- Shadow each Community Health Navigator and nurse through home visit
- Shadow Community Health Navigator through home environmental assessment
- Schedule home visits with families
- Get home visit bag organized
- Collect home visit paperwork

CASE MANAGEMENT

- Thoroughly review pertinent information in patient's medical record
- Phone calls to pharmacies, community resources, school etc.
- Communication with asthma specialist, PCP, scheduling, etc. (Nurse)
- Follow up with families one week after home visit (Nurse)

DATA

- Understand home visit paperwork
- Update patient records in REDCap
- Document home visits in electronic medical record

Registered Nurse Training and Education Resource List

MANDATORY

- Reach the Peak asthma course
- Mandatory Reporter training
- Pass the AE-C asthma educator test

IMPORTANT

- Patient Navigator training
- Motivational Interviewing training

Community Health Navigator Training and Education Resource List

MANDATORY

- Patient Navigator training
- Reach the Peak asthma course
- Healthy Homes Essentials
- Mandatory Reporter training
- Motivational Interviewing training

OPTIONAL

- Youth Mental Health First Aid
- Association for the Education of Children with Medical Needs
- Speak Up for Kids Advocacy Training
- Immigrant and Refugee Families Training

Evaluation

Evaluation Matrix

Just Keep Breathing collects data throughout the program, including three months after the final visit. These data points both guide the program team in working with the family and are used to evaluate program effectiveness. This matrix lists the data collection tools and at what point in the program each is used. When possible, we have incorporated validated data collection tools; the sources of these are listed below.

	Recruitment/ Enrollment	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5/ Last visit	3 month follow up
Eligibility and enrollment	X						
PACCI		X	X	X	X	X	X
Medications		X				X	
Psychosocial Screener		X					
Self-efficacy		X				X	
Asthma Action Plan		X				X	
Social Support		X				X	
PHQ-4			X			X	
Demographics		X					
IDAT		X	X	X	X	X	
Healthy Homes Environmental Assessment Checklist			X				
Missed School/Missed Work		X				X	X
Barriers to Asthma Control		X	X	X	X	X	

Sources:

1. Pediatric Asthma Control and Communication Instrument (PACCI): Okelo, S. O., Eakin, M. N., Patino, C. M., Teodoro, A. P., Bilderback, A. L., Thompson, D. A., ... & Riekert, K. A. (2013). The Pediatric Asthma Control and Communication Instrument asthma questionnaire: for use in diverse children of all ages. *Journal of Allergy and Clinical Immunology*, 132(1), 55-62.
2. Patient Health Questionnaire-4 (PHQ-4): <https://www.phqscreeners.com/>
3. Inhaler Device Assessment Tool (IDAT): https://rnao.ca/sites/rnao-ca/files/storage/related/5378_1852_IDAT_PedAsthma_User_Guide_FINAL_Nov2006.pdf

3 Month Follow Up

After completion of the Just Keep Breathing program, independent of patient's graduation status, Just Keep Breathing Community Health Navigator will contact the family for a final follow up. A limited amount of data will be collected, and a general sense of continued barriers will be assessed.

FOLLOWING UP WITH FAMILIES AFTER COMPLETION OF PROGRAM

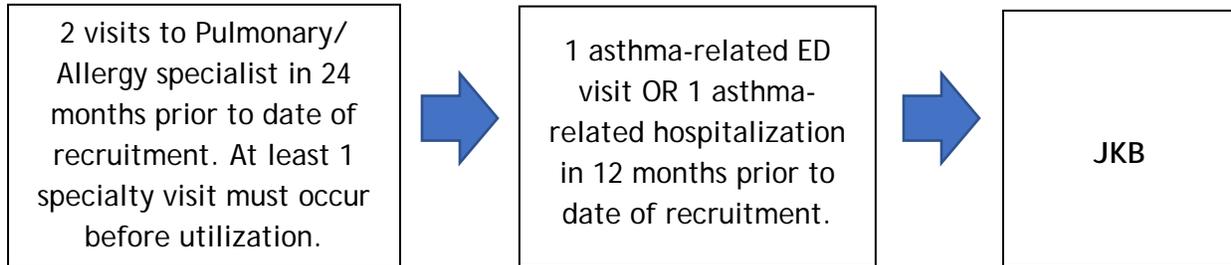
Follow up phone calls are made 3 months after completion of the program.

1. Administrative Support will enter 3-month follow-up call reminders into Outlook.
2. Community Health Navigator will call family up to three times.
3. Review PACCI.
4. Review Missed School/Missed Work.
5. Any new (non-health) issues should be forwarded to the clinic Patient Navigator.
6. Any new (health-related) issues should be discussed at weekly team meeting and communicated to the patient's asthma specialist.

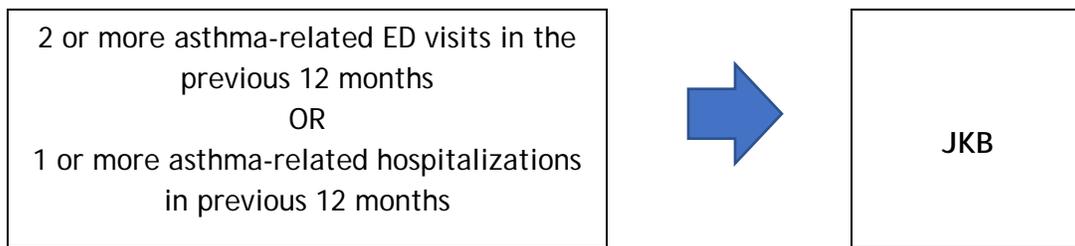
Appendix

Recruitment Criteria

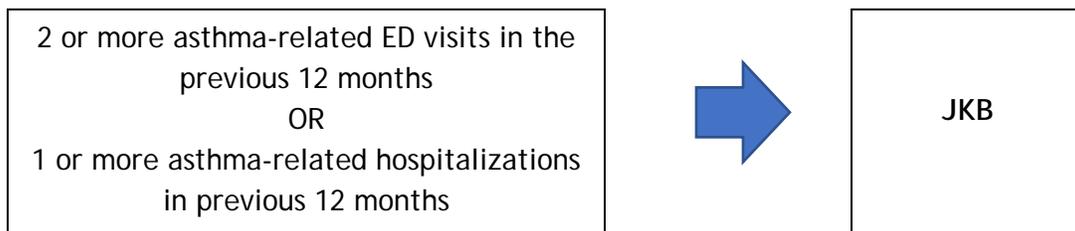
PROACTIVE RECRUITMENT CRITERIA FROM CHCO PULMONARY CLINIC /ALLERGY CLINIC



CHCO INTERNAL REFERRAL



RECRUITMENT CRITERIA FROM PCP



ELIGIBILITY REQUIREMENTS FOR ALL JUST KEEP BREATHING PATIENTS

- 1) Ages 2-17
- 2) Patient and at least one caregiver speak English or Spanish
- 3) Patient must live within 20 miles of Children's Anschutz Medical Campus
- 4) Family must not have an active Department of Human Services case
- 5) Patient must not have significant comorbid conditions: cystic fibrosis, neuromuscular disease, chronic lung disease, congenital heart disease

For questions or additional program information, please contact the Just Keep Breathing Registered Nurse

Kristi Blanshan, RN 720-777-9768

Just Keep Breathing Patient Referral Form

Just Keep Breathing performs up to five home visits for patients with difficult-to-control asthma. Just Keep Breathing educates families, assesses and remediates environmental triggers in homes, and helps families recognize and overcome their unique barriers to successful asthma control.

DEMOGRAPHIC REFERRAL CRITERIA (ALL CRITERIA MUST APPLY)

1. Ages 2-17
2. Patient and at least one caregiver speak English or Spanish
3. Patient must live within 20 miles of CHCO at Anschutz Medical Campus
4. Family must not have an active DHS case
5. Patient must not have significant comorbid conditions: cystic fibrosis, neuromuscular disease, chronic lung disease, congenital heart disease

MEDICAL REFERRAL CRITERIA (ONE OF THE FOLLOWING MUST APPLY)

1. Patient has had one asthma-related hospital admission in previous 12 months
2. Patient has had two or more asthma-related ED visits in previous 12 months

PATIENT INFORMATION

Name _____
DOB _____
MRN _____

FAMILY INFORMATION

Caregiver Name _____
Address _____
Phone _____
Preferred Language _____

REFERRING CARE TEAM MEMBERS (INCLUDE CONTACT INFORMATION)

PCP: _____

Pulmonary/Allergy Provider: _____

Social Worker: _____

Patient Navigator/Community Health Worker: _____

Care Coordinator: _____

Other Members: _____

NOTES

Patient Notes and Tracking Communication

PATIENT NAME:

MRN:

CHN:

PULM/ALLERGY PROVIDER:

PCP:

FAMILY:

ADDRESS:

OTHER DIAGNOSIS:

RECRUITMENT QUALIFICATIONS:

ALLERGIES:

SLEEP/ MAC?

PHARMACY NAME/PHONE NUMBER:

PHARMACY P/U (to be done after 1st HV. Record dates and amount of meds dispensed)

SCHOOL: (name of school/contact)

CURRENT ASTHMA/ALLERGY MEDICATIONS:

PRIMARY SOCIAL/COMPLICATING ISSUES:

HV #1

HV #2

HV #3

HV #4

HV #5

Home Visit Note Template

Asthma Home Visit

Current Identified Barriers of Family:

Pediatric Asthma Control & Communication Instrument (PACCI) Score =

JKB Follow up Needed at Next Home Visit:

Home Visit Summary:

Provider Interventions:

Organization of Medication:

Parent Primary Goal:

Primary Asthma Caregivers:

Safety Concerns:

Home Condition:

Patient Bedroom:

Since last visit to asthma provider, has child been to emergency room?

Since last visit to asthma provider, has your child been hospitalized?

Since last visit to asthma provider, has your child needed oral steroids?

Medications

Name/Dose/Frequency	# of puffs taken since last HV	Understanding of purpose

Does the Patient use a Spacer?

Observed Medication Technique:

Education Provided:

Telehealth Home Visit Note Template

Asthma Home Visit

This visit was done by telehealth. Two patient identifiers were verified with guardian.

Current Identified Barriers of Family:

Pediatric Asthma Control & Communication Instrument (PACCI) Score =

JKB Follow up Needed at Next Home Visit:

Home Visit Summary:

Provider Interventions:

Organization of Medication:

Parent Primary Goal:

Primary Asthma Caregivers:

Safety Concerns:

Home Condition:

Since last visit to asthma provider, has child been to emergency room?

Since last visit to asthma provider, has your child been hospitalized?

Since last visit to asthma provider, has your child needed oral steroids?

Medications

Name/Dose/Frequency	# of puffs taken since last HV	Understanding of purpose

Does the Patient use a Spacer?

Observed Medication Technique:

Education Provided:

Supplies Provided to Family During Home Visit Program:



IMPORTANT PHONE NUMBERS

IF NOT AN EMERGENCY CALL MY PRIMARY CARE PROVIDER FIRST!

Name: _____

Date of Birth: _____

PCP: _____

Address _____

Phone number _____

CALL PCP FOR:

- * non-emergent asthma that is not responding to albuterol
- * fever/diarrhea
- * vaccinations
- * non-emergent medical conditions
- * medication refills

IF NO RESPONSE FROM MY PCP,

CALL MY CHILDREN'S HOSPITAL COLORADO ASTHMA SPECIALIST:

Phone number: Pulmonary: **720-777-6181**

Allergy: **720-777- 2575**

Address: 13123 E. 16th Ave. Aurora, CO. 80045

My Children's Hospital Colorado pulmonologist/allergist is: _____

MY PHARMACY

Name _____

Address _____

Phone number _____

MY CASE WORKER

Name _____

Address _____

Phone Number _____

MY SCHOOL HEALTH OFFICE

Name _____

Address _____

Phone number _____

FOR AN EMERGENCY CALL 911 OR GO TO THE EMERGENCY DEPARTMENT

Graduation Checklist

Name: _____ MRN: _____ POC _____ Phone: _____

Graduation Criteria Met? Yes No

CHECKLIST

- Patient and/or caregiver can explain what asthma is
- Patient and/or caregiver can identify his/her triggers and allergens
- Patient and caregiver can explain what controller vs. reliever meds do inside the lungs
- Patient and caregiver can identify controller and reliever meds and explain when to use the controller vs. reliever
- Patient and/or caregiver understand what poor asthma control looks like:
 1. Needing albuterol more than 2x/week *or*
 2. Asthma symptoms 2x/month while sleeping *or*
 3. Exercise limitation that is not resolved by pretreating
- Patient and/or caregiver can explain how to treat an asthma exacerbation according to Asthma Action Plan
- Caregiver can identify their pharmacy and demonstrates they can order and pick up medication
- Caregiver has prescribed medications on hand
- Patient demonstrates proper inhaler technique
- Barriers to healthcare access have been addressed (and resolved when possible)
- Caregiver can explain access plan and proper utilization of healthcare system
- Follow up appointment is scheduled with provider. DATE: _____

REMAINING F/U ITEMS FOR NAVIGATOR/RN/PCP/PULMONARY SPECIALIST/SOCIAL WORK:

Children's Hospital Colorado, Breathing Institute
13123 E. 16th Ave, B395
Aurora, CO. 80045
p. 720-777-6181 f. 720-777-7247

Date: XXXXXX
To: XXXXXXX

Patient: XXXXXX
MRN: XXXXXXX
DOB: XXXXXX

**Just Keep Breathing
Asthma Home Visit Enrollment Letter**

{Patient's name} has been enrolled in the Just Keep Breathing asthma home visit program. Just Keep Breathing is designed to address the specific needs of children and their families who have shown to be at highest risk for severe asthma complications. In partnership with the family, our team seeks to problem-solve their personal barriers to achieving asthma control and to help them understand proper healthcare utilization.

The Just Keep Breathing Community Health Navigators typically complete five home visits over a five-month period of time. Our team focuses on educating the family about the pathophysiology of asthma, symptoms of asthma, asthma triggers, purpose of individual medications, proper administration technique, and understanding their asthma action plan. Additionally, Just Keep Breathing completes a thorough home assessment to identify potential asthma triggers or allergens within the home. Depending on the circumstances, some remediation services may be provided.

Throughout {patient's name} enrollment in our program, Just Keep Breathing will provide (via Epic or fax) monthly home visit updates which assess current level of asthma control, barriers to asthma control, and pertinent recommendations from our medical director. At the end of the program a graduation summary will also be sent.

Please contact the Just Keep Breathing Registered Nurse, at XXX-XXX-XXXX if you have any questions, concerns, or potential referrals to our program. We look forward to collaborating with you on {patient's name}'s asthma care.

Sincerely,

Children's Hospital Colorado, Breathing Institute
13123 E. 16th Ave, B395
Aurora, CO. 80045
p. 720-777-6181 f. 720-777-7247

Date: XXXXXX
To: XXXXXX

Patient: XXXXXX
MRN: XXXXXX
DOB: XXXXXX

**Just Keep Breathing
Asthma Home Visit Summary
Patient Discontinuation of Program**

{Patient name} has voluntarily discontinued from the Just Keep Breathing asthma home visit program. The family stated XXXX to be the reason for discontinuation.

Just Keep Breathing visited the family's home XXX times. Our team provided focused education with the family including: pathophysiology of asthma, symptoms of asthma, asthma triggers, purpose of individual medications, proper administration technique, and understanding their asthma action plan. We also provided XXXX.

In our limited time with the family, we understand their ongoing barriers to asthma control to be lack of adherence to controller medication/ parent non-engagement in the program/social chaos which may prohibit the family from delivering proper healthcare. Just Keep Breathing believes close follow up will be necessary to ensure {patient name}'s asthma is controlled.

Just Keep Breathing is happy to discuss our care of {Patient name} and share our recommendations for close follow up. Please call the Just Keep Breathing Registered Nurse at XXX-XXX-XXXX if you have questions or concerns regarding {patient name} or our home visit program.

Sincerely,

Children's Hospital Colorado, Breathing Institute
13123 E. 16th Ave, B395
Aurora, CO. 80045
p. 720-777-6181 f. 720-777-7247

Date: XXXXXX
To: XXXXXXX

Patient: XXXXXX
MRN: XXXXXXX
DOB: XXXXXX

**Just Keep Breathing
Asthma Home Visit Program Summary**

{Patient name} has now completed the Just Keep Breathing asthma home visit program. After visiting the family's home XX times and performing an environmental assessment on the house, we understand the family's personal barriers to asthma control to be: {non-adherence of controller medication, access to asthma medication, medications located at multiple households, patient does not understand asthma, parent does not understand asthma, parent engagement}. Other noted barriers to asthma control include:

Our team did extensive asthma education for {patient name} and his/her family including: pathophysiology of asthma, symptoms of asthma, asthma triggers, purpose of individual medications, proper administration technique, and understanding their asthma action plan. We also provided XXX.

The attached "important phone numbers access plan" has been provided to the family so they can better understand who to call when they have questions. For future clinic visits, we would recommend: {ongoing reinforcement of controller medications, frequent follow-up visits, continued work with the school, assessment of social support system}.

Please call the Just Keep Breathing Registered Nurse, at XXX-XXX-XXXX if you have any questions or concerns regarding {patient name} or our home visit program.

Sincerely,

Medication Counts Worksheet

Patient Name _____ Date of Home Visit _____ Home Visit # _____

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Medication & dosage	
# of puffs remaining after last HV	
# of puffs remaining at today's HV (verify dosage of each canister)	Canister #1 Canister #2 Canister #3
Unused canisters in home	
# of days since last HV	
# of puffs should have taken since last HV	

Healthy Homes Environmental Assessment Checklist

Patient Information

Last Name	First Name	MI	Date of Birth
Parent/Guardian Name			Phone Number
Gender	Race/Ethnicity	Primary Language	
Street Address			<input type="checkbox"/> Own <input type="checkbox"/> Rent
City	County	State	Zip Code
Housing Type: <input type="checkbox"/> House <input type="checkbox"/> Duplex <input type="checkbox"/> Apartment <input type="checkbox"/> Mobile Home			
Years/Months at Residence _____	Approx Year B <input type="checkbox"/> Pre-1940 <input type="checkbox"/> 1940-1959 <input type="checkbox"/> 1960-197 <input type="checkbox"/> Other		
Number of adults in the house 18 and older: _____		Number of children in the house under 18 years old: _____	
Where does the patient sleep?	<input type="checkbox"/> First floor <input type="checkbox"/> Basement <input type="checkbox"/> Above first floor <input type="checkbox"/> Other _____	Notes:	

Are there any particular concerns you would like us to address today?	Notes:
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Cooking Appliances and Mechanical Systems (Combustion)

Questions for family		
Are gas cooking appliances used?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
If yes, vented to the outside	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
What type of heat do you have?	<input type="checkbox"/> Gas <input type="checkbox"/> Electric <input type="checkbox"/> Oil <input type="checkbox"/> Other _____	Notes:

Does the heating and cooling system use filters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
If the home has a furnace, how often are the filters changed?	<input type="checkbox"/> Once a year <input type="checkbox"/> Once every 2 years <input type="checkbox"/> Once every 3 years <input type="checkbox"/> Once every 4 years <input type="checkbox"/> Can't remember the last time it was cleaned	Notes:
Are supplemental heating sources used? (Check all that apply)	<input type="checkbox"/> Fireplace <input type="checkbox"/> Wood-burning stove <input type="checkbox"/> Unvented kerosene or gas space heater <input type="checkbox"/> Other _____	Notes:
Visual Assessment		
Visual evidence of appliances vented to the outside?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Are filters changed regularly?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Visual evidence of supplemental cooking appliances?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Visual evidence of supplemental heating/cooling appliances?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Matrix Results		
Combustion Score(See Chart)	<input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Major	Notes:

Consumer Products (Chemical Irritants)

Questions for family		
Is the patient's asthma worse when around chemicals or products with strong odors (such as cleaners, paints, adhesives, pesticides, air fresheners, or cosmetics)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
If there is a garage, is it attached to the home? (If no, skip to cleaning habits)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Are any toxic chemicals, such as gasoline, stored in the garage?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:

Visual Assessment		
Evidence of strong odors?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Evidence of toxic chemicals, such as gasoline?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Matrix Results		
Chemical Irritant Score (See Chart)	<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Major	Notes:

Second-hand Smoke (Tobacco)

Questions for family		
Does anyone smoke inside of the home?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	No. of Smokers: Cigarettes per Day: Notes:
Does anyone smoke inside the car?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes :
Exposed to cigarettes elsewhere?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Visual Assessment		
Visual evidence of cigarettes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Matrix Results		
Tobacco Score (See Chart)	<input type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Major	Notes:

Pest Control (Cockroach/Rat)

Questions for family		
Have you seen cockroaches and/or rodents (such as droppings or dead specimens in traps)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you use pesticides to kill bugs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
What kind? (Check all that apply)	<input type="checkbox"/> Sprays <input type="checkbox"/> Baits <input type="checkbox"/> Other _____	Notes:
Are you aware of any holes or gaps between construction materials and pipes that could allow pests to enter the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Visual Assessment		
Is there evidence of cockroaches and/or rodents (such as droppings or dead specimens in traps)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Evidence of pesticides to kill bugs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Evidence of food crumbs or open or unsealed food?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Evidence of holes or gaps between construction materials and pipes that could allow pests to enter the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Matrix Results		
Cockroach/Rat Score (See Chart)	<input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Major	Notes:

Pets/Animals (Pet Allergens)

Questions for family		
Are there pets in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
How many and what type?	<input type="checkbox"/> Dogs _____ <input type="checkbox"/> Cats _____ <input type="checkbox"/> Birds _____ <input type="checkbox"/> Other _____	Notes:

Is the patient's asthma worse when around animals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Do pets get on furniture/beds?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Do pets enter the patient's bedroom?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Visual Assessment		
Is there evidence of pets in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
How many and what type?	<input type="checkbox"/> Dogs _____ <input type="checkbox"/> Cats _____ <input type="checkbox"/> Birds _____ <input type="checkbox"/> Other _____	Notes:
Evidence of pet dander on furniture/beds?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Is there evidence of pets in the patient's bedroom?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:
Matrix Results		
Pet Allergen Score(See Chart)	<input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Major	Notes:

Flooring (Dust)

Questions for family		
Is there carpet in the home?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
If there is carpet in the home, how old is it?	<input type="checkbox"/> 0-5 years <input type="checkbox"/> 5-10 years <input type="checkbox"/> 15-20 years <input type="checkbox"/> 20+ years	Notes:
How often is the carpet cleaned with a vacuum cleaner?	<input type="checkbox"/> Never <input type="checkbox"/> A few times a year <input type="checkbox"/> Once a month <input type="checkbox"/> Once a week <input type="checkbox"/> Every day	Notes:

Are shoes removed at the door?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sometimes	Notes:
Is there upholstered furniture present in child's room?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Visual Assessment		
What type of floor covering is present? (Check all that apply)	<input type="checkbox"/> Carpeting <input type="checkbox"/> Hardwood floor, tile, or vinyl flooring <input type="checkbox"/> Throw rugs <input type="checkbox"/> Other <hr/>	Notes:
Where is it located?(Check all that apply)	<input type="checkbox"/> Living areas <ul style="list-style-type: none"> <input type="checkbox"/> Area rug <input type="checkbox"/> Level loop <input type="checkbox"/> Shag/Plush <input type="checkbox"/> Bedrooms <ul style="list-style-type: none"> <input type="checkbox"/> Area rug <input type="checkbox"/> Level loop <input type="checkbox"/> Shag/Plush <input type="checkbox"/> Bathroom(s) <ul style="list-style-type: none"> <input type="checkbox"/> Area rug <input type="checkbox"/> Level loop <input type="checkbox"/> Shag/Plush 	Notes:
Evidence of shoes at the door?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sometimes	Notes:
Evidence of doormat?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Evidence of upholstered furniture present in child's room?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Are stuffed toys present?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
What window coverings are present? (Check all that apply)	<input type="checkbox"/> Curtains and drapes <input type="checkbox"/> Blinds <input type="checkbox"/> Shades <input type="checkbox"/> Other <hr/>	Notes:
Matrix Results		
Dust Score (See Chart)	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Notes:

Moisture Control (Mold)

Questions for family		
Do you have any drips or leaks in the home?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Does the roof leak?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Does the plumbing leak?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Are humidifiers used in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you have air conditioning?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Are there air conditioning window units?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Is the clothes dryer vented to the outside?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you have a swamp/evaporating cooler?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Portable <input type="checkbox"/> Window <input type="checkbox"/> Roof Notes:
Do you notice any water stains or warping on the walls or carpet?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you see or smell mold or mildew in the bathroom?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you see or smell mold or mildew anywhere else in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Do you use a working exhaust fan while bathing/showering?	<input type="checkbox"/> Never <input type="checkbox"/> Sometimes <input type="checkbox"/> Always	Notes:
Do you notice any standing water anywhere in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
If yes, frequency of standing water	<input type="checkbox"/> Never <input type="checkbox"/> Sometimes <input type="checkbox"/> Always	Notes:
Visual Assessment		
Is there evidence of any roof leaking?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:

Is there evidence of any plumbing leaking?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Notes:	
Is there evidence of water stains or warping on the walls or carpet?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Visual evidence or smell mold or mildew in the bathroom?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Is there a working exhaust fan in the bathroom?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Do you see or smell mold or mildew anywhere else in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	How many ft ² ?	Notes:
Evidence of any standing water anywhere in the house?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Does rainwater gravitate towards house? (Check gutters as well)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Are there signs of dampness in the basement/crawlspace? These include the presence of mold, or mildew, discoloration of walls, a musty odor and/or dampness.	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Are rooms and moisture-producing appliances - such as stoves, clothes dryers, or dishwashers - properly vented (including venting to the outside if specified by the manufacturer)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Notes:	
Matrix Results			
Mold Score (See Chart)	<input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Major	Notes:	

HEALTHY HOMES ENVIRONMENTAL ASSESSMENT MATRIX

Combustion Chart:

Evidence:	None	<ul style="list-style-type: none"> Gas appliances all properly vented and visually in good working order
	Minor	<ul style="list-style-type: none"> Unvented gas range with window in same room
	Moderate	<ul style="list-style-type: none"> Unvented gas range without window in same room Any gas appliance is very old with any signs of disrepair
	Major	<ul style="list-style-type: none"> Heater, furnace, or gas dryer appears not to be vented properly or clear disrepair Any use of gas-fired portable appliances indoors

Chemical Irritant Chart:

Evidence:	Minor	<ul style="list-style-type: none"> No obvious odors in any part of the living space. <u>OR</u> <u>Minor</u> odors in any part of the living space (candles, incense, air fresheners, perfume, cleaner, chemicals)
	Moderate	<ul style="list-style-type: none"> <u>Clear strong</u> odors in any part of the living space (candles, incense, air fresheners, perfume, cleaner, chemicals) Evidence of air freshener (spray, plug-in, potpourri, candles, incense, oils, reeds) use in any part of the living space
	Major	<ul style="list-style-type: none"> <u>Clear strong</u> odors in the child's bedroom (candles, incense, air fresheners, perfume, cleaner, chemicals) Evidence of air freshener (spray, plug-in, potpourri, candles, incense, oils, reeds) use in child's bedroom

Tobacco Chart:

Evidence:	None	<ul style="list-style-type: none"> No evidence of smoking in the home.
	Moderate	<ul style="list-style-type: none"> Clear smoke odor anywhere in the home <u>without</u> responses indicating smoking inside the home <u>and</u> no evidence of cigarette butts or ashtrays anywhere in the home.
	Major	<ul style="list-style-type: none"> Any smoking inside the home from initial interview Evidence of cigarettes butts or ashtrays anywhere in the home

Cockroach/Rat Chart:

Evidence:	None	<ul style="list-style-type: none"> No visual evidence of cockroach/mice/rats or resident reports of current cockroach/mice/rats
	Minor	<ul style="list-style-type: none"> Resident report of current cockroach/mice/rats or limited visual evidence of cockroach/mice/rats
	Major	<ul style="list-style-type: none"> Clear evidence of cockroach/mice/rats in any room

Pet Allergen Chart:

Measured Allergen Levels:	None	<ul style="list-style-type: none"> No visual evidence of pets
	Minor	<ul style="list-style-type: none"> 1 or more pets that live outside of the home and come inside infrequently
	Moderate	<ul style="list-style-type: none"> 1 or more pets living in house with pet dander who do NOT enter the child's bedroom
	Major	<ul style="list-style-type: none"> 1 or more pets living in house with pet dander who frequently enter the child's bedroom

Dust Score:

Dust Score:	Low	< 60
	Medium	60 to 80
	High	> 80
Sources:	Dust Score based on visual inspection and sum of the following: <ul style="list-style-type: none"> • 0.6 x % carpet in the room • 10 for fabric curtains, 5 for fabric blinds, 0 for hard surface blinds • 20 for fully upholstered chair or more, 10 for upholstered furniture less than a chair, 0 for no upholstered furniture • 10 for more than 10 stuffed animals, 5 for 5 to 10 stuffed animals, 0 for less than 5 stuffed animals 	

Mold Chart:

Evidence:	None	<ul style="list-style-type: none"> • No evidence of moisture or mold
	Minor	<ul style="list-style-type: none"> • Any visible mold other than in the shower or the Child's bedroom in the home • Minor moisture issue anywhere in the home other than the Child's bedroom including condensation, a slow dripping pipe, or RH > 50% • Obvious moldy smell anywhere in the home.
	Moderate	<ul style="list-style-type: none"> • Any visible mold in Child's bedroom • 1-4 ft.² visible mold anywhere other than the child's bedroom or shower without current water intrusion issue
	Major	<ul style="list-style-type: none"> • > 1 ft.² visible mold in Child's Bedroom • > 4 ft.² visible mold anywhere in the home • Obvious current water intrusion issue anywhere in the home (not condensation or a slow dripping pipe)

