

## CHW EDUCATIONAL PROTOCOL: WARNING SIGNS OF ASTHMA (ADULTS & CHILDREN)

### Statement of the Problem

Prevention of asthma attacks is a key component of asthma management. It is important to help a patient recognize his/her individual symptoms (warning signs) that are precursors to an asthma episode. It is also important to educate the patient about factors that contribute to asthma severity, self-adjustment of medications, and what to do when their warning signs occur. Using a peak flow meter or symptom self-monitoring can be useful to increase a patient's awareness of his/her disease status and control. Having an asthma action plan in place is also important. <sup>i</sup>

### Background

Early Warning Signs:

- Many asthma patients have predictable feelings or symptoms for a long time before they actually have trouble breathing or have an asthma attack. It is important keep a lookout for these symptoms each day, since they can be early warning signs of asthma.
- Early Warning Signs are written down in the patient's Asthma Action Plan.
- The earlier an asthma patient's warning signs are recognized, the earlier the patient can begin treatment. Early treatment may avoid the need for emergency treatment.
- If any warning signs occur, checking peak flow can give the patient more information about how bad the asthma is getting. Sometimes symptoms can appear mild, but peak flow can show that asthma is seriously out of control. (Peak flow monitoring is not recommended for children under 6 years old.)
- The presence of early warning signs means that the asthma patient is in the Yellow Zone of the Action Plan.
- Late Warning Signs mean that the asthma patient is in the "Red Zone" and needs immediate medical care. Late warning signs include:
  - Wheezing that gets worse even after rescue medicine has been given.
  - Breathing that gets faster even after rescue medicine has been given.
  - Difficulty breathing:
    - Nostrils flaring.
    - Pale skin/blue-gray color around lips. (Call 911)
    - Increased coughing interfering with breathing.
    - Skin cold and sweaty.
    - Retractions of the muscles in the neck and between ribs.

- Breathing fast
- Grunting or wheezing.
- Stomach muscles tense.
- Difficulty walking or observing
- Using both peak flow and symptoms is the best way to assess the severity of asthma. The zone of the asthma action plan is best determined by considering both symptoms and peak flow. If either indicates the red zone, then the asthma patient is in the red zone. If neither is in the red zone, but one is in the yellow zone, then the asthma patient is in the yellow zone.

## CHILD

Caregivers benefit a child by teaching them to be a good communicator about asthma. The child will have feelings about having asthma and then they will have days with symptoms. It is critical for the caregiver to learn about these feelings and symptoms in order to help the child become healthier and symptom free over time. Keep a record of these symptoms. Notice patterns. Some symptoms like stomach ache could be overlooked as an early asthma warning sign unless the caregiver is noticing and tracking their child's symptom patterns.

## ADULT

Recommend the patient to pay attention to his/her body. The patient will have symptoms and feelings before an asthma episode. Encourage the patient to keep a record of these symptoms and to not overlook seemingly unrelated signs. Record keeping is a great tool to help a patient become more aware of their specific symptoms.

## CHW Assessment

- Determine if the asthma patient knows his/her early asthma symptoms.
- Assess the asthma patient's knowledge of late warning signs of asthma.
- Check to see if asthma patient has asthma action plan. If the patient does not have an action plan on hand, have them contact their provider for a copy
- Check to see if the asthma patient can use symptoms to determine the zone of asthma Action Plan (if no action plan on hand, contact provider for a copy) and what to do in response to symptoms.

| Yellow Zone/ Early Warning Signs  | Red Zone/ Late Warning Signs   |
|---|--|
| <ul style="list-style-type: none"> <li>• Wheeze</li> <li>• Tight chest</li> <li>• Cough</li> <li>• Shortness of breath</li> </ul> | <ul style="list-style-type: none"> <li>• It's getting harder and harder to breathe</li> <li>• Unable to sleep or do usual activities because of trouble breathing</li> </ul> |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Waking up at night with asthma symptoms</li> <li>• Decreased ability to do usual activities</li> </ul> |  |
|---|--|

Check to see if the asthma patient has a peak flow meter and knows how and when to use it.

#### CHW Educational Messages

- Being aware of early symptoms and taking action early might prevent the need for emergency treatment.
- If any warning signs occur, checking peak flow can give the patient more information about how bad the asthma is getting. Peak flow can show that asthma is more serious than symptoms indicate.
- The presence of early warning signs means that the patient is in the Yellow Zone of the Action Plan.
- Late warning signs mean that the patient is in the “red zone” and needs immediate medical care.
- Using both peak flow (on patients over the age of 6) with symptom monitoring is the best way to assess the severity of asthma.

#### Actions

#### CHW ACTIONS

| CHILD   | ADULT  |
|---|--|
| <ul style="list-style-type: none"> <li>• If the asthma patient is unaware of early or late signs, help them identify the signs that usually show when asthma is worsening.</li> <li>• Create an Asthma Action Plan for patient if the patient does not have one completed.</li> <li>• Review how to use symptoms and action plan to figure out what to do to prevent asthma episode from worsening.</li> <li>• Instruct the caregiver to ask his/her health care provider for an action plan if he/she does not have one.</li> <li>• Provide a peak flow meter and instruct in use if child does not have one.</li> </ul> | <ul style="list-style-type: none"> <li>• If patient is unaware of early or late signs, help them identify the signs that usually show when asthma is worsening.</li> <li>• Create an Asthma Action Plan for patient if the patient does not have one completed.</li> <li>• Review how to use symptoms and action plan to figure out what to do to prevent asthma episode from worsening.</li> <li>• Contact healthcare provider nurse to let them know further education about signs as needed.</li> <li>• Provide a peak flow meter and instruct in use if asthma patient does not have one.</li> </ul> |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Make sure the caregiver understands:</li> <li>• Using both peak flow and symptoms is the best way to assess the severity of asthma.</li> <li>• The zone of the action plan is best determined by considering both symptoms and peak flow. If either indicates the red zone, then the child is in the red zone. If neither is in the red zone, but one is in the yellow zone, then the child is in the yellow zone.</li> </ul> | <ul style="list-style-type: none"> <li>• Make sure the patient understands:</li> <li>• Using both peak flow and symptoms is the best way to assess the severity of asthma.</li> <li>• The zone of the action plan is best determined by considering both symptoms and peak flow. If either indicates the red zone, then the patient is in the red zone. If neither is in the red zone, but one is in the yellow zone, then the patient is in the yellow zone.</li> </ul> |
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### Caregiver/Patient Actions

Identify and learn to recognize the patient's warning signs of asthma.

- Know the late warning signs.
- Know how to check breathing rate.
- Know what to do when early and late signs occur, based on Action Plan.
- Use the peak flow meter when any signs (early or late) of asthma occur.

### Follow-Up Visits

- As needed.

### Supplies

- Peak flow meter
- Action Plan
  - English  
<http://www.kingcounty.gov/healthservices/health/chronic/asthma/resources/~media/health/publichealth/documents/asthma/homebase/participantduen/ActionPlanAdult.ashx>
  - Spanish  
<http://www.kingcounty.gov/healthservices/health/chronic/asthma/resources/~media/health/publichealth/documents/asthma/homebase/ParticipantEduSP/ActionPlanSP.ashx>

### Education Handouts

- None.

## Referrals

- Primary Care Provider

# ENGLISH

## My Asthma Plan

Patient Name: \_\_\_\_\_

Medical Record #: \_\_\_\_\_

Physician's Name: \_\_\_\_\_ DOB: \_\_\_\_\_


Physician's Phone #: \_\_\_\_\_ Completed by: \_\_\_\_\_ Date: \_\_\_\_\_

| Controller Medicines   | How Much to Take | How Often                               | Other Instructions   |
|------------------------|------------------|---|--|
|                        |                  | _____ times per day<br><b>EVERYDAY!</b> |  |
|                        |                  | _____ times per day<br><b>EVERYDAY!</b> |  |
|                        |                  | _____ times per day<br><b>EVERYDAY!</b> |  |
|                        |                  | _____ times per day<br><b>EVERYDAY!</b> |  |
| Quick-Relief Medicines | How Much to Take | How Often                               | Other Instructions   |
|                        |                  | Take <b>ONLY</b> as needed              | NOTE: If this medicine is needed frequently, call physician to consider increasing controller medications. |

Special instructions when I feel  **good**,  **not good**, and  **awful**.

**I feel *good*.**

(My peak flow is in the GREEN zone.)



**GREEN ZONE**

**PREVENT** asthma symptoms everyday:

☐ Take my controller medicines (above) everyday.

☐ Before exercise, take \_\_\_\_\_ puffs of \_\_\_\_\_


☐ Avoid things that make my asthma worse like: \_\_\_\_\_

**I do *not* feel *good*.**

(My peak flow is in the YELLOW zone.)

My symptoms may include one or more of the following:

- Wheeze
- Tight chest
- Cough
- Shortness of breath
- Waking up at night with asthma symptoms
- Decreased ability to do usual activities



**YELLOW ZONE**

**CAUTION:** I should continue taking my everyday controller asthma medicines AND:

☐ Take \_\_\_\_\_

If I still do not feel good, or my peak flow is not back in the **Green Zone** within one hour, then I should:

☐ Increase \_\_\_\_\_

☐ Add \_\_\_\_\_


☐ Call \_\_\_\_\_

**I feel *awful*.**

(My peak flow is in the RED zone.)

Warning signs may include one or more of the following:

- Its getting harder and harder to breathe
- Unable to sleep or do usual activities because of trouble breathing



**RED ZONE**

**MEDICAL ALERT! Get help!**

☐ Take \_\_\_\_\_ until I get help immediately.

☐ Take \_\_\_\_\_

☐ Call \_\_\_\_\_

**Danger! Get help immediately!**

Call 911 if trouble walking or talking due to shortness of breath or lips or fingernails are gray or blue.

ORIGINAL (PATIENT)

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<sup>i</sup> Expert Panel Report: pg. 49, 61