Asthma Education

- What is Asthma?
- Triggers
- Medications / Devices
- Peak Flow
- Asthma Action Plan
- Asthma Across the Lifespan
- Vaccines / Smoking
What is Asthma?

- Chronic breathing disease
- Caused by squeezing and swelling of airway
- Cannot be cured
- Can be treated and controlled
What is Asthma?

- Chronic breathing disease
- Caused by squeezing and swelling of airway
- Cannot be cured
- Can be treated and controlled
Normal Airway

Breathing is good
No coughing, wheezing, chest tightness, or shortness of breath
Able to play, exercise and work

Green Zone: Doing Well
Normal Airway

- The linings of the airways (bronchial tubes) are smooth, clear, and air flows easily in and out when asthma is under control.

- How will you feel?
  - Breathing is good
  - No coughing, wheezing, chest tightness or SOB day or night
  - Able to play, exercise and work
Inflamed Airway

Yellow Zone: Caution

You may have: coughing, chest tightness, wheezing shortness of breath, or waking up from sleep with difficulty breathing.

Can do some, but not all usual activities.
Inflamed Airway

- The airways become inflamed and swollen when asthma is not controlled. Swelling makes the airways smaller.

- How will you feel?
  - Breathing problems may include: coughing, chest tightness, wheezing, shortness of breath, or waking up from sleep with difficulty breathing
  - Can do some, but not all usual activities

*Age 0-4: Call MD if you are not sure whether your child’s symptoms are due to asthma

* Age >5: Peak flow is between 60-80% of personal best
Asthma Attack

Red Zone: Medical Alert

Breathing is hard and fast
You may be coughing continuously
Quick relief medications have not helped
Cannot do usual activities
What is an asthma attack?

- The airways swell up and make extra mucus during an attack. The muscles around the airways become tight, and air gets trapped in the alveoli (sacs at the end on the bronchial tubes) making it very hard for air to pass through your airways.

- How will you feel?
  - Breathing is hard and fast, may be coughing continuously
    - nose opens wide, ribs show
  - Quick-relief/rescue medications have not helped
  - Cannot do usual activities - including talking and walking
  - Age > 5 : Peak flow is <60% of personal best
How to manage your asthma

- Work with your doctor
- Avoid Triggers
- Take your medicine
- Watch for signs and symptoms
- Call your doctor when you have problems with your asthma
How to manage your asthma

- Work with your doctor
- Avoid Triggers
- Take your medicine
- Watch for signs and symptoms
- Call your doctor when you have problems with your asthma
Asthma Triggers?

- Irritants and allergens that cause an asthma attack
Asthma Triggers

- Triggers can cause your airways to become swollen, tighten, and to fill up with mucus
- Each person has different triggers
- Know your triggers and do what you can to avoid them
What are your triggers?

- Foods
- Weather and Outdoor Air Quality
- Dust Mites
- Animals/Pets
- Cockroaches
- Molds/Mildew
- Tobacco Smoke
- Other Smoke
- Strong Odors and Sprays
- Colds and Infections
- Exercise
- Non-asthma Medications
- Heartburn and GERD
- Emotions

Note your triggers and ways to avoid them on the asthma education worksheet
What are your triggers?

Examples to discuss with patient:
- cold air
- dust mites
- smoke
- chemical fumes
- strong odors/sprays
- pollens
- pets
- molds/mildew
- air pollution
- foods
- exercise
- emotions
- and respiratory infections
- heartburn/GERD
- non-asthma medications

Assist patient to write his/her triggers on printed form for patient to take home (enclosed in binder)

Brainstorm with patient how to prevent exposure to triggers

Refer to the “Controlling Your Asthma” book, pages 6 -12 for suggestions for reducing exposure to triggers
Medications

- **Long-term Control Medications**
  - Must be taken **every day**; even if you are feeling well
  - Prevent and reverse asthma attacks
  - Treat the disease; not the symptoms
  - Take a few weeks to decrease the swelling in the airways that causes asthma symptoms
  - *What is the name of your controller medication?*
Controller medications

- Prevent and reverse asthma attacks by decreasing the inflammation (swelling) in the airways
- Treat the disease not just the symptoms but
- Must be used on a daily basis to work effectively

Show examples of controllers and spacers from kit (Identify patient’s medication when possible)

Controllers include:

Flovent (fluticasone)  Azmacort (triamcinolone)
Pulmicort (budesonide)  Aerobid (flunisolide)
Asmanex (mometasone)  QVAR (beclomethasone)
Advair (fluticasone and salmeterol)  Foradil (formoterol)
Symbicort (budesonide and formoterol fumarate)
Medications

Rescue

- Quick-relief medicines
- Relieve an attack once it starts
- *What is the name of your rescue medication?*

- Do you use your rescue medication more than twice per week?
- Do you wake up more than twice per month and need to use your rescue medication?
- Do you refill your rescue medication more than twice per year?
Relievers

- **Relievers (also called Rescue medications)**
- Help stop symptoms of an asthma attack by opening up airways
- Relieve symptoms within 10-15 minutes but they **do not** reduce or prevent the inflammation (or swelling) that causes the symptoms
- **STRESS:** Rescue medications should not be used often. Controller medications may need to be changed if:
  
  - Rescue medicine is needed more than twice per week
  - Wake up with asthma problems more than twice per month
  - Need a refill more than twice per year
  
  **Contact the physician if patient can answer YES to any of the above so that medications can be changed**

Show examples of controllers and spacers from kit (Identify patient’s medication when possible)

<table>
<thead>
<tr>
<th>Albuterol</th>
<th>Proventil</th>
<th>Ventolin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxair</td>
<td>Xopenex</td>
<td>Alupent</td>
</tr>
<tr>
<td>Pediapred</td>
<td>Prednisolone</td>
<td>Prelone</td>
</tr>
<tr>
<td>Orapred</td>
<td>Medrol Dosepak</td>
<td></td>
</tr>
</tbody>
</table>
Which type of inhaler do you use?
Which type of inhaler do you use?

- Patient identifies device/inhaler
  - Separate sections on metered-dose inhaler, flexhaler, diskus, and nebulizer follow
    - Choose appropriate tab
How to Use a Metered-Dose Inhaler

1. Remove the cap and hold the inhaler upright
2. Shake the inhaler
3. Push the inhaler mouthpiece into the end of the spacer
4. Position inhaler and spacer comfortably in your hand
5. Inhale a comfortable breath then breathe out all of the way

Continued......
How to Use a Metered-Dose Inhaler

1. Remove the cap.
2. Shake MDI vigorously 10-15 times. If MDI is new or has not been used in >7 days – activate 4 sprays into the open air to prime the spray system.
3. The spacer (holding chamber) helps get more medication into lungs where it is needed, rather than in your mouth and the back of your throat. Spacer also helps prevent thrush (a yeast infection in your mouth) when taking inhaled steroid medications.
   Spacers should NOT be used with Maxair Autohaler
4. The metal canister should be held upright with your first or second finger securely placed in the concave top and your thumb placed on the bottom.
5. Inhale deeply and then exhale as much as you can.
Continued….
How to Use a Metered-Dose Inhaler

6. Seal your lips around the mouthpiece of the spacer
7. Tilt your head back slightly to look at the ceiling
8. As you start to breathe in, push down on the top of the inhaler
9. Hold your breath and count to 10 slowly – breathe out slowly
10. Wait one minute before repeating puffs if prescribed by your doctor
11. Rinse your mouth
6. Do not bite on mouthpiece; keep jaw relaxed and teeth apart. * Children: If using mask with spacer - ensure that mask fits tightly around child’s nose and chin
7. Tilting head will straighten the airway
8. Stress importance of inhaling slowly
9. Hold breath and count to 10 or as long as it feels comfortable. Exhale slowly
10. Review prescribed dose
11. Rinse mouth if using inhaled corticosteroids - do not swallow
Cleaning your Metered-Dose Inhaler

Daily:
- Remove the canister from the sleeve. Do not get the canister wet.
- Rinse the sleeve and cap
- Allow them to dry before next use

 Twice a week:
- Remove the canister
- Wash plastic mouthpiece with mild dishwashing soap and warm water
- Rinse with water
- Allow to dry before next use

If you use a Maxair Autohaler: it should not be wet. Wipe mouthpiece and area around spray hole with a dry cloth.
Cleaning your Metered-Dose Inhaler

- The inhaler should be cleaned often to prevent build-up that will clog the inhaler.
- Maxair Autohaler’s should not be washed with water. Simply wipe mouthpiece and area around spray hole with a dry cloth.
When should the inhaler be replaced?

- Number of puffs in a canister are listed on the label
- Keep track of number of puffs taken
- Write “need to refill date” on canister
- Refill prescription before canister is completely empty to avoid missed medication doses
When should the inhaler be replaced?

- Determine number of puffs on canister
- Calculate number of days canister will last:
  \[ \text{Puffs per container; divided by puffs per day} = \# \text{ days canister will last} \]
- Write refill date on canister
- Stress importance of refilling the prescription before canister is before empty
Using a Diskus Dry Powder Inhaler

- Take Diskus out of box and foil
- Record “pouch opened date”
- Record “Use by” date
Using a Diskus Dry Powder Inhaler

- “Use by” date is one month from date of opening
- The dry powder is breath activated
- Never try to take inhaler apart
- Use inhaler in a level, horizontal position
- Never wash mouthpiece or any part of inhaler
Using a Diskus Dry Powder Inhaler

- Open inhaler
- Slide lever
- Breathe out
- Put mouth on inhaler
- Inhale fully
- Hold breath
- Check dose indicator
- Close inhaler
- Rinse mouth
- Store inhaler
Using a Diskus Dry Powder Inhaler

- Hold outer case in one hand and put the thumb of your other hand on the thumb grip. Push your thumb away from you as far as it will go.
- Hold inhaler with mouthpiece facing you. Slide the lever away from you as far as it will go until you hear and/or feel a click.
- Hold inhaler away from mouth; Exhale; *never blow into Diskus*
  - Put mouthpiece to lips. Breathe in steadily and deeply—through inhaler, not through nose
- Remove inhaler from mouth
- Hold breath for 10 seconds or as long as comfortable
- Breathe out slowly.
- Dose indicator on top of the inhaler tells how many doses are left
- Put thumb in the thumb grip and slide back towards you. Slide until clicks shut. Lever automatically resets to starting position
- Rinse mouth with water - do not swallow
- Store at room temperature (68-77 degrees) in a dry place away from direct heat or sunlight.
How to use a Flexhaler

- Load a dose
- Breathe out fully
- Inhale the dose
- Place cover on inhaler
- Twist inhaler shut
- Rinse mouth
- Store inhaler
How to use a Flexhaler

- **Loading the dose:**
  - Twist cover and lift off
  - Hold the Flexhaler with the mouthpiece up
  - Twist the brown grip in one direction as far as it will go. Twist back again as far as it will go. You will hear a click.
  - Turn head away from inhaler and breathe out fully

- **Inhaling the dose**
  - Place mouthpiece between lips; inhale quickly and deeply
  - Repeat dose as prescribed

- Place cover on inhaler.

- Twist inhaler shut.

- Rinse mouth with water - do not swallow.

- Keep your Flexhaler dry at all times.
How to use an Aerolizer

1. Peel paper backing from blister card
2. Put capsule in Aerolizer inhaler and twist mouthpiece closed
3. Press both side buttons ONCE ONLY and release, with Aerolizer Inhaler held upright
4. Fully exhale
5. Place mouth on mouthpiece, and tilt head back slightly
6. Breathe in fast, steadily, and deeply
7. Open mouthpiece of Aerolizer and dump directly into trash
How to use an Aerolizer

1. Pull cover off mouthpiece, and twist mouthpiece in direction of arrow. Peel paper backing from blister card.
2. Put capsule in Aerolizer inhaler and twist mouthpiece closed. You should hear a click when the mouthpiece is closed.
3. Press both side buttons ONCE ONLY and release, with Aerolizer Inhaler held upright. This releases the medicine from the capsule.
4. Fully exhale.
5. Place mouth on mouthpiece, and tilt head back slightly.
6. Breathe in fast, steadily, and deeply. As you breathe, you will hear the Aerolizer vibrate.
7. Open mouthpiece of Aerolizer. If there is still powder in the capsule, inhale deeply on the Aerolizer again. Once the powder is gone, dump the capsule directly into trash.
How to use a Twisthaler

1. Hold inhaler upright (with pink base at bottom)
2. Grip the base and twist the cap counterclockwise
3. Exhale fully
4. Inhale the dose
5. Place cap on inhaler
6. Twist clockwise until it clicks
7. Rinse mouth
8. Store inhaler
How to use a Twisthaler

1. Hold inhaler upright (with pink base at bottom).
2. Grip the base and twist the cap counterclockwise.
3. Exhale fully.
4. Inhale the dose, taking a fast deep breath. Do not cover the vent holes while inhaling the dose.
5. Wipe mouthpiece dry if needed. Place cap on inhaler.
6. Twist clockwise until it clicks.
7. Rinse mouth.
8. Store inhaler. Keep your Twisthaler dry at all times. Wipe clean with dry cloth if needed.
Nebulizers

May be used by:

- Young children
- People with trouble using metered dose inhalers
- People with severe asthma
Nebulizers

- A nebulizer is a compressed air machine that turns liquid asthma medications into a fine mist that can be breathed easier.
- Treatments should take 4-10 minutes
- Many types available
- Refer to the instructions that came with patient’s own nebulizer
Mixing Nebulizer Medications

- Measure normal saline solution using a clean eyedropper
- Place into the plastic cup
- Measure medicine using a clean eyedropper
- Place into the plastic cup
*Mixing Nebulizer Medications

* Refer to next page if medications are premixed
How to use a Nebulizer

1. Add medicine to cup.
2. Fasten mouthpiece or mask to the T-shaped part of the nebulizer. Fasten this unit to the cup.
3. Put mouthpiece in mouth or place mask over child’s mouth and nose.
How to use a Nebulizer

- Sit upright in a comfortable position.
- Place mouthpiece between teeth, over the tongue, with lips comfortably sealed or place mask over child’s mouth and nose. If using a mask, advise parent to avoid the “blow-by method” (holding the tube, with mist coming out of it, if front of the child’s face; results in very little medicine getting deep into the lungs).
- Take deep relaxed breaths until nebulizer begins to sputter.
- Turn off power to compressor.
- Disconnect nebulizer from tubing, disassemble, and briefly wash in warm soapy water – DO NOT WASH TUBING.
- Rinse nebulizer parts, and shake off excess water.
- Place nebulizer parts on a towel or dish rack, and allow to air dry. Keep parts out of the reach of children.
- Reassemble the clean nebulizer, and place in a cool, dry place.
Manage your Signs and Symptoms

- Peak flow measurement
- Asthma Action Plan
- Managing asthma in YOUR life
Manage your Signs and Symptoms

- Peak flow measurement are indicated for patients > age 5
- Asthma Action Plan
How to Use a Peak Flow Meter

1. Slide the marker down as far as it will go.
2. Stand up. Take a deep breath in, and blow all the way out as far as possible.
3. Take as deep a breath in as possible with your mouth open.
4. Place the meter in your mouth and close your lips around it to form a seal. You tongue should be away from the hole. Keep your fingers away from the markings. Blow out once as hard and as fast as you can.
5. Don’t touch the marker, and write down the number you get.
6. Do this three times. Reset the marker to zero each time. Write down the number each time. Your peak flow is the highest of these three numbers.
How to use a Peak Flow Meter
Age > 5

1. Slide the marker down as far as it will go.
2. Stand up. Take a deep breath in, and blow all the way out as far as possible.
3. Take as deep a breath in as possible with your mouth open.
4. Place the meter in your mouth and close your lips around it to form a seal. Your tongue should be away from the hole. Keep your fingers away from the markings. Blow out once as hard and as fast as you can.
5. Don’t touch the marker, and write down the number you get.
6. Do this three times. Reset the marker to zero each time. Write down the number each time. Your peak flow is the highest of these three numbers.

- Demonstrate with patient using peak flow meter
Your Personal Best Peak Flow
Age > 5

An Asthma Log Book for Peak Expiratory Flow Monitoring & Daily Management

This log is for:

Log time period:
From: _______________________
Through: ____________________

Physician Contact #:

Created by:
University Hospital Respiratory Care Department
Critical Care Support Services
University of Michigan Hospital and Health Center
Ann Arbor, Michigan
Your Personal Best Peak Flow

- Record peak flow twice daily for 2 weeks
- Do measurement at the same time every day (peak flow is lower in the morning and highest between 12 noon and 5 p.m.)
- The highest number during those two weeks will be your personal best peak flow.
- Re-establish your peak flow when using a new meter
- Children need to re-establish their personal best peak flow every 6 months due to lung growth changes.
### Peak Flow Zones

<table>
<thead>
<tr>
<th>Personal Best Peak Flow</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>&gt; 40</td>
<td>40 to 30</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>75</td>
<td>&gt; 60</td>
<td>60 to 45</td>
<td>&lt; 45</td>
</tr>
<tr>
<td>100</td>
<td>&gt; 80</td>
<td>80 to 60</td>
<td>&lt; 60</td>
</tr>
<tr>
<td>125</td>
<td>&gt; 100</td>
<td>125 to 75</td>
<td>&lt; 75</td>
</tr>
<tr>
<td>150</td>
<td>&gt; 120</td>
<td>120 to 90</td>
<td>&lt; 90</td>
</tr>
<tr>
<td>175</td>
<td>&gt; 140</td>
<td>140 to 105</td>
<td>&lt; 105</td>
</tr>
<tr>
<td>200</td>
<td>&gt; 160</td>
<td>160 to 120</td>
<td>&lt; 120</td>
</tr>
<tr>
<td>225</td>
<td>&gt; 180</td>
<td>180 to 135</td>
<td>&lt; 135</td>
</tr>
<tr>
<td>250</td>
<td>&gt; 200</td>
<td>200 to 150</td>
<td>&lt; 150</td>
</tr>
<tr>
<td>275</td>
<td>&gt; 220</td>
<td>220 to 165</td>
<td>&lt; 165</td>
</tr>
<tr>
<td>300</td>
<td>&gt; 240</td>
<td>240 to 180</td>
<td>&lt; 180</td>
</tr>
<tr>
<td>325</td>
<td>&gt; 260</td>
<td>260 to 195</td>
<td>&lt; 195</td>
</tr>
<tr>
<td>350</td>
<td>&gt; 280</td>
<td>280 to 210</td>
<td>&lt; 210</td>
</tr>
<tr>
<td>375</td>
<td>&gt; 300</td>
<td>300 to 225</td>
<td>&lt; 225</td>
</tr>
<tr>
<td>400</td>
<td>&gt; 320</td>
<td>320 to 240</td>
<td>&lt; 240</td>
</tr>
<tr>
<td>425</td>
<td>&gt; 340</td>
<td>340 to 255</td>
<td>&lt; 255</td>
</tr>
<tr>
<td>450</td>
<td>&gt; 360</td>
<td>360 to 270</td>
<td>&lt; 270</td>
</tr>
<tr>
<td>475</td>
<td>&gt; 380</td>
<td>380 to 285</td>
<td>&lt; 285</td>
</tr>
<tr>
<td>500</td>
<td>&gt; 400</td>
<td>400 to 300</td>
<td>&lt; 300</td>
</tr>
<tr>
<td>525</td>
<td>&gt; 420</td>
<td>420 to 315</td>
<td>&lt; 315</td>
</tr>
<tr>
<td>550</td>
<td>&gt; 440</td>
<td>440 to 330</td>
<td>&lt; 330</td>
</tr>
<tr>
<td>575</td>
<td>&gt; 460</td>
<td>460 to 345</td>
<td>&lt; 345</td>
</tr>
<tr>
<td>600</td>
<td>&gt; 480</td>
<td>480 to 360</td>
<td>&lt; 360</td>
</tr>
<tr>
<td>625</td>
<td>&gt; 500</td>
<td>500 to 375</td>
<td>&lt; 375</td>
</tr>
<tr>
<td>650</td>
<td>&gt; 520</td>
<td>520 to 390</td>
<td>&lt; 390</td>
</tr>
<tr>
<td>675</td>
<td>&gt; 540</td>
<td>540 to 405</td>
<td>&lt; 405</td>
</tr>
<tr>
<td>700</td>
<td>&gt; 560</td>
<td>560 to 420</td>
<td>&lt; 420</td>
</tr>
</tbody>
</table>
Peak Flow Zones
(Moderate or Severe Asthma Patients)

- Circle your Personal Best Peak Flow number on the chart in the white column

- Follow the numbers across from your Personal Best Peak Flow to find your Green/Yellow/Red zones

- Example: If your highest peak over 2 weeks is 360, then circle the number closest to 360, which is 350 and follow the line across to find your zones:
  Green > 280, Yellow 280-175, and Red < 175
Graph Your Peak Flow Rates

<table>
<thead>
<tr>
<th>Day</th>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>8/8</td>
<td>8/9</td>
<td>8/10</td>
<td>8/10</td>
<td>8/10</td>
<td>8/10</td>
<td>8/10</td>
</tr>
<tr>
<td>Time</td>
<td>am</td>
<td>pm</td>
<td>am</td>
<td>pm</td>
<td>am</td>
<td>pm</td>
<td>am</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

Used Albuterol coughing
Graph Your Peak Flow Rates

Instruct patient how to complete peak flow rate graph (in asthma log book)

- Obtain your highest peak flow measurement twice daily (refer to page 44)
- Record on the graph for two weeks, along with symptoms, medications taken, etc.
- This graph will help your doctor complete your Asthma Action Plan.
# Asthma Action Plan

**University of Michigan Hospitals & Health Centers**

**Asthma Action Plan for Patients 12 Years or Older**

<table>
<thead>
<tr>
<th>GREEN ZONE (Doing Well)</th>
<th>Controller Medications</th>
<th>Rescue Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Breathing is good (no coughing, wheezing, chest tightness, or shortness of breath during the day or night), and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Able to do usual activities (work, play, and exercise), and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Peak flow is more than 80% of your personal best (_____ )</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal Best:</strong> _____</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Replacing Controller Medication(s) EVERY DAY.**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ If you usually have symptoms with exercise, then take:

<table>
<thead>
<tr>
<th>YELLOW ZONE (Caution)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Breathing problems (coughing, wheezing, chest tightness, shortness of breath, or waking up from sleep), or</td>
</tr>
<tr>
<td>✓ Can do some, but not all, usual activities, or</td>
</tr>
<tr>
<td>✓ Peak flow is between 60% to 80% of your personal best ( _____ to _____ )</td>
</tr>
</tbody>
</table>

**Emergency Treatment**

Take these medication(s) and seek medical help NOW.

**First:** CALL YOUR DOCTOR or 9-1-1, then:

<table>
<thead>
<tr>
<th>Take:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

And: ☐ If you are GETTING WORSE or are NOT IMPROVING after the treatment(s), go to the Red Zone

And: ☐ If you are BETTER, ________

And: If you still have symptoms after 24 hours, CALL YOUR DOCTOR and if approved:

☐ Start: ________

☐ Other: ________

**If rescue medication is needed more than 2 times a week, call your doctor at ________**

**RED ZONE (Medical Alert)**

| Breathing is hard and fast (nose opens wide, ribs show), or |
| Rescue medications have not helped, or |
| Cannot do usual activities (including trouble talking or walking), or |
| Peak flow is less than 50% of your personal best ( _____ ) |

**Emergency Treatment**

Take these medication(s) and seek medical help NOW.

**First:** CALL YOUR DOCTOR or 9-1-1, then:

<table>
<thead>
<tr>
<th>Take:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

And: ☐ Start: ________

☐ Other: ________

And: ☐ If you are GETTING WORSE or are NOT IMPROVING, go to the hospital or call 9-1-1

And: ☐ If you are BETTER, continue treatments every 4 to 6 hours and call your doctor – say you are having an asthma attack and need to be seen TODAY

Plan developed by: ___________________________ Date/Time: ___________________________

Signature: ___________________________
Asthma Action Plan

- This is a tool used by you and your doctor to manage your asthma
- This should be updated at least once yearly
Green Zone – Doing Well

**GREEN ZONE**
(Doing Well)

1. Breathing is good (no coughing, wheezing, chest tightness, or shortness of breath during the day or night), *and*
2. Able to do usual activities (work, play, and exercise), *and*
3. Peak flow is more than 80% of your personal best (______)

**Controller Medications**
Take these medication(s) **EVERY DAY**.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ If you usually have symptoms with exercise, then take:

**Personal Best:** _____
Green Zone – Doing Well

- Symptoms: Breathing is good
- Activity: Able to work, play, exercise without difficulty
- Review: Green Zone of Asthma Action Plan
  - Review: controller medication and reinforce that meds must be taken EVERY DAY as prescribed
  - < Age 5: Peak flow – N/A
  - > Age 5: Document personal best peak flow and > 80% of personal best peak flow

*Inhaled corticosteroids (Controllers) include:*
Flovent Pulmicort QVAR Advair
Asmanex Azmacort Aerobid Symbicort
Yellow Zone

YELLOW ZONE (Caution)

- Breathing problems (coughing, wheezing, chest tightness, shortness of breath, or waking up from sleep), or
- Can do some, but not all, usual activities, or
- Peak flow is between 60% to 80% of your personal best (_____ to _____)

Rescue Medications
Continue taking your controller medication(s) as prescribed.

Take:

And:
- If you are GETTING WORSE or are NOT IMPROVING after the treatment(s), go to the Red Zone
- If you are BETTER, ______________

And:
- If you still have symptoms after 24 hours, CALL YOUR DOCTOR and if approved:
  - Start: __________________
  - Other: __________________

If rescue medication is needed more than 2 times a week, call your doctor at __________________.
Yellow Zone - Caution

- Symptoms: Coughing, wheezing, chest tightness, SOB, waking up from sleep with difficulty breathing
- Activity: Difficulty doing all usual activities
- Review: Yellow Zone of Asthma Action Plan
  - Review prescribed Rescue medication(s)
  - Review action steps of Asthma Action Plan
  - < Age 5: Peak flow – N/A
  - > Age 5: Determine and document 60-80% of personal best peak flow
- If rescue medication is needed more than two times per week, call your doctor

*Rescue medications (relievers) include:*

Proventil    Maxair
Xopenex    Alupent
Red Zone – Medical Alert

- Breathing is hard and fast (nose opens wide, ribs show), or
- Rescue medications have not helped, or
- Cannot do usual activities (including trouble talking or walking), or
- Peak flow is less than 60% of your personal best (_____)

Emergency Treatment
Take these medication(s) and seek medical help NOW.

First: CALL YOUR DOCTOR or 9-1-1, then:

Take:

And:
- Start: ________________________
- Other: ________________________

And:
- If you are GETTING WORSE or are NOT IMPROVING, go to the hospital or call 9-1-1
- If you are BETTER, continue treatments every 4 to 6 hours and call your doctor – say you are having an asthma attack and need to be seen TODAY
Red Zone – Medical Alert

- Symptoms: Breathing is hard and fast, may be coughing continuously (nose opens wide, ribs show) OR Rescue medications have NOT helped – considered a medical emergency
- Activity: Cannot do usual activity including trouble with talking or walking
- Emphasize: First step - CALL YOUR DOCTOR OR 9-1-1
- Review: Red Zone of Asthma Action Plan
  - < Age 5: Peak flow – N/A
  - > Age 5: Determine and document <60% of personal best peak flow
Asthma Across the Lifespan

- Exercising and Sports with Asthma
- Pregnancy
- School age child
- Teens
- Asthma management at college
- Asthma at work
- Seniors
Asthma Across the Lifespan

Choose the appropriate materials for your patient from the following sections:

- Exercise and Sports with Asthma
- Pregnancy
- School age child
- Teens
- Asthma management at college
- Asthma at work
- Seniors
Exercise and Sports

- Asthma should not prevent you from exercising or enjoying sports
- Kids should be able to play unaffected by asthma
- Get regular exercise
- Always warm-up and cool down
- Keep a log of symptoms while you exercise
Exercise and Sports

- Exercise is important because it conditions and strengthens the lungs.
- Always warm up to allow your lungs to adjust to the increased oxygen demand. Cool down for 15 minutes after exercise, this can help prevent asthma attacks that occur immediately after exercise.
- Keep a log of your symptoms during and after exercise. Additional medications may be needed to allow you to exercise without symptoms.
- Share your action plan with your coach
- In cold weather, cover your nose and mouth with a scarf to warm the air going into your lungs.
Asthma in School

- Talk with the school nurse or principal and teachers
- Access to medications
- Help your child to understand his/her symptoms
- Response to emergencies
Asthma in School

- Share your child’s asthma action plan with the school nurse or principal and teachers
  - Make sure there is a plan for access to rescue medications
    - Can your child carry the inhaler, if able?
- Help your child to recognize triggers and worsening symptoms
- Discuss an emergency plan
Teens and Asthma

- Take your medicine regularly
- Keep your inhaler with you – and use it if you are having difficulty breathing
- Tell friends and teachers you have asthma
- Don’t limit yourself
- Be a detective and learn your triggers
Teens and asthma

- Take your medicine even if you feel good
- Carry your inhaler and make sure you know how to use it (check it often to make sure it still has medicine in it)
- Tell people you have asthma. This will make it easier for them to help you if you have an attack.
- Don’t let asthma limit you! Many Olympic and professional athletes have asthma. Sports with down time (like baseball) might be easier for you. Work with your doctor for help in playing the sport you love.
- Figure out what triggers your attack (such as cigarette smoke). This will help you to avoid these things.
Asthma at College

- Get an updated asthma action plan before leaving for college
- Your dorm room
- Stay healthy
- Arrange local care
Asthma at College

- Get an updated Asthma Action Plan before leaving for college. Follow the plan, taking medicines and using your peak flow meter as directed.
- Dorm rooms breed allergens! Keep clutter to a minimum, avoid rugs. Wash bedding weekly and vacuum mattress covers monthly. Consider using an air filter. Don’t let people smoke in your room.
- Stay healthy. Get your flu shot. Wash your hands regularly. Eat well. And get 8 hours of sleep every night.
- Arrange local care. Get a local doctor for care near campus and locate the nearest hospital in case of emergency.
Work Related Asthma

- Reduce exposure to irritants and known triggers
- Educate your co-workers about your asthma
Work Related Asthma

- Understand your workplace triggers, such as smoke, perfumes, cleaners, and chemicals.
- Work with your employer to on the following:
  - Is the workplace smoke-free
  - Is there adequate ventilation? Is the system maintained?
  - Are dusts, cleaning agents and chemicals maintained?
- Educate your co-workers about how they can reduce your triggers and what to do in an emergency.
Asthma and Pregnancy

- Reduce exposure to triggers
- Exercise moderately
- Avoid tobacco smoke
- Take medications as directed
Asthma and Pregnancy

- If asthma is not under control, the lungs may not be getting enough oxygen to the baby. Not giving the baby enough oxygen is a far greater risk than most asthma medications.
- Exercise moderately to avoid exercise-induced attack.
- Asthma medications are usually continued throughout pregnancy, labor and delivery. Inhaled steroids reduce the risk of pregnancy-associated exacerbations.
- Tell all health care providers that you have asthma and are pregnant.
Asthma and Seniors

Discuss with your health provider any physical problems you may have that might make it hard for you to take your asthma medicine.

- Decreased hearing?
- Impaired memory?
- Decreased vision?
- Arthritis?
Asthma and Seniors

Problems that might make it difficult for Seniors to take their asthma medications:

- **Hearing**: Advise patient if they have problems or don’t understand the nurse or doctor, be sure to ask them to speak louder and write down instructions.
- **Memory**: Ask the doctor to make the asthma action plan as simple as possible to follow.
- **Vision**: Remind patient to wear their glasses when measuring medicines or reading peak flow numbers. Consider larger type handouts when indicated.
- **Arthritis**: A holding chamber or spacer device can make it easier to use a metered dose inhaler. A dry powder inhaler is also a good alternative.
Special Considerations

- Vaccinations
  - Flu vaccine
  - Pneumonia vaccine
- Smoking
  - Quit smoking! Encourage family members to quit. Have them smoke outside the house until they quit.
Special Considerations

- You should get a flu shot every fall.
- Some people should also get a pneumonia vaccine (only once before age 65). Talk about this with your doctor.
- Quit smoking for your health. Ask your family members to quit smoking too.
  - Would you like a referral to our smoking cessation service?
Questions?
Questions?

- Encourage patient to write questions for the doctor on the "Asthma Education Worksheet"

- Remind the patient to bring this to his/her next appointment