



**316 & 936:
The Child With Asthma:
Leading an Active Live
A Training Curriculum**

Developed by:

**SUN Home Health Services, Inc.
Sharon Auker, RN, MSN**

**For the
PA Child Welfare
Training Program**

**University of Pittsburgh
School of Social Work
Pittsburgh, PA**

May 1998

316 & 936: The Child with Asthma: Leading an Active Life

Copyright © 2006, The University of Pittsburgh

This material is copyrighted by The University of Pittsburgh. It may be used freely for training and other educational purposes by public child welfare agencies and other not-for-profit child welfare agencies that properly attribute all material use to The University of Pittsburgh. No sale, use for training for fees or any other commercial use of this material in whole or in part is permitted without the express written permission of The Pennsylvania Child Welfare Training Program of the School of Social Work at The University of Pittsburgh. Please contact the Training Program at (717) 795-9048 for further information or permissions.

316 & 936: The Child with Asthma: Leading an Active Life

An Overview of Curriculum

Rationale

Caring for a child with asthma is a manageable, but complex, responsibility. Caregivers must be equipped with the knowledge necessary and empowered to deal effectively with this condition on a daily basis. Armed with this knowledge, the caregiver, along with the child and the physician, can form a team dedicated to keeping the child active and well.

Learning Objectives

Upon completion of the training session, participants will be able to:

- Describe the normal function of the lung.
- Explain the disease process related to asthma.
- Identify measures to prevent and respond to flare-ups in the condition.
- Describe the interaction of the caregiver, child, and physician team.

Competency to be Addressed in Curriculum

316-1. The Child Welfare Professional knows health and medical conditions which can affect the well being of children and families or which can contribute or result from child abuse/neglect.

Workshop Training Time

3 hours

Target Audiences

Child Welfare Professionals, Family Preservation Workers, Foster Caregivers, and Adoptive Parents.

Expectations of Trainer

This curriculum has been developed to be delivered by a trainer knowledgeable in the medical, developmental, and psychosocial needs of the pediatric asthma population, have an awareness of community resources available to meet the needs of this diagnostic group, and have experience with disease management in the home setting. The trainer should have a strong medical background and have a minimum of a Bachelor's Degree. The trainer should have some knowledge in child welfare practice, specifically in direct services to children and families. The trainer should have considerable experience in training workshops and should possess excellent group facilitation skills. The trainer must have knowledge and experience in diversity awareness so that special attention can be afforded to the provision of culturally congruent healthcare.

Equipment Needed

Specific materials needed to conduct the training are listed for each section of the curriculum. All sections require overhead projector and flip chart. Medical equipment can be obtained from a local medical supplier, hospital, or pharmacy.

316 & 936: The Child with Asthma: Leading an Active Life

Agenda for a Half-Day Curriculum on The Child with Asthma: Leading an Active Life

0.5 Hours	INTRODUCTION AND OPENING ACTIVITIES
Section I 0.25 Hours	ALL ABOUT ASTHMA <ul style="list-style-type: none">A. Who has asthmaB. How the lungs workC. What is asthma
Section II 1 Hour	PREVENTING AND RESPONDING TO “FLARE-UPS” <ul style="list-style-type: none">A. TriggersB. Environmental concernsC. Early detection and treatmentD. Commonly used medicationsE. EquipmentF. Record keeping
Section III 0.25 Hours	EXERCISE AND THE CHILD WITH ASTHMA <ul style="list-style-type: none">A. RestrictionsB. EmotionsC. Maximizing participation
Section IV 0.5 Hours	TEAMWORK <ul style="list-style-type: none">A. The childB. The caregiverC. The physicianD. The schoolE. The caseworker
0.25 Hours	EVALUATION AND CLOSURE <ul style="list-style-type: none">A. Transfer of Learning

316 & 936: The Child with Asthma: Leading an Active Life

Dear Trainer –

The caseworkers, family preservation workers, foster parents, and adoptive parents that attend your training have accepted the challenge of caring for children with asthma. Their ability to meet this challenge can be greatly enhanced by this training you are about to present.

Best wishes as you teach “The Child with Asthma: Leading an Active Life”.

316 & 936: The Child with Asthma: Leading an Active Life

Preface

Managing the care of a child with asthma cannot be accomplished by one individual. The philosophy of teamwork – child, caregiver, physician, caseworker, and school – must be reinforced. Please be advised that treatment protocols are subject to change as continuous advancements in medicine occur. Workers and caregivers should strive to remain updated on new information to assist the child with asthma in leading in active life.

316 & 936: The Child with Asthma: Leading an Active Life

Incorporating Transfer Of Learning Into This Curriculum

A major component of this training session is the incorporation of a mechanism to promote transfer of learning from the secure training environment to the unpredictable, varied environment of a child living with asthma. In order for this training to have an effect on caregiver/caseworker practice, the participants must use this newly acquired knowledge in their daily interactions with an involved child. At the conclusion of this curriculum, you will facilitate an activity to promote this transfer of learning.

316 & 936: The Child with Asthma: Leading an Active Life

INTRODUCTION AND OPENING ACTIVITIES

Rationale: Participant interaction and group trust promote a positive environment for learning. Because each training audience may contain a blend of foster parents, adoptive parents, and caseworkers, it is important for the trainer to provide an opening activity that will reduce stress caused by this diversity and to encourage active involvement in the training experience.

Learning Objectives: Participants will be able to:
Familiarize themselves with other participants.
Describe the course and expectations for learning.

Time: 0.5 Hours

Methods: Presentation by trainer. Group discussion.

Materials: Name tents (large index cards or heavy stock paper)
Markers
Handout #1 – Agenda & Learning Objectives
Handout #2 – Best Friend Exercise

Activities: Activity #1 – Name tents
Activity #2 – Best Friend Exercise

Trainer Notes

INTRODUCTION & OPENING ACTIVITIES

Trainer Note: Handout #1 and name tent materials may be given to participants when they arrive or placed on the participants' tables prior to the start of training. Do not give Best Friend exercise handout until ready to do this activity.

training.

- Review specifics of Competency-Based Training:
 - 15-minute rule
 - Sign-in sheet
 - Evaluation form completion and submission
 - Availability of continuing education units
 - Review housekeeping rules pertaining to specific training site.
- Review agenda.
- Review learning objectives

Activity #1 – Names Tents

Instruct participants to fold the large index card in half to form a tent. Ask them to write their first name in large letters in the center of the tent. Have them also note, under their name, whether they are caseworkers, foster parents, adoptive parents, or other classification.

Activity #2 – Best Friend Exercise

Trainer Note: Keep this exercise moving along. Allow only 3-5 minutes for each interview.

Step 1 – Pass out Best Friend handout to each participant and instruct them to find a partner. Encourage them to team up with someone they do not know well.

Step 2 – Have each of the two persons interview each other and record their partner's answers on the handout. Remind the group that they are to answer the questions the way they believe their best friend would answer them.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Step 3 – When everyone has been interviewed, go around the room and have each participant introduce his or her partner by reading the information they have recorded on the handout. The individual being introduced should stand during the introduction.

316 & 936: The Child with Asthma: Leading an Active Life

ALL ABOUT ASTHMA

Rationale: It is necessary to have a basic understanding of the normal function of the lung and the disease process related to Asthma in order to anticipate and manage the daily challenges of caring for the child with Asthma.

Learning Objectives: Participants will be able to:
Describe the normal function of the lung.
Explain the disease process related to Asthma.

Time: 0.25 Hours

Methods: Presentation by trainer. Group discussion.

Materials: Overhead #1 – We do not have a cure . . .
Overhead #2 -- Lungs

Activities: None

Trainer Notes

ALL ABOUT ASTHMA

Who Has Asthma?

Asthma is a chronic illness. It is more common than most people realize. Five to ten percent of children in the United States have Asthma. Children who have Asthma generally look and behave like other children. They do not feel sick all the time. People who have Asthma generally have it their whole lives; but symptoms may be much less severe in adulthood.

Some children are born with Asthma; others develop the condition as they grow. We do not know the exact cause of Asthma. We do know that Asthma is not contagious.

~~Asthma does run in families~~

Trainer Note: Use Overhead #1 here. “We do not have a cure . . .”

We do not have a cure for Asthma, but we can control it!! Children with Asthma who receive expert medical care and have knowledgeable, caring adults working with them can lead active and satisfying lives.

How the Lungs Work

Trainer Note: Use Overhead #2 here. “Lungs”

Lungs are breathing in oxygen rich air and breathing out used air containing carbon dioxide. Breathing supplies oxygen to the body continuously. We need oxygen to enable our body cells to do many functions necessary for maintaining life. Oxygen is also used by the body to

Trainer Note: Point out the following parts of the respiratory tract while explaining the process of respiration.

Here is how normal breathing works –

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

As we breathe in air flows:

Through nose or mouth

Down the throat

Through the voice box

Down the windpipe

To the right and left bronchial tubes

Through bronchial tubes which branch into smaller and smaller passageways into 300 million tiny air sacs where the actual exchange of new and old air takes place.

At this point, the oxygen enters the blood vessels and the blood carries the oxygen to the body tissues, brain, and heart. Also at this point, carbon dioxide leaves the blood stream and enters the air sacs. This carbon dioxide is eliminated when the individual breathes out.

The main muscle involved in breathing is the diaphragm, which is a large dome-shaped muscle between the chest cavity and the abdomen. Normally, the diaphragm contracts when the person breathes in. As the diaphragm contracts, the chest cavity gets larger. This causes air to be drawn into the lungs. When the person breathes out, the diaphragm relaxes and the air flows out of the lungs.

What is Asthma?

When a person has Asthma, the small air passageways sometimes twitch or become overactive compared to the average person. When these airways overreact, they become temporarily narrowed or blocked.

These small airways narrow when something triggers the muscles around them to tighten. When this happens, the lining of these passageways swell up and make mucus which causes further narrowing.

When the narrowing and tightening of these airways causes so much difficulty in breathing that normal activities are interrupted, it is considered a “flare-up” of the condition.

316 & 936: The Child with Asthma: Leading an Active Life

Preventing and Responding to “Flare-Ups”

Rationale: In order to assist the child in remaining active, it is essential to know how to avoid situations that provoke Asthma flare-ups. When flare-ups do occur, prompt effective intervention will limit their duration and severity.

Learning Objectives: Participants will be able to:
Name common Asthma triggers
Identify signs of an impending flare up
List common steps in treatment process
Describe the use of equipment used to treat Asthma
Describe elements of the daily record keeping process for a child with Asthma

Time: 1 hour

Methods: Presentation by trainer. Group discussion. Critical thinking exercises.

Materials: Overhead #3 – Asthma Triggers
Overhead #4 – Making the Bedroom a Healthier Environment
Handout #3 – Find Your Asthma Triggers
Overhead #5 – Warning Signs
Overhead #6 – Signs of Actual Flare-Up
Overhead #7 – Average Breathing Rates
Overhead #8 – Bronchodilators and Anti-inflammatory Medications
Metered dose inhaler
Spacer
Peak Flow Meter
Overhead #9 – Record Keeping

Activities: Activity #3 – Trigger Exercise
Activity #4 – Healthy Bedroom Exercise

Trainer Note: Conclusion of this section may be a suitable time for a short break.

Trainer Notes

Preventing and Responding to Flare-Ups

Trainer Note: Use Overhead #3 here. “Asthma Triggers”

Triggers

Many, many different things can trigger an Asthma flare up. The triggers are unique to every child. Working with a child over a period of time and being very observant will lead you to identify the specific things that lead to breathing problems in that child.

Exercise

Viral infections such as a cold or bronchitis

Sinus infections

Cold air

Cigarette smoke

Perfumes & hairspray

Paints

Other chemicals

Allergens such as pollens, animal dander, foods, dust, mold

Emotional surges such as yelling, crying, screaming, laughing

Environmental Concerns

Smoking should never be allowed around the asthmatic child. Cigarette smoke is always a problem for these children. Indoor environments where smoking has occurred in the past, such as a hotel room, may also cause

Trainer Note: Use Overhead #4 here. “Making the Bedroom a Healthier Environment”

The bedroom is an especially important place to reduce possible Asthma triggers. Some suggestions for making the bedroom a more healthy environment for the child include:

- Minimize the number of books and toys that are out in the open.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

- Eliminate knick-knacks.
- Vacuum at least once a week.
- Wipe woodwork with damp cloth frequently.
- Keep curtains simple and launder often or eliminate them.
- Keep closet doors closed.
- Seal off hot air vents if possible.
- Replace or clean furnace filters each month during winter.
- Encase mattress and box spring in a mite-proof airtight cover.
- Consider purchasing an air purifier with a Hepa filter for bedroom.

Trainer Note: Pass out Handout # 3 “Find Your Asthma Triggers”. Review directions as printed at the top of the paper. Give participants 5 minutes to complete. Ask for volunteers to name all 11 triggers.

Trainer Note: Have participants break up into small groups. Instruct them that each person should spend about 3 minutes describing changes they would make in their own bedroom to make it a healthier environment for the person with Asthma. Spend a few minutes discussing the results of this exercise with the entire group.

Early Detention and Treatment

Trainer Note: Use Overhead #5 here. “Warning Signs”

An asthma flare up occurs when air cannot enter or leave the lungs like usual. Before an asthma flare up actually occurs, you may be able to notice some warning signs that will alert you that it may be coming. Although these signs are unique to the individual, there are some that occur fairly frequently such as:

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Mood changes – any different mood, aggressive, nervous, quiet, withdrawn.

Facial changes – color change, swelling, dark circles, increased perspiration.

Breathing changes – coughing, breathing through mouth, shortness of breath.

Verbal clues – complaints of tight or hurting chest, unable to get breath, feeling “funny”.

Other cues – yawning, itchy chin

When signs are identified for the individual child, one can anticipate the flare up and perhaps lessen the severity. You may want to change environments, eliminate triggers, give medications as directed.

Trainer Note: Use Overhead #6 here. “Signs of Actual Flare Up”

To identify when actual flare up is occurring, look for two or more of the following:

1. Wheezing
2. Chest skin sucked in
3. Breathing out takes longer than breathing in
4. Breathing faster

Wheezing is a high pitched, whistling sound heard when breathing. It is caused by air flowing through narrowed air passages. When flare up begins, you may only hear wheezing when child breathes out. As condition worsens, you will hear on both inspiration and expiration. If flare up becomes more severe, wheezing may stop as airways are becoming completely blocked.

Chest skin sucked in – This is called retractions. This skin sucks in when child cannot draw air into lungs fast enough. This is caused by the increased resistance in the airways.

Breathing out takes longer than breathing in – Ordinarily, it takes at least as long to breath in as to breath out. With flare up, the outflow is blocked more than the inflow.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Breathing faster – To determine rate of breathing, count the respirations for one full minute. You may have to watch the belly instead of the chest in very small children. You need to know what is normal for the individual child. When flare up is very, very serious, rate may slow down.

Trainer Note: Use Overhead #7 here. “Averaging Breathing Rates”

Average Breathing Rates

Infant 25 to 60 per minute
1-4 years 20 to 30 per minute
5-14 years 15 to 25 per minute
15 to 18 years 11 to 23 per minute

Treatment

Watch all four of the signs as you treat the flare up to see if they are increasing or lessening in severity.

If symptoms are mild to moderate, they can usually be treated at home. If the child has a moderate flare up, you should see their symptoms improve with treatment within two hours. If the symptoms do not improve within this time, you need to call the physician.

Before flare up ever occurs, you need to have a detailed treatment plan in place. The treatment plan must be developed with the child’s physician. The plan will have specific steps to follow if a flare up occurs.

When a flare up occurs, remove the child from any known triggers. Give inhalers and other medications as specified on the treatment plan. Watch the four signs to see if child improves.

Medications

Medication is used to restore normal breathing during flare ups or to prevent flare ups.

The child may need to take medication every day or only when needed.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Medication may come in pill form, in liquid form, or in an inhaled form.

Medications must be given when and how the physician prescribes them. The physician will tailor an individual medication plan to the child.

The proper dose of medication will be determined after trial and error and may need to be adjusted periodically.

Never give the child any other medication, whether prescription or over-the-counter medicine, without the physician's approval. Even common over-the-counter medications can cause more problems with breathing.

Trainer Note: Use Overhead #8 here. "Bronchodilators and Anti-Inflammatory Medications"

There are two major types of asthma medication: Bronchodilators and Anti-inflammatory medications.

Bronchodilators relax muscles that have tightened around airways. One type of Bronchodilator is called a Beta-agonist or Adrenergic medication.

These are usually inhaled and are often the first choice when a flare up occurs. The Beta-agonists can also be given by pill or liquid or in a machine called a nebulizer.

The inhaled version of these drugs works within 5 minutes and have less side effects. Beta-agonists are used to:

- Treat flare-ups
- Prevent symptoms from exercise
- Provide relief until other longer acting medications work
- Open up airways so other medications can work better

Examples of Beta-agonists are:

Albuterol – also called Proventil or ventalin

Metaproterenol – also called Alupent or Metapril

Terbutaline – also called Brethair

The other major type of Bronchodilator is called **Theophylline**. This medication comes in tablet, capsule, and liquid form. It is used to treat mild to moderate flare ups and also taken daily to prevent flare ups.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Theophylline is often used with the inhalers.

Anti-inflammatory medicines are the other major category of asthma drugs. Anti-inflammatory medicines prevent airways from swelling when they come in contact with a trigger.

Cromolyn is the most common anti-inflammatory drug used to treat asthma. Cromolyn comes in a metered dose inhaler, in liquid form to be used in a nebulizer, and also in powdered form to be used with a special kind of inhaler. Cromolyn cannot stop a flare up, but it can help to prevent one.

Steroids are another kind of anti-inflammatory medication used to treat asthma. Steroids prevent and reduce swelling inside airways. They also decrease the amount of mucous in the lungs. Steroids can be inhaled or taken in liquid, tablet, or injection form.

There are also drugs that combine the actions of several of the types of medications we discussed. These are called combination drugs.

Children with asthma may also use antibiotics and cough formulas occasionally as prescribed by their physician.

Trainer Note: Pass the pieces of equipment around as you discuss.

Metered Dose Inhaler – This is a good way to take asthma medicine. There are very few side effects because the medicine goes right to the lungs and not to the other parts of the body. This medicine usually works within 5 minutes. Inhalers can be used by anyone older than 5 years. With the use of an attachment called a spacer, even younger children can use the inhaler.

Here's how you use a Metered Dose Inhaler –

1. Remove the cap and hold the inhaler upright.
2. Shake the inhaler.
3. Tilt your head back slightly and breathe out.
4. Use the inhaler in any one of these ways:
 - Open mouth with inhaler 1-2 inches away.
 - Use a spacer.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

In the mouth. (This is the least effective way, but can be used if having great difficulty with procedure.)

5. Press down on the inhaler to release the medicine as you start to breathe in slowly.
6. Breathe in slowly for 3-5 seconds.
7. Hold your breath for 10 seconds to allow the medicine to reach deeply into your lungs.
8. Repeat puffs as prescribed. Waiting one minute between puffs may permit the second puff to go deeper into the lungs.

Cleaning

1. Once a day clean the inhaler and cap by rinsing it in warm running water. Let it dry before you use it again. Have another inhaler to use while it is drying.
2. Twice a week, wash the plastic mouthpiece with mild dishwashing soap and warm water. Rinse and dry well before putting it back.

Spacers – A spacer is a device that attaches to a metered dose inhaler. It holds the medicine in its chamber long enough for you to inhale it in one or two slow deep breaths. Unless the inhaler is used the right way, much of the medicine may end up on tongue, on the back of the throat, or in the air. A spacer is used to help this problem. The spacer will also help prevent yeast infection in the mouth (thrush) when taking inhaled steroid medicines.

Here's how to use a Spacer –

1. Attach the inhaler to the spacer. Directions will come with each product.
2. Shake well.
3. Press the button on the inhaler. This will put one puff of the medicine in the Spacer.
4. Place the mouthpiece of the Spacer in the mouth and inhale slowly.
5. Hold breath for a few seconds and then exhale. Repeat this two more times.

Nebulizer – A nebulizer is a device driven by a compressed air machine. It allows asthma medication to be taken in the form of a mist. A nebulizer consists of a cup, a mouthpiece attached to a T-shaped part or a mask, and thin plastic tubing to connect to the compressed air machine. Nebulizers are used mostly by three types of patients:

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

1. Young children under age 5.
2. Patients who have problems using metered dose inhalers.
3. Patients with severe asthma.

Directions for compresses air machines vary, so follow the manufacturer's directions. Generally, the tubing has to be put into the outlet of the machine before it is turned on.

Here's how to use a Nebulizer –

1. Measure the correct amount of normal saline solution using a clean dropper and put it into the cup. Some medications come premixed.
2. Draw up the correct amount of medicine using a clean eyedropper or syringe and put it into the cup with the saline solution.
3. Fasten the mouthpiece to the T-shaped part and then fasten this unit to the cup OR fasten the mask to the cup. For a child over the age of 2, a mouthpiece unit will deliver more medicine than a mask.
4. Put the mouthpiece in your mouth. Seal lips tightly around it OR place mask on face.
5. Turn on the air compressor machine.
6. Take slow, deep breaths in through the mouth.
7. Hold each breath 1-2 seconds before breathing out.
8. Continue this until medicine is gone from the cup.

Always Remember – Cleaning and getting rid of germs prevents infection. Cleaning keeps the nebulizer from clogging up and helps it last longer.

Peak Flow Meter – A device that measures how well air moves out of the lungs. During an asthma episode, the airways begin to slowly narrow. A Peak Flow Meter can be used to find out if there is narrowing of the airways before any symptoms of asthma appear. By taking medicine early, before symptoms begin, one may be able to avoid a serious episode.

Peak Flow Meters help families and doctors:

1. Decide if the medicine plan is working well.
2. Decide when to add or stop medicine.
3. Decide when to seek emergency care.
4. Identify triggers.
5. Talk about asthma with more knowledge.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

All persons age 5 or older who have moderate to severe asthma should consider using a Peak Flow Meter. Some children as young as 3 can also use it.

Here's how to use a Peak Flow Meter –

1. Place the indicator at the base of the numbered scale.
2. Stand up.
3. Take a deep breath.
4. Place the meter in the mouth and close lips around the mouth piece. Make sure the tongue is not put inside the hole.
5. Blow out as hard and fast as possible.
6. Write down the number.
7. Repeat these steps two more times.
8. Write down the highest of the three numbers achieved.

Personal Best Peak Flow Number -- This is the highest peak flow number achieved over a 2-week period when the asthma is under good control. Each person's asthma is different and, therefore, the best Peak Flow Number may be higher or lower than the usual number for someone of the same height, weight, and sex.

To find personal best Peak Flow number, take readings:

- Every day for two weeks.
- Mornings and evenings (when first wake up and 10-12 hours later).
- Before and after taking inhaled medicine (if medicine is taken).
- As instructed by the doctor.

Peak Flow Zone System – Once the personal best is known, the doctor will give specific numbers and describe what to do. The Peak Flow numbers are put into zones set up like a traffic light. For example:

Green Zone – (80-100 percent of personal best) **Signals all clear.** No asthma symptoms present and medicine should be taken as usual.

Yellow Zone – (50-80 percent of personal best) **Signals caution.** May be having an episode of asthma that requires an increase of medication, or the overall asthma may not be under control. Doctor may need to change the medication plan.

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

Red Zone – (below 50 percent of personal best) **Signals medical alert.** Must take an inhaled beta-agonist right away. Call doctor immediately if the Peak Flow number does not return to the yellow or green zone and stay in that zone.

Record Keeping

Trainer Note: Use Overhead #9 here. “Record Keeping”

A daily record should be kept of the child’s condition. The record should include:

1. Any symptoms the child had that day.
2. Any medication given, when, how much, and effectiveness of treatment.
3. When symptoms occurred and any triggers identified.
4. Peak Flow reading(s).

The record will help the caregiver to track and understand the child’s unique condition. It should be taken to all physician appointments to aid in recall. The record assists the caregiver in communicating clearly over the phone to the physician.

The record also assists the caregiver in identifying which medications work best under which circumstances. It also serves as a reminder to take daily doses of medication.

With the use of the daily record, the caregiver is able to identify triggers and determine a pattern of episodes. Over time, the record will assist the caregiver to become responsible and independent in treating the condition.

316 & 936: The Child with Asthma: Leading an Active Life

EXERCISE AND THE CHILD WITH ASTHMA

Rationale: It is important for all children to feel as normal as possible and do what they enjoy. Physical activity is necessary for a strong body and mind. With the proper information, the child with asthma can remain active.

Learning Objectives: Participants will be able to:
Discuss reasons why the child with asthma should remain active.
List at least 4 ways to assist the child to maintain an age-appropriate activity level.

Time: 0.25 Hours

Methods: Presentation by trainer.

Materials: Overhead #10 – Measures to Help Child Remain Active

Activities: None

Trainer Notes

Exercise and the Child with Asthma

Children with asthma can lead normal, active, and healthy lives. In fact, the goal is to have a plan that will allow the child to do whatever he or she likes to do best. With rare exceptions, each child should be able to do any age-appropriate activity and should be encouraged to take part.

Many Olympic athletes have asthma. If asthma is preventing the child from becoming involved in activities, the child's treatment plan needs to be re-evaluated with the physician.

Children with asthma may automatically limit their activity because they are not confident that they can handle the physical exertion or because breathing has been a problem when they've been active before. The caregiver needs to be alert that this could be happening and encourage the child to stay active and deal with the symptoms. Rarely should the child with asthma be excused from gym class or recess.

Exercise is, however, the most common trigger of flare-ups and special attention must be paid to preventing symptoms. A good medication plan should allow this.

Trainer Note: Use Overhead #10 here. "Measures to Help Child Remain Active"

Some measures to help the child remain active include:

1. Instruct the child to breath through his or her nose to warm and condition air before and during exercise.
2. If prescribed by the child's physician, an inhaler can be used before exercise begins to prevent a flare up.
3. Fast acting Theophylline taken an hour before exercise may also be helpful if prescribed by a doctor.
4. If the child gets symptoms such as coughing or shortness of breath less than 5 minutes into the exercise, he/she definitely needs an adjustment in the treatment.
5. The child or the caregiver should inform coaches and other adults involved with the activity about the child's condition. Perhaps the child can be given a break periodically.
6. The child should be helped to understand that some of

316 & 936: The Child with Asthma: Leading an Active Life

the emotions that often accompany competition can lead to breathing problems without a reasonable amount of control, i.e. a lot of yelling, laughing, or anxiety. There is nothing wrong with enthusiasm, but cheering and screaming wildly for long periods is enough to make anyone cough or wheeze.

316 & 936: The Child with Asthma: Leading an Active Life

TEAMWORK

Rationale: To ensure that the child with asthma receives the most effective, coordinated care, the child, the caregiver, the physician, the school personnel, and the caseworker, if one is involved, must work together. Without teamwork, the child will not have the necessary support and continuity of care to stay active and healthy.

Learning Objectives: Participants will be able to:
Explain the importance of the healthcare team.
Describe the role of each of the team members.
Give examples of how the team must work together.

Time: 0.5 Hours

Methods: Presentation by trainer. Group discussion.

Materials: Overhead #11 -- Teamwork
Overhead #12 – The Child
Overhead #13 – The Caregiver
Overhead #14 – The Physician
Overhead #15 – The School
Overhead #16 – The Caseworker

Activities: None

TEAMWORK

Trainer Note: Use Overhead #11 here. “Teamwork”

The team of individuals working with the child must have the child as the first and most significant member. The child’s primary caregivers, the physician, key school personnel, and the child’s caseworker, if applicable, must join together to plan, monitor, and intervene as necessary to keep the child healthy and happy.

The Child

Trainer Note: Use Overhead #12 here. “The Child”

Children with asthma need encouragement to communicate openly and coherently about their asthma. Children can learn and understand much about what triggers and relieves their symptoms. They should learn to report symptoms early but also learn that they can and should remain active.

Children should also be encouraged to talk to caring adults about their feelings and fears. Pent up feelings and emotions can make the breathing more difficult. It is normal for any child to feel frustrated or angry occasionally. Certainly dealing with asthma can be trying at times. Expressed in an appropriate way, preferably in talking it out, the expression of these feelings should be encouraged.

At the same time, it is important that the child does not learn to use the asthma as an excuse to avoid life. The fact that the child has this condition is a very small part of who he or she is and needs to be dealt with effectively so life can go on normally. It is important that the child learn to guide much of the care and to develop, over time, a sense of control over the disease.

The Caregiver

Trainer Note: Use Overhead #13 here. “The Caregiver”

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Note

The child's primary caregiver needs to become very knowledgeable and involved with the child's care. This person must learn:

1. What things or environments are triggers for the child.
2. How to recognize the signs of an impending flare up.
3. The 4 signs that a flare up is occurring.
4. How to keep an asthma diary.
5. How each medication works and all the details of administration.
6. How to use each piece of equipment involved.
7. When they can handle things themselves and what situations require professional intervention.
8. The details of the treatment plan and how to follow it in the event of a flare up.

Caregivers can learn much about asthma. They can also learn much about the individual child they are working with. Caregivers can learn to make good judgements and to control flare-ups without panic. Caregivers need to keep open communication flowing with the child and the physician.

The Physician

Trainer Note: Use Overhead #14 here. "The Physician"

It is of utmost importance that a physician is chosen for the child who deals regularly with children that have asthma. The physician must be someone that the caregiver and the child are comfortable with and confident in. The physician must be accessible and quite aware of the individual child's condition. The physician, along with the child and the caregiver, should devise the step by step plan to be used in case of flare up. The plan must include clear guidelines regarding when to call the physician or go to the Emergency Room.

The physician must be available to adjust the child's treatment plan if the asthma is interfering with normal activity.

The School

Trainer Note: Use Overhead #15 here. "The School"

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

The school-aged child normally spends at least 30 hours a week in school. It is important that the child with asthma miss as little school time as possible. It is an absolute must that school personnel be informed about the child's asthma and aware of the treatment plan. The school nurse should have an opportunity to review the treatment plan with the student and the caregiver. The nurse should have a copy of the plan.

The child's teachers should be made aware of the condition as well. They should be given simple steps to follow if a flare up occurs. A simple information form for teachers is a good idea. The form should include when the student should be kept inside, excused from gym, sent to the nurse, and when parents should be notified.

Medications that are sent to school must be given to the school nurse. If it is the school's policy, the child may be permitted to keep an inhaler with them. Medications sent to school must be labeled with the name of the medication, strength, amount to be given, and the times of administration.

It is especially important that emergency contact phone numbers be kept up-to-date and that the child and the caregiver communicate changes in the treatment plan or the condition to appropriate school personnel.

While every effort should be made to keep the child in school, asthma is the leading reason that children do miss class time. A system for retrieving assignments and making up missed work should be discussed before absences occur. Excessive absences from school are another indication that the child's treatment plan needs to be adjusted.

The Caseworker

Trainer Note: Use Overhead #6 here. "The Caseworker"

In situations where a caseworker is involved as part of the child's support system, he or she should be kept informed about the child's condition and treatment plan. There may be times when the caseworker will need to work with the caregiver to ensure that the child's needs are met. .

316 & 936: The Child with Asthma: Leading an Active Life

Trainer Notes

If concerns related to school arise, the caseworker may wish to advise the caregiver or child on appropriate steps to be taken.

Caseworkers should consider the unique needs of the child with asthma when placing the child in a home. A suitable, very clean environment is needed, as well as adults who are interested and able to learn about the condition and work with the team.

The caseworker can serve as a much-needed listening ear and available support person for the child and the caregiver. As such, he or she will need to understand the disease process and the challenges of daily management of asthma.

316 & 936: The Child with Asthma: Leading an Active Life

EVALUATION AND CLOSURE Transfer of Learning

Rationale: This section is designed to reinforce participants' transfer of learning and to allow the opportunity to evaluate the presentation.

Learning objectives: Participants will:
Actively engage in transfer of learning activity.
Complete and submit the program evaluation form.

Time: 0.5 Hours

Methods: Presentation by trainer. Group discussion.

Materials: Handout #4 – What Have I Learned
Evaluation Forms

Activities: Complete and discuss "What Have I Learned"
Complete Evaluation Forms

Trainer Notes

EVALUATION AND CLOSURE

Transfer of Learning

Trainer Note: This exercise will allow you to recap this session and give the participants the ability to formalize their knowledge. Pass out Handout #4 “What Have I Learned?”. Have participants take about 5 minutes to list the four most important things they have learned from this training session. Then, review it as a large group.

Evaluation

Before closing the training session, all participants must complete and return the evaluation forms to assist in future curriculum planning.

Closure

The good news about all this is that it's a challenge that can be met. The child with asthma can run, jump, laugh, play, work, live, love, and grow right along with his or her peers. Well-informed people who care for and about the child are the key. Children with asthma need caregivers who will make a daily commitment to keeping the condition under control and providing the best care available to the child. Children with asthma are children first and their medical conditions should never interfere with the joy of being young and alive.

316 & 936: The Child with Asthma: Leading an Active Life

References

American Lung Foundation. "The Lungs – An Overview of How They Work."
<http://www.lungnet.org.au/thelungs.html>

Executive Summary: Guidelines for the Diagnosis and Management of Asthma (1991).
National Institutes of Health, Publication #91-3042A. Bethesda, MD.

Global Initiative for Asthma (1995). National Institutes of Health, Publication #95-3659.
Bethesda, MD.

Plaut, T.F. (1988). Children with Asthma: A Manual for Parents. Pedipress, Inc.,
Amherst, MA.

Miner, H. (1997). Living with Asthma. Ways & Means – Medicine & My Life, Volume
VIII.
Olsten Health Services, Melville, NY.

Teach Your Patients About Asthma: A Clinician's Guide (1992). National Institutes of
Health, Publication #92-2737. Bethesda, MD.

Note: Glaxo Pharmaceuticals has offered to supply equipment for all training sessions.
Please contact David M. Coolidge, Sales Representative
Telephone # 717-322-2032
Fax # 717-322-0883
Voice Mail 800-496-3772 Mail Box # 80444