

Chronic Illness and it's Impact on School Children and Their Families: Asthma



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OCTOBER 26, 2013

**PRESENTED AT THE NEW YORK STATE
ASSOCIATION OF SCHOOL PSYCHOLOGISTS**

Asthma: A Background



- A breathing disorder characterized by episodic, reversible airway constriction in combination with chronic inflammation of the lungs and bronchi.
- Airway constriction (acute) is caused by an episode of tightening of the smooth muscles around the bronchi
- Inflammation (chronic), caused in large part by mucous production and secretion
- Asthma affects 24.1 millions Americans, 7.1 million of which are children
 - Since 1999, children ages 5-17 have had the highest rate of asthma
- Asthma cannot be cured, but it can be **controlled** through proper medication use

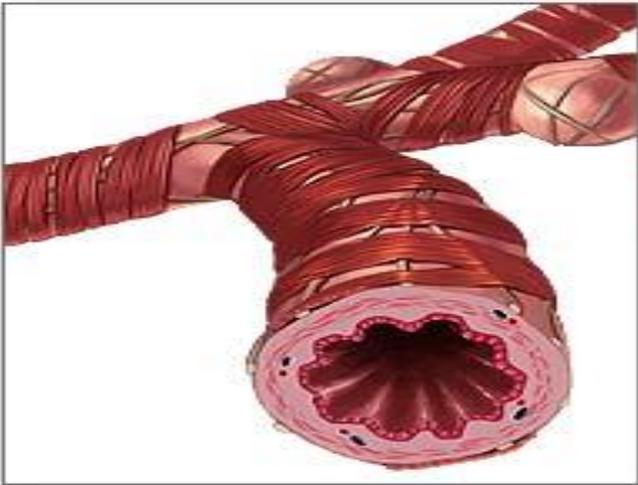
(AMERICAN LUNG ASSOCIATION, 2012)

Asthma—A Background



Normal bronchiole

Asthmatic bronchiole



ADAM.

- Asthma is responsible for over 2.5 million emergency room visits annually as of 2006 and over 128 million days of missed work and school (American Lung Association, 2010a; American Lung Association 2010)
- The annual cost of asthma to the healthcare system is over \$20 billion
- People in NYC are disproportionately affected by asthma. The lifetime prevalence rate of asthma is 29% higher than the national rate (Garg, Karpati, Leighton, Perrin, & Shah, 2003)

Asthma Medications



- **Short Acting Beta-2 Agonists (Quick Relief Meds)***
 - Usually inhalers. Often come in form for nebulizer
 - Used in the moment to treat acute exacerbations
- **Inhaled Corticosteroids (ICS)**
 - Treat chronic inflammation
 - Usually taken daily (2 or 3x/day)
- **Long Acting Beta-2 Agonists (LABA)**
 - Helps to keep airways open but lasts 12 hours.
 - Black box warning. Not for emergency use
- **Combined Medications**
 - Combines ICS and LABA meds
- **Corticosteroids**
 - Not typically taken in school. May see side effects in kids from it

Asthma Beliefs and Feelings about Medications and Side Effects



- “Advair...I’m not taking it everyday like I’m supposed to, because I don’t trust it”
- “The rescue inhaler. It lasts me like a week and a half...’cause I take it on a daily basis”
- “Just, it’s stressful trying to remember to take like, 10 different pumps, like, every single day...”
- “My mom always, you know, I was a track star, and my mom didn’t allow me to do the track because in a few minutes I would [gasps], and in her way she was protecting me”
- Because I could already feel the chest, my chest tightening, and when my allergic start kicking up, there’s really not much I can do because I’m in the environment where I’m allergic. The animals are there
- “And they don’t care anymore...the insurance. The insurance doesn’t cover it. And that’s what...it was like really unfair, because I walk around with the ProAir...it’s good, but I still don’t feel...”

My Asthma Action Plan

Name: _____ Date: _____

Parent/Guardian: _____

Healthcare Provider: _____

Phone for healthcare provider: _____

Phone for taxi or friend: _____ Emergency #911 _____

Other instructions: _____

I feel GOOD (Green)	<ul style="list-style-type: none"> Breathing is easy. No cough or wheeze. Can work and play 	<input type="checkbox"/> Use asthma long-term control medicine.	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Medicine:</th> <th style="text-align: left; border-bottom: 1px solid black;">How taken:</th> <th style="text-align: left; border-bottom: 1px solid black;">How much:</th> <th style="text-align: left; border-bottom: 1px solid black;">When:</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____ times a day</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____ times a day</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____ times a day</td> </tr> </tbody> </table>	Medicine:	How taken:	How much:	When:	_____	_____	_____	_____ times a day	_____	_____	_____	_____ times a day	_____	_____	_____	_____ times a day				
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Peak Flow Numbers: _____ to _____		20 minutes before exercise or sports, take _____ puffs of _____																					
I do NOT feel good (Yellow)	<ul style="list-style-type: none"> Cough Wheeze Hard to breathe Wake up at night. Can do some, but not all activities. 	<p>TAKE _____ puffs of quick-relief medicine. If not back in the Green Zone within 20 to 30 minutes, take _____ more puffs.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Medicine:</th> <th style="text-align: left; border-bottom: 1px solid black;">How taken:</th> <th style="text-align: left; border-bottom: 1px solid black;">How much:</th> <th style="text-align: left; border-bottom: 1px solid black;">When:</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>every _____ hours</td> </tr> </tbody> </table> <p>KEEP USING long-term control medicine:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Medicine:</th> <th style="text-align: left; border-bottom: 1px solid black;">How taken:</th> <th style="text-align: left; border-bottom: 1px solid black;">How much:</th> <th style="text-align: left; border-bottom: 1px solid black;">When:</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____ times a day</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____ times a day</td> </tr> </tbody> </table>	Medicine:	How taken:	How much:	When:	_____	_____	_____	every _____ hours	Medicine:	How taken:	How much:	When:	_____	_____	_____	_____ times a day	_____	_____	_____	_____ times a day	<p>Peak Flow Numbers: _____ to _____</p> <p>Call healthcare provider if quick-relief medicine does not work OR if these symptoms happen more than twice a week.</p>
Medicine:	How taken:	How much:	When:																				
_____	_____	_____	every _____ hours																				
Medicine:	How taken:	How much:	When:																				
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I feel AWFUL (RED)	<ul style="list-style-type: none"> Medicine does not help. Breathing is hard and fast. Can't walk well. Can't talk. Feel very scared 	<p>Get help now! Take these quick-relief medicines until you get emergency care.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Medicine:</th> <th style="text-align: left; border-bottom: 1px solid black;">How taken:</th> <th style="text-align: left; border-bottom: 1px solid black;">How much:</th> <th style="text-align: left; border-bottom: 1px solid black;">When:</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Medicine:	How taken:	How much:	When:	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	<p>Peak Flow Number: Under _____</p> <p>Call 911 if can't walk or talk because it is too hard to breathe OR if lethargic OR if skin is sucked in around neck and ribs during breaths OR if lips or fingernails are gray or blue.</p>				
Medicine:	How taken:	How much:	When:																				
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Asthma and School Performance



- More likely to miss school due to asthma
- Due to nighttime awakenings it may be more difficult for kids with asthma to stay focuses and complete work (Diette et. al., 2000)
- Children with asthma are more likely to be diagnosed with a LD or fail classes (Fowler, Davenport & Garg, 1992).
- Comorbidity between asthma and Attention Deficient Hyperactivity Disorder (ADHD)

Asthma and School



- Other effects of asthma on daily living, social functioning and development
 - In school aged children, restrictions in physical activity most commonly manifest as problems in PE or having to sit out on participating in after school sports
 - Children may suffer from social consequences of not being able to attend events with peers
 - ✦ Class trip to the zoo
 - ✦ Being a student in the classroom that doesn't have a class pet
 - ✦ Missing out on a party at a friends house who has a dog or cat
 - Emotional consequences—feelings of guilt, worry about future attacks or anger

• (NOCON AND BOOTH, 1991)

School Related Interventions: Open Airways Program

- Intervention designed and approved by ALA which educated elementary school aged children about asthma self management (ages 8-12)
 - 6 40 minute group lessons for kids with asthma during the school day
 - Interactive approach using role play, group discussion, stories and games
 - Includes information about asthma, recognizing and controlling symptoms, medication use, avoiding asthma triggers, exercise and doing well in school
 - Can be facilitated by parents, school nurse, anyone who has interest in asthma and working with children

School Related Interventions



- In this study design children were administered ICS or Combination medication on school days in the school, rather than at home with an extra canister of meds given to children's caregivers at home to administer only on weekends
- When school RNs are directly observed administering medications...
 - These children have more symptom free days
 - Fewer nighttime symptoms
 - Less rescue medication usage
 - Fewer days with limited activity
 - Less likely to have an exacerbation requiring prednisone

○ Halternman et. al (2011)

Your Role as the School Psychologist



- **Facilitator:**
 - Help facilitate open communication between child's treatment team—provider, parents, teacher and child
 - ✦ Make sure all children have an asthma action plan and the nurse and teacher have a copy
- **Teacher**
 - Can be trained as an OAS instructor
 - Use therapy or counseling sessions with children to help increase education about asthma and teach empowerment skills so kids can learn to independently manage their asthma
- **Supporter**
 - Be mindful of the unique challenges faced by children or parents with asthma such as: Lack of sleep, or the cost of medication and burden on the family and social challenges faced by these children

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The School Psychologist's Role in Working with Children Whose Parents Have Cancer



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Just How Many Children Are We Talking About?



- The National Cancer Institute (NCI, 2012) reported that 22.3% of all new cancer diagnoses in 2012 were adults aged 20-54, those most likely to have minor children living at home
- The five-year survival rate is 65.4% (NCI, 2012)
- An estimated 2.85 million minor children in the United States live with a parent who has or has had cancer (Weaver et al., 2010)
- Approximately 562,000 of these children live with a parent in the earliest and most intense phase of diagnosis and treatment (Weaver et al., 2010)

Implications



- Children are witnessing more aspects of parents' cancer experiences than ever before, including physical manifestations as well as their parents' emotional reactions and their impact on the family dynamic

The Family System



- Families are interconnected and interdependent (Kerr & Bowen, 1988)
- Stressors impact the status quo (Veatch, 1999)
- Families marked by a chaotic environment and low cohesion appear most vulnerable to poor psychosocial outcomes for children (Huizinga et al., 2003)

Communication, Communication, Communication



- Family communication and expressiveness are consistently associated with poor psychosocial outcomes for children and adolescents (Osborn, 2007)
- Open and effective family communication are associated with “healthiest adaptation” for children (Thastum et al., 2008)
- Poor family communication is linked to externalizing problems in adolescents (Watson et al., 2006)

What Kids Worry About



- **Short-Term Concerns**

- reduced physical and/or psychological accessibility of the ill parent and healthy family members
- family financial constraints
- changing roles and responsibilities within the family
- disrupted routines

- **Long-Term Concerns**

- fear for their own health
- fear of the loved one's death

(Leedham & Meyerowitz, 1999)

Negative Adjustment Outcomes for Children Whose Parents Have Cancer



- Slightly increased risk for internalizing problems (Osborn, 2007)
- And to a lesser degree externalizing problems (Visser et al, 2005) and behavioral problems (Birenbaum, 1999)
- Age and gender interaction effect: adolescent girls appear to sustain the most negative impact of a parent's cancer (Osborn, 2007)

Coping Strategies



- **Problem-Focused**
 - The least problematic
 - Used more by younger children coping with a parent's cancer
 - Examples: helping others and parentification (Thastum, 2008)

(Compas, Worsham, Ey & Howell, 1996)

Coping Strategies



- **Emotion-focused:**
 - associated with more avoidance behaviors and higher degrees of anxiety and depression
 - used more by adolescents and young adults coping with a parent's cancer
 - Examples: distraction, keeping it in the head, wishful thinking (Thastum, 2008)
- **Dual-focused:** also used more by adolescents and young adults coping with a parent's cancer
(Compas, Worsham, Ey & Howell, 1996)

Cancer is Not a 4-Letter Word



- It is hard to keep cancer a secret from children and often takes more energy for parents to do so than to share necessary and sufficient information with the child
- Children (even very young children) are very aware of parents' emotional state
- Children often imagine the worst
- Children may misattribute changes in routine, family dynamic

For the School Psychologist's Toolbox



- Normalize fears
- Check for understanding
- Create environment of trust and support
- Be honest about confidentiality issues
- Ask them what about their needs are
 - i.e., preferred information (about what, from whom); emotional and support needs (what kinds, from whom)
- Understand coping strategies
- Encourage open and honest family communication (involve parents when possible)
 - psychoeducation, resources (American Cancer Society information sheets at www.cancer.org)
- Make referrals

Resources



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