Practical Asthma Education for Families

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Today's Presenters

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All presenters have signed disclosure statements indicating:

- No financial or business interest, arrangement or affiliation that could be perceived as a real or apparent conflict of interest in the subject (content) of their presentation.
- No unapproved or investigational use of any drugs, commercial products or devices.

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CME Accreditation

ACCREDITATION:

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The George Washington University School of Medicine and Health Sciences and Children's National. The George Washington University School of Medicine and Health Sciences is accredited by the ACCME to provide continuing medical education for physicians.

PHYSICIAN CME CREDIT:

The George Washington University School of Medicine and Health Sciences designates this continuing medical education activity for a maximum of 30 AMA Physician Recognition Award Category 1 Credits™.

Participants will be required to certify attendance or participation on an hour-for-hour basis.

Objectives

At the end of this session, participants will be able to:

1) Identify at least one principle of effective patient education and how it translates to practice.
2) Demonstrate optimal technique for using a metered-dose inhaler (with two kinds of spacers - mouthpiece and mask) and a dry-powder inhaler.
3) Describe three recommendations for reducing common environmental exposures for a child with asthma.
4) Describe how to use an *Asthma Action Plan* as a patient education tool.

Practical Patient Education

Top 5 Tips

1. Partner with families and set shared goals
2. Teach proper use of meds and devices
3. Tailor environmental education
4. Encourage use of Asthma Action Plan and regular follow up
5. Review key messages at each visit

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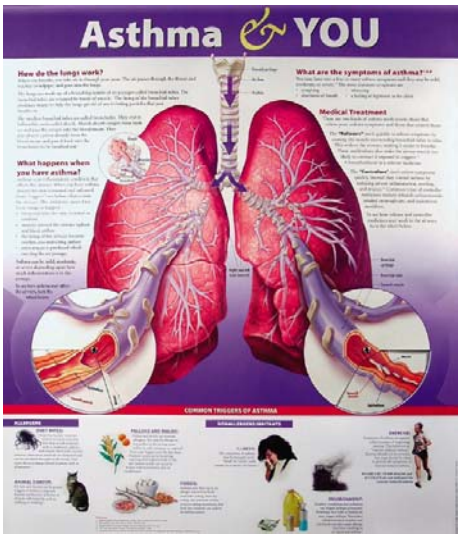
IMPACT DC Model



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Patient Education Principles

Meet the patient and family where they are…

In spirit:

- **Shared** agenda and goal setting
- ***Patient***-driven change
- Patient is the expert
- Collaboration instead of confrontation

In action:

- Express empathy
- Use **reflective listening** and **open-ended questions**
- Build a menu of choices
- Support self-efficacy
- Use **teach-back** method

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Quick and Dirty Patient Education Strategies

Identify **values:**

- "What's the worst thing about your child's asthma?"
- "What's the most important thing we can address today?"

Discuss **asthma-related beliefs**:

- "How do you feel about Jose's asthma medicines?"
- "Can you tell me what you think helps or hurts Jose's asthma?"

Explore **perceived barriers** to good asthma control…you might be surprised.

Self-efficacy… find it and build on it!

- Set *manageable* shared goals… one success will lead to another.

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Patient Education Principles: *Do they work?*

- Greater child and/or parent self-efficacy → better child health status and fewer asthma symptoms[1]
- Parents' positive beliefs about asthma management behaviors (i.e. how helpful they can be) lead to → fewer days of wheezing and better health status for kids with asthma[2]
- Better asthma management strategies – including a *more collaborative relationship with physicians* → decreased pediatric asthma morbidity[3]

[1]Walker. H. A, Chim, L., Chen, E. (2009). The role of asthma management beliefs and behaviors in childhood asthma immune and clinical outcomes. *Journal of Pediatric Psychology, 34(4), 379-388.*
[2]Wade, S. L., Holden, G., Lynn, H., Mitchell, H., & Ewart, C. (2000). Cognitive-behavioral predictors of asthma morbidity in inner-city children. *Journal of Developmental & Behavioral Pediatrics, 21*, 340-346.
[3]McQuaid, E. L., Walders, N., Kopel, S. J., Fritz, G. K., & Klinnert, M. D. (2005). Pediatric asthma management in the family context: The family asthma management system scale. *Journal of Pediatric Psychology, 30*, 492-502.

Health Literacy and Asthma

- The capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions (CDC)

- Demonstrated links between health literacy and:
  - Parental worry and perceived burden from child's asthma[1]
  - Perceived parental self-efficacy around managing child's asthma[2]
  - Racial and ethnic disparities in asthma[3]

[1]Shone, L.P., Conn, K.M., Sanders, M., Halterman, J.S. (2009). The role of parent health literacy among urban children with persistent asthma. *Patient Education Counseling, 75(3): 368-75.*
[2]Wood, M.R., Price, J.H., Dake, J.A., Telljohann, S.K., Khuder, S.A. (2010). African American parents'/guardians' health literacy and self-efficacy and their child's level of asthma control. *Journal of Pediatric Nursing, 25(5):418-27.*
[3]Curtis, L.M, Wolf, M.S., Weiss, K.B., Grammer, L.C. (2012). The impact of health literacy and socioeconomic status on asthma disparities. *Journal of Asthma, 49(2): 178-83.*

Health Literacy and Asthma

- Research suggests that ***one-on-one education with an asthma educator*** can result in fewer ED visits and admissions, and improved self-management.[1]

- Use of **video** or **written** asthma education materials increases parental knowledge.[2]

[1]Wood, M.R., Boylard, D. (2011). Making education count: the nurse's role in asthma education using a medical home model of care. *Journal of Pediatric Nursing, 26: 552-58.*
[2]Macy, M.L., Davis, M.M, Clark, S.J., Stanley, R.M. (2011). Parental health literacy and asthma education delivery during a visit to a community-based pediatric emergency department: a pilot study. *Pediatric Emergency Care, 27(6): 469-74.*

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Device Training

- Why it matters
- Who can do it
- Choosing a device
- Proper techniques

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Device Selection

- MDI with spacer
- Nebulizer
- DPI – Diskus, Twisthaler, Flexhaler

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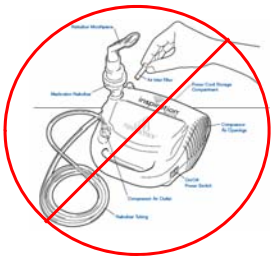
Device Selection

MDI + spacer beats nebulizer for kids < 5 years

- Systematic review & meta-analysis of RCTs
- Acute exacerbations in ED
- MDI use decreased admissions and improved clinical score
- Effect more pronounced for mod-severe exacerbations



Castro-Rodriguez JA & Rodrigo GJ. *J Pediatr 2004; 145:172-7.*

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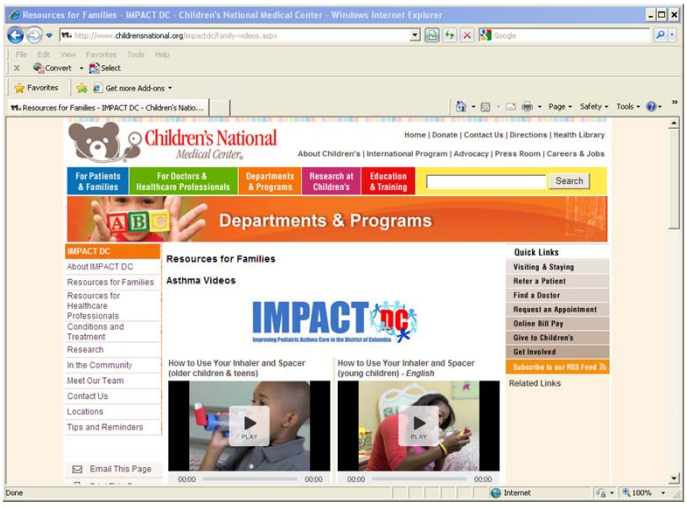
Metered Dose Inhalers (MDIs)

www.aanma.org → AANMA Store → Posters

Introducing the MDI to patients

- Name of medicine
- Expiration
- Counter

Proper MDI Technique



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Handouts

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Don't forget about *shaking and priming*!

- HFA inhalers clog easily
- Evaporation and separation of propellant may reduce dose up to 35%
- MDIs have specific priming recommendations
  - Ventolin & Proventil: 4 sprays before first use and if not used for 2 wks
  - ProAir: 3 sprays before first use and if not used for 2 wks
  - Xopenex: 3 sprays before first use and if not used for 3 days

See **Priming and Care Guide** on QI Team Space for details

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Key Points MDI Technique

With mask spacer

- Stand or sit up
- Shake x 5 secs
- *Prime* if needed
- Tight seal with mask
- 1 spray at a time
- 5-6 normal breaths
- Wait a minute before next spray

With mouthpiece spacer

- Stand up
- Shake x 5 secs
- *Prime* if needed
- Breathe out fully
- Tight seal on mouthpiece
- 1 spray at a time
- Long slow breath in
- Hold x 10 seconds
- Wait a minute before next spray

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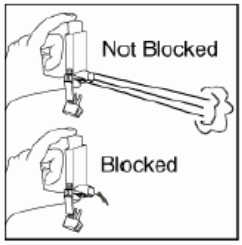
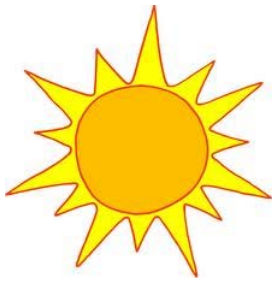
MDI Cleaning and Storage

- Clogged ports – wet cotton swab
- Avoid extreme temperatures



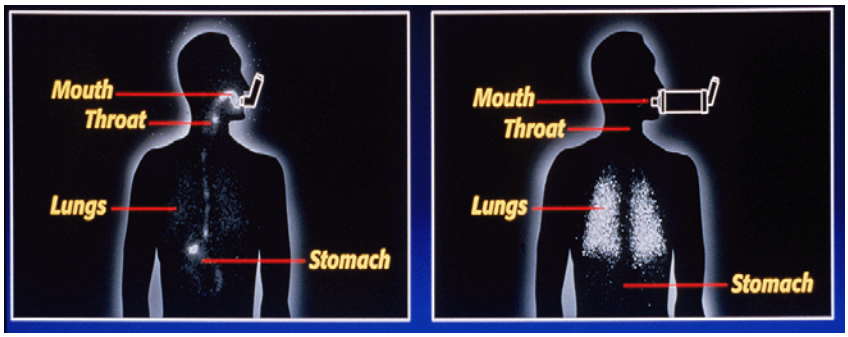


Valved Holding Chambers (VHC) - Spacers

How to choose

- Mask should cover mouth and nose
- Mouthpiece ~ age 8

MDI with & without spacer



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