

A Healthcare Navigation Tool Assesses Asthma Self-Management and Health Literacy

Supplementary Tables

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e-Table 1. Inhaled Corticosteroid Knowledge Questionnaire.^{1,2} The sum of the 5-point Likert score for each item is calculated so that more knowledge on an item results in a higher score.

	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
1. Inhaled steroids make airway muscles relax.	1	2	3	4	5
2. Inhaled steroids work by fighting inflammation.	5	4	3	2	1
3. Inhaled steroids work by fighting infection.	1	2	3	4	5
4. The full effect of inhaled steroids depends on regular use and may take days to work.	5	4	3	2	1
5. Inhaled steroids make you gain weight.	1	2	3	4	5
6. When you use inhaled steroids, your wheeze or chest tightness gets better immediately.	1	2	3	4	5
7. The full effect of inhaled steroids begins immediately.	1	2	3	4	5
8. Even if I have no symptoms from asthma, I should take [say rescue/reliever inhaler they are on] everyday so that I can stop asthma attacks from starting.	1	2	3	4	5
9. Even if I have no symptoms from asthma, I should take [say ICS they are on] everyday so that I can stop asthma attacks from starting.	5	4	3	2	1
10. [Say ICS they are on] should be taken only when I have asthma symptoms.	1	2	3	4	5

e-Table 2. Measure of Inhaler Corticosteroid Technique.³ For each, the score is the sum of the “yes” responses, so that a maximum score for MDI Inhaler Technique is 7, for DPI Inhaler Technique it is 6.

MDI Inhaler Technique		
1. Canister shaken	₁ Yes	₀ No
2. Exhales before actuating inhaler	₁ Yes	₀ No
3. Actuates inhaler at the start or within 1 second of the start of inhalation	₁ Yes	₀ No
4. Actuates only once per inhalation	₁ Yes	₀ No
5. Inhalation takes place over 3-5 seconds	₁ Yes	₀ No
6. Position of inhaler appears adequate	₁ Yes	₀ No
7. Patient holds breath for 6-10 seconds	₁ Yes	₀ No
DPI Inhaler Technique	₁ Yes	₀ No
1. Exposes mouthpiece	₁ Yes	₀ No
2. Cocks the triggers (activates the diskus)	₁ Yes	₀ No
3. Holds diskus horizontally while inhaling	₁ Yes	₀ No
4. Inhales deeply	₁ Yes	₀ No
5. Holds breath 6 seconds	₁ Yes	₀ No
6. Does not blow into diskus	₁ Yes	₀ No

1. Apter AJ, Reisine ST, Affleck G, Barrows E, ZuWallack RL. Adherence with twice-daily dosing of inhaled steroids. Socioeconomic and health-belief differences. *Am J Respir Crit Care Med.* 1998;157(6 Pt 1):1810-1817.
2. Apter AJ, Boston R, George M, et al. Modifiable barriers to adherence to inhaled steroids among adults with asthma: it's not just black and white. *J Allergy Clin Immunol.* 2003;111(6):1219-1226.
3. *Expert Panel Report 3: Guidelines for the diagnosis and management of asthma* Bethesda, MD: National Institutes of Health, National Heart, Lung, and Blood Institute;2007.