

Asthma Impairment and Risk Questionnaire (AIRQ™) Information for Health Care Providers

AIRQ™ Indications

The AIRQ™ is a patient assessment tool intended to help identify patients 12 years of age and older whose health may be at risk because of uncontrolled asthma. This assessment is based on a series of patient-facing questions about asthma medications, respiratory symptoms, and utilization of health care resources. Depending on the patient's responses to these questions, the patient will receive a score reflecting their level of asthma control. After completion of the AIRQ™, the patient and health care provider should discuss the responses to each of the individual questions, the total AIRQ™ score, and the patient's level of asthma control, and form a treatment plan.

The AIRQ™ is not intended to:

- Diagnose asthma
- Replace the advice or treatment of a health care provider
- Direct specific actions to treat, mitigate, or improve asthma
- Collect or store any laboratory values or lung function test values

Health Care Provider Instructions for Use

1. Provide your patient with the AIRQ™ during or immediately prior to their appointment.
2. Examine the responses to each of the individual questions, the total AIRQ™ score, and the patient's level of asthma control.
3. Discuss responses to each of the individual questions, the total AIRQ™ score, and the patient's level of asthma control with your patient.
4. Determine a treatment plan with your patient based on the information you've learned during your discussion and clinical assessment of the patient, and through responses to the AIRQ™ questions.

Information on the Validation and Interpretation of AIRQ™

1. AIRQ™ is a 10-item, equally weighted, yes/no composite asthma control questionnaire that includes 7 impairment and 3 risk items.
2. The AIRQ™ was validated against a standard of ACT™ score (impairment) + prior-year, chart-documented exacerbations (risk) in 442 patients 12 years of age and older who were previously diagnosed with asthma.
3. Multivariable logistic regression analyses were used to determine questions with the greatest validity in discriminating between patients of varying levels of control.
4. A total of 10 questions were identified for inclusion in the AIRQ™.
5. The AIRQ™ performed well with respect to the ACT™ + exacerbations standard in identifying well-controlled vs not well-/very poorly controlled and well-/not well-controlled vs very poorly controlled asthma, with area under the ROC (receiver operating characteristic) curves of 0.94 and 0.93, respectively.
6. The combination of selected AIRQ™ items and cut points of control demonstrated a sensitivity of 0.90 to identify patients whose asthma was well-controlled (cut point of ≥ 2), and a specificity of 0.96 to determine patients whose asthma was very poorly controlled (cut point of ≥ 5).
7. For further information on the development and cross-sectional validation of the AIRQ™, please refer to Murphy KR, et al. *J Allergy Clin Immunol Pract.* 2020;8(7):2263-2274.e5; and Murphy KR, et al. *J Allergy Clin Immunol Pract.* 2021;9(1):603.

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