Improve patient and clinician decision-making in asthma care: The Asthma Control Monitor®

Paul Foreman, PhD, MS; Ben Francisco, PNP, PhD, AE-C; Sherri Homan, RN, PhD; Tammy Rood, MSN, CPNP-PC, AE-C

Asthma Ready® Communities, University of Missouri-Columbia

**Background**
- Asthma is a highly variable inflammatory disease that blocks airflow, causes airway symptoms and imposes limitations.
- If airway inflammation is present, airflow obstruction can occur after exposure to environmental triggers, including smoke and allergens.
- Inhaled corticosteroids (ICS) are the most effective anti-inflammatory treatment for asthma.
- Effective self-care and clinical services require frequent, standardized assessments to adjust therapy, reduce triggers and maintain asthma control.

**Intervention**
- Lack of appropriate assessments and reliable information contribute to inadequate medical decision-making when based only on a clinical history and physical examination.
- Discordance between patients' verbal histories and records of actual medication and health services use (claims) shows that clinicians overestimate use of ICS and underestimate asthma risk and impairment.
- The Asthma Control Monitor® (ACM®) coupled with My Asthma Control report address these barriers by closing critical gaps in communication between patients and providers.
- The ACM® is an innovative application tool that graphically describes the current level of asthma control in accordance with national asthma guidelines in two display formats.
- The first format is designed to improve provider decision-making and guide EPR3 compliant treatment decisions. This is called the Asthma Control Monitor®. The second format is designed to enable patients to make better treatment decisions. This is called My Asthma Control®.

**Asthma Assessment Tool**
- Summary fields in the ACM® provide “clickable” links to detailed tables stamped by date and source.
- Assessment data (functional impairment score, FEV1, inhalation technique–inspiratory flow rate and time, and environmental risk) from school nurses, pharmacists, community asthma educators and clinical staff can be merged with claims data and displayed for clinical providers to determine asthma severity and control.
- Clinical asthma educators collect assessment data during Counseling for Risk Reduction (CARR©) asthma education sessions prior to a patient seeing their provider.
- The data will then populate the ACM® and display treatment information to the provider, clinical asthma educator, and the patient (My Asthma Control© or MAC©) in a visually iconic report.
- These reports are health literate deliverables for parents, school nurses, community health workers, environmental specialists, and providers themselves.

**Support Layer**

**Asthma Control Monitor**

**Summary Layer**
- Iconic representation of asthma status

**Assessment Layer**
- Detailed view of each indicator
  - Clinician and medical home care manager views of indicators

**Support Layer**
- Promoting positive change
  - URLs for self-care resources and education
  - URLs for training, evidence and resources

**Acknowledgements**

All Asthma Ready® programs and innovations are made available through a partnership with: Missouri Asthma Prevention and Control Program, Missouri Department of Health & Senior Services, and Missouri School Boards’ Association.

Supported in part by cooperative agreement #5U59EH000510-04 from the U.S. Centers of Control and Prevention. Content is the sole responsibility of the authors.