

## Implementation Guidance

### Clinician's Summary:

In individuals ages 4 years and older, the preferred Step 3 (low-dose ICS) and Step 4 (medium-dose ICS) therapy is single-inhaler ICS-formoterol both daily and as needed. In the literature, inhaled ICS-formoterol is referred to as “single maintenance and reliever therapy (SMART).” This form of therapy has only been used with formoterol as the LABA. Formoterol has a rapid onset and a maximum total daily dose that allows it to be used more than twice daily.<sup>147</sup> The maximum total daily dose of formoterol should not exceed eight puffs (36 mcg) for ages 4–11 years and 12 puffs (54 mcg) for ages 12 years and older. SMART is administered with a single inhaler containing both formoterol and an ICS (primarily budesonide in the reviewed studies, but one study used beclomethasone). The regimens compared to address this key question required two inhalers: the controller (ICS or ICS-LABA) and the reliever (SABA). The recommended alternate therapy of maintenance ICS-LABA with SABA as quick-relief therapy does not need to be changed if it is providing adequate control. However, patients whose asthma is uncontrolled on such therapy should receive the preferred SMART if possible before moving to a higher step of therapy.

The Expert Panel makes the following suggestions for implementation of daily and intermittent combination ICS-formoterol in individuals ages 4 years and older:

- No patient characteristics exclude consideration of this option in individuals ages 4 years and older with asthma.
- The studies demonstrating reduced exacerbations (see below) enrolled individuals with a severe exacerbation in the prior year. The results suggest that such individuals are particularly good candidates for SMART to reduce exacerbations.
- SMART might not be necessary for individuals whose asthma is well controlled on alternate treatments, such as conventional maintenance ICS-LABA with SABA as quick-relief therapy.
- SMART is appropriate for Step 3 (low-dose ICS) and Step 4 (medium-dose ICS) treatment.
- ICS-formoterol should be administered as maintenance therapy with one to two puffs once to twice daily (depending on age, asthma severity, and ICS dose in the ICS-formoterol preparation) and one to two puffs as needed for asthma symptoms. The maximum number of puffs per day is 12 (54 mcg formoterol) for individuals ages 12 years and older and 8 (36 mcg formoterol) for children ages 4–11 years. Clinicians should advise individuals with asthma or their caregivers to contact their physician if they need to use more than these amounts.
- The calculation of the dose of formoterol was based on 4.5 mcg/inhalation, the most common preparation used in the RCTs reviewed.
- ICS-formoterol should not be used as quick-relief therapy in individuals taking ICS-salmeterol as maintenance therapy.