

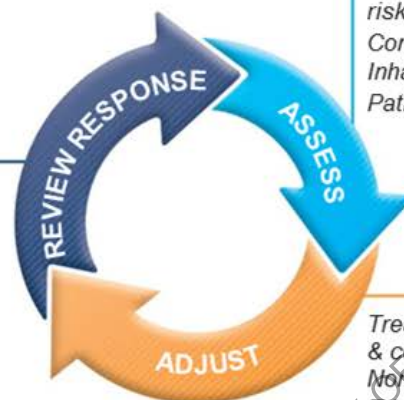
Box 7. The GINA asthma treatment strategy

Adults & adolescents 12+ years

Personalized asthma management:

Assess, Adjust, Review response

Symptoms
Exacerbations
Side-effects
Lung function
Patient satisfaction



Confirmation of diagnosis if necessary
Symptom control & modifiable risk factors (including lung function)
Comorbidities
Inhaler technique & adherence
Patient goals

Treatment of modifiable risk factors & comorbidities
Non-pharmacological strategies
Education & skills training
Asthma medications

Asthma medication options:

Adjust treatment up and down for individual patient needs

PREFERRED CONTROLLER

to prevent exacerbations and control symptoms

Other controller options

PREFERRED RELIEVER

Other reliever option

STEP 1

As-needed low dose ICS-formoterol*

Low dose ICS taken whenever SABA is taken†

STEP 2

Daily low dose inhaled corticosteroid (ICS), or as-needed low dose ICS-formoterol*

Leukotriene receptor antagonist (LTRA), or low dose ICS taken whenever SABA taken†

STEP 3

Low dose ICS-LABA

Medium dose ICS, or low dose ICS+LTRA#

STEP 4

Medium dose ICS-LABA

High dose ICS, add-on tiotropium, or add-on LTRA#

STEP 5

High dose ICS-LABA
Refer for phenotypic assessment ± add-on therapy, e.g. tiotropium, anti-IgE, anti-IL5/5R, anti-IL4R

Add low dose OCS, but consider side-effects

As-needed low dose ICS-formoterol*

As-needed low dose ICS-formoterol‡

As-needed short-acting β_2 -agonist (SABA)

* Off-label; data only with budesonide-formoterol (bud-form)

† Off-label; separate or combination ICS and SABA inhalers

‡ Low-dose ICS-form is the reliever for patients prescribed bud-form or BDP-form maintenance and reliever therapy

Consider adding HDM SLIT for sensitized patients with allergic rhinitis and FEV1 >70% predicted

For children 6–11 years, the preferred Step 3 treatment is low dose ICS-LABA or medium dose ICS.

For more details about treatment recommendations including in children, supporting evidence, and clinical advice about implementation in different populations see the full GINA 2019 report (www.ginasthma.org). For more details about Step 5 add-on therapies, see GINA 2019 Pocket Guide on Difficult to Treat and Severe Asthma, and check eligibility criteria with local payers.