technique is verified, the cornerstone of preferred therapy is the intensification of ICS therapy in conjunction with the use of a LABA to achieve greater control at lower ICS doses.

TABLE 287-5 Step Therapy for the Treatment of Asthma Ages 12+ (modified from GINA and NAEPP)

	Address exposures and comorbidities (see Tables 287-2 and 287-3) Confirm inhaler technique and optimize adherence Move up or down steps based on control (see Table 287-3)					
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Preferred regular therapy	None	None[a] or low-dose ICS[b]	Low-dose ICS/ formoterol	Medium-dose ICS/formoterol	Medium to high-dose ICS/LABA, + add-on LAMA	Anti-IgE or anti–IL-5 or anti–IL4-Rα; step 5 therapy as required
Alternative regular therapy	None	LTRA	Medium-dose ICS	High-dose ICS	Anti-IgE or anti–IL-5 or anti–IL4-Rα	OCS[c]
Adjunctive therapy			LTM and/or LAMA (especially LAMA at Step 5)			
As-needed reliever therapy	ICS/formoterol (low dose) or SABA[b]	ICS/formoterol (low dose), or PRN concomitant ICS and SABA[b] or SABA[a]	ICS/formoterol (low dose)[d]			

[a]If using as-needed ICS/formoterol or PRN concomitant ICS & SABA, this is an option. [b]National Asthma Education and Prevention Program (NAEPP) recommendation. [c]To be avoided as much as possible. [d]PRN ICS/formoterol only suggested for steps 3 and 4 by NAEPP. [e]If using low-dose ICS as regular therapy.

Abbreviations: ICS, inhaled corticosteroid; IL, interleukin; LABA, long-acting β-agonist; LAMA, long-acting muscarinic antagonist; LTM, leukotriene modifier; LTRA, leukotriene receptor antagonist; OCS, oral corticosteroid; PRN, as needed; SABA, short-acting β-agonist.

A major change in the stepwise approach, advocated for more than two decades, has occurred. Evidence has accumulated that as-needed ICS can be used instead of regular ICS in milder asthma and that the trigger for such use could be patient perception of the need to use a reliever inhaler. Since formoterol is a LABA with a rapid onset, combination ICS/formoterol has been used as a single agent in multiple studies: as needed without background therapy in milder asthma, and as needed in addition to twice daily ICS/formoterol in more severe asthma. Since asthma mortality can occur even in mild asthma (albeit at lower rates than more severe asthma), GINA, as part of a comprehensive strategy of asthma management, recommends ICS/formoterol be used as the reliever in all steps of asthma severity, including intermittent asthma (Step 1). NAEPP guidelines utilizing evidence-based studies recommend that ICS/formoterol be used as the reliever medication in patients requiring step 3 and 4 therapy (see Table 287-5) and that as-needed concomitant ICS and short-acting β-agonist (SABA) can be used as a therapy in step 2. For the sake of simplicity, an adapted GINA approach is outlined in Table 287-5 with footnotes identifying the major differences from the NAEPP.