Value pyramids of asthma interventions in the UK

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Background

A range of interventions are employed to manage asthma in UK. However, detailed evidence to assist policy makers, commissioners and clinicians in recommending and prioritising implementation is unavailable.

Aims

- To summarise the **interventions for management of asthma in the UK NHS**
- To develop a **value pyramid** of asthma management interventions using evidence for their **additional cost per quality-adjusted life year (QALY)** and identify **gaps in available cost-effectiveness evidence**

Methods

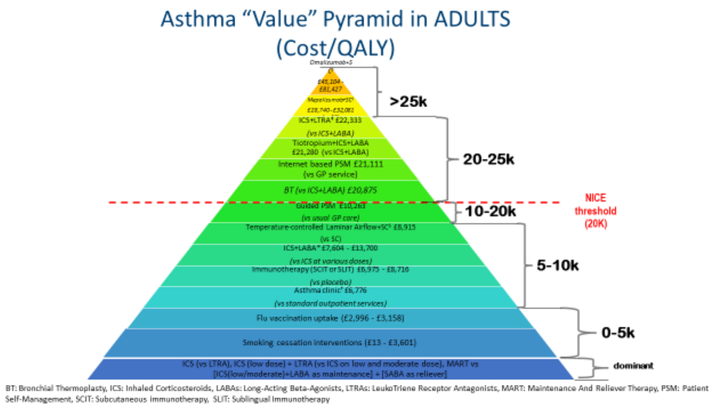
- **Interventions for management of asthma in the UK considered in:** (1) **BTS/SIGN 2016** British guideline for the management of asthma: clinically relevant recommendations, and (2) **NICE 2017**: Asthma guideline on diagnosis, monitoring and chronic asthma management: appraisal of clinical and economic evidence and practice recommendations.
  - Inhalers, tablets, injections, devices, surgery, self-management, complementary services and asthma triggers avoidance
- **Economic evidence in asthma:** (1) in-house systematic review (5 databases for the period 1990-2017) of economic evaluations in asthma interventions (n=135); (2) review of NICE asthma guidelines and technology appraisals (n=22); and (3) review of NICE appraisal for other highly relevant interventions (n=7) for asthma in general population.
- **Eligibility for inclusion in the UK value pyramid**: (1) reporting incremental cost per QALY in UK, or (2) in the absence of UK evidence, reporting incremental cost per QALY in non-UK setting; cost-effectiveness results converted to UK£.

Results

Asthma management in ADULTS in UK

	Pharmacological	Non-Pharmacological
Economic Evidence	ICS (at various doses)	self-management
	LTRA	immunisations
	LABA	stop smoking cessation
	MART	TLA device
	LAMA (tiotropium)	BT
	moAB	immunotherapy (SCIT/SLIT)
No economic evidence	SABA	exercise
	theophylline	complementary therapies
	oral steroids	

Recommended
Not recommended

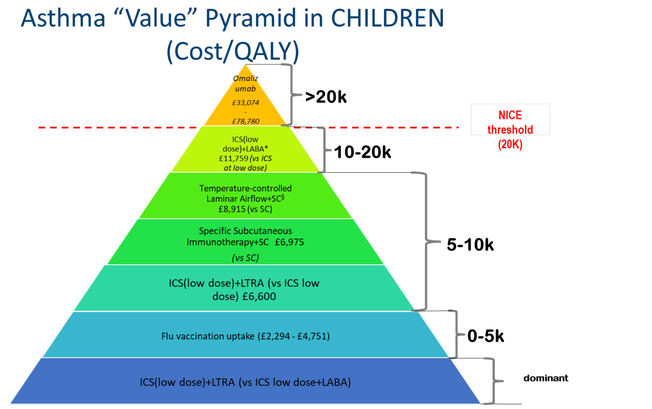


BT: Bronchial Thermoplasty, ICS: Inhaled Corticosteroids, LABAs: Long-Acting Beta-Agonists, LTRAs: LeukoTriene Receptor Antagonists, MART: Maintenance And Reliever Therapy, PSM: Patient Self-Management, SCIT: Subcutaneous Immunotherapy, SLIT: Sublingual Immunotherapy

Asthma management in CHILDREN in UK

	Pharmacological	Non-Pharmacological
Economic Evidence	ICS (at various doses)	TLA device
	LTRA	immunotherapy (SCIT)
	LABA	immunisations
	moAB	
No economic evidence	SABA	exercise
	theophylline	complementary therapies
	LAMA	immunotherapy (SLIT)
	oral steroids	self-management
	MART	

Recommended
Not recommended



ICS: Inhaled Corticosteroids, LABAs: Long-Acting Beta-Agonists, LTRAs: LeukoTriene Receptor Antagonists, MART: Maintenance And Reliever Therapy, SCIT: Subcutaneous immunotherapy, SLIT: Sublingual Immunotherapy

Conclusions

- 19 interventions are currently recommended in the UK for the management of asthma.
- 53% (10/19) with economic evidence; 47% (9/19) recommended without economic evidence.
- There is a substantial gap in available economic evidence for interventions considered in the management of asthma.