Deprescribing long acting beta2 agonists in children and adolescents with stable asthma: a systematic review

**Background:** Current guidelines recommend step-down of asthma drugs once stable asthma has been achieved but there is no guidance regarding deprescribing long acting beta2 agonists (LABAs) in the paediatric population.

**Aim:** To systematically review evidence regarding deprescribing methods of LABAs in the paediatric population.

**Method:** Searches were undertaken in the following databases: EMBASE, Medline, PubMed and CINAHL regarding reports of deprescription or discontinuation of LABAs in children and adolescents with persistent asthma.

**Results:** The search returned 168 papers following deduplication. 4 papers met the eligibility criteria including 3 randomised control trials and 1 retrospective study. Overall, there were X children and young people recruited (min age, max age). The studies had variable follow up durations once deprescribing was undertaken, from XX to YY [units]. Effects of withdrawal were measured using parameters such as airway hyperresponsiveness tests (number of studies or patients here), asthma control test scores (and here), use of rescue medication (ditto) and lung function tests (FeNO, FEV1, FEF25-75%, peak expiratory flow rate (PEFR), % forced expiratory ﬂow at 50% of vital capacity (%V50)) (and again). Following LABA withdrawal, decreases in %PEFR and %V50, FEV1 and asthma control test scores were observed. Airway responsiveness was unchanged 2 weeks following LABA withdrawal. No studies assessed changes in LABA related adverse effects after deprescribing (IF TRUE).

**Conclusion:** There is limited and short-term evidence regarding stepping down LABAs in paediatrics. To fully implement national and international guidelines, prospective studies in this area are required.