

# **A systematic review of interventions addressing limited health literacy to improve asthma self-management**

## **ABSTRACT**

**Background:** Supported asthma self-management improves health outcomes. However, people with limited health literacy, especially in lower-middle-income countries (LMICs), may need tailored interventions to enable them to realise the benefits. We aimed to assess the clinical effectiveness of asthma self-management interventions targeted at people with limited health literacy and to identify strategies associated with effective programmes. **Methods:** Following Cochrane methodology, we searched ten databases (January 1990 – June 2018; updated October 2019), without language restriction. We included controlled experimental studies whose interventions targeted health literacy to improve asthma self-management. Selection of papers, extraction of data and quality assessment were done independently by two reviewers. The primary outcomes were clinical (asthma control) and implementation (adoption/adherence to intervention). Analysis was narrative. **Results:** We screened 4318 titles and abstracts, reviewed 52 full-texts and included five trials. One trial was conducted in a LMIC. Risk of bias was low in one trial and high in the other four studies. Clinical outcomes were reported in two trials, both at high risk of bias: one of which reported a reduction in unscheduled care (number of visits in 6-month (SD); Intervention:0.9 (1.2) vs Control:1.8 (2.4),  $P = 0.001$ ); the other showed no effect. None reported uptake or adherence to the intervention. Behavioural change strategies typically focused on improving an individual's psychological and physical capacity to enact behaviour (eg, targeting asthma-related knowledge or comprehension). Only two interventions also targeted motivation; none sought to improve opportunity. Less than half of the interventions used specific self-management strategies (eg, written asthma action plan) with tailoring to limited health literacy status. Different approaches (eg, video-based and pictorial action plans) were used to provide education. **Conclusions:** The paucity of studies and diversity of the interventions to support people with limited health literacy to self-manage their asthma meant that the impact on health outcomes remains unclear. Given the proportion of the global population who have limited health literacy skills, this is a research priority.