



<b>Title</b>	A Systematic Review to Examine the Impact of Psycho-Educational Interventions on Health Outcomes and Costs in Adults and Children with Difficult Asthma
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<b>Reference</b>	Health Technol Assess 2005;9(23). June 2005. <a href="http://www.ncchta.org/execsumm/summ923.htm">www.ncchta.org/execsumm/summ923.htm</a>

## Aim

To determine if psycho-educational interventions improve outcomes and constitute an efficient use of health resources for patients with difficult asthma.

## Conclusions and results

In total, 278 citations associated with 188 different studies were initially identified for inclusion and classification. Of these, 57 studies with concurrent control groups that showed sufficient evidence of targeting difficult asthma were selected for in-depth review (35 in children, 21 in adults, and 1 with subgroups of both). In most cases, meta-analyses were not possible due to the variety of outcome measures used and inadequate reporting of data. Available data suggest psycho-educational interventions, as compared to routine care or minimal intervention, may reduce hospital admissions in adults and children and improve symptoms in children. However, effects on admissions may not extend to patients most at risk.

## Recommendations

Valid conclusions could not be drawn on the relative effectiveness of the different interventions. Data on costs were limited in quantity and quality. However, the results suggest that psycho-educational interventions can reduce hospital admissions and asthma symptoms in children, and may reduce admissions in adults. Positive effects, particularly in adults, may not extend to patients most at risk. Studies in children also showed mainly positive effects on various measures of self-care behavior.

## Methods

Systematic review.

**Data sources:** Electronic bibliographic databases, on-line research registers, conference abstracts, non-English language health research databases.

**Study selection:** Studies were reviewed in-depth if reviewers agreed that patients had at least one clear risk factor or indicator associated with difficult asthma and the study evaluated a personal educational or psychological

intervention. Studies were classified into groups by the degree of reviewers' certainty that patients had difficult asthma and by the type of intervention.

**Data extraction and validity:** Studies including concurrent control groups were included for in-depth extraction of descriptive and outcome data. Quality of studies was assessed using published guidelines for quantitative effectiveness research designs and for economic studies.

**Data synthesis:** Results of controlled studies were described and summarized in tables and text format. Where studies of sufficiently similar interventions reported sufficient data about comparable outcomes, pooled relative risks or standardized mean differences and confidence intervals were estimated using meta-analysis.

## Further research/reviews required

1. Incorporate results of studies still in progress into these results, and revision of conclusions
2. Further conceptualize interventions targeting different points, with a focus on developing more intensive, individualized, multidisciplinary approaches
3. Standardize reporting of complex interventions
4. Further standardize and validate outcomes for difficult and severe asthma
5. Develop tools to identify patients at risk from their asthma
6. Develop and evaluate costs and effects of clearly targeted, well-defined interventions in randomized trials with sufficient power to assess all important outcomes
7. Further methodological work to combine different effect size measures in systematic reviews.