

# Systematic literature review of health-related quality of life data for house dust mite allergic asthma and/or allergic rhinitis

C. Bartlett<sup>1</sup>, J. Hahn-Pedersen<sup>2</sup>, E. Hammerby<sup>2</sup>, M. Arber<sup>1</sup>, T. Veale<sup>1</sup>, M. Edwards<sup>1</sup>, J. Glanville<sup>1</sup>

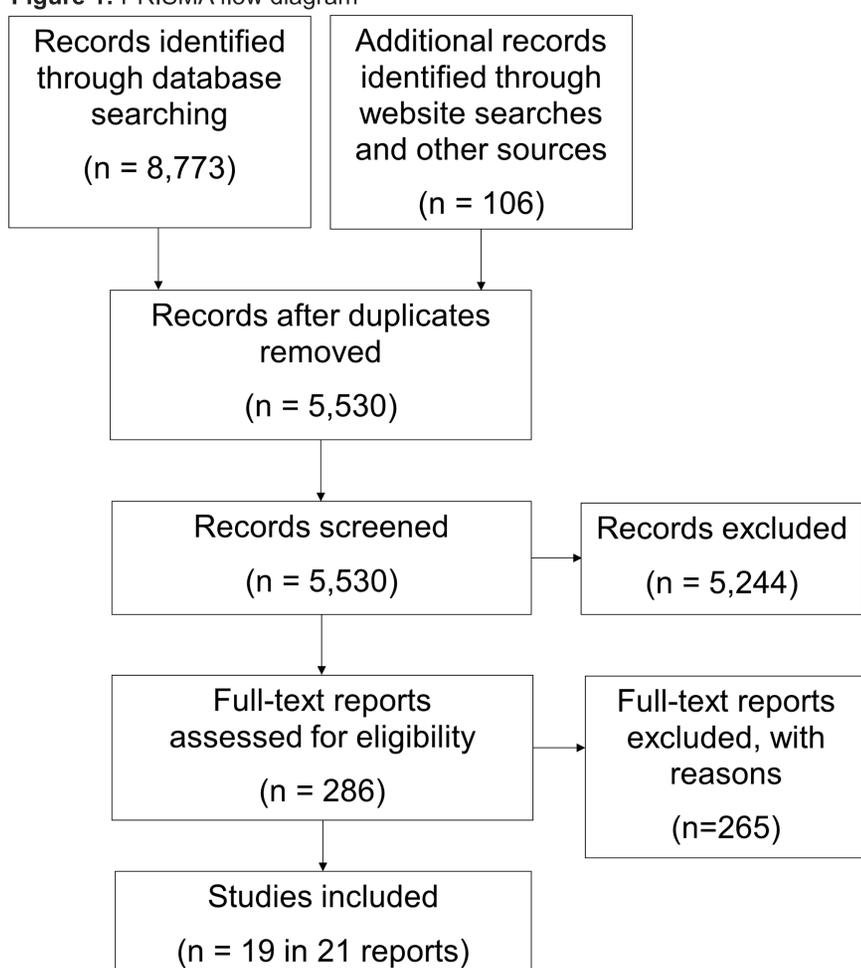
<sup>1</sup>York Health Economics Consortium, York, United Kingdom, <sup>2</sup>ALK, Hørsholm, Denmark

## Objectives

A systematic literature review (SLR) was conducted to identify health-related quality of life (HRQoL) data in individuals with house dust mite (HDM) allergic asthma (AA) and/or allergic rhinitis (AR). These data were used to inform an economic model.

## Methods

Figure 1: PRISMA flow diagram

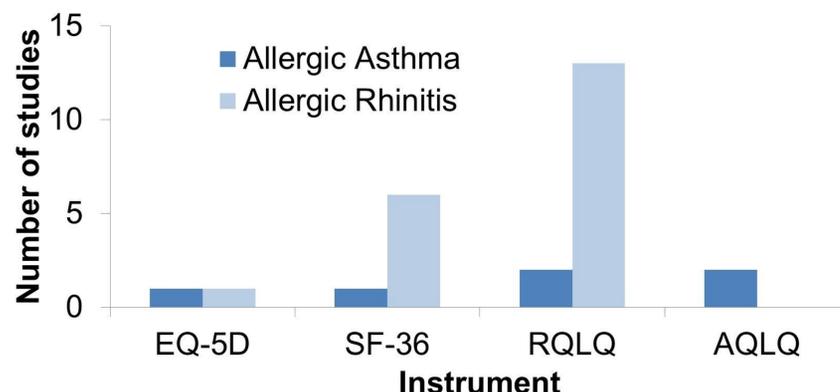


The SLR was conducted according to a formal protocol specified before the searches began. The review objective was to identify and review utilities, Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ), Asthma Quality of Life Questionnaire (AQLQ) and Short Form (SF)-36 outcomes. Eligible primary health states were patients classified by Allergic Rhinitis and its Impact on Asthma (ARIA), modified ARIA (m-ARIA) or Global Initiative for Asthma (GINA) guidelines classifications. 24 bibliographic databases, websites and trial registers were searched up to February 2015. Two reviewers independently selected records, extracted data for studies and assessed study quality using a checklist of questions around participant selection, representativeness, pilot testing, elicitation, bias and limitations. Figure 1 shows the record search and selection process (PRISMA flow diagram). The extracted data were summarized.



## Results

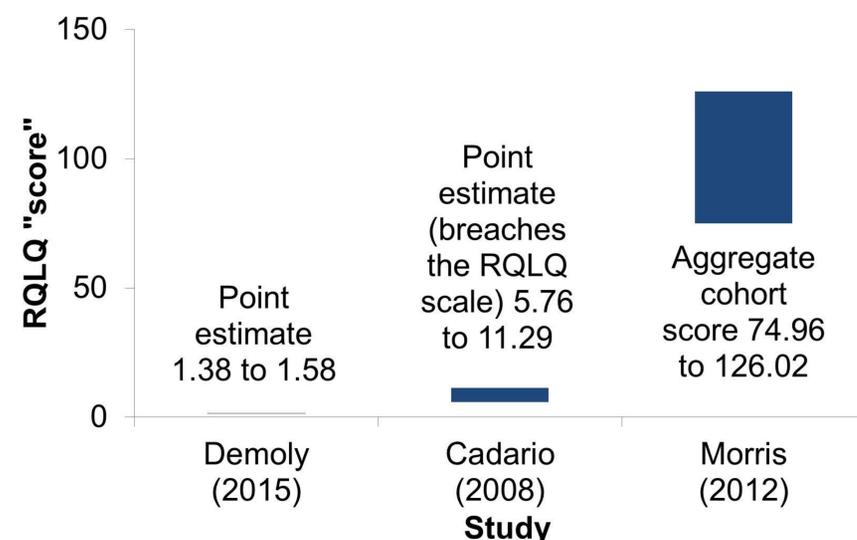
Figure 2: Number of studies per instrument



NB 4 studies reported data for both AA and AR and 3 studies for >1 instrument

Nineteen good quality studies (21 documents) were eligible for the SLR. Data were reported for EQ-5D utility scores, SF-36, RQLQ, and AQLQ (Figure 2). There is a large variation in the way that HRQoL data are reported. For example, RQLQ, which should be reported on a scale of 0 to 6, was reported as point estimates in one study, point estimates which breach the top of the scale without explanation in a second study and as aggregate cohort scores of the combined RQLQ question domains in a third study (Figure 3).

Figure 3: Range of reported RQLQ outcome data



## Conclusion

The SLR found a large variation in the reporting of HRQoL data for HDM AA and AR. Differences in reporting hinder direct comparison of the scores across studies and may contribute to confusion around how the scores should be interpreted: 1.58 (RQLQ point estimate) seems intuitively smaller when compared to an aggregated RQLQ score of 126.02. This SLR suggests that HRQoL scores within HDM AR and AA should be interpreted carefully. Authors should be encouraged to report scores consistently and with adequate explanation.