

## Development of an instrument measuring patient needs related to asthma treatment

*Background:* Prior evidence suggests that major unmet needs exist among asthma patients in the context of their treatment. Addressing those needs may improve the compliance and health outcomes of patients. A prerequisite is though that patient needs can be measured reliably and validly. We aimed to develop and tentatively validate an instrument assessing patients' needs related to asthma treatment.

*Methods:* Instrument development built on the following stages: we first carried out repeated focus groups with patients to explore their needs. We then devised an item pool, which was reduced by patients. Second, items were refined based on insights from cognitive interviews. Finally, data from a survey among patients with asthma (n = 362) were used to examine the questionnaire's psychometric properties.

*Most important findings:* The multi-stage mixed methods development process resulted in the so-called „Patient Needs in Asthma Treatment (NEAT)" questionnaire. The NEAT questionnaire comprised 13 items with four subscales: "patient expertise", "drug effects", "handling drugs" and "exacerbations". Increasing scores (implying more unmet needs) showed close and consistent associations with poor asthma control, reduced asthma-specific quality of life and low treatment satisfaction.

In additional statistical analyses we explored the potential determinants of unmet patient needs. Overall, we observed that younger age, poor mental health and a more recently established asthma diagnosis were associated with increased needs in asthma treatment.

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