

Mapping EQ-5D-5L utility scores from the severe asthma questionnaire in the SHARP CRC registry – *Lay summary*

Living with severe asthma affects much more than breathing. It can impact daily activities, energy levels, and emotional well-being. Research to understand the experienced burden of living with severe asthma is often based on questionnaires filled in by patients. In our study, two types of questionnaires were used: the Severe Asthma Questionnaire (SAQ), which focuses specifically on the real-life experiences of people living with severe asthma, and the more general EQ-5D-5L, which is commonly used by policy makers to inform healthcare decisions and compare treatments across diseases.

While the SAQ gives a detailed picture of how patients feel, it cannot directly be used in calculations that help decide which treatments should be funded. We therefore asked whether it is possible to “translate” SAQ results into EQ-5D-5L scores, so that patient experiences can still be used in healthcare decision-making. This translation is called *mapping*.

We analysed data of 327 adults with severe asthma from multiple European countries. All patients completed both questionnaires. We then developed statistical models to predict EQ-5D-5L scores based on the SAQ answers and compared different methods to find the most accurate approach. We also tested whether these predictions still worked well using data collected six months later.

The study showed that it is indeed possible to estimate EQ-5D-5L scores from SAQ data. Some methods performed slightly better than others, especially those using more detailed parts of the SAQ. Overall, the predictions were quite accurate, particularly for patients who were doing relatively well, although they were less precise for those with poorer health.

This is important because it means that patient-reported experiences collected with the SAQ can still be used to support decisions about treatments, healthcare policy, and access to care, even when the EQ-5D-5L was not collected.

Future research will focus on improving these predictions, especially for patients with more severe health problems, and on testing the method in other groups to ensure it works reliably in different settings.