Children's Hospital of Philadelphia PolicyLab

Responsiveness of Children's Global Health to Improvements in Acute Asthma

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OBJECTIVE: To evaluate the reliability and validity of the PROMIS Pediatric Global Health scale, a 7-item measure of perceived physical, mental, and social health, in children with asthma. METHODS: From February 2014 to February 2015, convenience samples of children 8–17 years-old (n = 182) and parents of children 5–17 years-old (n = 328) visiting an emergency department for treatment of asthma were enrolled. The Asthma Control Test was used to characterize children as controlled versus not controlled, and the PROMIS Asthma Impact Scale was used to assess the effects of asthma symptoms on functional status. We conducted longitudinal analyses among 92 children and 218 parents at 3 weeks, and 74 children and 171 parents at 8 weeks after enrollment. RESULTS: The PGH-7 reliability across the three time points ranged from 0.66 to 0.81 for child-report and 0.76 to 0.82 for parent-proxy. In cross-sectional analyses, children with controlled asthma had PGH-7 scores 0.40-0.95 standard deviation units higher than those who were uncontrolled. The PGH-7 was responsive to changes in overall general health between time points, with moderate effect sizes (0.5-0.6 standard deviation units). In longitudinal analyses, PGH-7 scores were no different between those who stayed uncontrolled versus became controlled at 3 weeks of follow-up; however, by 8 weeks of follow-up, the differences between these groups was 0.7-0.8 standard deviation units, indicative of large effects. CONCLUSIONS: The PGH-7 is a reliable and valid patient-reported outcome for assessing general health among children with asthma. It is a useful complement to other asthma-specific outcome measures.

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