

P63 Application of PROMIS to address the physical and psychosocial burden of pediatric cyclic vomiting syndrome

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Objective: Cyclic vomiting syndrome (CVS) is a disorder of gut-brain interaction (DGBI) manifested by recurrent episodes of vomiting lasting hours to days between periods of baseline health. The multidisciplinary pediatric CVS Program at Children's Wisconsin uses the PROMIS Pediatric Global Health Scale (PGH-7) child- and parent proxy-reports to guide clinical care. In this quality improvement project, we characterized demographics, clinical features, and global health using the PROMIS PGH-7 to identify factors that may improve multidisciplinary services.

Methods: We conducted a retrospective chart review to collect demographics and baseline self- and caregiver-reported PROMIS PGH-7 scores from patients evaluated in the CVS Program between April 2022 and March 2025.

Results: Data from 182 children of mean age 11.29 ($SD = 3.55$) years (57.1% female, 85.7% White) were analyzed. Families were from 19 US states (73.6% Wisconsin) and one Canadian territory. The most common medical diagnoses were CVS (91.2%), other or co-occurring DGBI (47.3%), and dysautonomia (32.4%). Over half (56%) had a documented anxiety diagnosis. PGH-7 T-scores were below standardized average (self-report $M = 44.09$, caregiver report $M = 41.71$). Patient and caregiver reports were strongly correlated ($r = 0.91$, $p < 0.001$). Older age was associated with lower PGH-7 scores for self- ($r = -0.23$, $p = 0.005$) and caregiver report ($r = -0.3$, $p < 0.001$). There were no significant differences in PGH-7 scores by sex, ethnicity, home state, or visit type (new versus follow-up). Patient and caregiver-reported PGH-7 scores were higher in those with a diagnosis of CVS than those without ($p = 0.006$, $p < 0.001$, respectively), and lower in those with a co-occurring DGBI ($p = 0.01$, $p = 0.001$, respectively) and/or dysautonomia ($p < 0.001$). Patients and caregivers indicated lower global health in those with concurrent diagnoses of anxiety ($p < 0.001$), depression ($p = 0.02$, $p = 0.002$, respectively), and ADHD ($p = 0.02$, $p = 0.01$, respectively) compared to those without.

Conclusions: Older age, presence of comorbid DGBI and dysautonomia, and anxiety, depression, and ADHD are related to worse global health as measured by PROMIS PGH-7 in children with CVS. These data help guide clinical decision making by identifying patients who may benefit from additional supports and reinforce the value of a multitargeted, multidisciplinary approach to improve quality of life in children with CVS.