Title: The population prevalence, characteristics, health outcomes and quality of care for children with frequent and severe headache: Findings from the new National Survey of Children's Health.

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Background: Little is known about the population prevalence, characteristics or
health of US children with frequent or severe headache, including their daily functioning and quality of care. Understanding these issues will inform assessment, referral and treatment guidelines. The National Survey of Children’s Health (NSCH) provides new information to address these issues at the population level.

**Objective:** To estimate the population prevalence of frequent or severe headache experienced by children age 3-17 and to assess if these children experience greater functional impact and/or issues with health care access and quality compared to similar children who do not experience headache.

**Design/Methods:** The prevalence and characteristics of children with frequent or severe headache was estimated using data from the 2003-2004 NSCH (n = 100,000 weighted to represent all children age 0-17). Logistic regression analysis was used to assess the impact of headache on health outcomes (e.g. missed school, overall health status) and aspects of quality of care (e.g. medical home) after adjusting for age, sex, race, household income and special health care needs.

**Results:** Nationally, 5.6%, or 3.4 million, children age 3-17 have parents who report that they experience frequent or severe headache (3.2%-7.7% across states). This rate varies across age, sex, race and household income groups. Over 12% of children with special health care needs (CSHCN) and 14.8% of those with moderate or severe socio-emotional difficulties experience headache. Children with headache are much more likely to miss school (adj. OR 2.89) and much less likely to have parents who report that they experience excellent or very good health (adj. OR .56) or have health care that meets criteria for being a medical home, controlling for age, sex, race, household income and special needs status.

**Conclusions:** Frequent or severe headache is disproportionally represented among CSHCN and those with socio-emotional difficulties as well as among certain demographic groups of children. These children face greater functional impairments and challenges receiving quality care than similar children without headache. Pediatricians need to be aware of this information and obtain the skills and tools to assess and manage this common and often complex disorder.

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