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Leveraging the Cshcn Screener to Stratify Cshcn By Complexity of Service Need, Health Impact and Quality of Care: Key Methods and Applications

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Abstract Text:

Purpose

Since 1999, the CSHCN Screener has been used as an efficient and valid method to identify children with chronic physical, mental, behavioral or other conditions who require a type or amount of health and related services beyond that required by children generally. It is included in three national and numerous international surveys, health care quality surveys and other applications. Research objectives are to evaluate using the CSHCN Screener as a potential primary or complementary method to identifying CSHCN complexity as it relates to service needs, health impacts and/or quality of care and to evaluate variations in prevalence observed across applications and validity of multiple stratification methodologies.

Methods

Analyses were conducted on the National Survey of Children with Special Health Care Needs (2009/10; 2005/06 standard and reference files), National Survey of Children's Health (2011/12; 2007) and 2008 Medical Expenditures Panel Survey.

Systematic synthesis of published literature and new psychometric, bivariate and multivariate regression methods assessed prevalence, validity and variations associated with different options to employ and stratify the CSHCN Screener to identify Complex CSHCN (C-CSHCN). Medical expenditures across C-CSHCN groups and comparisons with diagnostic code list based approaches were also assessed.

Results

Multiple stratification options validly identify CSHCN with more complex needs both within and across diagnostic categories. Analyses across datasets confirm that both qualitative stratification by which of the five CSHCN Screener criteria and qualitative stratification by how many criteria were met demonstrate sensitivity to level of need, child functioning and family impact, quality of care and medical expenditures.

For example, CSHCN meeting the lowest level cut off for having more complex needs are nearly 8 times more likely to experience daily impacts due to their conditions than those with less complex needs. This same group had 4.5 times higher health care expenditures and was 5 times more likely to miss 2+ weeks of school compared to Non-CSHCN. Similarly, children meeting 3 or more of the 5 CSHCN Screener criteria have nearly 8 times higher health care expenditures and are 6.5 times more likely to miss 2+ weeks of school than Non-CSHCN. Numerous other comparisons will be presented and application at population versus individual level will be discussed. Comparison of CSHCN Screener results to methods using diagnostic code lists will be reviewed and show value in integrating CSHCN Screener and code-based methods.

Conclusion

The CSHCN Screener continues to provide an efficient and highly discriminating method for identifying

children with special health care needs. Physicians, health plans, and emerging ACOs can utilize the CSHCN Screener to identify a robust group of individuals who are homogenous as to chronicity and complexity of health needs and elevated costs of care, and therefore likely to most benefit from care coordination and health and quality improvement strategies.

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