



U.S. Department of Health and Human Services  
Assistant Secretary for Planning and Evaluation  
Office of Disability, Aging and Long-Term Care Policy

# **CHILDREN WITH DISABILITIES AND SPECIAL HEALTHCARE NEEDS IN NCQA-RECOGNIZED PATIENT- CENTERED MEDICAL HOMES:**

## **HEALTH CARE UTILIZATION, PROVIDER PERSPECTIVES AND PARENTAL EXPECTATIONS EXECUTIVE SUMMARY**

January 2014

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This report was prepared under contract #HHSP23320095642WC between HHS's ASPE/DALTCP and Mathematica Policy Research. For additional information about this subject, you can visit the DALTCP home page at [http://aspe.hhs.gov/office\\_specific/daltcp.cfm](http://aspe.hhs.gov/office_specific/daltcp.cfm) or contact the ASPE Project Officers, Hakan Aykan and David de Voursney, at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201. Their e-mail addresses are: [Hakan.Aykan@hhs.gov](mailto:Hakan.Aykan@hhs.gov) and [David.DeVoursney@hhs.gov](mailto:David.DeVoursney@hhs.gov).

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PATIENT-CENTERED MEDICAL HOMES:  
Health Care Utilization, Provider Perspectives and  
Parental Expectations Executive Summary**

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## ACRONYMS

The following acronyms are mentioned in this paper.

CSHCN	Children with Special Health Care Needs
ED	Emergency Department
NCQA	National Committee for Quality Assurance
PCMH	Patient-Centered Medical Home

## I. BACKGROUND AND PURPOSE

Children with special health care needs (CSHCN) often require specialized care from multiple health care providers in addition to preventive and primary care services (Van Dyck et al., 2004). Lack of coordination among providers and primary care that does not meet the standards of a “medical home” can place these children at high risk for adverse outcomes, including failure to receive necessary care, increased use of emergency and inpatient services, and duplication of services (Strickland et al., 2009). Preliminary evidence suggests that pediatric primary care practices that have implemented components of a medical home provide better care to their patients compared with those without such components (Homer et al., 2008; Cooley et al., 2009), and various multi-payer initiatives now provide incentives for practices to become medical homes (Takach, 2011). Since 2008, the National Committee for Quality Assurance (NCQA) has recognized practices and providers who meet its standards for patient-centered medical homes (PCMHs) and submit required documentation and fees (NCQA, 2012). Although it is not the only PCMH-recognition program available, NCQA’s initiative has a high profile and is widely used in many multi-payer initiatives (Takach, 2011).

The studies summarized in this document were sponsored by the Office of the Assistant Secretary for Planning and Evaluation at the U.S. Department of Health and Human Services as part of the Center on Excellence in Disabilities Research, and had the following goals: (1) test the relationship between NCQA recognition and patterns of health service use for Medicaid-enrolled CSHCN; (2) document changes made by practices to obtain NCQA recognition and the perceived impact of recognition on quality of care; and (3) identify provider and practice characteristics that are most important to parents of CSHCN. In the following sections we summarize key findings from the quantitative evaluation of the relationship between NCQA recognition and health care utilization and interpret these findings based on discussions with NCQA-recognized providers, parents with children treated by NCQA-recognized providers, and parent-leaders.

## II. EMPIRICAL FINDINGS ON THE RELATIONSHIP BETWEEN NCQA-RECOGNITION AND UTILIZATION

We evaluated whether Medicaid-covered CSHCN who were treated by NCQA-recognized providers had patterns of health care utilization indicative of higher quality compared to two comparison groups of similar CSHCN treated by: (1) providers who received recognition at a later date; and (2) non-recognized providers. We performed these comparisons using data on CSHCN ages 0-18 in fee-for-service Medicaid in Louisiana, New Hampshire and Texas in 2010. These three states were selected because they had relatively high numbers of NCQA-recognized child-serving providers, low penetration of Medicaid comprehensive managed care, and Medicaid Analytic eXtract 2008 and 2010 data available for analysis.

We identified CSHCN using Medicaid eligibility and claims data, and flagged NCQA-certified providers in Medicaid claims data using national provider identified numbers obtained from NCQA. We attributed children to providers based on the volume of well-child, preventive care, evaluation and management services and other services. Children attributed to providers who received NCQA-recognition between 2008 and 2010 comprised the treatment group. Children attributed to providers who received NCQA-recognition in 2011 comprised the non-matched, “late recognition” comparison group. Children not attributed to recognized providers were exact-matched to the treatment group children on demographics, diagnoses, prescription drugs, and number of months enrolled in Medicaid to comprise a matched comparison group.

Outcome measures for this study included five measures related to service use (any well-child visit, any emergency department (ED) use, any preventable or avoidable ED use, any hospitalizations, and any ambulatory care-sensitive hospitalizations) and two measures related to care coordination (follow-up within 30 days of an ED visit and follow-up within 30 days of a hospitalization). We fit logistic regression models for the outcome variables for treatment group versus the non-matched “later recognition” and treatment versus the matched comparison group in each state, adjusting for demographic characteristics, Medicaid enrollment, health status and zip code-level socioeconomic characteristics. We also conducted a number of sensitivity analyses to test the robustness of our findings.

Table 1 summarizes findings from the empirical analyses. The association between NCQA recognition and the outcome measures used in this study varied across the three states. CSHCN in Louisiana treated by NCQA-recognized providers had significantly *worse* or no statistically significant difference in utilization patterns compared to CSHCN treated by non-recognized providers on all measures. In New Hampshire, there were favorable differences showing higher proportions of CSHCNs



receiving well-child visits and primary care follow-up after ED visits among those treated by NCQA-recognized providers than the comparison groups. However, there was a significantly higher overall hospitalization rate compared to one comparison group, and no difference in ambulatory care-sensitive hospitalizations among those children. Texas showed a similar pattern to New Hampshire, with favorable differences showing more well-child visits and follow-up after ED visits for CSHCN in NCQA-recognized practices, but no consistently significant findings for the other outcomes in our study.

**TABLE 1. Summary Results from Louisiana, New Hampshire and Texas**

	Louisiana		New Hampshire		Texas	
	"Late Recognition" Comparison Group	Matched Comparison	"Late Recognition" Comparison Group	Matched Comparison	"Late Recognition" Comparison Group	Matched Comparison
<b>Outcome Measures</b>						
Any Well-Child Visits	f	u	f	F	F	f
Any ED Visits	u	U	f	f	f	e
Any Avoidable ED Visits	u	U	f	f	f	u
Any Hospitalization	f	f	U	u	f	u
Any Ambulatory Care-Sensitive Hospitalization	f	f	f	U	f	f
Follow-up within 30 days of ED Visit	f	U	F	F	F	f
Follow-up within 30 days of Hospitalization	f	f	Not assessed due to small number of hospitalizations		Not assessed due to small number of hospitalizations	
<b>Maximum Sample Sizes</b>						
CSHCN						
Treatment group	9,761	8,414	4,090	3,023	1,174	968
Comparison group (unweighted)	1,343	126,856	777	10,574	1,006	59,622
Providers						
Treatment group	114	111	145	141	73	57
Comparison group	27	2,856	54	1,180	100	5,568
<b>Legend:</b>						
F = F indicates statistically significant ( $p < 0.05$ ) favorable findings for treatment group in multivariable analyses.						
U = U indicates statistically significant ( $p < 0.05$ ) unfavorable findings for treatment group in multivariable analyses.						
f = f indicates point-estimate favorable to treatment group in multivariable analyses, but not statistically significant.						
u = u indicates point-estimate unfavorable to treatment group in multivariable analyses, but not statistically significant.						
e = e indicates equivocal findings (i.e., odds ratio equal to one).						

### III. INTERPRETING EMPIRICAL FINDINGS BASED ON PROVIDER AND PARENT DISCUSSIONS

We expected, *a priori*, that CSHCN attributed to treatment group providers would have better outcomes compared to the comparison groups. The results, however, suggest that there is variation across measures and states in the relationship between NCQA-recognition and outcomes among CSHCN enrolled in Medicaid. Overall, the findings generally suggested equivalent or worse outcomes in Louisiana, generally better outcomes in New Hampshire, with the exception of hospitalizations, and some positive, but mostly equivalent outcomes in Texas.

The 20 semi-structured discussions we held with providers in NCQA Level 3-recognized practices in Texas and Colorado suggest some possible explanations for these findings. While many providers reported that NCQA recognition largely acknowledged the care their practice was already providing, some providers, particularly from smaller and independent practices, reported they made substantial changes in practice culture and workflows as well as practice infrastructure to obtain NCQA recognition and improve quality.

Our quantitative analyses used 2010 data to measure outcomes, the most recent year of data available, yet most providers in our treatment samples obtained recognition only shortly before, in 2009 and 2010. Providers from practices that only recently implemented medical home processes might have required more time to demonstrate improved quality. Additionally, the 2008 NCQA PCMH-recognition standards have been criticized for not applying well to pediatric primary care, which NCQA has attempted to address in the subsequent version of the standards.

In interpreting results from Louisiana, we know from other published studies that efforts to rebuild the primary care infrastructure in New Orleans after Hurricane Katrina included financial incentives for practices to transform into PCMHs and bonus payments for obtaining NCQA PCMH-recognition (Rittenhouse et al., 2012). Most of the practices participating in these efforts were small, and many had difficulty sustaining quality of care initiatives as funding dried up (Rittenhouse et al., 2012). If providers from small, low-resource practices in New Orleans comprise the majority of treatment providers in Louisiana and they also tend to be safety-net providers who started at a lower level of quality than other practices in the state, this may help explain our negative findings in Louisiana. In contrast, the generally more positive findings in New Hampshire could reflect the fact that almost two-thirds of recognized providers were affiliated with Dartmouth-Hitchcock medical center, and might comprise pediatric practices with more resources and support for quality improvement activities and may already be quality leaders in the state. These providers may mirror those providers in the qualitative discussions who noted that recognition was primarily an acknowledgement of existing efforts.

Provider discussions also found that few respondents had access to data to assess the impact of their recognition-related activities on utilization or clinical outcomes. This is likely true as well for many or all of the providers included in our quantitative study, which could explain the general absence of favorable impacts.

In addition, several physicians noted that CSHCN are a heterogeneous group in terms of diseases and conditions, which can make it difficult to improve their outcomes. They stated that it can be challenging to care for patients with less prevalent or rare conditions for which there are no widely accepted clinical guidelines -- in contrast to children with more common conditions such as asthma, where there are standards for quality of care. These physicians also noted that it is more difficult for the practice to develop registries and proactive tracking systems to ensure these children receive all necessary care, and that there are few or no pay-for-performance targets, making it harder to invest in systems of care for these complex CSHCN. Despite these difficulties, however, all of the measures used in our study should be applicable to the full range of CSHCN and not just children with common conditions.

Providers were also asked about features they thought were missing from the NCQA recognition process, and some physicians noted that recognition underemphasized patient-centeredness relative to various infrastructure and process metrics. This is consistent with findings from discussions with nine parents of CSHCN who are current patients of NCQA-recognized providers who participated in the provider discussions. In these discussions, most parents were unaware of the term patient-centered medical home, but they were able to describe the characteristics of primary care providers and practices that were important to them. Parents noted the importance of practice characteristics that are components of NCQA's recognition program such as providing continuity in care, welcoming and well-informed care teams, care coordination support, easy access, and linkages between the practice and other community supports. However, parents frequently emphasized aspects of patient-centeredness that can be challenging to capture in a medical home recognition process such as NCQA's, such as having a provider who knows and cares about their family, has expertise in and a willingness to learn more about their child's special needs, respects the family's knowledge and opinions, and engages them in shared decision-making. In separate discussions with six parent-leaders in Texas and Colorado identified through discussions with the Catalyst Center, a nationally recognized center dedicated to improving care for CSHCN, these parents also stressed the importance of patient-centeredness, and suggested that practices involve parents in quality improvement efforts. The parent-leaders further suggested expanding the reach of PCMH models to aspects of care that are particularly important to CSHCN, including behavioral and mental health, social services, and educational services. Several suggested an expanded role for specialists as the center of the medical home, particularly for CSHCN who visit specialists more often than primary care physicians.

The importance of patient-centeredness as a key component of medical homes was a consistent finding across provider, parent and parent-leader discussions, and

underscores a limitation of our empirical analyses -- specifically, we had no outcome measures available related to patient experience. It may be that practices that obtain NCQA-recognition are also more patient-centered than non-recognized practices, and we were unable to capture this important outcome.

Finally, it is possible that the adverse results and widespread absence of significant favorable differences in outcomes between patients of NCQA-recognized practices and other practices may be due to unmeasured self-selection of sicker children, within any given diagnosis category, into NCQA-recognized practices. If that occurs, the unfavorable or unpromising outcome differences we estimate in our models may be due to these unobserved differences between the treatment and comparison groups, and may be masking favorable differences for comparably ill children.

## IV. CONCLUSIONS

We found variation across the three states in the association between NCQA-recognition and measures of health care utilization and care coordination. These findings suggest that NCQA PCMH-recognition is an inconsistent indicator of higher quality care for the narrow list of outcomes we examined. The findings from our provider, parent and parent-leader discussions suggest that patient-centeredness and patient experience are critical outcomes that can be assessed in relation to NCQA-recognition. It may be that providers who obtain NCQA-recognition are also more likely to engage in patient-centered activities; alternatively, because the NCQA-recognition process does not focus on these aspects of care, there may be no association between NCQA-recognition and patient-centeredness. Our current findings suggest NCQA-recognized providers may be associated with better performance on well-child and post-emergency room use follow-up visits for CSHCN in some states, but not consistently across states, and not for other outcomes.

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