Relationship Between NCQA Medical Home Recognition and Health Care Utilization Among Children in Medicaid with Disabilities or Special Health Care Needs

March 11, 2013
Presentation at the CEDR National Conference
Background

- The medical home is widely promoted as a model for coordinating preventive and specialty care for children with disabilities and special health care needs (CSHCN).

- Since 2008, National Committee for Quality Assurance (NCQA) has recognized qualifying practices as patient-centered medical homes (PCMHs).
Study Questions

1. Is NCQA recognition associated with differences in health care use for Medicaid-enrolled CSHCN?

2. What do providers and parents think are the most important components of pediatric medical homes?
Study Hypotheses

- Compared with children not treated by NCQA-recognized providers, CSHCN treated by recognized providers will:
  - Receive more preventive services
  - Experience fewer emergency department (ED) visits and hospitalizations
  - Receive care that is better coordinated
Study Design

- Cross-sectional analyses to quantify association between recognition and service use
- Semi-structured discussions with NCQA-recognized providers, parents in those practices, and parent leaders/advocates
Data (1)

- NCQA data on practices and providers with PCMH recognition
  - November 2008–October 2011
  - National Provider Identifier (NPI) data on individual providers

- Medicaid data from Louisiana, Texas, Colorado, New Hampshire
Data (2)

- 2009 Medicaid Analytic eXtract Provider Characteristics (MAXPC)
  - Contains NPI data that can be merged to MAX claims data

- 2010 (beta) MAX
  - Enrollment data
  - Claims data
Cross-Sectional Methods: 2010 MAX Data (1)

- Identify children with special needs
  - Medicaid eligibility data for disability status
  - Claims data suggesting high health care costs based on Chronic Illness and Disability Payment System (CDPS) grouper

- Develop claims-based outcome variables
Cross-Sectional Methods: 2010 Max Data (2)

- Attribute children to providers
- Flag CSHCN attributed to recognized providers and develop matched comparison group
- Fit weighted logistic models
  - Account for clustering of CSHCN among providers
## Study Populations

<table>
<thead>
<tr>
<th></th>
<th>LA 2010</th>
<th>TX 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCQA-recognized providers</td>
<td>118</td>
<td>70</td>
</tr>
<tr>
<td>Children attributed to NCQA-recognized providers (treatment group)</td>
<td>11,725</td>
<td>1,381</td>
</tr>
<tr>
<td>Characteristics</td>
<td>Louisiana</td>
<td>Texas</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>Age, mean</td>
<td>7.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Female, %</td>
<td>45.2</td>
<td>41.2</td>
</tr>
<tr>
<td>Disabled, %</td>
<td>11.2</td>
<td>14.4</td>
</tr>
<tr>
<td>No. conditions, mean</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Prescription medications, mean</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Months enrolled, mean</td>
<td>11.5</td>
<td>10.5</td>
</tr>
</tbody>
</table>
## Cross-Sectional Multivariable Results: LA

### Predicted Probabilities from Logistic Models

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Treatment</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any well-child visit</td>
<td>68.3</td>
<td>71.3</td>
</tr>
<tr>
<td>Any ED use</td>
<td>48.6</td>
<td>43.9*</td>
</tr>
<tr>
<td>Any hospitalization</td>
<td>3.9</td>
<td>4.4</td>
</tr>
<tr>
<td>30-day follow-up post-ED</td>
<td>41.4</td>
<td>47.1*</td>
</tr>
<tr>
<td>30-day follow-up post-hospitalization</td>
<td>59.1</td>
<td>57.2</td>
</tr>
</tbody>
</table>

*Significantly different from treatment at $p<0.05$ level
**Cross-Sectional Multivariable Results: TX**

Predicted Probabilities from Logistic Models

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Treatment</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any well-child visit</td>
<td>81.1</td>
<td>83.2</td>
</tr>
<tr>
<td>Any ED use</td>
<td>40.6</td>
<td>34.4*</td>
</tr>
<tr>
<td>Any hospitalization</td>
<td>3.0</td>
<td>2.6</td>
</tr>
<tr>
<td>30-day follow-up post-ED</td>
<td>52.3</td>
<td>51.1</td>
</tr>
<tr>
<td>30-day follow-up post-hospitalization</td>
<td>68.7</td>
<td>65.6</td>
</tr>
</tbody>
</table>

*Significantly different from treatment at p<0.05 level*
 CSHCN attributed to NCQA-recognized providers in LA and TX did not have service use patterns associated with higher quality of care
  – Preliminary results
  – Some TX results changed in sensitivity analyses
Parents unfamiliar with the term “medical home” but value components of it:
- Continuity of care
- Access
- Coordination
Parents prioritized provider attributes

- Know child’s needs and care about family
- Listen and include parents in decisions
- Don’t make patients feel rushed
Discussions with Parent Leaders

- Parent leaders strongly support PCMH models, especially for CSHCN
- Parent leaders want expanded role for parents in practices’ transformation into PCMHs
Discussion

- In LA and TX, no evidence that NCQA-recognized practices provide higher quality care

- Qualitative results suggest importance of PCMH practices incorporating parents’ preferences and values to increase effectiveness of medical home
Key Study Limitations (1)

- Results from only 2 states
  - LA and TX may be special cases

- Small sample size in TX

- Limited number of outcome measures
  - NCQA-recognized practices may score higher on other measures
  - Claims-based measures only
Key Study Limitations (2)

- Time between NCQA recognition and study implementation may be too short to observe impacts on these outcomes

- Unobserved differences between treatment and comparison children may explain some of the results,
  - No reliable data on race/ethnicity

- Limited number of parent discussions
Next Steps

- Conduct additional analyses
  - Include race/ethnicity as control variable
  - Adjust for prior utilization

- Complete analyses in Colorado and New Hampshire

- Fit four-state pooled models
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