Access to Therapy for Children with Autism: A Population-Based Analysis

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OBJECTIVES
1. Examine population-based trends in access to needed therapy services for children with ASD under the age of 18 years
2. Compare differences in access to needed therapy services between children with ASD and children with other special health care needs (CSHCN)
3. Identify individual, family enabling, and child need characteristics that contribute to reduced access to therapy services

BACKGROUND
• Improving early access to effective care for children with autism spectrum disorder (ASD), while minimizing costs, are important health policy objectives identified by the Maternal and Child Health Bureau (MCHB).1
• Therapies such as occupational, speech, and physical therapy (OT/ST/PT) are needed and utilized significantly more by ASD children than other CSHCN.2,3
• Disparities in access to OT/ST/PT have been previously described for children with ASD, and the disparities are disproportionately found among low income or minority race populations.2,3
• Additional investigation into OT/ST/PT access is warranted using Andersen’s Behavioral Model of Health Service Use, adapted below for this study.4

METHODS

Data sources and sampling.
• 2005-2006 and 2009-2010 National Survey for Children with Special Health Care Needs (NS-CSHCN)5
• Screeners, Household, Main Interview datasets merged, concatenated both years
• Differences in surveys were considered during concatenation and analysis (e.g., 2009-2010 survey used both a landline and cell-phone sample)

Sample Size Available for Analysis

<table>
<thead>
<tr>
<th>NS-CSHCN Survey</th>
<th>Current ASD</th>
<th>Other CSHCN</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2,123</td>
<td>38,600</td>
<td>40,723</td>
</tr>
<tr>
<td>2009-2010</td>
<td>3,055</td>
<td>37,187</td>
<td>40,242</td>
</tr>
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Dependent Variables.
• Need for therapy (Yes/No): “During the past 12 months, was there any time when [child] needed physical, occupational, or speech therapy?”
• Unmet need for therapy (Yes/No): “During the past 12 months, did [child] receive all of the therapy s/he needed?”

Independent Variables.
• Predisposing, family enabling, and Need Characteristics of child
• Receipt of a well-child checkup in the past 12 months

Data analysis.
• Stata SE 12.1, survey features with strataacross (year x state x sample type)
• χ2 to examine therapy access rates by year and group, with design-based F statistics to account for complex design
• Logistic regression adjusted for complex survey design to examine hypotheses
• Alpha set to .05 for all analyses

RESULTS

H1a: Children with ASD had poorer access than children in 2005-2006 for both ASD and other CSHCN groups. Children sampled in 2009 had 1.3 times the likelihood of having a therapy access problem compared to children in 2005

Data: OR = 1.32, 95%CI: [1.14, 1.52], p <.001

H1b: Children with ASD were 1.6 times more likely to have a therapy access problem compared to other CSHCN at both time points

Data: OR = 1.62, 95%CI: [1.39, 1.90], p <.001

Receipt of Needed Therapy Services in Past Year Among ASD and Other CSHCN by Survey Year

<table>
<thead>
<tr>
<th>Year</th>
<th>ASD-2005</th>
<th>Other CSHCN-2005</th>
<th>ASD-2009</th>
<th>Other CSHCN-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>% [95% CI]</td>
<td>[17.9 [15.0, 21.2]</td>
<td>82.1 [88.8, 85.0]</td>
<td>12.8 [11.4, 14.2]</td>
<td>87.2 [88.8, 88.6]</td>
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</tbody>
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CONCLUSIONS
• Children with ASD are significantly more likely to have an unmet need for therapy services compared to other CSHCN, even after controlling for year and characteristics of the child and family.
• The most important predictor of an unmet need for therapy was not receiving a well-child visit from a pediatrician or other primary care provider.
• All children sampled in 2009 had greater odds of not receiving needed therapy services than children sampled in 2005.
• Having public insurance appeared to improve the likelihood of receiving therapy services, above and beyond having private insurance alone, while being uninsured reduced the likelihood of receiving all needed therapy services.
• Children with the greatest functional limitations had greater odds of not receiving services.

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