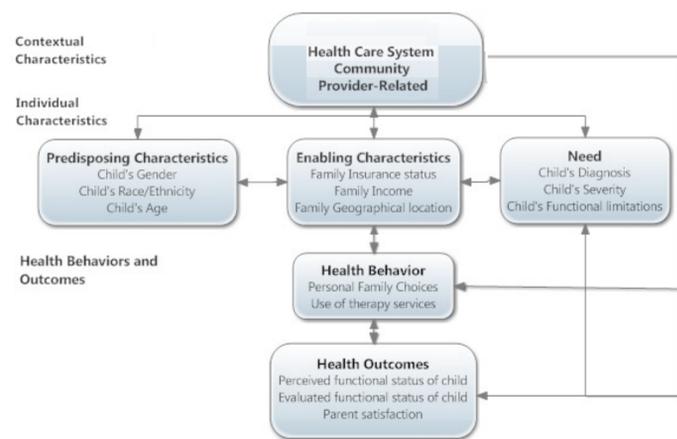


## OBJECTIVES

- 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).<sup>1</sup>
- Therapies such as occupational, speech, and physical therapy (OT/ST/PT) are needed and utilized significantly more by ASD children than other CSHCN.<sup>2,3</sup>
- 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<sup>2,3</sup>.
- Additional investigation into OT/ST/PT access is warranted using Andersen's Behavioral Model of Health Service Use, adapted below for this study<sup>4</sup>.



## SPECIFIC AIMS AND ALTERNATIVE HYPOTHESES

- 1. Compare rates of access to therapy service in children with ASD at two survey time points (2005-06 and 2009-10) and between other CSHCN at these two survey years**

**H1a:** Children with ASD will have greater realized access in 2009-10 than in 2005-06.

**H1b:** Children with ASD will have poorer realized access to therapy services than other CSHCN at both time points.

- 2. Examine the relationship of individual characteristics to access to therapy services and identify differences in the frequency of parent-reported contextual characteristics that limit therapy access in both groups across the two survey time points**

**H2a:** Predisposing characteristics will significantly predict lack of realized access for children with ASD across both survey time points.

**H2b:** Children with ASD will have greater provider-related problems than other CSHCN across both survey years; but within the ASD sample at both points, parents will report community-related problems more frequently than provider problems.

## METHODS

### Data sources and sampling.

- 2005-2006 and 2009-2010 National Survey for Children with Special Health Care Needs (NS-CSHCN)<sup>5,6</sup>
- Screener, 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

NS-CSHCN Survey	Current ASD	Other CSHCN	Total Sample
2005-2006	2,123	38,600	40,723
2009-2010	3,055	37,187	40,242

### Dependent Variables.

- Need for therapy (Yes/No): "During the past 12 months, was there any time when [child] needed physical, occupational, or speech therapy?" If **yes** caregiver was asked:
- 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 stratacross (year x state x sample type)
- $\chi^2$  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  $<.01$  for all analyses

## RESULTS

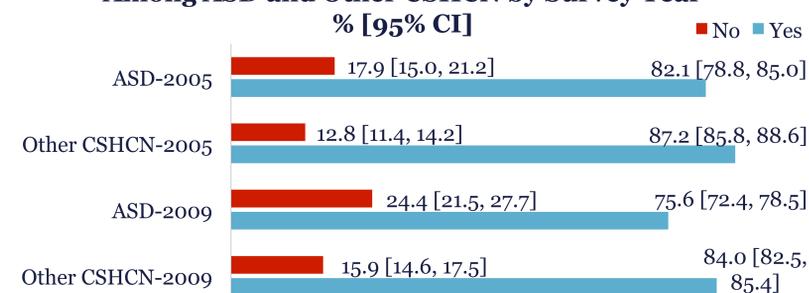
**H1a:** Children in 2009-2010 had poorer access than children in 2005-2006 for both ASD and other CSHCN groups. Children sampled in 2009 had 1.3 times the likelihood of having a therapy access problem compared to children in 2005

- 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

- 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



## RESULTS (CONTINUED)

### Multivariate Logistic Regression Predicting Unmet Need for Therapy

	OR	95% Confidence Interval
<b>Child has other CSHCN</b>	Reference	
<b>Child has current ASD</b>	1.50 <sup>c</sup>	1.25-1.80
<b>Child surveyed in 2005-2009</b>	Reference	
<b>Child surveyed in 2009-2010</b>	1.37 <sup>c</sup>	1.15-1.63
<b>Caucasian</b>	Reference	
<b>Black</b>	1.23 <sup>a</sup>	1.02-1.64
<b>Multiple</b>	1.00	0.64-1.59
<b>Other</b>	1.27	0.95-1.68
<b>&lt;200% FPL</b>	1.18	0.92-1.53
<b>200-400% FPL</b>	1.27 <sup>a</sup>	1.01-1.59
<b>&gt;400% FPL</b>	Reference	
<b>Private insurance</b>	Reference	
<b>Public insurance</b>	0.70 <sup>b</sup>	0.56-0.89
<b>Private &amp; public insurance</b>	0.71 <sup>b</sup>	0.54-0.92
<b>Other comprehensive insurance</b>	0.98	0.60-1.60
<b>Uninsured</b>	1.71 <sup>b</sup>	1.15-2.55
<b>'Never' affected</b>	Reference	
<b>'Sometimes' affected</b>	1.17	0.86-1.60
<b>'Usually' affected</b>	1.89 <sup>c</sup>	1.36-2.61
<b>'Always' affected</b>	2.23 <sup>c</sup>	1.66-3.00
<b>No well-child visit in past year</b>	5.23 <sup>c</sup>	3.53-7.73

Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children with Special Health Care Needs, 2005-2006 and 2009-2010.

- <sup>a</sup> Significance  $p \leq .05$ , <sup>b</sup> Significance  $p \leq .01$ , <sup>c</sup> Significance  $p \leq .001$
- <sup>\*</sup> Cell phone sample, age, gender, ethnicity, living in an urban area, all  $p > .05$ .

## 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.

## FUNDING SOURCE

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