

**Table A: Variable Coding**

<b>Children With Special Health Care Needs</b>	Variable name	cshcn
	Coding	<p>1 = Screened positive for having a special health care need using the CSHCN Screener. Requires answering “yes” to 1 of 5 items and follow up probes. 0 = Screened negative with the CSHCN Screener.</p> <p>Criteria:</p> <ol style="list-style-type: none"> <li>1. Need or use of prescription medication</li> <li>2. Above routine need or use of services</li> <li>3. Functional limitations</li> <li>4. Need or use of special therapy</li> <li>5. Need or use of counseling or treatment for psychosocial issues</li> </ol> <p>The screener is based upon the federal Maternal and Child Health Bureau definition of CSHCN: “those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.”</p> <p>For full screener and scoring, please see: <a href="http://www.cahmi.org/wp-content/uploads/2014/06/CSHCNS-Survey-and-scoring.pdf">http://www.cahmi.org/wp-content/uploads/2014/06/CSHCNS-Survey-and-scoring.pdf</a></p>
<b>Household Generational Status</b>	Variable name	HOUSE_GEN
	Coding	<p>1 = Child and all parents born abroad 2 = Child born in the US and at least 1 parent born abroad; Child born abroad and 1 parent born in the US 3 = Both parents born in US and child born in US or abroad</p>
<b>Number of Currently Diagnosed Chronic Health Conditions</b>	Variable name	ind1_9a_11
	Coding	<p>0 = Parent/guardian reports child is currently diagnosed with none of a list of 18 common chronic conditions 1 = Parent/guardian reports child is currently diagnosed with 1 of 18 common chronic conditions</p>

		<p>2 = Parent/guardian reports child is currently diagnosed with 2 or more of 18 common chronic conditions</p> <p>Chronic conditions screened for:</p> <ol style="list-style-type: none"> <li>1. Learning disabilities</li> <li>2. ADD/ADHD</li> <li>3. Depression</li> <li>4. Anxiety problems</li> <li>5. ODD or conduct disorder</li> <li>6. Autism</li> <li>7. Developmental delay</li> <li>8. Intellectual disability or mental retardation</li> <li>9. Cerebral palsy</li> <li>10. Speech problems</li> <li>11. Tourette syndrome</li> <li>12. Asthma</li> <li>13. Diabetes</li> <li>14. Epilepsy or seizure disorder</li> <li>15. Hearing problems</li> <li>16. Vision problems not corrected with glasses/contact lenses</li> <li>17. Bone, joint, or muscle problems</li> <li>18. Brain injury or concussion</li> </ol>
<b>Sex of Child</b>	Variable name	sex_11
	Coding	1 = Male 2 = Female
<b>Age of Child</b>	Variable name	age3_11
	Coding	1 = 0-5 years old 2 = 6-11 years old 3 = 12-17 years old
<b>Child's Race/Ethnicity</b>	Variable name	race4_11
	Coding	1 = Ethnically Hispanic/Latino, any race 2 = White, non-Hispanic/Latino 3 = Black, non-Hispanic/Latino 4 = Multi-racial/Other, non-Hispanic/Latino
<b>Child's Insurance Status</b>	Variable name	ind3_1_11
	Coding	0 = Child has no health coverage (insurance, prepaid plans, or government plans) 1 = Child has health coverage (insurance, prepaid plans, or government plan)
	Variable name	planguage

<b>Primary Household Language</b>	Coding	1 = English is primary language spoken in respondent's home 2 = Language other than English is primarily spoken in respondent's home
<b>Highest Education in Child's Household</b>	Variable names	EDUC_MOMR, EDUC_DADR, EDUC_RESR
	Coding	Highest educational level attained by an adult guardian (mother, father, or respondent) in the child's household.  1 = Less than high school 2 = High school graduate 3 = Post-high school education

All variables provided by Data Resource Center and/or Child and Adolescent Health Measurement Initiative.

CSHCN = Children with Special Health Care Needs      ADD = Attention Deficit Disorder  
ADHD = Attention Deficit Hyperactivity Disorder      ODD = Oppositional Defiant Disorder

**Table B: Crude and Adjusted Odds Ratios for Identification of a Child with Special Health Care Needs using the CSHCN-S**

	Sample N = 89,380 F (14, 89265) = 348.91	
	OR (95% CI)	AOR (95% CI)
<i>Constant</i>		0.06 (0.05 – 0.07)
<i>Household Generational Status</i>		
First	0.29 (0.19 – 0.44)***	0.58 (0.37 – 0.91)‡
Second	0.46 (0.41 – 0.51)***	0.81 (0.66 – 0.98)‡
Third	1.00	1.00
<i>Number of Chronic Conditions</i>		
None	1.00	1.00
One	18.86 (16.94 – 20.99)***	17.63 (15.80 – 19.67)***
Two or more	90.54 (78.14 – 104.91)***	84.76 (72.76 – 98.73)***
<i>Sex of child</i>		
Female	1.00	1.00
Male	1.42 (1.32 – 1.53)***	1.07 (0.97 – 1.18)
<i>Age of child (years)</i>		
0 – 5	1.00	1.00
6 – 11	2.33 (2.11 – 2.58)***	1.32 (1.17 – 1.49)***
12 – 17	2.65 (2.41 – 2.92)***	1.32 (1.16 – 1.50)***
<i>Child's Race/Ethnicity</i>		
White, non-Latino	1.00	1.00
Black, non-Latino	1.14 (1.02 – 1.26)‡	1.00 (0.87 – 1.16)
Multi-racial/Other, non-Latino	0.78 (0.70 – 0.88)***	0.96 (0.81 – 1.13)
Latino	0.63 (0.55 – 0.71)***	1.05 (0.86 – 1.28)
<i>Child's Insurance Status</i>		
Uninsured	1.00	1.00
Insured	1.90 (1.53 – 2.36)***	1.41 (1.08 – 1.85)‡
<i>Primary Household Language</i>		
English	1.00	1.00
Spanish or other	0.35 (0.30 – 0.42)***	0.66 (0.49 – 0.88)***
<i>Highest education in child's household</i>		
Less than high school	0.68 (0.58 – 0.79)***	0.67 (0.53 – 0.84)***

High school graduate or GED completed	0.98 (0.89 – 1.08)	0.80 (0.70 – 0.91)***
Post-high school education	1.00	1.00

‡ p < 0.05    \*\* p < 0.01    \*\*\* p < 0.001

CSHCN-S = Children with Special Health Care Needs Screener    COR = Crude Odds Ratio

AOR = Adjusted Odds Ratio    CI = Confidence Interval

**Table C. Crude and Adjusted\* Odds Ratios for Identification of a Child with Special Health Care Needs by CSHCN-S Criteria and Household Generational Status (n = 89, 380)**

<b>Need or Use of a Prescription Medication</b>		
	COR (95% CI)	AOR (95% CI)
1 <sup>st</sup> Generation	0.12 (0.09 – 0.18)***	0.27 (0.17 – 0.45)***
2 <sup>nd</sup> Generation	0.42 (0.37 – 0.48)***	0.81 (0.55 – 1.00)‡
3 <sup>rd</sup> Generation	1.00	1.00
<b>Above Routine Use of Services</b>		
	COR (95% CI)	AOR (95% CI)
1 <sup>st</sup> Generation	0.25 (0.11 – 0.54)***	0.66 (0.32 – 1.36)
2 <sup>nd</sup> Generation	0.47 (0.39 – 0.55)***	0.99 (0.76 – 1.29)
3 <sup>rd</sup> Generation	1.00	1.00
<b>Functional Limitation</b>		
	COR (95% CI)	AOR (95% CI)
1 <sup>st</sup> Generation	0.38 (0.15 – 1.06)	1.14 (0.44 – 2.96)
2 <sup>nd</sup> Generation	0.58 (0.45 – 0.74)***	1.17 (0.86 – 1.58)
3 <sup>rd</sup> Generation	1.00	1.00
<b>Need or Use of Special Therapy</b>		
	COR (95% CI)	AOR (95% CI)
1 <sup>st</sup> Generation	0.59 (0.24 – 1.46)	1.68 (0.77 – 3.65)
2 <sup>nd</sup> Generation	0.61 (0.49 – 0.76)***	1.09 (0.82 – 1.44)
3 <sup>rd</sup> Generation	1.00	1.00
<b>Need or Use of Counseling or Treatment for Psychosocial Issues</b>		
	COR (95% CI)	AOR (95% CI)
1 <sup>st</sup> Generation	0.59 (0.32 – 1.10)	1.66 (0.83 – 3.30)
2 <sup>nd</sup> Generation	0.44 (0.37 – 0.54) ‡	0.87 (0.67 – 1.15)
3 <sup>rd</sup> Generation	1.00	1.00

\*Adjusted for child's number of currently diagnosed chronic conditions, sex, age, race/ethnicity, and insurance status and household language and educational attainment.

‡ p < 0.05    \*\* p < 0.01    \*\*\* p < 0.001

CSHCN-S = Children with Special Health Care Needs Screener    COR = Crude Odds Ratio  
AOR = Adjusted Odds Ratio

**Table D. Prevalence of 18 Common Chronic Conditions among Children from 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Generation Households<sup>a</sup>**

	<b>1<sup>st</sup> generation</b>	<b>2<sup>nd</sup> generation</b>	<b>3<sup>rd</sup> generation</b>
<b>Learning Disability (age 3-17)</b>	4.4 (2.6 – 7.5)	4.9 (4.2 – 5.8)	8.9 (8.4 – 9.4)
<b>ADD/ADHD (age 2-17)</b>	1.8 (0.6 – 5.6)	3.1 (2.6 – 3.7)	9.4 (8.9 – 10.0)
<b>Depression (age 2-17)</b>	2.3 (0.9 – 6.0)	0.7 (0.5 – 1.1)	2.4 (2.2 – 2.7)
<b>Anxiety Problems (age 2-17)</b>	1.1 (0.4 – 2.8)	1.5 (1.2 – 1.9)	4.0 (3.7 – 4.3)
<b>ODD or Conduct Disorder (age 2-17)</b>	1.9 (0.6 – 5.5)	1.5 (1.0 – 2.0)	3.6 (3.2 – 3.9)
<b>Autism (age 2-17)</b>	1.9 (0.6 – 6.2)	1.1 (0.8 – 1.4)	2.1 (1.8 – 2.3)
<b>Developmental Delay (age 2-17)</b>	0.5 (0.2 – 1.2)	2.2 (1.8 – 2.8)	4.1 (3.7 – 4.4)
<b>Intellectual Disability or Mental Retardation (age 2-17)</b>	0.7 (0.1 – 3.6)	0.8 (0.5 – 1.2)	1.1 (0.9 – 1.3)
<b>Cerebral Palsy (age 2-17)</b>	0.0 (0.0 – 0.2)	0.2 (0.0 – 0.3)	0.2 (0.2 – 0.3)
<b>Speech Problems (age 2-17)</b>	2.8 (1.2 – 6.4)	4.0 (3.3 – 4.8)	5.1 (4.8 – 5.5)
<b>Tourette Syndrome (age 0-17)</b>	0.0 (0.0 – 0.0)	0.1 (0.0 – 0.2)	0.2 (0.1 – 0.2)
<b>Asthma (age 0-17)</b>	2.5 (1.6 – 3.9)	5.5 (4.8 – 6.4)	9.8 (9.3 – 10.3)
<b>Diabetes (age 0-17)</b>	0.3 (0.0 – 0.9)	0.1 (0.0 – 0.3)	0.4 (0.3 – 0.5)



<b>Epilepsy or Seizure Disorder (age 0-17)</b>	0.0 (0.0 – 0.0)	0.4 (0.2 – 0.7)	0.7 (0.6 – 0.9)
<b>Hearing Problems (age 0-17)</b>	1.0 (0.3 – 3.3)	0.5 (0.4 – 0.8)	1.5 (1.3 – 1.7)
<b>Vision Problems Not Corrected by Glasses/Contacts (age 0-17)</b>	1.0 (0.5 – 2.0)	1.4 (1.0 – 2.0)	1.3 (1.1 – 1.4)
<b>Bone, Joint, or Muscle Problems (age 0-17)</b>	1.1 (0.5 – 2.2)	1.7 (1.2 – 2.3)	2.5 (2.2 – 2.7)
<b>Brain Injury or Concussion (age 0-17)</b>	0.0 (0.0 – 0.0)	0.2 (0.1 – 0.3)	0.3 (0.2 – 0.4)

<sup>a</sup>Weighted percentiles and 95% confidence intervals are shown for each cell.

ADD = Attention Deficit Disorder    ADHD = Attention Deficit Hyperactivity Disorder  
 ODD = Oppositional Defiant Disorder

**Table E. Prevalence of 18 Common Chronic Conditions among Children with at least 1 Diagnosed Chronic Condition from 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Generation Households<sup>a</sup>**

	<b>1<sup>st</sup> generation</b>	<b>2<sup>nd</sup> generation</b>	<b>3<sup>rd</sup> generation</b>
<b>Learning Disability (age 3-17)</b>	38.1 (24.6 – 53.7)	27.3 (23.5 – 31.5)	30.0 (28.5 – 31.5)
<b>ADD/ADHD (age 2-17)</b>	16.1 (5.7 – 38.4)	17.9 (14.9 – 21.4)	32.7 (31.2 – 34.3)
<b>Depression (age 2-17)</b>	20.0 (8.3 – 40.9)	4.2 (2.8 – 6.4)	8.4 (7.5 – 9.4)
<b>Anxiety Problems (age 2-17)</b>	9.5 (3.8 – 21.9)	8.4 (6.6 – 10.7)	13.7 (12.7 – 14.8)
<b>ODD or Conduct Disorder (age 2-17)</b>	16.3 (5.9 – 37.7)	8.5 (6.1 – 11.6)	12.3 (11.3 – 13.5)
<b>Autism (age 2-17)</b>	16.3 (5.2 – 40.7)	6.4 (4.9 – 8.4)	7.2 (6.4 – 8.0)
<b>Developmental Delay (age 2-17)</b>	4.4 (1.9 – 10.1)	13.0 (10.4 – 16.2)	14.0 (13.0 – 15.2)
<b>Intellectual Disability or Mental Retardation (age 2-17)</b>	6.0 (1.1 – 25.8)	4.5 (2.9 – 6.9)	3.9 (3.3 – 4.5)
<b>Cerebral Palsy (age 2-17)</b>	0.5 (0.1 – 1.9)	1.0 (0.5 – 1.8)	0.8 (0.6 – 1.0)
<b>Speech Problems (age 2-17)</b>	24.0 (11.5 – 43.6)	23.1 (19.3 – 27.3)	17.7 (16.5 – 18.9)
<b>Tourette Syndrome (age 0-17)</b>	0.2 (0.0 – 0.7)	0.6 (0.3 – 1.2)	0.6 (0.5 – 0.8)
<b>Asthma (age 0-17)</b>	21.5 (13.6 – 32.4)	36.3 (32.0 – 40.9)	37.2 (35.7 – 38.7)
<b>Diabetes (age 0-17)</b>	2.0 (0.5 – 7.9)	0.9 (0.5 – 1.7)	1.4 (1.0 – 1.7)

<b>Epilepsy or Seizure Disorder (age 0-17)</b>	0.2 (0.0 – 0.7)	2.4 (1.3 – 4.5)	2.9 (2.4 – 3.4)
<b>Hearing Problems (age 0-17)</b>	8.3 (2.4 – 24.9)	3.5 (2.5 – 5.0)	5.5 (4.9 – 6.3)
<b>Vision Problems Not Corrected by Glasses/Contacts (age 0-17)</b>	8.9 (4.3 – 17.4)	9.2 (6.6 – 12.6)	4.8 (4.2 – 5.5)
<b>Bone, Joint, or Muscle Problems (age 0-17)</b>	9.3 (4.4 – 18.4)	11.2 (8.2 – 15.0)	9.3 (8.5 – 10.2)
<b>Brain Injury or Concussion (age 0-17)</b>	0.2 (0.0 – 0.6)	1.2 (0.7 – 2.0)	1.1 (0.9 – 1.4)

<sup>a</sup>Weighted percentiles and 95% confidence intervals are shown for each cell.

ADD = Attention Deficit Disorder    ADHD = Attention Deficit Hyperactivity Disorder

ODD = Oppositional Defiant Disorder