Title V National Performance and Outcome Measures: Key measures of child health, development and well-being

CityMatCH Leadership and MCH Epidemiology Conference
September 13, 2018

Maternal and Child Health Bureau (MCHB)
Health Resources and Services Administration (HRSA)
Outline

1. Provide a brief overview of the National Survey of Children’s Health (NSCH) design and operations.

2. Present findings from recent analyses of NSCH data related to five Title V National Performance and Outcome Measures:
   - Developmental screening (NPM-6);
   - Parental perception of children’s overweight/obese weight status (NOM-20);
   - Medical Home access (NPM-11);
   - System of care for CSHCN (NOM-17.2);
   - Measuring “Healthy and Ready to Learn” (NOM-13).

3. Accessing and Using the NSCH

4. Q & A
Overview

Redesigned National Survey of Children’s Health (NSCH)
NSCH/NS-CSHCN
History and Purpose

National Survey of Children’s Health
• Produce national and state-based estimates of the health and well-being of children, their families, and their communities.
• 2003, 2007, 2011-12

National Survey of Children with Special Health Care Needs
• Assess the prevalence and impact of special health care needs at both national and state levels and evaluate change over time.
• 2001, 2005-06, 2009-10

Common Elements:
• Historically directed and funded by HRSA MCHB and fielded by the CDC/NCHS as a module of SLAITS as a RDD telephone survey (landline + cell-phone samples);
• Produced both national and state-level estimates;
• Representative of children ages 0-17 years;
• All data are parent/caregiver reported.
NSCH/NS-CSHCN
History and Uses

• Title V Maternal and Child Health Services Block Grant needs assessments and funding applications
  • 18 National Performance and Outcome Measures

• State-level planning and program development

• Federal policy and program development

• Healthy People 2010/2020/2030 Objectives
  • 15+ measures

• Scientific Research
  • Conditions; Systems; State & Regional Analyses; Special Populations
Quick Facts:

Data collected:
2016 = June 2016-February 2017
2017 = August 2017-February 2018

Subjects: Non-institutionalized children ages 0-17 years

Respondents: Parents/guardians

Language: English & Spanish

Average Length: ≈ 30 minutes

Sample:
2016 = 50,212 nationally;
≈ 955 from each State & DC
2017 ≈ 21,500 nationally

Weighted Response & Interview Completion Rates:
2016 = 40.7% / 69.7%
2017 = not released yet

• Sponsored by the Health Resources and Services Administration’s Maternal and Child Health Bureau; conducted by the U.S. Census Bureau

• Annual, cross-sectional, address-based survey that collects information via the web and paper/pencil questionnaires.

• Designed to collect information on the health and well-being of children ages 0-17, and related health care, family, and community-level factors that can influence health, including:
  • Health conditions;
  • Health care access, utilization and quality;
  • Child and family health behaviors;
  • Neighborhood amenities and resources;
  • Sociodemographic characteristics.

• Provides both National and State-level estimates.
Design: Retained as much content and functionality as possible, while dramatically changing sampling strategy and mode of administration → An address-based, self-administered survey completed via web or paper by a parent/caregiver knowledgeable about the health and health care of one randomly selected child in the household.

Innovations:

→ Adaptive use of a new administrative flag to identify HH with children
  - INNOVATION: A prototype linkage between children & parents based on administrative records
  - GOAL: Improve efficiency by targeting households most likely to have children.
  - IMPACT: Reduced the number of households contacted by approximately half.

→ Adaptive design to differentially target “High” and “Low” Web HH
  - INNOVATION: Customized survey recruitment based on likelihood of web response.
  - GOAL: Reduce survey costs by customizing contact/recruitment to respondents.
  - IMPACT: 80% of 2016 responses were obtained online; important lessons learned for 2017.
NSCH 2016 Experiments
Incentives and Branding

1) Incentives: Addresses were divided equally between three incentive groups ($0, $2, $5) for the initial mailing.
   - Rationale: Test effectiveness of $5 and $2 incentives v. a $0 control;
   - Result: The $2 incentive produced topicals from an additional 3.3% of eligible households (29.7% to 33.0%); the $5 incentive produced topicals from another 3.3% (33.0% to 36.4%).

2) Branding: In the second mailing, some addresses received materials with Census branding, others with HRSA MCHB branding.
   - Rationale: Test the effectiveness of HRSA MCHB branding.
   - Result: Return rates were not significantly different between Census versus HRSA MCHB branding (36.4% vs 35.9%, respectively).
NSCH 2016 Experiments
Incentives and Branding

3) Topical Incentives: In the third topical mailing, 10% of addresses were assigned to the control and 30% each to $2, $5 and $10 treatment groups.

- **Rationale:**
  - Hail Mary attempt to increase response rates.
  - Test the effectiveness of Topical incentives.

- **Results:** Response by treatment group: $0 - 10.9%; $2 - 17.3%; $5 - 22.0%; $10 - 23.9%.
NSCH 2016
Reflections and Lessons Learned

1. 2016 was a “building” year to ensure the timely and accurate release of data for the nation and Title V partners.

2. The 2016 response rate was not as expected, but we identified a number of ways to improve and tighten the sampling and contact strategies that should drive response rates and representativeness in the right direction.
2017 NSCH Survey Summary
New Directions – Design and Administration

• **Launch** August 7, 2017 – Concluded February, 2018

• **Goal Sample** = 156,690 HH ⇒ 23,460 completed topicals

• **Operations:**
  - Improvement to identification of “High Paper” and “High Web” areas – 30% of households most likely to respond by paper received paper questionnaire with initial web invitation.
  - Contact strategy – Decreased time between contacts and transition to topical questionnaire; Utilized new capability to send pressure-sealed reminders.
  - Revision to stratum for households without child flag to improve efficiency – Increased resources targeted to households most likely to have a child.

Public data available October 1, 2018
1) Incentives: Addresses were divided between two incentive groups ($0 = 10\%, \$2 = 90\%) for the initial mailing.
   - Rationale: Monitor effectiveness of $2 incentives v. a $0 control;
   - Result: The $2 incentive was again more cost effective.

2) Infographic: Half of addresses received a one-page infographic in the initial mailing.
   - Rationale: Test the effectiveness of the infographic.
   - Results: The infographic wasn’t effective.

3) Topical Incentives: 90\% of addresses received a $2 incentive in topical mailings 7 and 8.
   - Rationale: Test effectiveness of $2 incentives v. a $0 control;
   - Result: The $2 incentive was cost effective.
Cognitive Testing completed Fall 2017
Launch June 29, 2018 – Conclude January, 2019
Goal Sample = 176,690 HH ⇒ 24,387 completed topicals
Operations:
- 45% of screeners will get $5 (rather than $2), 45% keep $2 and 10% keep $0;
- 80% of topicals will get $5;
- Add certified mail sticker to 50% of initial screener mailing and 50% of initial topical mailing;
- Add 20K addresses to sample.
<table>
<thead>
<tr>
<th>Measure #</th>
<th>Short Title</th>
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<tbody>
<tr>
<td>NPM-6</td>
<td>Developmental screening</td>
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<tr>
<td>NPM-9</td>
<td>Bullying</td>
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<tr>
<td>NPM-10</td>
<td>Adolescent well-visit</td>
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<td><strong>NPM-11</strong></td>
<td><strong>Medical home</strong></td>
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<td>NPM-12</td>
<td>Transition</td>
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<td>NPM-13</td>
<td>Preventive dental visit</td>
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<tr>
<td>NPM-14</td>
<td>Smoking – household exposure</td>
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<tr>
<td>NPM-15</td>
<td>Adequate insurance</td>
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<tr>
<td><strong>NOM-13</strong></td>
<td><strong>School readiness</strong></td>
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<tr>
<td>NOM-14</td>
<td>Tooth decay/cavities</td>
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<tr>
<td>NOM-17.1</td>
<td>CSCHN</td>
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<tr>
<td><strong>NOM-17.2</strong></td>
<td><strong>CSHCN Systems of care</strong></td>
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<tr>
<td>NOM-17.3</td>
<td>Autism/ASD</td>
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<tr>
<td>NOM-17.4</td>
<td>ADD/ADHD</td>
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<tr>
<td>NOM-18</td>
<td>Mental health treatment</td>
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<tr>
<td>NOM-19</td>
<td>Overall health status</td>
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<tr>
<td><strong>NOM-20</strong></td>
<td><strong>Obesity</strong></td>
</tr>
<tr>
<td>NOM-25</td>
<td>Forgone health care</td>
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Developmental Screening and Surveillance in Early Childhood: Results from the 2016 NSCH

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Health Resources and Services Administration (HRSA)

https://jamanetwork.com/journals/jamapediatrics/fullarticle/2686728
Background and Importance

- Approximately 12%-15% of children experience developmental delays or disabilities
  - Isolated delays in reaching developmental milestones
  - Functional impairments in vision or hearing
  - Diagnosable learning, emotional, and behavioral disorders
- Early identification and intervention are critical to promote healthy development and school readiness
- AAP has recommended universal screening since 2001 with specific algorithm in 2006 for screening at 9, 18, 24 or 30 months
- Many initiatives and campaigns
  - Commonwealth Fund’s Assuring Better Child Development
  - CDC “Learn the Signs, Act Early”; ACF “Birth to Five, Watch Me Thrive”
  - Medicaid/CHIP Core Quality Measure with Demonstration Grants
  - Title V MCH Block Grant Performance Measure
Objectives

• **Previous NSCH analyses indicated that**
  • Fewer than 1 in 5 children screened in 2007 (19.5%)
  • Increased to 1 in 3 by 2011/12 (30.8%)

• **Study Question:** Using the newly redesigned NSCH, what are the latest national estimates of developmental screening and surveillance, and individual and state variation, that may identify opportunities for improvement?
How is developmental screening (NPM-6) assessed?

National Survey of Children’s Health

DURING THE PAST 12 MONTHS, did a doctor or other health care provider have you or another caregiver fill out a questionnaire about specific concerns or observations you may have about this child’s development, communication, or social behaviors? Sometimes a child’s doctor or other health care provider will ask a parent to do this at home or during a child’s visit.

☐ Yes  ☐ No

If yes, and this child is 9-23 Months:

Did the questionnaire ask about your concerns or observations about: Mark ALL that apply.

☐ How this child talks or makes speech sounds?
☐ How this child interacts with you and others?

If yes, and this child is 2-5 Years:

Did the questionnaire ask about your concerns or observations about: Mark ALL that apply.

☐ Words and phrases this child uses and understands?
☐ How this child behaves and gets along with you and others?

Parent-completed questionnaire from a doctor or other health care provider

Two age-specific content components regarding
• language development
• social behavior
Measure Alignment for Developmental Screening

NPM-6

• **Denominator Change**
  • Previously children 10 months through 5 years with a health care visit in the past year
  • Now all children 9 through 35 months for alignment with
    • AAP Bright Futures – screening at 9, 18, 24 or 30 months
    • Healthy People 2020 – Maternal, Infant, Child Health Objective 29.1 Screening for Autism and Other Delays through 35 months
    • Medicaid/CHIP Core Quality Set – developmental screening in first three years of life

• **Alignment for consistency with guidelines and other measures; should be no change in practice**
Methods

• **Data Source:** 2016 National Survey of Children’s Health
  • Nationally and state representative parent-completed survey
  • Address-based mailed survey with web response option

• **Study Population:** Children 9-35 months

• **Outcomes:**
  • **Developmental Screening:** parent-completed standardized screening
  • **Developmental Surveillance:** elicitation of developmental concerns

• **Covariates:**
  • Child: age, sex, race/ethnicity
  • Family: household education/income, primary language, family structure
  • Health Care: insurance, preventive visit, medical home, CSHCN

• **Statistical Analysis:**
  • Unadjusted and adjusted associations with covariates
  • State-level estimates before and after adjustment
As reported by their parent/guardian(s) in 2016,

- 30.4% of children had received developmental screening
- 37.1% of children had received developmental surveillance

Past year receipt

- Developmental Screening: 30.4%
- Developmental Surveillance: 37.1%
Variation by Child, Family, and Health Care Factors

- Developmental screening ranged from 9.2% among children without a preventive medical visit to 39.1% among CSHCN.
- After adjustment, factors that remained significantly related to screening included primary language, family structure, highest household education, medical home, preventive visit, child health status, and CSHCN status.

### Adjusted Rates of Developmental Screening

<table>
<thead>
<tr>
<th>Factor</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Primary Language</td>
<td>32.9%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Preventive Medical Visit</td>
<td>32.6%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Medical Home</td>
<td>35.1%</td>
<td>26.3%</td>
</tr>
</tbody>
</table>
State-level Variation in Developmental Screening

- Child, family, health care factors explained only 4% of variation
Conclusions and Implications

• Addressing language barriers and promoting the medical home model and adherence to well child visit schedule may improve screening rates

• Despite low overall rates, state variation underscores the promise and potential for quality improvement efforts

• State differences were not explained by child, family, and health care characteristics, suggesting a role for unmeasured policies and practices
  • Top performers (OR, CO, MN, NC, AK, MT, MA, MD) located in all regions show that improvement is possible across the country

• Systems-level quality improvement efforts, building upon the medical home, will be necessary to achieve universal screening
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Prevalence of No Parental Concern about Weight among 10-17 Year-Old Children with Overweight/Obesity

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Background

- Children with overweight/obesity (OV/OB) are at higher risk of adverse health outcomes, including elevated blood pressure/cholesterol, impaired glucose tolerance, type 2 diabetes, and other health conditions.

- Parents of children with overweight/obesity who do not recognize their child as OV/OB and/or at-risk for possible future health complications may be less likely to intervene by promoting healthier weight-related behaviors.

- Only three nationally representative studies have examined parental perceptions of children’s weight in the U.S.; none of these studies focused specifically on parental concerns about weight.
Objectives

Use nationally representative data to:

- Estimate the prevalence of no reported parental concerns about child weight among children with overweight/obesity (OV/OB)

- Identify correlates of no reported parental concerns about child weight among children with OV/OB
  - Child characteristics
  - Family characteristics
  - Parent characteristics
  - Child health and behavior
  - Child health care
Survey Sample and Measures

- Data from a subsample of 26,094 children 10-17 years of age in the 2016 National Survey of Children’s Health (NSCH)

- Dichotomous Outcome Measure: Parental concern about child’s weight
  - 1 = “No, I’m not concerned”
  - 0 = “Yes, it’s too high” AND “Yes, it’s too low “

- Independent Measures:
  - Healthy weight (BMI-for-age ≥5<sup>th</sup> to <85<sup>th</sup> percentile)
  - Overweight (BMI-for-age ≥85<sup>th</sup> to <95<sup>th</sup> percentile)
  - Obesity (BMI-for-age ≥95<sup>th</sup> percentile)

- Other Potential Correlates
  - Child characteristics - Age, sex, race/ethnicity, birthweight
  - Parent characteristics - Parent physical and emotional health, parent education
  - Family characteristics - Family structure, household poverty
  - Child health and behavior - Difficulty breathing, physical pain, TV watching, use of recreational computer, cell phone, handheld video game or other electronic device, physical activity, bullying victimization, difficulty making/keeping friends
  - Child health care - Having a usual source of preventive care/personal doctor or nurse and receipt of preventive care in the past 12 months
Analytic Methods

- Prevalence rates (weighted %):
  - Healthy weight, Overweight, Obesity
  - No reported parental concern about weight among children with overweight/obesity

- Adjusted associations (Multivariable Logistic Regression) with No Parental Concern:
  - Overweight and obesity
  - Potential correlates among child, parent and family characteristics, child health and behavior, and child health care
Prevalence Rates

Unadjusted Prevalence Rates (95% Confidence Intervals) among 10-17 Year-olds

- Healthy Weight: 63% (61% - 64%)
- Overweight: 15% (14% - 16%)
- Obesity: 16% (15% - 17%)
- No Parental Concern about Weight among Children with Overweight or Obesity: 64% (61% - 67%)
### Adjusted Rate Ratios (95% Confidence Interval) and Percentages for No Parental Concern about Child's Weight among Children with OV/OB

<table>
<thead>
<tr>
<th>Category</th>
<th>Adjusted %</th>
<th>Adjusted Rate Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight vs Obese</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male vs Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other vs Hispanic</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OV</td>
<td>79%</td>
<td>1.63 (1.48 – 1.79)</td>
</tr>
<tr>
<td>OB</td>
<td>49%</td>
<td>1.00 (1.01 – 1.38)</td>
</tr>
<tr>
<td>Male</td>
<td>68%</td>
<td>1.18 (1.09 – 1.28)</td>
</tr>
<tr>
<td>Female</td>
<td>58%</td>
<td>1.18 (1.09 – 1.28)</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>63%</td>
<td>NS</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>71%</td>
<td>NS</td>
</tr>
<tr>
<td>Other</td>
<td>60%</td>
<td>NS</td>
</tr>
<tr>
<td>Hispanic</td>
<td>60%</td>
<td>NS</td>
</tr>
</tbody>
</table>

Birthweight, family structure, poverty, education, and parent physical and emotional health were not significant.
TV/video watching, recreational electronic device use, difficulty making/keeping friends, difficulty with breathing and physical pain were not significant.
Associations – Child health care

| No Parental Concern about Child's Weight among Children with Overweight/Obesity |
|-------------------------------------------------|-----------------|
| **Adjusted Rate Ratio** | **Adjusted Percentage** |
| 1.25 (1.04 – 1.50) | 78.2% |
| 1.00 (Reference) | 62.5% |

Had **NO** usual source of preventive care or personal doctor/nurse and **DID NOT** receive preventive care in the past 12 months

**VS**

Had usual source of preventive care or personal doctor/nurse and **received** preventive care in the past 12 months
Summary and Conclusion

Summary:

- Approximately 30% of children 10-17 years of age were affected by overweight or obesity (OV/OB).
- A majority of parents (63%) of children with OV/OB reported having no concern about the child’s weight.
- Prevalence of parent-reported concern about the weight of their child with OV/OB:
  - more likely among children with obesity vs overweight
  - more likely if a child with OV/OB was male or Non-Hispanic Black
  - more likely if a child with OV/OB was bullied
  - more likely if a child with OV/OB was physically inactive.
  - more likely if a child with OV/OB had a usual source of preventive care or personal doctor/nurse and received preventive care in the past 12 months.

Conclusion:

- This research identified an important link to potentially improving parental awareness of the health consequences of OV/OB via a Primary Care Provider with whom a family has an ongoing care relationship.
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Systems of Care for CSHCN

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Children with Special Health Care Needs

• **Children with Special Health Care Needs (CSCHCN)**
  "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"

• **Identified using the CSCHN Screener**
  • Screener uses five items on current health status and needs
  • Parent-reported
  • Included in the initial NSCH household screener

• **19.4% of all children (2016)**
Systems of Care: Components

• NOM 17.2: Percent of CSHCN receiving care in a well-functioning system

• Components of a well-functioning system include:
  • Families are partners in health care decision making
  • Children receive care within a medical home
  • Children have adequate private and/or public insurance
  • Children are screened early and continuously for special health care needs
  • Community-based services are organized so families can access them
  • Youth receive services necessary to make transitions to adult health care
Families Partner in Decision Making

- Components include:
  - Doctors usually or always discuss range of options
  - Doctors usually or always make it easy to raise concerns or disagree
  - Doctors usually or always work with family to make decisions

**PROPORTION OF CSHCN WITH NEEDED HEALTH CARE DECISIONS WHOSE FAMILIES PARTNER IN DECISION MAKING BY HOUSEHOLD INCOME, 2016 NSCH**

- FLP < 100%: 77.7%
- 100-199%: 80.6%
- 200-399%: 85.3%
- >=400%: 89.7%
- All CSHCN: 84.3%
Receives Care in a Medical Home

• **Components include:**
  - Usual source of care
  - Personal doctor or nurse
  - Obtaining referrals, when needed
  - Effective care coordination, when needed
  - Family-centered care

• **Overall, 43.2% of CSHCN received care in a Medical Home (2016)**
Adequate Health Insurance

PROPORTION OF CSHCN, 0-17 YEARS, WITH CONSISTENT AND ADEQUATE HEALTH INSURANCE COVERAGE

- Consistent Coverage for Past 12 Months: 93.3%
- Adequate Coverage of Needed Providers: 94.6%
- Adequate Coverage of Needed Services: 91.1%
- Reasonable Costs: 73.8%
- Consistent and Adequate Coverage: 66.1%
Early and Continuous Screening & Access to Community-based Services

• Early and Continuous Screening
  • Child had a routine preventive medical care visit in past year (ages 0-17)
  • Child had a routine preventive dental care visit in past year (ages 1-17)
  • 76.6% of CSHCN achieved this component (2016)

• Community-based services are organized so families can access them
  • Needed care was received
  • Child’s family was never or only sometimes frustrated when trying to get services for the child
  • 65.3% of CSHCN achieved this component (2016)
Transition to Adult Health Care

- Components updated in 2016 – Now include 4 items
  - A) “DISCUSS SHIFT TO ADULT PROVIDER” - Do any of this child’s doctors or other health care providers treat only children? (Yes, No) [If yes]: Have they talked with you about having this child eventually see doctors or other health care providers who treat adults?
  - B) “FUTURE HEALTH CARE NEEDS” - Has this child’s doctor or other health care provider actively worked with this child to: Understand the changes in health care that happen at age 18.
  - C) “SELF-CARE SKILLS” - Has this child’s doctor or other health care provider actively worked with this child to: Gain skills to manage his or her health and health care.
  - D) “TIME ALONE WITH PROVIDER” - At his or her last preventive check-up, did this child have a chance to speak with a doctor or other health care provider privately, without you or another adult in the room?

- Component is achieved if A and (B and/or C) and D = yes

16.5% of CSHCN ages 12-17 years achieved this component (2016)
Summary Measure

- Overall, 16.5% of CSHCN receive care in a well-functioning system
- Range Across States: 9.3% to 26.0%
Additional NSCH Items on the *Health* of CSHCN

- Food Insufficiency
- Neighborhood safety
- Environmental exposures
- Adverse Childhood Experiences
- Bullying
- School Readiness
Contact Information

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Access to the Medical Home among Children with and without Special Health Care Needs

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Background

- The medical home is a model of care delivery that is
  - Accessible
  - Family-centered
  - Continuous
  - Comprehensive
  - Coordinated
  - Compassionate
  - Culturally effective
Importance

• The medical home is vital for the care of children with special health care needs (CSHCN), as they use more health care services and have more unmet health needs than other children.

• The model has also become widely accepted as an effective health care delivery model for all children, not just CSHCN.

• The 2016 National Survey of Children’s Health represents a new set of baseline data for medical home
Objectives

1. Provide updated estimates of medical home access among children with and without SHCN using the new National Survey of Children’s Health

2. Examine of the sociodemographic and health factors associated with medical home access in each group.
Methods

• **Data:** 2016 NSCH.

• **Study Sample:** 50,177 children age 0-17 years with non-missing medical home status.

• **Outcome:** Parent/caregiver reported access to the medical home

• **Sociodemographic and Health Covariates:**
  • Child age, sex, race/ethnicity, insurance coverage
  • Primary language spoken at home, household income, and household education.
  • For CSHCN, included a count of the number of qualifying SHCN screening items (1-5).

• **Analyses:** Bivariate analyses and logistic regression. All analyses were stratified by CSHCN status and survey weighted.
Constructing Medical Home

- In the NSCH, medical home is a composite measure based on five components, constructed from a total of 15 survey items. The five components include:
  - having a usual source of care
  - having a personal doctor or nurse
  - receiving care that is family-centered
  - receiving needed referrals
  - receiving needed care coordination
Principle Findings

- 43% of CSHCN and 50% of non-CSHCN had a reported medical home in 2016
Adjusted Results

- Medical home attainment varied significantly by sociodemographic characteristics among both children with and without SHCN.
  - Sociodemographic characteristics were not consistently associated with having a reported medical home among CSHCN.

- Medical complexity of CSHCN was associated with attainment of medical home. Compared to CSHCN with one qualifier for SHCN, those with five qualifiers were 21.0 percentage points (p<0.000) less likely have a reported medical home.
Adjusted Results: Children with SHCN

Average Marginal Effects of Selected Sociodemographic Characteristics On Medical Home among CSHCN

<table>
<thead>
<tr>
<th>Category</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>6-11 years</td>
<td>-0.001</td>
</tr>
<tr>
<td>12-17 years</td>
<td>-0.005</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.027</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>-0.064</td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td></td>
</tr>
<tr>
<td>Any other language</td>
<td>-0.126</td>
</tr>
<tr>
<td>Any public</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>&lt;100%</td>
<td>-0.112</td>
</tr>
<tr>
<td>100%-200%</td>
<td>-0.047</td>
</tr>
<tr>
<td>200%-400%</td>
<td>-0.05</td>
</tr>
<tr>
<td>High school</td>
<td>-0.037</td>
</tr>
<tr>
<td>More than high school</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-0.011</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-0.102</td>
</tr>
<tr>
<td>5</td>
<td>-0.206</td>
</tr>
</tbody>
</table>

*p<0.05  **p<0.01  ***p<0.001

Reference categories: Sex=female, Age=0-5 years, Race/ethnicity=non-Hispanic white, Primary language spoken at home=English, Insurance=uninsured, Household income=>400% FPL, Household education=Less than high school, Qualifiers for CSHCN=1
Adjusted Results: Children without SHCN

Average Marginal Effects of Selected Sociodemographic Characteristics
On Medical Home among Non-CSHCN

-0.15 -0.10 -0.05 0.00 0.05 0.10 0.15 0.20 0.25

<table>
<thead>
<tr>
<th>Category</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-0.001</td>
</tr>
<tr>
<td>6-11 years</td>
<td>-0.032 *</td>
</tr>
<tr>
<td>12-17 years</td>
<td>-0.041 **</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.113 ***</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>-0.116 ***</td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td>-0.097 ***</td>
</tr>
<tr>
<td>Any other language</td>
<td>-0.07 **</td>
</tr>
<tr>
<td>Any public</td>
<td>0.174 ***</td>
</tr>
<tr>
<td>Private</td>
<td>0.228 ***</td>
</tr>
<tr>
<td>&lt;100%</td>
<td>-0.09 ***</td>
</tr>
<tr>
<td>100%-200%</td>
<td>-0.107 ***</td>
</tr>
<tr>
<td>200%-400%</td>
<td>-0.063 ***</td>
</tr>
<tr>
<td>High school</td>
<td>-0.008</td>
</tr>
<tr>
<td>More than high school</td>
<td>0.091 *</td>
</tr>
</tbody>
</table>

*p<0.05  **p<0.01  ***p<0.001

Reference categories: Sex=female, Age=0-5 years, Race/ethnicity=non-Hispanic white, Primary language spoken at home=English, Insurance=uninsured, Household income>=400% FPL, Household education=Less than high school
Conclusions

• There is still room for improvement in medical home attainment for both children with and without SHCN.

• Sociodemographic and health-related disparities in attainment of the medical home persist.

• The factors associated with reported medical home were not consistent between CSHCN and non-CSHCN.
Contact Information

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Measuring “Healthy and Ready to Learn”

Jessie Buerlein, MSW
Office of Policy and Planning
Maternal and Child Health Bureau (MCHB)
Health Resources and Services Administration (HRSA)
### Healthy and Ready to Learn

#### Timeline & Major Activities: 2012-2015

<table>
<thead>
<tr>
<th>Event</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSCH/NS-CSHCN pulled from field for major redesign</td>
<td>2012</td>
</tr>
<tr>
<td>Title V MCH Block Grant Performance Measure redesign</td>
<td>2013</td>
</tr>
<tr>
<td>5 Domains from National School Readiness Indicators Initiative</td>
<td>2013</td>
</tr>
<tr>
<td>- physical well-being and motor development;</td>
<td></td>
</tr>
<tr>
<td>- social and emotional development;</td>
<td></td>
</tr>
<tr>
<td>- approaches to learning;</td>
<td></td>
</tr>
<tr>
<td>- language development (including early literacy); and</td>
<td></td>
</tr>
<tr>
<td>- cognition and general knowledge.</td>
<td></td>
</tr>
<tr>
<td>Other surveys (+ previous NSCH/NS-CSCHCN) (2013-2014)</td>
<td></td>
</tr>
<tr>
<td>- National Household Education Survey – School Readiness</td>
<td></td>
</tr>
<tr>
<td>- Early Childhood Longitudinal Study</td>
<td></td>
</tr>
<tr>
<td>- Early Development Instrument and Australian Early Development Instrument</td>
<td></td>
</tr>
<tr>
<td>- National Longitudinal Survey of Children and Youth</td>
<td></td>
</tr>
<tr>
<td>- Social Competence Scale</td>
<td></td>
</tr>
<tr>
<td>- Emotion Regulation Checklist</td>
<td></td>
</tr>
<tr>
<td>- Etc...</td>
<td></td>
</tr>
</tbody>
</table>
Healthy and Ready to Learn
Timeline & Major Activities: 2012-2015

- Input from Technical Expert Panel (2013-2014)
  - Expert meeting December 2014 w/ Dept. of Education, ACF, Child Trends and others to review/edit items prior to Pretest
- Cognitive and Usability Testing (2014)
- National Pretest (2015)
- 2016 NSCH Production Survey (2016)

22 items added to the NSCH with a total of 25 identified throughout the survey
Healthy and Ready to Learn
Timeline & Major Activities: Work with Child Trends using 2016 data

**Item Level Analyses**
- Distribution of data
- Concurrent validity
- Can we use the item to distinguish, in a meaningful way, between children?
- Outcome: identification of 18 items that can be used and confirmation of possible changes.

**Confirmatory Factor Analyses**
- Domain specific measures
- Composite measure
- Can the items (overall and in subsets) be used to meaningfully measure underlying constructs of health and ready to learn?
- Outcome: 4 Domain-Specific + 1 Summary Measure
  1) Early learning skills;
  2) Self-regulation;
  3) Socio-Emotional competence;
  4) Physical Health and Motor Development.

**Development of Domain Indices**
- Standardize item scales
- Account for differences by age

Can items be standardized to create meaningful summary scores?

Outcome: Defined 3 age-specific levels of "readiness" for each domain:
1) At-Risk
2) Needs Support
3) On track
Proportion of U.S. Children Aged 3-5 Scoring “On-Track,” “Needs Support,” or “At-Risk” for Each Healthy and Ready to Learn Domain, 2016 NSCH

- **Early Learning Skills**: 58.4% On-Track, 32.7% Needs Support, 8.8% At Risk
- **Self Regulation**: 78.4% On-Track, 18.7% Needs Support, 3.0% At Risk
- **Social-Emotional Development**: 82.0% On-Track, 16.2% Needs Support, 1.8% At Risk
- **Physical Health & Motor Skills**: 86.3% On-Track, 11.9% Needs Support, 1.8% At Risk
Healthy and Ready to Learn
Timeline & Major Activities: Work with Child Trends using 2016 data

Proportion of U.S. Children Aged 3-5 years Scoring “On-Track,” “Needs Support,” or “At-Risk” for Healthy and Ready to Learn, 2016 NSCH

- On Track: 41.8%
- Needs Support: 48.9%
- At Risk: 9.2%

Proportion of U.S. Children Aged 3-5 years Scoring “On-Track" in 0-4 domains of Healthy and Ready to Learn, 2016 NSCH

- On-track in 0-1 Domains: 9.2%
- On-track in 2 Domains: 15.3%
- On-track in 3 Domains: 33.6%
- On-track in 4 Domains: 41.8%
Healthy and Ready to Learn
Timeline & Major Activities: 2017-2018

Refined/revised items for 2017 based on preliminary analyses (2016)
- Added additional response option (5 options v. 4 options) where feasible and appropriate.
- Added item on color recognition to expand Cognition & General Knowledge items.

Added items for 2018 based on Expert input (2017)
- 11 items added on Early Language Development for children 12 mo. and older

Conducted cognitive and usability testing of entire NSCH (2017)

Released/awarded validation contract (2018)

Convened Expert Panel (2018)

Published manuscript in Child Indicators Research (2018)
Accessing & Using the NSCH
2017 and 2018 NSCH Surveys

Next Steps

2017 NSCH

✓ Fielded August 2017-January 2018.
✓ Expected public release October 1, 2018.
✓ Includes new content sponsored by the EPA on mold and pesticide exposure + military service and deployment of either/both primary caregivers.

2018 NSCH

✓ Cognitive interviews conducted Fall 2017 to inform content and formatting.
✓ Launched late June 2018.
Using the 2016 NSCH
MCHB NSCH Website

National Survey of Children's Health

The National Survey of Children's Health, funded and directed by HRSA MCHB, provides national and state level estimates of key measures of child health and well-being. These data are essential to understanding the health status and health services needs of children across the nation and in your state and community.

Contact Us
Michael D. Kogan, PhD,
Director, MCHB Office of Epidemiology and Research
MKogan@hrsa.gov

What’s New
- Access the Data

Survey
- Surveys, Datasets, and related documents
- Publications/Supporting documents

Previous Surveys
National Survey of Children's Health (NSCH)
National Survey of Children with Special Health Care Needs (NS-CSHCN)
Using the 2016 NSCH Data Resource Center

Making data accessible to all. It’s your data…your story!
National Survey of Children's Health (NSCH)

The National Survey of Children’s Health (NSCH) is sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration, an Agency in the U.S. Department of Health and Human Services.

The NSCH examines the physical and emotional health of children ages 0-17 years of age. Special emphasis is placed on factors related to the well-being of children, including access to and quality of health care, family interactions, parental health, school and after-school experiences, and neighborhood characteristics.

The NSCH is also designed to assess the prevalence and impact of special health care needs among children in the US and explores the extent to which children with special health care needs (CSHCN) have medical homes, adequate health insurance, access to needed services, and adequate care coordination. Other topics may include functional difficulties, transition services, shared decision-making, and satisfaction with care. Information is collected from parents or guardians who know about the child’s health.

Latest

NSCH Data  FAQs

2016 NSCH Data Release
Access the 2016 public use microdata files.

Browse NSCH Data
Access the Data Resource Center (DRC) to browse NSCH data
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