Children with Special Health Care Needs in Florida: Examining Health and Well-Being from A Life Course Approach

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Background

- Children with special health care needs (CSHCN) experience a broad range of chronic health conditions that vary in complexity, level and types of functional limitations, comorbidities, and need for specific types of health services

- This diversity presents a challenge for public health agencies charged with developing and implementing community-based systems of care that are responsive to the needs of CSHCN

- A life course approach offers a useful means to address the diverse health patterns of CSHCN

Purpose

- The present study draws on key concepts of the life course approach to establish a descriptive profile of CSHCN in Florida, examine variations in the health and well-being of Florida's CSHCN population, and discuss how life course research can inform Florida's systems of care for CSHCN

Methods

- Cross-sectional data on Florida children 0–17 years of age available in the 2011–2012 National Survey of Children's Health (NSCH) were analyzed (N=1,855)

- CSHCN were identified in the NSCH with the *CSHCN Screener*

- Descriptive analyses and measures of association were produced using survey variables that represent key concepts of a life course approach:
  - Timing and timeline
  - Environment
  - Equity

- Comparisons between CSHCN and non-CSHCN were made whenever possible

- StataSE software, version 14 (StataCorp, College Station, TX) was used for all analyses

- Weighted, population-based estimates representative of non-institutionalized Florida children are presented

Results

- In line with national estimates, nearly 1 in 5 Florida children **(19.6%)** qualify as CSHCN **(Table 1)**

- Gender, age, family structure, and household language vary by CSHCN status in Florida **(Table 1)**

- With regard to environmental factors, CSHCN experience a significantly higher average number of missed school days **(5.6 vs. 2.8)** and ACEs **(1.3 vs. 0.8)** compared to non-CSHCN **(Table 2)**

Table 1. Socio-demographic Characteristics of Florida children by CSHCN status

	CSHCN 19.6 (17.0–22.3)	Non-CSHCN 80.4 (77.7–82.9)
Race/ethnicity		
White, non-Hispanic	46.1 (38.9–53.6)	41.8 (38.2–45.4)
Black, non-Hispanic	23.1 (16.9–30.7)	19.0 (15.9–22.4)
Hispanic	21.9 (16.3–28.6)	29.9 (26.0–32.8)
Other non-Hispanic	6.9 (3.9–12.0)	7.6 (0.6–9.7)
Gender		
Male	58.4 (50.8–65.6)	49.3 (45.6–53.1)*
Female	40.4 (33.3–48.0)	50.5 (46.8–54.2)
Age (years)†	9.8 ±0.3	8.4 ±0.2*
Household income (% federal poverty level [FPL])		
400% FPL	22.7 (17.6–28.9)	24.5 (21.8–27.4)
200–399% FPL	29.6 (23.2–36.9)	24.4 (21.5–27.6)
100–199% FPL	23.7 (18.0–30.6)	23.9 (20.7–27.3)
0–99% FPL	23.9 (17.6–31.6)	27.2 (23.8–30.9)
Health insurance coverage		
Private	46.8 (39.5–54.3)	52.5 (48.9–56.2)
Public	44.3 (36.9–51.9)	36.3 (32.7–40.1)
Uninsured	8.3 (4.5–14.5)	9.8 (7.6–12.5)
Highest parent education		
High school	24.8 (18.4–32.6)	21.1 (17.9–24.7)
< High school	14.2 (9.7–20.3)	15.7 (13.0–18.9)
> High school	60.9 (53.2–68.2)	63.2 (59.4–66.9)
Household employment		
Employed	79.1 (72.2–84.2)	80.3 (77.0–83.3)
Unemployed	17.9 (12.7–24.6)	17.4 (14.6–20.6)
Family structure		
2 parent (bio/adoptive)	48.3 (40.9–55.7)	63.4 (57.0–67.0)*
2 parent (step-parent)	8.1 (4.6–13.9)	7.2 (5.5–9.6)
Single mother	32.9 (26.0–40.6)	19.8 (16.8–23.2)
Other	9.8 (6.2–15.1)	7.9 (6.0–10.4)
No. children in household		
1 child	25.1 (19.9–31.2)	27.0 (24.2–30.1)
>1 child	74.9 (68.7–80.1)	72.9 (69.9–75.8)
Household language		
English	90.1 (84.1–94.0)	82.6 (79.5–85.4)*
Other language	9.9 (6.0–15.9)	17.3 (14.6–20.5)

Weighted % and 95% confidence intervals (CI)
† Weighted mean ± standard error (SE)
*p<0.05 based on χ² test for categorical variables and *t* test for continuous variables

### Table 2. Environment Missed school days and ACEs by CSHCN status in Florida

	CSHCN Mean ±SE	Non-CSHCN Mean ±SE	Difference	*t*
Missed School Days†	5.6 ±0.5	2.8 ±0.2	2.8*	5.0
Number of ACEs	1.3 ±0.1	0.8 ±0.0	0.5*	3.7

*p<0.05 based on *t* tests
†Children 6-17 years of age

Adverse Childhood Experiences (ACEs) are psychosocial risk factors that affect children, including parental separation or divorce; death of a parent or guardian; socioeconomic hardship; domestic violence; neighborhood violence; substance abuse in the household; parental incarceration; familial mental illness; racial discrimination

Figure 1. Timing and Timeline Variability Across Age in the Prevalence of CSHCN

Prevalence of CSHCN — Linear (Prevalence of CSHCN)
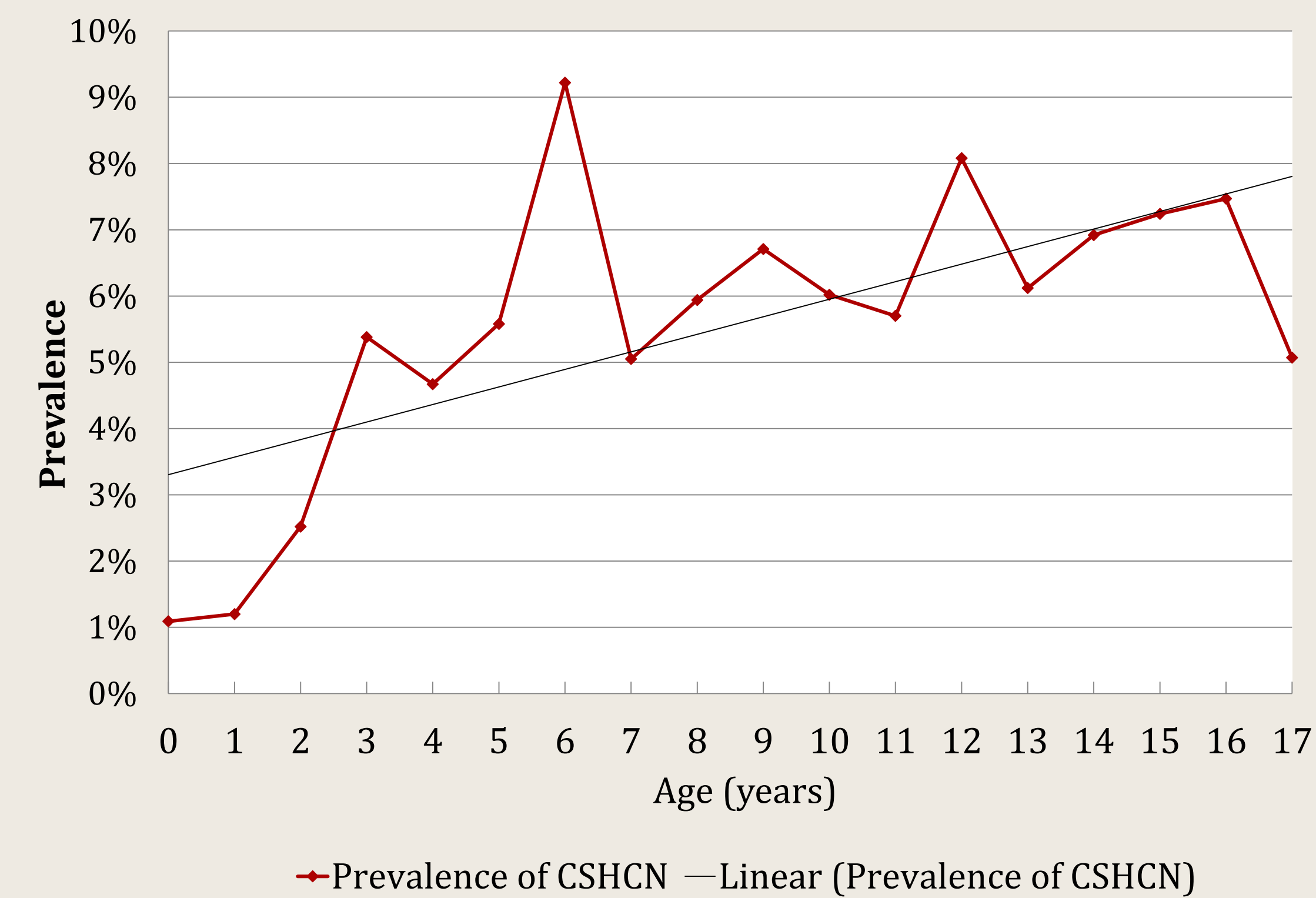
The prevalence of CSHCN generally increases with age (Figure 1)

- Fluctuation occurs between the ages of 3 and 12, with the highest prevalence at age 6. Prevalence then begins to level off around age 14, and sharply decreases after age 16. This latter decrease may be attributable to transitions to adult care

- Variability in the type of needs CSHCN experience was relatively stable with age (results not shown)

Figure 2. Equity Criteria for Quality Health Care by CSHCN status
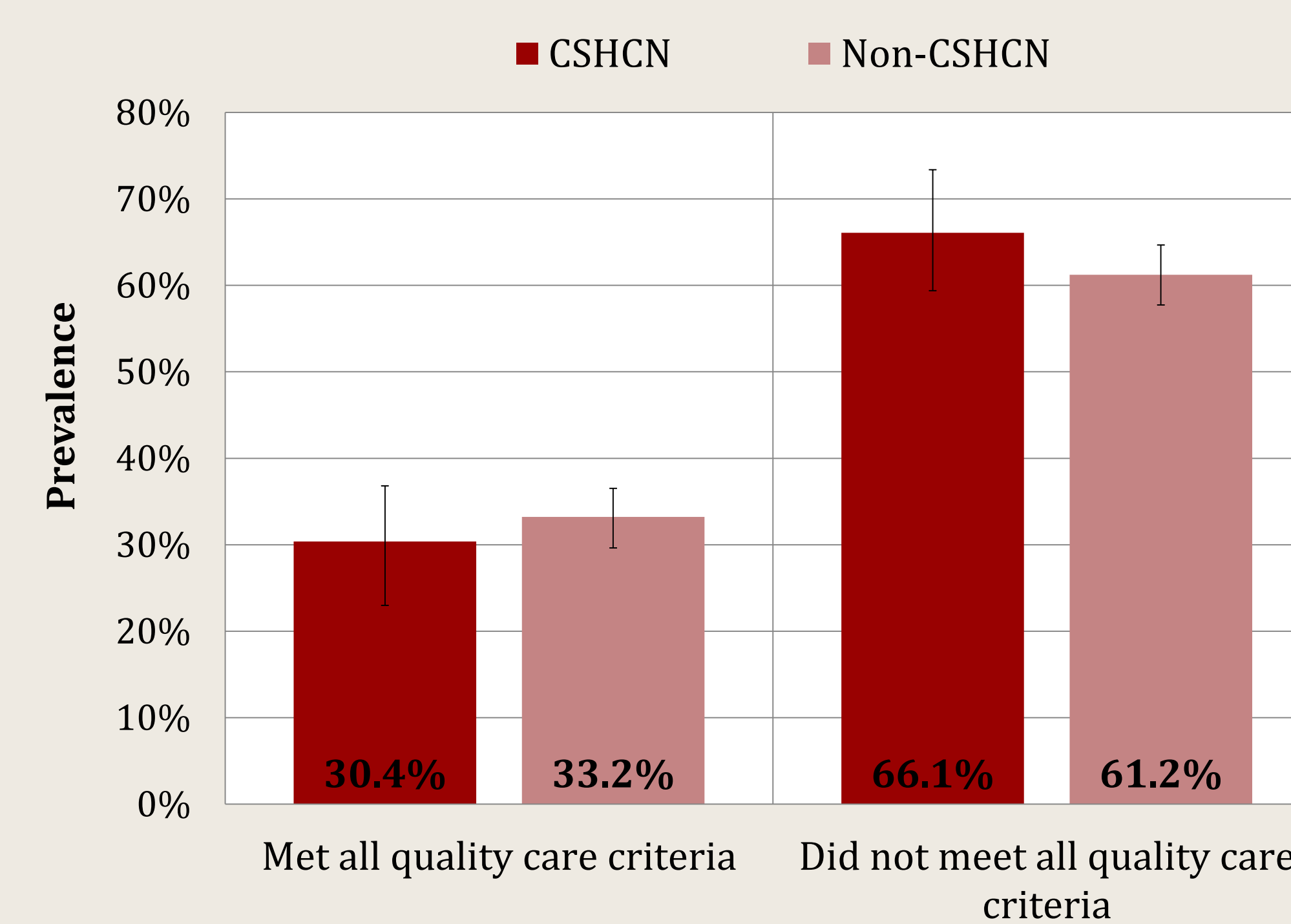
CSHCN and non-CSHCN do not differ in the prevalence of quality health care (Figure 2)

- Quality health care includes current health insurance; coordinate, comprehensive, and culturally effective care within a medical home; and at least one preventive medical care visit in the past 12 months

- 30.4% of CSHCN met the criteria for quality health care compared to 33.2% of non-CSHCN **(p=0.35)**

Conclusions

- A life course approach provides a more complete picture of Florida's CSHCN population and describes the health and well-being of these children across age and in comparison to non-CSHCN

- This approach also offers an informative framework that can be used to help Florida develop and implement community-based systems of care that adequately address the diverse and dynamic health patterns of CSHCN

Recommendations

- The findings presented here yield several examples of recommendations for integrating a life course approach into Florida's community-based systems of care for CSHCN:

  - Ensure timely identification and care for CSHCN, with an emphasis on appropriate transition services and lifelong health care

  - Increase the focus on social determinants of health, including environmental factors that may impact CSHCN. For example, systems of care that work to recognize and address family stress and provide support services to increase resilience and agency may decrease childhood exposure to ACEs

  - Encourage preventative health care visits and assure universal access to medical homes and health services

  - Collect longitudinal data on CSHCN to allow for a baseline on health and well-being from birth through adulthood and to assess the differential impact of specific interventions for Florida's special needs population

  - Integrate a life course approach to the care of all children. A life course approach can be used to examine risk and protective factors that otherwise healthy children have for developing specific health conditions and functional limitations later in life

Limitations

- The cross-sectional nature of the NSCH data limits the ability to conduct life course analyses; however, examining measures as snapshots in time provides an informative and useful glimpse into the life-course of CSHCN

- Small cell sizes at the state-level limit the type of analyses that could be done

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