



Age Group Differences In Healthcare Access For People With Disabilities: Are Young Adults At Increased Risk?

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Abstract

Purpose: The purpose of this study was to quantify and describe the population of young adults with disability in Florida and to assess correlates of healthcare access in this population in contrast with adults belonging to middle and older age groups. **Methods:** This study analyzed data of 36,704 respondents obtained from the 2007 Florida Behavioral Risk Factor Surveillance System. A test for homogeneity of the risk difference across the three age groups was conducted using inverse weighting to adjust for confounding and selection bias. **Results:** The adjusted model for risk difference of not being able to see a doctor in the past 12 months because of cost was significantly heterogeneous across age groups (x^2F value = 12.40, $p < .01$). The risk difference between population of young adults with disability and their age peers decreased significantly across the groups. The risk difference was 15.5% for those aged 18 –29, 11.9% for those aged 30 – 64, and 2.1% for those aged 265. **Conclusions:** This article quantifies the differences in risk and access to health care between young adults with and without disability, using population-based data. It provides indirect evidence of the widely held belief that there is a problem in healthcare transition in the United States warranting continued investigation and intervention.

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A B S T R A C T

Purpose: The purpose of this study was to quantify and describe the population of young adults with disability in Florida and to assess correlates of healthcare access in this population in contrast with adults belonging to middle and older age groups.

Methods: This study analyzed data of 36,704 respondents obtained from the 2007 Florida Behavioral Risk Factor Surveillance System. A test for homogeneity of the risk difference across the three age groups was conducted using inverse weighting to adjust for confounding and selection bias.

Results: The adjusted model for risk difference of not being able to see a doctor in the past 12 months because of cost was significantly heterogeneous across age groups ($\chi^2_{2,df}$ F value = 12.40, $p < .01$). The risk difference

between population of young adults with disability and their age peers decreased significantly across the groups. The risk difference was 15.5% for those aged 18–29, 11.9% for those aged 30–64, and 2.1% for those aged ≥65.

Conclusions: This article quantifies the differences in risk and access to health care between young adults with and without disability, using population-based data. It provides indirect evidence of the widely held belief that there is a problem in healthcare transition in the United States warranting continued investigation and intervention.

Today, thanks to the combined efforts of medicine, public health, and policy children with chronic conditions or disability live to adulthood, often with a life span similar to the general population. Each year nearly 500,000 U.S. children with disability become adults [1], many of whom have increased or specialized needs, and as they grow older they must transition from a pediatric to an adult

healthcare system. This is generally described as healthcare transition. Although there are several other formal definitions of healthcare transition, the definition used here is by Blum et al: “the purposeful, planned process that addresses the medical, psychosocial, educational, and vocational needs of youth and young adults with disabilities as they move from child-centered to adult-oriented healthcare systems” [2].

Our purpose was to quantify and describe the population of young people with disability (PWD) in Florida and to assess correlates of healthcare access in this population in contrast with adults belonging to middle and older age groups. A priori, we expected that young PWD would report poorer access to health

Table 1
 Characteristics of 36,704 Floridians by age and disability status, 2007 Florida Behavioral Risk Factor Surveillance System

Variable	Weighted % (95% confidence interval)					
	Age: 18–29 (n = 2,734)		Age: 30–64 (n = 22,050)		Age: 65+ (n = 11,920)	
	Disability n = 281	No disability n = 2,453	Disability n = 5,588	No disability n = 16,462	Disability n = 4,221	No disability n = 7,699
Male	54.7 (42.7, 66.7)	49.0 (44.5, 53.5)	46.6 (43.4, 49.7)	49.9 (48.1, 51.7)	45.0 (41.8, 48.2)	43.6 (41.4, 45.8)
Race/ethnicity ^a						
White, non-Hispanic	48.9 (36.7, 61.1)	51.6 (47.1, 56.2)	71.3 (68.2, 74.4)	65.3 (63.5, 67.0)	82.1 (79.2, 85.2)	84.5 (82.7, 86.5)
Black, non-Hispanic	18.5 (9.1, 27.9)	15.1 (11.8, 18.5)	9.3 (7.4, 11.1)	9.2 (8.1, 10.2)	7.0 (5.0, 8.9)	3.6 (2.9, 4.3)
Hispanic	20.1 (7.4, 32.9)	26.6 (22.4, 30.9)	13.1 (10.5, 15.8)	21.1 (19.4, 22.8)	7.4 (4.9, 9.8)	9.6 (7.8, 11.4)
Other groups	12.5 (4.1, 20.8)	6.6 (4.3, 8.9)	6.4 (4.7, 8.0)	4.5 (3.7, 5.2)	3.5 (2.3, 4.7)	2.2 (1.7, 2.8)
Education ^a						
<High school	12.7 (6.1, 19.3)	12.7 (9.6, 15.7)	10.8 (9.0, 12.6)	6.2 (5.4, 7.1)	16.2 (13.6, 18.8)	10.4 (8.9, 11.9)
High school	35.6 (23.7, 47.2)	33.4 (29.2, 37.7)	30.1 (27.2, 33.0)	23.6 (22.1, 25.1)	31.2 (28.3, 34.1)	33.6 (31.5, 35.7)
Some college	34.1 (22.8, 45.5)	30.3 (26.0, 34.6)	31.7 (28.8, 34.5)	28.4 (26.7, 30.0)	26.5 (23.8, 29.3)	24.9 (23.1, 26.8)
College graduate	17.5 (6.8, 28.2)	23.6 (20.0, 27.2)	27.4 (24.6, 30.3)	41.8 (40.0, 43.5)	26.1 (23.4, 28.9)	31.0 (28.9, 33.0)
Annual income ^a						
\$19,999 or less	18.3 (8.4, 28.2)	15.2 (11.4, 19.0)	24.2 (21.5, 26.8)	6.2 (5.4, 7.1)	22.7 (20.0, 25.3)	13.1 (11.7, 14.4)
\$20,000–\$24,999	15.0 (6.7, 23.2)	9.2 (7.1, 11.3)	10.1 (8.3, 11.9)	6.0 (5.1, 6.9)	12.6 (10.5, 14.7)	12.5 (11.0, 14.1)
\$25,000–\$34,999	10.5 (4.8, 16.1)	15.0 (11.7, 18.2)	11.5 (9.6, 13.4)	9.4 (8.4, 10.4)	12.1 (10.2, 14.0)	13.8 (12.3, 15.2)
\$35,000–\$49,999	20.7 (8.9, 32.4)	15.3 (12.2, 18.5)	13.2 (11.1, 15.2)	14.6 (13.4, 15.8)	13.8 (11.7, 15.8)	14.7 (13.1, 16.4)
\$50,000 or more	16.8 (7.9, 25.6)	30.1 (26.1, 34.2)	30.8 (27.8, 33.9)	56.1 (54.3, 57.8)	17.9 (15.5, 20.4)	25.2 (23.3, 27.2)
Missing	18.9 (10.0, 27.7)	15.1 (11.9, 18.3)	10.3 (8.5, 12.0)	7.7 (6.8, 8.7)	20.9 (18.2, 23.6)	20.7 (18.8, 22.5)
General health ^a						
Excellent/very good/good	68.4 (56.8, 80.1)	93.4 (91.0, 95.7)	52.0 (48.9, 55.1)	91.7 (90.6, 92.7)	52.6 (49.4, 55.7)	85.9 (84.2, 87.6)
Fair/poor	31.5 (19.8, 43.2)	6.6 (4.2, 8.9)	48.0 (44.9, 51.1)	8.2 (7.2, 9.3)	47.4 (44.2, 50.6)	14.0 (12.3, 15.8)
Healthcare coverage ^a						
Any coverage	53.6 (41.2, 66.0)	62.9 (58.4, 67.5)	79.2 (76.6, 81.7)	82.1 (80.7, 83.5)	98.3 (97.2, 99.3)	97.1 (96.1, 98.0)
No coverage	46.3 (33.9, 58.7)	37.0 (32.4, 41.5)	20.8 (18.3, 23.4)	17.8 (16.5, 19.2)	1.7 (.6, 2.7)	2.8 (1.9, 3.8)
Personal doctor ^a						
At least one	50.8 (38.4, 63.1)	52.5 (48.0, 57.0)	81.6 (78.9, 84.2)	77.9 (76.4, 79.4)	94.6 (93.0, 96.2)	92.6 (91.5, 93.8)
None	49.2 (36.9, 61.6)	47.5 (43.0, 52.0)	18.4 (15.8, 21.1)	22.1 (20.6, 23.6)	5.4 (3.8, 7.0)	7.4 (6.2, 8.5)
Could not see a doctor in the past 12 months because of cost ^a	45.3 (33.2, 57.3)	21.9 (18.1, 25.6)	31.5 (28.5, 34.4)	13.3 (12.1, 14.5)	7.1 (5.3, 8.8)	3.3 (2.3, 4.2)

^a There was a significant difference ($p < .05$) between % across age groups among those who reported having a disability.

care and health insurance as compared with their peers without disability than would older groups with disability as compared with their peers.

Methods

This study analyzed data collected from the 2007 Florida Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an ongoing, random digit dial telephone survey of noninstitutionalized U.S. adults aged 18 years [3,4]. In 2007, Florida's BRFSS collected responses from 39,549 residents from all 67 counties. Our analysis included the 36,704 respondents who provided details of their age and county of residence and who answered the disability screening questions concerning activity limitation and the use of special equipment. Three questions broadly measured important components of a person's access to

care: whether or not respondents had any healthcare coverage,

had at least one personal doctor, and had not visited a doctor in the past year because of cost.

In addition to descriptive comparisons of the relationship

between disability and healthcare access among age groups (Table 1), we conducted adjusted analyses of the risk difference across groups by comparing access of PWD and their age peers without disability. Risk difference (vs. relative risk) was used because background access, regardless of disability, is very different across age groups and large absolute differences might have been masked had we used a comparison of relative access

the risk difference across the three age groups. These analyses used inverse weighting to adjust for confounding and selection bias introduced by the complex survey design [5]; analyses were completed using SAS9.2 (SAS Institute Inc., Cary, NC). This study was approved by the University of Florida's Institutional Review Board.

Results

In general, access improved with increased age, and differences between PWD and their age peers decreased in the oldest group (Table 1). In the adjusted model, the risk difference for having no healthcare coverage based on disability status across age groups did not confirm statistical heterogeneity (χ^2_{2df} F value = .42, $p = .66$; Table 2). Similarly, the risk difference for having a personal doctor was only marginal for heterogeneity by

disability across age groups (χ^2_{2df} F value = 2.58, $p = .08$). How-

ever, the adjusted risk difference for not being able to see a doctor because of cost was significantly heterogeneous across

age groups (χ^2_{2df} F value = 12.40, $p < .01$). The risk difference was

across groups. Finally, we conducted a test for homogeneity of

highest for those aged 18–29 at 15.5%, at 11.9% for those aged 30–64, and at 2.1% for those aged 265 years.

Discussion

When PWD were compared with their peers without disability, there were no differences in health insurance coverage or having a personal doctor. However, PWD across all three age

Table 2

Adjusted^a risk difference comparing PWD and those without disability by age group across measures of access to care, 2007 Florida Behavioral Risk Factor Surveillance System

Access variable	Risk difference (95% confidence interval)		
	Age: 18–29 (n = 2,734)	Age: 30–64 (n = 22,050)	Age: 65 ^a (n = 11,920)
Difference in risk of having no healthcare coverage for PWD as compared with persons without disability, by age group*	1.1% (-13.7, 16.0)	-2.9% (-5.9, .2)	-1.5% (-2.7, -.2)
Difference in risk of having no personal doctor for PWD as compared with persons without disability, by age group**	-5.1% (-20.8, 10.4)	-6.2% (-9.6, -2.8)	-7% (-4.0, 2.6)
Difference in risk of not being able to see a doctor because of cost for PWD as compared with persons without disability, by age group***	15.5% (1.4, 29.7)	11.9% (8.3, 15.4)	2.1% (.3, 4.0)

^a Adjusted for race, income, education, and gender.

* χ^2_{2df} test of effect-measure modification: .42, $p = .66$.

** χ^2_{2df} test of effect-measure modification: 2.58, $p = .08$.

*** χ^2_{2df} test of effect-measure modification: 12.40, $p < .01$.

groups were more likely to report barriers to seeing a doctor in the past year because of cost. Young adults, both those with and without disability, were more likely to report lack of health insurance coverage and lack of a personal doctor than older age groups.

Our findings are compatible with issues of access that vary by age in the United States, for example, the effect of disability on employment [6]. Most importantly, young and middle-aged adults still reported a significantly higher risk of not being able to see a doctor in the past 12 months because of cost. Lack of access to insurance and to a regular provider for young adults has been documented in other studies [7]. One potential explanation for the change in access at the age of 65 years is access to Medicare. Perhaps a system that affords “universal access” at younger ages might be a success in reducing disparities by disability at younger ages.

This study has some limitations. Because the BRFSS is administered by phone through random digit dial sampling, selection bias is possible. Specifically, PWD might be interviewed less frequently because of physical or communications limitations [8]; moreover, there was no measure of availability of adult healthcare providers for PWD. Additionally, although all three outcome variables are indicators of access to health care, they only indirectly measure concepts such as healthcare transition and related issues. There is still a great need for more population-based data on indicators of healthcare access.

This study has several strengths. It describes and quantifies, at the population level, the differences in risk and access to health care between young adults with and without disability, a previously understudied segment of the population. The large sample size provides for a robust description and analysis. The current study can also serve as a model for similar research in other states because of the consistency of the questions that define disability and measure access to health care on the BRFSS, a publicly available dataset.

Transitioning from the pediatric healthcare system to the adult-oriented healthcare system can be a challenging, yet important, step for any family. Using a large and robust sample, this

study has described some differences in the healthcare access for Floridians by age and disability status. Additional research is needed to assess the potential for transition planning to improve healthcare access for youth with and without disability.

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