

Adult Disability Prevalence: 2010 Florida Behavioral Risk Factor Surveillance System (BRFSS)

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Adult Disability Prevalence: Results from the 2010 Florida Behavioral Risk Factor Surveillance System (BRFSS)

A Report of the Florida Office on Disability and Health at the University of Florida

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Introduction:

The Americans with Disabilities Act (ADA) defines an individual as having a disability if they are limited in one or more major life activities because of a physical or mental impairment (1). Based on data from the Survey of Income and Program Participation (SIPP), about 22% of people in the United States live with disability, representing approximately 48 million people (2). Disability increases with age; thus, as the proportion of older adults in the United States increases, the overall prevalence of disability likely will increase (3). In 2006, approximately 16.8% of the Florida's population was 65 years of age or older, compared to 12.4% nationally (4). Disability is a major public health concern for our state.

Data Source: BRFSS 2010

The Behavioral Risk Factor Surveillance System (BRFSS) is a random-digit-dial telephone survey conducted by each state's health department in collaboration with the Centers for Disease Control and Prevention (CDC; see <http://www.cdc.gov/brfss/>). A nationally standard questionnaire is used every year to conduct the survey, with questions added by individual states based on each state's specific data needs. All community-dwelling, non-institutional, civilian adults aged 18 years and older are eligible to participate in the BRFSS. One adult per randomly-selected household is interviewed (5).

The BRFSS has included two questions related to disability since 2001 (6). The two questions are:

1. Are you limited in any activities because of physical, mental, or emotional problems?
2. Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?

These questions individually help define the prevalence of disability, and the combination of answers for the two questions is used as a standard definition of general disability prevalence by the CDC and state reports (7-10).

Data Analysis:

BRFSS 2010 data for the state of Florida were analyzed using SAS 9.2 to accommodate the complex sampling and response patterns of the BRFSS. Using the weighted data, these results represent the community-dwelling Florida population aged 18 and older. Data were analyzed to allow for the creation of multiple disability types based on positive answers to the two BRFSS disability questions:

1. **Limited.** Adults who are limited in any activities because of physical, mental, or emotional problems.
2. **Equipment.** Adults with health problem(s) that requires the use of special equipment.
3. **Disability.** Adults who are either activity limited and/or use equipment.

Table 1. Cross-tabulation of disability variable with activity limitation and special equipment needs.

	Use Special Equipment	Do Not Use Special Equipment
Activity Limitations	Disability: Yes	Disability: Yes
No Activity Limitations	Disability: Yes	Disability: No

Age and race/ethnicity were divided into categories. Age groups were: 18-44, 45-54, 55-64, 65-74, and ≥75 years old. Race and ethnic groups were classified as: White non-Hispanic; African American non-Hispanic; Hispanic; and Other groups, which included Floridians who identified themselves as multiracial.

Results:

The results are summarized in two tables. Table 2 shows the state-wide prevalence of disability and Table 3 summarizes data for Florida counties. Data in both tables were weighted to represent the entire population of Florida in 2010.

Table 2. Prevalence of disability (weighted) by type of disability and demographic subgroup, 2010 Florida BRFSS (n=34,888)

	Type of Disability Percentage (95% Confidence Intervals)		
	Limited*	Equipment†	Disability§
Overall Prevalence	24.3 (23.3, 25.3)	9.3 (8.7, 9.9)	26.2 (25.2, 27.3)
Subgroup Prevalence			
Gender			
Women	25.5 (24.2, 26.7)	9.5 (8.8, 10.3)	27.2 (26.0, 28.5)
Men	23.0 (21.4, 24.7)	9.0 (8.2, 10.0)	25.2 (23.6, 26.9)
Age groups			
18-44	16.6 (14.8, 18.4)	3.1 (2.5, 3.9)	17.4 (15.6, 19.3)
45-54	23.4 (21.2, 25.7)	8.0 (6.7, 9.4)	24.2 (22.0, 26.5)
55-64	32.3 (30.2, 34.5)	12.3 (10.9, 13.8)	34.5 (32.3, 36.8)
65-74	30.1 (28.0, 32.3)	14.1 (12.4, 15.8)	33.1 (30.9, 35.3)
75 and older	34.5 (32.3, 36.8)	23.2 (21.4, 25.1)	41.6 (39.3, 43.9)
Race and ethnic groups			
White, non-Hispanic	26.2 (25.1, 27.3)	10.0 (9.3, 10.6)	28.3 (27.2, 29.4)
Black, non-Hispanic	22.0 (18.6, 25.9)	12.0 (9.6, 15.0)	24.1 (20.6, 28.0)
Hispanic	17.2 (14.1, 20.9)	4.4 (3.2, 6.1)	18.6 (15.3, 22.3)
Other race, non-Hispanic	22.7 (18.2, 27.9)	7.5 (5.5, 10.1)	23.6 (19.1, 28.9)

*Limited in any activities because of physical, mental, or emotional problems

†Health problems requires use of special equipment

§Disability (yes to either activity limitation or special equipment use or both)

Table 3. Prevalence of disability (weighted) by type of disability and county of residence, 2010 Florida BRFSS (n=34,271)

County	Sample (n)	Type of Disability Percentage (95% Confidence Interval)		
		Limited*	Equipment†	Disability§
Alachua	525	23.8 (19.1, 29.3)	7.3 (4.9, 10.6)	24.8 (20.0, 30.3)
Baker	501	26.0 (20.1, 33.0)	11.0 (6.9, 17.2)	27.3 (21.3, 34.3)
Bay	533	24.7 (19.7, 30.6)	11.2 (7.3, 16.7)	25.9 (20.8, 31.8)
Bradford	472	29.9 (19.9, 42.4)	8.1 (5.3, 12.1)	32.7 (22.8, 44.5)
Brevard	511	29.3 (24.5, 34.7)	11.7 (8.7, 15.5)	31.1 (26.1, 36.5)
Broward	512	21.5 (17.4, 26.4)	6.8 (4.8, 9.4)	23.0 (18.7, 27.9)
Calhoun	477	30.8 (24.9, 37.4)	12.1 (8.8, 16.4)	33.1 (27.0, 39.8)
Charlotte	462	26.3 (20.9, 32.5)	9.2 (6.6, 12.6)	28.6 (23.1, 34.9)
Citrus	519	32.2 (27.1, 37.8)	15.6 (12.0, 19.9)	34.3 (29.1, 39.9)
Clay	474	28.2 (23.5, 33.3)	9.4 (7.0, 12.4)	29.9 (25.2, 35.1)
Collier	507	19.4 (15.1, 24.6)	8.1 (5.6, 11.7)	21.4 (17.0, 26.6)
Columbia	550	29.3 (24.2, 35.0)	11.0 (8.4, 14.4)	31.3 (26.1, 37.1)
DeSoto	487	29.1 (23.4, 35.4)	10.8 (7.7, 15.0)	31.9 (26.1, 38.4)
Dixie	455	45.5 (39.0, 52.3)	18.3 (13.3, 24.7)	47.0 (40.5, 53.7)
Duval	542	25.8 (21.6, 30.5)	11.1 (8.4, 14.4)	26.9 (22.6, 31.6)
Escambia	510	29.1 (24.0, 34.8)	10.9 (7.5, 15.6)	30.6 (25.4, 36.3)
Flagler	459	22.1 (17.6, 27.3)	8.1 (5.8, 11.4)	23.7 (19.2, 29.0)
Franklin	505	27.4 (22.2, 33.2)	9.1 (6.6, 12.4)	28.4 (23.2, 34.3)
Gadsden	491	21.7 (17.3, 26.8)	9.3 (6.0, 14.1)	25.6 (20.5, 31.4)
Gilchrist	402	33.1 (23.2, 44.8)	9.3 (6.4, 13.3)	36.4 (26.2, 48.2)
Glades	490	29.7 (20.7, 40.7)	11.7 (6.9, 19.1)	31.6 (22.3, 42.7)
Gulf	466	25.4 (19.7, 32.1)	8.5 (5.5, 12.8)	26.6 (20.8, 33.4)
Hamilton	458	25.6 (20.1, 32.1)	10.4 (6.7, 15.7)	28.9 (23.0, 35.6)
Hardee	519	20.9 (16.3, 26.4)	6.5 (4.5, 9.3)	21.7 (17.0, 27.1)
Hendry	436	21.7 (16.6, 27.9)	10.1 (6.5, 15.4)	22.8 (17.6, 29.0)
Hernando	480	30.5 (25.2, 36.4)	12.7 (9.3, 17.0)	33.1 (27.6, 39.1)
Highlands	509	30.4 (25.1, 36.3)	11.8 (8.8, 15.6)	32.8 (27.4, 38.8)
Hillsborough	495	23.8 (19.2, 28.9)	10.3 (7.3, 14.3)	26.6 (21.8, 32.0)
Holmes	504	29.2 (24.1, 35.0)	10.7 (7.9, 14.3)	31.6 (26.3, 37.5)
Indian River	483	27.0 (21.9, 32.8)	13.5 (9.7, 18.5)	30.0 (24.7, 35.9)
Jackson	523	25.8 (21.3, 32.8)	14.1 (10.8, 18.3)	28.9 (24.2, 34.2)
Jefferson	493	24.9 (20.2, 30.2)	9.9 (7.4, 13.3)	26.8 (22.0, 32.3)
Lafayette	527	23.6 (17.9, 30.6)	8.1 (5.8, 11.5)	24.4 (18.5, 31.4)
Lake	598	26.3 (21.9, 31.2)	11.3 (8.7, 14.6)	29.4 (24.9, 34.4)
Lee	513	26.8 (21.5, 32.8)	11.2 (8.2, 15.1)	29.2 (23.8, 35.2)
Leon	496	20.5 (16.3, 25.5)	8.9 (6.0, 12.9)	23.9 (19.2, 29.4)
Levy	600	27.3 (22.5, 32.8)	11.9 (9.3, 15.1)	29.6 (24.6, 35.3)
Liberty	516	24.9 (19.8, 30.8)	12.3 (7.8, 19.0)	29.1 (23.0, 36.1)
Madison	489	25.9 (20.2, 32.6)	8.6 (5.8, 12.7)	27.2 (21.5, 33.8)

County	Sample (n)	Limited*	Equipment†	Disability§
Manatee	518	22.0 (18.1, 26.5)	9.4 (7.2, 12.3)	24.1 (19.9, 28.7)
Marion	578	30.5 (25.7, 35.6)	15.2 (11.7, 19.5)	32.7 (27.7, 38.1)
Martin	510	27.6 (22.7, 33.1)	10.4 (7.7, 13.8)	29.6 (24.6, 35.1)
Miami-Dade	478	18.3 (14.7, 22.7)	5.6 (4.0, 7.9)	20.0 (16.2, 24.4)
Monroe	495	26.6 (21.7, 32.1)	6.6 (4.4, 9.9)	28.2 (23.2, 33.9)
Nassau	514	23.5 (18.9, 28.9)	7.0 (5.1, 9.6)	25.9 (21.1, 31.4)
Okaloosa	438	21.0 (16.8, 26.0)	6.9 (4.9, 9.8)	22.7 (18.3, 27.7)
Okeechobee	473	29.6 (24.2, 35.7)	12.6 (9.0, 17.3)	32.1 (26.5, 38.3)
Orange	990	22.3 (19.3, 25.6)	8.1 (6.4, 10.1)	24.4 (21.3, 27.7)
Osceola	553	20.3 (16.4, 24.9)	7.2 (4.7, 10.8)	22.2 (18.1, 26.9)
Palm Beach	541	20.9 (16.6, 25.9)	8.7 (6.0, 12.4)	22.4 (18.1, 27.5)
Pasco	533	31.0 (15.9, 36.7)	12.2 (9.1, 16.1)	33.4 (28.1, 39.1)
Pinellas	483	25.9 (21.3, 31.0)	10.5 (7.8, 14.0)	28.7 (24.0, 34.0)
Polk	510	29.3 (24.1, 35.0)	9.3 (6.9, 12.4)	30.8 (25.6, 36.6)
Putnam	431	30.9 (25.5, 36.9)	12.9 (9.5, 17.4)	33.5 (27.9, 39.6)
Saint Johns	511	23.4 (19.5, 28.0)	7.9 (5.8, 10.6)	25.4 (21.3, 30.0)
Saint Lucie	489	34.8 (29.7, 40.2)	12.6 (9.4, 16.5)	36.6 (31.4, 42.0)
Santa Rosa	485	23.1 (18.5, 28.5)	10.3 (7.5, 14.0)	24.9 (20.2, 30.4)
Sarasota	599	21.8 (17.8, 26.5)	8.9 (6.8, 11.5)	23.9 (19.7, 28.6)
Seminole	478	21.6 (17.5, 26.5)	7.0 (5.0, 9.8)	25.1 (20.7, 30.1)
Sumter	360	25.1 (16.2, 36.7)	15.7 (8.3, 27.6)	26.8 (17.7, 38.3)
Suwannee	447	34.7 (29.2, 40.6)	13.8 (10.5, 18.0)	37.0 (31.4, 43.0)
Taylor	531	28.6 (23.4, 34.3)	13.5 (9.9, 18.1)	31.8 (26.4, 37.8)
Union	466	25.7 (19.5, 33.0)	10.4 (7.0, 15.3)	27.5 (21.2, 35.0)
Volusia	839	32.6 (28.2, 37.3)	11.2 (8.9, 14.1)	34.0 (29.6, 38.7)
Wakulla	520	28.9 (23.0, 35.6)	12.1 (8.3, 17.2)	32.3 (26.2, 39.2)
Walton	515	28.5 (23.3, 34.3)	10.4 (7.4, 14.4)	29.4 (24.2, 35.2)
Washington	497	29.3 (23.7, 35.7)	11.5 (8.7, 15.0)	32.6 (26.7, 39.0)
Florida Overall	34,271	24.3 (23.3, 25.3)	9.3 (8.7, 9.9)	26.2 (25.2, 27.3)

*Limited in any activities because of physical, mental, or emotional problems

†Health problems requires use of special equipment

§Disability (yes to either activity limitation or special equipment use or both)

We estimate the prevalence of disability in Florida to be about 26%, making it higher than previously reported national averages (2). However, this figure varies greatly by county. For example Miami-Dade (20%), Osceola (22%), and Palm Beach (22%) counties are consistent with national estimates, while Suwannee (37%), Saint Lucie (37%), and Dixie (47%) counties appear to be highly elevated.

Table 4. Adjusted* prevalence odds ratios (POR) of disability† in Florida

Demographic Subgroup	Adjusted POR	95% Confidence Interval
Men	1.00 (reference group)	--
Women	1.08	(0.96, 1.2)
18-44	1.00 (reference group)	--
45-54	1.46	(1.22, 1.75)
55-64	2.36	(2.01, 2.77)
65-74	2.26	(1.92, 2.66)
75 & older	3.18	(2.70, 3.73)
White, non-Hispanic	1.00 (reference group)	--
Black, non-Hispanic	0.96	(0.77, 1.19)
Hispanic	0.71	(0.56, 0.90)
Other race, non-Hispanic	0.97	(0.73, 1.29)

*Estimates adjusted for gender, age, and race/ethnicity

†Disability (yes to either activity limitation or special equipment use or both)

Men and women had approximately equal risk of disability after accounting for age and race/ethnicity (Table 4). There was a clear increase in disability with increasing age. African Americans and respondents who were classified as “other” race and non-Hispanic ethnicity had similar prevalence of disability compared to non-Hispanic white Floridians. Respondents who reported Hispanic ethnicity were less likely to have a disability compared to white, non-Hispanic respondents.

Figure 1: Prevalence of activity limitation due to a health problem in Florida based on the 2010 Behavioral Risk Factor Surveillance System.

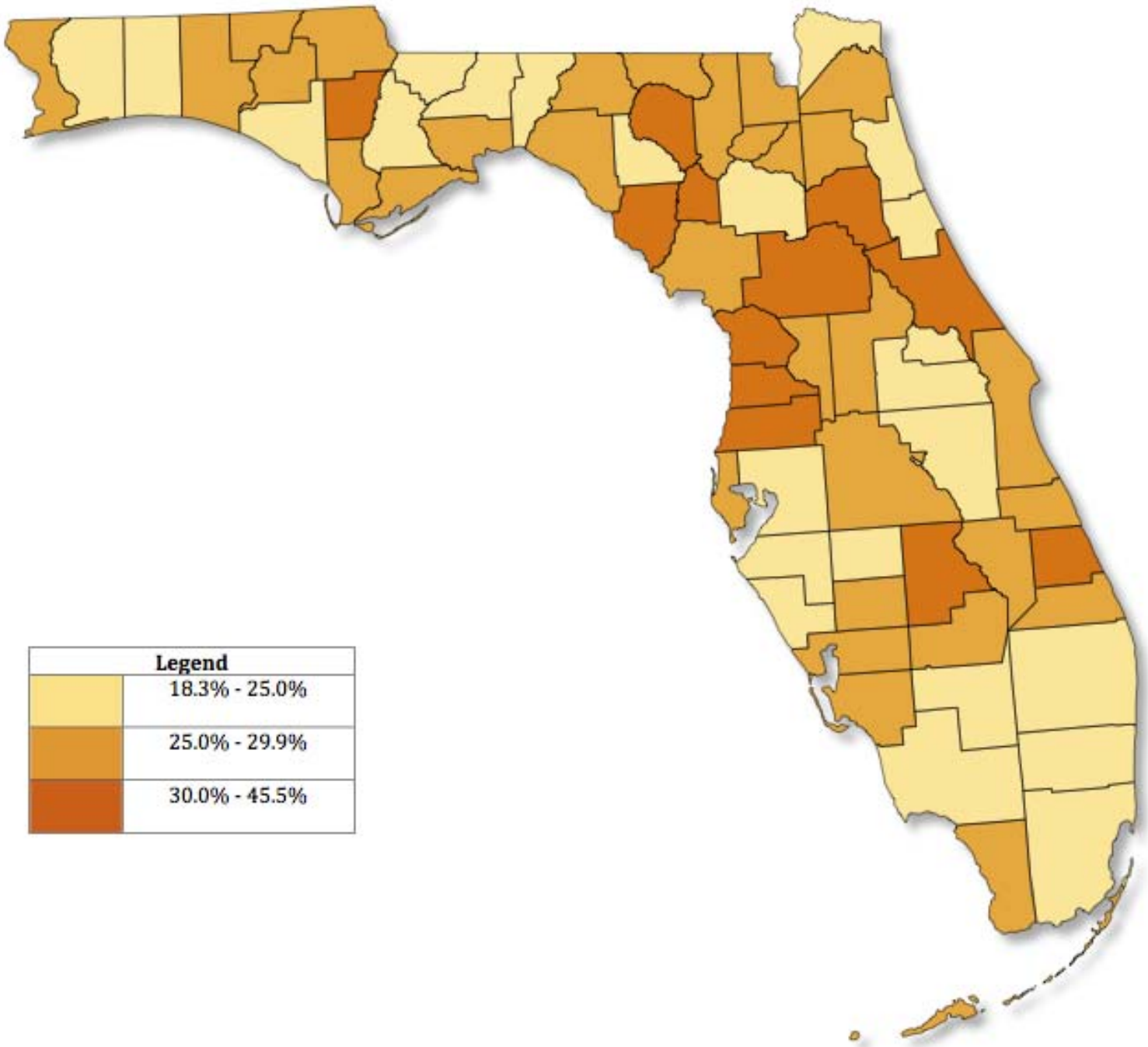


Figure 2: Prevalence of special equipment use due to a health problem in Florida based on the 2010 Behavioral Risk Factor Surveillance System.

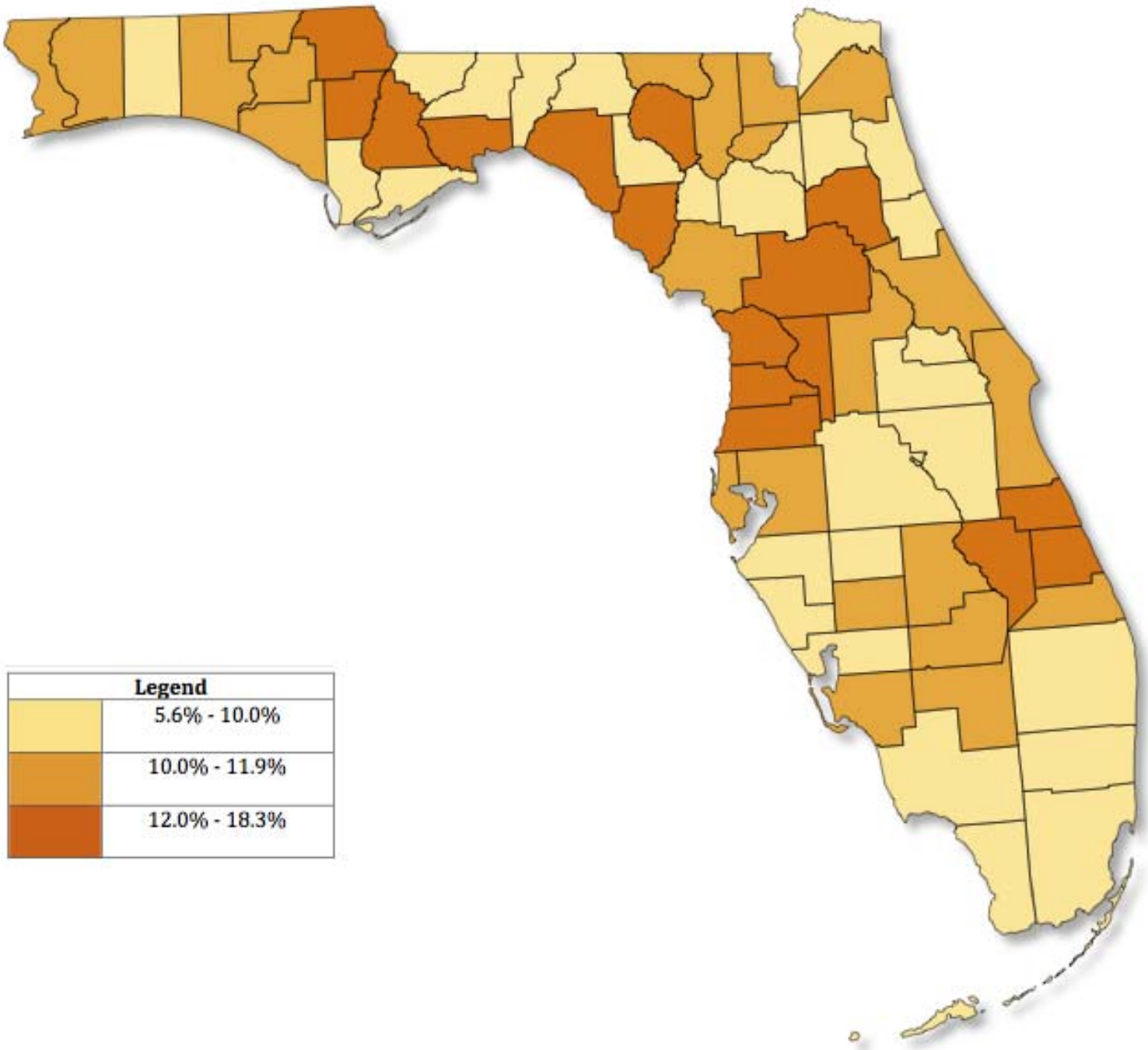
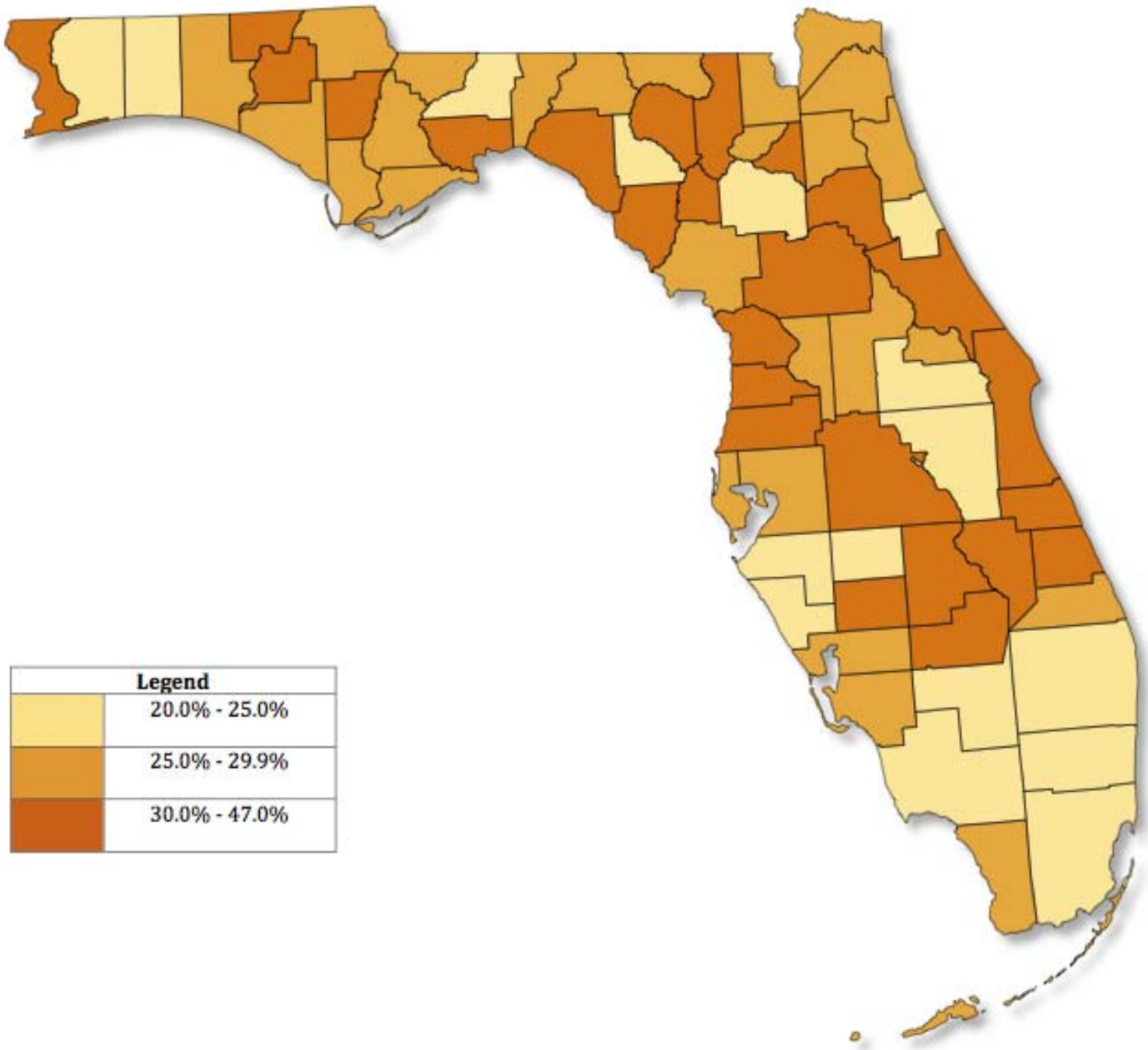


Figure 3: Prevalence of disability* in Florida based on the 2010 Behavioral Risk Factor Surveillance System.



* Disability defined as an activity limitation, use of special equipment, or both.

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