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Contraceptive use at last intercourse among reproductive-aged women with disabilities: an analysis of population-based data from seven states

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Abstract

Objective—To assess patterns of contraceptive use at last intercourse among women with physical or cognitive disabilities compared to women without disabilities.

Study design—We analyzed responses to 12 reproductive health questions added by seven states to their 2013 Behavioral Risk Factor Surveillance System questionnaire. Using responses from female respondents 18–50 years of age, we performed multinomial regression to calculate estimates of contraceptive use among women at risk for unintended pregnancy by disability status and type, adjusted for age, race/ethnicity, marital status, education, health insurance status, and parity.

Results—Women with disabilities had similar rates of sexual activity as women without disabilities (90.0% vs. 90.6%, $p=.76$). Of 5995 reproductive-aged women at risk for unintended pregnancy, 1025 (17.1%) reported one or more disabilities. Contraceptive use at last intercourse was reported by 744 (70.1%) of women with disabilities compared with 3805 (74.3%) of those without disabilities ($p=.22$). Among women using contraception, women with disabilities used male or female permanent contraception more often than women without disabilities (333 [29.6%] versus 1337 [23.1%], $p<.05$). Moderately effective contraceptive (injection, oral contraceptive, patch, or ring) use occurred less frequently among women with cognitive (13.1%, $n=89$) or

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independent living (13.9%, $n=40$) disabilities compared to women without disabilities (22.2%, $n=946$, $p<.05$).

Conclusions—The overall prevalence of sexual activity and contraceptive use was similar for women with and without physical or cognitive disabilities. Method use at last intercourse varied based on presence and type of disability, especially for use of permanent contraception.

Implications—Although women with disabilities were sexually active and used contraception at similar rates as women without disabilities, contraception use varied by disability type, suggesting the importance of this factor in reproductive health decision-making among patients and providers, and the value of further research to identify reasons why this occurs.

Keywords

Contraception; Woman; Disability; Reproductive Health; Behavioral Risk Factor Surveillance System

1. Introduction

Nearly one in five, or almost 57 million people in the US have a communicative, physical, or cognitive disability [1]. Two reports by the US Surgeon General [2,3] discuss the exclusion of persons with disabilities from public health programs, and subsequent work has reinforced the persistence of unmet health care needs in this population [4,5]. Poor health outcomes have been documented among persons with disabilities, due in part to the social stigma associated with disability [6,7]. Spurred by passage of the Americans with Disabilities Act (ADA) of 1990 and consequent increase in awareness of the health needs of people with disabilities [3,4], healthcare providers have gradually increased their recognition of the importance of sexuality and reproductive health issues among people with disabilities [8–14].

Despite the influence of disability status on reproductive health outcomes, women with disabilities face frequent barriers to accessing timely and appropriate reproductive care, including contraceptive services [15–17]. Data from a US survey of reproductive-aged women revealed that, compared with women without physical disabilities, higher percentages of women with physical disabilities used no contraception (42% vs. 33%), and, among users, women with disabilities had a higher prevalence of permanent contraception but a lower prevalence of hormonal and barrier-method use [18]. Among women with intellectual disabilities residing in government run care facilities in Belgium, approximately 41% did not use any form of contraception, 22% had been sterilized, 18% used oral contraceptives or depot medroxyprogesterone acetate (DMPA), and 1% had an intrauterine device [19]. Likewise, more than half of Dutch women with intellectual disabilities living in residential facilities used no contraception and, among those who did, most (78%) used oral, intramuscular or transdermal hormonal contraception [20]. A recent study using US National Survey of Family Growth data indicates that 27% of women with physical or sensory disabilities at risk for unplanned pregnancy were not using contraceptives and having a disability was associated with decreased odds of using highly or moderately effective contraceptive methods [21].

To date, patterns of contraceptive use among reproductive-aged women with disabilities stratified disability type in the US have not been well described. Using data from the 2013 Behavioral Risk Factor Surveillance System (BRFSS), we aimed to expand the limited knowledge on this topic by comparing contraceptive use among women by disability status and type.

2. Methods

We analyzed data from the 2013 Behavioral Risk Factor Surveillance System (BRFSS), a cross-sectional state-based telephone survey of the US noninstitutionalized civilian population aged 18 years [22]. The BRFSS annually collects information on behavioral risk factors, chronic conditions, and preventive health practices. All states use a standard set of core questions; however, states can add optional modules or state-developed questions to their survey. In 2013, seven states (Connecticut, Kentucky, Massachusetts, Mississippi, Ohio, Texas, and Utah) opted to include 12 previously validated reproductive health questions for female respondents 18–50 years of age [23]. The questions collected information on sexual activity, reproductive history, infertility, childbearing intentions, and contraceptive use. BRFSS uses iterative proportional fitting or “raking” to weight the data. This method adjusts for nonresponse, noncoverage, and selection bias. States may choose to sample disproportionately from strata with certain characteristics; no states oversampled individuals with disabilities in 2013 [22].

The 2013 BRFSS included questions on five select disability types: Vision (“Are you blind or do you have serious difficulty seeing, even when wearing glasses?”); Cognition (“Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?”); Mobility (“Do you have serious difficulty walking or climbing stairs?”); Self-care (“Do you have difficulty dressing or bathing?”); and Independent living (“Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?”). Information on hearing disability was not collected until the 2016 BRFSS survey. Women who answered “yes” to one or more of the disability questions were classified as having disability. The state-added reproductive health questions on contraceptive use asked whether the respondent or her spouse or partner did anything at last intercourse to keep from getting pregnant and, if so, the type of method used. Using this information, we categorized responses into 5 groups based on level of effectiveness for prevention of unintended pregnancy during first year of typical use as defined by the World Health Organization [24]. Highly effective methods included male or female permanent contraception and long-acting reversible contraception (LARC) (contraceptive implants or hormonal, copper-bearing, or unknown type of intrauterine device (IUD)). Moderately effective methods included shots or injections, oral contraceptives, contraceptive patch, and rings. Less effective methods included male (or female) condoms, withdrawal, diaphragm, cervical cap, sponge, spermicides and fertility awareness methods. The reproductive health question added to the BRFSS combined diaphragm/cap/sponge as a single response option, making it impossible to differentiate between these methods. Emergency contraception or other methods were considered less effective. We evaluated text responses for “other” contraception evaluated and re-classified into appropriate categories when possible.

We restricted analyses to women at risk for unintended pregnancy, defined as those who were sexually active (i.e., women who did not indicate that they had no partner or were not sexually active when asked about contraceptive use at last intercourse), not currently pregnant, who had not had a hysterectomy, did not have a same sex partner, and reported not wanting a pregnancy at last intercourse. We excluded respondents with missing information on contraceptive use or disability status. We compared the distribution (and 95% confidence intervals [CI]) of demographic (age, race/ethnicity, marital status, education, annual household income, state of residence, and parity) and health care characteristics (health care coverage, having a personal doctor or health care provider and timing of last routine checkup), and use of contraception at last intercourse among female respondents who were at risk for unintended pregnancy by disability status.

We calculated the prevalence of use of any contraceptive method at last intercourse for women with and without disabilities separately by each demographic and health care characteristic. We used two-tailed Satterthwaite adjusted chi-squared tests to evaluate statistically significant differences in distributions between women with and without report of disabilities. Finally, we used predicted marginal proportions derived from multinomial logistic regression models with contraceptive method as a nominal outcome to calculate adjusted estimates of contraceptive use at last intercourse by disability type and to estimate use of specific methods for women with and without disabilities. All models included age, race/ethnicity, marital status, education, health insurance status, and parity as covariates.

P-values < 0.05 were considered statistically significant. All estimates were adjusted to account for the complex survey sample design used in the BRFSS. SAS version 9.3 and SUDAAN version 11.0 were used for the analyses.

3. Results

Of the 8691 women aged 18–50 years who answered the state-added reproductive health questions, 7208 (82.9%) provided complete information on disability and contraception use. Sexual activity prevalence among women with disabilities (90.0%, 95% CI 85.6%–93.1%) and without disabilities (90.6%, 95% CI 87.4%–93.0%) were similar (*p*=.79). After excluding 2696 women not at risk for unintended pregnancy (i.e., who were pregnant [*n*=267], reported hysterectomy [*n*=1104], were not sexually active [*n*=518], had a same sex partner [*n*=76]), wanted a pregnancy [*n*=301]) or had missing information on contraceptive use [*n*=371] or disability status [*n*=59]), the final sample included 5995 women at-risk for unintended pregnancy. Table 1 presents the characteristics of the study population. Overall, 17.1% (95% CI 15.1–19.4%) reported one or more disabilities. Specific disabilities reported included cognition (11.5%, 95% CI 9.8–13.5%), mobility (7.1%, 95% CI 5.8–8.6%), independent-living (6.2%, 95% CI 5.0–7.7%), vision (2.9%, 95% CI 2.2–3.8%), and self-care (2.2%, 95% CI 1.6–3.1%).

Seventy percent of women with disabilities (*n*=744) and 74% of women without disabilities (*n*=3805) reported contraceptive use at last intercourse (*p*=.22) (Table 2). Compared with their counterparts without disability, sexually active women with disabilities had a lower

prevalence of contraceptive use among women who were younger, those who were never married, and those who were nulliparous.

Method effectiveness differed between women with and without disabilities who used contraception. For both groups, permanent methods were reported most frequently with 29.3% ($n=333$) of women with 1 disabilities reporting use of permanent methods compared to 23.2% ($n=1337$) women without disabilities ($p<.05$) (Table 3). Women with disabilities had a lower prevalence of using moderately effective methods (15.8%, $n=137$) than women without disabilities (21.9%, $n=946$, $p<.05$). Notably, about 28% of women with and without a disability reported no contraceptive use at last intercourse.

Contraceptive methods also varied by disability type. Permanent methods were used more frequently among women with mobility, self-care, or independent living disabilities than among women without disabilities ($p<.05$). Women with cognitive disabilities were less likely to use moderately effective methods than women without disabilities (13.9%, $n=89$ vs 21.9%, $n=946$, $p<.05$). Women with self-care disabilities had the lowest prevalence of using less effective contraceptive methods compared with women without disabilities (8.9%, $n=20$ vs 17.5%, $n=850$, $p<.05$). While women with vision disabilities had the highest prevalence of reporting no contraceptive use during last intercourse (34.8%, $n=63$), this proportion was not significantly different from women without disabilities (27.6%, $n=1159$, $p=.26$).

Compared with women without disabilities, women with one or more disabilities more frequently used female permanent contraception ($n=267$ [21.8%] vs $n=743$ [14.1%], respectively, $p=.008$) and less frequently used oral contraceptives ($n=110$ [14.3%] vs $n=847$ [19.9%], respectively, $p=.03$) (Table 4).

4. Discussion

This study adds to the limited but growing literature on patterns of sexual activity and contraceptive use among reproductive-aged women with disabilities by providing population-based estimates from seven US states. Women with disabilities reported similar levels of sexual activity as women without disabilities and tended to rely on use of permanent methods of contraception (especially female permanent contraception) more often, a finding consistent with recent studies [25]. Of note, the higher prevalence of permanent contraception among sexually active women with one or more disabilities compared with their counterparts without a disability remained after adjustment and may be due to factors such as limited knowledge of contraception and reproduction among women with cognitive disabilities [26], difficulty in obtaining reliable information from providers on the full range of contraceptive options [15], negative provider or family attitudes toward pregnancy in women with disabilities [27,28], or medical contraindications to using other contraceptive methods [16]. Additionally, providers who are aware of potentially increased risks for pregnancy complications among women with certain types of disabilities [29–31] may be more likely to recommend permanent methods of contraception for these women [25].

Given the variations in contraceptive use observed by disability type, provider training that addresses the specific sexual and reproductive health needs of women with disabilities who either are sexually active or contemplating sexual activity may be warranted [3]. Indications for the use of certain contraceptive methods may differ by disability type, and providers may need to consider additional factors related to the impairment. For example, estrogen-containing methods may increase venous thrombosis risk for women with significant mobility limitations [32]. Also, women with intellectual disabilities may use contraception for reasons other than pregnancy prevention (e.g., issues related to menstrual hygiene or management). When pregnancy prevention is of concern, women with disabilities should be counselled on the full range of contraceptive options, and provided education on self-care for menstrual hygiene [16]. Finally, barriers to accessing specific methods such as LARC should be considered, including lack of height-adjustable examination tables and safe methods (e.g., mechanical lifts) to transfer patients from a wheelchair to an examination table [33].

The presence, type, and severity of a disability may influence the extent to which healthcare providers are comfortable and willing to discuss and provide sexual health and contraceptive needs with reproductive-aged women who have disability [15,16]. Women with more severe or multiple cognitive, sensory or physical disabilities may require specialized health messaging strategies and additional care regarding contraception that are tailored to their needs.

There were several limitations to our analysis. First, because hearing status was not assessed in the 2013 BRFSS, the prevalence of overall disability among women of reproductive age is likely underestimated and sexual activity and contraceptive use patterns among women with this disability type were unknown. Next, BRFSS data are based on self-report and are thus subject to recall and reporting biases. However, there is no evidence to suggest that women with versus those without disabilities recall recent sexual activity and contraceptive use differently. In addition, because the BRFSS does not include individuals living in institutional settings or group homes, persons with more severe disabilities, may have been disproportionately excluded. The resulting effect would be an underestimate of the prevalence of disability and lack of generalizability to reproductive age women with disabilities who live in such settings. However, the prevalence of disability among reproductive age women in our study is 18.7%, which is similar to the 19.8% prevalence of disability among all females reported for the USA [1]. Fourth, although women with disabilities are more likely to be covered by Medicare or Medicaid compared to women without disabilities [34], we could not determine type of insurance the respondents had, but our models did include an indicator of whether or not the individual had any insurance. Finally, we excluded reproductive-aged women with hysterectomies from our analysis who, by definition, are not at risk for unintended pregnancy.

Women with disability had a statistically similar prevalence of sexual activity as women without disability, and nearly 30% of both groups reported using no contraceptive method at last intercourse. Younger and unmarried women with disabilities had lower rates of contraception use than their counterparts without disability, suggesting that these women may have unmet need for contraceptive services. Contraception use varied by disability type,

and future research is need to understand the reasons for these differences. These findings clearly highlight that women with disabilities have important sexual and reproductive health needs, including access to the full array of FDA-approved contraceptive methods, as medically appropriate. Public health messaging specific to these needs that is inclusive of women with cognitive, sensory, and physical disabilities can help address knowledge and access barriers among women with disabilities desiring contraception. Clinical guidance for healthcare providers should emphasize the need for informed discussions on reproductive health with all their patients, regardless of disability status.

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Table 1
Characteristics of women 18–50 years and at-risk for unintended pregnancy,* 7 states
with state-added questions on reproductive health, BRFSS, 2013 (n=5995)

	1 disability ^a (n=1031)		No disability (n=4964)		p-Value
	Unweighted n	Weighted % ^b (95% CI)	Unweighted n	Weighted % ^b (95% CI)	
Age (years)					.20
18–29	235	36.6	1127	34.3	
30–39	282	26.6	1630	32.8	
40–50	514	36.8	2207	32.9	
Race/ethnicity					.70
Non-Hispanic white	736	61.7	3765	60.9	
Non-Hispanic black	146	14.6	566	13.6	
Non-Hispanic other	50	6.5	194	5.1	
Hispanic	99	17.2	439	20.4	
Marital status					<.0001
Married/coupled	460	39.0	3203	59.6	
Divorced/separated/widowed	266	22.1	638	10.9	
Never married	303	38.8	1109	29.5	
Education					<.0001
Less than high school	122	17.7	212	9.5	
High school graduate	705	72.0	2371	57.8	
College graduate	203	10.3	2374	32.9	
Annual household income					<.0001
<\$25,000	480	50.8	866	23.5	
\$25,000–50,000	202	14.3	953	16.2	
\$50,000	204	17.3	2592	46.0	
Missing	145	12.9	553	14.3	
State of residence					.04
Connecticut	101	6.0	698	7.0	
Kentucky	275	10.1	946	6.8	
Massachusetts	168	15.4	917	12.6	
Mississippi	129	6.1	512	4.2	
Ohio	169	22.2	794	20.4	
Texas	68	36.0	371	43.8	
Utah	121	4.2	726	5.0	
Parity					.03
0	266	37.1	1322	27.9	
1	191	14.6	874	18.9	
1	562	48.4	2712	53.2	
Health care insurance coverage					.001

	1 disability ^a (n=1031)		No disability (n=4964)		p-Value
	Unweighted n	Weighted % ^b (95% CI)	Unweighted n	Weighted % ^b (95% CI)	
Yes	767	68.2	4260	80.5	
No	262	31.8	688	19.5	
Has a personal doctor or health care provider					.85
Yes	851	76.7	4057	76.1	
No	176	23.3	894	23.9	
Last routine checkup					.86
Within past year	673	67.8	3359	68.4	
>1 year ago	336	32.2	1546	31.6	
Number of disabilities					n/a
1	569	54.9			
2	239	26.6			
3	134	9.5			
4-5	89	9.0			

Note: Missing data for all variables other than Annual Household Income were <3% and not included in findings. Abbreviations: CI, confidence interval.

* Women at risk for unintended pregnancy were defined as those who reported they were not currently pregnant, had not had a hysterectomy, did not have a same sex partner, did not want a pregnancy, and were sexually active (i.e., women who did not indicate that they had no partner or were not sexually active when asked about contraceptive use at last intercourse) at time of survey.

^a Includes vision, cognition, mobility, self-care, and independent living disabilities.

^b Weights derived by iterative proportional fitting and adjust for nonresponse, noncoverage, and selection bias.

Table 2
Prevalence of any contraceptive use at last intercourse among women 18–50 years and at-risk for unintended pregnancy* by disability status, 7 states with state-added questions on reproductive health, BRFSS, 2013 (n=5995)

	1 disability ^a			No disability			p-Value
	Unweighted total	Unweighted n	Weighted % ^b (95% CI)	Unweighted total	Unweighted n	Weighted % ^b (95% CI)	
Total	1031	744	70.1 (63.8–75.7)	4964	3805	74.3 (71.1–77.2)	.22
Age (years)							
18–29	235	166	60.1 (48.2–70.9)	1127	901	77.3 (71.9–82.0)	.01
30–39	282	216	77.3 (66.1–85.7)	1630	1298	76.6 (70.6–81.7)	.90
40–50	514	362	74.8 (66.7–81.4)	2207	1606	68.7 (63.3–73.6)	.20
Race/ethnicity							
Non-Hispanic white	736	533	70.2 (62.9–76.6)	3765	2924	75.3 (71.5–78.8)	.20
Non-Hispanic black	146	112	82.1 (66.8–91.3)	566	424	75.3 (65.9–82.8)	.41
Non-Hispanic other	50	35	52.3 (28.2–75.3)	194	127	62.4 (48.6–74.4)	.51
Hispanic	99	64	66.0 (48.5–80.0)	439	330	73.4 (65.1–80.4)	.43
Marital status							
Married/coupled	460	331	75.0 (66.1–82.3)	3203	2474	72.2 (67.8–76.2)	.54
Divorced/separated/widowed	266	202	74.6 (63.7–83.1)	638	475	71.9 (61.8–80.1)	.69
Never married	303	210	62.6 (50.4–73.5)	1109	844	79.2 (74.3–83.5)	.01
Education							
Less than high school	122	80	51.6 (36.7–66.2)	212	136	63.7 (49.9–75.5)	.25
High school graduate	705	516	73.3 (66.0–79.5)	2371	1786	74.3 (70.1–78.2)	.80
College graduate	203	147	79.1 (69.1–86.4)	2374	1879	77.5 (72.5–81.7)	.76
Annual household income							
<\$25,000	480	339	66.0 (56.5–74.3)	866	634	71.0 (64.3–76.9)	.37
\$25,000–50,000	202	155	83.5 (74.3–89.8)	953	741	76.7 (70.9–81.6)	.18
\$50,000	204	157	79.4 (65.0–88.9)	2592	2020	76.2 (71.5–80.4)	.63
Missing	145	93	61.8 (45.1–76.2)	553	410	70.5 (60.0–79.3)	.36
Parity							
0	266	177	63.0 (52.2–72.8)	1322	977	76.3 (71.2–80.8)	.02
1	191	122	66.1 (52.2–77.7)	874	636	67.5 (59.9–74.4)	.23
>1	562	437	77.0 (67.8–84.2)	2712	2151	75.8 (71.0–79.9)	.85
Health care coverage							
Yes	767	567	74.0 (67.3–79.8)	4260	3287	75.3 (71.8–78.6)	.72
No	262	175	61.4 (48.1–73.3)	688	505	69.7 (62.2–76.2)	.27
Has a personal doctor or health care provider							
Yes	851	620	73.3 (66.9–78.8)	4057	3123	76.1 (72.7–79.3)	.41
No	176	122	60.8 (45.0–74.6)	894	673	68.2 (61.0–74.7)	.39
Last routine checkup							

	1 disability ^a			No disability			p-Value
	Unweighted total	Unweighted n	Weighted % ^b (95% CI)	Unweighted total	Unweighted n	Weighted % ^b (95% CI)	
Within past year	673	484	74.3 (67.2–80.3)	3359	2593	75.2 (71.1–78.8)	.83
>1 year ago	336	240	61.0 (49.5–71.4)	1546	1166	72.3 (67.0–77.0)	.09

Note: Missing data for all variables other than Annual Household Income were <3% and not included in findings. Abbreviations: CI, confidence interval.

* Women at risk for unintended pregnancy were defined as those who reported they were not currently pregnant, had not had a hysterectomy, did not have a same sex partner, did not want a pregnancy, and were sexually active (i.e., women who did not indicate that they had no partner or were not sexually active when asked about contraceptive use at last intercourse) at time of survey.

^a Includes vision, cognition, mobility, self-care, and independent living disabilities.

^b Weights derived by iterative proportional fitting and adjust for nonresponse, noncoverage, and selection bias.

Table 3

Adjusted* estimates of contraceptive use at last intercourse among women 18–50 years at risk for unintended pregnancy[†], by disability type, 7 states, BRFSS, 2013 (n=5767^d)

Method	Vision		Cognition		Mobility		Self-care		Independent living		1 disability		No disability	
	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)	N	Weighted % ^b (95% CI)
Highly effective permanent (male or female permanent contraception)	54	25.5 (16.7–36.7)	202	27.6 (21.8–34.3)	188	36.4 ^c (29.0–44.7)	56	41.9 ^c (29.5–55.2)	136	35.3 ^c (27.9–43.4)	333	29.3 ^c (24.2–35.0)	1337	23.2 (20.6–26.0)
Highly effective - reversible (implant or IUD [LNG or copper])	13	10.8 ^c (4.6–23.5)	50	9.2 (6.0–13.8)	18	6.9 ^e (2.9–15.6)	10	<i>f</i>	24	9.7 ^e (5.2–17.4)	74	8.4 (5.7–12.1)	473	9.8 (7.4–12.8)
Moderately effective - (injection, oral contraceptive, patch, or ring)	21	17.9 ^e (9.7–30.8)	89	13.9 ^c (9.8–19.3)	51	15.9 (9.9–24.6)	11	15.8 ^d (5.5–37.8)	40	14.7 (8.8–23.5)	137	15.8 ^c (11.8–20.8)	946	21.9 (19.2–25.0)
Less effective - (male or female condom, diaphragm, cervical cap, sponge, withdrawal, fertility awareness methods, spermicide or other ^d)	36	11.0 (5.8–19.9)	102	20.4 (13.3–29.9)	61	14.6 (9.7–21.4)	20	8.9 ^{c,e} (4.6–16.3)	59	15.8 (10.3–23.5)	171	18.4 (13.0–25.3)	850	17.5 (15.2–20.1)
No contraception	63	34.8 (23.6–47.8)	183	29.0 (22.4–36.6)	135	26.2 (19.1–34.7)	45	20.4 (11.2–34.3)	104	24.5 (17.4–33.5)	287	28.2 (23.0–34.2)	1159	27.6 (24.6–30.9)

Note: N for disability categories are not mutually exclusive, therefore do not add up to N for Column #6. Abbreviations: CI, confidence interval; IUD, intrauterine device; LNG, levonorgestrel.

* Prevalence estimates adjusted for age, race/ethnicity, marital status, education, health insurance status, and parity.

[†] Women at risk for unintended pregnancy were defined as those who reported they were not currently pregnant, had not had a hysterectomy, did not have a same sex partner, did not want a pregnancy, and were sexually active (i.e., women who did not indicate that they had no partner or were not sexually active when asked about contraceptive use at last intercourse) at time of survey.

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^aThere were 228 women who did not report type of contraceptive method used.

^bWeights derived by iterative proportional fitting and adjust for nonresponse, noncoverage, and selection bias.

^c $p < .05$ for comparison of prevalence of contraceptive method for women with and without disability.

^dLess effective category includes “other” methods that could not be classified, including emergency contraception.

^eRelative standard error of the estimate is between 30% and 50%. Interpret with caution.

^fRelative standard error > 50%, data not shown.

Table 4
Adjusted* estimates of contraceptive use at last intercourse among women 18–50 years at risk for unintended pregnancy[†], by disability status and contraceptive type, 7 states, BRFSS, 2013 (n=5767^a)

Method	1 disability ^b (n=1031)		No disability (n=4964)		p-Value
	Unweighted n	Weighted % ^c (95% CI)	Unweighted n	Weighted % ^c (95% CI)	
Highly effective permanent					
Female permanent contraception	267	21.8 (17.0–27.5)	743	14.1 (11.9–16.6)	.008
Male permanent contraception	66	6.4 (4.0–10.1)	594	9.1 (7.7–10.7)	.12
Highly effective reversible					
Implant	11	1.8 (0.8–4.3) ^d	72	1.8 (1.2–2.6)	.94
IUD (LNG or copper)	63	6.5 (4.4–9.5)	401	8.1 (5.8–11.1)	.38
Moderately effective					
Shots/injections	18	0.5 (0.2–1.0) ^d	47	1.0 (0.7–1.6)	.07
Oral contraceptives	110	14.3 (10.5–19.3)	847	19.9 (17.1–22.9)	.03
Patch or ring	9	— ^e	52	1.1 (0.6–1.8)	.92
Less effective					
Male condom	153	13.8 (10.3–18.4)	711	15.1 (12.9–17.6)	.59
Female condom, diaphragm, cervical cap, sponge, withdrawal, fertility awareness methods, spermicide or other	18	— ^e	139	2.4 (1.8–3.3)	.36

Abbreviations: CI, confidence interval; IUD, intrauterine device; LNG, levonorgestrel.

* Prevalence estimates adjusted for age, race/ethnicity, marital status, education, health insurance status, and parity.

[†] Women at risk for unintended pregnancy were defined as those who reported they were not currently pregnant, had not had a hysterectomy, did not have a same sex partner, did not want a pregnancy, and were sexually active (i.e., women who did not indicate that they had no partner or were not sexually active when asked about contraceptive use at last intercourse) at time of survey.

^a There were 228 women who did not report type of contraceptive method used.

^b Includes vision, cognition, mobility, self-care, and independent living disabilities.

^c Weights derived by iterative proportional fitting and adjust for nonresponse, noncoverage, and selection bias.

^d Relative standard error of the estimate is between 30% and 50%. Interpret with caution.

^e Relative standard error > 50%, data not shown.