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Pregnancy among U.S. women: Differences by presence, type, and complexity of disability

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Abstract

Background—Approximately 12% of women of reproductive age have some type of disability. Very little is known about sexual and reproductive health issues among women with disabilities, including what proportion of women with disabilities experience pregnancy. Data on pregnancy are important to inform needs for preconception and pregnancy care for women with disabilities.

Objective—The purpose of this study was to describe the occurrence of pregnancy among women with various types of disability and with differing levels of disability complexity, compared to women without disabilities, in a nationally representative sample.

Study Design—We conducted cross-sectional analyses of 2008–2012 Medical Expenditure Panel Survey annualized data to estimate the proportion of women ages 18–44 with and without disabilities who reported a pregnancy during one year of their participation on the survey panel. We used multivariable logistic regression to test the association of pregnancy with presence, type, and complexity of disability, controlling for other factors associated with pregnancy.

Results—Similar proportions of women with and without disabilities reported a pregnancy (10.8% vs. 12.3%, with 95% confidence intervals overlapping). Women with the most complex disabilities (those that impact activities such as self-care and work) were less likely to have been pregnant (AOR=0.69, 95% CI=0.52–0.93), but women whose disabilities only affected basic actions (seeing, hearing, movement, cognition) did not differ significantly from women with no disabilities.

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This study was conducted in Portland, Oregon.

Conflict of Interest

The authors report no conflicts of interest.

Conclusion—Women with a variety of types of disabilities experience pregnancy. Greater attention is needed to the reproductive healthcare needs of this population in order to ensure appropriate contraceptive, preconception, and perinatal care.

Keywords

People with disabilities; Women; Pregnancy; Population-based data

Introduction

Nearly 57 million Americans have a disability, constituting approximately 19% of the United States population.¹ Disability is more common among older individuals, but approximately 12% of U.S. women of childbearing age have some type of disability.² Despite the size of the disability population, the sexual and reproductive health needs of this population have largely been ignored. Sexuality in people with disabilities has historically been viewed as either nonexistent or dangerous; thus, there has been little impetus until recently to develop a knowledge base regarding the reproductive health of people with disabilities.^{3,4}

Disability is conceptually defined as the interaction of an individual's impairments with characteristics of the environment, resulting in restricted ability to carry out social roles or access needed services.⁵ In practical measurement terms, however, disability is typically assessed through self-report of difficulty performing basic functions such as movement, vision, hearing, or cognition. Each of these broad categories of disability may also include difficulty with more complex tasks such as activities of daily living (ADLs, e.g. bathing or dressing), instrumental activities of daily living (IADLs, e.g. shopping or preparing meals), or participation in social roles such as work or recreation.⁶

Numerous studies have documented disparities between women with and without disabilities in receipt of one aspect of care related to reproductive health: Pap testing to detect cervical cancer.^{6,7-12} There is, however, much less data available on other components of sexuality and reproductive health of women with disabilities, including sexual behavior, needs for and use of contraception, family planning decision-making, pregnancy, and maternal and infant birth outcomes. Historically, women with disabilities have been discouraged from having children. Although practices such as involuntary sterilization are now illegal,¹³ women with various types of disabilities have reported discouraging responses from healthcare providers and others regarding potential pregnancy, and a profound lack of healthcare provider knowledge about how their disability and pregnancy may interact.^{3,14-16}

Very little is known about how common pregnancy is among women with disabilities. Recent evidence suggests that women with and without disabilities were equally likely to want children, but women with disabilities were less certain about their intentions to have children.¹⁷ Findings limited to current pregnancy at time of interview found a lower prevalence of pregnancy among women with chronic physical disabilities compared to those without disabilities, but pregnancy prevalence was similar after adjusting for other socio-demographic characteristics associated with pregnancy.¹⁸ An analysis of data from women

with spinal cord injuries found that 2% reported a pregnancy during the past 12 months, similar to the rate of current pregnancy among all women with physical disabilities.¹⁹

Important gaps remain in our knowledge of the sexual and reproductive health of women with disabilities. No research has documented the rate of unintended pregnancy among women with disabilities. Nor has research to date examined pregnancy rates among women with cognitive or sensory (vision or hearing) disabilities. Such data are important to understand needs for pregnancy care, and to ensure adequate access to contraception to prevent unintended pregnancies, among women with disabilities. Reproductive healthcare providers need evidence to inform discussions about contraception, childbearing plans, preconception care, and prenatal care for women with disabilities. The purpose of this study was to describe the occurrence of pregnancy among women with various disability types and differing levels of disability complexity, compared to women without disabilities.

Materials and Methods

Data Source

We used existing data from the Medical Expenditure Panel Survey (MEPS) Household Component. MEPS data are collected by the Agency for Healthcare Research and Quality (AHRQ) to provide nationally representative data on health and utilization of healthcare among non-institutionalized individuals. The MEPS uses an overlapping panel design with a new panel selected each year from the previous year's National Health Interview Survey sample.^{20,21} Panel members complete five in-person interviews over a 2-year period. Thus, MEPS can capture a relatively broad range of pregnancy occurrences, including those that are short-lived. AHRQ creates full-year consolidated files weighted to provide annualized U.S. population estimates. These files can be pooled across multiple years to increase sample size. We conducted cross-sectional analyses of combined full-year files from 2008–2012, the available years in which a variable about pregnancy was included in the public use datasets. Because data are de-identified and publicly available, the Institutional Review Board of Oregon Health & Science University classified the study as non-human subjects research.

Sample

Our analyses included women age 18–44. The combined 2008–2012 MEPS dataset included a total of 31,964 women in this age range, 27,567 of whom had non-missing data on all variables of interest for our analyses (see Figure 1). The proportion of women reporting a pregnancy did not significantly differ between women excluded due to missing data on covariates (described below) and women with complete data.

Measures

Dependent Variable—A pregnancy indicator is available for each MEPS round, specifying whether any female household members were pregnant during that interview round (“Since [start date] has anyone in the family been pregnant at any time?”). If yes, a follow-up question was asked to ascertain who in the household was pregnant. We coded as pregnant any females who had a pregnancy indicated in any round.

Disability Variables—We created three disability variables, each of which served as a primary predictor variable in separate analyses. The first was a dichotomous variable noting presence or absence of any disability as indicated by limitations in physical functions, vision, hearing, or cognition. This operationalization of disability was based on Altman and Bernstein's concept of basic action difficulties, which are limitations in movement, sensory, cognitive, or emotional functioning.⁶ We did not include emotional functioning, as the MEPS household interview only covers limitations in movement, sensory, and cognitive functions. Basic action difficulties were identified by affirmative responses to one or more MEPS survey questions about: 1) any degree of difficulty with physical functions such as walking, standing, bending, lifting, reaching, or grasping; 2) any difficulty seeing (while wearing glasses, if used); 3) any difficulty hearing (with a hearing aid, if used); and 4) any cognitive limitations such as confusion, memory loss, or difficulty making decisions. Women with no reported limitations were coded as having no disability (reference group)

Second, we created a 6-category variable specifying what type of disability (i.e. basic action difficulty) was present, if any. Categories were: no disability (reference), physical limitation only, vision limitation only, hearing limitation only, cognitive limitation only, or multiple types of limitations. Disabilities can range considerably in the extent to which they limit activities. Therefore, our third disability variable indicated the extent of impact on daily life, and was modeled on Altman & Bernstein's description of complex activity limitations as restrictions in ability to participate in social roles or self-care activities.⁶ Women were coded as having a complex activity limitation if they had positive responses to MEPS items about needing assistance with ADLs or IADLs, or being limited in work, housework, social, or recreational activities. The variable included three categories: 1) no disability (reference); 2) basic action difficulties only; 3) complex activity limitations. This 3-level variable and the 6-level disability type variable are not mutually exclusive; women with any disability type could also have a complex activity limitation.

Covariates—Demographic covariates in our multivariable models included age group (18–24, 25–34, 35–44) and race/ethnicity (non-Hispanic White, all other race and ethnicity groups). Sociodemographic covariates included marital status (currently married or not), family income as percent of the Federal Poverty Level (≥400%, 200 to <400%, 100 to <200%, <100%), education (any education beyond high school, high school diploma [HS]/general educational development [GED] or less), and employment status (employed or not employed). We included two healthcare access variables that could affect ability to obtain contraception, thereby impacting pregnancy. These variables were health insurance (insured all year with any portion of that being private insurance, publicly insured all year, uninsured for part or all of the year) and whether or not the woman had a usual source of healthcare. Additional covariates included perceived health status (excellent/very good/good versus fair/poor), region of the U.S. (Northeast, Midwest, South, West), and survey year.

Statistical analysis

We calculated the proportion (with 95% confidence interval) of women who had been pregnant within each category of our three measures of disability. We then developed multivariable logistic regression models with any reported pregnancy as our outcome.

Regression analyses examined odds of pregnancy by overall disability (any versus none), by disability type, and by disability complexity, controlling for covariates described above. All analyses used Stata version 12.1 with Taylor series linearization and incorporated survey weights to account for the complex survey design of MEPS.

Results

Table 1 shows the proportion of women with reported pregnancy by overall disability and by disability type, along with other sample characteristics for each group. Table 2 presents similar information by disability complexity. Approximately 12.3% of our sample had some type of disability. Women with disabilities were less likely to be married and more likely to be non-Hispanic White. They also tended to older, poorer, less educated, less employed, and less healthy than women without disabilities. However, the majority of women with disabilities reported positive perceived health, consistent with prior survey research^{22,23} and with conceptual models distinguishing disability from poor health.²⁴

Within our sample, 12.1% of women had reported pregnancies during one year of their panel participation. Overlapping confidence intervals indicated no statistically significant differences between women with disabilities as a whole (10.8%, 95% CI=9.4–12.3) and those without disabilities (12.3%, 95% CI=11.7–12.9). When considering disability type, women with multiple types of limitations had the lowest proportion who had been pregnant (8.4%, 95% CI=6.1–11.3) followed by women with cognitive disabilities (9.2%, 95% CI=6.3–13.1), women with hearing disabilities (9.8%, 95% CI=8.4–13.2), and women with physical disabilities (10.6, 95% CI=8.4–13.2). While each of these groups had lower percentages with reported pregnancies compared to women without disabilities, the confidence intervals for the disability groups were wide and most overlapped with the non-disabled reference group. Only women with multiple types of disabilities had a significantly lower proportion who had been pregnant.

Across disability types, women with more complex limitations were significantly less likely to have been pregnant (7.8%, 95% CI=6.3–9.8) than women with no disabilities. Pregnancy among women who were limited in one or more basic actions but did not have a complex activity limitation (12.8%, 95% CI=10.7–15.2) did not differ significantly from women with no disabilities (12.3%, 95% CI=11.7–12.9). The proportion of each disability type group that had a complex activity limitation varied widely. Complex limitations were most common among women with multiple types of disabilities (69.1% with a complex limitation), women with cognitive disabilities (55.3%), and women with physical disabilities (43.9%), and were relatively rare among women with vision (4.3%) or hearing disabilities (8.2%).

There were no significant associations between overall disability and pregnancy or between individual types of disability and pregnancy in our multivariable models. Women with complex disabilities, however, had lower odds of pregnancy, controlling for covariates (adjusted odds ratio [AOR]=0.69, 95% CI=0.52–0.93). Because the effects of covariates were consistent across models, we present only the model with disability complexity as the primary predictor (Table 3). We followed up on the significant effect for women with complex limitations by conducting stratified multivariable models for women with complex

limitations and those with no disabilities. The purpose was to determine whether the relationships between covariates and pregnancy were substantially different for women with complex limitations than for women without disabilities. We noted that, although the relationship between age and pregnancy was in the same direction in both analyses, the effect for the 35–44 age group was stronger among women with complex limitations (AOR=0.07, 95% CI=0.03–0.16) than for women without disabilities (AOR=0.21, 95% CI=0.17–0.26). Fewer than 2% of women age 35–44 with complex limitations were pregnant during panel participation.

Comment

Our study extends prior knowledge by providing data on pregnancy in women with sensory, cognitive, and multiple disabilities as well as those with physical disabilities, and by examining variations in relation to disability complexity. Overall, the women with disabilities in our sample were just as likely to have been pregnant as women without disabilities. Our results differ somewhat from previous research, in which unadjusted analyses indicated women with physical disabilities were significantly less likely to report current pregnancy compared to women with no disabilities.¹⁸ The difference in findings may be due to the time period covered (current pregnancy versus any pregnancy during a year) as well as differences in the way disability was measured and analyzed. Of note, Iezzoni and colleagues¹⁸ restricted their disability sample to women with chronic disabilities, whereas the annualized MEPS files did not allow us to make that distinction for our disability categories. Examination of the relationship of chronic versus transient disability to pregnancy for various disability types is an important avenue for future research.

Women with multiple disabilities and those with more complex disabilities were less likely to have reported pregnancies. There was substantial overlap between these groups; nearly 70% of women with multiple types of basic action difficulties also had a complex activity limitation. In other words, both groups primarily represent women with more extensive limitations. Women with multiple disabilities were no longer significantly less likely to have been pregnant when accounting for covariates, suggesting that the lower proportion with reported pregnancy among these women was attributable to differences in socio-demographic characteristics rather than disability per se. However, women with complex limitations continued to differ significantly from women with no disabilities. The reduced odds of pregnancy in the oldest age group were particularly pronounced for women with complex limitations, with pregnancy being quite unlikely for women who had complex limitations and were in the upper decade of the reproductive age range. Some women with complex limitations may have had pregnancies earlier in life that were not captured during the brief window of their MEPS participation. Alternatively, women with complex limitations may face greater societal obstacles to being perceived as sexual beings, finding sexual partners, and achieving childbearing desires.

Clearly, women with disabilities, even those with complex disabilities, can and do get pregnant and therefore have needs for the full range of reproductive healthcare services. We know from previous research that at least some of these needs are not well met; multiple studies have demonstrated that women with disabilities are significantly less likely to receive

timely testing for cervical cancer.^{7–12} Deficits in reproductive healthcare may stem, in part, from perceptions of women with disabilities as asexual and a lack of conversation between women and their healthcare providers about their sexual activity.²⁵ Unfortunately, very little is known about physician-patient interactions regarding sexuality of women with disabilities.

The MEPS does not provide data about pregnancy intendedness or contraceptive utilization; therefore, we could not determine what proportion of the pregnancies in each group were planned or desired. There is some evidence that women with disabilities face increased risks of health problems during pregnancy, as well as poorer pregnancy outcomes.^{15,26–28} Unintended pregnancies could therefore be especially problematic in this population. The extent to which women with disabilities have unmet needs for contraception is currently unknown. Research into the contraception preferences and needs of women with disabilities is essential to inform future care.

On the other hand, many women with disabilities desire pregnancies and are able to conceive and deliver with no adverse outcomes for mother or baby.^{15,17} Yet women with disabilities have reported a lack of clear guidance from physicians as to whether or not they can safely have children.¹⁶ There is some evidence among Medicaid recipients that women with disabilities were less likely to receive early and adequate prenatal care than their counterparts without disabilities.²⁹ It is important for healthcare providers to discuss childbearing desires with patients with disabilities. Such conversations will facilitate provision of appropriate preconception and prenatal care to minimize pregnancy complications and maximize healthy outcomes.

The restricted time frame during which pregnancies could be reported was a limitation of our study. Further, no data were available on prior pregnancies or the number of children women had. Additional data are needed to understand lifetime pregnancy experiences of women with disabilities. Another limitation was that pregnancies may have been under-reported in MEPS if the responding household member did not know about a pregnancy, or if a woman who was or had been pregnant chose not to divulge that information. Our sample size of women with disabilities was relatively small and we may not have had sufficient power to detect all relevant differences between groups. Our categories of disability types were also quite broad, and no specifics about the many potential etiologies of these disabilities are available in MEPS. Moreover, we were unable to examine pregnancy outcomes. There is a great need for population-based studies to determine what proportion of pregnancies among women with disabilities are completed and result in a live birth, and how these outcomes compare to those of women without disabilities. Further, while some studies of pregnancy complications and maternal and infant birth outcomes have been conducted,^{15,26–28} additional large-scale studies with diverse samples of women with disabilities are needed to better understand what specific disabling conditions are most associated with adverse outcomes and how those impacts can be ameliorated.

Our findings make clear that pregnancy among women with disabilities is not rare, highlighting the relevance of existing and emerging research on unintended pregnancy, disparities in prenatal care, and pregnancy outcomes for women with disabilities. Sexual expression and childbearing are key components of life regardless of disability status. Both

women and men with disabilities need accurate, accessible, and understandable information about sexual health and options regarding contraception and reproduction. It is especially important for women with disabilities to have opportunities to discuss sexual activity, childbearing desires, and associated concerns with their healthcare providers so that clinicians can provide appropriate screenings, contraceptive services, preconception, and prenatal care. Attention to the reproductive healthcare needs of women with disabilities is central to improving social and health outcomes in this population.

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Figure 1. Analytic sample selection, Medical Expenditure Panel Survey 2008–2012

Figure 1 is a flow chart depicting the steps in narrowing the sample from the full number of individuals available in the data source to the number included in our analyses.

Table 1

Sample characteristics by type of disability, women ages 18–44

Variable	None ^a (n=24,358)	Any ^b (n=3209)	Vision ^c (n=692)	Hearing ^d (n=254)	Physical ^e (n=1036)	Cognitive ^f (n=417)	Multiple ^g (n=810)	Total (n=27,567)
Weighted % (95% Confidence Interval)								
Pregnant while on panel	12.3 (11.7,12.9)	10.8 (9.4,12.3)	15.3 (11.3,20.2)	9.8 (6.4, 14.6)	10.6 (8.4,13.2)	9.2 (6.3,13.1)	8.4 (6.1,11.3)	12.1 (11.5,12.7)
Age (years)								
18–24	26.6 (25.5,27.7)	18.0 (16.2,19.9)	26.5 (22.4,31.1)	14.8 (9.6,22.2)	14.5 (12,17.3)	21.8 (16.6,28.2)	14.4 (10.7,19.2)	25.5 (24.5,26.6)
25–34	37.5 (36.2,38.7)	33.9 (31.6,36.2)	38.0 (32.9,43.4)	33.7 (26.3,41.9)	33.3 (29.5,37.2)	34.2 (28.4,40.6)	30.9 (26.4,35.9)	37.0 (35.9,38.2)
34–44	35.9 (34.8,37)	48.2 (45.5,50.8)	35.5 (30.1,41.2)	51.5 (43.7,59.2)	52.3 (47.9,56.6)	43.9 (37.1,51)	54.6 (48.9,60.3)	37.4 (36.4,38.5)
Married	48.3 (47.1,49.6)	40.8 (38.3,43.2)	43.0 (37.5,48.7)	49.9 (41,58.8)	45.1 (41.3,48.9)	30.3 (23.7,37.9)	35.0 (29.7,40.7)	47.4 (46.2,48.6)
Family income as % of poverty level								
>=400%	34.7 (33.3,36.2)	23.8 (21.2,26.6)	24.0 (19,29.8)	39.7 (30.9,49.2)	25.1 (21.1,29.7)	18.8 (12.2,27.7)	18.8 (14.1,24.5)	33.4 (32,34.7)
200 to <400%	32.3 (31.3,33.2)	27.8 (25.6,30.1)	29.7 (25.3,34.4)	27.4 (20.7,35.3)	30.9 (27.4,34.5)	26.5 (21.1,32.6)	23.0 (19.3,27)	31.7 (30.8,32.6)
100 to <200%	18.0 (17.2,18.7)	21.9 (20.1,23.8)	23.5 (19.6,27.9)	17.6 (13,23.3)	19.7 (17,22.8)	20.1 (15.9,25.2)	25.6 (21.4,30.2)	18.4 (17.7,19.2)
<100%	15.1 (14.1,16.1)	26.6 (24.4,28.9)	22.9 (19.4,26.8)	15.4 (10.7,21.6)	24.3 (20.4,28.7)	34.6 (28.5,41.3)	32.7 (28.1,37.6)	16.5 (15.5,17.5)
Non-Hispanic White	59.8 (57.6,62)	66.8 (64.1,69.4)	63.3 (57.8,68.4)	75.3 (68.2,81.2)	68.0 (63.9,71.9)	62.3 (55.2,68.9)	67.5 (62.5,72)	60.7 (58.5,62.8)
> high school education	44.4 (42.8,46.0)	35.3 (32.4,38.3)	39.9 (34.3,45.9)	50.8 (41.7,60.0)	39.4 (35.5,43.5)	28.1 (20.9,36.6)	24.0 (19.7,28.7)	43.3 (41.7,44.8)
Employed	70.4 (69.1,71.6)	58.2 (55.4,60.9)	71.5 (65.9,76.5)	78.0 (71.4,83.5)	63.0 (58.6,67.2)	40.2 (33,47.8)	42.1 (37.2,47.1)	68.9 (67.7,70)
Health insurance								
Insured all year (any private)	63.6 (62,65.2)	49.1 (46.1,52.1)	56.0 (50.5,61.4)	63.5 (55.4,71)	54.9 (50.3,59.4)	36.8 (29.6,44.6)	36.5 (31.5,41.7)	61.9 (60.3,63.4)
Publicly insured all year	9.1 (8.3,10.1)	24.1 (21.5,26.8)	9.3 (7.1,12)	11.7 (7.4,17.8)	21.3 (17.6,25.4)	37.7 (30.6,45.5)	38.4 (33.1,44)	11.0 (10,12)

Variable	None ^a (n=24,358)	Any ^b (n=3209)	Vision ^c (n=692)	Hearing ^d (n=254)	Physical ^e (n=1036)	Cognitive ^f (n=417)	Multiple ^g (n=810)	Total (n=27,567)
Weighted % (95% Confidence Interval)								
Uninsured part/all year	27.2 (25.8,28.7)	26.8 (24.5,29.3)	34.7 (30.2,39.6)	24.8 (19.4,31.2)	23.8 (20.7,27.3)	25.5 (20.2,31.5)	25.1 (20.8,30)	27.2 (25.8,28.6)
Have usual source of care	71.5 (70.3,72.7)	78.1 (75.8,80.2)	67.5 (62.1,72.5)	84.8 (77.8,89.9)	83.1 (79.6,86.1)	74.1 (68.9,79)	80.4 (75.2,84.7)	72.3 (71.2,73.5)
Fair/poor health	6.0 (5.6,6.5)	33.0 (30.7,35.2)	11.6 (8.8,15.3)	16.6 (11.6,23.2)	35.4 (31.5,39.4)	30.6 (24.7,37.2)	54.9 (49.7,60)	9.3 (8.8,9.9)
Region								
Northeast	24.0 (22.3,25.9)	22.8 (20.5,25.3)	22.2 (17.7,27.4)	17.9 (13.3,23.7)	22.4 (18.4,27)	27.6 (21.7,34.4)	23.3 (19.1,28.1)	23.9 (22.2,25.6)
Midwest	37.4 (35.4,39.4)	36.9 (33.3,40.7)	41.2 (35.3,47.2)	34.6 (26.9,43.1)	35.4 (30.6,40.5)	31.4 (24.5,39.3)	38.6 (32.5,45.2)	37.3 (35.3,39.3)
South	21.0 (19.6,22.5)	23.6 (20.1,27.4)	21.4 (16.7,26.8)	30.1 (21.8,43.1)	24.3 (19.6,29.6)	22.0 (16.2,29.1)	23.2 (18.3,28.8)	21.3 (19.8,22.9)
West	17.6 (16.4,18.9)	16.7 (14.6,19.1)	15.3 (10.7,21.4)	17.5 (11.4,25.9)	17.9 (14.7,21.7)	19.0 (13.5,26.2)	14.9 (1.1,19.7)	17.5 (16.3,18.8)
Year								
2008	21.0 (20.2,21.8)	21.9 (20.2,23.7)	19.2 (15.9,23)	24.4 (18.1,31.9)	22.1 (18.9,25.7)	21.7 (16.5,27.9)	23.3 (19.9,27)	21.1 (20.3,21.8)
2009	21.0 (20.5,21.6)	22.2 (20.7,23.8)	24.1 (20.3,28.4)	28.2 (22.5,34.8)	19.6 (17.1,22.3)	20.2 (15.9,25.3)	22.7 (19.3,26.4)	21.2 (20.7,21.7)
2010	21.3 (20.6,22)	20.1 (18.5,21.9)	19.8 (16,24.4)	19.0 (13.9,25.3)	21.7 (18.4,25.5)	18.9 (14.9,23.6)	19.3 (16.6,22.4)	21.2 (20.6,21.7)
2011	18.4 (17.8,19)	18.3 (16.6,20.1)	19.4 (15.4,24.1)	12.5 (9.1,17.1)	19.0 (16,22.4)	21.0 (16.1,27)	17.1 (13.7,21.1)	18.3 (17.8,18.9)
2012	18.3 (17.7,19)	17.5 (16.1,19.1)	17.5 (14.4,21)	15.9 (11.2,22.1)	17.6 (14.9,20.6)	18.2 (13.9,23.4)	17.7 (14.5,21.3)	18.2 (17.6,18.8)

^aNo disability^bAny type of disability^cVision disability^dHearing disability^ePhysical disability^fCognitive disability

Multiple types of disability
 $\mathcal{M}_g$

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Table 2

Sample characteristics by disability complexity, women age 18–44

Variable	No disability (n=24,358)	Basic only (n=1901)	Complex (n=1308)	Total (27,567)
Weighted % (95% Confidence Interval)				
Pregnant while on panel	12.3 (11.7,12.9)	12.8 (10.7,15.2)	7.8 (6.3,9.8)	12.1 (1.5,12.7)
Age (years)				
18–24	26.6 (25.5,7.7)	20.2 (17.9,2.26)	14.7 (11.5,18.6)	25.5 (24.5,26.6)
25–34	37.5 (36.2,38.7)	35.7 (32.6,38.9)	31.1 (27.8,34.6)	37.0 (35.9,38.2)
34–44	35.9 (34.8,37.0)	44.2 (40.8,47.6)	54.2 (49.8, 58.5)	37.4 (36.4,38.5)
Married	48.3 (47.1,49.6)	45.4 (42.4,48.4)	33.8 (29.7,38.2)	47.4 (46.2,48.6)
Family income as % of Federal Poverty Level				
>=400%	34.7 (33.3,36.2)	26.7 (23.5,30.1)	19.4 (15.7,23.7)	33.4 (32.0,34.7)
200 to <400%	32.3 (31.3,33.2)	30.7 (27.9,33.8)	23.3 (20.3,26.6)	31.7 (30.8,32.6)
100 to <200%	18.0 (17.2, 18.7)	21.5 (19.2,23.9)	22.6 (19.9,25.5)	18.4 (17.7,19.2)
<100%	15.1 (14.1,16.1)	21.1 (18.9,23.5)	34.7 (30.5,39.2)	16.5 (15.5,17.5)
Non-Hispanic White	59.8 (57.6,62.0)	65.7 (62.6,68.7)	68.4 (64.6,71.9)	60.7 (58.5,62.8)
Completed education beyond high school	44.4 (42.8,46.0)	41.5 (37.8,45.2)	26.0 (22.2,30.1)	43.3 (41.7,44.8)
Employed	70.4 (69.1,71.6)	73.4 (70.8,75.9)	35.2 (31.0,39.6)	68.9 (67.7,70.0)
Health insurance				
Insured all year (any private)	63.6 (62.0,65.2)	57.7 (54.1,61.3)	36.1 (31.8,40.6)	61.9 (60.3,63.4)
Publicly insured all year	9.1 (8.3,10.1)	11.9 (10.1,13.9)	42.5 (37.8,47.3)	11.0 (10.0,12.0)
Uninsured part or all year	27.2 (25.8,28.7)	30.4 (27.4,33.6)	21.4 (18.1,25.1)	27.2 (25.8,28.6)
Have usual source of care	71.5 (70.3,72.7)	74.8 (72.0,77.5)	83.0 (79.1, 86.3)	72.3 (71.2,73.5)
Fair/poor perceived	6.0 (5.6,6.5)	20.9 (18.6,23.3)	51.2 (47.2,55.2)	9.3 (8.8,9.9)
Region				
Northeast	24.0 (22.3,25.9)	21.2 (18.5,24.2)	25.1 (21.7,28.9)	23.9 (22.2,25.6)
Midwest	37.4 (35.4,39.4)	37.6 (33.7,41.7)	35.9 (30.9,41.3)	37.3 (35.3,39.3)
South	21.0 (19.6,22.5)	25.7 (21.2,30.7)	20.4 (16.7,24.7)	21.3 (19.8,22.9)
West	17.6 (16.4,18.9)	15.5 (12.9,18.4)	18.5 (14.7,23.1)	17.5 (16.3,18.8)

Variable	No disability (n=24,358)	Basic only (n=1901)	Complex (n=1308)	Total (27,567)
Weighted % (95% Confidence Interval)				
Year				
2008	21.0 (20.2,21.8)	21.0 (19.0,23.3)	23.2 (20.3,26.4)	21.1 (20.3,21.8)
2009	21.0 (20.5,21.6)	22.2 (20.1,24.5)	22.1 (19.5,25.1)	21.2 (20.7,21.7)
2010	21.3 (20.6,22.0)	20.9 (18.7,23.2)	19.1 (16.6,21.8)	21.2 (20.6,21.8)
2011	18.4 (17.8,19.0)	19.1 (16.7,21.7)	17.1 (14.9,19.5)	18.3 (17.8,18.9)
2012	18.3 (17.7,19.0)	16.8 (14.9,19.0)	18.5 (16.2,21.1)	18.2 (17.6,18.8)

Table 3

Adjusted odds of pregnancy by disability complexity

Independent Variable	AOR ^a	95% CI ^b	P
Disability complexity (reference: No disability)			
Basic only	1.15	0.93,1.43	0.206
Complex	0.69	0.52,0.93	0.014
Age (reference: 18–24)			
25–34	0.89	0.76,1.04	0.138
35–44	0.20	0.16,0.24	<.001
Marital status (reference: Married)			
Not currently married	0.21	0.18,0.24	<.001
Family income as % of FPL ^c (reference: 400%)			
200 to <400%	0.94	0.80,1.09	0.407
100 to <200%	1.37	1.15,1.63	0.001
<100%	2.3	1.89,2.80	<.001
Race/ethnicity (reference: Non-Hispanic White)			
Other race/ethnicity	1.16	1.03,1.31	0.017
Education (reference: >HS/GED ^d)			
HS/GED	0.73	0.65,0.82	<.001
Employment (reference: Employed)			
Not employed	1.07	0.94,1.21	0.301
Health insurance (reference: Privately insured)			
Publicly insured all year	1.59	1.31,1.93	<.001
Uninsured part or all year	0.71	0.60,0.84	<.001
Usual source of care? (reference: yes)			
No	1.01	0.89,1.14	0.899
Perceived physical health (reference: E/VG/G ^e)			
Fair/poor	0.92	0.74,1.15	0.461
Region (reference: Northeast)			
Midwest	0.98	0.85,1.14	0.838
South	1.23	1.04,1.46	0.015
West	1.11	0.93,1.32	0.249
Year (reference: 2008)			
2009	0.84	0.74,0.95	0.005
2010	0.91	0.78,1.07	0.267
2011	0.79	0.66,0.93	0.005
2012	0.71	0.60,0.83	<.001

^aAdjusted odds ratio (adjusted for other variables in model)^bConfidence interval^cFederal Poverty Level

^dHigh school or General Educational Development

^eExcellent, very good, or good perceived health

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