Prevalence of Self-Reported Kidney Disease in Older Adults by Sexual Orientation

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ABSTRACT

Background
Existing research identifies disparities in chronic kidney disease (CKD) by age, race and ethnicity, and access to health care; however, little is known about chronic kidney disease in lesbian, gay, bisexual and transgender (LGBT) older adults, despite known higher kidney disease risk factors such as diabetes and heart disease.

Methods
We pooled data from the Behavioral Risk Factor Surveillance System (2014–2019) for 22,114 adults aged 50+ who self-identified on the survey as lesbian, gay, bisexual, "other" or "something else" and 748,963 adults aged 50+ who self-identified on the survey as heterosexual to estimate the prevalence of self-reported kidney disease. In addition, we used logistic regressions to compare older adults by sexual orientation.

Results
Older LGBT+ men were more likely than their heterosexual counterparts to report kidney disease, after controlling for sociodemographic factors, health behaviors, access to healthcare, and self-reported coronary heart disease, HIV, and diabetes (adjusted odds ratio 1.3; 95% confidence interval [CI], 1.09-1.54); LGBT+ men and women also reported high incidences of known risk factors for CKD such as diabetes, heart disease, etc. For example, both gay, bisexual and other men (odds ratio [OR] 1.39; [95% CI], 1.26-1.54 and LGBT+ women (OR 1.39; [95% CI], 1.25-1.55) were more likely to report being smokers and have a higher incidence of activity limitations, adverse health outcomes, and limited access to health care, housing, and employment.

Conclusion
These results underscore the importance of addressing the interaction between CKD risk factors and the social and medical marginalization of older LGBT+ adults. These findings also support increased access to screening for CKD risk factors, preventative education, culturally responsive and affirming care, and addressing other societal drivers of health disparities in older LGBT+ adults.

METHODS

Population Demographics
Data for this study come from the 2014–2019 BRFSS, a cross-sectional, nationally representative survey of the civilian, noninstitutionalized US population aged 18 years and older. This analysis combines 6 years of BRFSS data for states that included a sexual orientation question: for instance, a total of 31 states in 2019.

In the BRFSS (2014–2019), respondents were asked about their sexual orientation and gender identity. Other demographic, socioeconomic, health behavior, and health care categorical variables used in this study were age in years; race and ethnicity; smoking status; consumption of drinks per week; educational attainment; body mass index (BMI) measured in kg/m2; self-reported health status; having health insurance; and having a personal doctor or health care provider.

Sample
Our final sample included 22,114 adults who identified as lesbian, gay, bisexual, or "something else" and 748,963 adults who identified as "straight or heterosexual." Sixteen thousand hundred and two men and 22,342 women reported that they were told they had kidney disease.

Analysis
We undertook this analysis to identify what, if any, differences exist between older LGBT+ adults and their heterosexual peers as it relates to self-reported kidney disease and its risk factors.

LESSONS LEARNED

The elevated prevalence of self-reported kidney disease among LGBT+ older adults, especially among gay, bisexual, and other men, **underscores the need for access to screening for kidney disease risk factors for older LGBT+ adults.**

Education, culturally responsive and affirming care, and addressing systemic and societal drivers of vulnerability may increase detection and early treatment.

National surveys should develop **standardized, consistent, and tested kidney disease nomenclature** to ensure that they capture an accurate estimate of kidney disease prevalence in future surveillance efforts.

SELF-REPORTED KIDNEY DISEASE PREVALENCE

Table 1. Self-reported kidney disease prevalence, older adult respondents (>50 years) by sex and sexual orientation, Behavioral Risk Factor Surveillance System 2014–2019

	Men		Women	
Variable	Gay / Bisexual / Something else, % (S.E)	Heterosexual, % (S.E)	Gay / Bisexual / Something else, % (S.E)	Heterosexual, % (S.E)
Self-reported kidney disease	6.23 (0.47)	4.81 (0.08)	5.97 (0.46)	4.88 (0.08)

SELF-REPORTED KIDNEY DISEASE PREVALENCE

Table 2. Risk factor indicators, older adult respondents (>50 years) by sex and sexual orientation, Behavioral Risk Factor Surveillance System 2014–2019

	Men			Women		
Variable	Gay / Bisexual / Something else %	Heterosexual %	Gay/ Bisexual/ Something else vs Heterosexual (OR)	Lesbian / Bisexual / Something else %	Heterosexual %	Lesbian / Bisexual/ Something else vs Heterosexual (OR)
Smoking						
Current smoker	19.56	14.85	1.39 (1.26 – 1.54)	16.85	12.68	1.39 (1.25 – 1.55)
Former smoker	34.25	38.38	0.84 (0.77 – 0.91)	31.39	28.91	1.12 (1.03 – 1.23)
Body Mass Index (BMI)						
BMI ≥ 30.0	29.65	33.73	0.81 (0.75 – 0.89)	37.48	31.92	1.27 (1.17 – 1.40)
Activity Limitations						
Difficulty walking	22.38	19.11	1.21 (1.10 – 1.33)	31.92	24.84	1.41 (1.28 – 1.55)
Difficulty doing errands	9.99	6.52	1.58 (1.36 – 1.84)	14.64	10.34	1.48 (1.32 – 1.66)
Access to Health Care						
No current health care coverage	9.05	6.69	1.39 (1.18 – 1.63)	8.26	4.99	1.72 (1.45 – 2.03)
No personal health care provider	11.92	12.02	0.99 (0.86 – 1.14)	10.25	7.11	1.49 (1.30 – 1.71)
Could not afford doctor when needed	11.14	8.41	1.37 (1.2 – 1.56)	14.06	9.60	1.54 (1.36 – 1.74)
Health Outcomes						
General Health (Fair or Poor)	27.14	23.04	1.24 (1.14 – 1.36)	28.31	23.22	1.31 (1.19 – 1.43)
Diabetes	20.71	20.49	1.01 (0.92 – 1.11)	19.52	17.40	1.15 (1.02 -1.29)
Stroke	6.88	5.94	1.17 (1.0 – 1.36)	7.17	5.39	1.36 (1.16 – 1.59)
Angina or heart disease	9.37	10.13	0.92 (0.81 – 1.03)	7.64	5.86	1.33 (1.11 – 1.58)
Depressive disorder	23.71	12.72	2.13 (1.94 – 2.34)	31.44	21.51	1.67 (1.52 – 1.84)
Housing						
Rent	22.52	12.83	1.97 (1.81 – 2.16)	21.80	13.56	1.78 (1.62 -1.95)
Employment						
Unemployed	5.11	3.96	1.31 (1.1 – 1.55)	5.75	3.59	1.64 (1.20 – 2.24)
Unable to work	12.71	8.51	1.56 (1.39 – 1.76)	15.51	9.83	1.68 (1.49 -1.90)

FIGURES

Figure 1. Self-reported kidney disease prevalence in LGBT+ women (50+), BRFSS 2014-2019

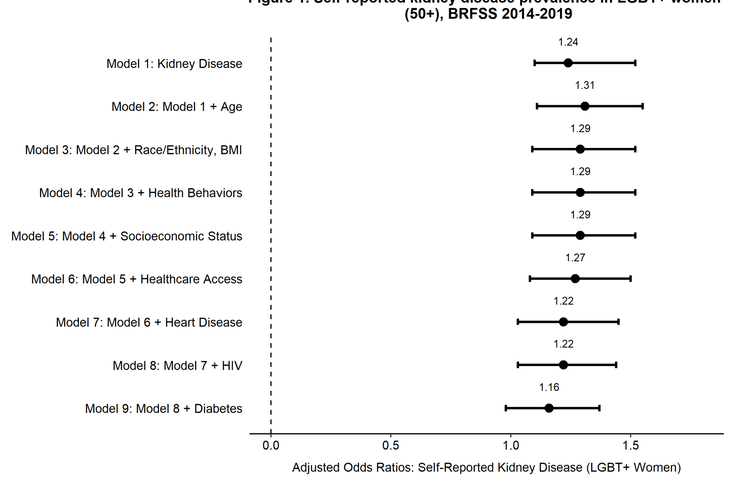
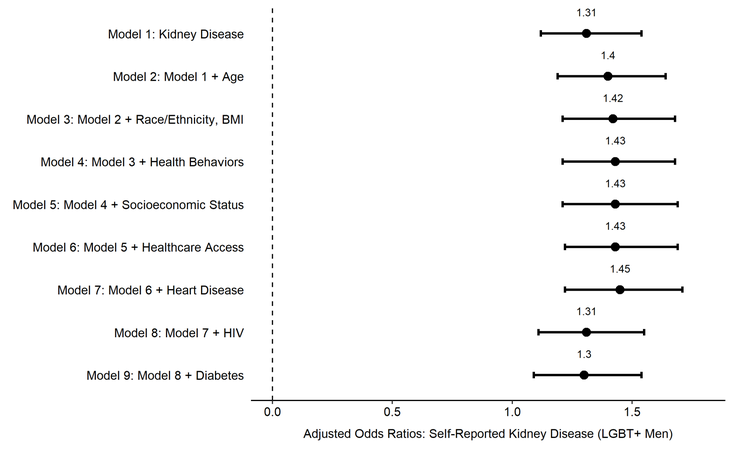


Figure 2. Self-reported kidney disease prevalence in LGBT+ men (50+), BRFSS 2014-2019



RESULTS

Prevalence of Self-Reported Kidney Disease by Sex and Sexual Orientation

LGBT+ older adults reported higher rates of kidney disease than their heterosexual counterparts. Specifically:
- **6.23%** of LGBT+ men older than 50 years had self-reported kidney disease compared with **4.81%** of heterosexual men.
- **5.97%** of LGBT+ women older than 50 years reported being told they have kidney disease compared with **4.88%** of heterosexual women.

Risk Factors
When compared with their heterosexual peers, LGBT+ older adults in our sample were more likely to report: poor health; limitations in activities of daily living, such as difficulty walking; a diagnosis of a depressive disorder; and indicators of financial instability such as renting their homes, being unemployed, or being unable to work.

Compared with their heterosexual peers, LGBT+ men were more likely to report: Uninsured status; unmet health needs due to costs; status as a current smoker, and a stroke diagnosis. Compared with their heterosexual peers, LGBT+ women were more likely to report: High BMI (defined as ≥ 30.0); status as a current smoker; uninsured status; no personal health care physician; diabetes diagnosis; and a stroke diagnosis.

After adjusting for age, race/ethnicity, and BMI:
- LGBT+ men and women had increased odds of self-reported kidney disease
- After adjusting for socioeconomic characteristics, health behaviors, and healthcare access variables, and kidney disease risk factors:
- Adults over 50 who were LGBT+ men were more likely to report kidney disease than heterosexual men of the same age

	Kidney Disease	Men	Women
Model No.	Logistic Regression Variables	Gay/ Bisexual/ Something else vs Heterosexual, AOR	Gay or Lesbian / Bisexual/ Something else vs Heterosexual, AOR
Model 1	Sexual Orientation	1.31 (1.12-1.54)	1.24 (1.10-1.52)
Model 3	Model 2+race/ethnicity, BMI	1.42 (1.21-1.68)	1.29 (1.09-1.52)
Model 6	Model 5+healthcare access—health insurance, personal doctor	1.43 (1.22-1.69)	1.27 (1.08-1.50)
Model 9	Model 8 + diabetes	1.3 (1.09-1.54)	1.16 (0.98-1.37)

DISCUSSION

- Research documents disparities in chronic kidney disease (CKD) by age, race, ethnicity, and access to health care, but little is known about the relationship between sexual orientation and kidney disease.
- LGBT+ individuals have higher rates of key risk factors for kidney disease (diabetes, high blood pressure, heart disease, smoking, alcohol use, obesity, and antiretroviral medications for HIV treatment and prevention).
- LGBT+ adults may have increased risk of CKD because of anti-LGBT+ stigma, discrimination, and intersectional barriers such as racism and/or ableism.
- Older LGBT+ people experience higher rates of kidney disease risk factors:
  - Higher prevalence of diabetes in LGBT+ women (OR= 1.15)
  - Higher prevalence of coronary heart disease in LGBT+ women (OR= 1.33)
  - Higher rates of tobacco use among LGBT+ people
  - Higher rates of poverty among older LGBT+ men and women
- Interventions are needed that address the intersection of chronic kidney disease risk factors and social marginalization among older LGBT+ adults.
- Disparities in kidney disease risk factors are likely to persist as long as social stigma and marginalization persist for older LGBT+ adults.

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