



# Health Disparities Experienced among Older Sexual Minorities:

## National Health Interview Survey, 2013–2014

### Introduction

Considerable efforts have focused on eliminating health disparities experienced by vulnerable populations in the United States. While disparate health outcomes by race and ethnicity, sex, and socio-economic status have been well-documented, limited studies have investigated health disparities by sexual orientation. Despite increased awareness of and greater societal acceptance of people who are sexual minorities (that is gay, lesbian, or bisexual), our ability to conduct insightful and meaningful analyses between this group and the sexual majority (i.e. straight, heterosexual) group is significantly hampered by our inability to identify and systematically study individuals who identify as a sexual minority. According to a 2016 National Survey of Family Growth report for adults age 18-44, 1.3 percent of women and 1.9 percent of men identified as “homosexual, gay, or lesbian”; 5.5 percent of women and 2.0 percent of men as bisexual; and 0.9 percent of women and 1.0 percent of men said “don’t know” or “refused” (Copen, Chandra, and Febo-Vazquez, 2016).

Furthermore, recognizing that very little representative national data exist on sexual minorities, the Institute of Medicine has identified a need for more and better research in this underserved population (IOM, 2011). As a result, more recent research is focusing on this population. For example, by using data from the 2013 National Health Interview Survey (NHIS) Ward et al., found significant differences in health behaviors and health status between sexual minorities and self-identified straight adults, age of 18-64 years (Ward, Dahlhamer, Galinsky, and Joestl, 2014). Sexual minorities had higher rates of receiving influenza vaccines, ever being tested for HIV, being current

### Key Findings:

- Among persons aged 65 and older, 62.7% of sexual minority respondents reported that they are in excellent or very good health compared to 45.9% of sexual majority respondents.
- Nearly 80% of older sexual minority respondents reported that they received an influenza vaccine during the past year compared to nearly 70% of older sexual majority respondents.
- More than half (51.3%) of the older sexual minority respondents reported that they had been tested for HIV compared to only 15.8% of the older sexual majority respondents.
- Nearly twice as many older sexual minority respondents (14.5%) had five or more alcoholic drinks in one day – at least once in the past year – compared to older sexual majority respondents (6.7%).

Data Source: 2013 and 2014 National Health Interview Survey, conducted by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS)

smokers, and consuming more than 5 alcoholic drinks in one day than persons self-identified as straight (Ward et al., 2014). Sexual minorities also had lower rates of having a usual place to go for medical care and higher rates of failure to obtain needed care than persons classified as straight (Ward et al., 2014). However these studies have focused solely on adults under age 65.

We present estimates using data from two years of the National Health Interview Survey (NHIS 2013-2014) conducted by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS). This study examines differences in 15 health characteristics among persons who are 65 years of age or older (hereafter “older adults”) and self-identify as either a member of the sexual minority group or the sexual majority groups. Our analysis includes 16,376 older adults persons of whom 95.59 percent (n=15,653) were identified as straight and 0.90 percent (n=147) were classified as gay, lesbian, or bisexual. Another 3.52 percent of people (n=576) reported “I don’t know the answer,” “something else,” or “not ascertained” and were excluded from the analysis. Due to limited data availability only a few studies have explored the health challenges experienced among older sexual minorities.

Our findings are presented in three categories: 1) health characteristics with statistically significant differences (RSE  $\leq$  30 %), 2) health characteristics with no statistically significant differences (RSE  $>$  30%), and 3) health characteristics with insufficient data to detect differences. Because there were relatively few respondents who identified as sexual minorities, the tests we performed had limited power, and the detectable differences were correspondingly large. This analysis utilizes a similar methodology to those previously used for identifying health characteristics of sexual minorities to examine health characteristics for sexual majority and minority populations (Ward et al. 2014; Dahlhamer et al. 2014). Health characteristics with differences are defined as those that had a statistically significant difference between the sexual minority and sexual majority groups.

## Results

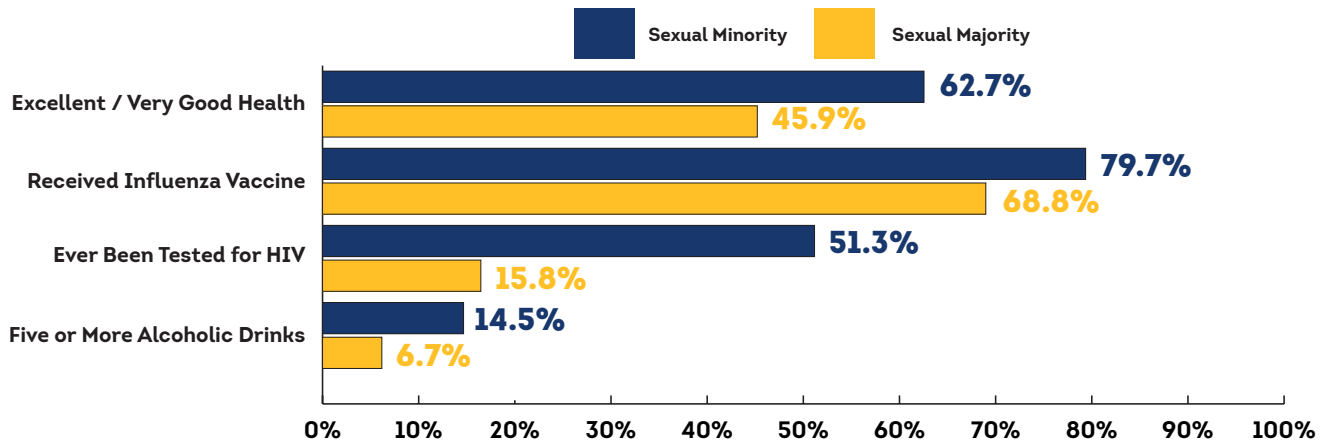
**Table 1. Older Adult\* Respondents by Group, NHIS 2013-2014**

	2013-2014 NHIS	
	Sexual Minority	Sexual Majority
Number of Respondents	147	15,653
Female, %	38.4%	55.8%
White, %	88.8%	85.82%
Age, Mean $\pm$ SD	71.8 $\pm$ 0.5	73.8 $\pm$ 0.1

NOTE: \*Analysis only includes older adult persons who are either sexual minority or sexual majority. Data are based on household interviews of a sample of the civilian non-institutionalized population.

Table 1 shows the number of older adult respondents who were classified as sexual minority and sexual majority. Overall, the 2013-2014 NHIS included 147 respondents (0.90 percent) who identified as sexual minority, with 38.4 percent identified as female and nearly 90 percent identified as White. On average, sexual minority respondents were younger than their sexual majority respondents. Additional individual estimates for respondents who comprise the sexual minority group, are included in the appendix.

**Figure 1.**  
**Statistically significant health characteristics among older adults\* by sexual minority or majority group, NHIS 2013-2014**



NOTE: \*Analysis only includes older adult persons who are either sexual minority or sexual majority. Data are based on household interviews of a sample of the civilian non-institutionalized population.

**Excellent/Very Good Health:**

Sexual minority respondents were more likely to report that they are in excellent or very good health compared to sexual majority respondents (62.7 percent and 45.9 percent, respectively). The Pearson’s chi-square test was used to test for statistically significant difference in excellent/very good health (p=0.0031).

**Received Influenza Vaccine During Past Year:**

Sexual minority respondents were more likely to report that they received an influenza vaccine during the past year compared to sexual majority respondents (79.7 percent and 68.8 percent, respectively). The Pearson’s chi-square test was used to test for statistically significant difference in receiving an influenza vaccine during past year (p=0.0232).

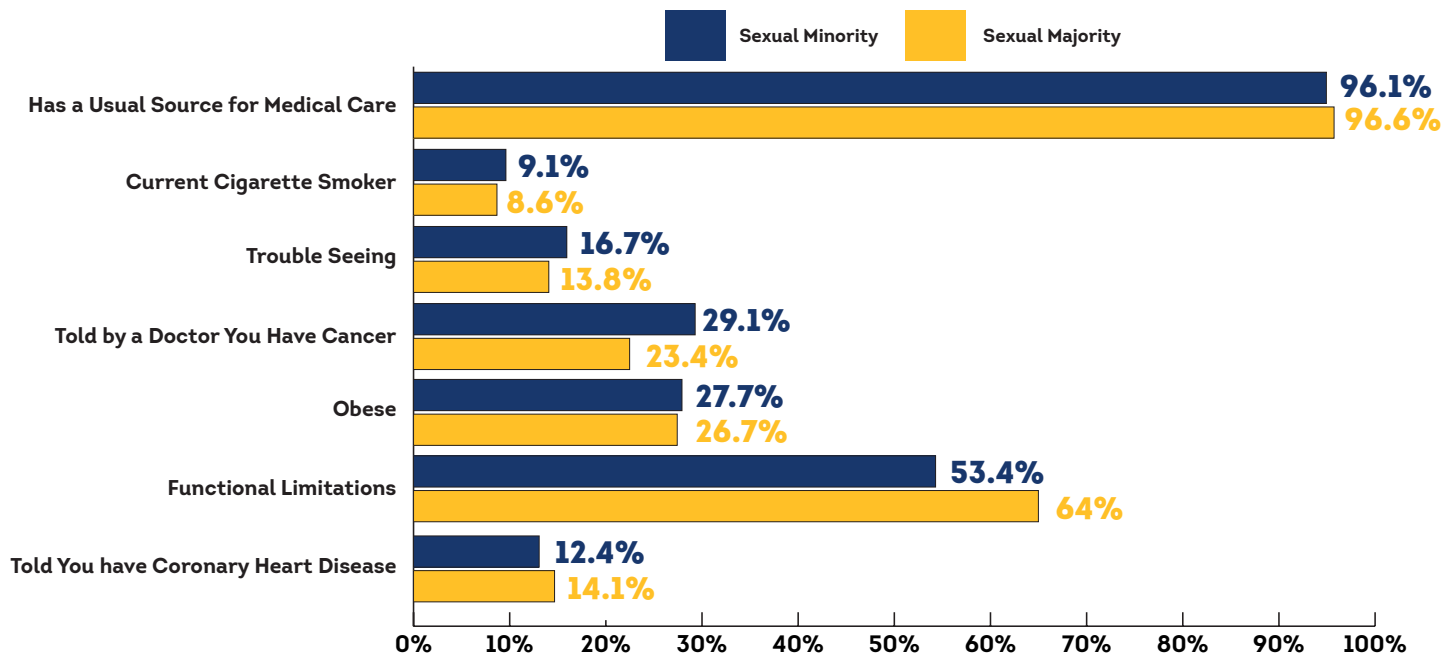
**Ever Been Tested for HIV:**

Sexual minority respondents were more likely to report that they have been tested for HIV compared to sexual majority respondents (51.3 percent and 15.8 percent, respectively). The Pearson’s chi-square test was used to test for a statistically significant difference in ever being tested for HIV (p<0.001).

**Five or More Alcoholic Drinks in One Day at Least Once in Past Year:**

Sexual minority respondents were more likely to report having five or more alcoholic drinks in one day at least once in the past year compared to sexual majority respondents (14.5 percent and 6.7 percent, respectively). The Pearson’s chi-square test was used to test for statistically significant difference in consuming five or more alcoholic drinks in one day at least once in past year (p<0.01).

**Figure 2.**  
**Health characteristics with no differences by group, NHIS 2013-2014**



NOTE: Analysis only includes older adults who reported their identity as either sexual minority or sexual majority. Data are based on household interviews of a sample of the civilian non-institutionalized population.

For the health characteristics shown in Figure 2, the estimated differences between the sexual minority and sexual majority groups were not statistically significant. For several of these health characteristics, the measured difference between groups was small, so not observing statistically significant differences was not surprising. For functional limitations, however, the difference was relatively large between the sexual majority and sexual minority groups (53.4 percent and 64.0 percent, respectively).

## Conclusion

Using data from the 2013 and 2014 NHIS, we found statistically significant differences for several health characteristics between sexual minority and sexual majority respondents. A higher percentage of sexual minority respondents were tested for HIV or received an influenza vaccine. A higher percentage of sexual minority respondents reported very good or excellent health than sexual majority respondents. However, sexual minority respondents were more likely to exceed a moderate drinking limit than sexual majority respondents.

We did not detect statistically significant differences between sexual minority and sexual majority respondents for most health characteristics. However, our tests have relatively little power given the small number of respondents in the sexual minority group. By including future survey data, these health characteristics could be further investigated.

In this analysis, we combined gay, lesbian, and bisexual respondents into a single group due to data limitations. However, prior literature suggests that there may be important differences between these three groups. Other studies have found differences among gay, lesbian, and bisexual people. For example, “gay and bisexual men are more likely than heterosexual men and lesbians to experience eating disorders and weight management issues,” and “[r]esearch also indicates higher rates of alcohol and other drug use among lesbian and bisexual women compared to heterosexual women” (The Fenway Institute, 2015, citing Ruble and Forstein, 2008; Stevens, 2012). When we examined gay, bisexual, and lesbian respondents separately, we observe some differences we would expect based on prior literature, but the differences were not statistically significant. It is possible that the subgroup differences could be observed with more data.

Healthy People 2020 (HP2020), a national 10-year initiative aimed at improving the health of the nation, identified lesbian, gay, bisexual, and transgender (LGBT) Health as key health topic area for the first time for the decade leading up to 2020. Current measurable objectives in the LGBT Health topic area are focused on increasing data collection on sexual and gender minority populations, although measurable objectives in other topic areas show sexual orientation data where it is available. As sexual orientation data collection continues to increase, more robust and numerous analysis will become possible. The existence of the HP2020 LGBT topic area alone highlights the Department of Health and Human Service’s commitment to improving the quality of health for sexual and gender minorities. The Office of Minority Health at the Centers for Medicare and Medicaid Services is committed to supporting the departments’ goals and to advancing sexual orientation and gender minority data collection and research.

## Definitions

### **Current cigarette smoker**

Older adults were classified as a current cigarette smoker if they had smoked 100 cigarettes in their lifetime and currently smoked every day or on occasion.

### **Ever been tested for HIV**

Based on whether an older adult had ever been tested for HIV.

### **Ever used a hearing aid**

Based on whether an older adult had ever used a hearing aid.

### **Excellent/Very good health**

Older adults were classified as having excellent/very good health if they responded “excellent” or “very good” when describing their current health.

### **Experienced serious psychological distress in past 30 days**

Older adults who in the past 30 days reported being so sad that nothing cheered them up, feeling nervous, feeling restless / fidgety, feeling hopeless, feeling that everything was an effort, or feeling worthless were considered to have experienced serious psychological distress in past 30 days.

### **Failed to obtain needed medical care in past year due to cost**

Older adults were considered to have failed to obtain needed medical care in the past year due to cost if in the past year they were unable to afford prescription medicine, health care/counseling, dental care, eyeglasses, to see a specialist, or follow-up care.

### **Five or more alcoholic drinks in one day in past year (Five or More Alcoholic Drinks, or Moderate Drinking Limit)**

Older adults were considered to have exceeded a moderate drinking limit if they had consumed five or more alcoholic drinks in one day at least once in the past year.

### **Functional Limitations**

Based on whether an older adult had any functional limitation with any conditions.

### **Has a usual source for medical care**

Older adults were considered to have a usual place for medical care if they indicated having a place they usually go when sick.

### **Obese**

Weight status was based on body mass index (BMI, kg/m<sup>2</sup>). BMI classifications were based on cut-points established by the World Health Organization, using self-reported height and weight. Older adults with BMI of 30 kg/m<sup>2</sup> and above were classified as obese.

1. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. Data File Documentation, National Health Interview Survey, 2012 (machine readable data file and documentation). National Center for Health Statistics-Centers for Disease Control and Prevention, Editor. 2013: Hyattsville, Maryland.

### **Received influenza vaccine during past year (Received Influenza Vaccine)**

Older adults were considered to have received an influenza vaccine in the past year if they had received an influenza vaccine or a flu nasal spray in the past 12 months.

### **Told by a doctor you have cancer**

Older adults were classified as having cancer if they had ever been told by their doctor or health professional that they had cancer.

### **Sexual Minority/Majority group**

Older adults were considered to be in the sexual majority group if they described their sexual orientation as straight. Older adults were considered to be in the sexual minority group if they described their sexual orientation as “gay,” “lesbian,” or “bisexual.”

### **Told by a doctor you have coronary heart disease**

Older adults were classified as having coronary heart disease if they had ever been told by their doctor or health professional that they had coronary heart disease.

### **Type of usual place of care**

If an older adult had a usual source for medical care, then the type of place was classified as a doctor’s office, clinic / hospital, or other.

### **Trouble Seeing**

Based on whether older adults had trouble seeing even with eyeglasses or contact lenses.



## Data Sources and Methods

The National Health Interview Survey (NHIS) monitors the health of the U.S. population by collecting data on a wide range of health topics. The NHIS is conducted annually by the Centers for Disease Control & Prevention's (CDC) National Center for Health Statistics (NCHS). In recent years, the survey also includes information on the sexual orientation of the respondents, allowing researchers to investigate potential healthcare differences between sexual minority and sexual majority groups.

The number of respondents for the NHIS varies from year to year. The number of total survey respondents was 34,557 in 2013 and 36,697 in 2014. One adult is randomly selected from each household for an additional survey related to health issues (National Center for Health Statistics, 2014, National Center for Health Statistics, 2015). Among older respondents, the 65 years and older group included 7,732 respondents in 2013 and 8,644 respondents in 2014.

To test the statistical significance of the difference between the sexual minority and sexual majority groups, we use a Pearson's chi-square test adjusted for the complex sample design of the NHIS. Statistical significance was reported at  $p < 0.05$  level. The estimates, confidence intervals, and statistical tests were computed from weighted 2013 and 2014 NHIS survey years. Estimates were weighted according to guidelines published by the NHIS (Centers for Disease Control and Prevention, June 2015). Specifically, sample weights from each year are divided by two given that two years of data were pooled. Estimates for years 2013 and 2014 separately are provided in the appendix tables. Statistical analyses were conducted using STATA 13 to account for the complex sample design of the NHIS. NCHS considers an estimate to be reliable if it has a relative standard error of 30 percent or less. None of our estimates for the sexual majority group has a relative standard error of 30 percent or more.

Health characteristics with very small sample sizes or low response rates were considered to have insufficient data. Estimates for these health characteristics tend to have a standard error that is a substantial portion of the estimate itself (a large relative standard error). We consider health characteristics where the sexual minority group has a relative standard error greater than 30 percent to have insufficient data, and do not analyze them.

## Limitations

Due to the small number of sexual minority respondents, we combined gay, lesbian, and bisexual respondents into a single group. The estimates for gay, lesbian, and bisexual respondents are separately included in the appendix tables. Because there are relatively few respondents who identified as a sexual minority, the tests we perform have limited power, and the detectable differences are correspondingly large.

## References

1. Center for Disease Control and Prevention, “About Adult BMI,” Division of Nutrition, Physical Activity, and Obesity, May 2015. Web. Available at [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/index.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html).
2. Center for Disease Control and Prevention, “About the National Health Interview Survey,” National Health Interview Survey, December 2015. Web. Available at [http://www.cdc.gov/nchs/nhis/about\\_nhis.htm](http://www.cdc.gov/nchs/nhis/about_nhis.htm).
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## About the Authors

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# Appendix

**Appendix Table 1. Estimated Population Values for Selected Health Characteristics, among Older Adults, by Sexual Orientation - 2013 and 2014 NHIS**

Health Characteristics [1]	Gay or Lesbian	Straight	Bisexual	Gay, Lesbian, or Bisexual <sup>2</sup>
Excellent / Very Good Health, % (SE)	62.29 % (6.18%)	45.89 % (0.54%)	63.87% (11.05%)	62.66% (5.42%)
Has a Usual Source for Medical Care, % (SE)	95.46% (2.44%)	96.62% (0.19%)	98.30% (1.72%)	96.13% (1.91%)
Type of Usual Place of Care, % (SE)				
Clinic/ Hospital	22.22% (5.30%)	16.31% (0.46%)	22.82% (8.54%)	22.36% (4.46%)
Doctor's Office	75.15% (5.34%)	81.21% (0.49%)	73.81% (9.21%)	74.83% (4.58%)
Other	2.63% (1.50%)	2.17% (0.15%)	3.37% (3.14%)	2.81% (1.36%)
Obese	29.74% (5.86%)	26.74% (0.50%)	21.14% (7.54%)	27.70% (4.87%)
Told by a Doctor You Have Cancer, % (SE)	27.67% (5.66%)	23.35% (0.47%)	33.54% (14.41%)	29.06% (5.64%)
Functional Limitations, % (SE)	53.22% (6.50%)	64.04% (0.54%)	54.03% (13.34%)	53.41% (5.92%)
Told You have Coronary Heart Disease, % (SE)	12.05% (3.73%)	14.39% (0.39%)	13.54 % (8.06%)	12.40% (3.36%)
Trouble Seeing, % (SE)	16.00% (4.74%)	13.83% (0.37%)	18.97% (8.66%)	16.71% (4.15%)
Ever Used a Hearing Aid, % (SE)	2.22% (2.10%)	3.04% (0.18%)	3.35% (3.26%)	2.49% (1.78%)
Ever Been Tested for HIV, % (SE)	52.47% (7.00%)	15.81% (0.42%)	47.27% (12.69%)	51.25% (5.96%)
Current Cigarette Smoker, % (SE)	8.88% (2.84%)	8.57% (0.31%)	9.66% (5.12%)	9.07 % (2.51%)
Five or More Alcoholic Drinks in One Day at Least Once in Past Year, % (SE)	3.75 % (3.86%)	6.66% (0.31%)	17.06 % (9.28%)	14.54% (3.68%)
Experienced Serious Psychological Distress in Past 30 Days, % (SE)	4.20% (2.24%)	2.37% (0.16%)	2.48% (2.14%)	3.79% (1.78%)
Received Influenza Vaccine During Past Year, % (SE)	78.23% (5.09%)	68.77% (0.54%)	84.38% (6.50%)	79.69% (4.13%)
Failed to Obtain Needed Medical Care in Past Year Due to Cost, % (SE)	3.94% (2.54%)	2.34% (0.16%)	6.00% (3.72%)	4.43% (2.11%)
<b>All Respondents</b>				
Cell Count	111	15,653	36	147
Population Estimate	310,077	42,228,575	96,380	406,456

## Notes to Exhibit:

A **red cell**  indicates that the estimate has a relative standard error greater than 50% or that all observations within cell take the same value. This indicates that the estimates are not statistically different. A **yellow cell**  indicates that the estimate has a relative standard error greater than 30% and less than 50%.

<sup>1</sup>Health characteristics include selected variables available in 2013-2014 NHIS surveys. These characteristics include, but are not limited to, all measures from Ward et al. (2014), except for “Currently with private/public insurance coverage,” “Currently uninsured,” and “Met Federal guideline for aerobic physical activity.”

Estimates and standard errors are calculated from weighted 2013 and 2014 survey data. Estimates were weighed according to guidelines published by the NHIS. See Center for Disease Control and Prevention (June 2015).

Responses are taken from adults 65 years and older in the NHIS 2013 data. Percentages shown are estimated population percentages, accounting for the survey design. Standard errors are given in parentheses. Estimates with a relative standard error greater than 30% should be used with caution.

<sup>2</sup>Sexual orientation is constructed from the variables “asisim” and “asisif.” Sex is taken from the variable “sex.” The “Gay, Lesbian, or Bisexual” group combines the “Gay or Lesbian” and “Bisexual” groups.