

# **A Population-Based Analysis of Five Health-Related Behaviors for Chronic Disease Prevention among Sexual and Gender Minorities**

**Timothy Cunningham**  
**LCDR, U.S. Public Health Service**  
**Division of Population Health**  
**U.S. Centers for Disease Control and Prevention**



# USPHS Scientific and Training Symposium

- ❑ **DISCLOSURE:** In compliance with continuing education requirements, all presenters must disclose any financial or other associations with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters as well as any use of unlabeled product(s) or product(s) under investigational use
- ❑ **CDC, our planners, presenters, and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias**
- ❑ **Content will not include any discussion of the unlabeled use of a product or a product under investigational use**
- ❑ **The Centers for Disease Control and Prevention and PHS Commissioned Officers Foundation are jointly providing the CNE for this activity**
- ❑ ***CDC did not accept commercial support for this continuing education activity***

# Acknowledgments

## □ Co-authors

- Fang Xu, PhD – Division of Population Health
- Machell Town, PhD – Division of Population Health

## **Learning Objectives**

- ❑ Describe the Healthy People 2020 objectives for lesbian, gay, bisexual, and transgender (LGBT) health**
- ❑ Identify how LGBT populations are vulnerable to social and structural factors**
- ❑ Discuss the importance of five key lifestyle behaviors for preventing chronic disease**

## Healthy People 2020

### □ **Goal related to LGBT health:**

- Improve the health, safety, and well-being of LGBT individuals

### □ **Objectives related to LGBT health:**

- Increase the number of population-based data systems used to monitor Healthy People 2020 objectives that include in their core a standardized set of questions that identify LGBT populations
- Increase the number of states, territories, and the District of Columbia that include questions that identify sexual orientation and gender identity on state level surveys or data systems

# **Lesbian, Gay, Bisexual, and Transgender Populations**

- ❑ LGBT individuals encompass all races and ethnicities, religions, and social classes. Sexual orientation and gender identity questions are not asked on most national or State surveys, making it difficult to estimate the number of LGBT individuals and their health needs**
- ❑ Research suggests that LGBT individuals face health disparities linked to societal stigma, discrimination, and denial of their civil and human rights**

# Why Is LGBT Health Important?

- **The many benefits of addressing health concerns and reducing disparities include:**
  - Reductions in disease transmission and progression
  - Increased mental and physical well-being
  - Reduced health care costs
  - Increased longevity

## **Alameda County Study**

- ❑ **The Alameda County Study is a probability study of residents from Alameda County, California which examines the relationship between lifestyle and health. Cohort members who followed five practices lived healthier and longer lives:**
  - Avoiding smoking
  - Limiting consumption of alcoholic drinks
  - Maintaining a healthy body weight
  - Exercising regularly
  - Sleeping seven to eight hours per night



## **Study Objective**

- To provide estimates of five key lifestyle behaviors for preventing chronic disease among U.S. adults aged 21 years or older by sexual orientation (n=150,116) and transgender status (n=150,928) using data from the 2014 Behavioral Risk Factor Surveillance System (BRFSS) in 19 U.S. states and Guam**

# **Behavioral Risk Factor Surveillance System (BRFSS)**

- ❑ State-based, random-digit dialed telephone survey**
- ❑ Administered annually by state health departments with assistance from CDC**
- ❑ Weighted to adjust for sampling and non-response**
- ❑ Sexual orientation and gender identity optional module used by 19 states and Guam**

## Methods

- **Weighted prevalences and 95% confidence intervals calculated by transgender status and sexual orientation for men and women**
  - Chi-square tests
  - Trend difference for ordinal variables
  - Pairwise tests

## Sexual Orientation

- ❑ ***Do you consider yourself to be:***
  - Straight
  - Lesbian or gay
  - Bisexual
  - Other
  - Don't know/Not sure
  - Refused

## Gender Identity

- ❑ ***Do you consider yourself to be transgender?***
  - Yes, Transgender, male-to-female
  - Yes, Transgender, female-to-male
  - Yes, Transgender, gender non-conforming
  - No
  - Don't know/not sure
  - Refused

# Population Characteristics

## □ Male

- **Straight:** 94.1%
- **Gay:** 2.0%
- **Bisexual:** 1.2%
- **Other:** 2.8%

## □ Female

- **Straight:** 93.3%
- **Lesbian:** 1.0%
- **Bisexual:** 2.0%
- **Other:** 3.7%

## □ All

- **Cisgender:** 97.6%
- **Male to Female:** 0.3%
- **Female to Male:** 0.2%
- **Non-conforming:** 0.9%
- **Other:** 2.8%

# Non-Smoker

## □ Male

- **Straight:** 79.3%
- **Gay:** 68.0%
- **Bisexual:** 73.2%
- **Other:** 89.5%

## □ Female

- **Straight:** 83.0%
- **Lesbian:** 67.4%
- **Bisexual:** 70.8%
- **Other:** 89.7%

## □ All

- **Cisgender:** 81.0%
- **Male to Female:** 77.9%
- **Female to Male:** 77.6%
- **Non-conforming:** 73.8%
- **Other:** 86.9%

# Moderate/No Alcohol

## □ Male

- **Straight:** 61.3%
- **Gay:** 56.9%
- **Bisexual:** 58.7%
- **Other:** 78.1%

## □ Female

- **Straight:** 66.4%
- **Lesbian:** 50.9%
- **Bisexual:** 50.5%
- **Other:** 84.1%

## □ All

- **Cisgender:** 63.9%
- **Male to Female:** 65.6%
- **Female to Male:** 66.7%
- **Non-conforming:** 73.6%
- **Other:** 82.0%



# Normal Weight

## □ Male

- **Straight:** 25.2%
- **Gay:** 36.3%
- **Bisexual:** 28.5%
- **Other:** 30.1%

## □ Female

- **Straight:** 36.9%
- **Lesbian:** 31.4%
- **Bisexual:** 35.3%
- **Other:** 34.0%

## □ All

- **Cisgender:** 31.3%
- **Male to Female:** 21.9%
- **Female to Male:** 21.0%
- **Non-conforming:** 37.4%
- **Other:** 30.7%

# Any Leisure-Time Physical Activity

## □ Male

- **Straight:** 77.3%
- **Gay:** 75.6%
- **Bisexual:** 73.0%
- **Other:** 62.6%

## □ Female

- **Straight:** 74.2%
- **Lesbian:** 79.2%
- **Bisexual:** 78.0%
- **Other:** 58.5%

## □ All

- **Cisgender:** 75.5%
- **Male to Female:** 78.9%
- **Female to Male:** 60.2%
- **Non-conforming:** 78.1%
- **Other:** 62.3%

# Sufficient Sleep

## □ Male

- **Straight:** 62.8%
- **Gay:** 66.7%
- **Bisexual:** 61.9%
- **Other:** 67.5%

## □ Female

- **Straight:** 64.7%
- **Lesbian:** 57.8%
- **Bisexual:** 55.9%
- **Other:** 65.1%

## □ All

- **Cisgender:** 63.7%
- **Male to Female:** 56.8%
- **Female to Male:** 66.6%
- **Non-conforming:** 47.4%
- **Other:** 65.9%

# All Five Healthy Behaviors

## □ Male

- **Straight:** 6.6%
- **Gay:** 9.4%
- **Bisexual:** 4.4%
- **Other:** 9.1%

## □ Female

- **Straight:** 10.4%
- **Lesbian:** 6.4%
- **Bisexual:** 6.4%
- **Other:** 10.8%

## □ All

- **Cisgender:** 8.5%
- **Male to Female:** 7.8%
- **Female to Male:** 3.2%
- **Other:** 10.1%

## **Highlighted Findings**

- ❑ Lesbian and bisexual women were significantly less likely to engage in all five healthy behaviors than heterosexual women**
- ❑ Gay men but not bisexual men were significantly more likely to engage in all five healthy behaviors than heterosexual men**
- ❑ Female to male transgender adults but not male to female transgender adults were less likely to engage in all five healthy behaviors than cisgender adults**

## **Public Health Implications**

- ❑ LGBT populations varied among the 19 states and Guam**
- ❑ These findings are consistent with previous analyses that have observed greater likelihoods of HIV/AIDS, substance abuse, and poor mental health among LGBT populations**
- ❑ Further work is needed to promote universal and targeted interventions to improve these health behaviors that prevent chronic disease**

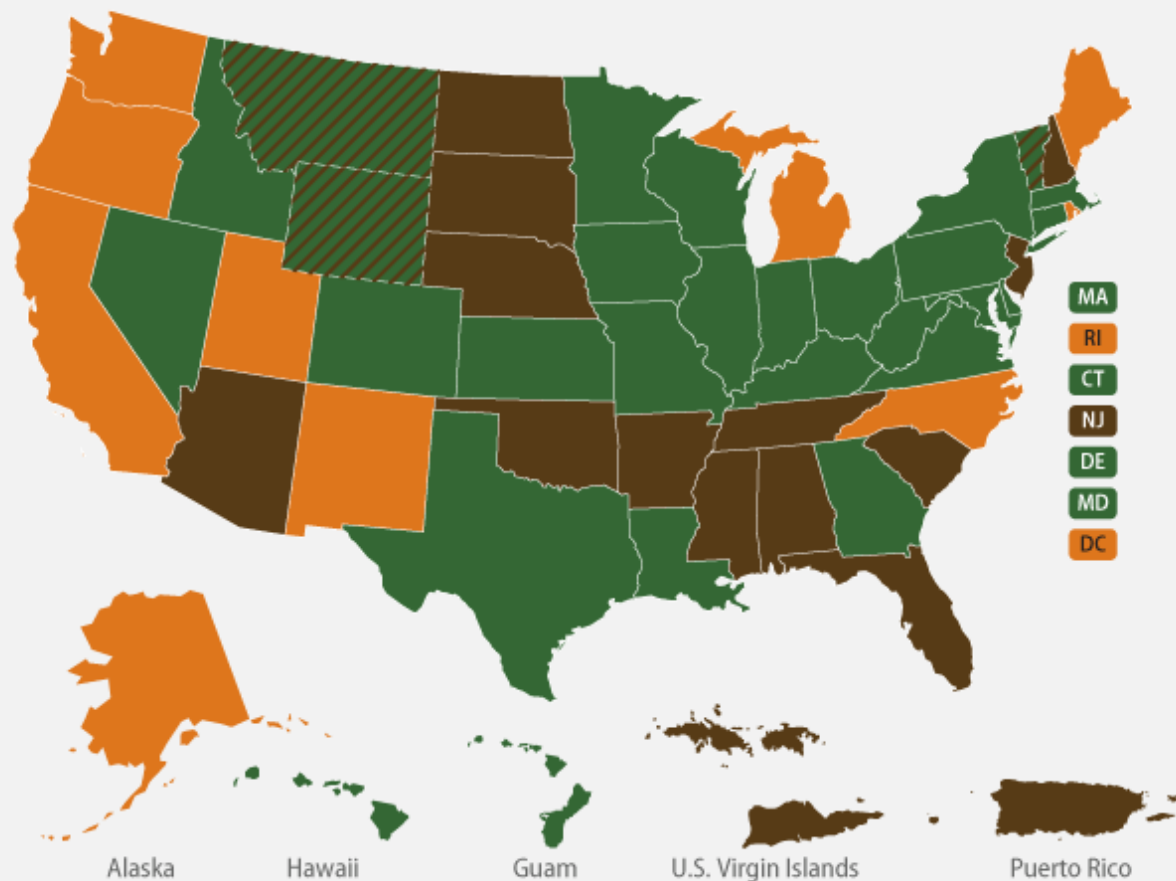
## Limitations

- ❑ **BRFSS is a household telephone survey**
- ❑ **Information collected through self-report**
  - Social desirability bias
  - Recall bias
- ❑ **Cross-sectional study design**
- ❑ **Data only from 19 U.S. states and Guam**

FIGURE 1

### Sexual orientation and gender identity data collection on the 2015 BRFSS

- No SOGI data collection
- Used the SOGI module to collect SOGI data
- Did not use the module to collect SOGI data
- Used the SOGI module in 2014 but discontinued it in 2015



Note: Micronesia and Samoa do not currently field BRFSS. Palau did not respond to inquiries and is excluded from this analysis.

Source: CAP analysis based on personal communication with state BRFSS directors, July 2015–February 2016.



## Efforts to Reduce Disparities

- ❑ The Community Preventive Services Task Force published recommendations for interventions with proven effectiveness for the prevention of obesity, physical inactivity, and tobacco use (<https://www.thecommunityguide.org/>)
- ❑ The U.S. Department of Health and Human Services (DHHS) Advancing LGBT Health and Well-being: 2016 Report of the HHS LGBT Policy Coordinating Committee promotes targeted interventions to reduce these disparities (<https://www.hhs.gov/sites/default/files/2016-report-with-cover.pdf>).

**Timothy J. Cunningham, ScD  
LCDR, US Public Health Service  
Epidemiology and Surveillance Branch  
Division of Population Health  
NCCDPHP, CDC  
4770 Buford Hwy NE, MS F78  
Atlanta, GA 30341**

**TJCunningham@cdc.gov**

**For more information please contact Centers for Disease Control and Prevention**

1600 Clifton Road NE, Atlanta, GA 30333  
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348  
E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) Web: [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

