

Appendix A. Data description

1. National Health Interview Survey

Sexual orientation reports the individual's sexual identity for sample adults ages 18 and older. The original question is the following:

[2013-2018] "Which of the following best represents how you think of yourself?"

- Gay [lesbian or gay when asked to women]
- Straight, that is, not gay
- Bisexual
- Something else
- I don't know the answer
- Refused

[2019-2021] "Do you think of yourself as gay/lesbian; straight, that is, not gay/lesbian; bisexual; something else; or you don't know the answer?"

- Gay/lesbian
- Straight, that is not gay/lesbian
- Bisexual
- Something else
- I do not know the answer
- Refused
- Do not know

2. Behavioral Risk Factor Surveillance System

SOGI states. The Sexual Orientation and Gender Identity module was added to the approved list of optional BRFSS modules starting in 2014 and has been making it available to states and territories since then. While some states may have included SOGI questions in their state-added section of the questionnaire, these may have been formatted differently by states and are not included in the public-use data sets. Individuals who want to obtain information before 2014 should contact individual state health departments. The following states participated in the SOGI module, by year, and released their data to the public use file:

2014 [19 states]: Delaware, Hawaii*, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Minnesota*, Montana, Nevada, New York, Ohio*, Pennsylvania, Vermont, Virginia*, Wisconsin*, Wyoming

2015 [22 states]: Colorado, Connecticut, Delaware, Georgia, Hawaii*, Idaho, Illinois, Indiana, Iowa (only to a random subset of its sample), Kansas, Maryland, Massachusetts, Minnesota*, Missouri, Nevada, New York, Ohio*, Pennsylvania, Texas, Virginia*, West Virginia*, Wisconsin*.

2016 [25 states]: California, Connecticut, Delaware, Georgia, Hawaii*, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota*, Mississippi, Missouri, Nevada, New York, Ohio*, Pennsylvania, Rhode Island, Texas, Vermont, Virginia*, Washington, Wisconsin*.

2017 [27 states]: California, Connecticut, Delaware, Georgia, Hawaii*, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota*, Mississippi, Missouri, Nevada, New York, Ohio*, Pennsylvania, Rhode Island, Texas, Vermont, Virginia*, Washington, Wisconsin*.

2018 [29 states]: Arizona (only to a random subset of its sample), Connecticut, Delaware, Florida, Hawaii*, Idaho, Illinois, Kansas, Louisiana, Maryland, Minnesota*, Mississippi, Missouri, Montana, Nevada, New York, North Carolina, Ohio*, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia*, Washington, West Virginia*, Wisconsin*.

2019 [30 states]: Alaska, Arizona, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii*, Idaho, Iowa, Kansas, Louisiana, Maryland, Minnesota*, Mississippi, Montana, New York, North Carolina, Ohio*, Oklahoma, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia*, Washington, West Virginia*, Wisconsin*.

2020 [32 states]: Alaska, Arkansas, California, Colorado, Connecticut, Georgia, Hawaii*, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Massachusetts, Michigan, Minnesota*, Montana, New Jersey, New Mexico, New York, North Carolina, Ohio*, Oklahoma, Rhode Island, South Carolina, Texas, Utah, Vermont, Virginia*, Washington, West Virginia*, Wisconsin*.

2021 [34 states]: Alaska, Arkansas, Colorado (only to a random subset of its sample), Connecticut, Georgia, Hawaii*, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan (only to a random subset of its sample), Minnesota*, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, North Carolina, Ohio*, Oklahoma, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Virginia*, Washington, West Virginia*, Wisconsin*.

States marked with an asterisk (*) are those that have consistently asked the SOGI module and released data to the public use file for every year in our sample.

Sexual orientation reports the individual's sexual identity for adults ages 18 and older. The original question states the following:

[2014-2017] Do you consider yourself to be: (We ask this question in order to better understand the health and health care needs of people with different sexual orientations.)

- Straight
- Lesbian or gay
- Bisexual
- Other
- Don't know/not sure
- Refused

[2018-2021] Which of the following best represents how you think of yourself?

- Gay [lesbian or gay when asked to women]

- Straight, that is, not gay
- Bisexual
- Something else
- I don't know the answer
- Refused

Gender identity reports the individual's gender identity. The original question states the following:

Do you consider yourself to be transgender? (If yes, ask "Do you consider yourself to be male-to-female, female-to-male, or gender non-conforming?)

- Yes, transgender, male-to-female
- Yes, transgender, female-to-male
- Yes, transgender, gender non-conforming
- No
- Don't know / Not sure
- Refused

3. Census Household Pulse Survey

Sexual orientation reports the sexual identity for adults ages 18 and older. The original question states the following:

Which of the following best represents how you think of yourself?

- Gay or lesbian
- Straight, that is, not gay or lesbian
- Bisexual
- Something else, please specify ____
- I don't know

Sex at birth reports whether the person was male or female. The original question states:

What sex were you assigned at birth, on your original birth certificate

- Male
- Female

Gender identity reports the individual's current gender identity. The original question states the following:

Do you currently describe yourself as male, female or transgender?

- Male
- Female
- Transgender
- None of these

The Pulse asks a confirmation question after both questions are answered that states the following:

Just to confirm, you were assigned "{answer choice}" at birth and now you describe yourself as "{answer choice}". Is that correct?

- Yes
- No

Table A1. Overview of four major publicly available surveys

	National Health Interview Survey	Behavioral Risk Factor Surveillance System	American Community Survey	Census Household Pulse Survey
Contains sexual orientation question	X	X		X
Contains complete gender identity question		X		X
Defining LGB/T	Defined LGB if respondent indicates that they are gay/lesbian or bisexual.	Defined LGBT if respondent indicates that (1) they are gay/lesbian or bisexual or (2) indicate that they identify as transgender, male to female; transgender, female to male; or transgender, gender non-conforming.		Defined LGBT if respondent indicates that (1) they are gay/lesbian or bisexual, (2) identify as transgender, or (3) report a sex at birth that does not align with their current gender identity.
Identifies same-gender couples through household structure	Identifies same-gender couples if a spouse or unmarried partner indicates having the same gender as the household reference person.	Identifies same-gender couples if respondent indicates that there are exactly two adult individuals of the same gender (and zero adult individuals of the opposite gender) living in the household. See Carpenter et al. 2018)	Identifies same-gender couples if a spouse or unmarried partner indicates having the same gender as the household reference person. ACS 2013 piloted the use of an indicator variable of same-sex married couple, but did not include a variable for same-sex unmarried couples.	
Geography	National, public use data. State level information available only using privileged data.	Individual states have the option to administer the SOGI module each year. The set of states is not always constant each year.	National, public use data. State level information available.	National, public use data. State level information available.
Timespan	2013 – present	2014 – present	2000 – present	SOGI questions start in Phase 3.2: Week 34 (July 21-August 2, 2021) – Week 51 (November 2 – November 14, 2022)
Annual sample size	39,000	400,000 (varies by state)	3,100,000	519,000

Appendix B. Same-gender couple identification

1. National Health Interview Survey

The NHIS used two variables to identify same-gender couples until 2018: relationship to householder and sex. From 2019 onwards, NHIS identifies same-gender couples using information about the sex of spouse, sex of unmarried partner, and sex.

Relate refers to an individual's relationship to the householder. It contains a detailed list of relationship categories, of which we focus on "householder," "spouse," and "unmarried partner." We do not consider "Housemate/roommate" in our analysis. This variable is available only until 2018.

Sex reports whether the individual is male or female. The original NHIS variable is available for all respondents.

Sex of spouse reports whether the sample adult's spouse is male or female, among sample adults who indicate that they are married. This variable was available starting in 2019 after the *relate* variable was discontinued.

Sex of partner reports whether the sample adult's unmarried partner is male or female, among sample adults who indicate that they are living with an unmarried partner. This variable was available starting in 2019 after the *relate* variable was discontinued.

The combination of *sex of spouse* and *sex of partner* accomplishes the same method of identifying same-gender couples using *relate* and *sex*.

2. Behavioral Risk Factor Surveillance System

The BRFSS does not include a question that points to the relationship between each household member and the household reference person. Instead, researchers use information on the sex composition in the household (Carpenter et. al 2018). Specifically, the BRFSS asks a random adult in the household to report the number of adult men and women in the household. Same-gender male (female) households are defined as those that only contain exactly two adult men (women) in the household and zero adult women (men) who either indicate that they are in a married/unmarried relationship. Different-gender households are those that contain exactly one adult man and one adult woman in a married/unmarried relationship.

This method, however, is prone to sampling error and may only partially capture individuals who identify as non-heterosexual and in a relationship with each other. For instance, if two roommates of the same gender lived together, yet had opposite-gender partners living outside of the household, they would be misclassified as a same-gender household. Conversely, two individuals of opposite gender in the same household would be classified as a different-gender household, even if they had a same-gender partner who did not live in the household. As a result, this creates an imperfect proxy for LGBTQ individuals in a relationship. In fact, Carpenter et. al

(2018) report that only 46.4% of women and 59.7% of men in their definition of same-gender households identify as non-straight.

3. American Community Survey

The American Community Survey has historically only been able to identify individuals in cohabiting relationships. The primary method of identification is using two variables: relationship to householder and sex.

Relate refers to an individual's relationship to the householder. It contains a detailed list of relationship categories, of which we focus on "householder," "spouse," and "unmarried partner." We do not consider "Housemate/roommate" in our analysis.

Sex reports whether the individual is male or female. The original NHIS variable is available for all respondents.

Same-sex married couple reports whether the head of household and spouse are in a same sex married couple. Beginning in 2013 ACS, this became its own variable. Prior to 2013, same-sex married couples were classified as unmarried partners. This variable, however, still does not include an option to explicitly indicate whether the head of household and partner are in a same-sex unmarried partnership.

For more information about the history of identifying same-gender couples in the ACS, check out the technical appendix from the [Hamilton Project's work](#) on same-gender relationship households.

Table B1. Proportion of men/women who are in different/same-gender couple, by sexual identity

	Different-gender		Same-gender	
	Married	Unmarried couple	Married	Unmarried couple
<u>Men</u>				
Gay	4.6%	0.9%	16.2%	18.1%
Bisexual	15.9%	8.2%	2.1%	2.8%
Straight	53.4%	7.6%	0.0%	0.0%
Something else/other	19.9%	8.3%	0.7%	2.9%
<u>Women</u>				
Lesbian	5.6%	0.6%	21.2%	23.1%
Bisexual	18.2%	17.1%	2.0%	3.0%
Straight	49.1%	6.8%	0.0%	0.0%
Something else/other	15.3%	9.9%	1.5%	1.8%

Source: NHIS 2021

Appendix C. Methodology and regression results

We estimate a series of linear regressions with successive controls to observe whether there are systematic differences in outcomes between LGBT and non-LGBT people once key characteristics are held constant.

Our basic model follows the form:

$$outcome_i = \beta * 1(LGBT_i) + X_i\Omega + \epsilon_i$$

where $outcome_i$ is a list of five potential economic outcomes, including current employment status, whether an individual has health insurance, whether the individual is in a household with less than \$35,000, whether the individual is a homeowner, and whether the individual is in a household that receives SNAP benefits. $1(LGBT_i)$ is an indicator for whether an individual is classified as LGBT. X_i is a list of successive controls that we add in the following order:

- (1) No controls. Raw mean differences in outcomes between LGBT and non-LGBT individuals.
- (2) Race and ethnicity controls, gender, individual age controls
- (3) Educational controls
- (4) Individual state controls
- (5) Marital status and number of children in the household controls
- (6) Unmarried couple status controls (only the ACS has additional information on unmarried couple status. The Pulse does not record this information.)

Additionally, in the Pulse, we breakdown our analysis by sexual identity and gender. Thus, Figure 6 in the report shows the individual coefficients on each identity using Model 5.

Table C1. LGBT status on currently working, Pulse 2021

	(1)	(2)	(3)	(4)	(5)
<i>Sexual identity</i>					
Gay / lesbian	0.073*** (0.008)	-0.007 (0.008)	-0.022*** (0.008)	-0.020*** (0.008)	-0.019** (0.008)
Bisexual	0.097*** (0.008)	0.001 (0.008)	0.003 (0.008)	0.003 (0.008)	0.003 (0.008)
Something else	-0.004 (0.014)	-0.074*** (0.015)	-0.058*** (0.015)	-0.058*** (0.015)	-0.055*** (0.015)
Don't know	-0.077*** (0.013)	-0.121*** (0.014)	-0.086*** (0.014)	-0.086*** (0.014)	-0.084*** (0.014)
<i>Gender identity</i>					
Transgender	-0.077*** (0.013)	-0.074*** (0.021)	-0.050** (0.021)	-0.050** (0.021)	-0.040* (0.021)
Female (current gender identity)		-0.078*** (0.003)	-0.084*** (0.003)	-0.084*** (0.003)	-0.079*** (0.003)
Black		-0.092*** (0.005)	-0.072*** (0.005)	-0.067*** (0.005)	-0.059*** (0.005)
Asian		-0.009 (0.006)	-0.039*** (0.006)	-0.034*** (0.006)	-0.033*** (0.006)
Other race		-0.059*** (0.007)	-0.047*** (0.007)	-0.046*** (0.007)	-0.041*** (0.007)
Hispanic		-0.086*** (0.005)	-0.039*** (0.005)	-0.034*** (0.005)	-0.031*** (0.005)
Married					0.033*** (0.003)
Number of children in household					-0.016*** (0.002)
Age controls		X	X	X	X
Educational controls			X	X	X
State controls				X	X
Observations	496,402	486,564	486,564	486,564	484,937

Table C2. LGBT status on whether has health insurance, Pulse 2021

	(1)	(2)	(3)	(4)	(5)
<i>Sexual identity</i>					
Gay / lesbian	-0.009 (0.009)	0.036*** (0.008)	0.024*** (0.008)	0.023*** (0.008)	0.023*** (0.008)
Bisexual	-0.027*** (0.007)	0.050*** (0.008)	0.050*** (0.008)	0.048*** (0.007)	0.047*** (0.007)
Something else	-0.096*** (0.014)	-0.028* (0.016)	-0.014 (0.015)	-0.016 (0.015)	-0.013 (0.015)
Don't know	-0.191*** (0.013)	-0.110*** (0.013)	-0.080*** (0.013)	-0.082*** (0.013)	-0.077*** (0.013)
<i>Gender identity</i>					
Transgender	-0.094*** (0.013)	-0.023 (0.021)	0.000 (0.021)	0.000 (0.021)	0.013 (0.021)
Female (current gender identity)		0.022*** (0.003)	0.017*** (0.003)	0.017*** (0.003)	0.022*** (0.003)
Black		-0.103*** (0.005)	-0.086*** (0.005)	-0.076*** (0.005)	-0.066*** (0.005)
Asian		-0.021*** (0.006)	-0.043*** (0.006)	-0.050*** (0.006)	-0.049*** (0.006)
Other race		-0.041*** (0.008)	-0.032*** (0.007)	-0.037*** (0.007)	-0.032*** (0.007)
Hispanic		-0.124*** (0.005)	-0.085*** (0.005)	-0.081*** (0.005)	-0.078*** (0.005)
Married					0.040*** (0.003)
Number of children in household					-0.019*** (0.002)
Age controls		X	X	X	X
Educational controls			X	X	X
State controls				X	X
Observations	507,750	497,175	497,175	497,175	495,432

Table C3. LGBT status on whether in household with less than \$35,000, Pulse 2021

	(1)	(2)	(3)	(4)	(5)
<i>Sexual identity</i>					
Gay / lesbian	0.033*** (0.008)	0.041*** (0.009)	0.066*** (0.008)	0.067*** (0.008)	0.017** (0.008)
Bisexual	0.101*** (0.008)	0.060*** (0.008)	0.059*** (0.008)	0.061*** (0.008)	0.043*** (0.008)
Something else	0.137*** (0.016)	0.116*** (0.017)	0.089*** (0.017)	0.091*** (0.017)	0.063*** (0.017)
Don't know	0.162*** (0.015)	0.145*** (0.016)	0.093*** (0.015)	0.094*** (0.015)	0.072*** (0.015)
<i>Gender identity</i>					
Transgender	0.096*** (0.014)	0.081*** (0.023)	0.042* (0.024)	0.040* (0.024)	0.028 (0.024)
Female (current gender identity)		0.096*** (0.014)	0.081*** (0.023)	0.042* (0.024)	0.040* (0.024)
Black		0.191*** (0.006)	0.161*** (0.006)	0.159*** (0.006)	0.116*** (0.006)
Asian		-0.034*** (0.006)	0.011* (0.007)	0.024*** (0.007)	0.029*** (0.007)
Other race		0.089*** (0.008)	0.075*** (0.007)	0.076*** (0.008)	0.060*** (0.007)
Hispanic		0.138*** (0.006)	0.062*** (0.005)	0.069*** (0.006)	0.067*** (0.005)
Married					-0.231*** (0.003)
Number of children in household					0.011*** (0.002)
Age controls		X	X	X	X
Educational controls			X	X	X
State controls				X	X
Observations	410,669	403,195	403,195	403,195	402,021

Table C4. LGBT status on homeownership, Pulse 2021

	(1)	(2)	(3)	(4)	(5)
<i>Sexual identity</i>					
Gay / lesbian	-0.134*** (0.009)	-0.085*** (0.008)	-0.096*** (0.009)	-0.089*** (0.009)	-0.040*** (0.009)
Bisexual	-0.216*** (0.008)	-0.096*** (0.009)	-0.095*** (0.009)	-0.091*** (0.009)	-0.072*** (0.009)
Something else	-0.195*** (0.015)	-0.117*** (0.016)	-0.101*** (0.015)	-0.097*** (0.015)	-0.074*** (0.015)
Don't know	-0.153*** (0.014)	-0.091*** (0.015)	-0.062*** (0.015)	-0.058*** (0.015)	-0.037** (0.015)
<i>Gender identity</i>					
Transgender	-0.073*** (0.014)	-0.068*** (0.022)	-0.044** (0.022)	-0.048** (0.022)	-0.045** (0.023)
Female (current gender identity)		-0.021*** (0.003)	-0.025*** (0.003)	-0.026*** (0.003)	-0.012*** (0.003)
Black		-0.227*** (0.006)	-0.213*** (0.005)	-0.216*** (0.006)	-0.186*** (0.006)
Asian		-0.014** (0.007)	-0.033*** (0.007)	0.000 (0.007)	-0.005 (0.007)
Other race		-0.088*** (0.007)	-0.080*** (0.007)	-0.067*** (0.007)	-0.057*** (0.007)
Hispanic		-0.119*** (0.006)	-0.076*** (0.005)	-0.055*** (0.006)	-0.057*** (0.005)
Married					0.182*** (0.003)
Number of children in household					0.010*** (0.002)
Age controls		X	X	X	X
Educational controls			X	X	X
State controls				X	X
Observations	433,856	425,744	425,744	425,744	424,436

Table C5. LGBT status on SNAP receipt, Pulse 2021

	(1)	(2)	(3)	(4)	(5)
<i>Sexual identity</i>					
Gay / lesbian	0.016** (0.007)	0.017*** (0.006)	0.029*** (0.006)	0.027*** (0.006)	0.026*** (0.006)
Bisexual	0.054*** (0.007)	0.041*** (0.007)	0.040*** (0.007)	0.039*** (0.007)	0.042*** (0.007)
Something else	0.040*** (0.014)	0.040*** (0.015)	0.025* (0.015)	0.025* (0.015)	0.020 (0.015)
Don't know	0.068*** (0.012)	0.060*** (0.012)	0.031*** (0.012)	0.029** (0.012)	0.016 (0.012)
<i>Gender identity</i>					
Transgender	0.053*** (0.013)	0.068*** (0.021)	0.045** (0.019)	0.044** (0.019)	0.022 (0.020)
Female (current gender identity)		0.054*** (0.002)	0.058*** (0.002)	0.058*** (0.002)	0.043*** (0.002)
Black		0.169*** (0.005)	0.152*** (0.005)	0.150*** (0.005)	0.122*** (0.005)
Asian		-0.009* (0.005)	0.014*** (0.005)	0.013*** (0.005)	0.011** (0.005)
Other race		0.072*** (0.006)	0.063*** (0.006)	0.060*** (0.006)	0.046*** (0.006)
Hispanic		0.074*** (0.005)	0.034*** (0.004)	0.033*** (0.005)	0.023*** (0.004)
Married					-0.115*** (0.003)
Number of children in household					0.059*** (0.002)
Age controls		X	X	X	X
Educational controls			X	X	X
State controls				X	X
Observations	458,239	449,430	449,430	449,430	448,021

Table C9. Same-gender couple status on homeownership, ACS 2021

	(1)	(2)	(3)	(4)	(5)	(6)
Same-gender household	-0.033*** (0.004)	-0.034*** (0.004)	-0.051*** (0.004)	-0.046*** (0.004)	-0.043*** (0.004)	-0.060*** (0.004)
Female		-0.006*** (0.001)	-0.012*** (0.001)	-0.013*** (0.001)	0.001 (0.001)	0.002* (0.001)
Black		-0.241*** (0.003)	-0.223*** (0.003)	-0.230*** (0.003)	-0.165*** (0.002)	-0.162*** (0.002)
Asian		-0.069*** (0.003)	-0.072*** (0.003)	-0.044*** (0.003)	-0.058*** (0.002)	-0.057*** (0.002)
Other race		-0.072*** (0.002)	-0.061*** (0.002)	-0.051*** (0.002)	-0.045*** (0.002)	-0.044*** (0.002)
Hispanic		-0.098*** (0.003)	-0.066*** (0.003)	-0.053*** (0.003)	-0.056*** (0.002)	-0.056*** (0.002)
Married couple					0.289*** (0.002)	0.299*** (0.002)
Number of children in household					0.001 (0.001)	0.000 (0.001)
Unmarried couple						0.052*** (0.002)
Age controls		X	X	X	X	X
Educational controls			X	X	X	X
State controls				X	X	X
Observations		2,567,816	2,567,816	2,567,816	2,567,816	2,567,816

Table C10. Same-gender couple status on SNAP receipt, ACS 2021

	(1)	(2)	(3)	(4)	(5)	(6)
Same-gender household	-0.025*** (0.003)	-0.024*** (0.003)	-0.001 (0.002)	-0.003 (0.002)	0.015*** (0.002)	0.019*** (0.002)
Female		0.029*** (0.001)	0.037*** (0.001)	0.037*** (0.001)	0.028*** (0.001)	0.028*** (0.001)
Black		0.163*** (0.002)	0.140*** (0.002)	0.143*** (0.002)	0.122*** (0.002)	0.121*** (0.002)
Asian		0.028*** (0.002)	0.034*** (0.001)	0.035*** (0.001)	0.038*** (0.001)	0.038*** (0.001)
Other race		0.047*** (0.001)	0.036*** (0.001)	0.035*** (0.001)	0.033*** (0.001)	0.033*** (0.001)
Hispanic		0.065*** (0.002)	0.030*** (0.002)	0.032*** (0.002)	0.027*** (0.002)	0.027*** (0.002)
Married couple					-0.105*** (0.001)	-0.107*** (0.001)
Number of children in household					0.051*** (0.001)	0.051*** (0.001)
Unmarried couple						-0.010*** (0.001)
Age controls		X	X	X	X	X
Educational controls			X	X	X	X
State controls				X	X	X
Observations		2,567,816	2,567,816	2,567,816	2,567,816	2,567,816