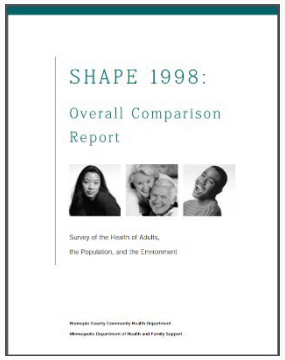
HENNEPIN COUNTY

MINNESOTA

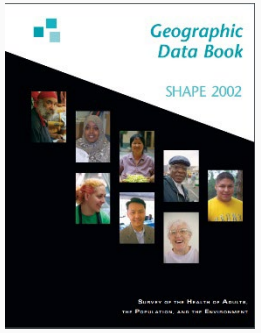
SHAPE 2018 – methodology and selected findings

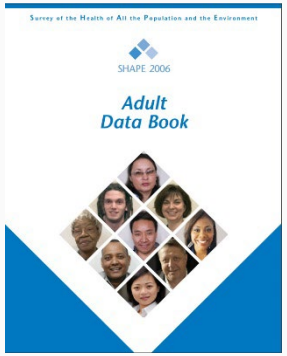
Twin Cities Research Group – February 19, 2020

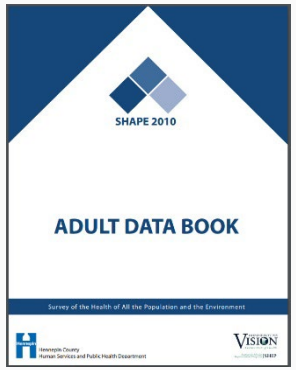
1998 | 2002 | 2006 | 2010 | 2014 | 2018

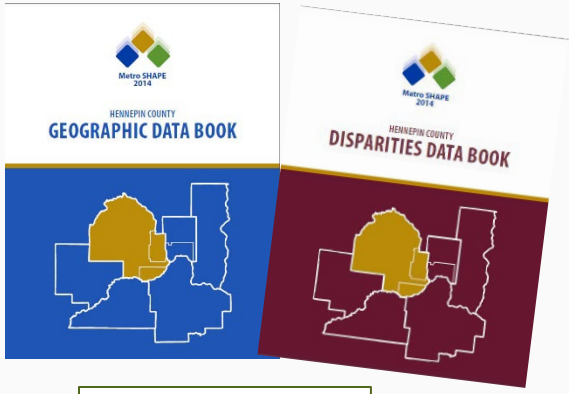


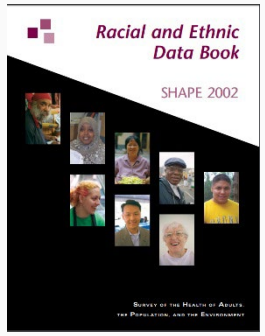
19 geographic specific data books

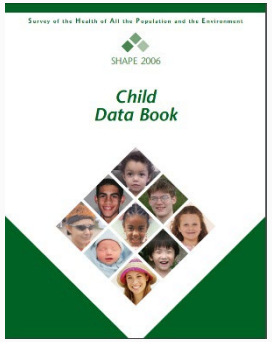


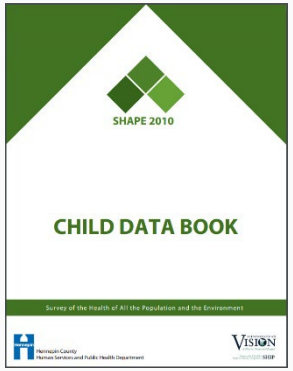


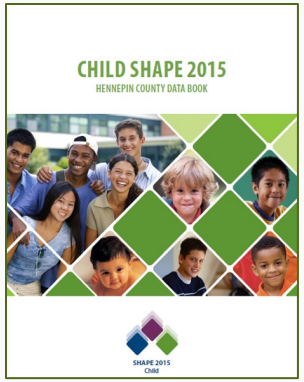


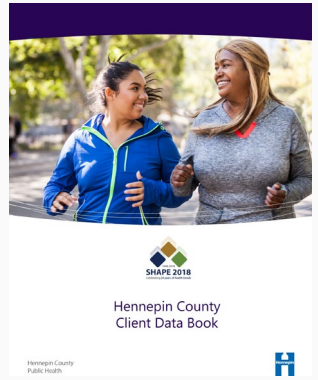












What we did, how we did it, and who we reached

SHAPE: Survey of Health of All the Population and the Environment

Two substantial goals for SHAPE 2018:

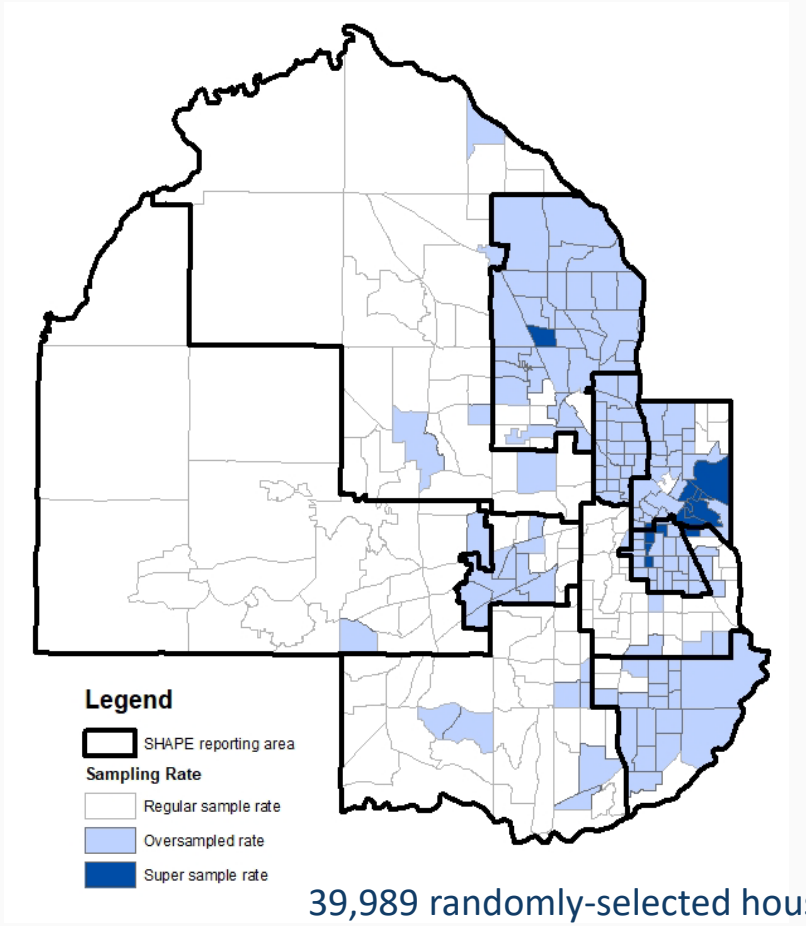
1) Reduce non-response bias by increasing response from:

- Young adults (18-29)
- Low education (<HS/HS only)
- Populations of color
- Non-English speaking participants

Under-represented in SHAPE 2010 and 2014

2) Maintain scientifically sound results

SHAPE 2018 blended in-person responses with address-based sampling responses



In-person sites

6 Hennepin County Human Service Centers

NORTHPOINT Health & Wellness Center, Inc.

NorthPoint Health & Wellness Center

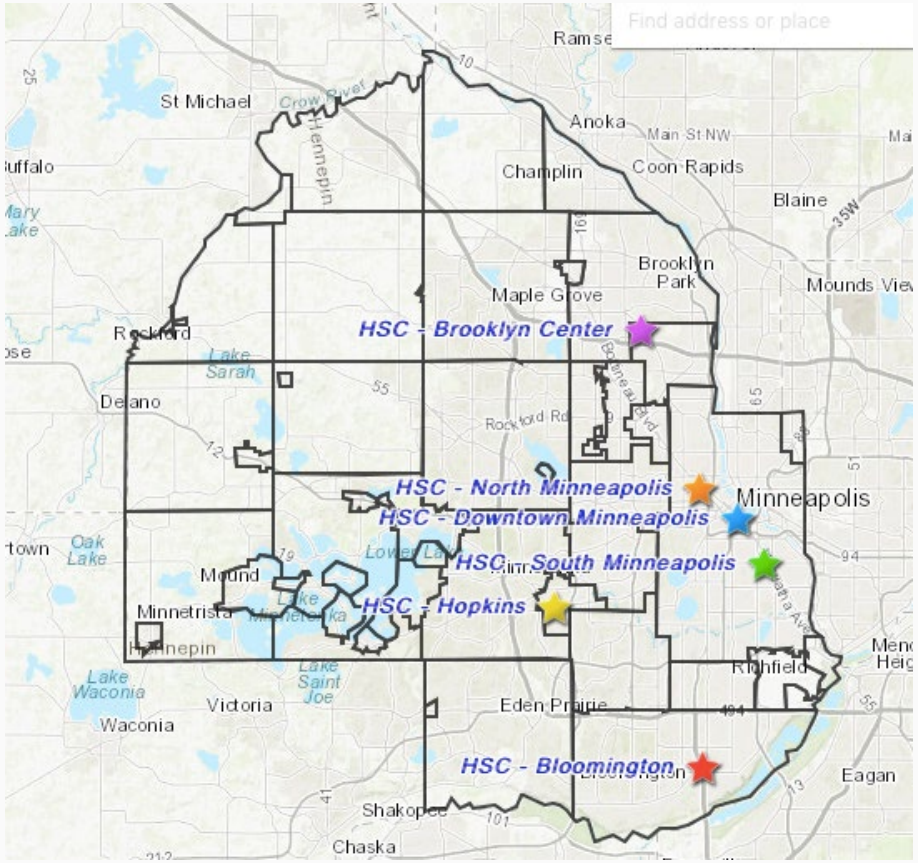
OFFICE OF MULTI-CULTURAL SERVICES

Hennepin County Office of Multicultural Services

3,300 completed surveys; 2,700 had address

39,989 randomly-selected households from USPS Delivery Sequence File
8,810 usable completed responses RR: 23.8%

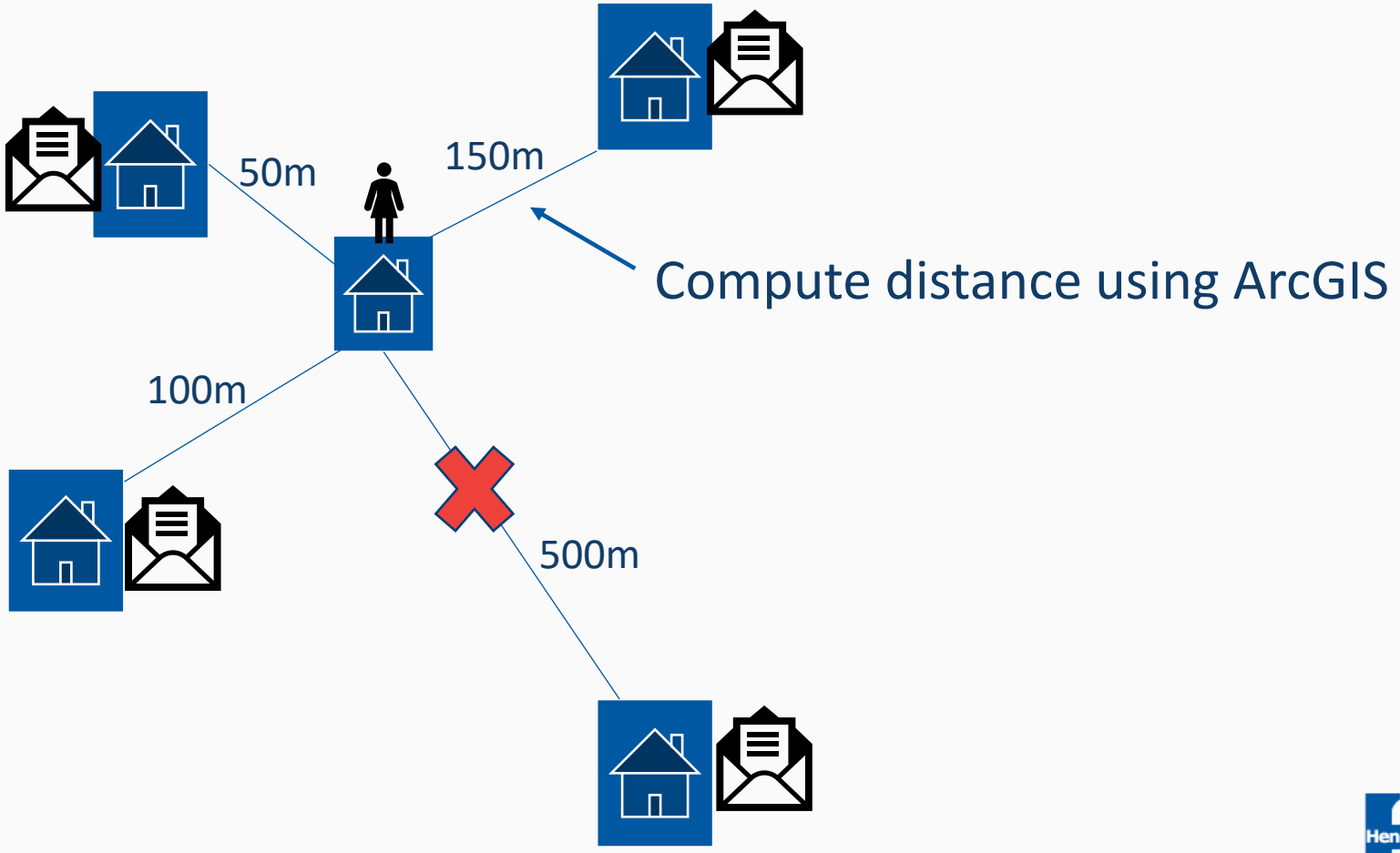
In-person data collection happened at eight locations



Objective: Pair the households to minimize the total distance (i.e., most similar)

In-person Survey ID	Nearest Household ID that did not return a survey	Distance between the houses/apartments
1	103	50
2	109	108
3	211	77
4	155	0
5	224	84
Total		319

Pairing is easy for a given in-person address, but…



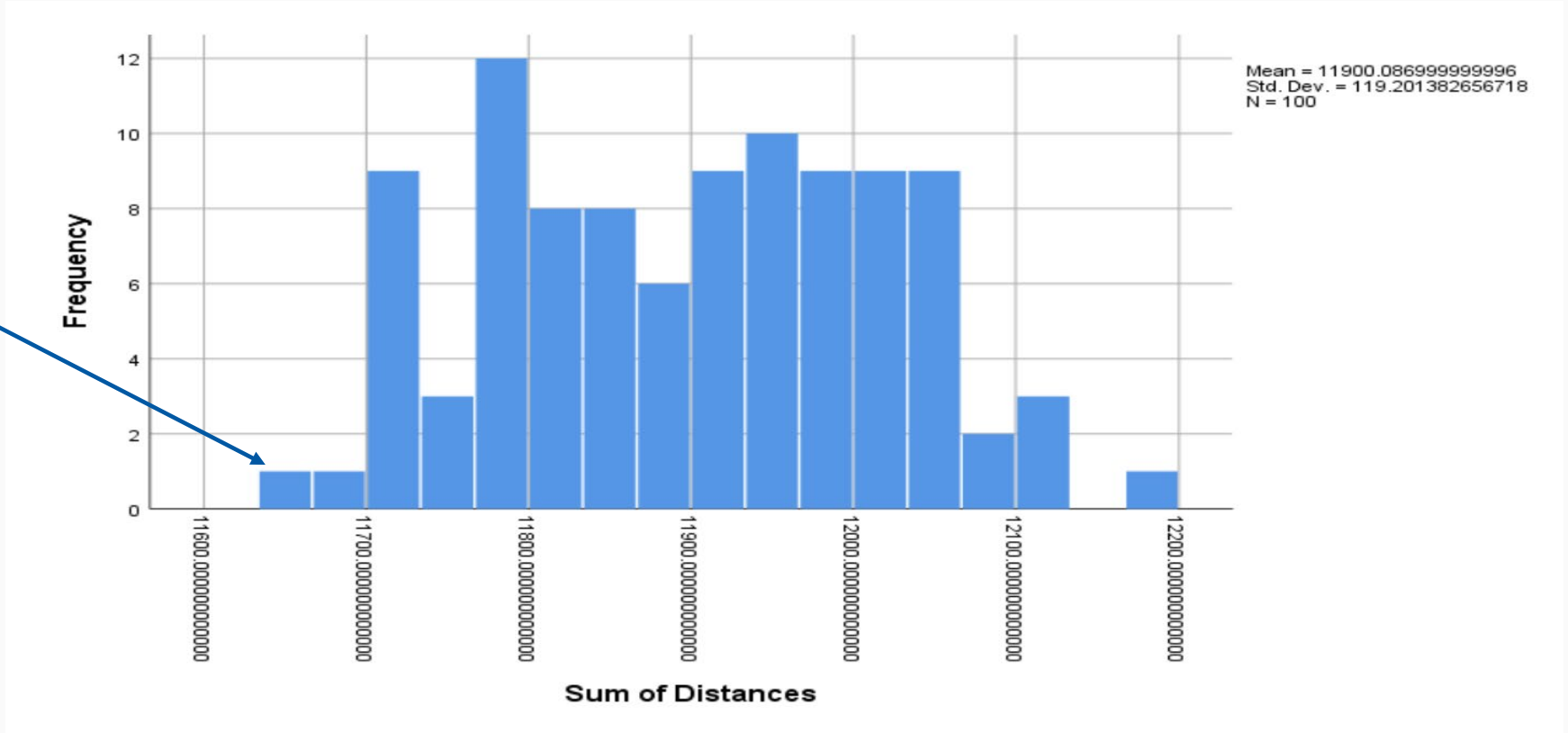
The order in which you pair can make a big difference

Distance between households				
	ABS ID			
In-person ID	101	102	103	104
1	50	60	75	300
2	100	90	110	130
3	51	49	750	500
Total distance:	**640**			

Distance between households				
	ABS ID			
In-person ID	101	102	103	104
3	51	49	750	500
2	100	90	110	130
1	50	60	75	300
Total distance:	**224**			

Solution: Run 100s of randomizations to find a near-optimal pairing

Find pairing that gives lowest total sum of distances

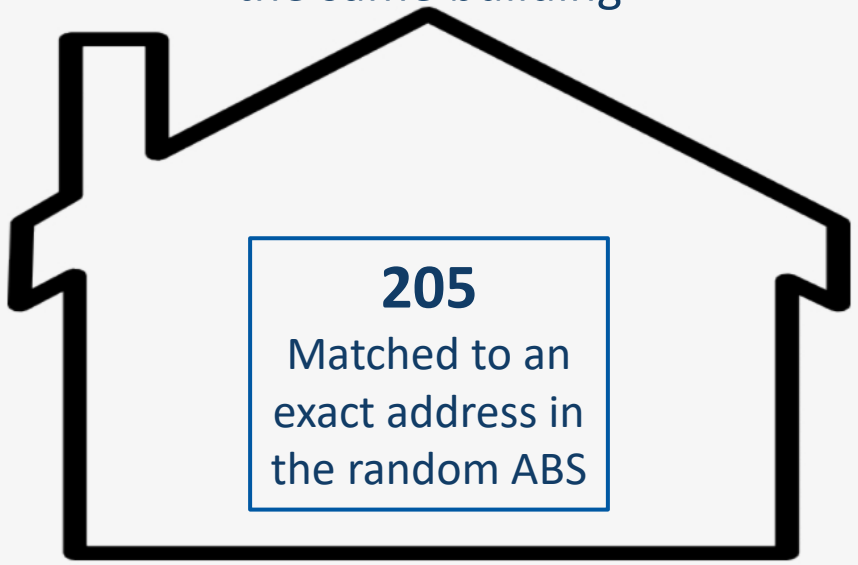


2,333 in-person respondents were blended in with the address-based sampling respondents

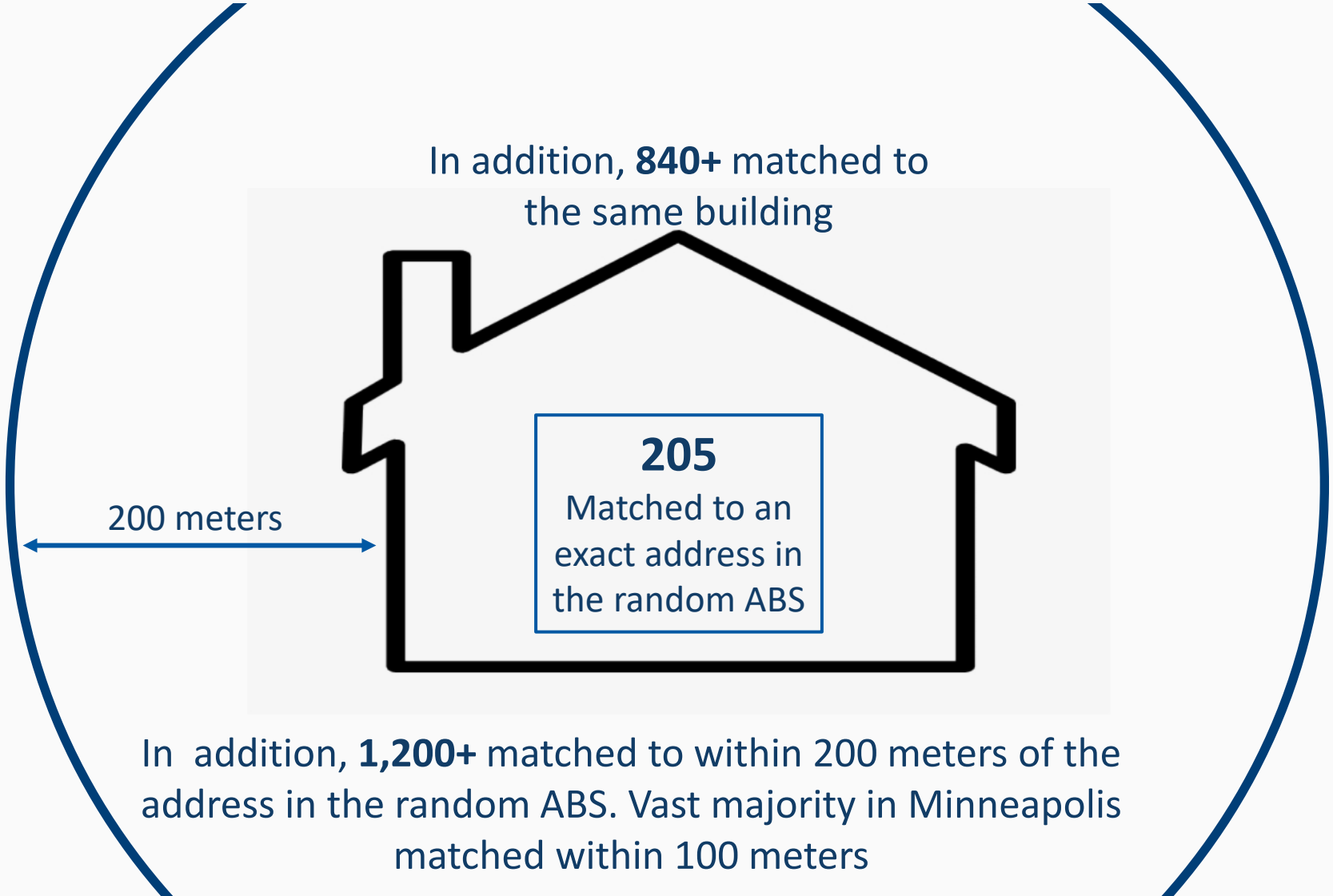
205
Matched to an exact address in the random ABS

2,333 in-person respondents were blended in with the address-based sampling respondents

In addition, **840+** matched to the same building



2,333 in-person respondents were blended in with the address-based sampling respondents

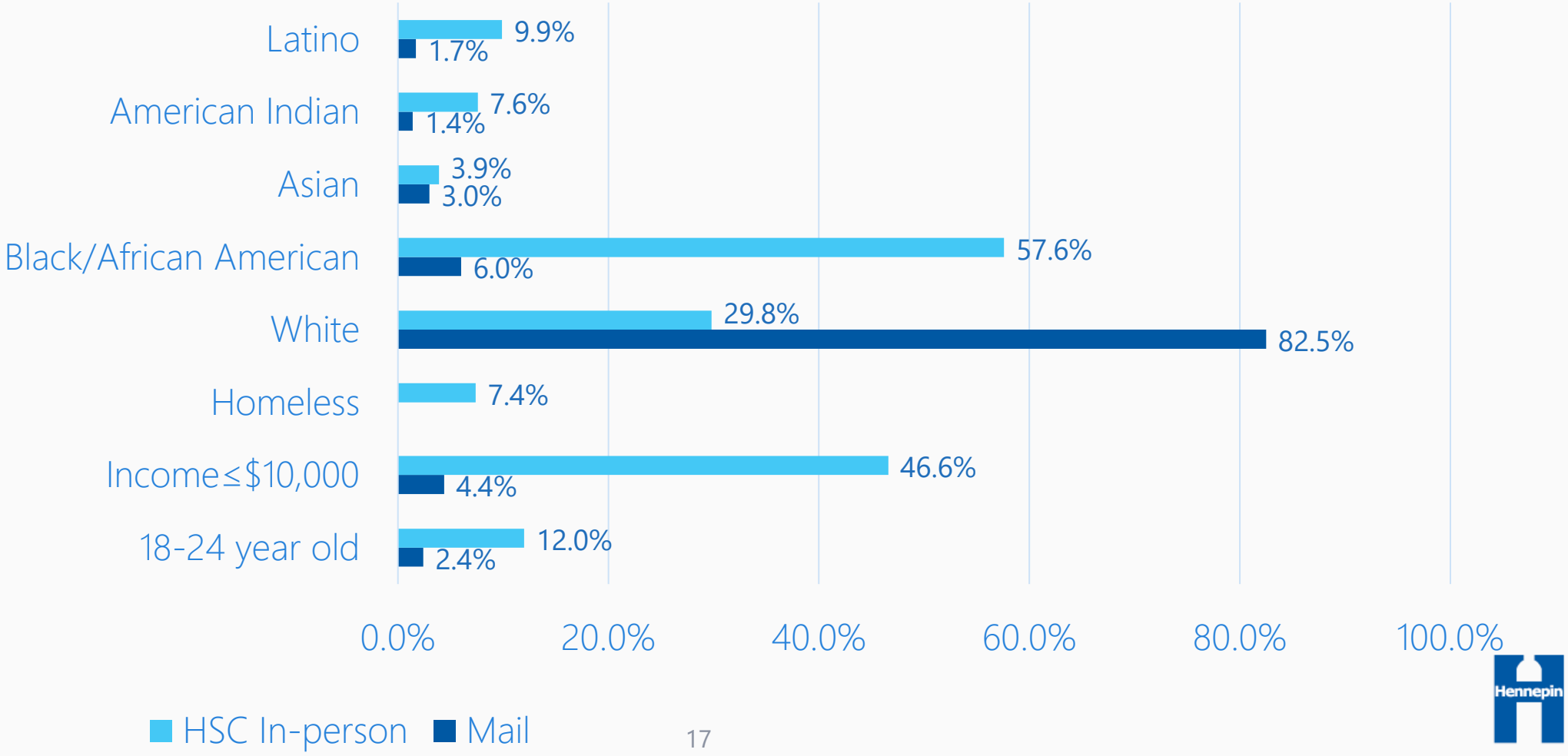


Who we reached

Blending in in-person respondents resulted in a sample that was more representative of the Hennepin County population

- Enhanced mailed survey + in person strategy yielded:
  - More young adult respondents – reportable in 2018!
  - More respondents with lower education (<HS/HS only)
  - Greater representation of populations of color and American Indians
    - Respondents identifying as foreign-born black, southeast Asian, American Indian reportable in 2018
  - Greater representation of respondents with limited English proficiency
    - 281 surveys completed in Spanish; nearly 100 in Somali; dozens in other languages

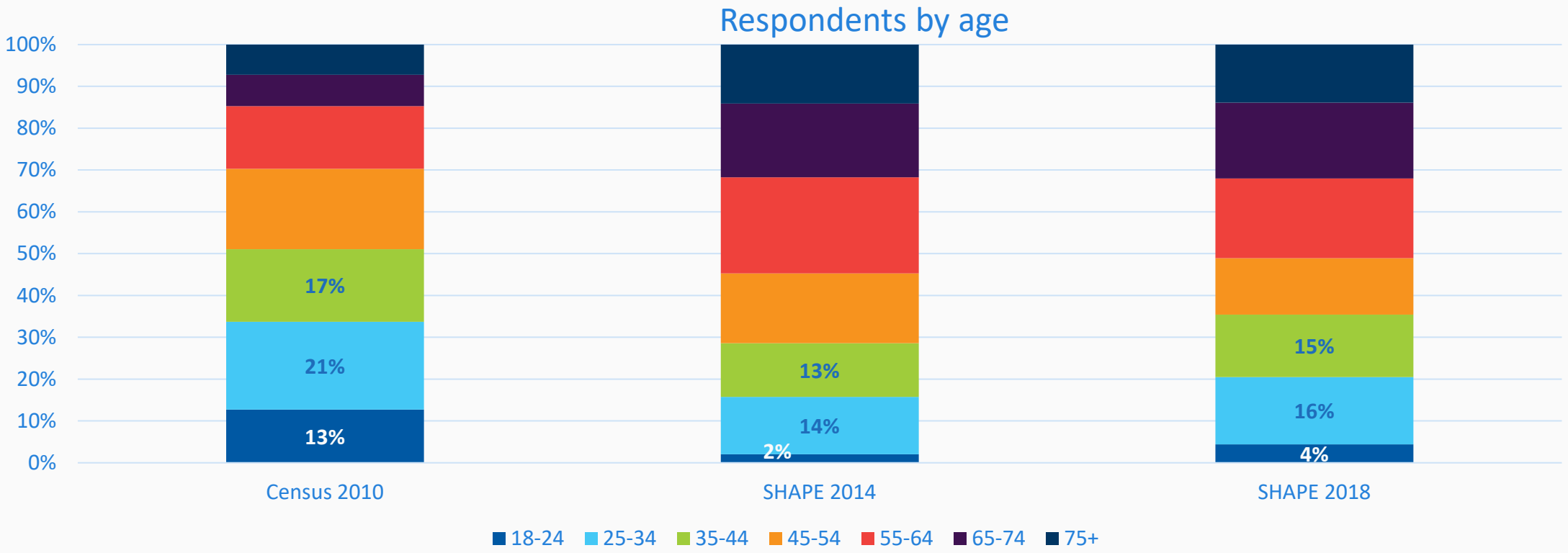
The profile of in-person respondents was quite different than that of the address-based sampling respondents



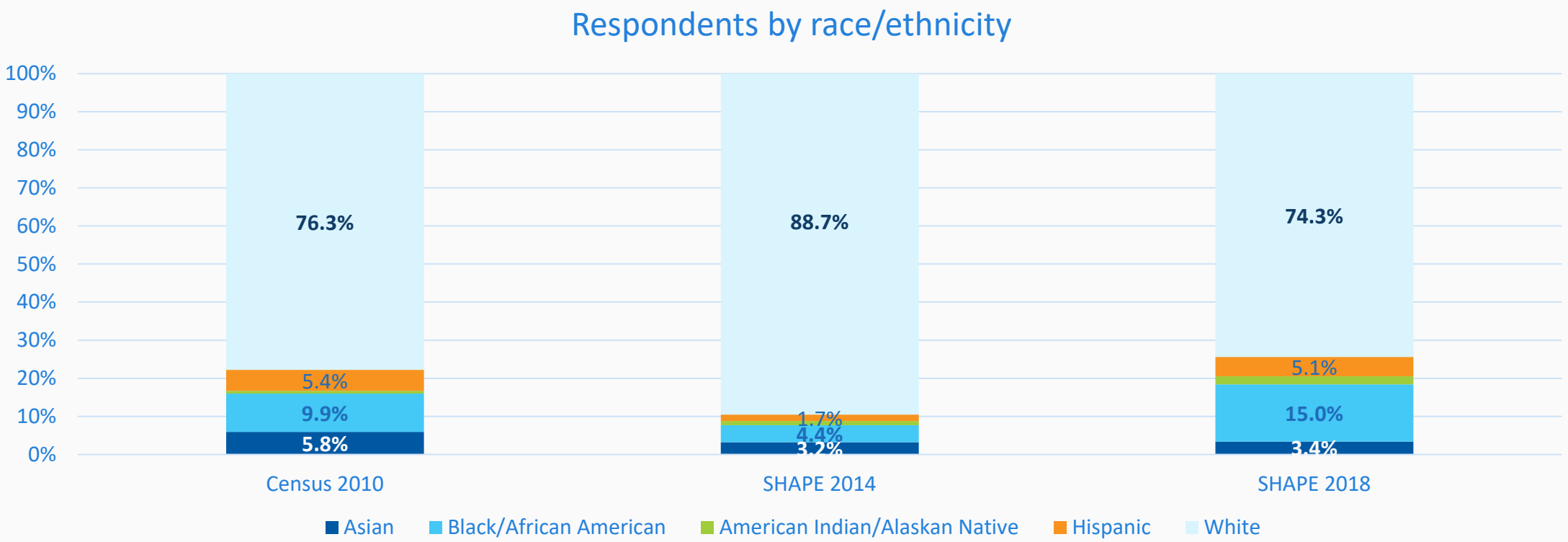
SHAPE 2018 reached many non-English speaking adults

Languages	Respondents reached
Spanish	Nearly 300
Somali	90+
Oromo	63
Russian	27
Amharic	22
Vietnamese	22
Hmong	19
Arabic	8
French	5
Tigrinya	4
Hindi	1

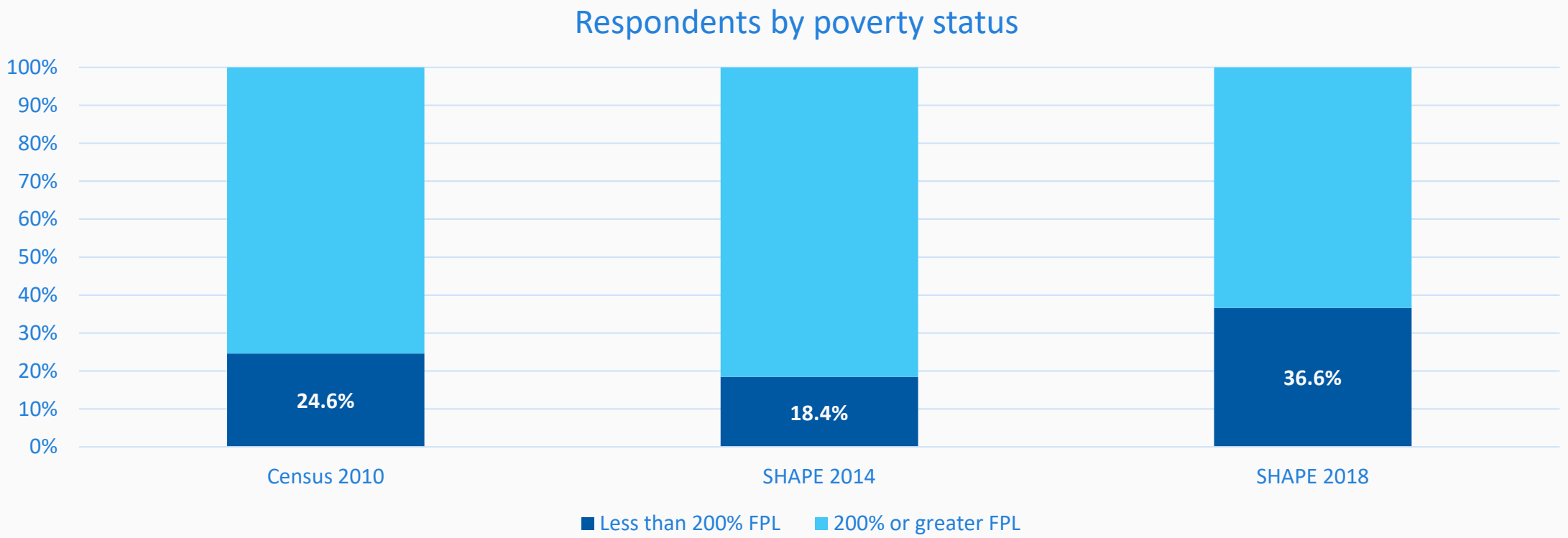
SHAPE 2018 respondents were closer to matching the county age profile than in 2014



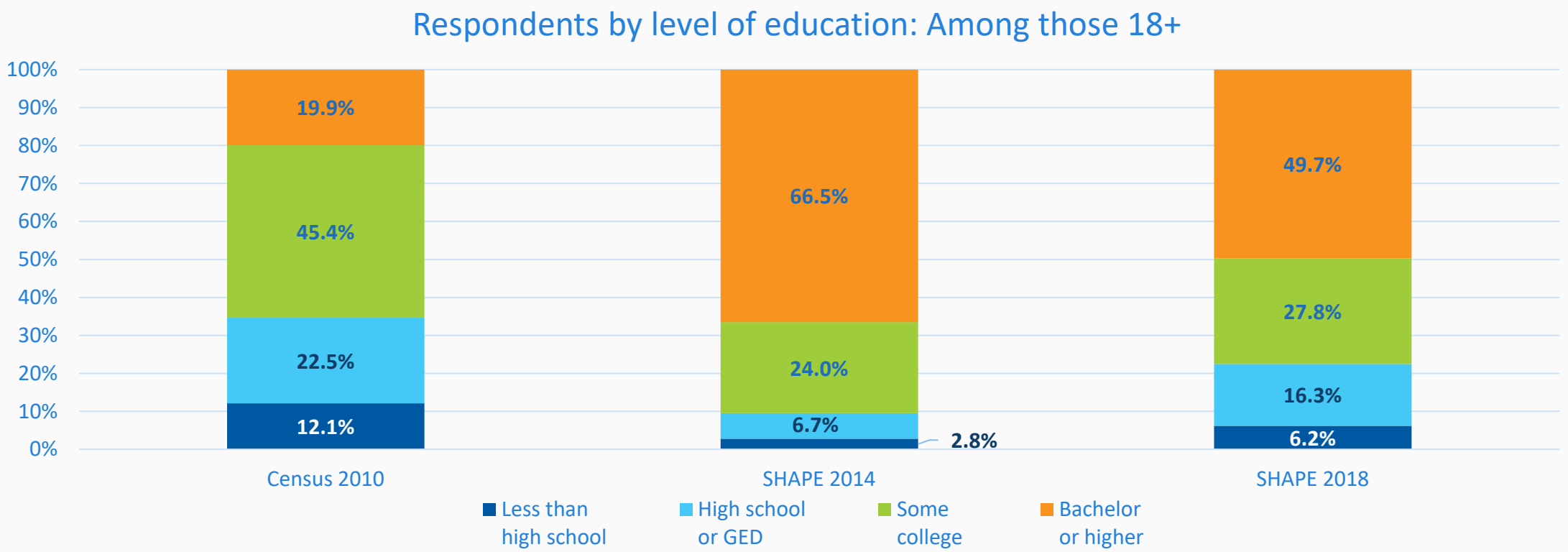
SHAPE 2018 respondents were closer to matching the county race/ethnicity profile than in 2014



SHAPE 2018 respondents were closer to matching the county household income profile than in 2014



SHAPE 2018 respondents were closer to matching the county education profile than in 2014



SHAPE 2018 respondents were older for the most part than the county as a whole, so weighting was necessary

Comparing the SHAPE 2018 Responders and the 2010 Decennial Census

Sex	Age	Mpls-N	Mpls-DNE	Mpls-Cent	Mpls-S	NW Inner	NW Outer	W Inner	W Outer	S East	S West
Males	18-29	661.78%	251.40%	317.98%	606.41%	914.36%	625.35%	386.90%	420.27%	504.95%	1557.67%
	30-44	176.19%	180.36%	168.96%	220.08%	282.51%	274.83%	218.10%	230.45%	226.54%	299.21%
	45-54	135.96%	131.35%	181.20%	178.10%	237.63%	192.28%	301.00%	245.06%	314.33%	297.07%
	55-64	96.44%	77.65%	102.75%	99.54%	68.18%	85.50%	108.26%	92.98%	105.44%	114.26%
	65-79	33.99%	27.85%	35.35%	33.31%	43.13%	39.62%	43.63%	41.56%	46.01%	42.54%
	80+	57.81%	47.17%	67.06%	42.09%	47.01%	24.25%	56.42%	47.48%	52.81%	41.49%
Females	18-29	227.78%	140.78%	189.71%	187.37%	272.73%	291.52%	131.65%	259.61%	297.55%	202.08%
	30-44	114.47%	76.83%	81.40%	84.83%	97.32%	111.05%	92.16%	119.56%	114.29%	122.13%
	45-54	84.13%	92.52%	75.85%	80.80%	104.96%	84.12%	87.54%	100.04%	91.13%	112.71%
	55-64	39.09%	51.11%	49.99%	58.70%	47.52%	55.35%	50.85%	66.58%	62.55%	71.64%
	65-79	32.53%	35.05%	39.21%	32.01%	36.77%	36.39%	32.37%	42.62%	37.57%	41.60%
	80+	79.46%	63.27%	72.25%	130.47%	60.52%	42.50%	96.38%	60.19%	66.93%	64.29%

= Very over-represented = Roughly equivalent = Very under-represented

Since the demographics of the SHAPE 2018 responders did not match those of the adults in the County as a whole, the responses were weighted – using raking – on:

- Population in the geographic area
- Age and gender
- Race/Ethnicity
- Education level

Results for American Indian were included – but with a change in definition

- Critical to reflect population in data books, reports, presentations
- Consulted with SME
- Compared demographics of respondents vs. census
  - Close for age, education, and <200% FPL vs. >=200% FPL
- Expanded to include those identifying as American Indian + one other race (226 respondents)

Results for LGBT(Q) were included, but not all subgroups

- Critical to reflect populations in data books, reports, presentations
- Asked transgender separately from LGBT questions
    - Omission of queer as a response option = mistake
- Deep consultation with SMEs and people with lived experience in HC staff + recommendation from GLAAD lead to imperfect but acceptable reporting
    - Transgender: missing due to small sample size, but reflected in data book
    - LGBT self-identified vs. not LGBT self-identified

What we learned

SHAPE results are a useful tool to document and track health disparities but be prepared for the unexpected

- SHAPE results are a useful tool to document and track health disparities
- SHAPE shares the limitations (selection and information bias) common to all self-administered surveys
- SHAPE team needed to do multiple mid-course modifications to address unexpected challenges

SHAPE 2018 included questions on many health topics

Overall health
- General health, health related quality of life
- Chronic diseases and conditions
- Overweight and obesity
- Mental health
- Activity limitations and disabilities

Access to health care
- Health insurance coverage
- Usual places of care
- Unmet health and mental health care need
- Prevention care
- Dental care, prescription use

Healthy lifestyles and behaviors
- Diet, nutrition, beverage intake
- Physical activity and exercise
- Cigarettes, e-cig, other tobacco products
- Alcohol use

Social-environmental factors
- Community connectedness, social support, isolation
- Neighborhood safety
- Face and gender identity discrimination
- Economic distress
- Sexual orientation and gender identity

SHAPE 2018 Adult Survey

Survey of the Health of All the Population and the Environment

Please complete the entire survey, answering every question as honestly as you can. Your responses are confidential.

SECTION A. GENERAL HEALTH AND HEALTH CONDITIONS

A1. In general, would you say your health is ... ?
- ○ Excellent
- ○ Very good
- ○ Good
- ○ Fair
- ○ Poor

A2. Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

[ ] Number of days

A3. Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

[ ] Number of days

A4. During the past two weeks, how often have you been bothered by any of the following problems?

a. Little interest or pleasure in doing things
- ○ Not at all
- ○ Several days
- ○ More than half the days
- ○ Nearly every day

b. Feeling down, depressed, or hopeless
- ○ Not at all
- ○ Several days
- ○ More than half the days
- ○ Nearly every day

A5. Have you ever been told by a doctor, nurse, or other health professional that you had any of the following?

a. Hypertension, also called high blood pressure
- ○ Yes
- ○ Yes, but only during pregnancy
- ○ Borderline high or pre-hypertension
- ○ No

b. Diabetes or sugar disease
- ○ Yes
- ○ Yes, but only during pregnancy
- ○ Pre-diabetes or borderline diabetes
- ○ No

A6. How tall are you without shoes?

[ ] Feet [ ] Inches

OR [ ] Centimeters

A7. How much do you weigh without shoes?

If you are a female and are currently pregnant, please provide your weight before you were pregnant.

[ ] Pounds OR [ ] Kilograms

A8. Are you limited in any activities because of physical, mental, or emotional problems?
- ○ Yes
- ○ No

A9. Because of any impairment or health problem, do you need help from another person with personal care needs such as eating, bathing, dressing, or getting around your house?
- ○ Yes
- ○ No

A10. Because of any impairment or health problem, do you need help from another person in handling routine needs such as everyday household chores, business, shopping, or getting around for other purposes?
- ○ Yes
- ○ No

E8. During the past 12 months, did you or your family miss or delay a rent or mortgage payment because you did not have enough money?
- ○ Yes
- ○ No

E9. During the past 12 months, how often have you stayed in a shelter, somewhere not intended as a place to live, or someone else's home because you had no other place to stay?
- ○ Never
- ○ Once
- ○ Twice
- ○ Three or more times

E10. During the past 12 months, how often did lack of transportation keep you from getting places where you needed to go, such as jobs, medical appointments, or shopping?
- ○ Often
- ○ Sometimes
- ○ Rarely
- ○ Never

E11. How often are you in a situation where you feel you are not accepted because of your race, culture, religion, or immigration status?
- ○ At least once a week
- ○ Once or twice a month
- ○ A few times a year
- ○ Once a year or less often
- ○ Never

E12. How often are you in a situation where you feel you are not accepted because of your sexual orientation or gender identity?
- ○ At least once a week
- ○ Once or twice a month
- ○ A few times a year
- ○ Once a year or less often
- ○ Never

SECTION F. ABOUT YOU

The following questions are used to help us understand who responds to the survey. Again, your answers to these and all other questions will remain confidential.

F1. Are you
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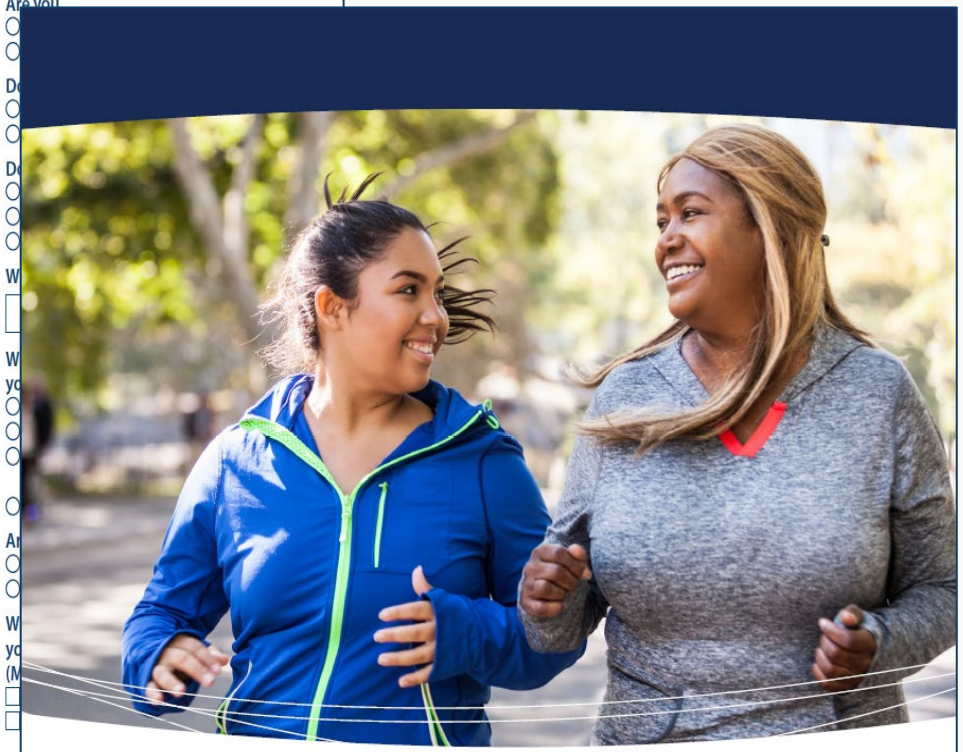


1998-2018
SHAPE 2018
Celebrating 20 years of health trends

Hennepin County Adult Data Book

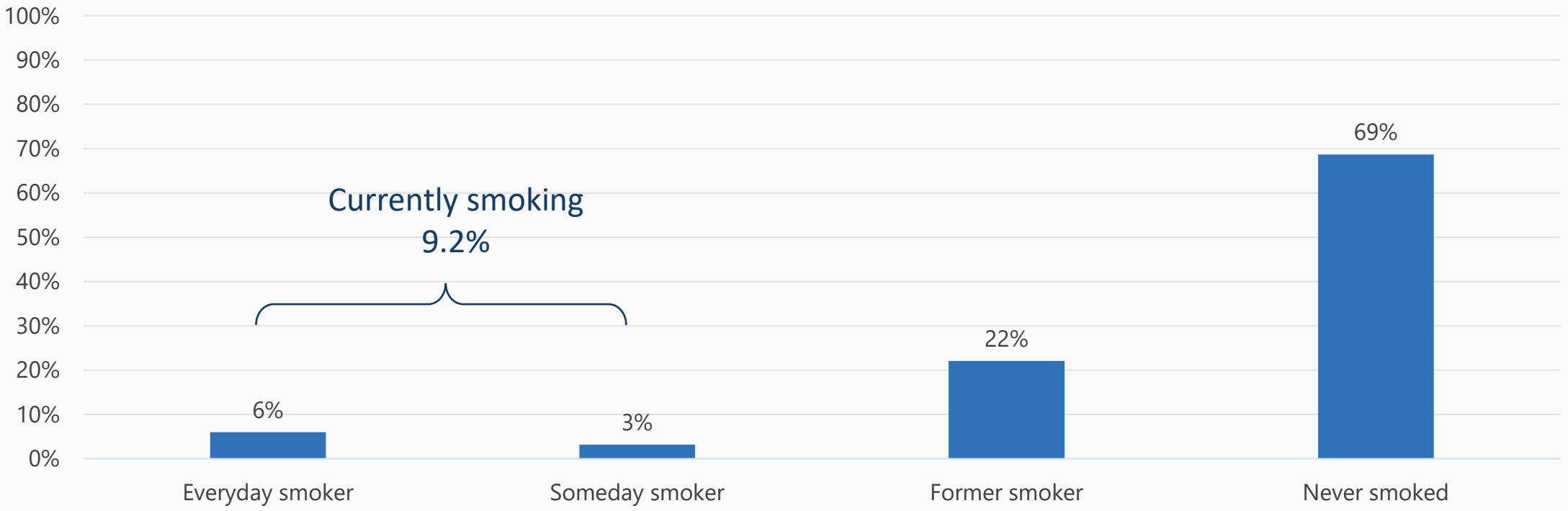
Hennepin County
Public Health

Hennepin

Hennepin

Health

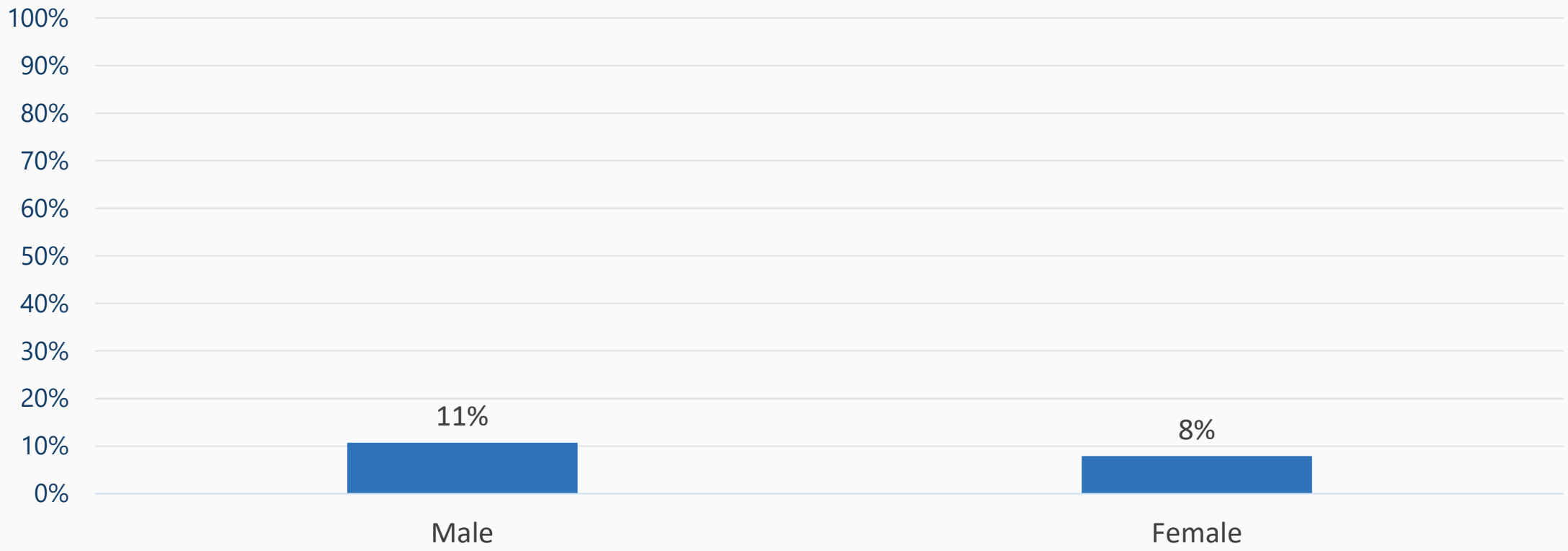
Approximately 9% of county adults currently smoke



SHAPE 2018: selected findings adult health survey

Health

Men smoke at a slightly higher rate than women*

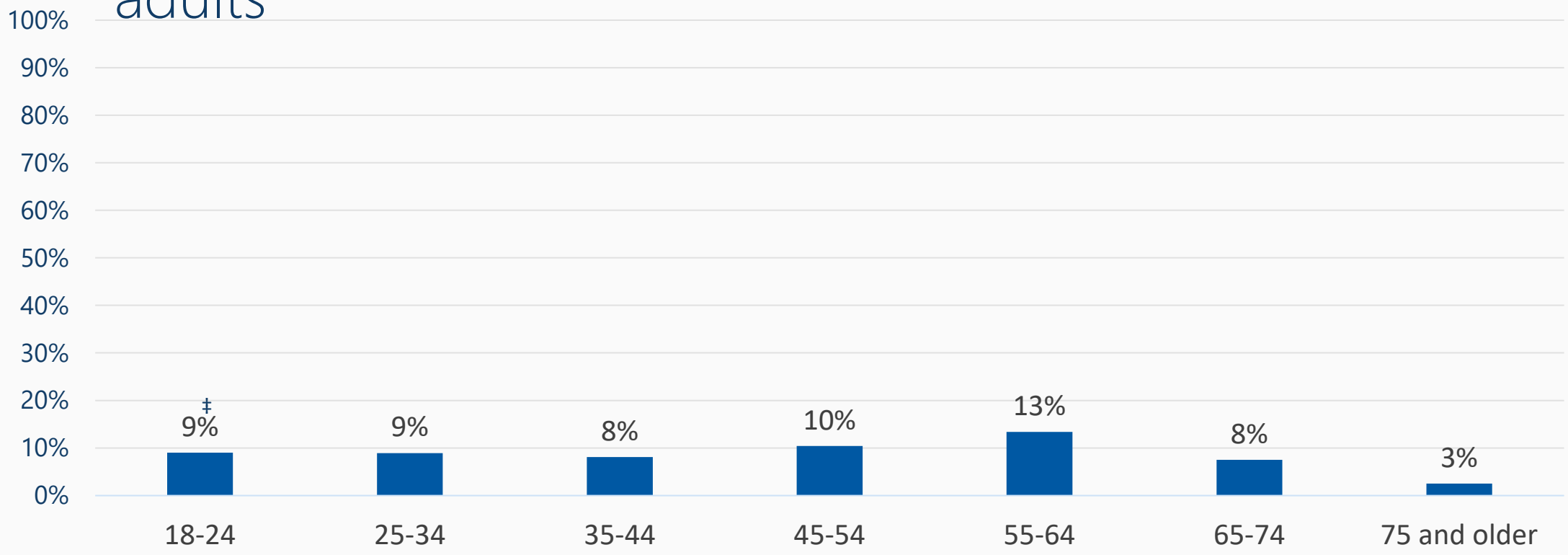


SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Health

Older adults smoke at a higher rate than younger adults*

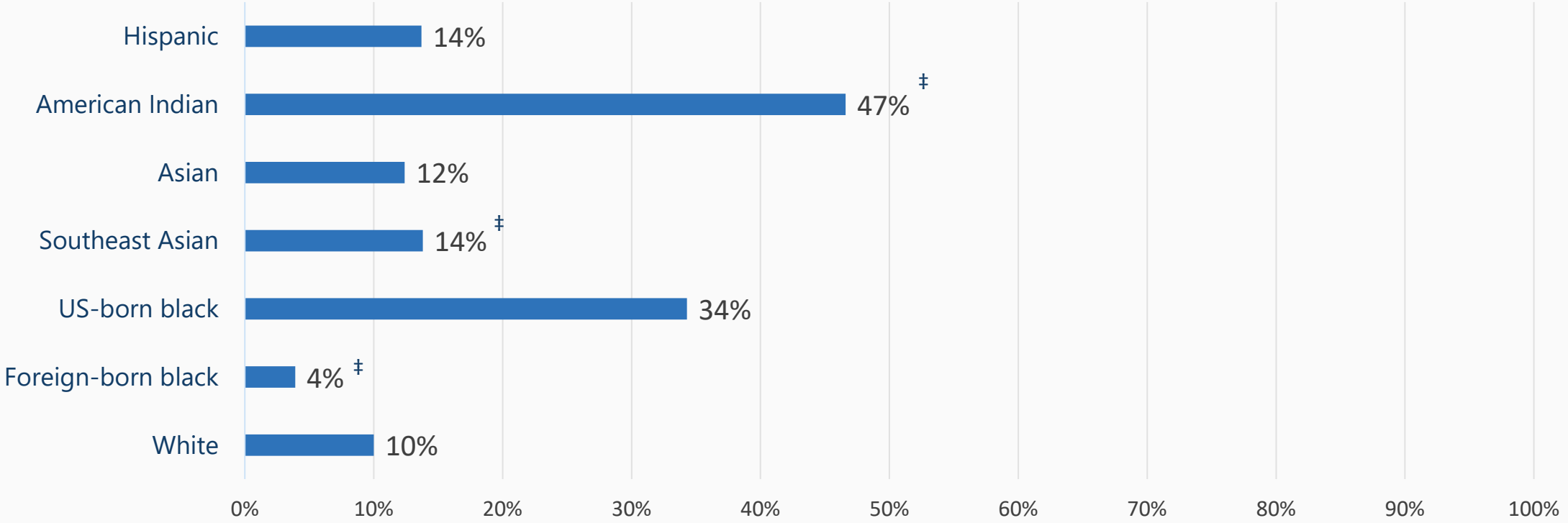


SHAPE 2018: selected findings

* Results are statistically significant @ $p<0.05$

Health

American Indian and US-born black adults smoke at a higher rate than adults of other race/ethnicities*



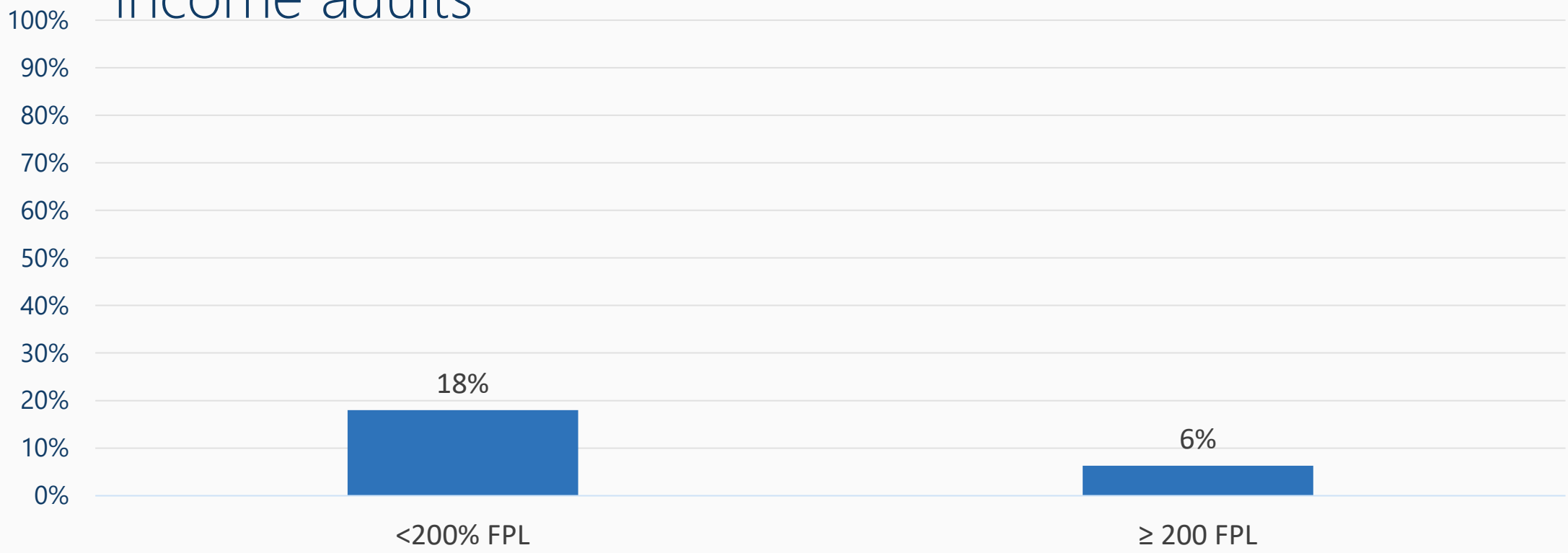
SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05. The test doesn't include Asian group and only includes the SE Asian group.

‡ Estimate is potentially unreliable and should be used with caution. (Relative Standard Error is >30% and ≤50%)

Income

Lower-income adults smoke at a higher than higher-income adults*

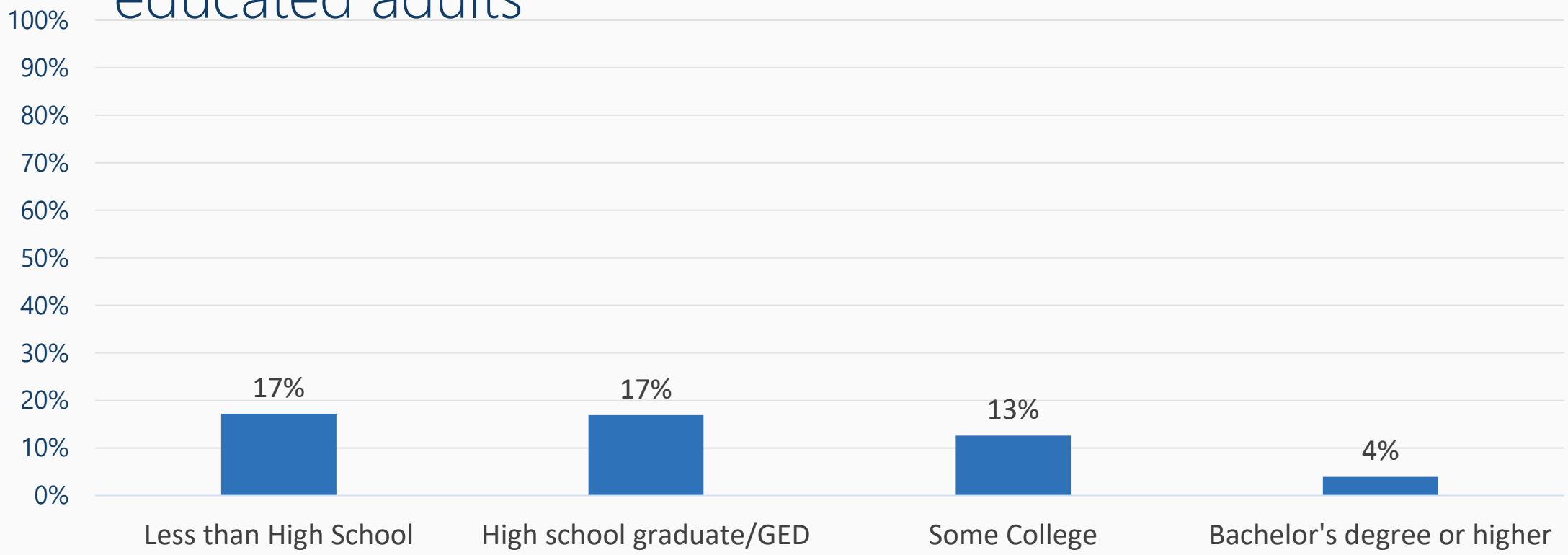


SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Education

Lower-educated adults smoke at a higher than higher-educated adults *

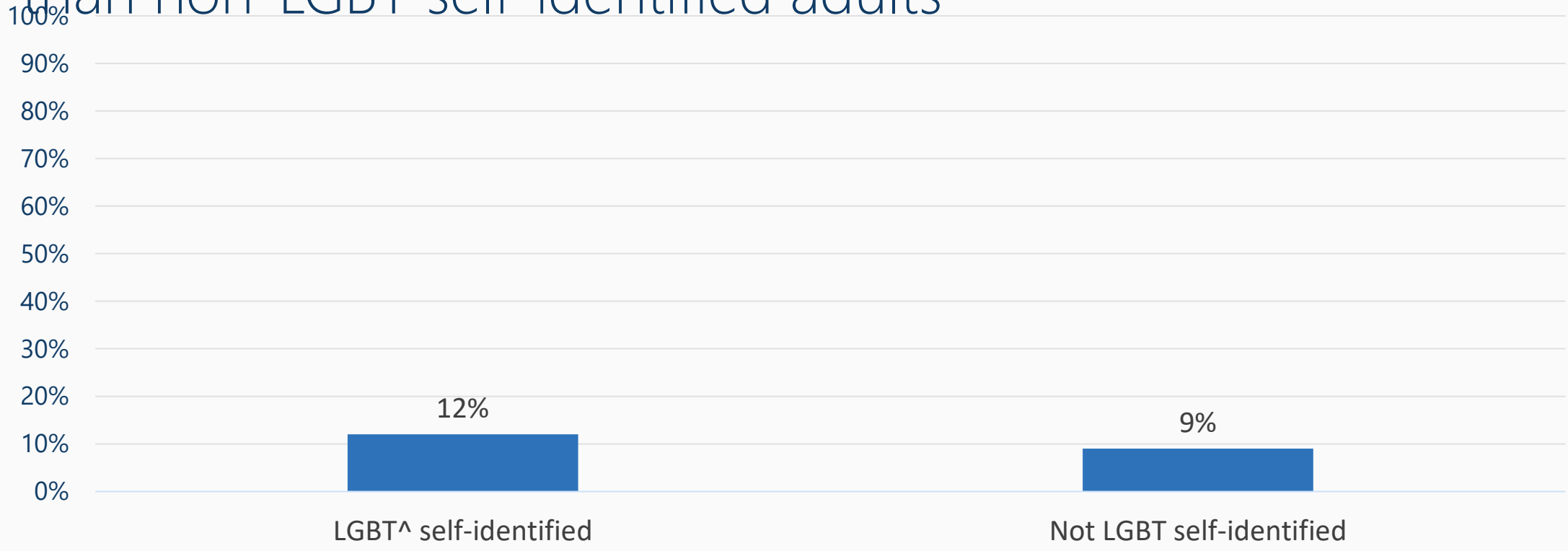


SHAPE 2018: selected findings

* Results are statistically significant @ $p<0.05$

Health

LGBT self-identified adults smoke at a slightly higher rate than non-LGBT self-identified adults **

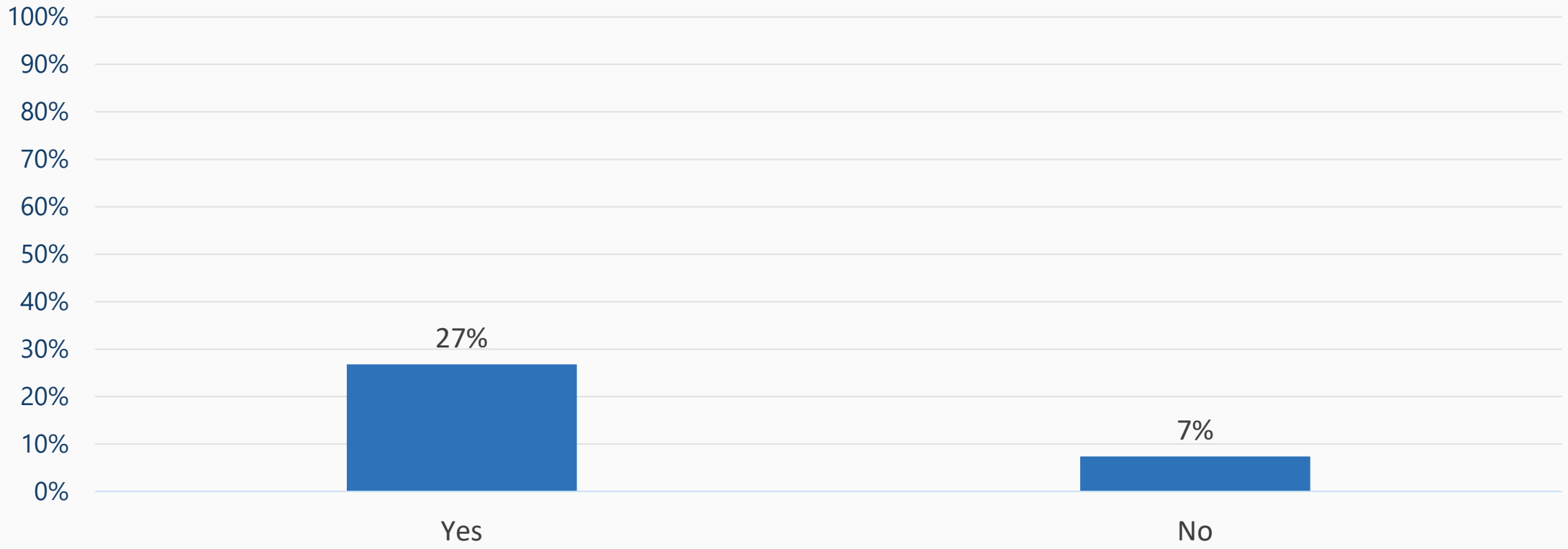


SHAPE 2018: selected findings

** Results are statistically significant @ 0.05≤p<0.10

Housing

Housing insecure adults smoke at a higher rate than non-housing insecure adults *

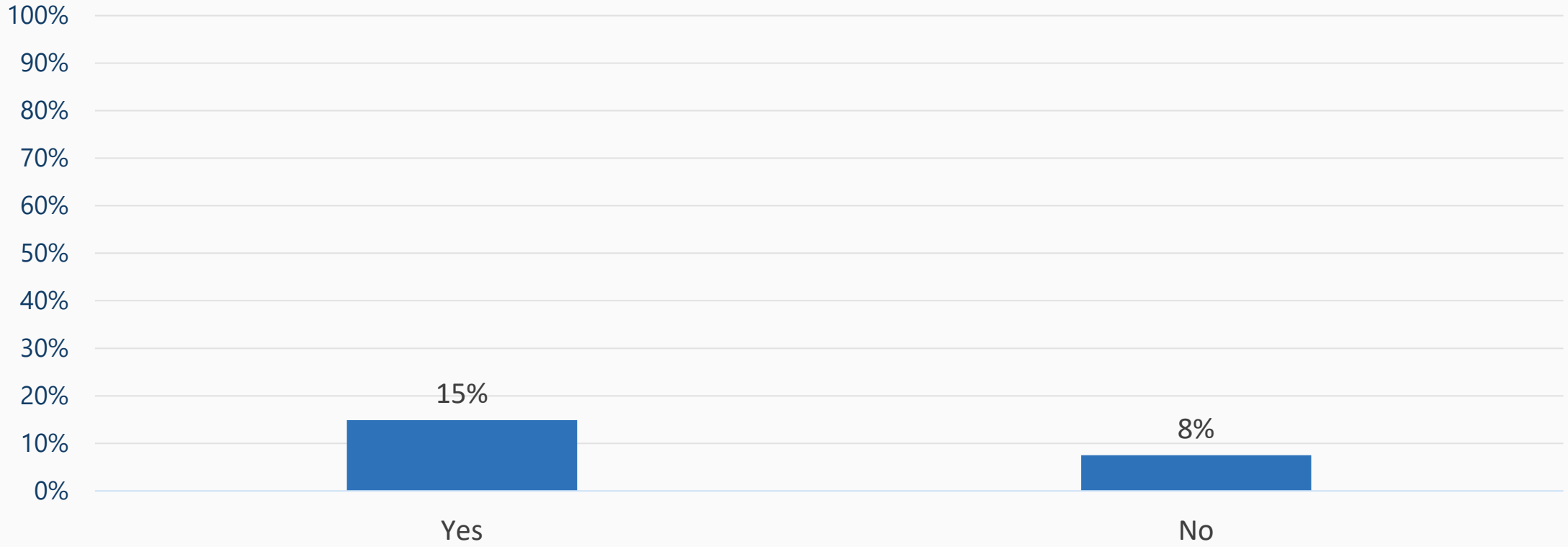


SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Health

Adults with self-reported disabilities smoke at a higher rate than adults without self-reported disabilities*

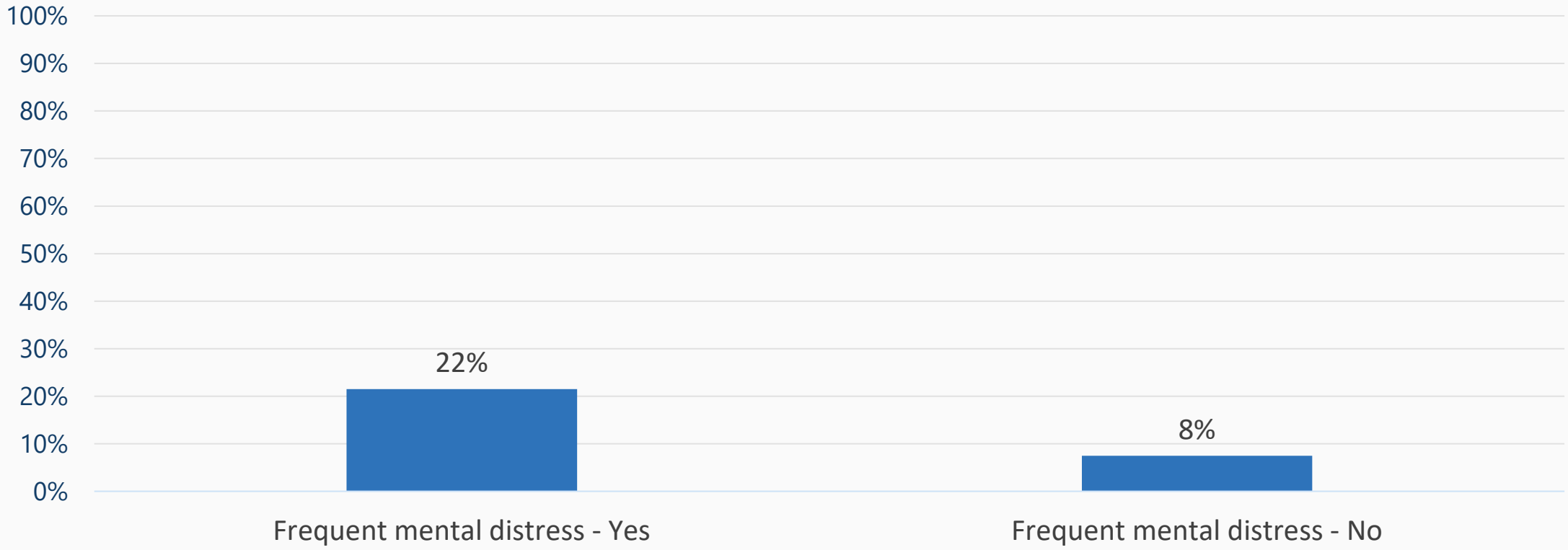


SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Health

Adults with self-reported frequent mental distress smoke at a higher rate than adults without self-reported frequent mental distress *



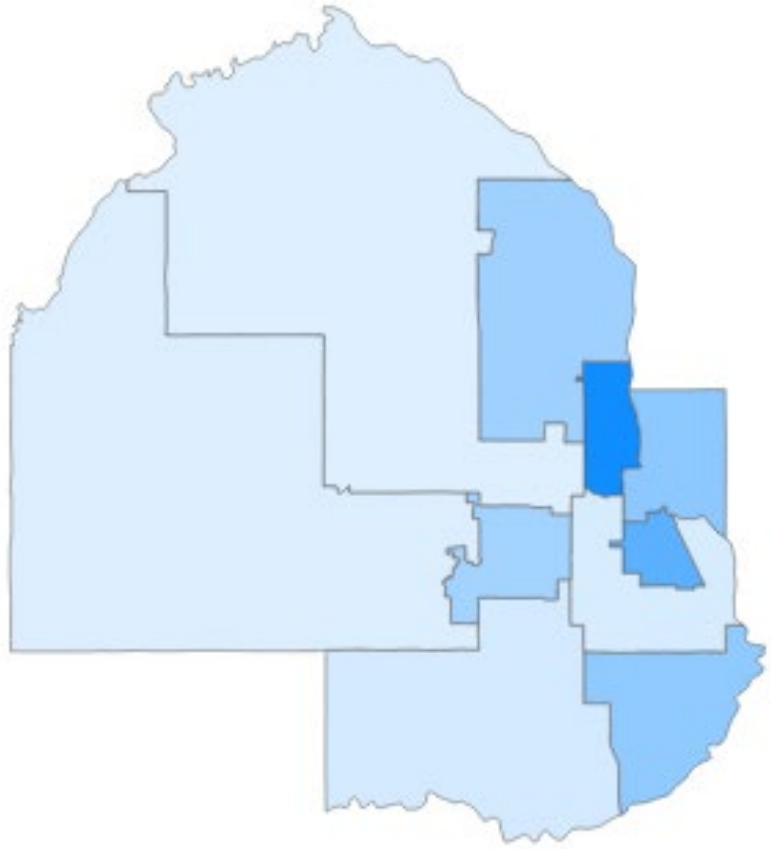
SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Health

Adults living in the north Minneapolis smoke than a higher rate than adults living elsewhere

North Minneapolis	22.3%
Minneapolis C/NE	12.1%
Phillips/Powderhorn	16.0%
South/SW Minneapolis	5.9%
NW – inner suburbs	10.3%
NW – outer suburbs	5.4%
West – inner suburbs	10.3%
West – outer suburbs	5.5%
South – east suburbs	11.7%
South – west suburbs	6.1%



SHAPE 2018: selected findings

* Results are statistically significant @ p<0.05

Health

Low-income adults and adults with self-reported disabilities smoke at a much higher rate than adults as a whole

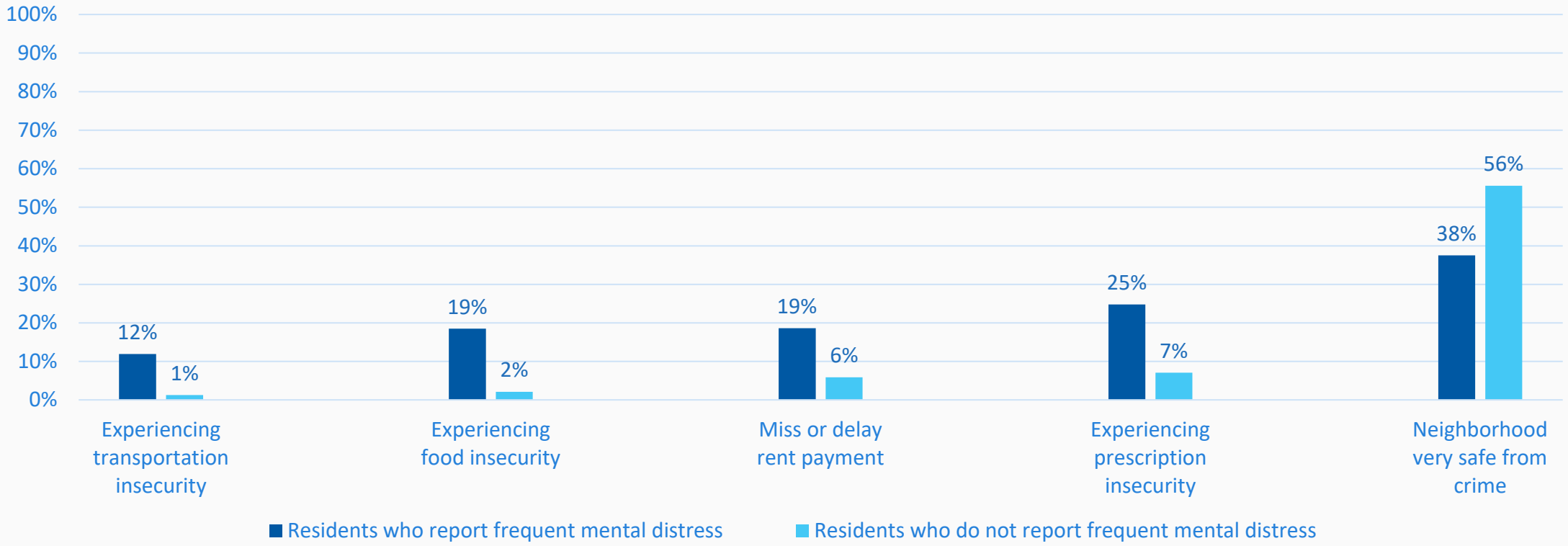
	Reported frequent mental distress
Hennepin County residents	**12.3%**
Income	
< 200% FPL	25.5%
<100% FPL	31.1%
≥ 200% FPL	8.2%
Residents with self-reported disability	29.9%

Housing, transportation, and food insecurity are social determinants of health

- Experiencing housing insecurity:
  - Miss or delay a rent or mortgage payment in past 12 months and/or experience homelessness in past 12 months
- Experiencing transportation insecurity:
  - During the past 12 months, how often did lack of transportation keep you from getting to places where you needed to go, such as jobs, medical appointments, or shopping? (*often* or *sometimes*)
- Experiencing food insecurity:
  - During the past 12 months, how often did you worry that food would run out before you had money to buy more? (*often* or *sometimes)*

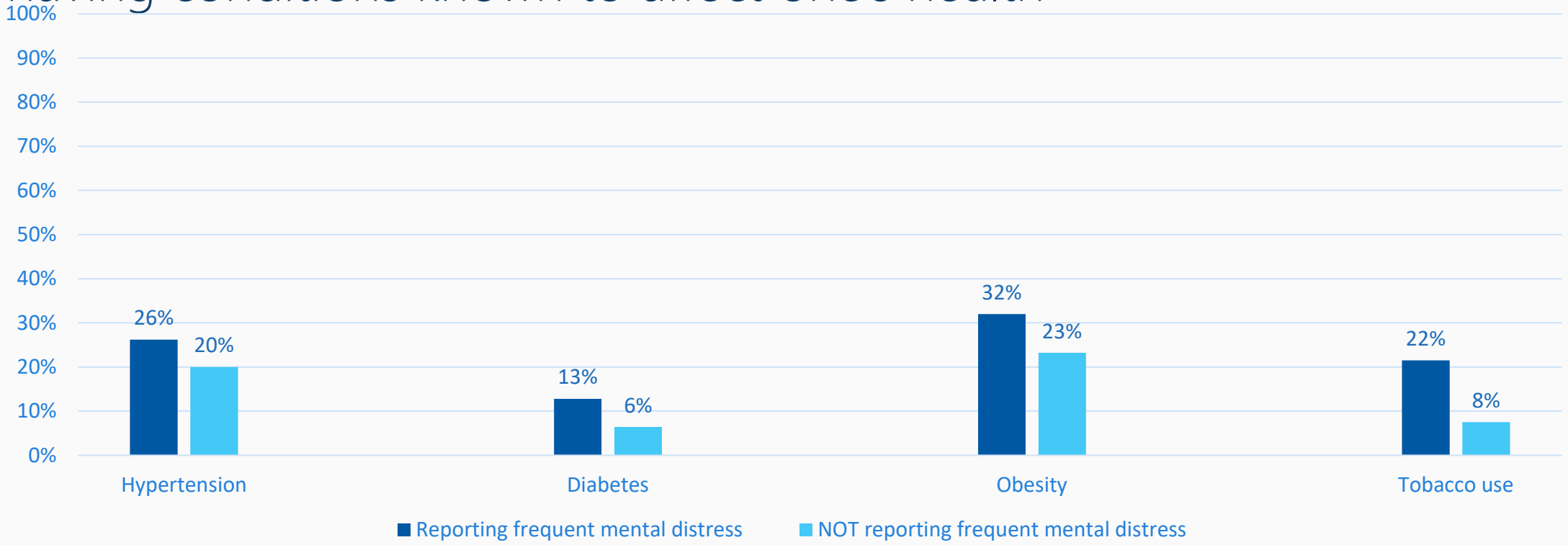
Health

Adults reporting frequent mental distress are more likely to report factors known to affect one's health



Health

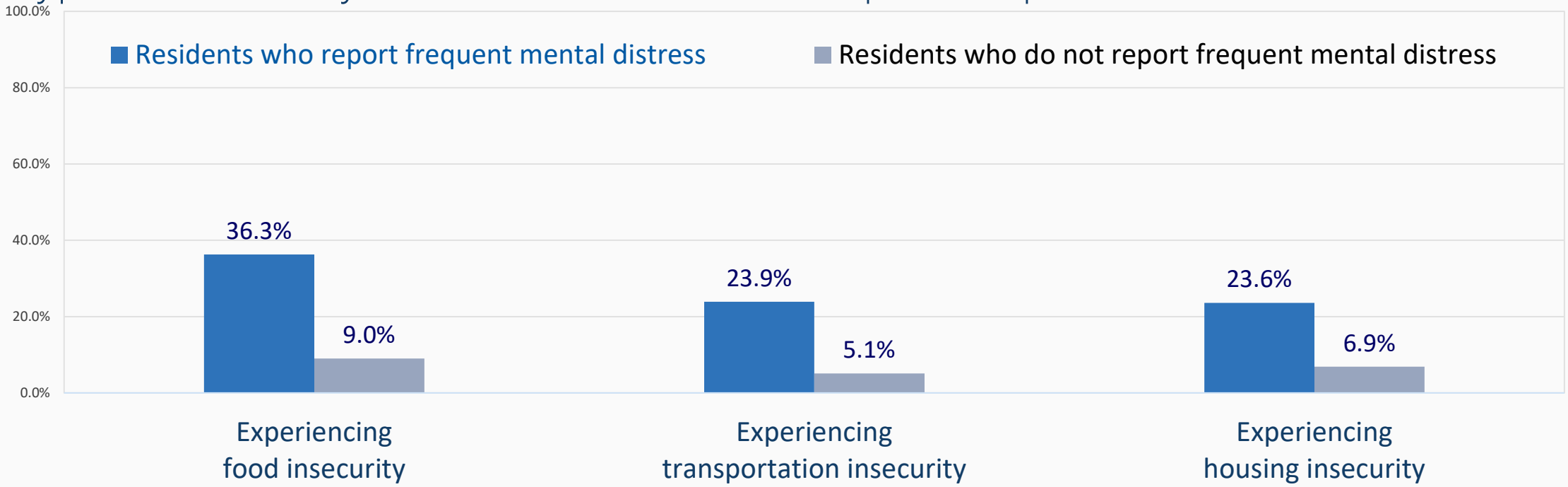
Adults reporting frequent mental distress are more likely to report having conditions known to affect one's health



SHAPE 2018: selected findings

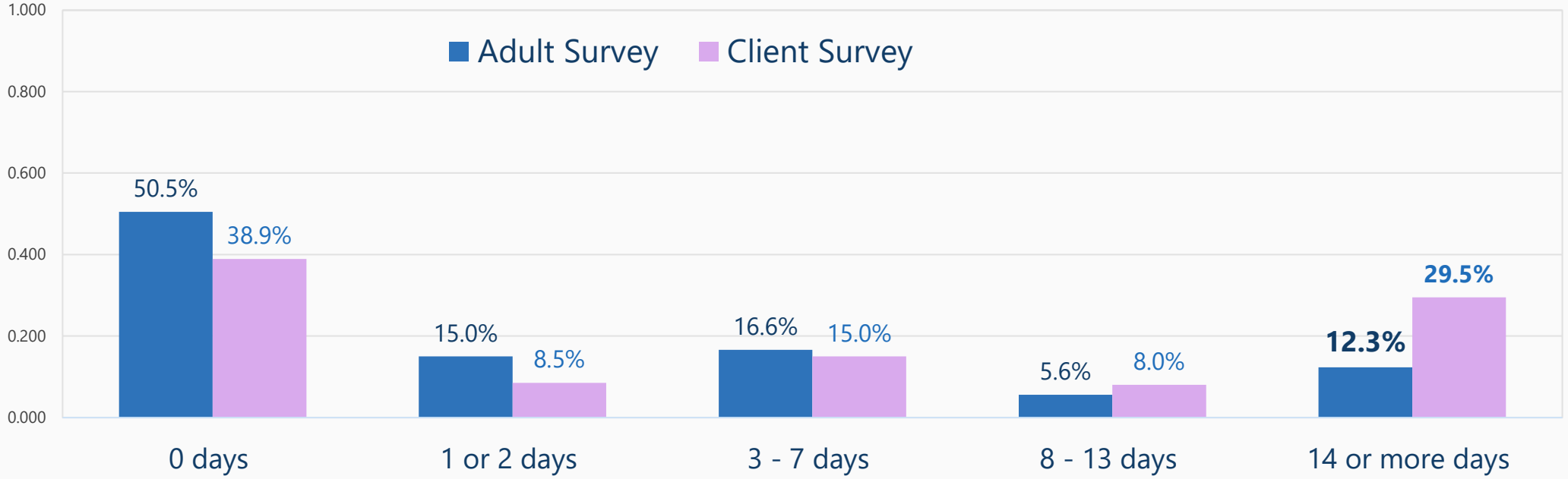
Health

Adults who report frequent mental distress are more likely to experience various types of insecurity than adults who do not report frequent mental distress



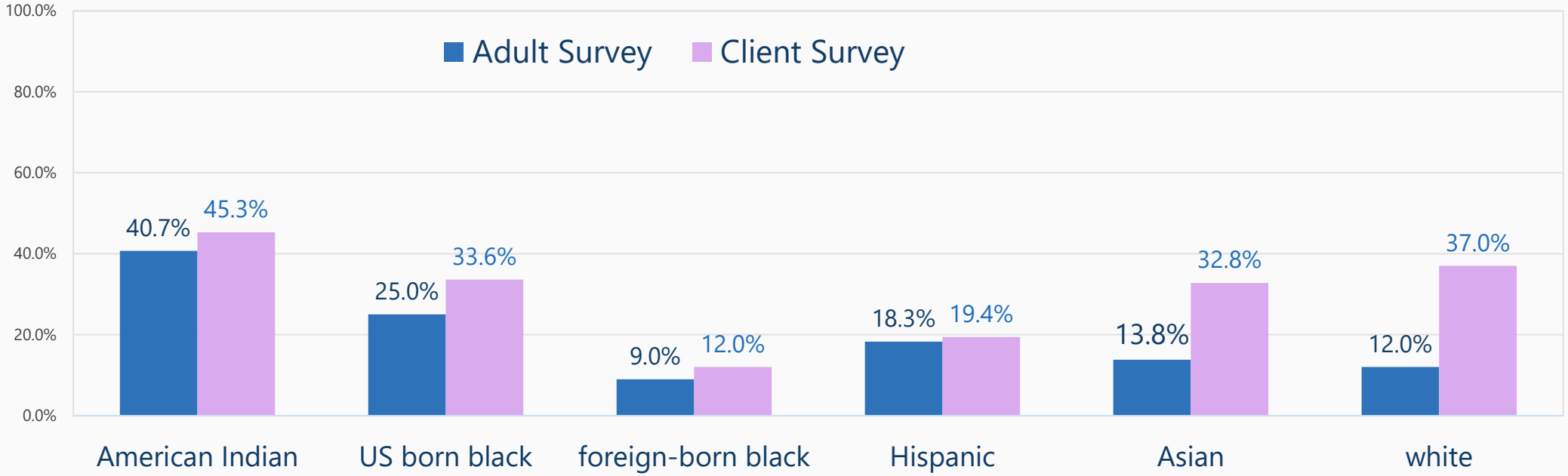
Health

Adults in the Client Survey were more likely to report that their mental health, which includes stress, depression, and problems with emotions was not good for 14 or more days during the past 30 days than adults in the general population.



Health

White and Asian adults who completed the Client Survey were more likely to report frequent mental distress than their counterparts in the general population



Health

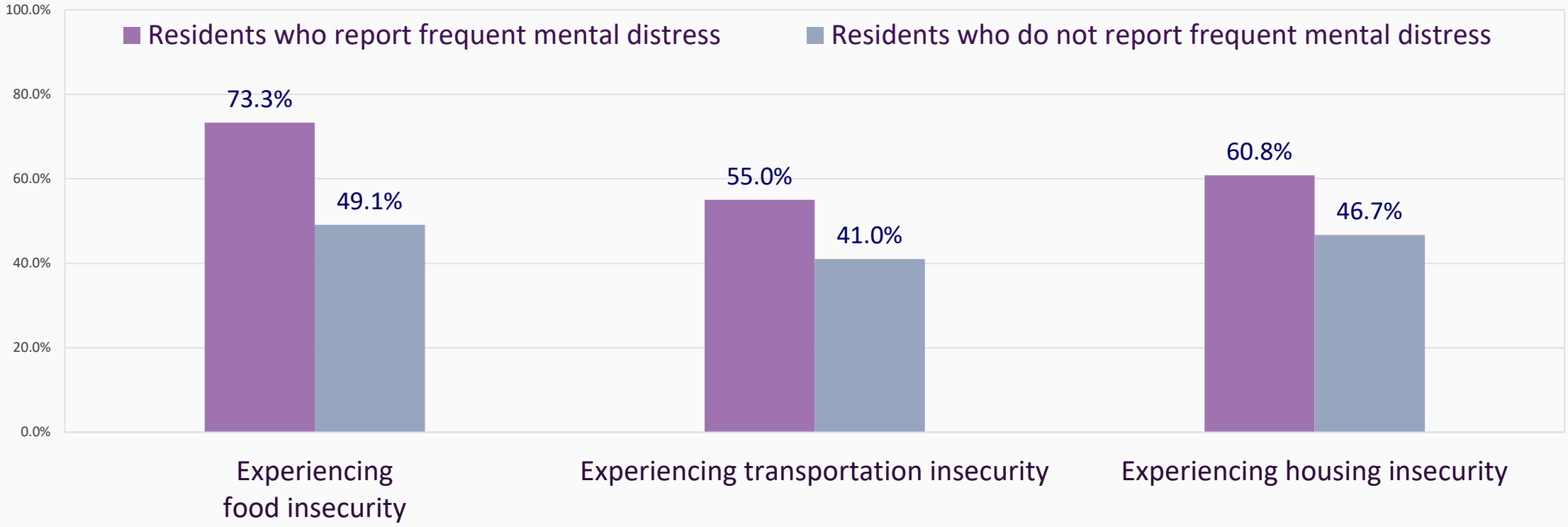
Adults in the Client Survey were more likely to report frequent mental distress than their counterparts in the general population

Gender and LGBT self-identification	Adult Survey	Client Survey
Hennepin County total	**12.3%**	**29.5%**
Gender		
Male	10.6%	29.7%
Female	13.8%	29.5%
LGBT self-identification		
LGBT self-identified	22.0%	34.9%
Not LGBT self-identified	11.3%	30.9%

SHAPE 2018: selected findings

Health

Adults in the Client Survey who report frequent mental distress are more likely to experience various types of insecurity than adults who do not report frequent mental distress



SHAPE 2018: selected findings: Client survey

Contact the SHAPE team for additional information

1998-2018 SHAPE data books and methodology

- https://www.hennepin.us/your-government/research-data/shape-surveys

Public Use File-

- Data request form to receive 2018 public use dataset

Assessment team

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