

# VETERANS HEALTH ADMINISTRATION

## Office of Health Equity

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202-615-8727



Choose **VA**

**VA**



U.S. Department  
of Veterans Affairs

# OFFICE OF HEALTH EQUITY

Created in 2012

Vision: To ensure that VHA provides appropriate individualized health care to each Veteran in a way that-

- Eliminates disparate health outcomes and
- Assures health equity



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# POLL

True or False:

Health Disparities do **NOT** exist within VHA because it's a nationally integrated health care system.



# POLL

The answer is *False*.

**But the good news is, while disparities do exist within VHA, they tend to be smaller than the disparities that are found outside of VHA.**



# OFFICE OF HEALTH EQUITY GOALS

1. **Leadership:** Strengthen VA leadership to address health inequalities and reduce health disparities.
2. **Awareness:** Increase awareness of health inequalities and disparities.
3. **Health Outcomes:** Improve outcomes for Veterans experiencing health disparities.
4. **Workforce Diversity:** Improve cultural and linguistic competency and diversity of the VHA workforce.
5. **Data, Research and Evaluation:** Improve data and diffusion of research to achieve health equity.

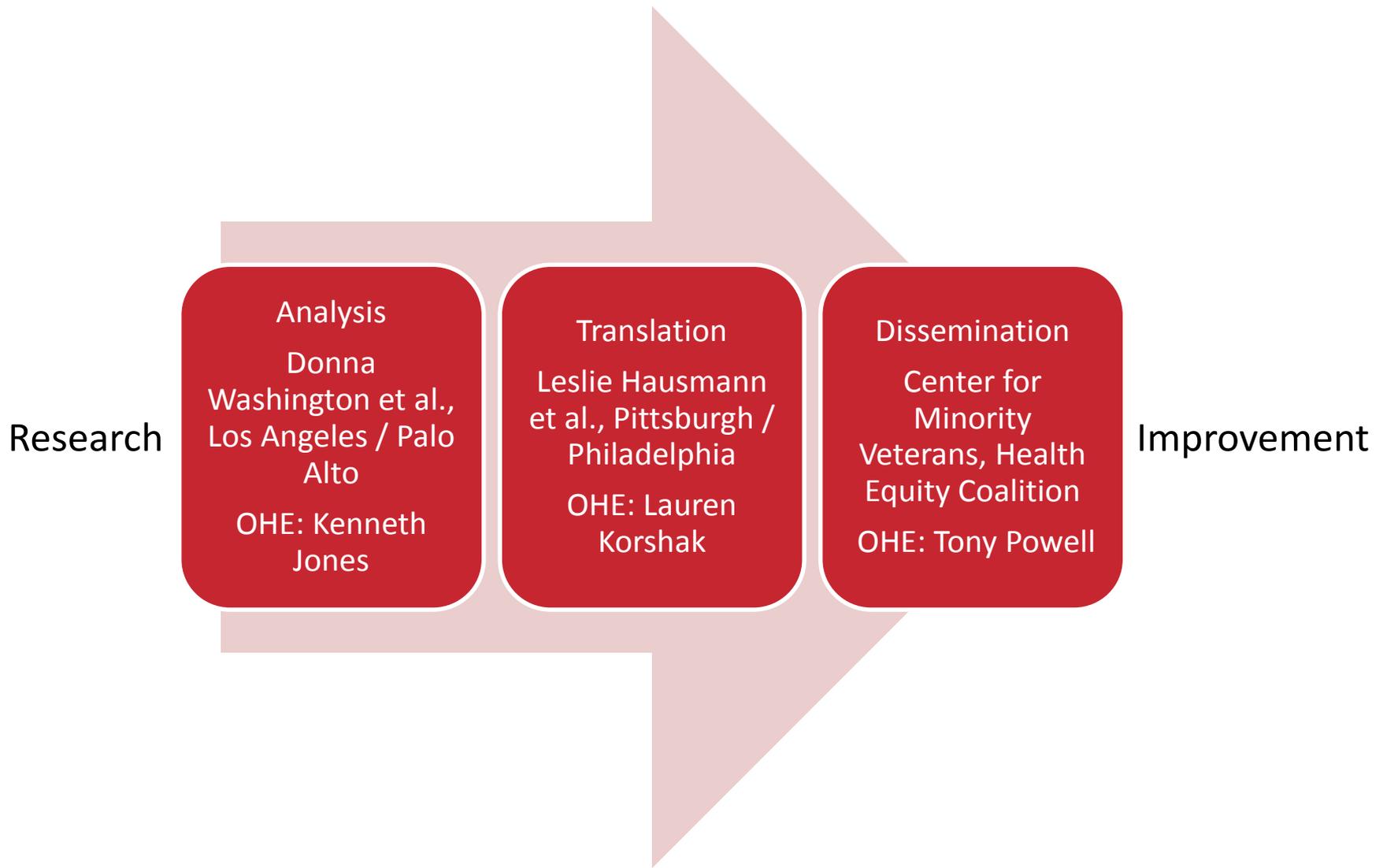


Veterans who experience greater obstacles to health related to:

- Race or ethnicity
- Gender
- Age
- Geographic location
- Religion
- Socio-economic status
- Sexual orientation
- Mental health
- Military era
- Cognitive /sensory / physical disability



# OFFICE OF HEALTH EQUITY TEAM



# OFFICE OF HEALTH EQUITY TEAM

<https://www.va.gov/healthequity>

An official website of the United States government [Here's how you know](#) Talk to the Veterans Crisis Line now

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VA » Health Care » Office of Health Equity

## Office of Health Equity

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### EQUALITY

### EQUITY

### Equality vs. Equity

Many incorrectly use equality and equity in their conversations by believing that these concepts have the same meaning. Do you know the difference?

[Learn more »](#)

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### VHA Office of Health Equity

Equitable access to high-quality care for all Veterans is a major tenet of the VA

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# OUR PRESENTERS



**Jessica Breland, PhD**

VA Palo Alto Health Care  
System



**Lisa Gualtieri, PhD, ScM**

Assistant Professor, Tufts  
University School of Medicine,  
Department of Public Health  
and Community Medicine  
Founder, RecycleHealth



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# Obesity among Veterans Using VHA Primary Care

**Jessica Y. Breland, PhD**

VA HSR&D Center for Innovation to Implementation (Ci2i)

VA Palo Alto Health Care System

January 2019

Funders for program evaluation: VA Office of Women's Health Services & VA Office of Health  
Equity

VA HSR&D CDA 15-257

No conflicts of interest.

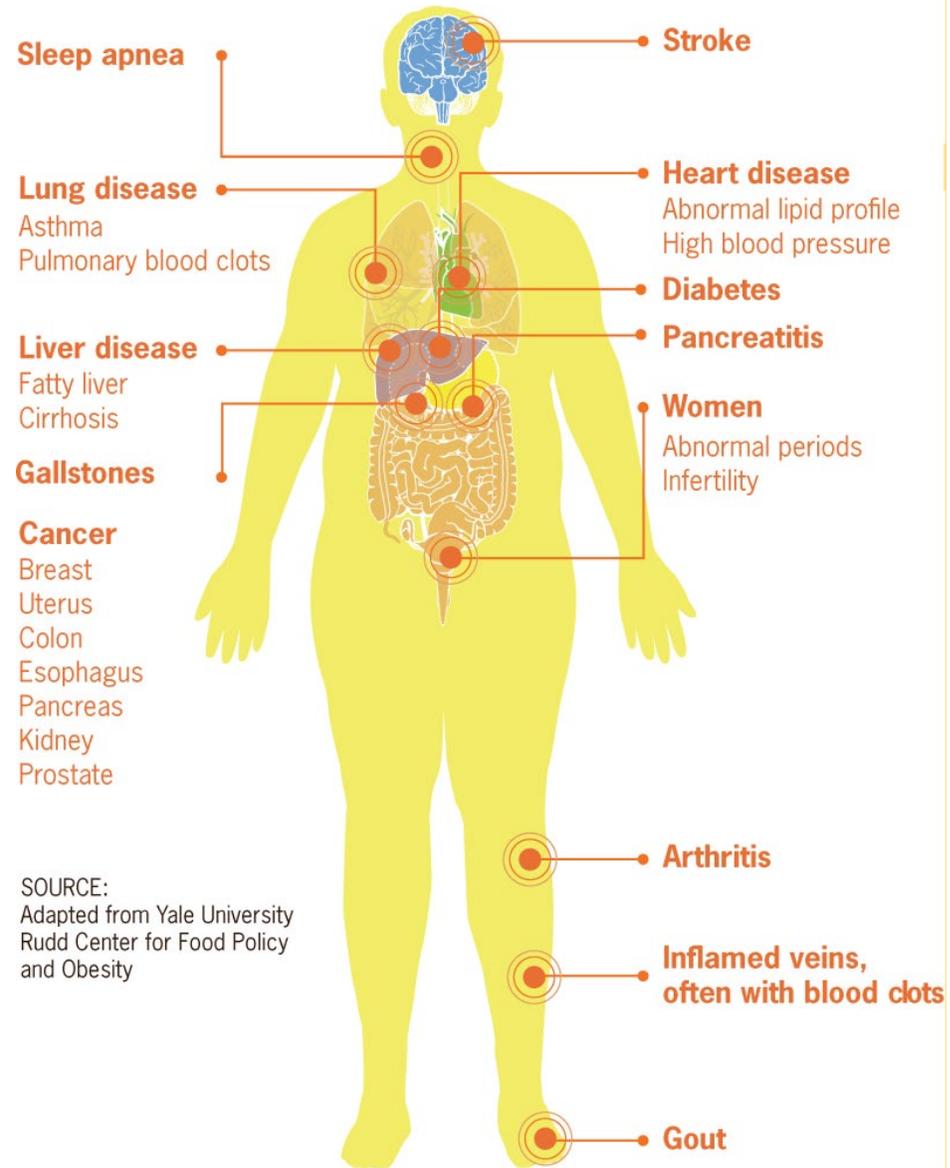
Views represented here are my own and do not necessarily represent those of VA or the US government.

# POLL QUESTION

What is your primary role?

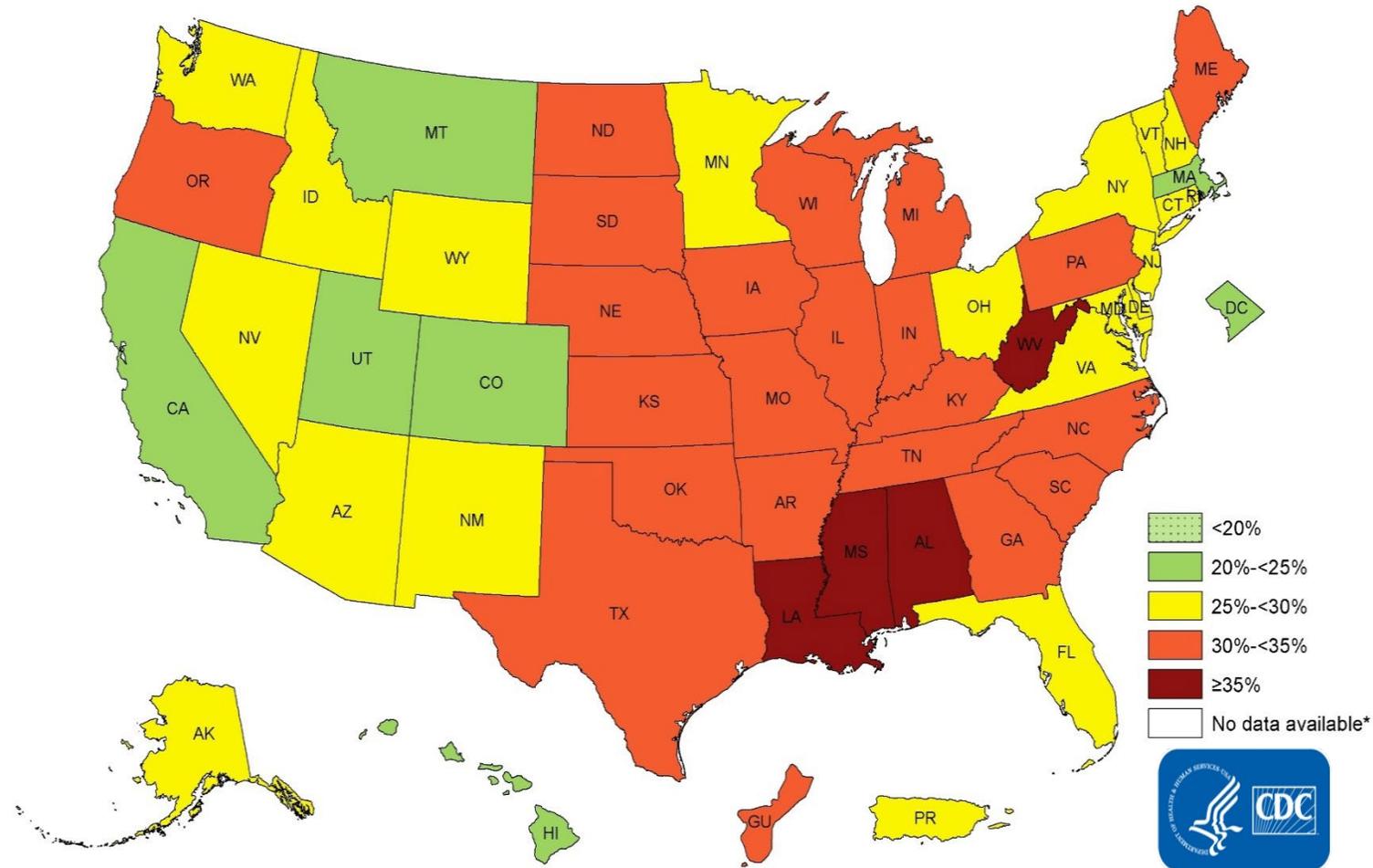
- Clinician
- Researcher
- Trainee
- Something else (please say what in comments!)

## Medical Complications of Obesity



SOURCE:  
Adapted from Yale University  
Rudd Center for Food Policy  
and Obesity

# PREVALENCE\* OF SELF-REPORTED OBESITY AMONG U.S. ADULTS BY STATE AND TERRITORY, BRFSS, 2015

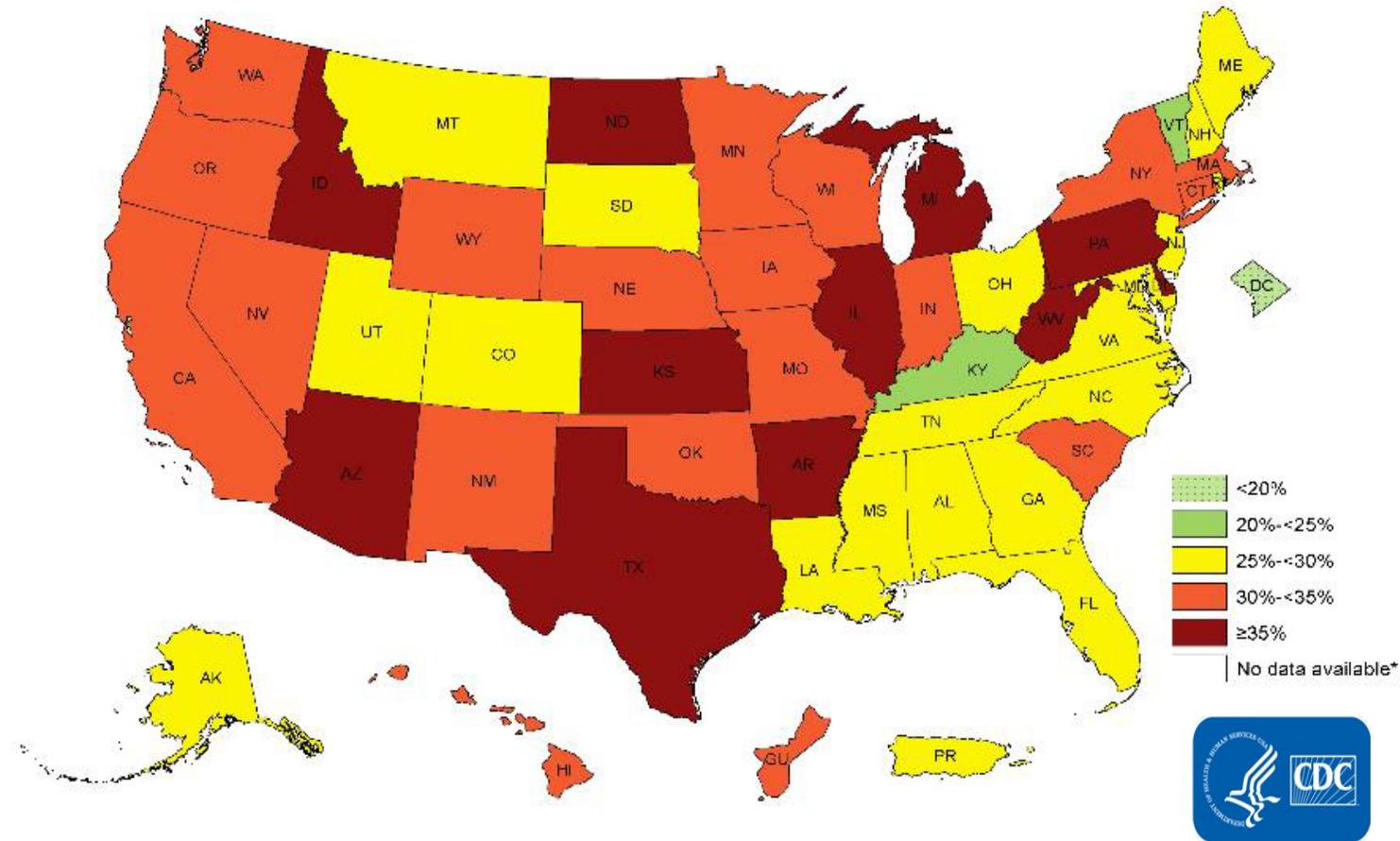


\*Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

<http://www.cdc.gov/obesity/data/prevalence-maps.html>

Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.

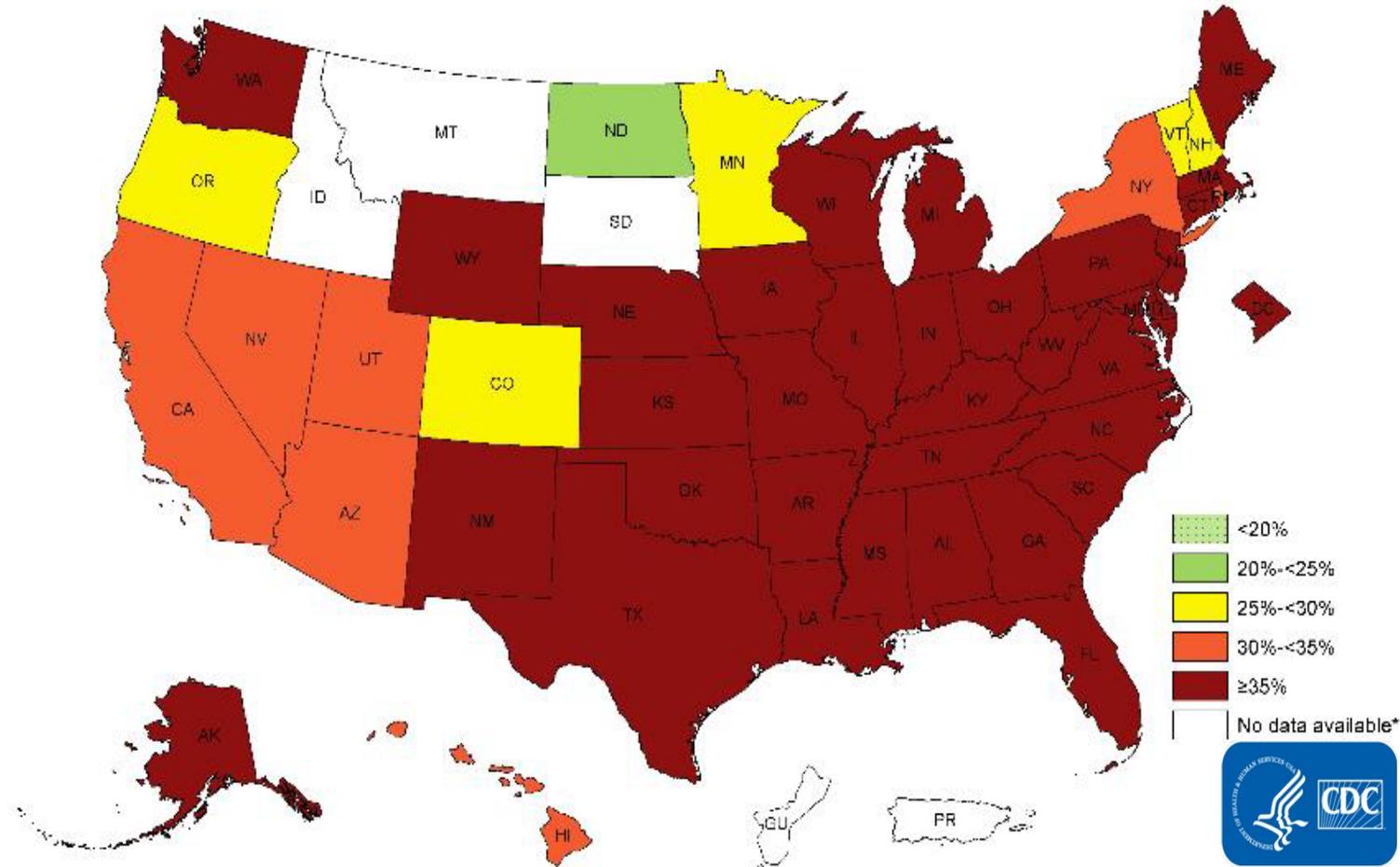
# PREVALENCE OF SELF-REPORTED OBESITY AMONG HISPANIC ADULTS, BY STATE AND TERRITORY, BRFSS, 2013-2015



\*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.

<http://www.cdc.gov/obesity/data/prevalence-maps.html>

# PREVALENCE OF SELF-REPORTED OBESITY AMONG NON-HISPANIC BLACK ADULTS, BY STATE AND TERRITORY, BRFSS, 2013-2015



\*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.

<http://www.cdc.gov/obesity/data/prevalence-maps.html>

What are obesity rates among  
Veterans using primary care  
services in the Veterans Health  
Administration (VHA)?

# COHORT

Veteran VHA primary care users in fiscal year (FY) 2014

- 347,112 women
- 4,567,096 men

Obesity: BMI  $\geq 30$  kg/m<sup>2</sup>

- Based on modal height, weight closest to first primary care visit in FY2014

# POPULATIONS

## Gender Stratification

## Subpopulations

- Race/Ethnicity
- Mental health conditions
- Age
- Physical health conditions
- Urban/Rural status
- Disability status
- Service era

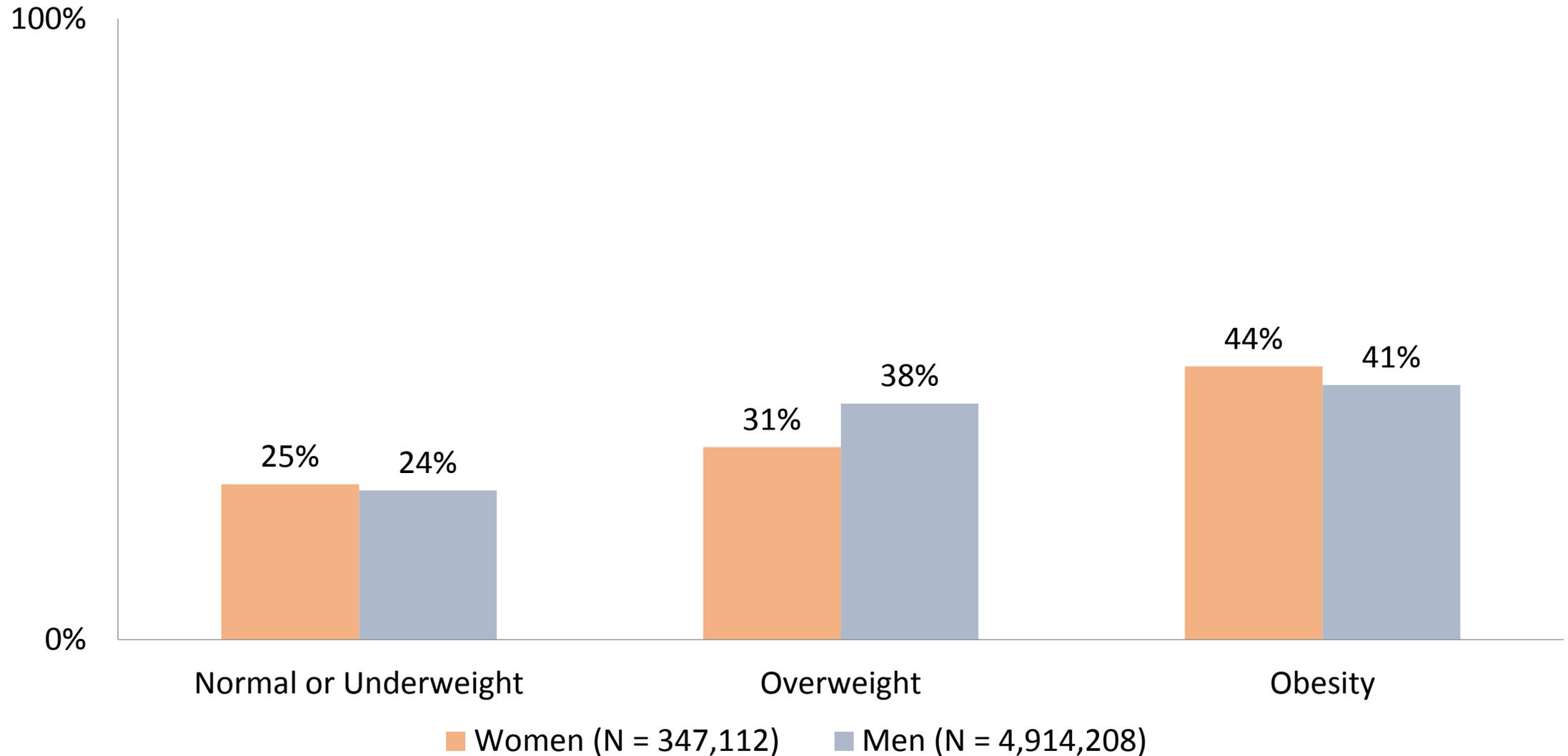
# POPULATIONS

## Gender Stratification

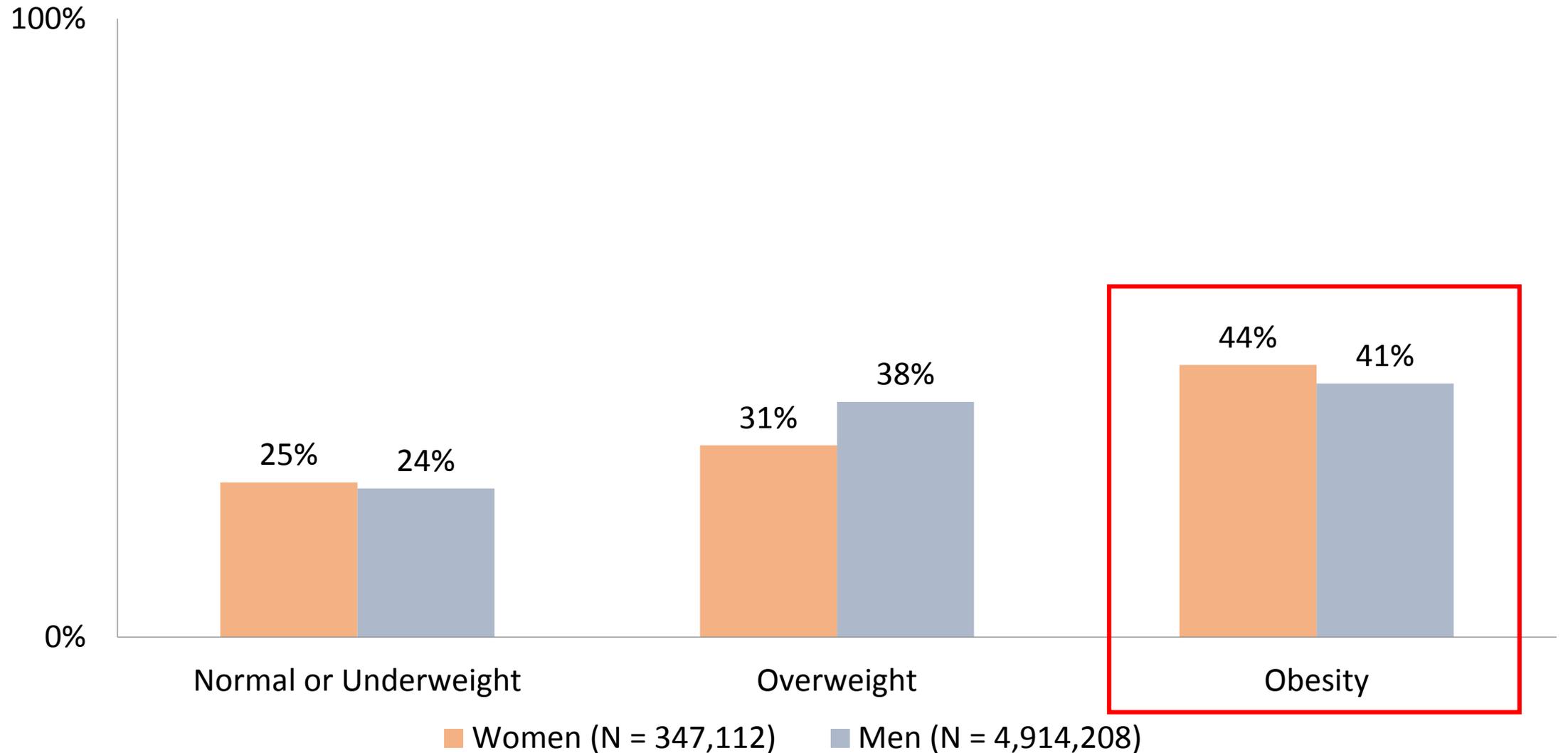
### Subpopulations

- Race/Ethnicity
- Mental health conditions
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- Physical health conditions
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- Service era

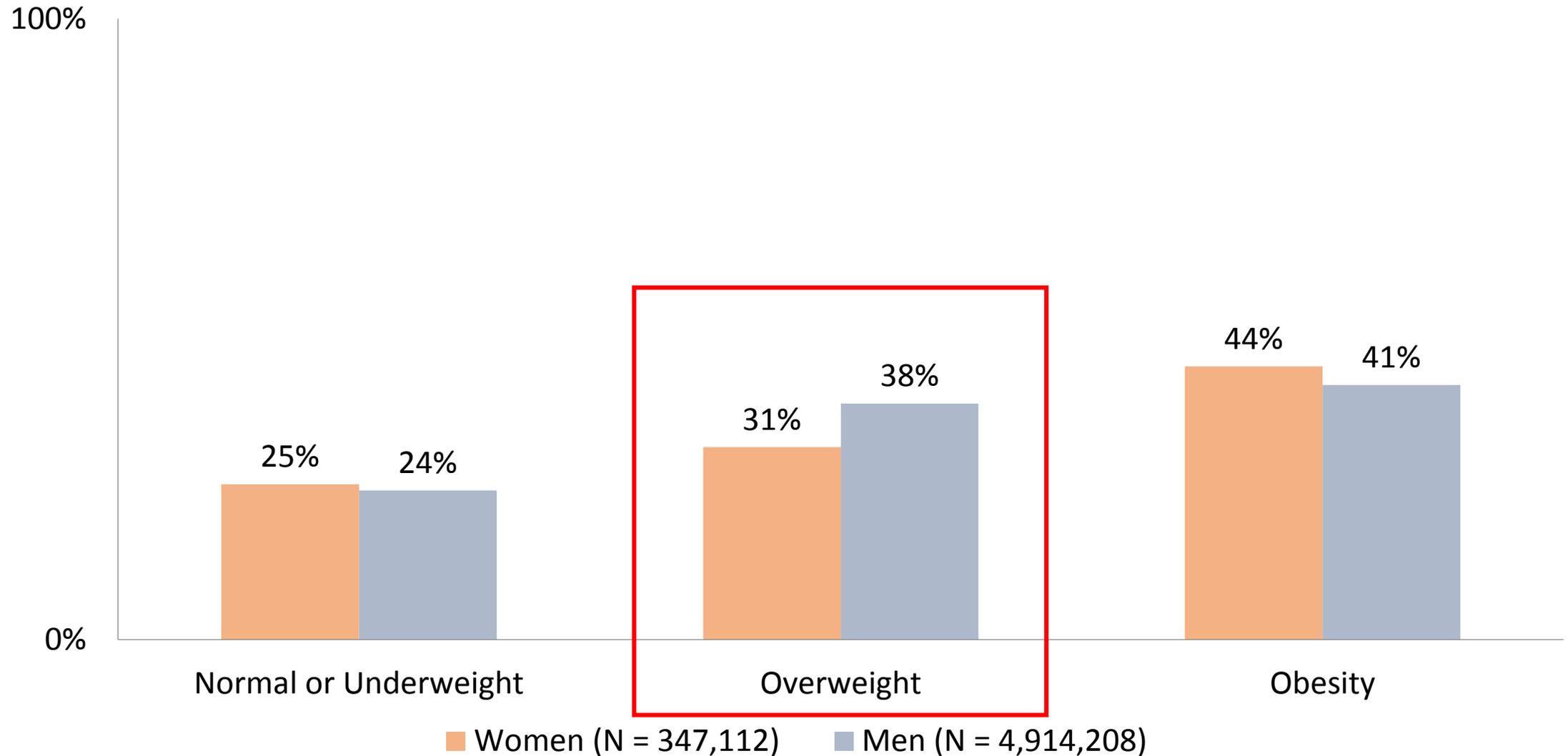
# BMI DISTRIBUTION AMONG WOMEN AND MEN VETERAN VHA PRIMARY CARE USERS IN FY2014



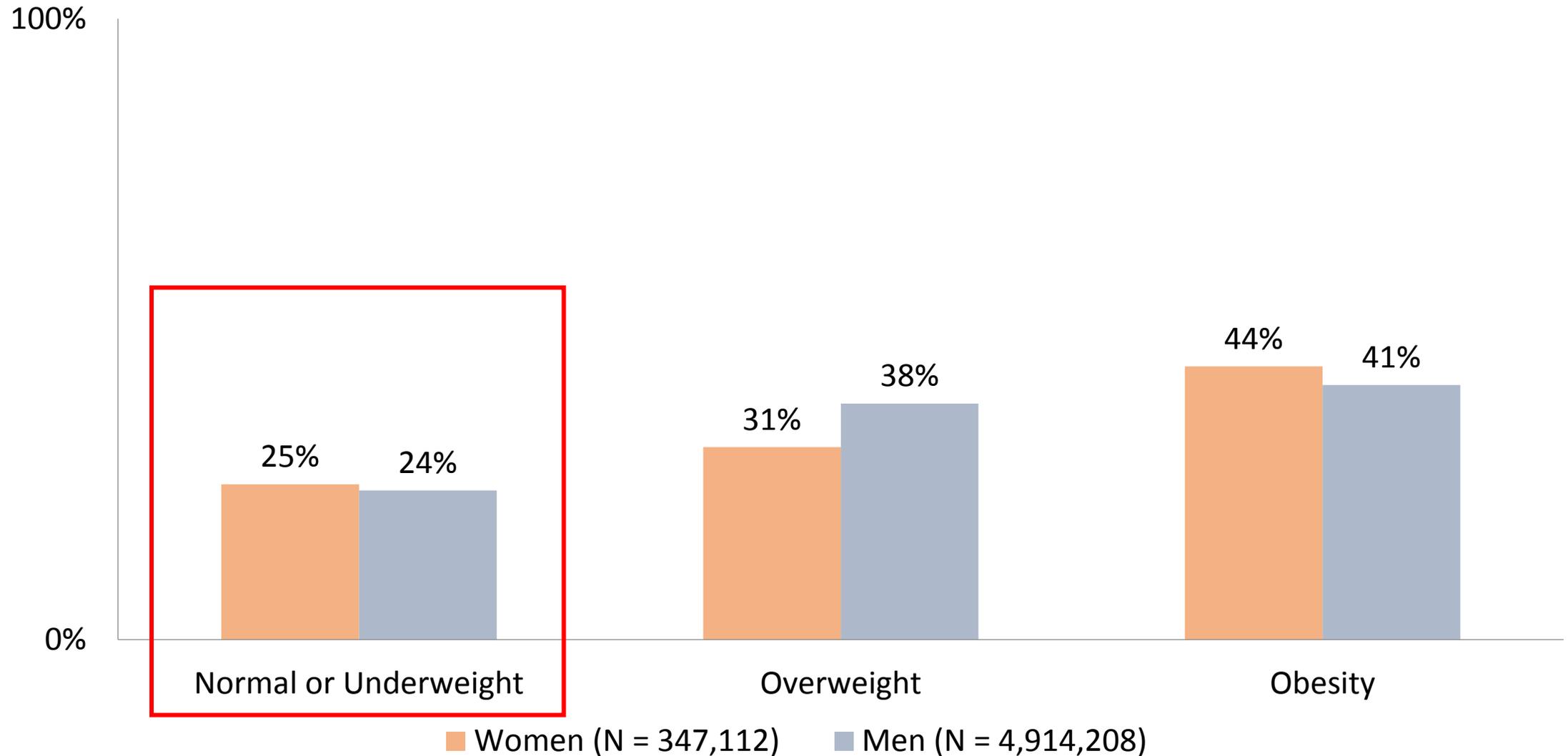
# BMI DISTRIBUTION AMONG WOMEN AND MEN VETERAN VHA PRIMARY CARE USERS IN FY2014



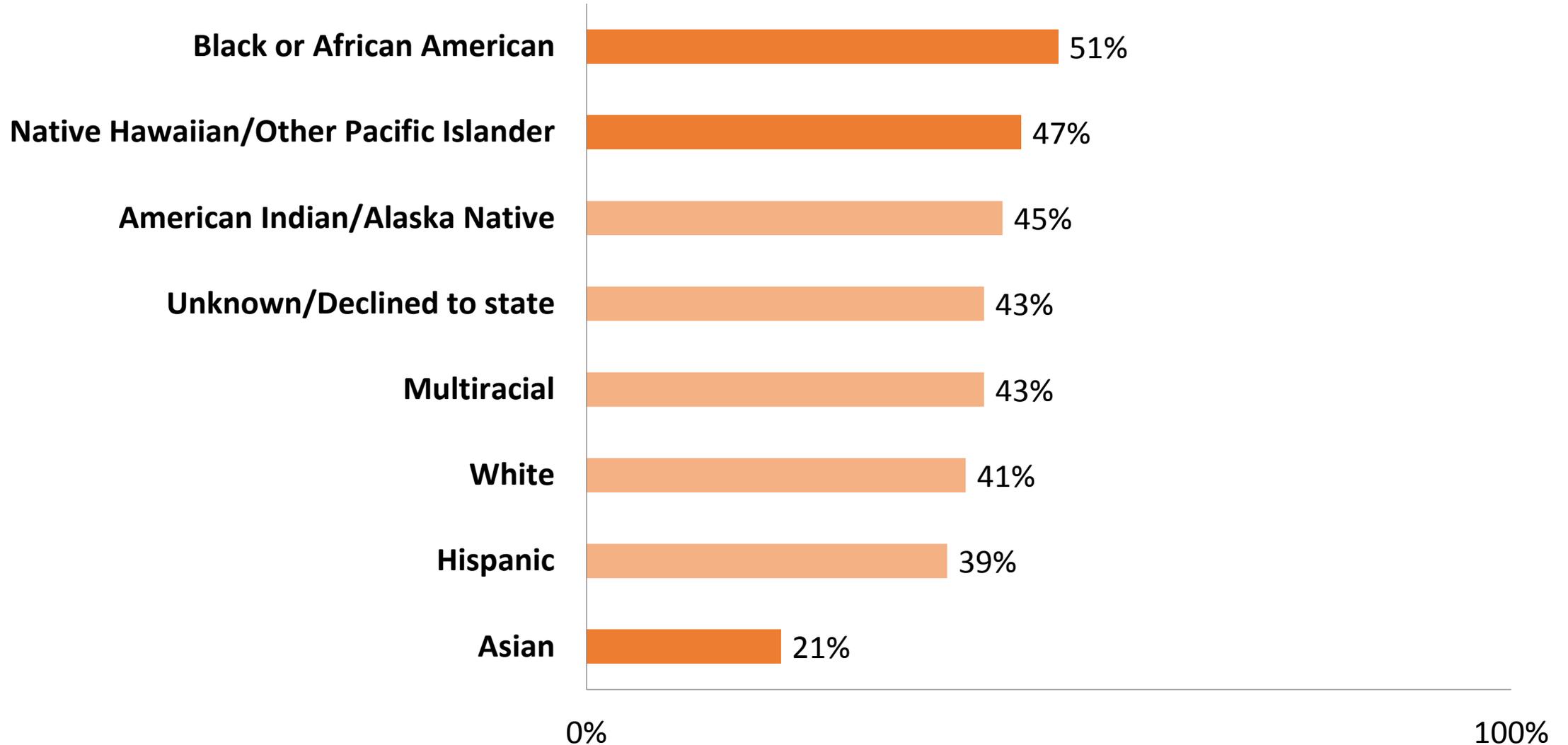
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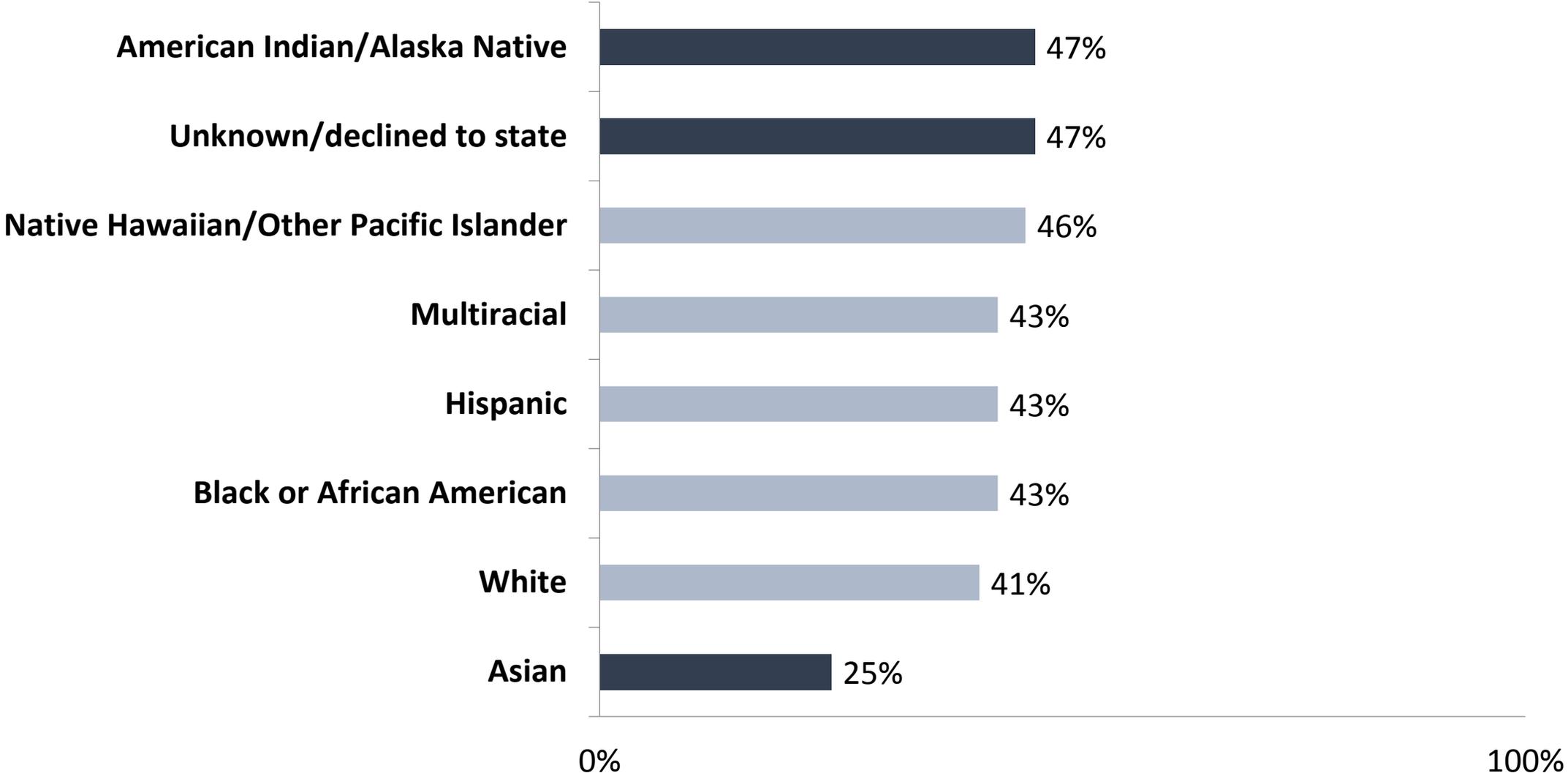


# OBESITY PREVALENCE BY RACE/ETHNICITY STATUS AMONG WOMEN VETERAN VHA PRIMARY CARE USERS IN FY2014



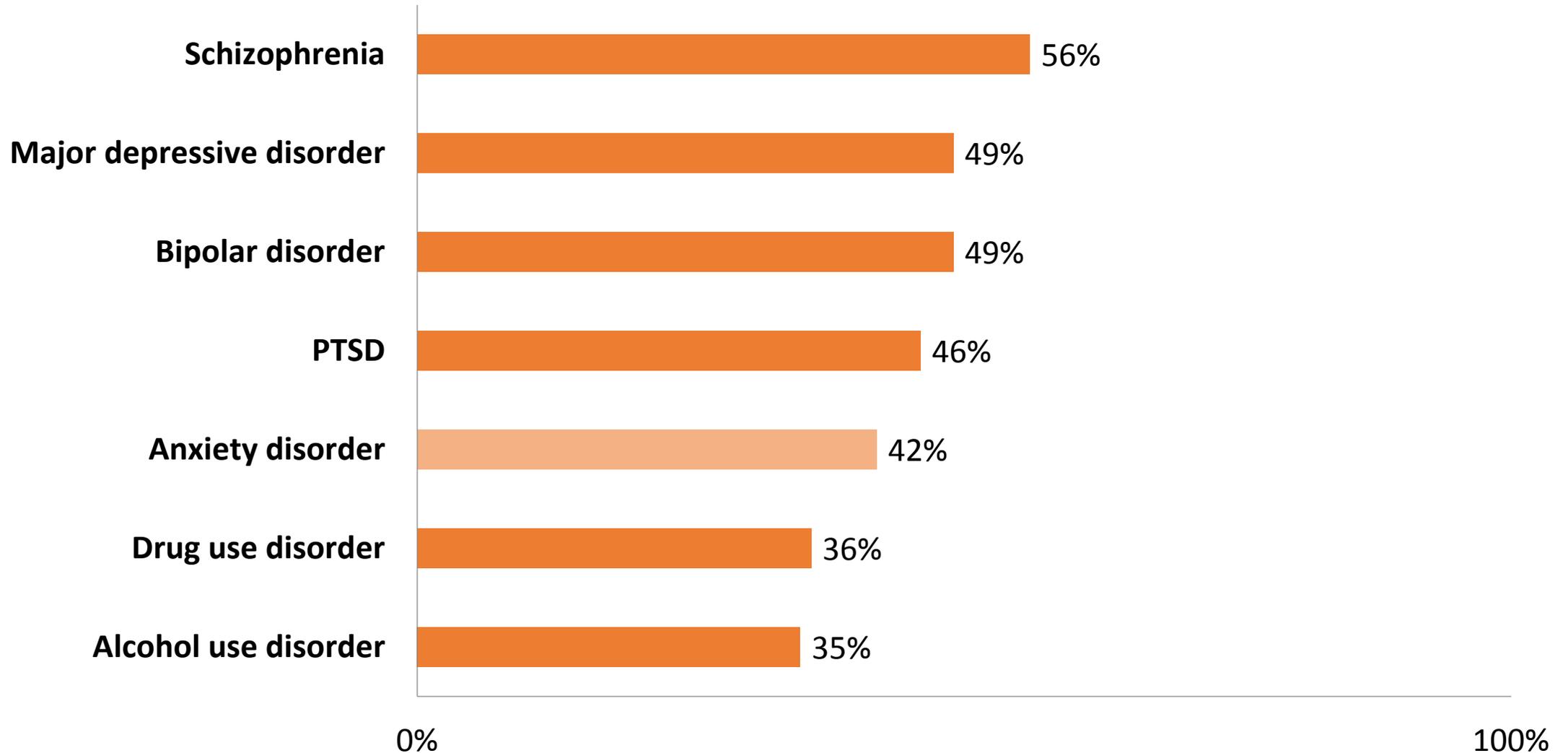
Darker colors indicate  $\geq 5\%$  difference from population obesity mean (41%)

# OBESITY PREVALENCE BY RACE/ETHNICITY STATUS AMONG MEN VETERAN VHA PRIMARY CARE USERS IN FY2014



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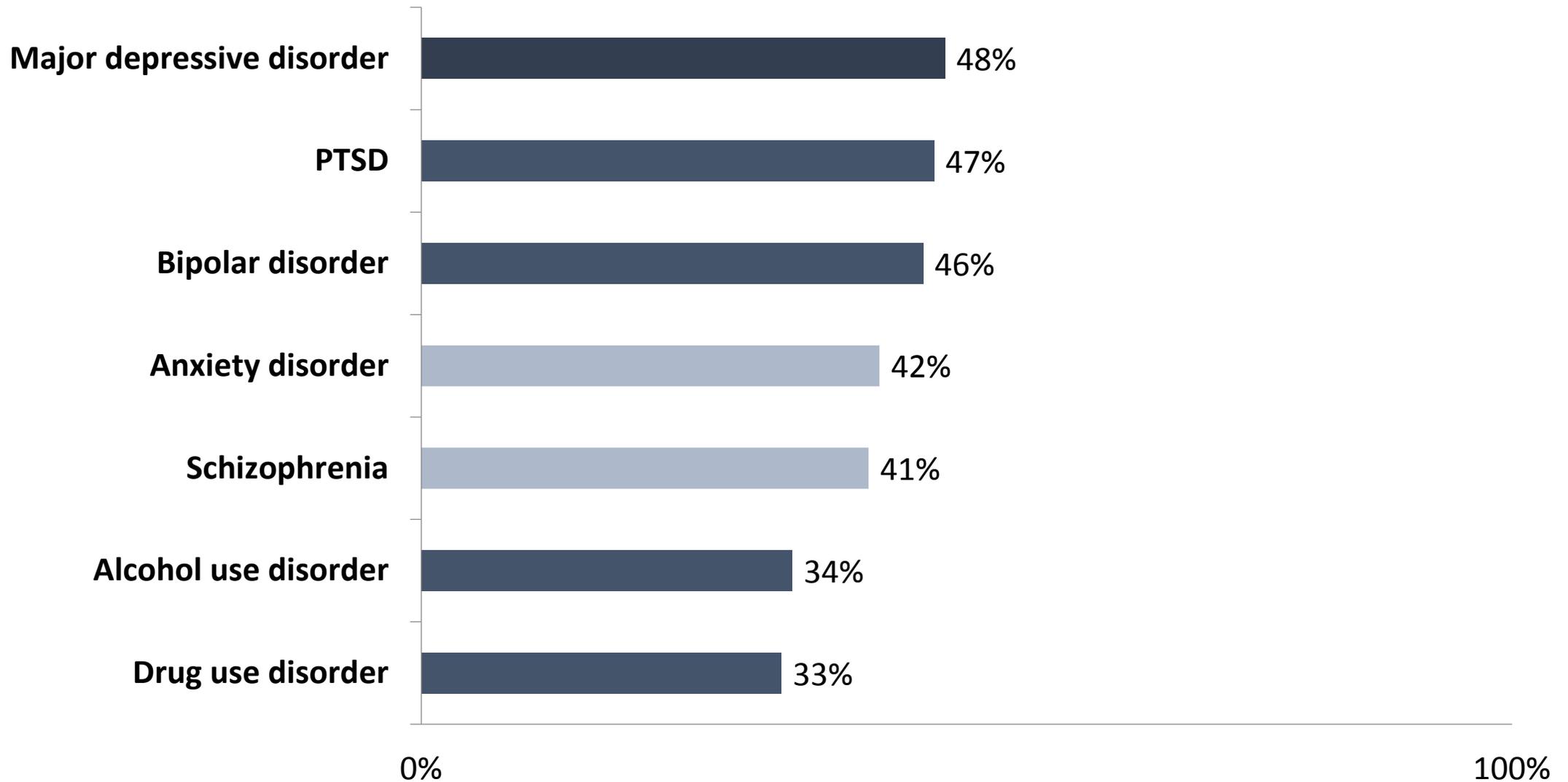
# OBESITY PREVALENCE BY MENTAL HEALTH CONDITION AMONG WOMEN VETERAN VHA PRIMARY CARE USERS IN FY2014



Darker colors indicate  $\geq 5\%$  difference from population obesity mean (41%)

PTSD: Post-traumatic stress disorder

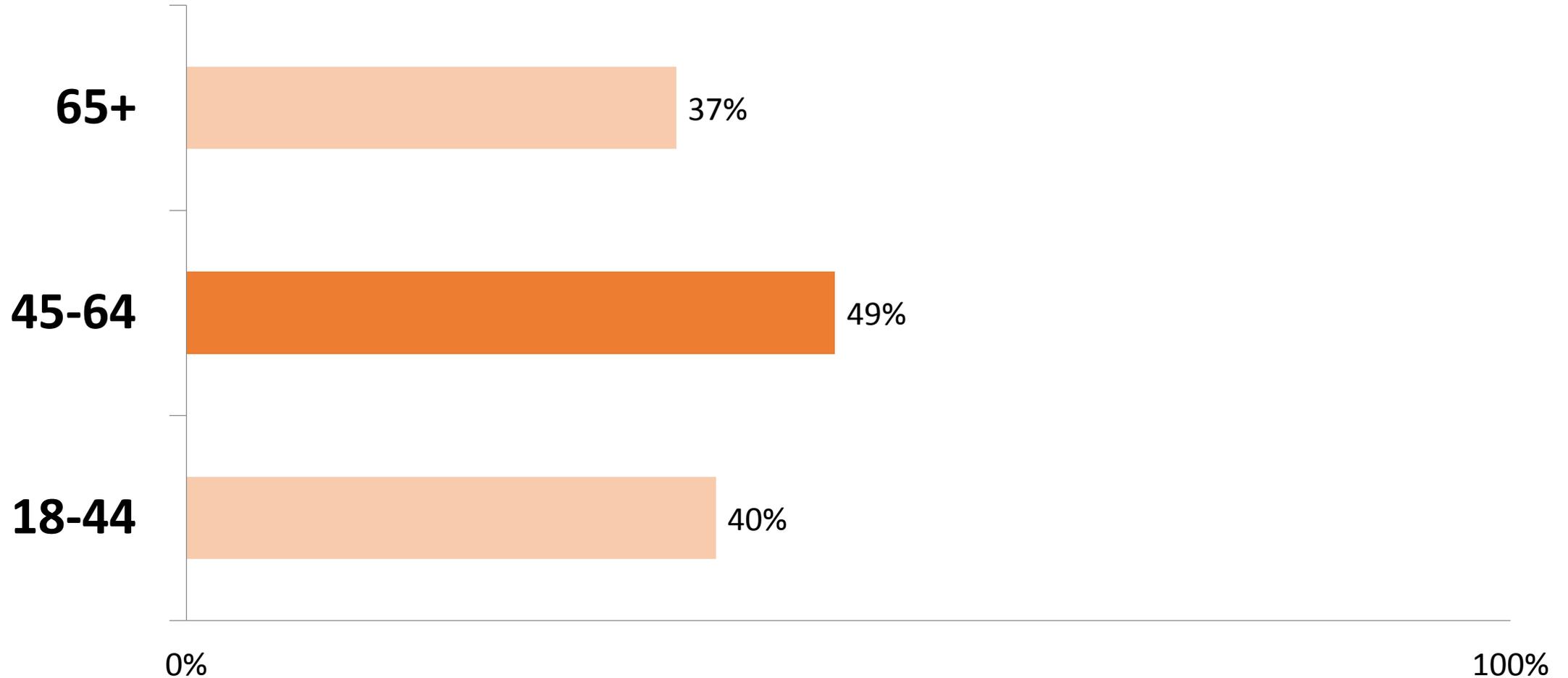
# OBESITY PREVALENCE BY MENTAL HEALTH CONDITION AMONG MEN VETERAN VHA PRIMARY CARE USERS IN FY2014



Darker colors indicate  $\geq 5\%$  difference from population obesity mean (41%)

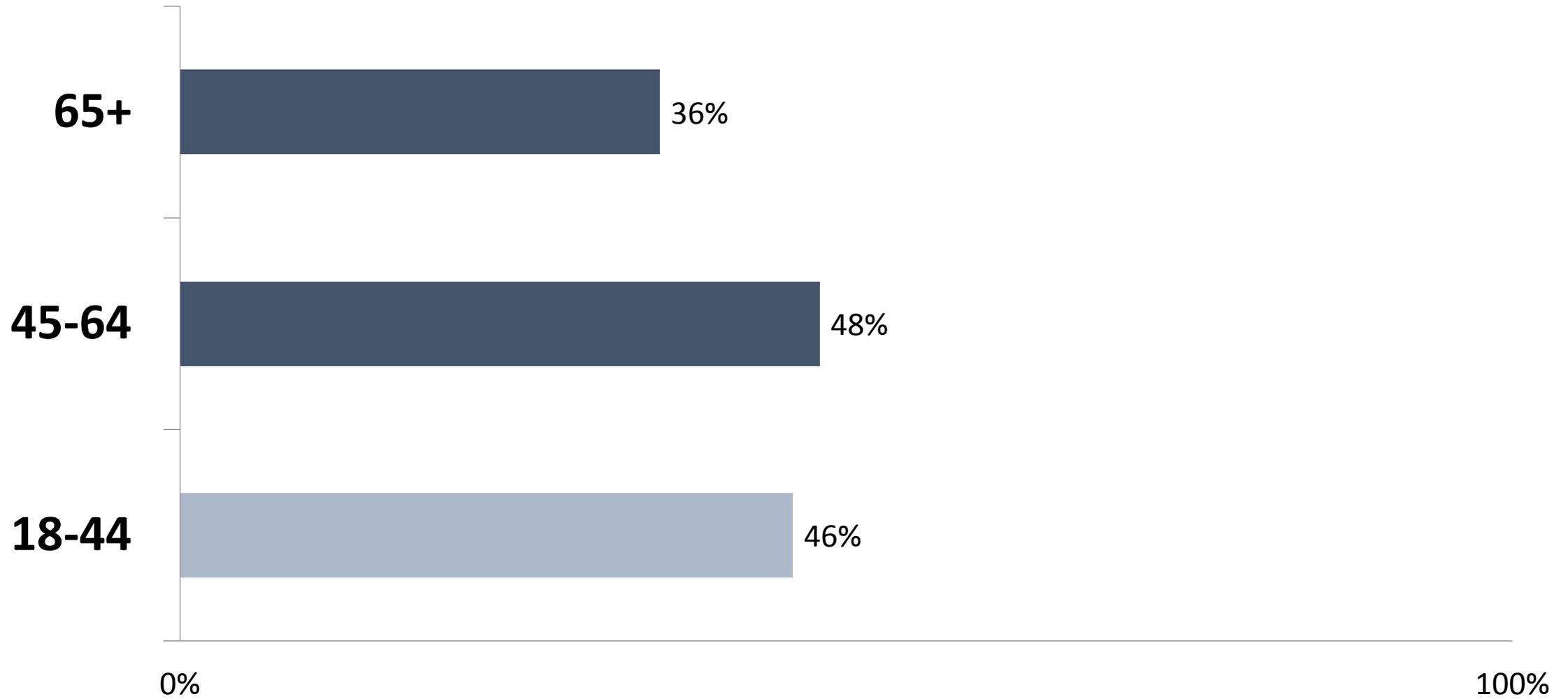
PTSD: Post-traumatic stress disorder

# OBESITY PREVALENCE BY AGE AMONG WOMEN VETERAN VHA PRIMARY CARE USERS IN FY2014



Darker colors indicate  $\geq 5\%$  difference from population obesity mean (41%)

# OBESITY PREVALENCE BY AGE AMONG MEN VETERAN VHA PRIMARY CARE USERS IN FY2014



Darker colors indicate  $\geq 5\%$  difference from population obesity mean (41%)

# KEY POINTS

- Difficult to make comparisons to general US population due to differences between Veterans using VHA and others in the US
- High obesity rates among
  - Young men (46%)
  - Veterans with mental health conditions, especially women with schizophrenia (56%)
  - Black Women (51%)
- Low obesity rates among:
  - Asian women (21%)
  - Asian men (25%)

# LIMITATIONS

- BMI is an imperfect predictor of health
  - Difficult to compare across racial/ethnic groups
- Racial/Ethnic groupings
- Not possible to compare results to those from general US population

# FUTURE DIRECTIONS

- Understand treatment use among high-risk populations
- Develop tailored outreach and/or intervention efforts
- Consider intersectionality

# IMPLICATIONS

- Given high obesity rates among VHA primary care patients, a population health approach to weight management is warranted
- High risk groups may require special attention to ensure that systems improvements at the population level do not inadvertently increase health disparities

# POLL QUESTION

What do you think is the most important future direction?

- Outreach efforts tailored to specific populations
- Weight loss programs tailored to specific populations
- Statistical analyses to describe differences among VHA populations
- Analyses to compare VHA and non VHA obesity rates
- Something else (please say what in comments!)

# THANK YOU

- Office of Women's Health Services
- Office of Health Equity
- VA HSR&D
- Women's Health Evaluation Initiative (WHEI)
- Coauthors: Ciaran S. Phibbs, Katherine J. Hoggatt, Donna L. Washington, Jimmy Lee, Sally Haskell, Uchenna S. Uchendu, Fay S. Saechao, Laurie C. Zephyrin, & Susan M. Frayne
- Elon Hailu

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Link to manuscript – [The Obesity Epidemic in the Veterans Health Administration: Prevalence among Key Populations of Women and Men Veterans](#)

# The Use of Activity Tracker Technology to Facilitate Healthy Behavior

Lisa Gualtieri, PhD, ScM  
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@lisagualtieri





# About the Presenter

Lisa Gualtieri, PhD, ScM

- Assistant Professor, Department of Public Health and Community Medicine, Tufts University School of Medicine
- Director, Digital Health Communication Certificate Program
- Founder, [RecycleHealth.com](https://www.recyclehealth.com)

# Wearable activity tracker, fitness tracker, Fitbit,...

- **Trackers** are devices/applications for monitoring and tracking **health metrics** such as distance walked or run, heartbeat, and sleep
- Aimed towards consumers, not medical professionals
- Fitbit has the largest market share and their name is used interchangeably with tracker (like “Kleenex” or “FedEx”)

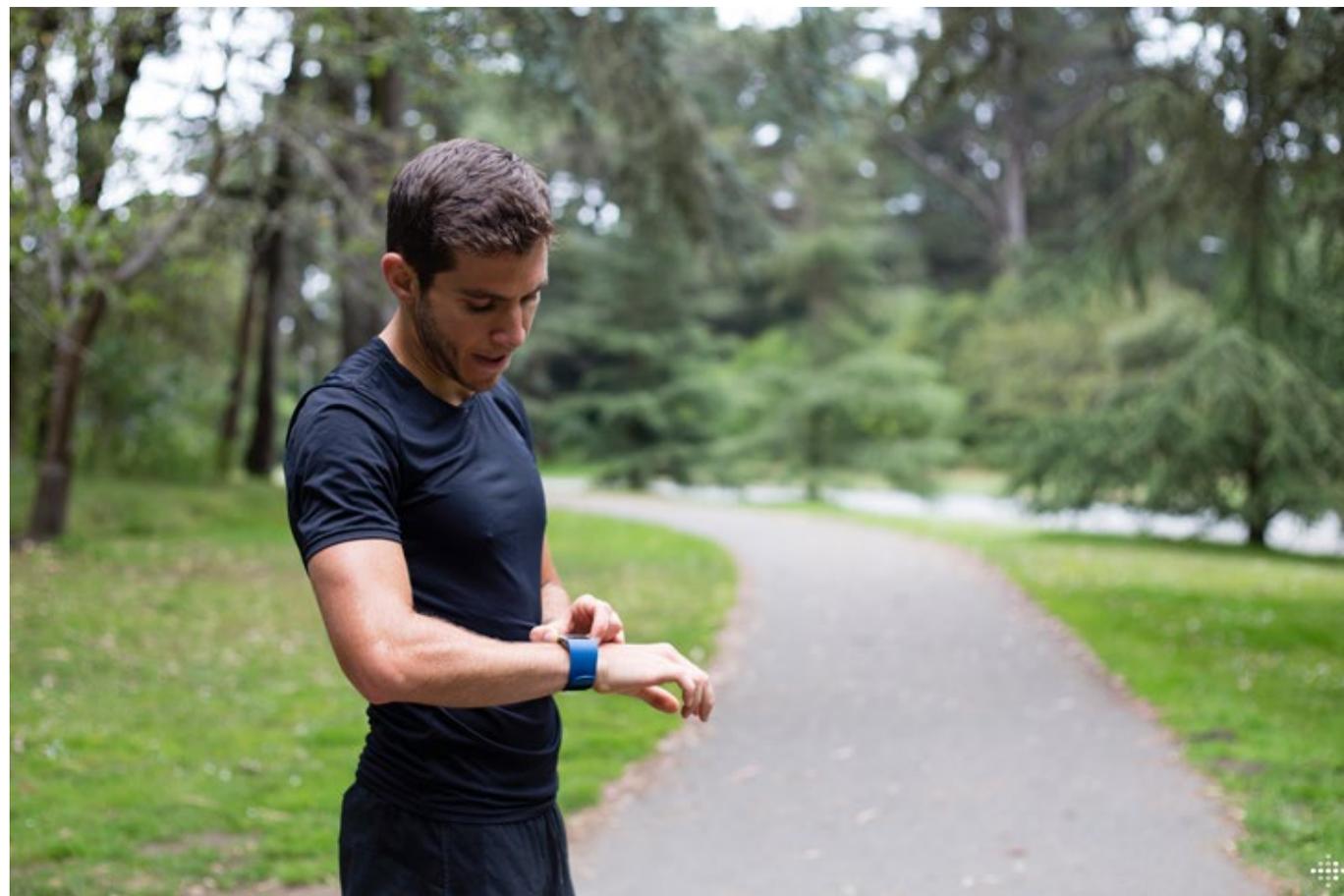


# Poll question – select one or more

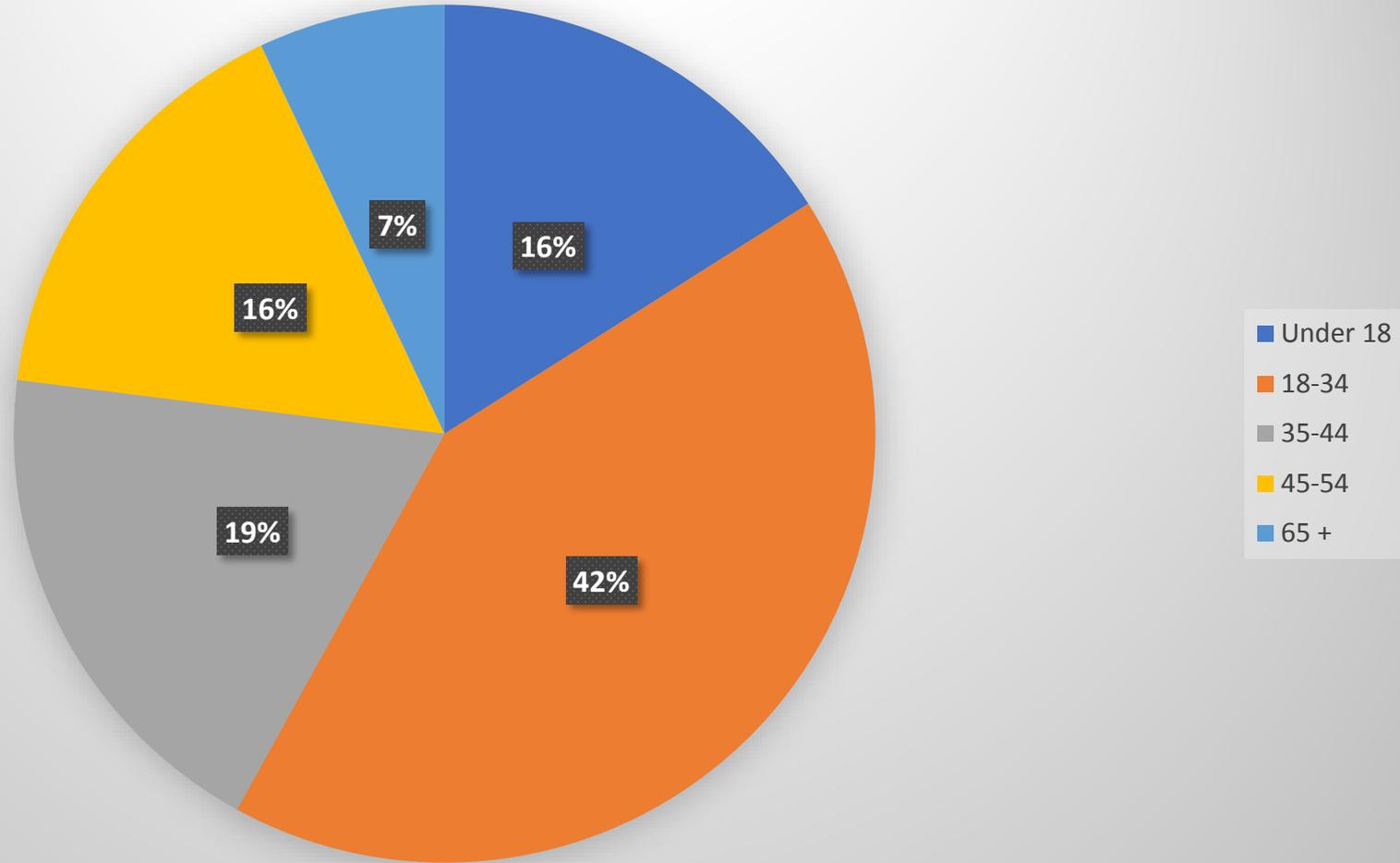
- Select one or more: I...
  - Currently use a tracker
  - Own a tracker I don't use
  - Have never owned a tracker
  - Use my smartphone or smartwatch to track

# Who buys trackers?

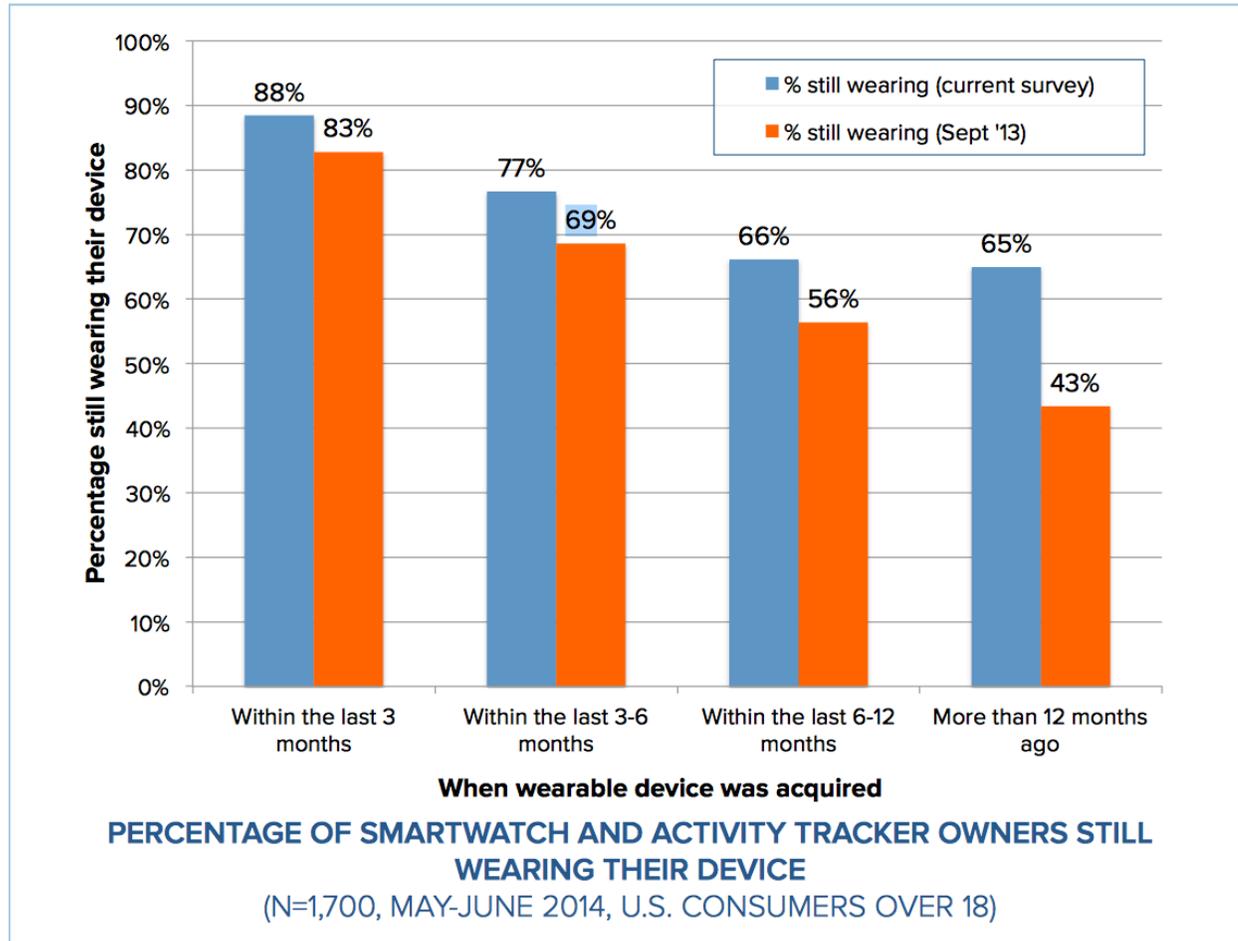
**See how Fitbit can help  
you exercise, eat, sleep &  
live better**



## Tracker Ownership by Age



# Sustained engagement



# Who might benefit most from trackers?

- Older adults
- Chronic illness
- Overweight/Obese
- Underserved populations
- Root of RecycleHealth





# RecycleHealth

- After late night reading reports about
  - Demographics of tracker use
  - Abandonment
- Woke up and asked
  - What if trackers no longer in use were given to the people who may benefit most?





**RecycleHealth**  
Published by Lisa Gualtieri [?] · January 28 ·

Morning happiness is boxes outside RecycleHealth headquarters. Thank you to all who donated.



**RecycleHealth**  
Published by Lisa Gualtieri [?] · January 4 ·

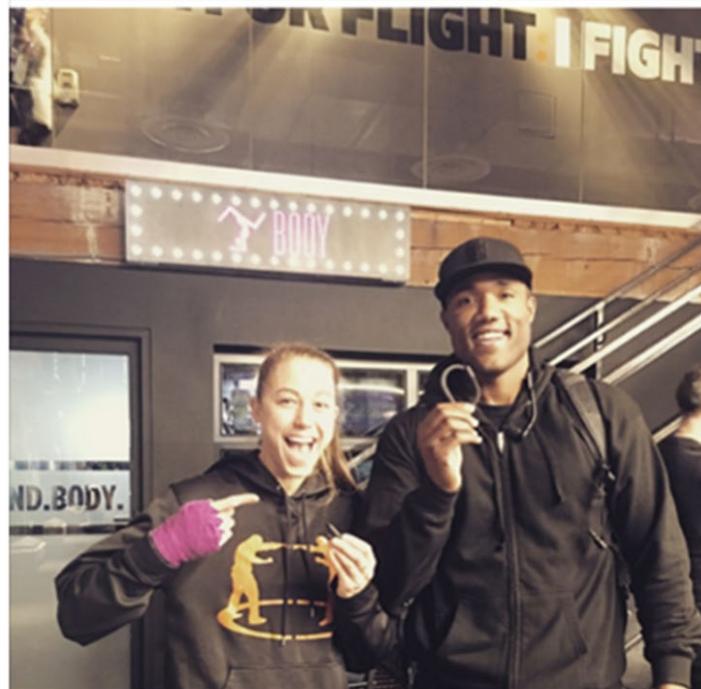
Lots of packages arrived at RecycleHealth headquarters today, displayed by Nicole Schultz. Thank you in advance to the kind people who sent us their used wearable activity trackers.



**RecycleHealth**  
Published by Lisa Gualtieri [?] · January 31 ·

RecycleHealth's newest donation box is at EBF By George Foreman III. Here Nicole Schultz and George Foreman III show off the latest Fitbit to be dropped off.

RecycleHealth takes your used wearable activity trackers, cleans and refurbishes them, and gives them to people who can't afford them yet want to increase their fitness. Donate now #everybodyfights #fightitforward



**RecycleHealth** added 2 new photos.  
Published by Lisa Gualtieri [?] · March 20 at 8:16am · Lexington, MA ·

Newest arrival: a Fitbit, charger, and 2 bands. Visitor to RecycleHealth, Brandon Ransom, hold up the package. Have a Fitbit collecting dust? #ShareTheHealth!



- Founded in 2015 as 501(c)(3) at Tufts University
- Media mentions include USA Today, Boston Globe, ABC News,... and social media
  - Results in high visibility in search

# RecycleHealth trackers

- Collected 4000+ trackers to date from
  - People who upgrade or receive unwanted gifts
  - Vendors include Withings, Fitbit, and Fossil
  - Corporate wellness programs
- Distributed trackers to underserved populations, including organizations providing services to
  - Intellectually-disabled adults
  - Inner city youths through running clubs
  - Lower income older adults



# What if trackers no longer in use were given to the people who may benefit most?

- Can trackers be recycled? Foray into Project Greenball and Product Stewardship
  - How influential to purchase/use are tracker appearance and battery life?
  - Which features help, how many, and what should be visible on device vs app?
  - How beneficial are financial incentives, gamification, notifications, and challenges other than to “quantified self” adherents?
  - Many reports of inaccuracy and a few class-action suits yet consistent or inconsistent inaccuracy?
- Why a default of 10,000 steps?
  - Does how you acquire the tracker matter: purchase, gift, prize, corporate wellness, insurance provider, healthcare provider?
  - What are the barriers besides cost?
  - Do trackers educate about baseline fitness levels and facilitate behavior change?

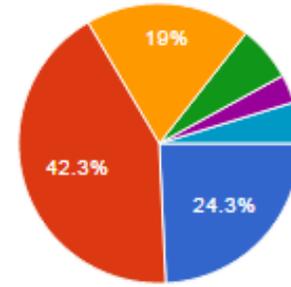
# Why 10,000 steps as the default goal?

- Why 10,000 steps?
- Pedometers sold in Japan in the 1960s were marketed under the name "manpo-kei," which translates to "10,000 steps meter"
- Does this deter use?

# Survey to learn more about trackers: How acquired?

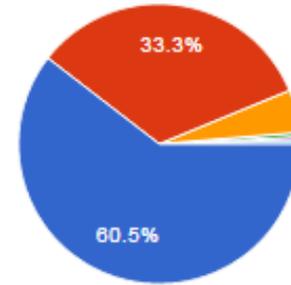
- Purchase
  - 42% purchased 1
  - 19% purchased 2
  - 15% purchased 3+
- Gift
  - 33% received 1
  - 6% received 2+
- Company
  - 11% received 1
  - 2% received 2
- 1091 respondents

How many wearables have you purchased?



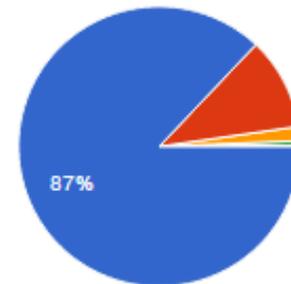
Count	Percentage
0	148 24.3%
1	258 42.3%
2	116 19%
3	39 6.4%
4	20 3.3%
5+	29 4.8%

How many wearables have you been given as a gift?



Count	Percentage
0	369 60.5%
1	203 33.3%
2	30 4.9%
3	3 0.5%
4	2 0.3%
5+	3 0.5%

How many wearables have you been given by your company or corporate wellness program?

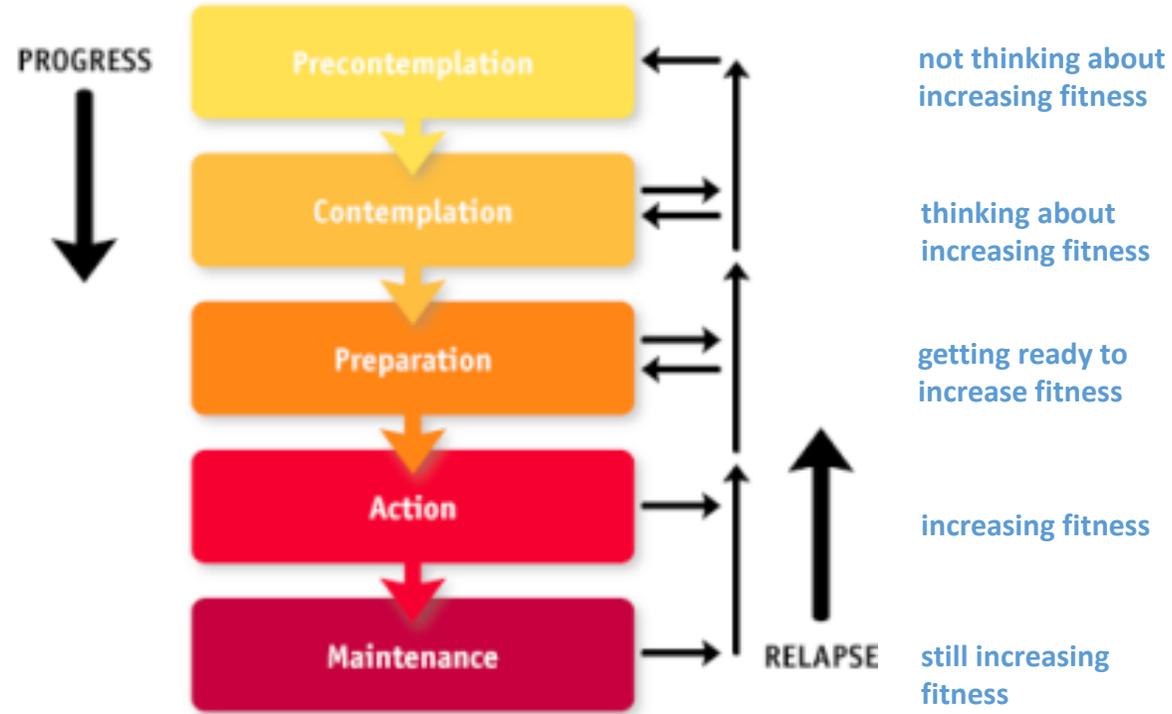


Count	Percentage
0	531 87%
1	65 10.7%
2	10 1.6%
3	3 0.5%
4	0 0%
5+	1 0.2%

Have you received wearables in other ways?

# Transtheoretical model of change applied to fitness

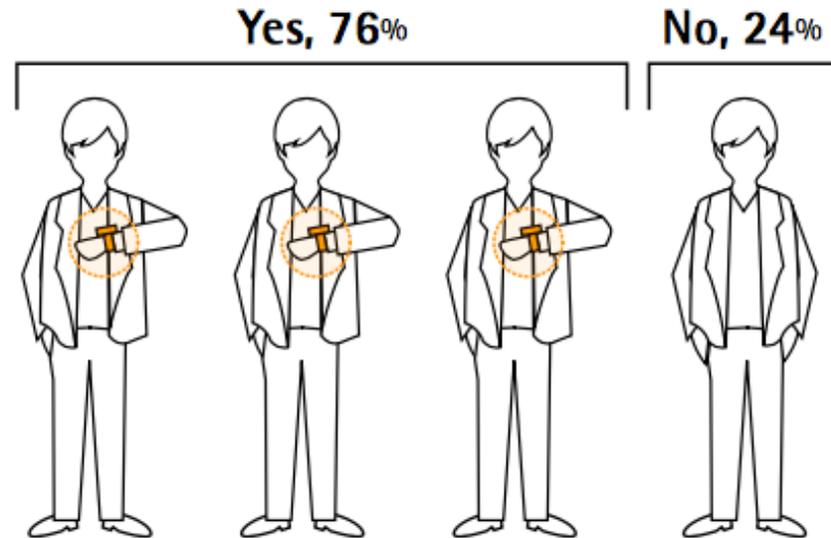
Could who recommends a tracker or how a person acquires one influence behavior change?  
Where do people get stuck?



# Physician influence on tracker use in patients

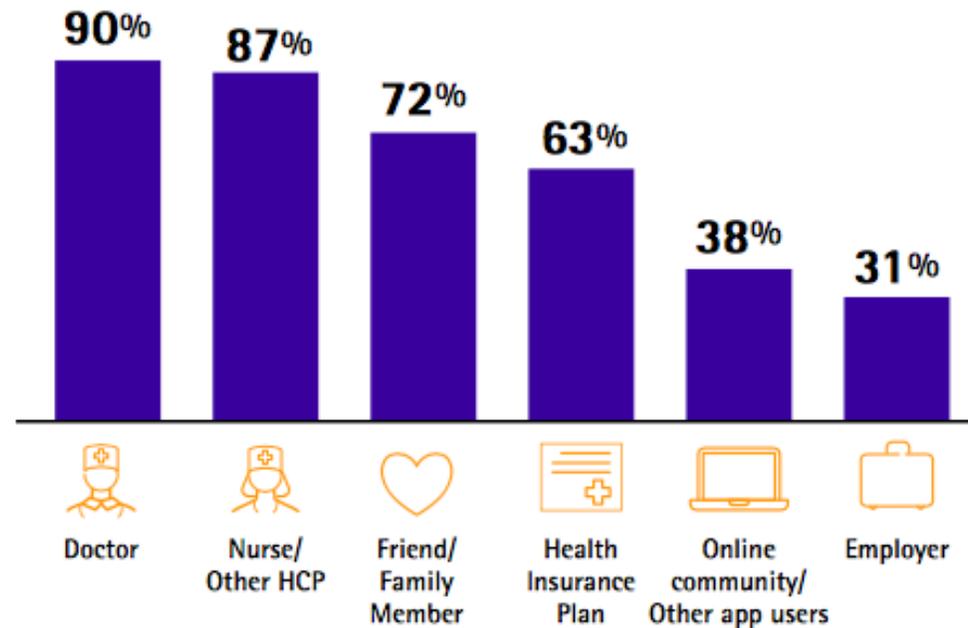
FIGURE 12.

When recommended by a doctor,  
3 in 4 consumers followed advice to wear  
technology to track health



# With whom to share data...

FIGURE 13.  
Most consumers are willing to share wearable  
or app data with a doctor or nurse





## But physicians have...

---

- No time to review data
- Not sure what to do with the data
- Questions around meaning of the data
- Don't want to add anything to a full plate
- Is brand/model knowledge is needed to make a recommendation
- Questions around accuracy

“In general, they are accurate enough to be useful”

- More accurate for steps than heartrate and sleep
- Heartrate more accurate at rest than when exercising

# Integrating trackers into a Wellness Group

## Research Questions

- Will participants **accept** and **use** trackers if provided **free** and with **training**?
- Are there other **barriers** to use?
- Will trackers **educate** participants on baseline and ongoing physical activity levels and support behavior change?
- Will there be clinical outcomes that show **improvements** in health?

## Demographics

- 10 participants
- All but one overweight/obese, all with 1+ chronic conditions
- **Median age 63**
- All owned smartphones and none had used trackers before

## Methods

- Given Withings Pulses in week 2
- Interviewed by phone after 12 – 14 weeks of tracker use



# Integrating trackers into Wellness Group

## Results

- Clinical outcomes
  - Participants lost on average ½ lb per week
  - 9.2% decrease in LDL levels

Table 1: Changes in systolic blood pressure, diastolic blood pressure, low-density lipoprotein, and body weight after 12 weeks of wearable activity tracker use.

Characteristic	Before	After	Mean change	<i>P</i> value
SBP <sup>a</sup> (mmHg), mean	129.8	130.0	0.2	.920
DBP <sup>b</sup> (mmHg), mean	78.0	73.7	-4.3	.113
LDL <sup>c</sup> , mean	105.1	95.4	-9.7	.038
Weight (lbs), mean	236.4	230.4	-6.0	.004

<sup>a</sup>SBP: systolic blood pressure.

<sup>b</sup>DBP: diastolic blood pressure.

<sup>c</sup>LDL: low-density lipoprotein.

# Behavior change

## Results

- Barriers identified besides cost and training
  - Choice confusion
  - Perceived value
  - Ongoing support
- Acceptance and use
  - At start ½ of participants expressed excitement and hope and ½ expressed hesitation or trepidation
  - At end all participants felt positive: “fantastic,” “helpful,” “optimistic,” “very happy,” “healthy,” and “elation”
  - Some short-term drop-off in use due to health, family circumstances, or travel
- Behavior change
  - Educated about baseline activity level
  - Immediate feedback on increased activity motivated change
  - Increased accountability to oneself
  - Physical presence of wearable served as a reminder

...[immediate feedback from the tracker] made me feel like I was making some progress. Before, I would go to the gym and get sweaty, but I didn't see any changes in the scale or the mirror right away.

I don't have to report to anyone, but I kind of have to report to my tracker. I'm accountable to it in some way.

If I really put my mind to it, it wasn't that difficult to achieve 7,000 or 8,000 steps.

# Pilot study published in JMIR

[Original Paper](#)

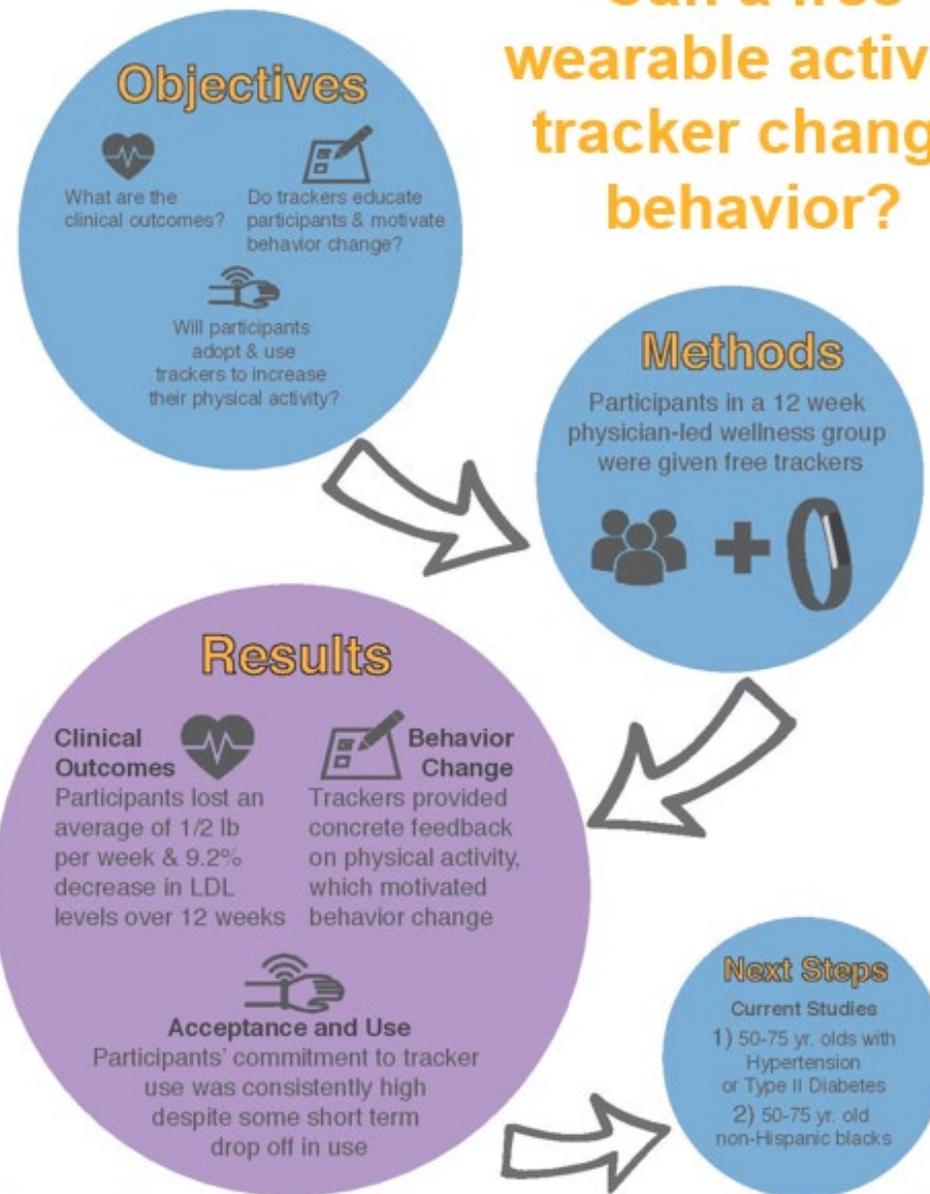
## Can a Free Wearable Activity Tracker Change Behavior? The Impact of Trackers on Adults in a Physician-Led Wellness Group

Lisa Gualtieri<sup>1</sup>, ScM, PhD; Sandra Rosenbluth<sup>1</sup>, MS; Jeffrey Phillips<sup>2</sup>, MD

<sup>1</sup>Tufts University School of Medicine, Department of Public Health and Community Medicine, Boston, MA, United States

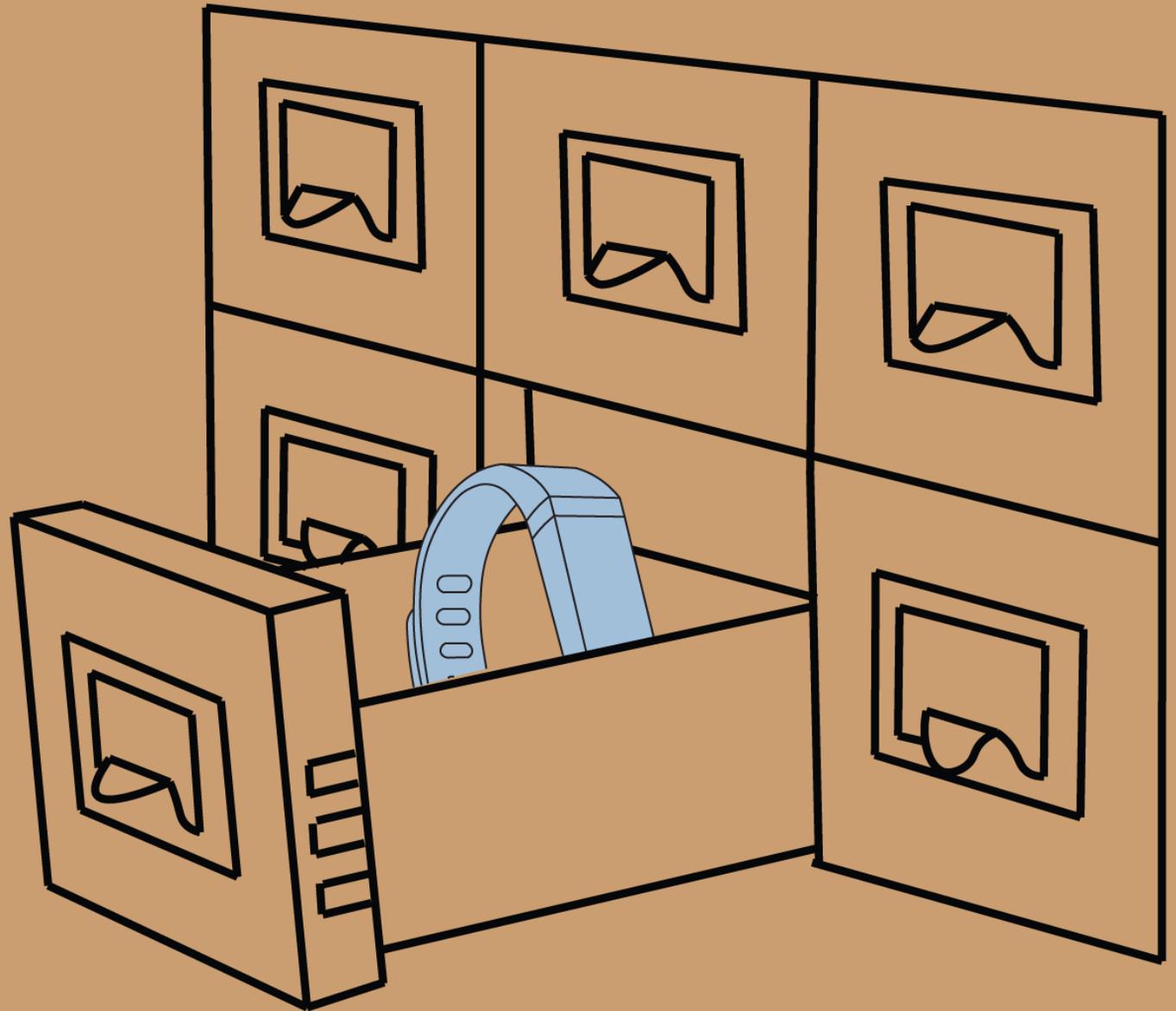
<sup>2</sup>Family Doctors, LLC, Swampscott, MA, United States

## Can a free wearable activity tracker change behavior?



# Ongoing initiatives

- Tracker Lending Library
  - Pilot in 3 doctor's offices
- HutsforVets.org
  - How do trackers impact mental and physical health in veterans adjusting to civilian life?
  - Impact on PTSD
- Integration of tracker data into clinical care
  - Tailored to physician work flow and time restrictions
  - In a 10 minute patient visit, data review is 30 sec or less
  - Data summaries must be accurate, relevant, and actionable
  - Used survey and key informant interviews to gain insights



**Tracker Lending Library**

Questions?

Contact me:  
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[@lisagualtieri](https://www.instagram.com/lisagualtieri)

