



GEORGE W. BUSH  
PRESIDENTIAL CENTER



**INNOVATIVE APPROACHES TO ENGAGING VETERANS  
IN MENTAL HEALTHCARE**

14 March 2019

Kacie Kelly, Director Health & Wellbeing



# MISSION

The George W. Bush Presidential Center engages communities in the United States and around the world by developing leaders, advancing policy, and taking action to solve today's most pressing challenges.





# OUR IMPACT CENTERS



## **DOMESTIC EXCELLENCE**

- Bush Institute - SMU Economic Growth Initiative
- Education Reform Initiative
- Military Service Initiative
- Presidential Leadership Scholars

## **GLOBAL LEADERSHIP**

- Global Health Initiative
- Human Freedom Initiative
- Women's Initiative

DEVELOPING LEADERS  
ADVANCING POLICY  
TAKING ACTION

## **ENGAGEMENT AGENDA**

- Bush Library and Museum
- Engage, Publications, and *The Catalyst*
- SMU Community Engagement
- Native Texas Park

ENGAGING COMMUNITIES  
IN THE UNITED STATES  
AND AROUND THE WORLD





GEORGE W. BUSH  
INSTITUTE



**MILITARY SERVICE INITIATIVE**



# MILITARY SERVICE INITIATIVE

*Ensuring post-9/11 veterans and their families make successful transitions to civilian life*



## Veteran Health and Well-being

Spotlighting the invisible wounds of war and connecting veterans with quality care providers through the Warrior Wellness Alliance



## Economic Opportunity

Advancing educational opportunities for veterans while connecting them with best-in-class resources for compelling careers



## Veteran Leadership

Our Stand-To Veteran Leadership Program develops the skills of those who serve our Nation's veterans and helps increase their impact



## Team 43

Our Warrior Open golf tournament and Warrior 100K mountain bike ride highlight the resilience and continued leadership of our most seriously wounded warriors and their families



# VETERAN HEALTH & WELLBEING —

## The Challenge:

While most servicemen and women return home without any injuries or recover successfully from these injuries, the number of post-9/11 veterans experiencing the invisible wounds has been high compared to historical rates.

At any given time, as many as 10-20% of service members who've deployed to Iraq and Afghanistan experience symptoms consistent with PTSD. Since 2001, more than 339,000 have been diagnosed with TBI.



Source: Tanielian, et al. 2008, 2018; George W. Bush Institute, 2016





# WARRIOR WELLNESS ALLIANCE

**GOAL:** *Connect more veterans to effective mental health care.*

## WARRIOR WELLNESS ALLIANCE MEMBERS

*representing over 1 million post-9/11 veterans*

### PEER-TO-PEER NETWORKS

Bush Institute's Team 43  
Student Veterans of America  
The Mission Continues  
Team Red White & Blue  
Team Rubicon  
Wounded Warrior Project (WWP)

Serving more veterans

Connecting more veterans

### CARE PROVIDERS

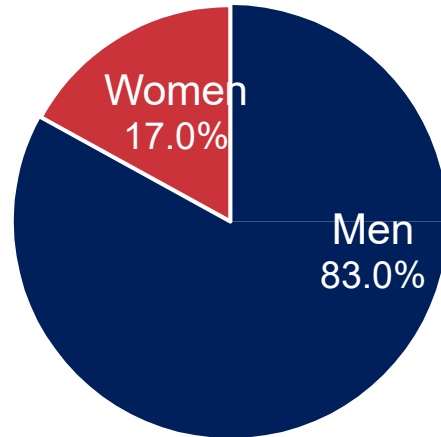
Cohen Veterans Network  
Marcus Institute for Brain Health  
U.S. Department of Veterans Affairs/Veterans Health Administration  
WWP Warrior Care Network: Emory Healthcare, Massachusetts General Hospital, Rush University Medical Center, and UCLA Health

### PARTNERS

TriWest Healthcare Alliance

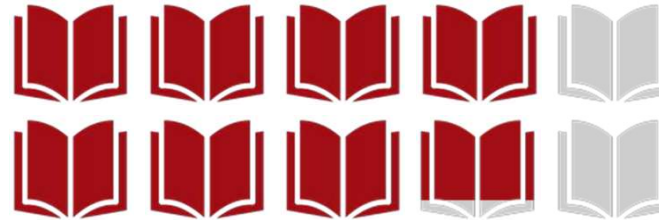


# WHO ARE OUR CUSTOMERS?

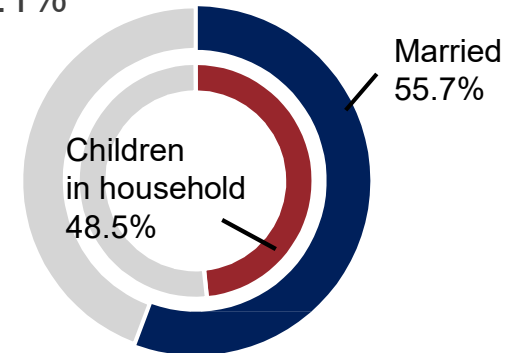
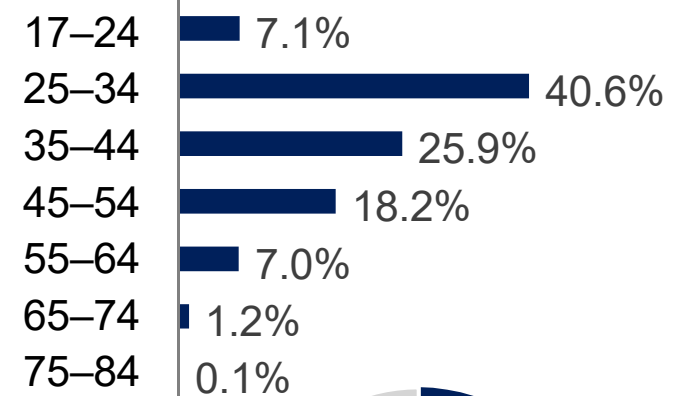


TOTAL:  
4 Million ~

Average age: 35



Attended college, 78.4%



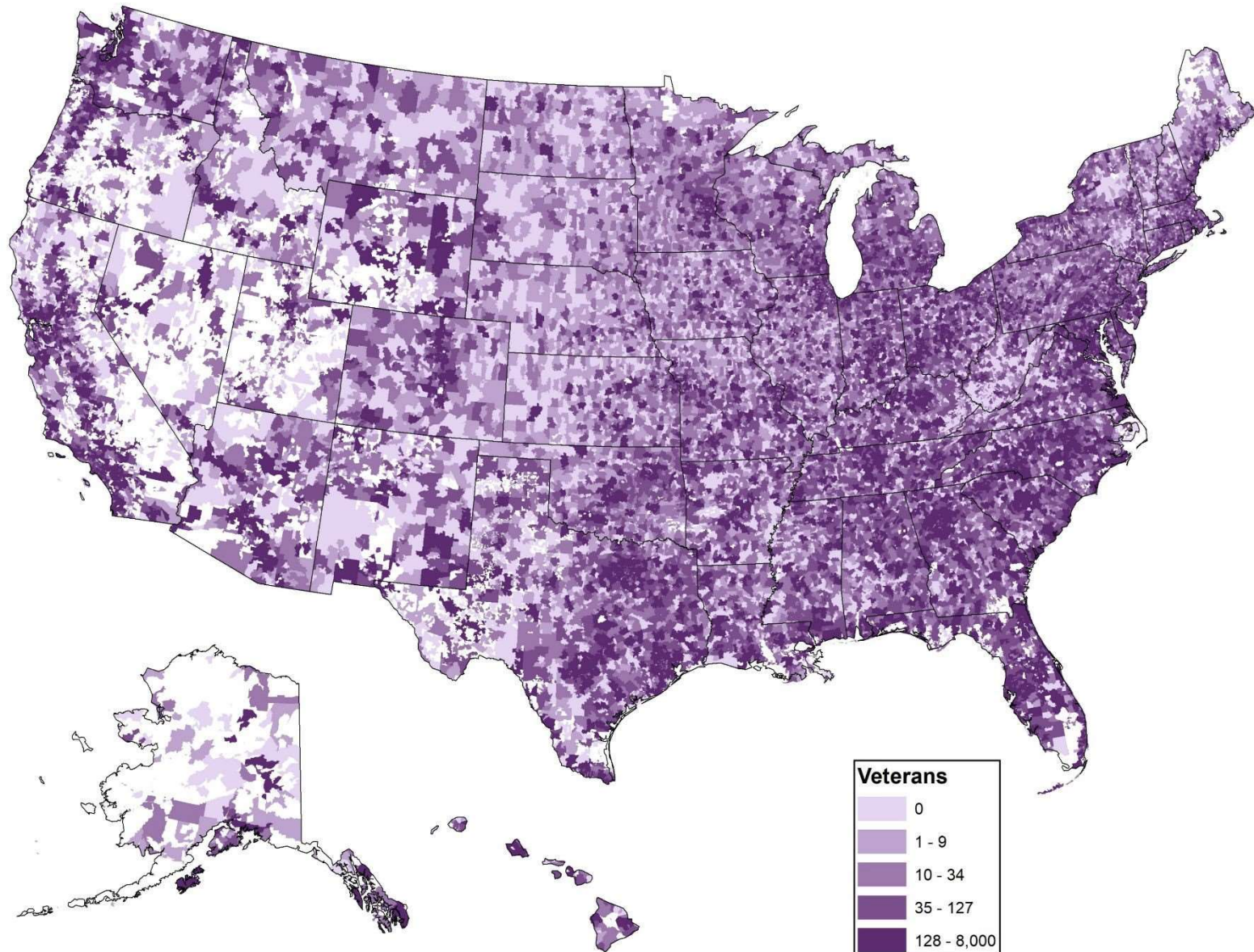
Asian/Pacific Islander, 3.2%  
American Indian/Alaska native, 0.7%  
Non-Hispanic multiracial, 3.0%  
Non-Hispanic other, 0.2%





# GEOGRAPHIC DISTRIBUTION

*Post-9/11 Veterans, Source: VETPoP, 2016*





# WHO ARE OUR CUSTOMERS?

*Why Social Media Data Can Help?*

Healthcare System Interactions

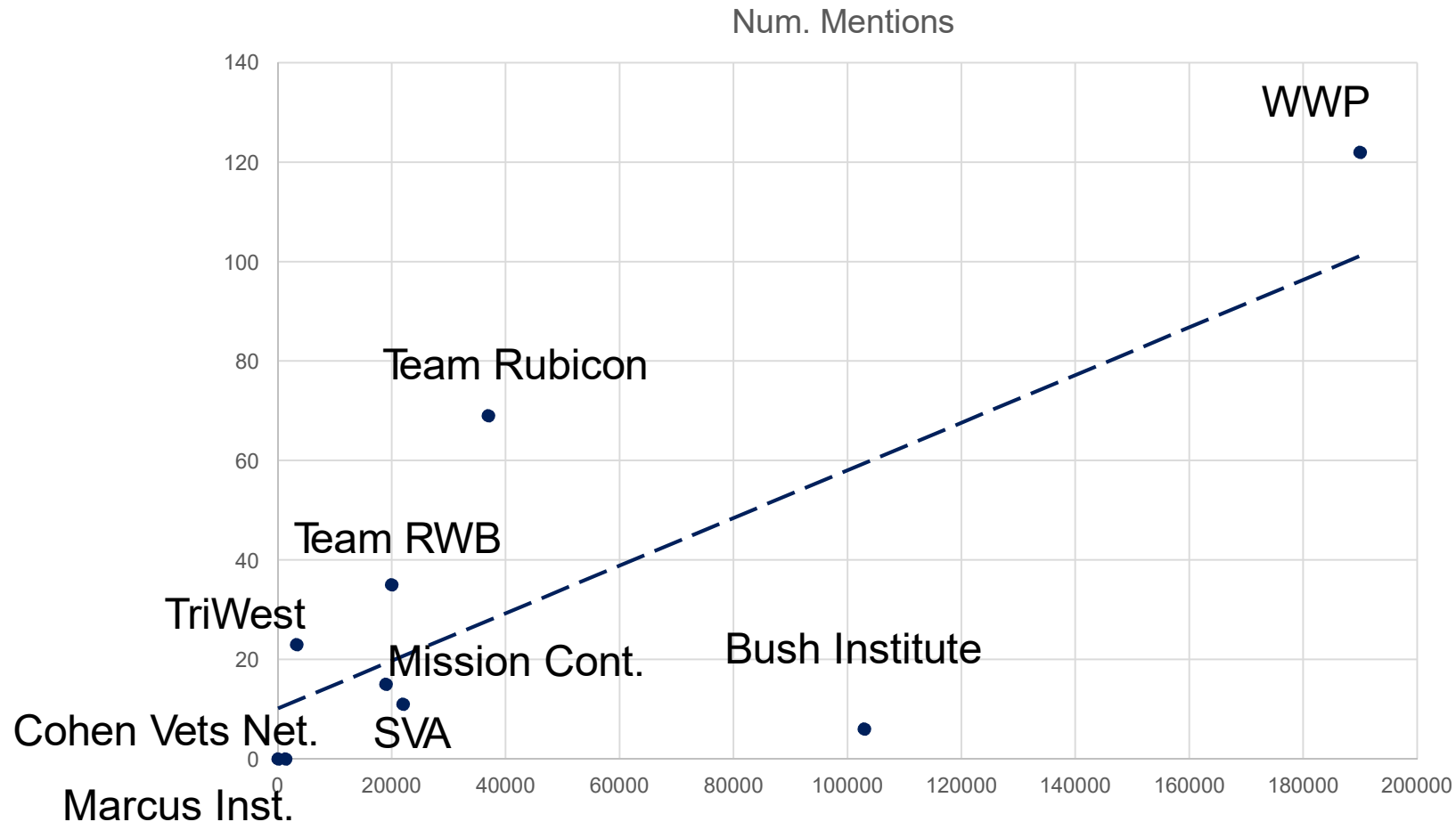


Social Media Posts



# WHY SOCIAL MEDIA?

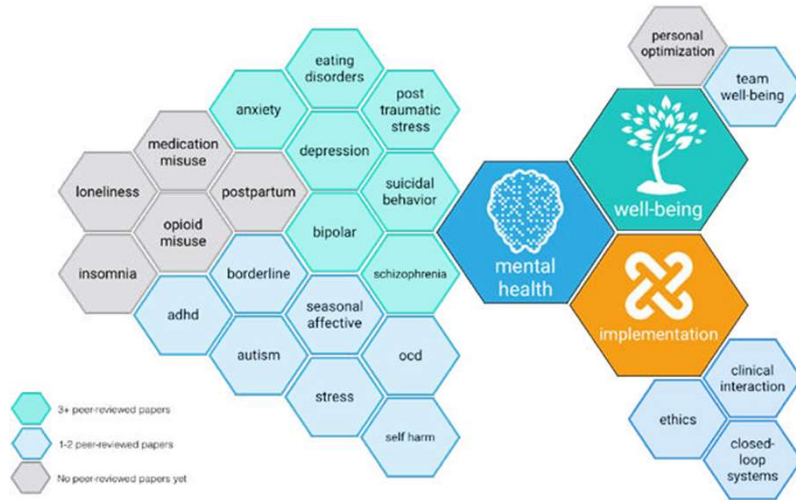
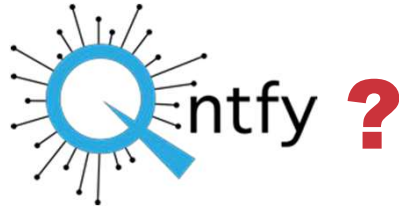
*Who is utilizing social media to understand & engage their customers?*



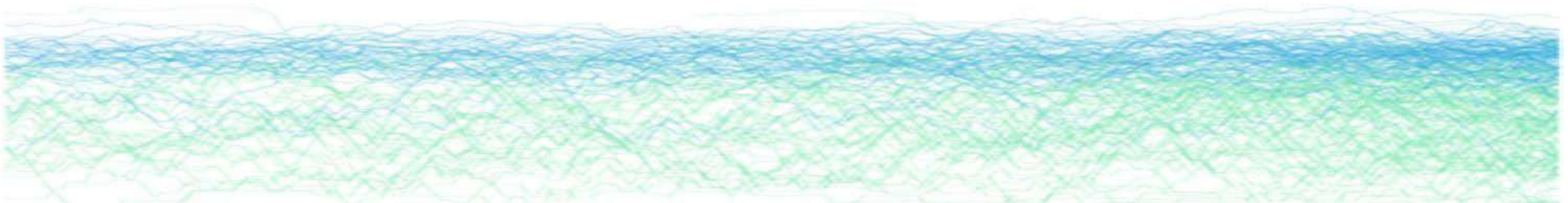




# WHY

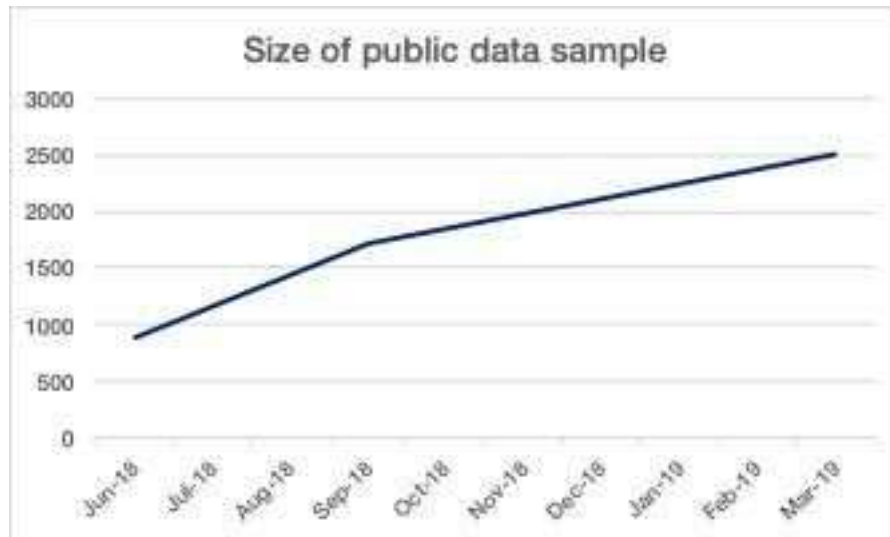


- Leaders at the intersection of Data Science and Behavioral Health.
- Peer-reviewed publication record on advances to the field, pragmatic implementation, and ethics.
- Created OurDataHelps, the largest opt-in data repository for behavioral health and digital life data.
- Recent paper indicating state of the art suicide risk detection from social media data.





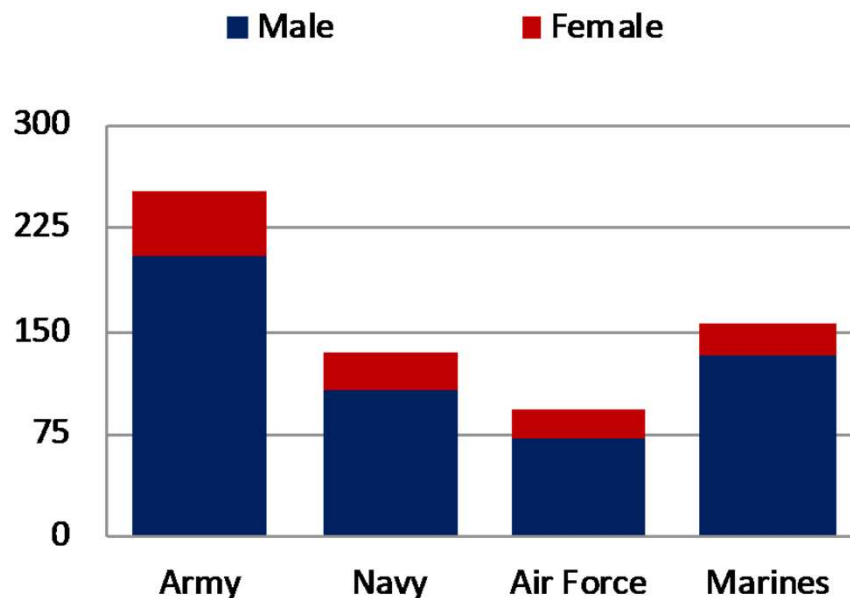
# WHAT IS TWITTER TELLING US? —



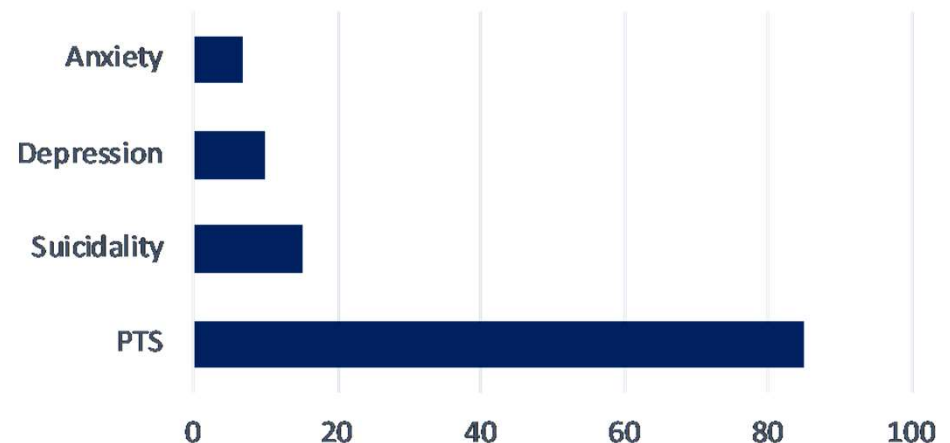
Ongoing collection and human annotation of Twitter data, yielding a research-grade sample of veteran social media messages.

Median age: 30

Median Tweets per user: 150

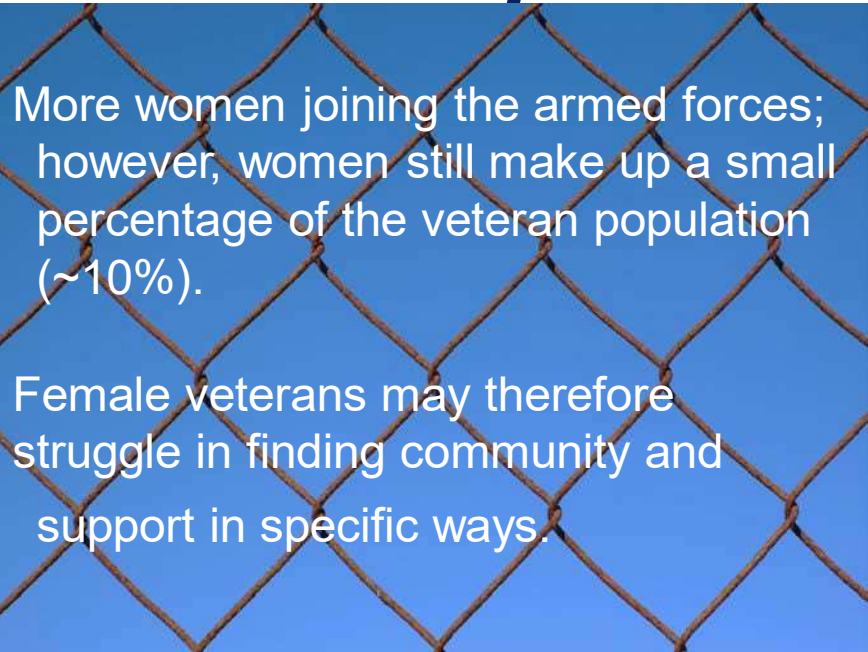


## Self-stated MH condition





# CHALLENGES FOR FEMALE VETERANS



More women joining the armed forces; however, women still make up a small percentage of the veteran population (~10%).

Female veterans may therefore struggle in finding community and support in specific ways.

Rate of substance abuse disorders among female veterans increased 81% from 2005 to 2010.

Female veterans equally likely to report symptoms of PTSD and anxiety, and more likely to report military sexual trauma and depression.

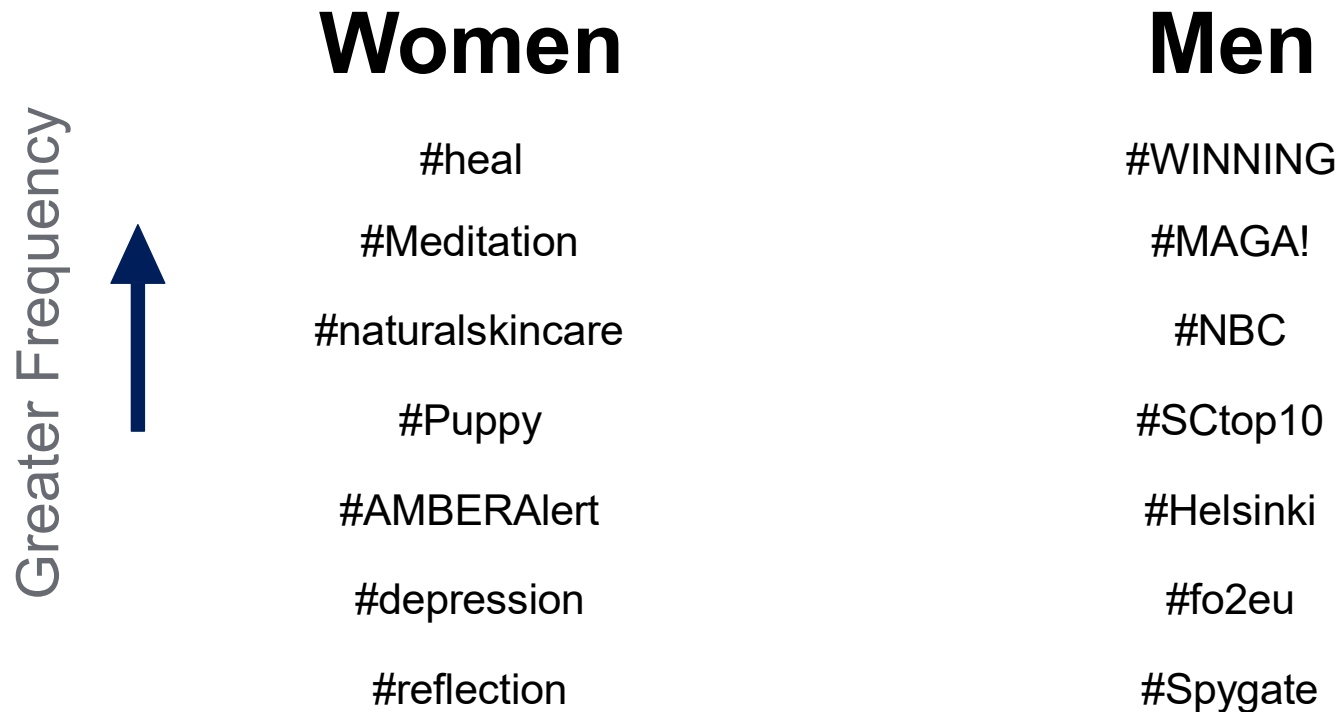
Many treatments available to veterans are provided in male-dominated group settings, where female veterans report that they feel uncomfortable.

Female veterans are significantly more likely to be burdened with child care and other responsibilities, further impeding care-seeking.





# HASHTAG USE BY GENDER

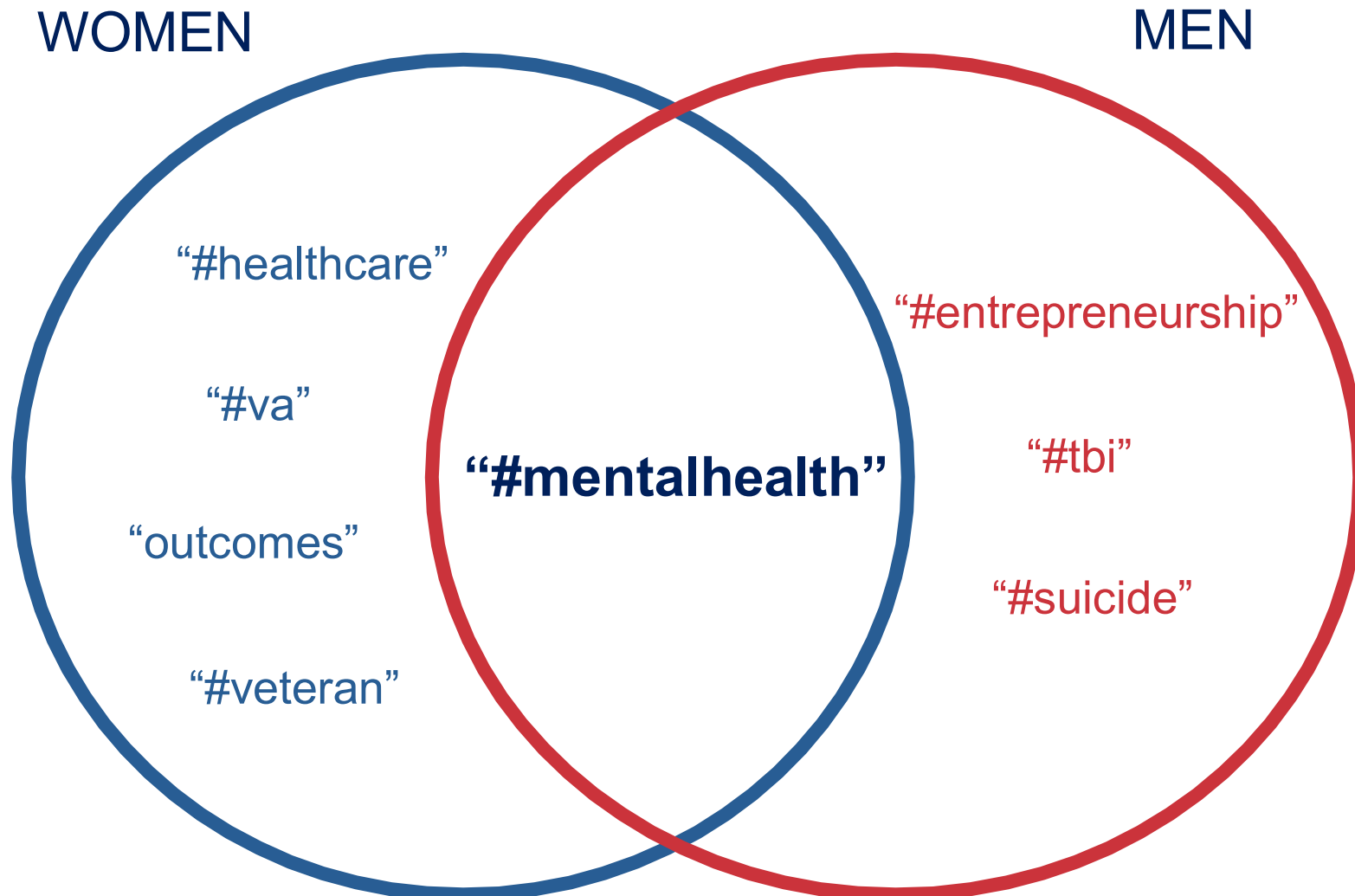


Women engaged more with hashtags conveying engagement with reflection and self-care, where men engage more broadly with news, political content.



# GENDER-SPECIFIC KEYWORDS

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# SO WHAT?

## A CUSTOMER SEGMENTATION APPROACH



**How Can The Warrior Wellness Alliance use this type of data to power its mission: to empower more veterans to connect to high-quality care and services when they need it?**

### Powering engagement and outreach

- Women veterans are faced with unique challenges in adjusting to civilian life.
- Women are talking about mental health differently than men.
- Social media may be an important venue for connecting with women veterans and may be easier with women than men.
- Social media research can power more precise marketing messages to ensure women know about services relevant to them.





# WHO ARE OUR CUSTOMERS

## ***I'm all in***

*Identifies strongly with status as a veteran and is eager to support other veterans. Has a desire to continue serving and often view it as a form of therapy.*

## ***I'm good***

Does not, or is not willing to, recognize their invisible wounds. May feel undeserving of services because they don't want to take resources from those they perceive to be in greater need.

## ***I'm out***

Characterized by a disdain or mistrust of "the system". This can exacerbate their issues by increasing a sense of isolation.

## ***I'm not sure***

Healthy reluctance to engage with peer and clinical support. Does not identify strongly as a veteran and may want to simply move on with life.

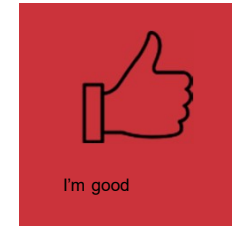
## ***I'm broken***

Believe they are far worse off as a result of military service. Engaged in some type of care, but general outlook on recovery and thriving is poor.

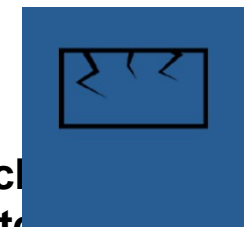
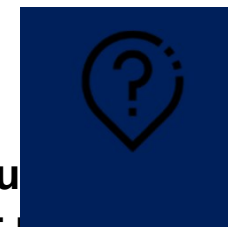
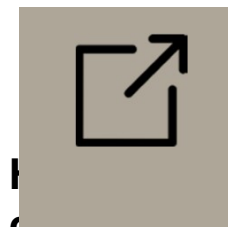
## A Customer Segmentation Approach



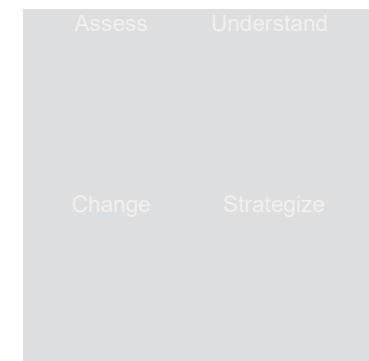
I'm all in



I'm good



I'm all in, I'm good, I'm out, I'm not sure, I'm broken  
get better at reaching veterans.



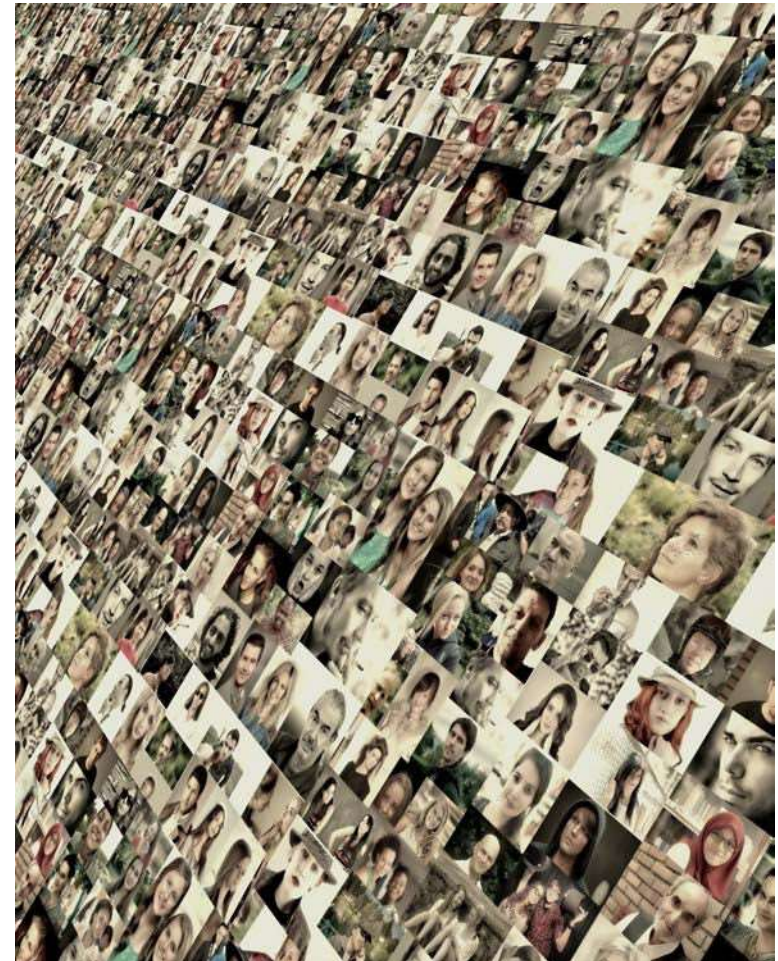
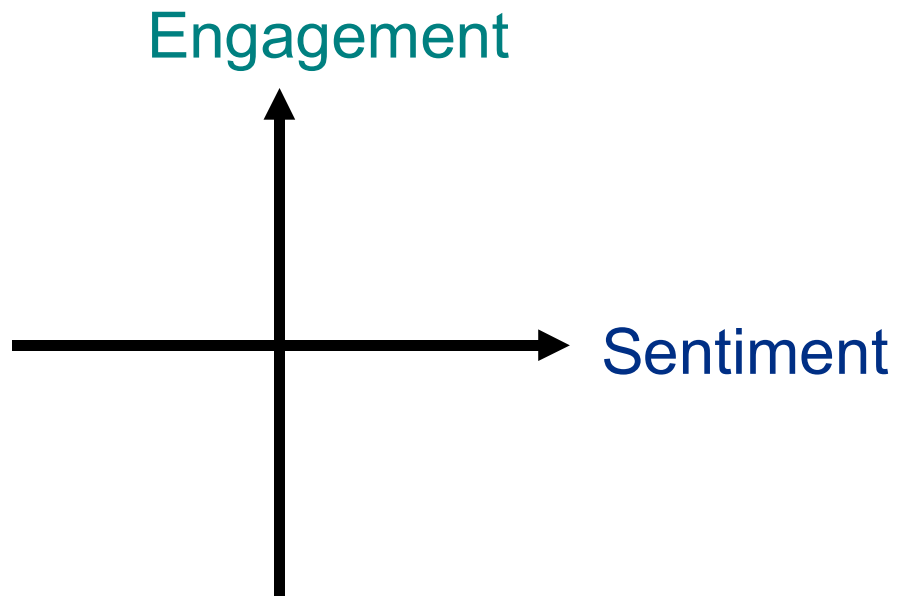


# QUANTIFYING OUR GROUPS

*Social Media analyses can be used to quantify veteran archetypes*

Archetypes can be decomposed into where a person falls on 2 axes:

Sentiment towards and  
Engagement on veteran topics.





# ARCHETYPES IN ACTION

## Generating Outreach “Playbooks”

**Map** services in the WWA ecosystem to corresponding archetype(s)



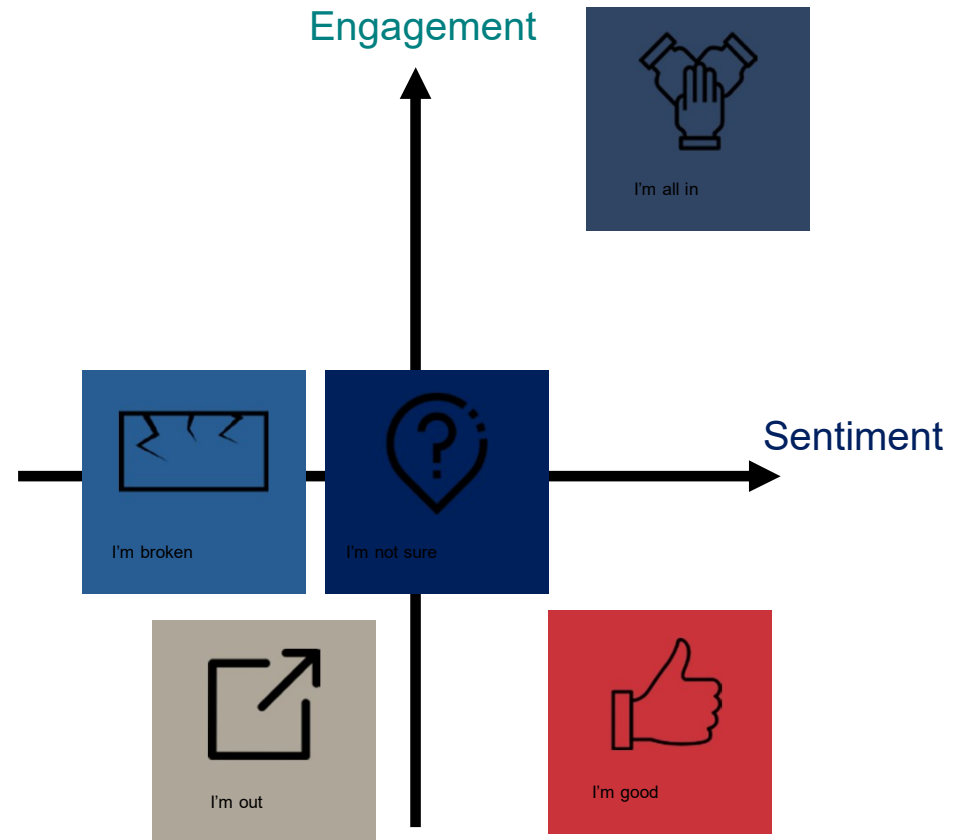
Automatically **assign** digital footprints to archetypes



**Characterize** online markers of each archetype (keywords, frequently-visited websites)



**Recommend** strategies for engaging with vets online to WWA





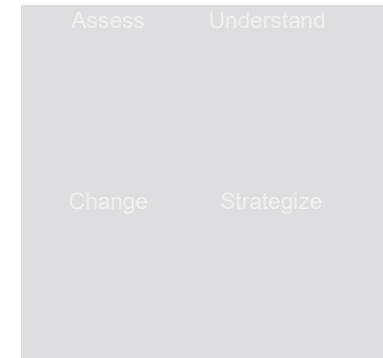


# WARRIORS CONNECT

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*Who? What? When? Where? ?*

- Ground-breaking research project asks people for donations of their public facing social media information and fitness tracker information.
- Participation allows you to contribute to the advancement of care for yourself and for thousands of others in the future.
- Project is strictly opt-in and this is important because...



- Unprecedented insight into how veterans talk about the mental health challenges, and about the coping strategies, techniques, treatments, and support mechanisms available to them.
- Findings will power precise and targeted outreach & interventions for veterans – no more one size fits all.



OurDataHelps

https://warriorsconnect.ourdatahelps.org

# WARRIORS CONNECT

IN COLLABORATION WITH QNTFY

**SIGN UP** **LOG IN**

<https://warriorsconnect.ourdatahelps.org/>

## YOUR INFORMATION CAN HELP POWER RESEARCH INTO VETERAN WELLBEING!

SHARE YOUR INFORMATION WITH THE WARRIOR WELLNESS ALLIANCE THROUGH QNTFY'S OURDATAHELPS DONATION

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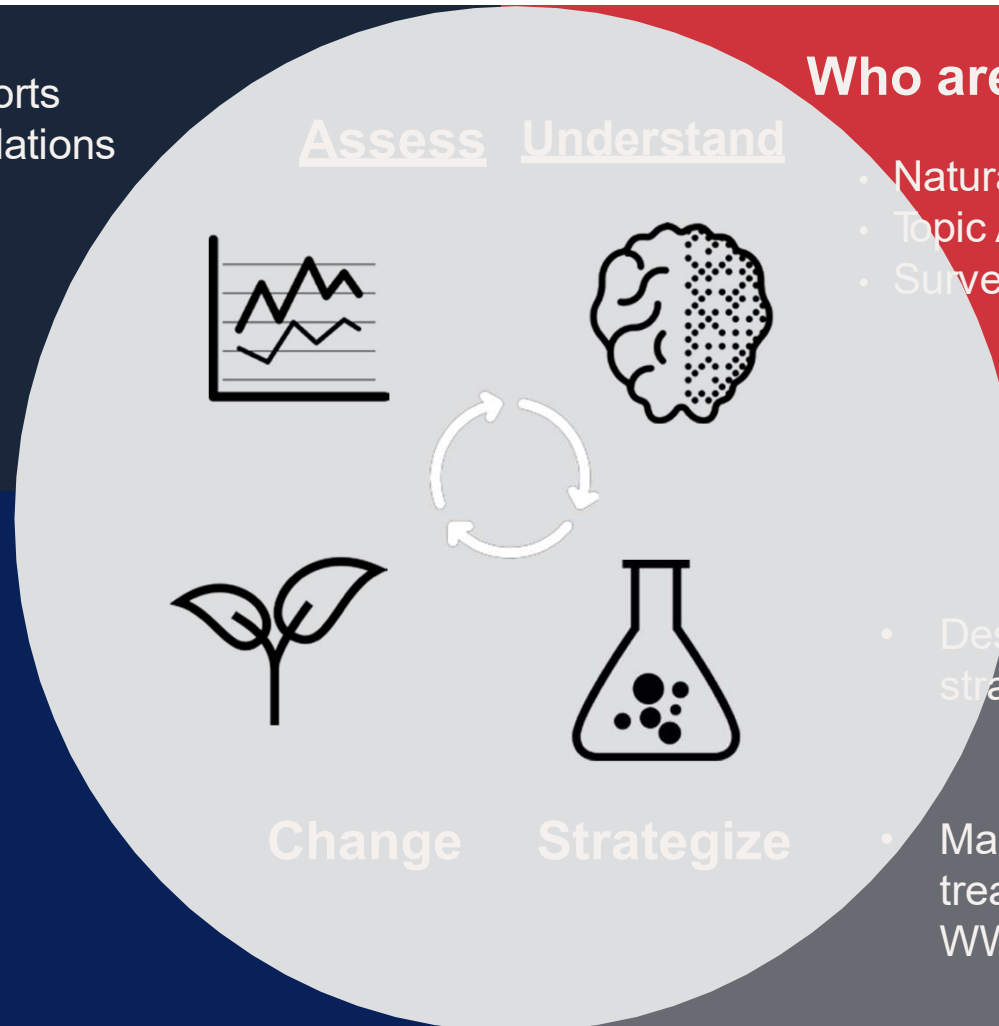


# RESEARCH IN ACTION

## *Putting our Data in Action*

- Create & refine cohorts
- Find novel subpopulations
- Define segments
- Monthly reporting
- Share results

- Take actions
- Rigorously Assess impact of actions
- Iteratively refine strategy



### Who are our customers?

- Natural Language Processing
- Topic Analysis
- Survey Data

- Design stratified outreach strategies;

- Make referrals to targeted treatment programs with WWA members.



## WHAT'S NEXT

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- Partner Nationally & Internationally to Reach Goals for WWA
- Recruitment, recruitment, recruitment for Warriors Connect!
- Collaborate to share findings and recommendations with our partners & key stakeholder communities.
- Follow us on Twitter: **@KacieAKelly @TheBushCenter**

**JOIN US - Donate Your Social Media Information Today!**

Visit: <https://warriorsconnect.ourdatahelps.org/>

Visit: <https://www.BushCenter.org/WWA>





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