

VA



U.S. Department
of Veterans Affairs

Making Health Equity Data Actionable with Visualizations

Wednesday, October 10, 2018
12:00 PM EST

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Leslie Hausmann, PhD

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Veterans Health Administration
Office of Health Equity



INTRODUCTIONS



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Brian D. Smedley, PhD

Executive Director and Co-Founder, National Collaborative for Health Equity



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POLL QUESTION #1

- **What is your primary role in VA?**
 - Student, trainee, or fellow
 - Clinician
 - Researcher
 - Administrator, manager or policymaker
 - Other

HEALTH OPPORTUNITY AND EQUITY (HOPE) MEASURES PROJECT

National Collaborative for Health Equity

Texas Health Institute

Virginia Commonwealth University Center on
Society and Health

Purpose

To create a national resource of health equity indicators that spurs action at multiple levels across a broad cross section of stakeholders - including those not traditionally engaged - to improve health and well-being

Our Unique Contribution

- Reframing the health disparities conversation to one of health opportunity and equity
- Creating a set of broadly accessible tools that measure gaps in opportunities that shape health outcomes at multiple jurisdictional levels
- Utilizing an aspirational yet achievable benchmarks to inspire action and measure progress
 - ▣ Concrete measures for decision-makers to inform action and track change

Our Unique Contribution

- Disaggregating data by race, ethnicity, and SES at the finest level of detail the data will allow
- Examining gaps in both health outcomes and in the conditions that shape health
 - ▣ Intentionally aligning with RWJF 7 domains

Big Picture Vision

- Promoting a new narrative centered in data
- Reaching allies and new audiences
- Providing useful tools
- Inspiring action at multiple levels

Phase I Objectives

- Reframing the disparities conversation
- Developing measures and related benchmarks by race & ethnicity and SES
 - ▣ National and regional observations
 - ▣ Domain and indicator level summaries
 - ▣ State-level profiles & state rankings

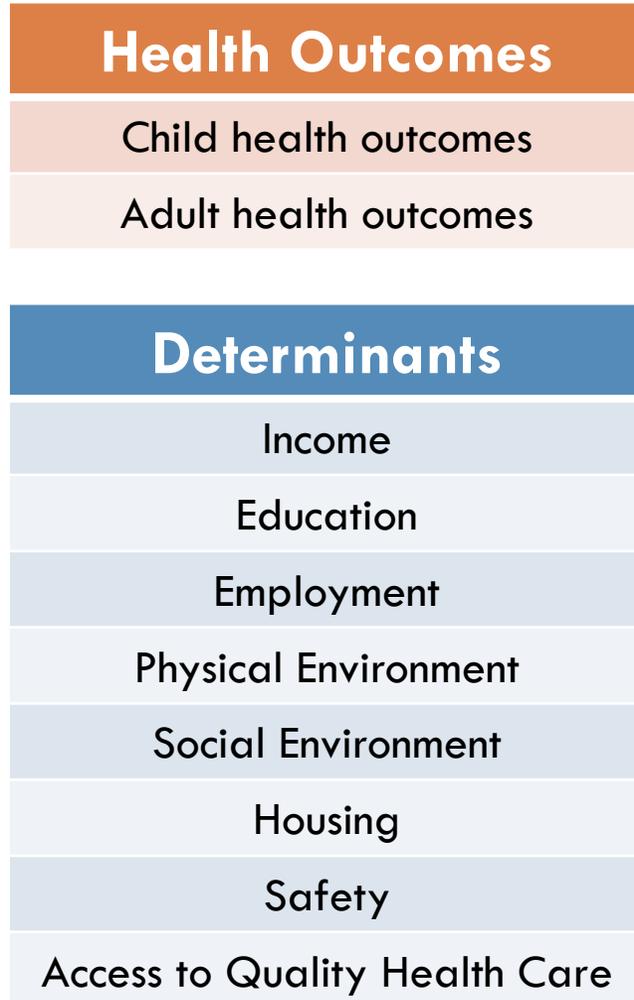
HOPE Measures Deliverables

- Framing document
 - ▣ Commentary that argues for emphasis on opportunity and equity
 - ▣ Key Messages:
 - Opportunity is a core American value
 - Not everyone has an equal opportunity to live a healthy life
 - Decisions that impact health go beyond individual choice
 - Determinants for opportunity are at policy & systems levels and are interconnected
 - Time for solutions/action to increase opportunities & equity

HOPE Measures Deliverables

- State and national level analyses
 - ▣ Measure gaps in select health outcomes and determinants by race/ethnicity and SES
 - Determinants: income, education, employment, physical environment, social environment, housing, safety, and access to quality health care
 - ▣ Measure *distance-to-go* for each state to reach benchmarks for health outcomes and determinants indicators by race/ethnicity and SES
 - Rank states on distance-to-go
 - ▣ Document national patterns observed by geography and populations

Overall Design



1. Magnitude of disparities
2. Distance-to-go (DTG) to reach benchmarks
3. DTG Rankings

By Population Group:

Race/Ethnicity

Income

Education

&

By Place:

National

State

Grouping Variables

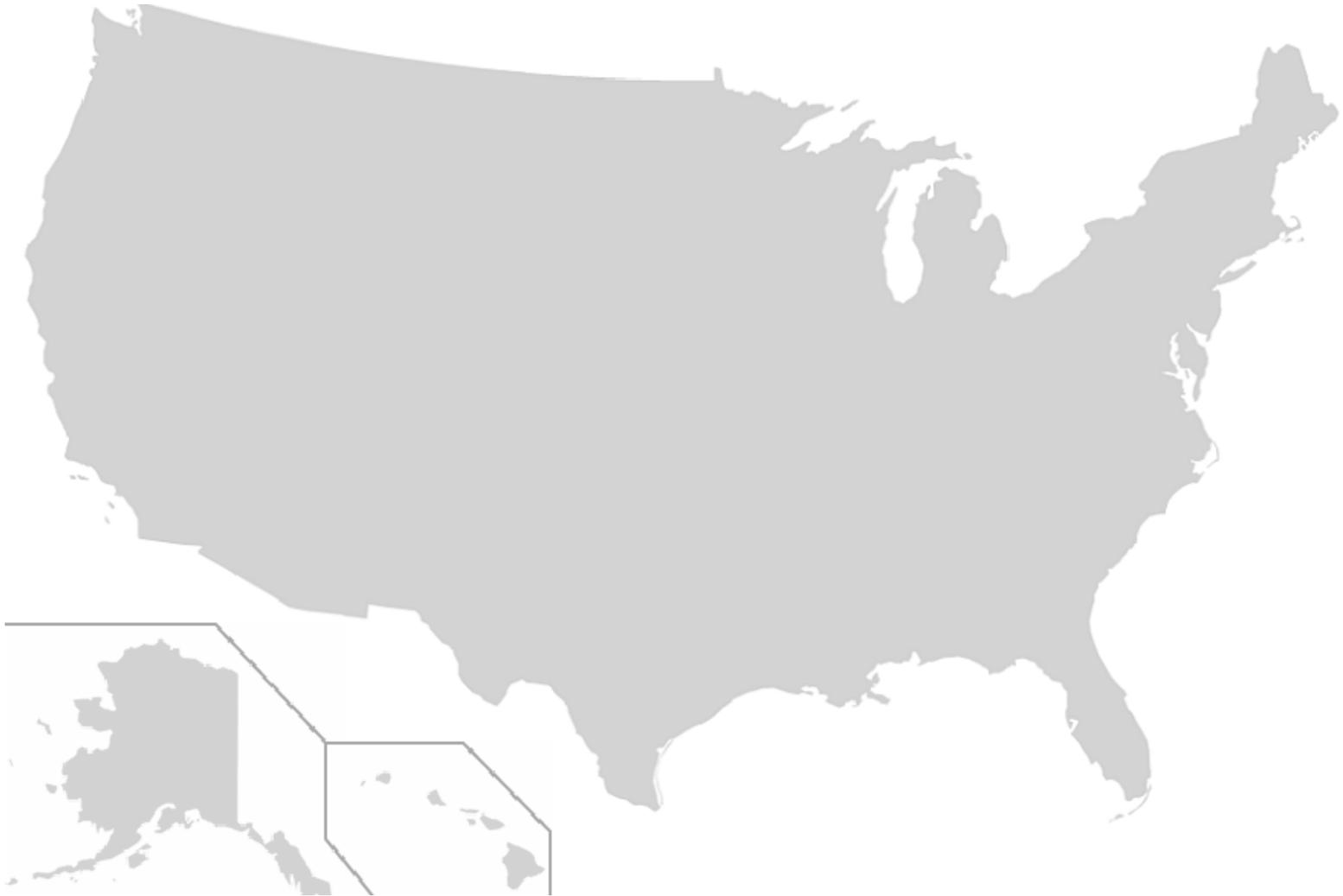
Race / Ethnicity	Education	HH Income (% FPL)
White	Less than HS grad	≤ 100%
Black	HS graduate	101 – 200%
Hispanic	Some college	201 – 300%
Asian / Pacific Islander	College graduate+	301 – 400%
American Indian / Alaska Native		> 400%
Multi Race		

- State analyses: race/ethnicity and SES separately
- National level: race/ethnicity and SES separately and together (e.g., AIAN HS grads)

HOPE Measures Project
Select Findings and
Sample Data Display

Levels of Data

National Observations by Domain & Subgroup



Levels of Data

State Rankings and Regional Observations



Levels of Data

State Profiles



- State Level Profiles
 - ▣ Measures and DTG for health outcomes and 7 determinant domains within each of the 50 states plus DC
 - Race & ethnicity and SES by domain
 - Race & ethnicity and SES by available indicators

Environment

- ***Low Poverty Concentration***
- *Air Quality*
- *Liquor Store Access*

Low Poverty Concentration

Percent living in neighborhoods with 20% or less poverty concentration

What is the HOPE Benchmark?

100%

of people living in low poverty
concentration neighborhoods

What is the National Distance to the HOPE Benchmark?

Over 70 million people

would need to emerge from concentrated poverty
to achieve the HOPE Benchmark.

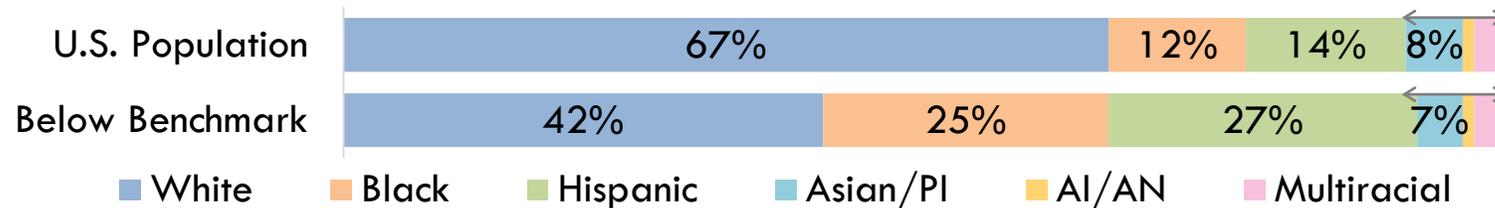
Low Poverty Concentration

Percent living in neighborhoods with 20% or less poverty concentration

Who is Below the HOPE Benchmark?

BY RACE/ETHNICITY

People of color comprise 33% of the U.S. population but 58% of those who would need to emerge from concentrated poverty.



Data only available by race/ethnicity.

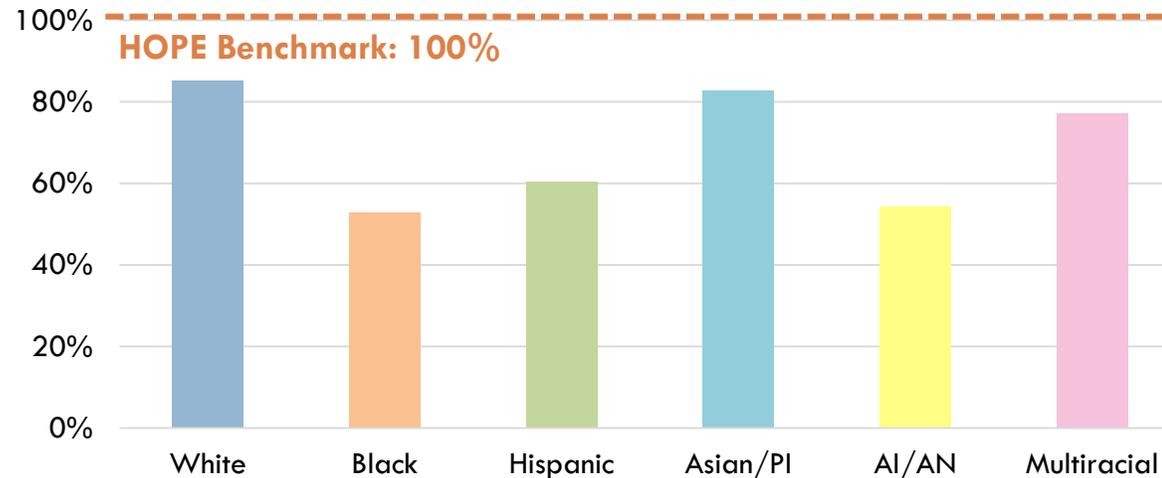
Low Poverty Concentration

Percent living in neighborhoods with 20% or less poverty concentration

Whites, Asian/Pis, and Multiracial individuals are more likely to live in neighborhoods with low poverty concentration, and are closer to the HOPE benchmark. Blacks, Hispanics, and AI/ANs are farther from the HOPE benchmark, residing in low poverty concentration neighborhoods less often.

Who Has a Greater Distance to Go to Achieve the HOPE Benchmark?

BY RACE/ETHNICITY



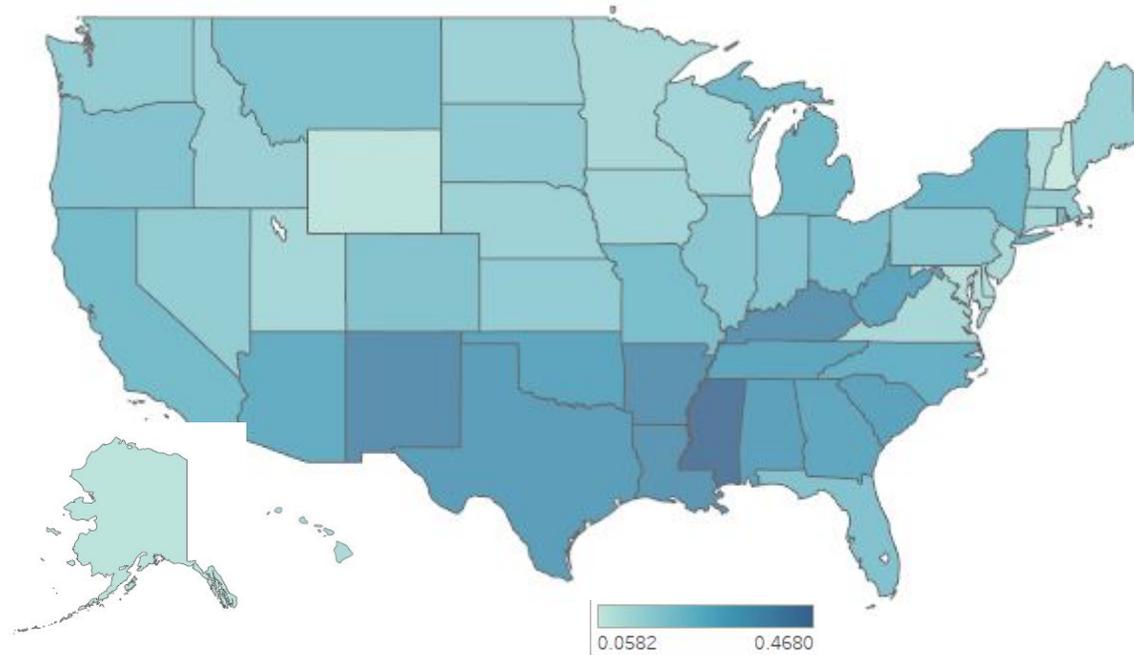
Data only available by race/ethnicity.

Low Poverty Concentration

Percent living in neighborhoods with 20% or less poverty concentration

Who Has a Greater Distance to Go to Achieve the HOPE Benchmark?

BY STATE



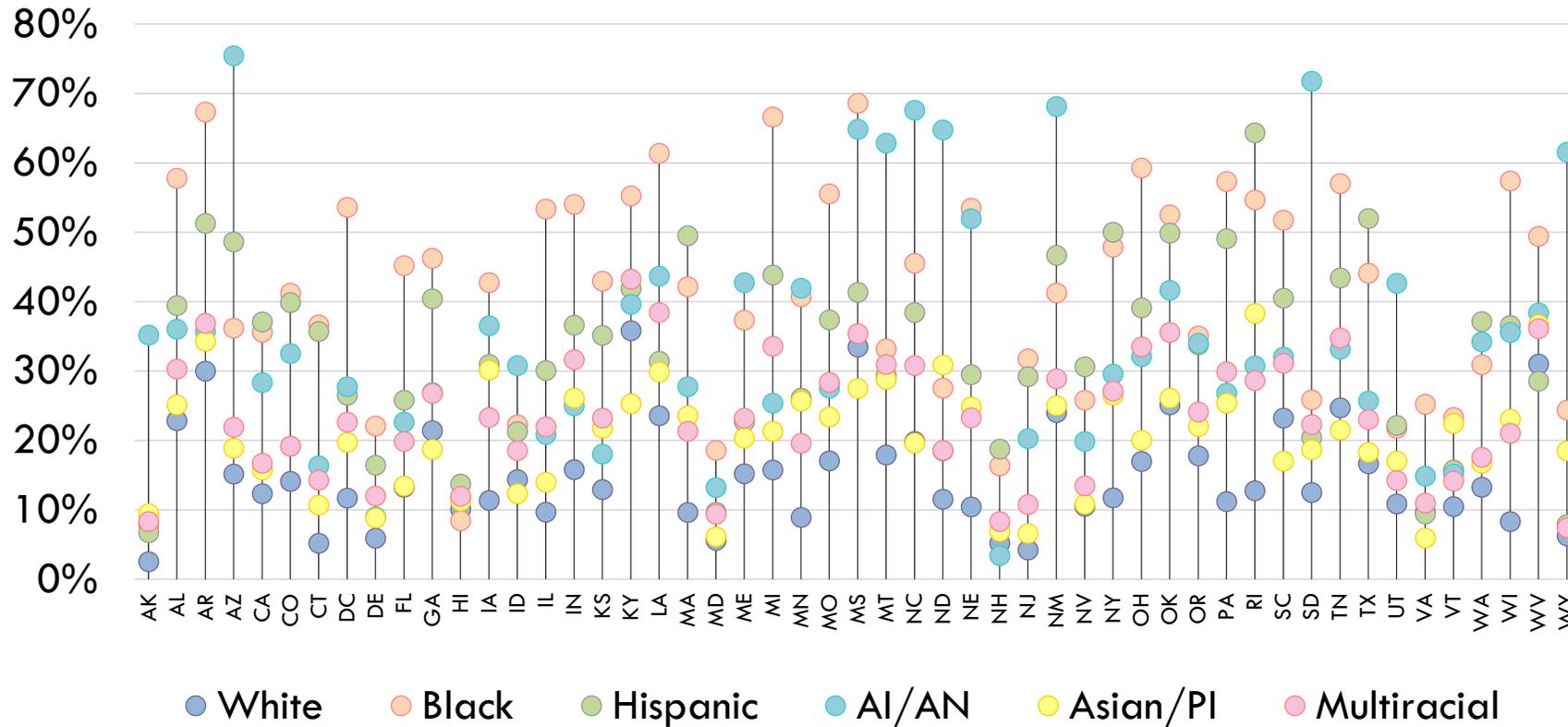
Appalachian, Southwestern, and Deep South states have the greatest distance to the HOPE benchmark. In some, nearly half of residents would need to emerge from concentrated poverty. Midwestern and Northeastern states tend to be closer to the HOPE benchmark.

Low Poverty Concentration

Percent living in neighborhoods with 20% or less poverty concentration

Who Has A Greater Distance to Go to Achieve the HOPE Benchmark in Each State?

BY RACE/ETHNICITY



State-Level Data Example

- *Adult High Health Status in Alabama*



Alabama State Profile

Adult High Health Status by Race & Ethnicity

State Rank

46

Distance to HOPE Benchmark by Race/Ethnicity

Alabama has over 1 million excess cases of individuals with less than excellent or very good health. Blacks and American Indian/Alaska Natives face the greatest magnitude of inequities in health status in the state.

Magnitude of Inequities in Health Status, by Race/Ethnicity

	% of State Population	# Below Benchmark	% Distance to HOPE Benchmark	Relative Magnitude
Whites	70%	689,886	30.5%	40.9%
Blacks	24%	313,975	40.5%	54.3%
Hispanics	3%	15,859	16.3%	21.9%
Asians & Pls	1%	4,213	10.6%	14.3%
AIANs	1%	7,749	43.5%	58.3%
Multiracial	1%	9,651	35.9%	48.1%
TOTAL	100%	1,041,334	32.4%	43.2%

HOPE Benchmark = 75% reporting high health status



Alabama State Profile

Adult High Health Status by Education

State Rank

48

Distance to HOPE Benchmark by Education

Alabama has over 1 million excess cases of individuals with less than excellent or very good health. Those with no high school education face the greatest magnitude of inequities in health status in the state.

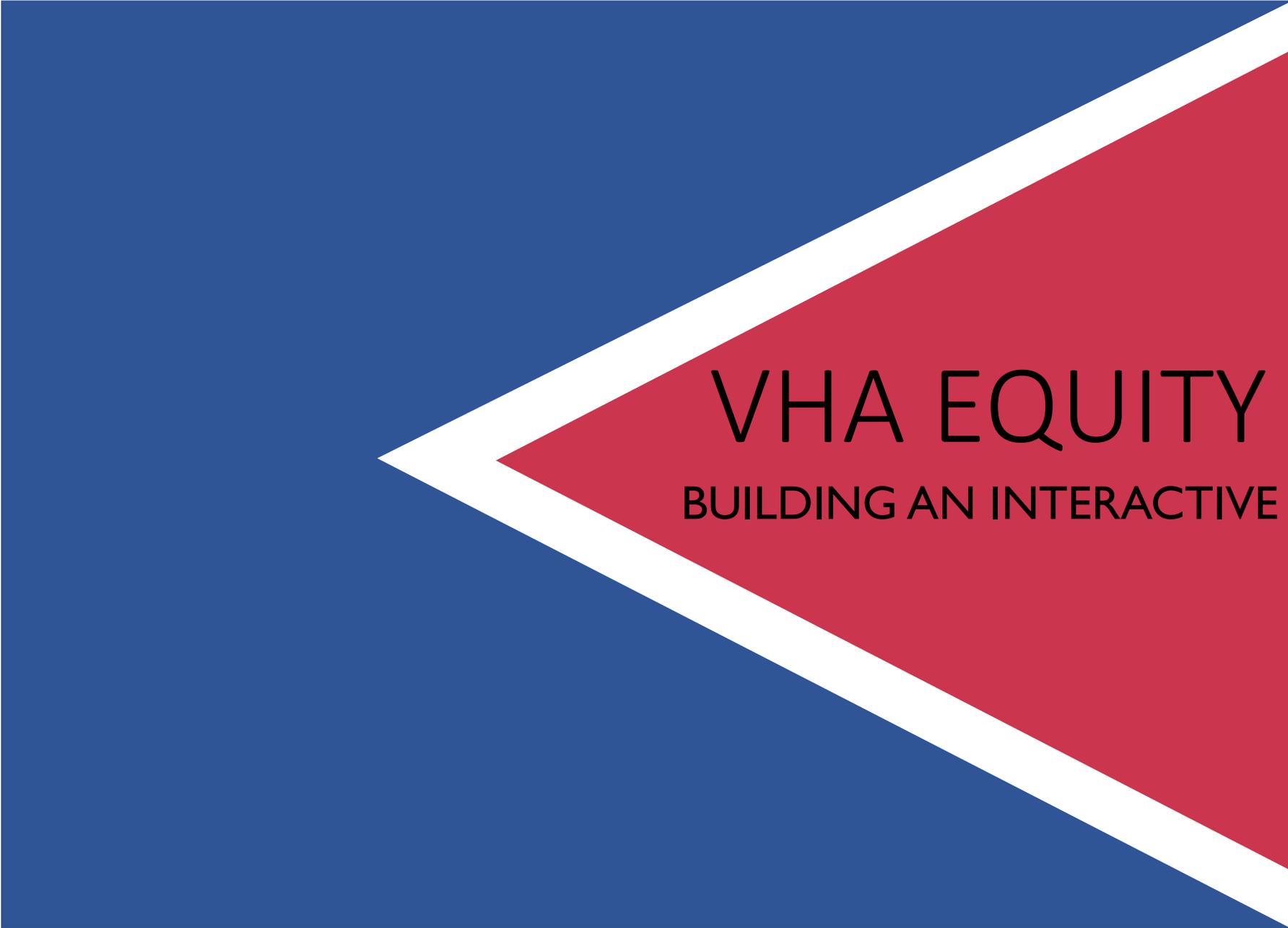
Magnitude of Inequities in Health Status, by Education

	% of State Population	# Below Benchmark	% Distance to HOPE Benchmark	Relative Magnitude
Less than HS	16%	268,269	51.0%	68.4%
HS Grad	31%	391,671	39.1%	52.4%
Some College	30%	282,536	29.8%	40.0%
College Grad	23%	88,729	12.1%	16.2%
TOTAL	100%	1,031,205	32.1%	42.8%

HOPE Benchmark = 75% reporting high health status

THANK YOU!





VHA EQUITY EXPLORER

BUILDING AN INTERACTIVE EQUITY DASHBOARD

Leslie R. M. Hausmann, PhD
VA Pittsburgh Healthcare System

CHERP
CENTER FOR HEALTH EQUITY
RESEARCH AND PROMOTION
VA HSR&D CENTER OF INNOVATION

Poll Question

- Do you have a way to determine whether quality of care in your VA Medical Center varies by patient demographics (e.g., sex, race, etc.)?
 - Yes
 - No
 - Not sure



DOMAINS OF HEALTHCARE QUALITY

Care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status

SPARK! Designing an Equity Explorer Prototype



Spark-Seed-Spread INNOVATION INVESTMENT PROGRAM

Powered by the VHA Innovators Network

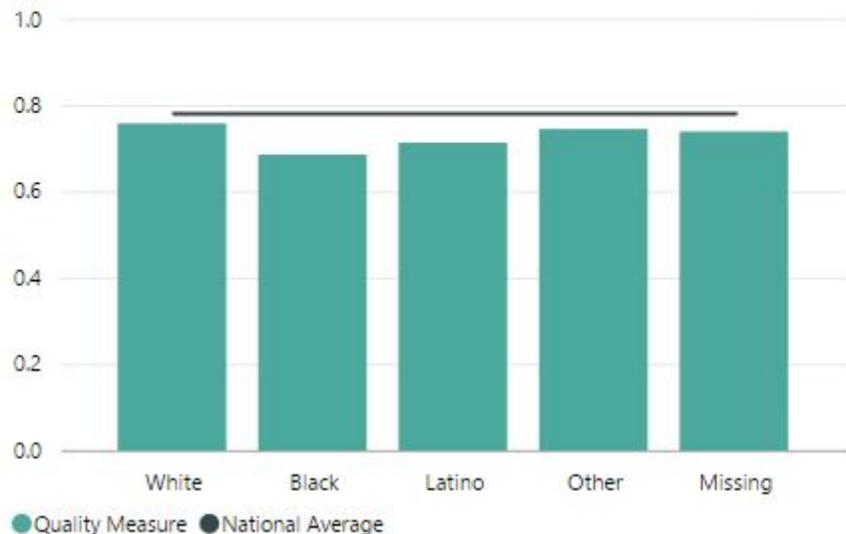
- Seeks innovative concepts and practices from VHA employees
- Invests in employees who wish to recognize and address the system's greatest challenges
- VA Pulse:
<https://www.vapulse.net/community/vha-innovators-network>

Making It Happen

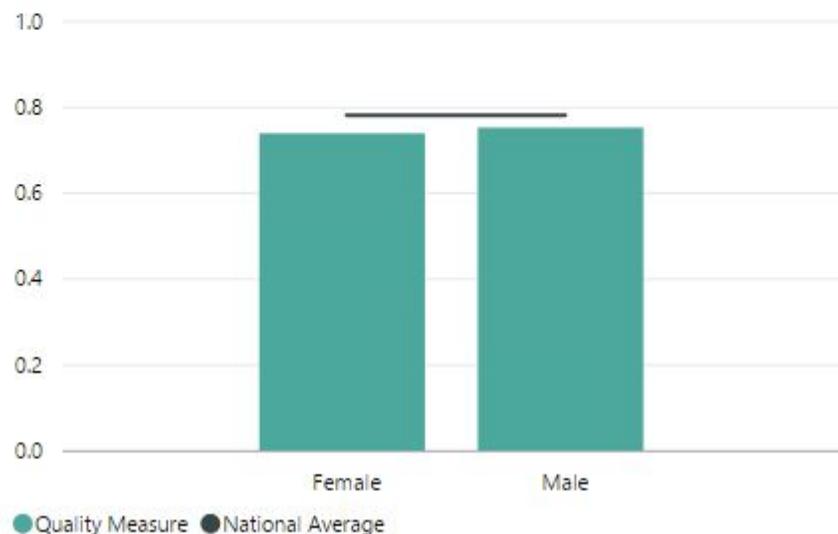
- Designed prototype to complement, not to compete with, existing reporting tools
- Obtained outpatient quality measures from the Electronic Quality Measurement (eQM) Program from April 2017 – May 2018
- Merged eQM data with patient race/ethnicity and rural/urban residence from Corporate Data Warehouse
- Used Microsoft BI to create interactive display of performance across demographic groups and VISNs

eQM Equity Explorer (Version 1.0)

Quality Measure, National Average and Denominator by Race/Ethnicity



Quality Measure, National Average and Denominator by Sex



Quality Measure

Controlling High Blood Pressure

VISN

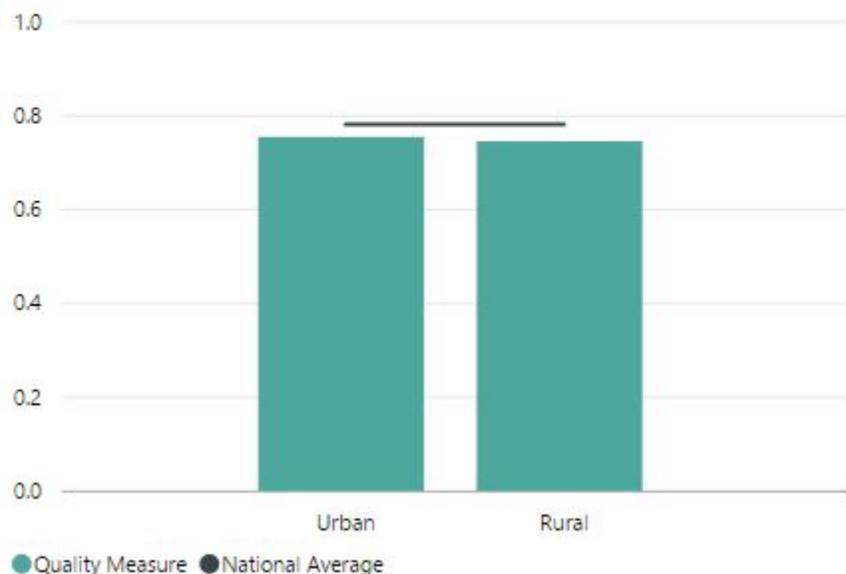
VISN X

Time Frame

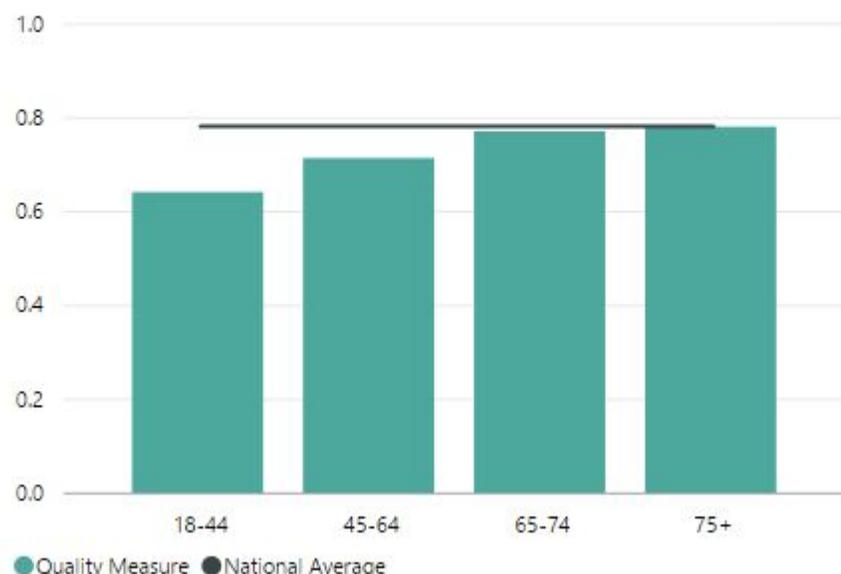
5/1/2018

5/31/2018

Quality Measure, National Average and Denominator by Urban/Rural Residen...



Quality Measure, National Average and Denominator by Age



To see how quality varies across demographic groups, use the dropdown menus to select:

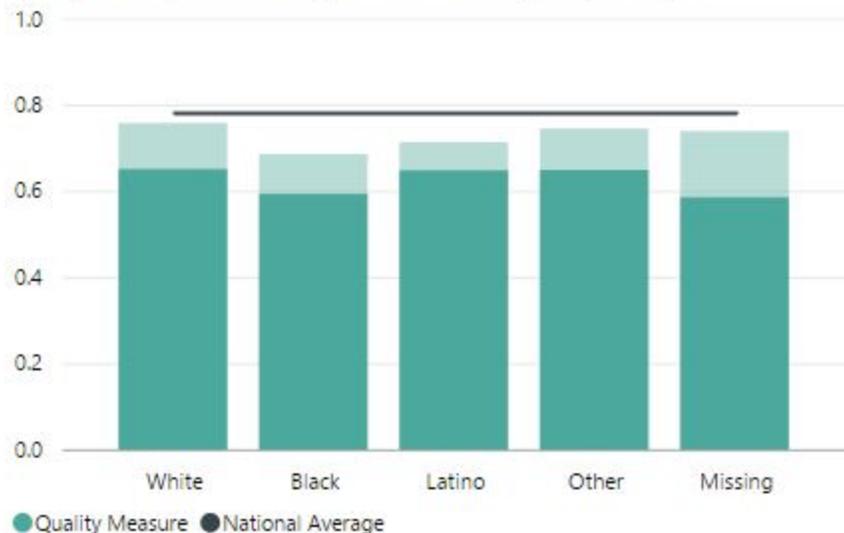
1. An electronic quality measure
2. A specific VISN (or all, for national performance)
3. A time frame

Each graph shows how the quality measure varies across specific demographic groups.

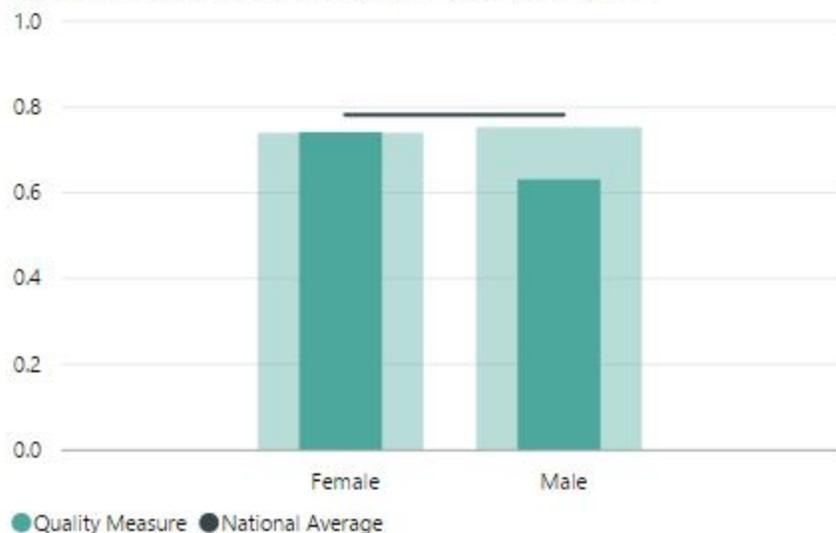
To see how quality varies across combinations of demographic characteristics (e.g., sex and race/ethnicity, urban/rural, and age), click on a bar for a specific demographic group. All other bars will change to highlight the percentage of patients in that demographic group who meet the quality measure.

eQM Equity Explorer (Version 1.0)

Quality Measure, National Average and Denominator by Race/Ethnicity



Quality Measure, National Average and Denominator by Sex



Quality Measure

Controlling High Blood Pressure

VISN

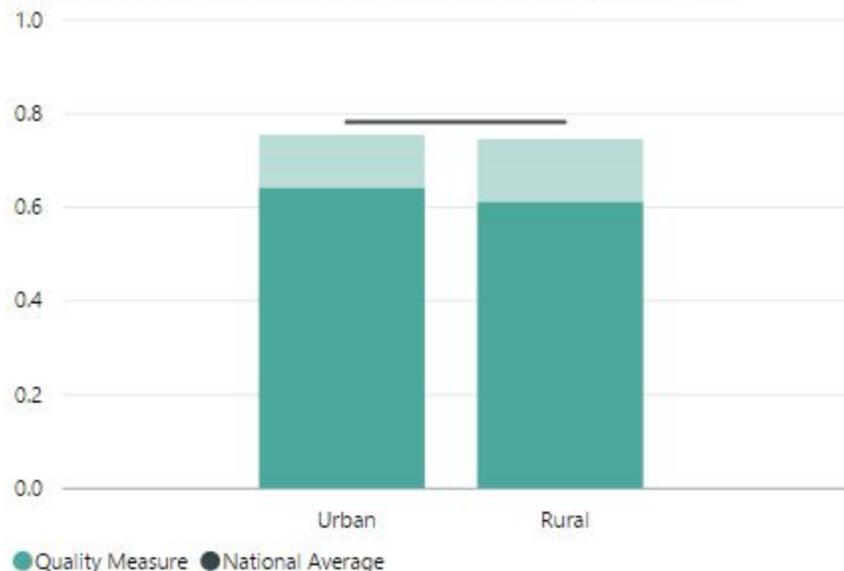
VISN X

Time Frame

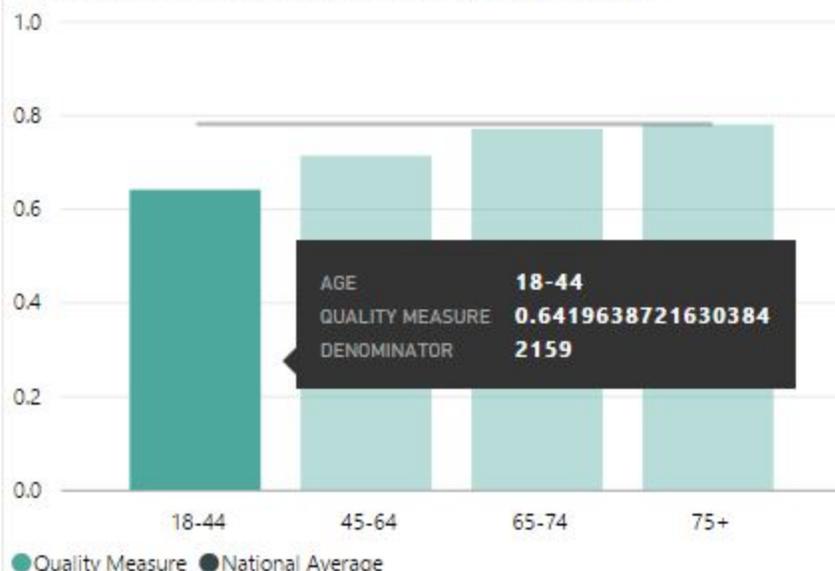
5/1/2018

5/31/2018

Quality Measure, National Average and Denominator by Urban/Rural



Quality Measure, National Average and Denominator by Age



AGE **18-44**
 QUALITY MEASURE **0.6419638721630384**
 DENOMINATOR **2159**

- To see how quality varies across demographic groups, use the dropdown menus to select:
1. An electronic quality measure
 2. A specific VISN (or all, for national performance)
 3. A time frame

Each graph shows how the quality measure varies across specific demographic groups.

To see how quality varies across combinations of demographic characteristics (e.g., sex and race/ethnicity, urban/rural, and age), click on a bar for a specific demographic group. All other bars will change to highlight the percentage of patients in that demographic group who meet the quality measure.

Next Step: Building Equity Explorer 2.0

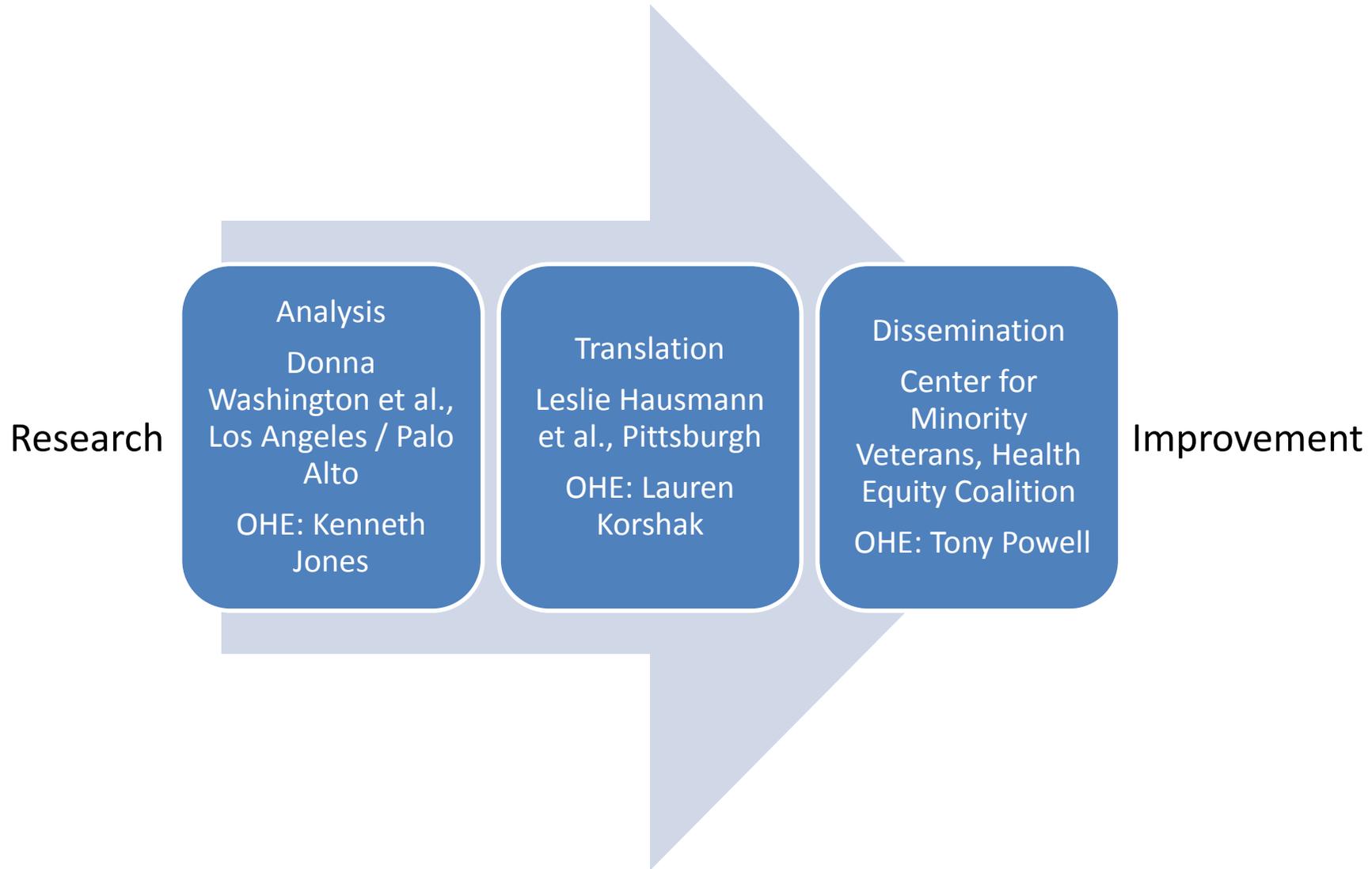
- Moved the prototype to a reporting server with Pyramid Analytics
- Partnering with eQM Program and VA Pittsburgh Data Center to automatize data refresh process
- Applied for SEED funding to expand and refine the dashboard through iterative user-testing at two sites
- **End goal:** Human-centered equity reporting tools that will empower VHA employees to identify and take action to eliminate disparities in the Veterans they serve



HEALTHCARE
QUALITY,
RE-ENVISIONED



OFFICE OF HEALTH EQUITY TEAM

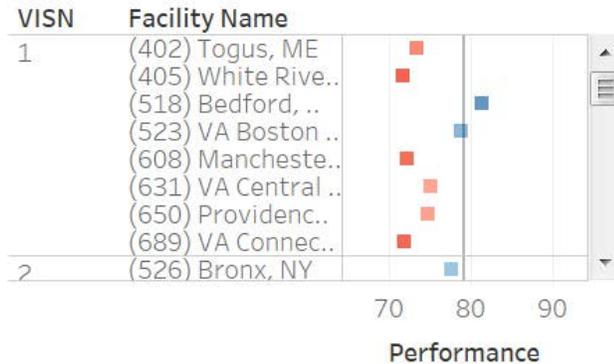
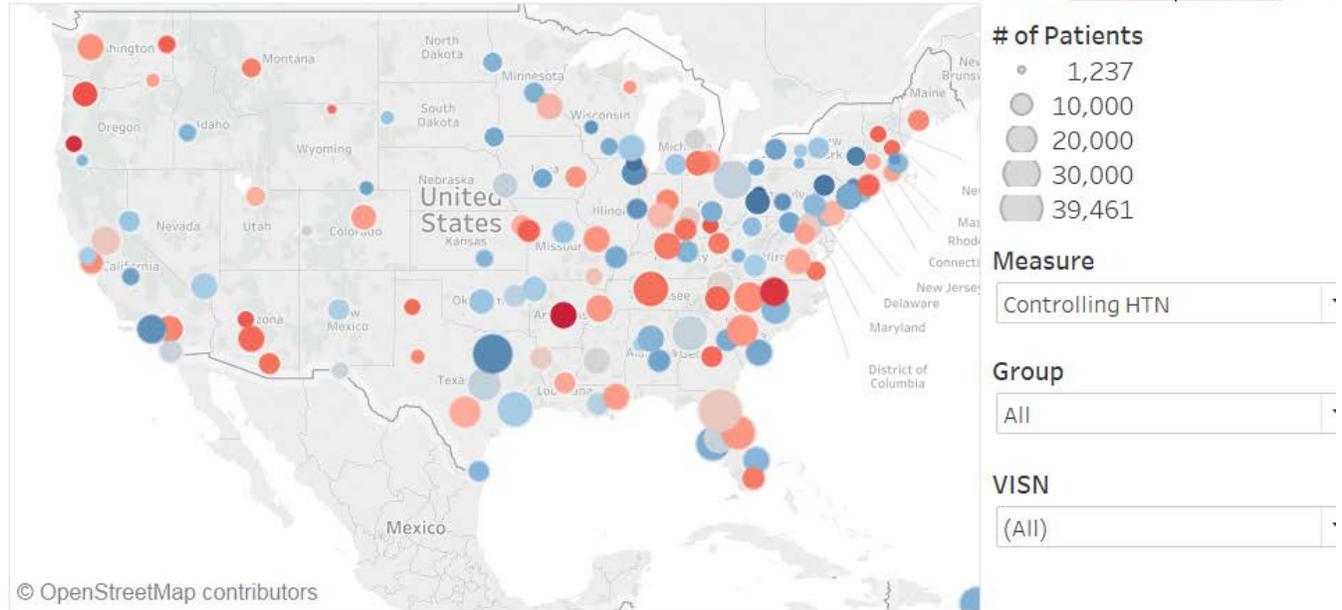




APPLYING EQUITY TO TARGET QI

Equity-Guided Improvement
1: Identify Performance Gap

Controlling HTN, All Veterans



Top: Shows performance of measure across facilities for selected group. Size of circle indicates number of patients in selected group used to make estimate.

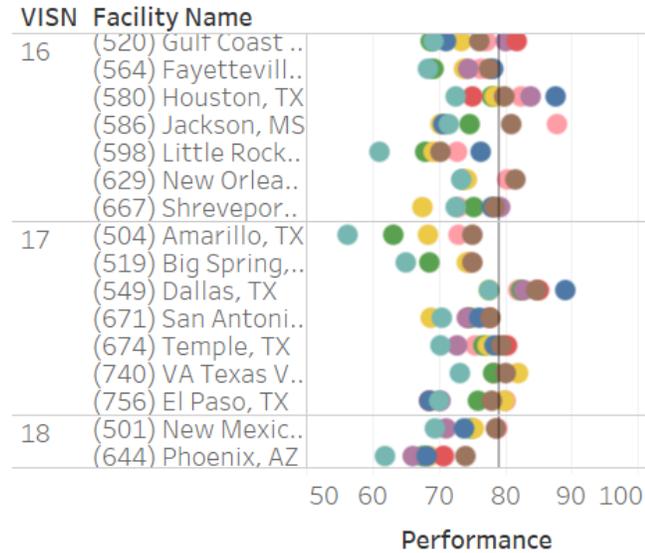
Bottom: Shows same information as map but is easier to sort. Vertical line shows performance of top quartile facilities (Top Quartile Target).



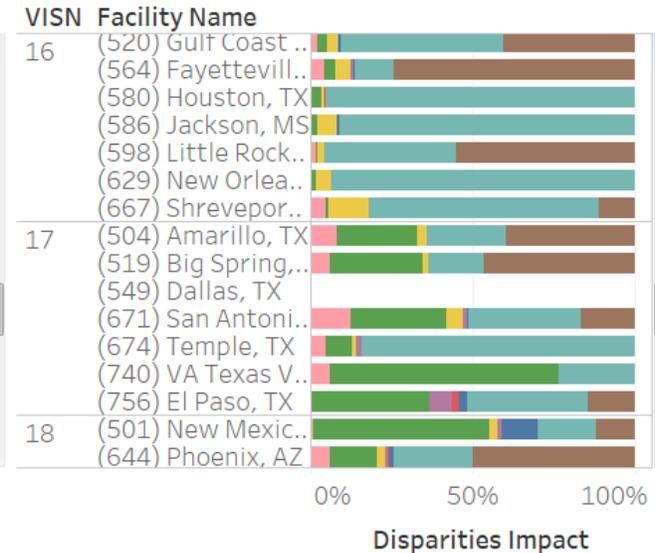
APPLYING EQUITY TO TARGET QI

Equity-Guided Improvement
2: Identify Population Accounting for High % of Performance Gap

Controlling HTN by Race/Ethnicity



Controlling HTN Disparities Impact by Race/Ethnicity



Left: Shows measure by race/ethnicity for each facility. Estimates with <30 patients in a facility are not shown. Vertical line shows performance of top quartile facilities (Target).

Right: Shows how much each race/ethnicity group contributes to performance below Target level. This is calculated as (Difference below Target of a group * size of group) / (Sum of differences below Target * size of all groups). Groups above Target are not included in this calculation. Facilities with overall performance in the top quartile appear as empty bars.

Measure
Controlling HTN

VISN
(All)

Group

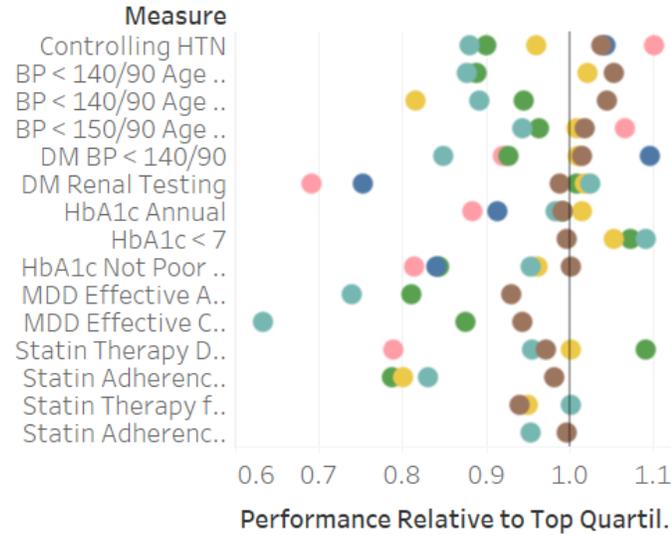
- White
- Black
- AIAN
- Asian
- NHPI
- Multiple
- Hispanic
- Unknown



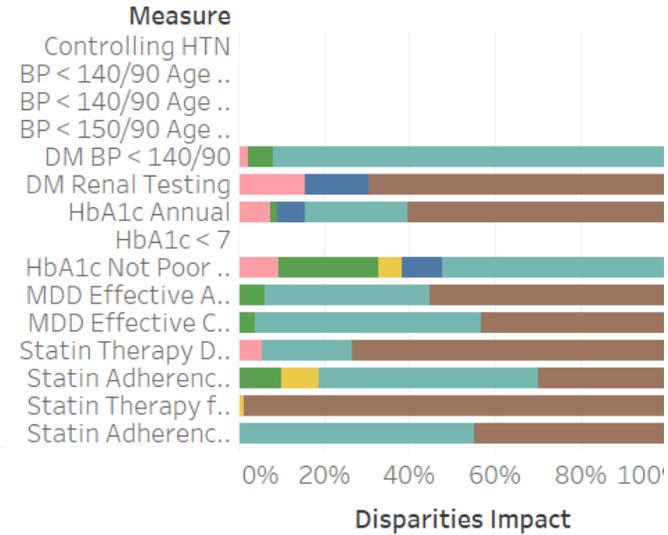
APPLYING EQUITY TO TARGET QI

Equity-Guided Improvement
 3: Consider Other Metrics with a Population Accounting for High % of Performance Gap in a VAMC
 4: Target Population for Improvement

Performance Relative to Top Quartile Target, (528) Western New York, NY



Disparities Impact by Race/Ethnicity, (528) Western New York, NY



Left: Shows all measures by race/ethnicity within one facility. Each measure is shown relative to its Top Quartile Target (Estimate / Target). Relative Performance < 1 (left of vertical line) indicates performance below Target level. Estimates with <30 patients in a facility are not shown.
Right: Shows how much each race/ethnicity group contributes to performance below Target level. This is calculated as (Difference below Target of a group * size of group) / (Sum of differences below Target * size of all groups). Groups above Target are not included in this calculation. Measures with overall performance in the top quartile appear as empty bars.

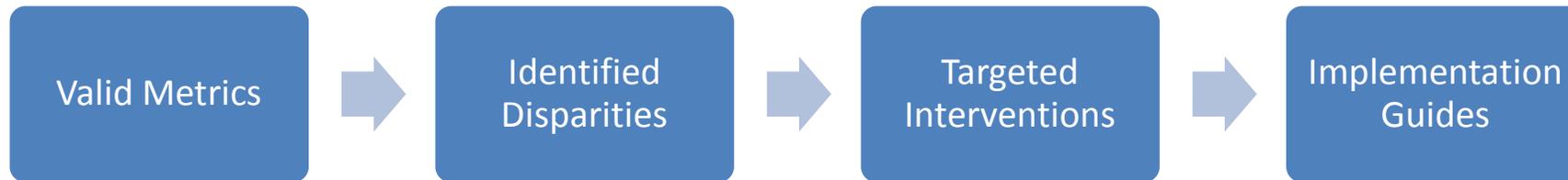
VISN

Facility Name

Group
 White NHPi
 Black Multiple
 AIAN Hispanic
 Asian Unknown



CHALLENGE TO HSR&D





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