

Measuring Equity

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A little structure for this presentation

- Defining the problem
 - Health disparities in populations and mismatch in their health care professionals
- Health equity in a Donabedian framework
- Recommended actions:
 - ***Measure, track, and improve***

The problem: populations

Addressing rural myths

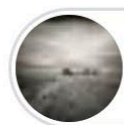
**Documenting rural and racial
disparities**

Rural myths and biases....

 Images for images rural america :



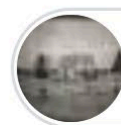
rural areas



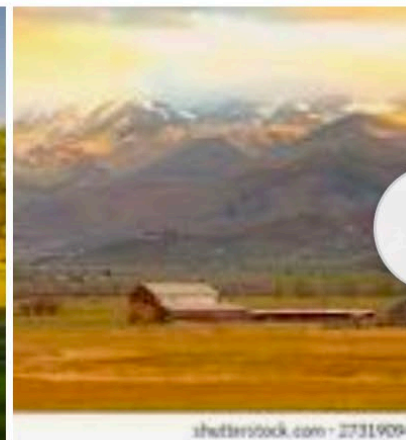
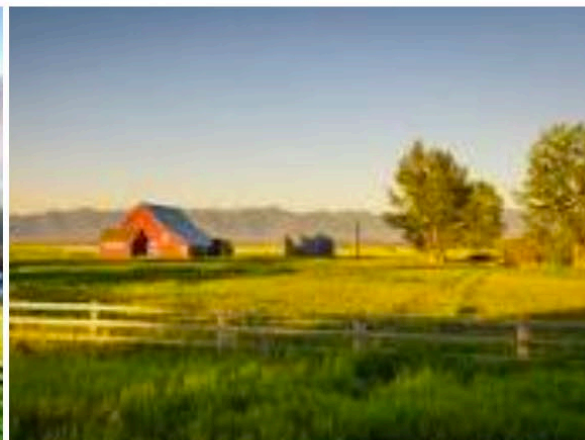
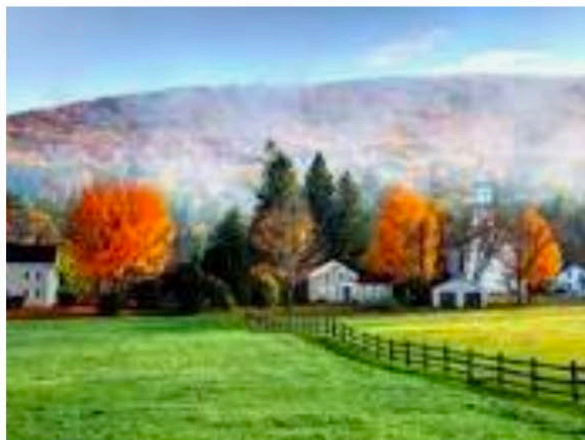
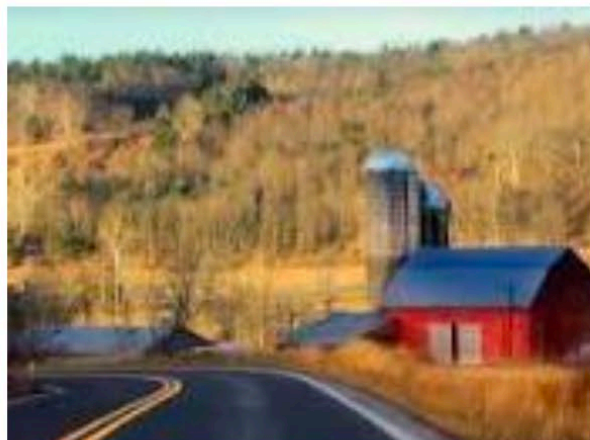
photography



rural communities



farmhouse



shutterstock.com - 273190941

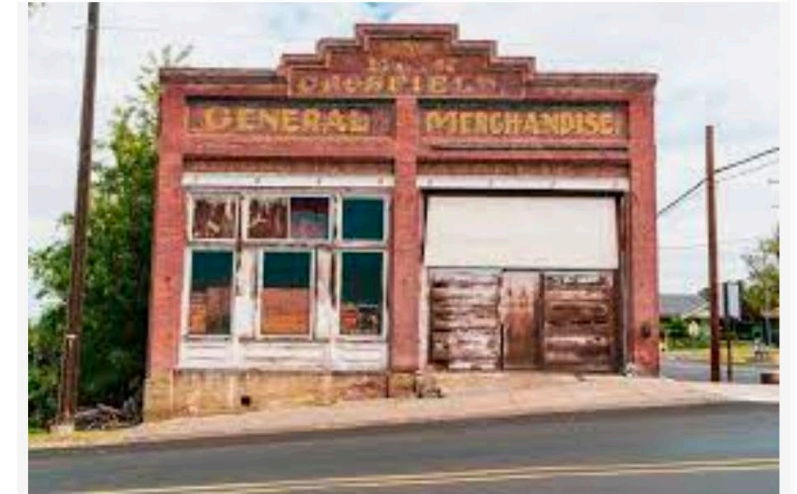
Rural myths and biases...



Rural America is the new 'inner city ...
houstonherald.com



Rural American Poverty ...
inthesetimes.com

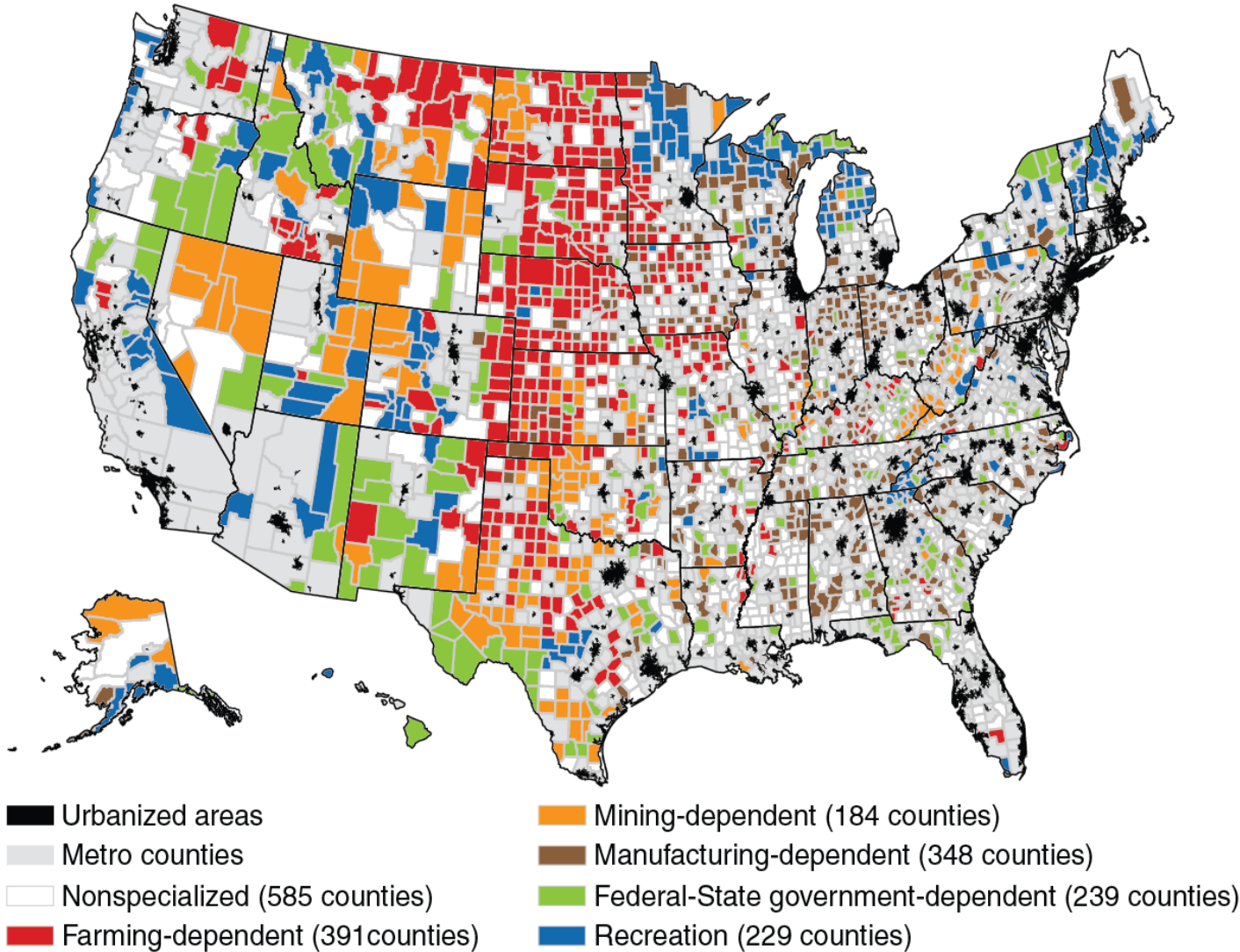


Many Rural Americans Are Still "Left ...
irp.wisc.edu

Rural America is economically diverse

Agriculture and recreation are seasonal industries.

Mining and agriculture experience global price volatility

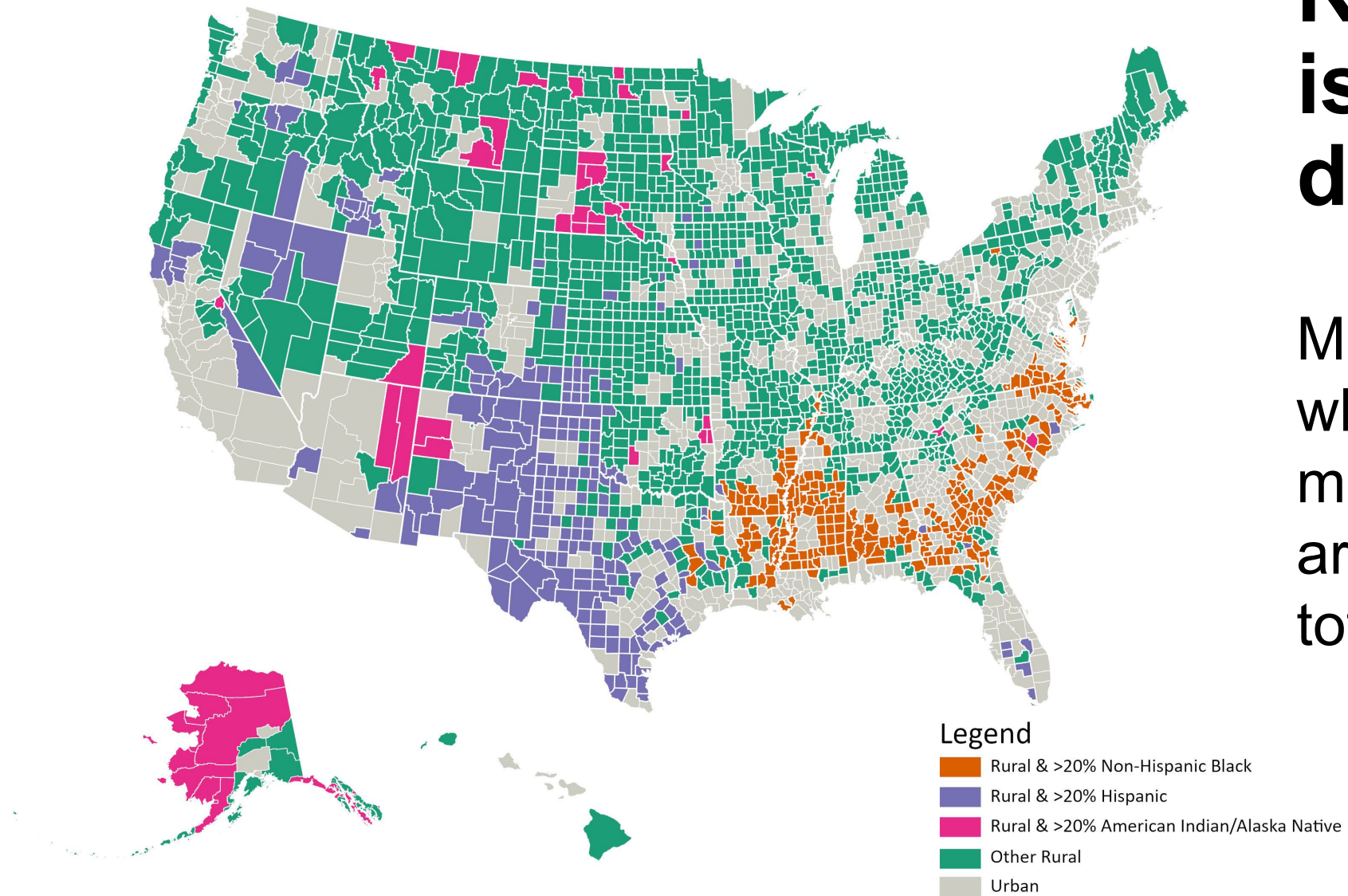


Note: The 2015 county typologies use data from 2010-2012.

https://www.ers.usda.gov/webdocs/charts/81423/December16_Feature_Kusmin_fig01.png?v=9934.5

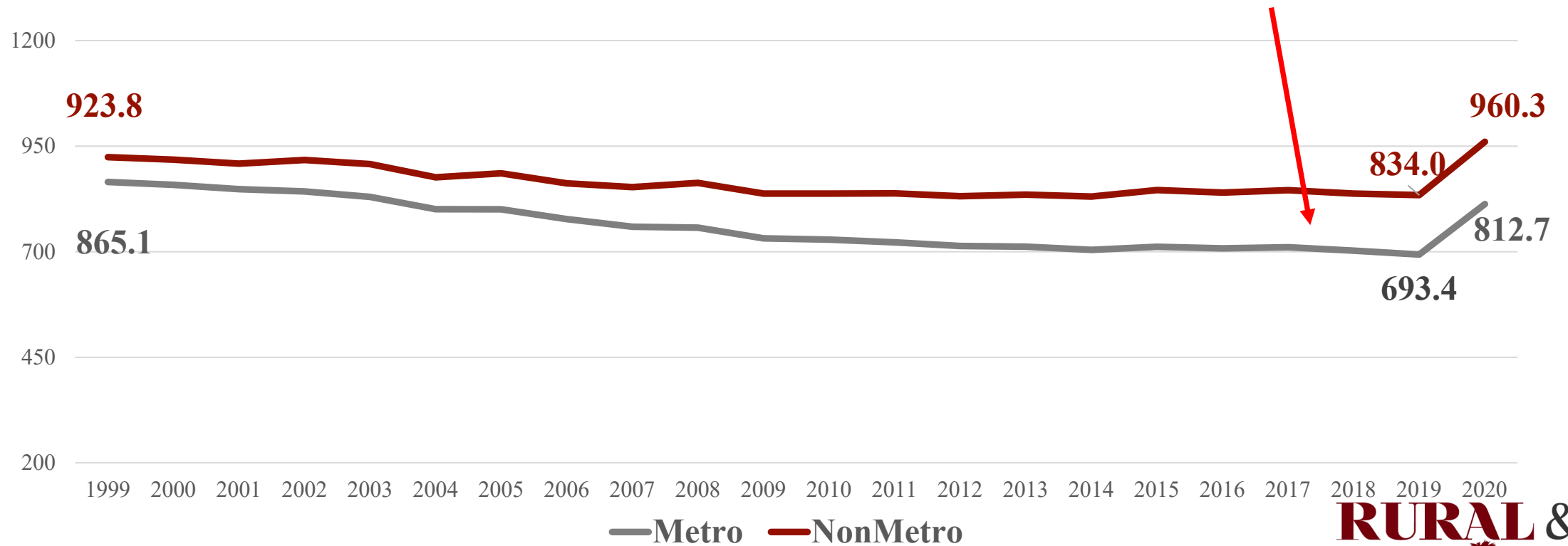
Rural America is racially diverse

Map shows counties where indicated minoritized populations are more than 20% of total population



COVID erased 20 years of rural mortality improvement

Age-adjusted mortality per 100,000 residents. by rurality of county of residence

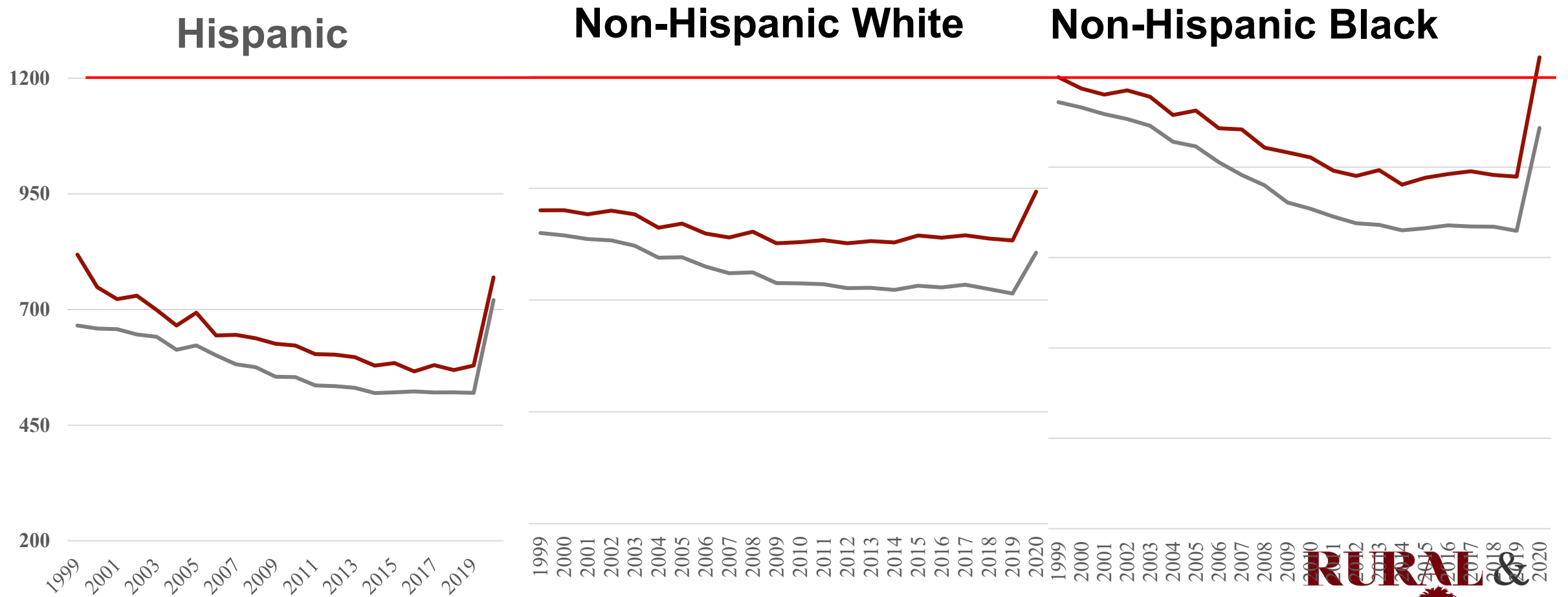


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Source: Author's analysis, CDC Wonder

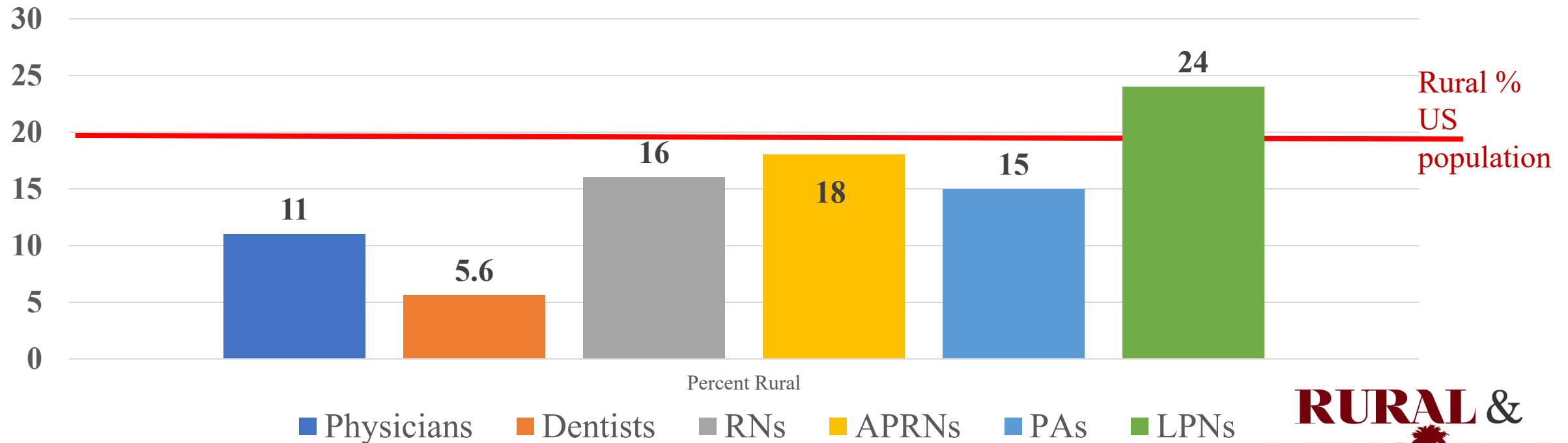
Dual disadvantage: rural + minoritized

Age-adjusted mortality per 100K residents. by rurality & race/ethnicity



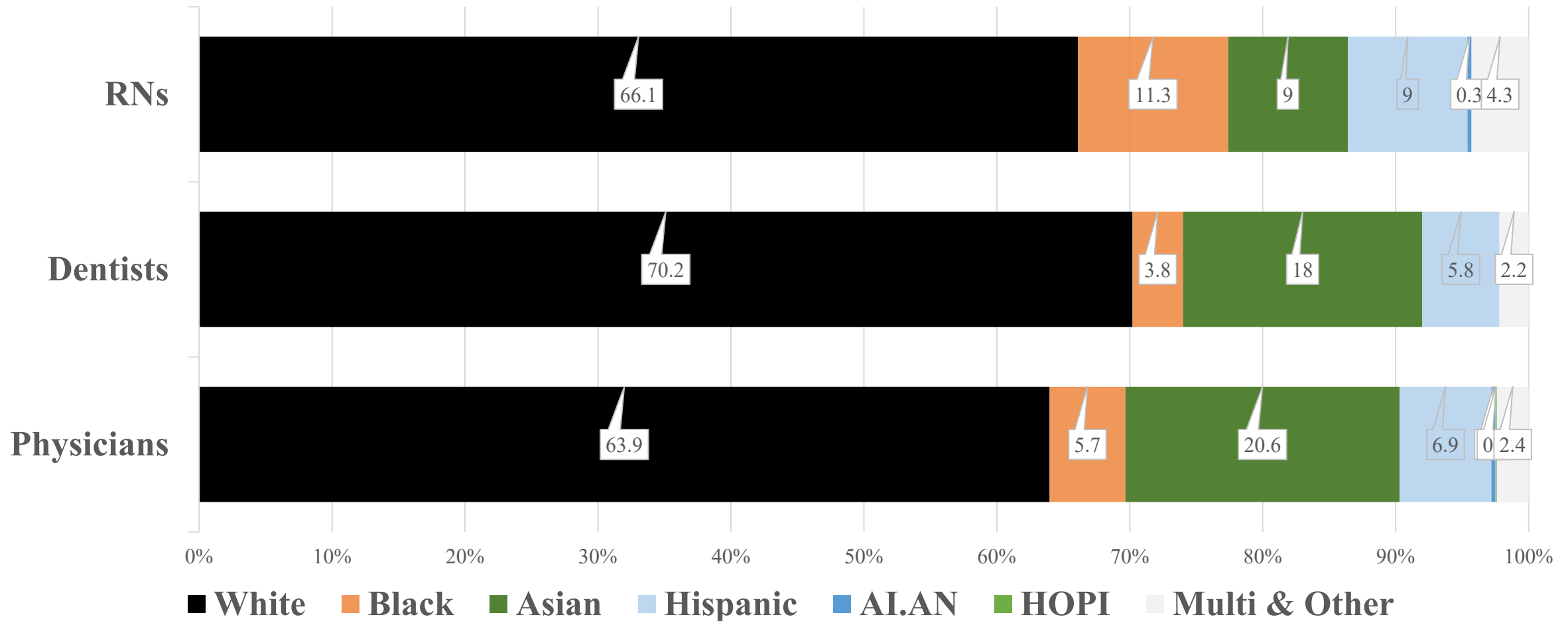
Part of the problem: practitioner location

Proportion of Practitioners Located in Rural Areas



Part of the problem: practitioner culture

Practitioners by race/ethnicity



Assumptions

- A better distribution of practitioners, both culturally and geographically, will lead to better population health
- Title VII funding can be used to influence these outcomes

Thus:

- How do we use data and metrics to be sure we are moving in the right direction?

Equity does not mean “equal”

- **Recipients**

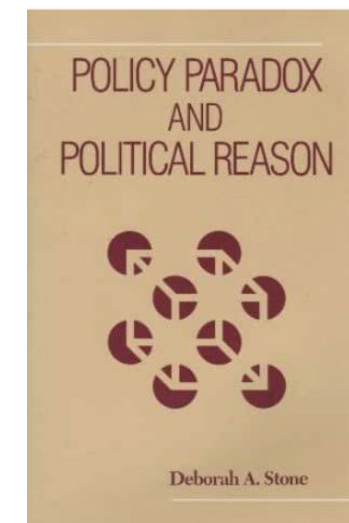
- What categories of person should get the resource being allocated?
- Who sets the boundaries for the categories?

- **The thing itself**

- Undergraduate medical education
- Residency

- **Process**

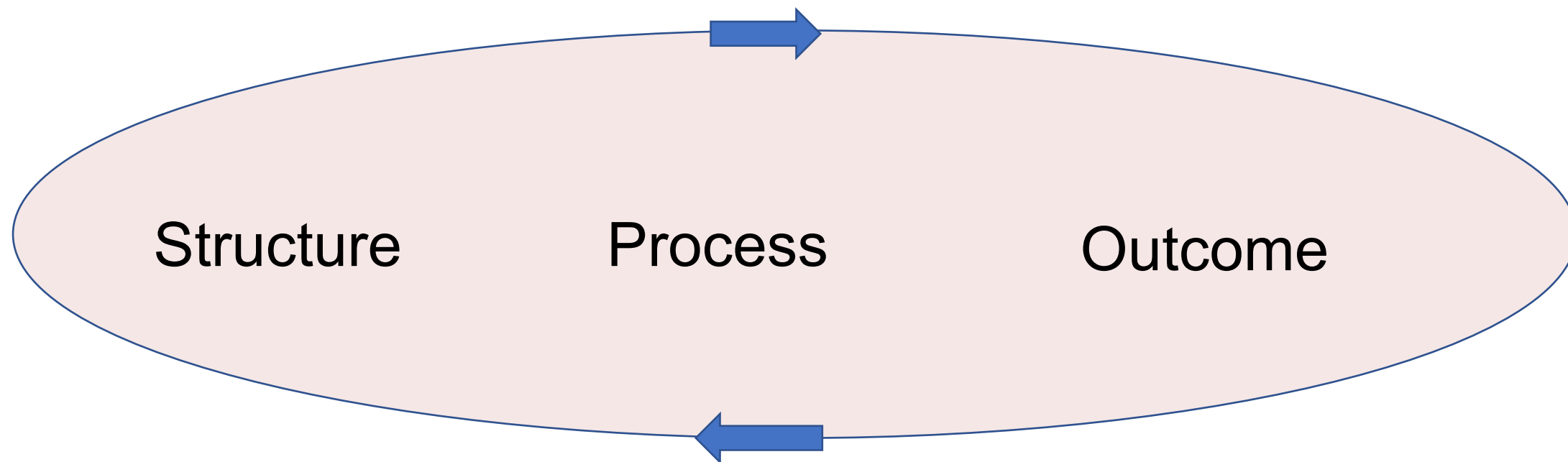
- Competition
- Lottery



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Measuring Equity

Donabedian's quality model



Structure

- What is the composition of the institution's faculty?
- What policies and procedures are in effect to ensure diversity in faculty composition?

Structure: academic roles

Women faculty

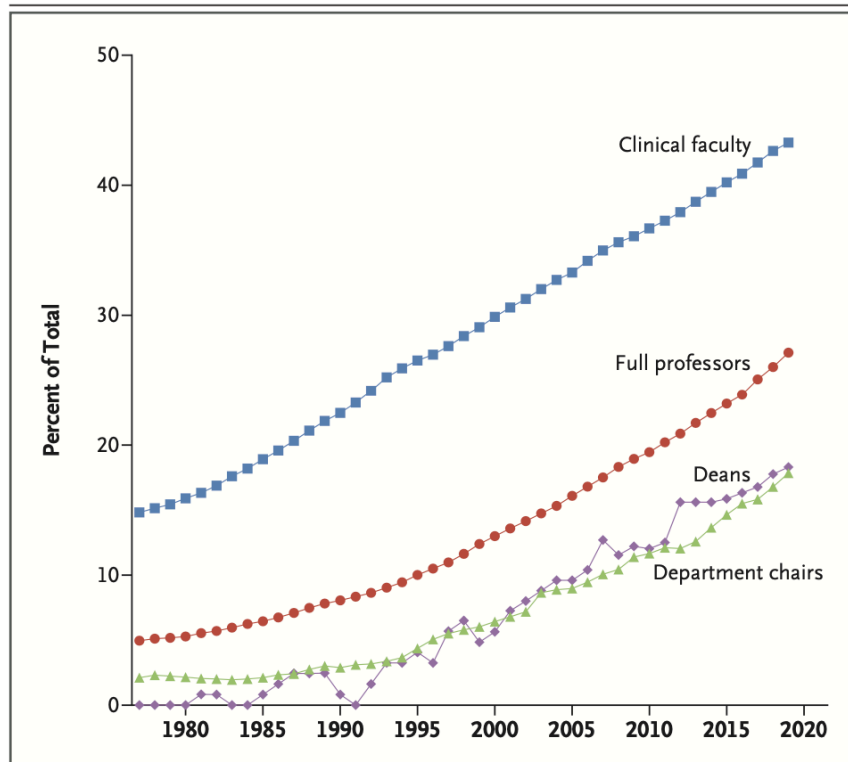


Figure 1. Longitudinal Trends of Female Clinical Faculty, Full Professors, Department Chairs, and Medical School Deans.

The distribution of female clinical faculty, full professors, department chairs, and medical school deans is shown as a percentage of the total in each group for the period from 1977 through 2019. The y axis extends to 50%.

URM faculty

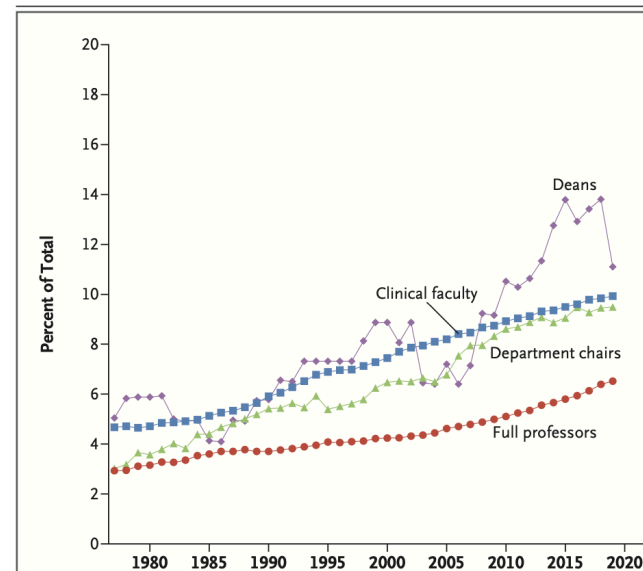


Figure 2. Longitudinal Trends of URM Clinical Faculty, Full Professors, Department Chairs, and Medical School Deans.

The distribution of underrepresented in medicine (URM) clinical faculty, full professors, department chairs, and medical school deans is shown as a percentage of the total in each group for the period from 1977 through 2019. According to the Association of American Medical Colleges definition, URM status refers to persons identifying as Black, Hispanic, non-Hispanic Native Hawaiian or other Pacific Islander, or non-Hispanic American Indian or Alaska Native.¹⁵ Owing to low representation, the y axis extends to 20%.

- Clinical faculty
- Lower academic rank
- Less authority

Structure & Title VII metrics

From January 2023 ACTPCMD report:

“encourage funding of applicants with diverse faculty.”

- Tweak: “encourage funding of applicants which
 - [1] have diverse faculty and
 - [2] have policies in place to enhance retention and promotion of female, URM and rural-based faculty.”

Measuring structure

- **Written policies & procedures for retention / promotion:**
 - Mentoring, almost anything other than “we toss ‘em in there”
 - Technological support for faculty in rural settings (ECHO, other models)
- **Turnover**
 - Mean time in position for targeted faculty
- **National and regional metrics**
 - Nationally, 5% of physicians nationally identify as black; 6% in South Carolina.
 - Nationally, 12.6% of population identifies as NH black; SC 26.7%.

Structure

- **Location**
 - Rural?
 - Really rural?
 - No “helicoptering”
- **Embeddedness**
 - Ongoing commitment
- **Not urban reclassified**

<https://www.ruralhealthinfo.org/am-i-rural>

The screenshot displays the RHIhub website header with the logo and navigation menu. The main content area features the 'Am I Rural? - Tool' with a search input field, a 'Locate' button, and a map of the central United States. The map shows states including Montana, Wyoming, North Dakota, South Dakota, and Nebraska, with cities like Missoula, Great Falls, Billings, and Cheyenne marked. A 'Help' link is visible next to the tool title.

RHIhub
Rural Health Information Hub

[Updates & Alerts](#) | [Ab](#)

Online Library ▾ Topics & States ▾ Rural Data Visualizations ▾ Case Studies & Conversations ▾ Tools for Success ▾

Am I Rural? – Tool [Help ?](#)

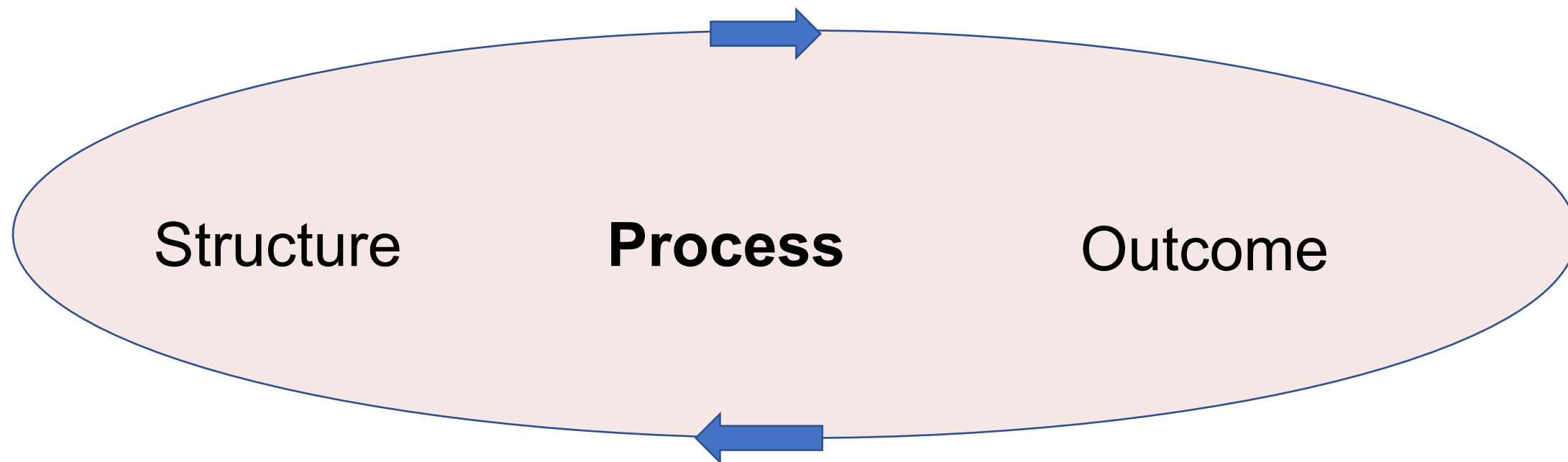
Enter address

Determine whether your specific location is considered rural based on [various definitions of rural](#), including definitions that are used as eligibility criteria for federal programs.

Map showing locations in Montana, Wyoming, North Dakota, South Dakota, and Nebraska. Cities labeled include Missoula, Great Falls, Billings, Cheyenne, and Salt Lake City.

Measuring Equity

Donabedian's quality model



Process measures: Faculty

- **Recruiting faculty**
 - How many new hires per year?
 - Applicant pool versus hired
- **Retaining faculty**
 - Are support mechanisms actually used? Evaluated annually?
 - Is organizational culture assessed? How often? By whom?
 - Turnover across divisions
 - Turnover by gender, URM
- **Change over time**

Process measures: learners

- **Are all potential learners invited to apply?**
 - Web presence & tone
 - Do you recruit from HBCU/HSI's?
 - Reaching out to rural?

Sidebar: rural recruiting by RN-to-BSN programs

- Rural nurses are disproportionately ADN (54% versus 42%)
- Schools of nursing with RN to BSN programs:
 - 38% reach out to rural learners
 - 25% don't know where applicants come from and thus can't guess rural representation in student body
 - 58% do not offer rural-specific content in their curricula
 - 64% could not indicate whether graduates practice in urban, suburban or rural areas

Process measures: learners

- **Are all applicants treated “equally”?**
 - Uniform admission requirements (GRE, MCAT)?
 - More consideration for “prestige” undergraduate institutions?
 - Extra “points” for activities that are dependent on financial resources?
 - Alumni preference?

Opportunities for some...

Financial Support & Housing

Applicants should be eager to immerse in research and self-sufficient enough to arrange their own travel. [REDACTED] participants will receive a living allowance of \$400.00 per week for a total of \$4000 to help pay for expenses while participating in the SURP. Please note: this living allowance is not tax-free and taxes will be deducted if required. [REDACTED] does not offer meal tickets for the 10-week program. Meals are the responsibility of the student.

**\$400 / week =
\$10.00/hour**

**If the student is not
local, housing is \$2,500**

Process measures: learners

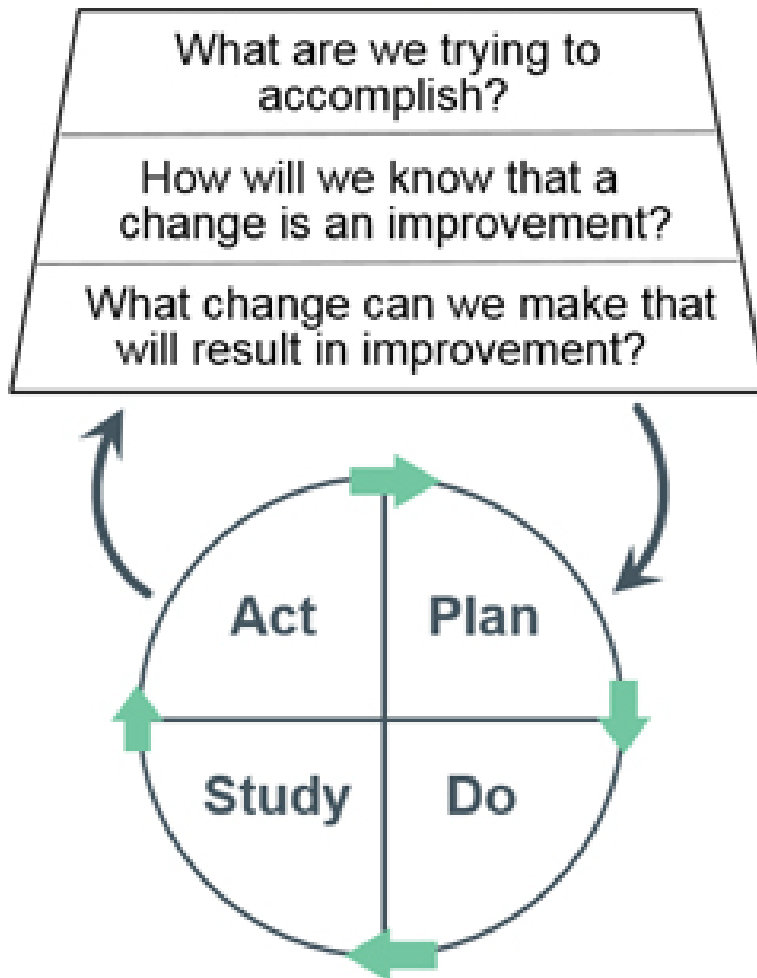
- **Financial & social support of learners**
 - Application fees
 - “Hidden curriculum”
 - Faculty culture
- **Tracking learner success and placement**
 - Graduation rates
 - Match rates
 - Employment within specified period of time
- **All of the above over time**

Process measures: content

- **Does the institution offer:**
 - Courses or integrated curricula addressing health disparities
 - Interprofessional education
 - Learning opportunities in underserved areas
- **How has this trended over time?**

Why measures matter

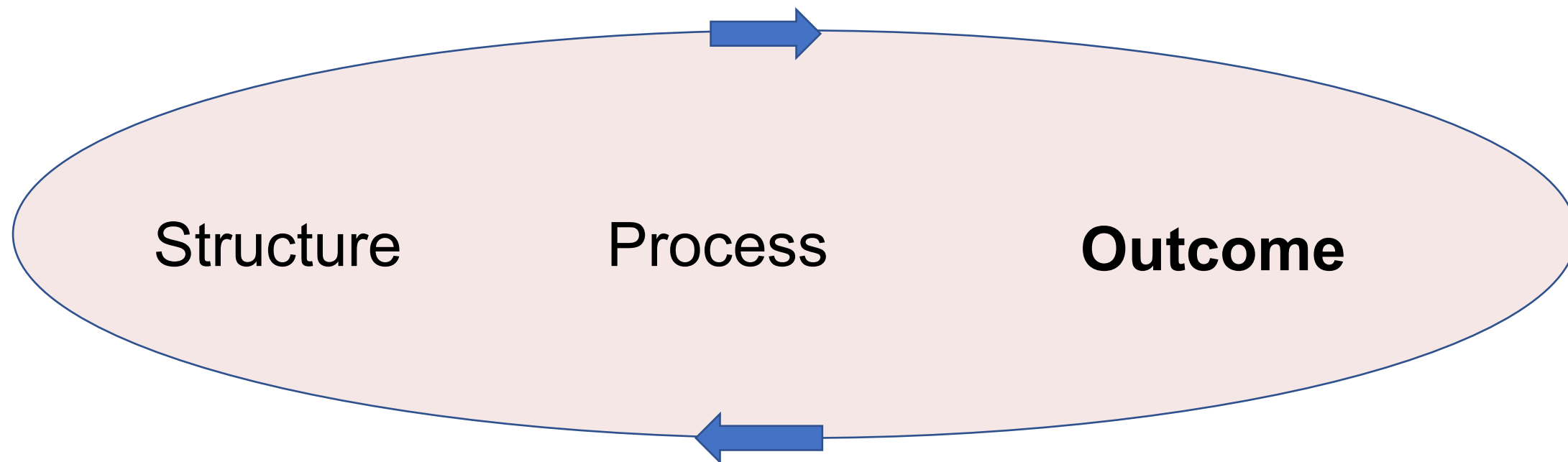
Model for Improvement



- The PDSA cycle: you can't improve unless you know where you are and where you wish to be

Measuring Equity

Donabedian's quality model



Outcomes

- **Faculty**
 - Retention and promotion
- **Learners**
 - Recruitment outcomes
 - Graduation rates
 - Placement of graduates

Learner recruitment outcomes

- Demographic characteristics of applicants versus pool
 - Is the pool the state in which the institution is located?
- Demographic characteristics of accepted versus applicants

Outcomes: placement

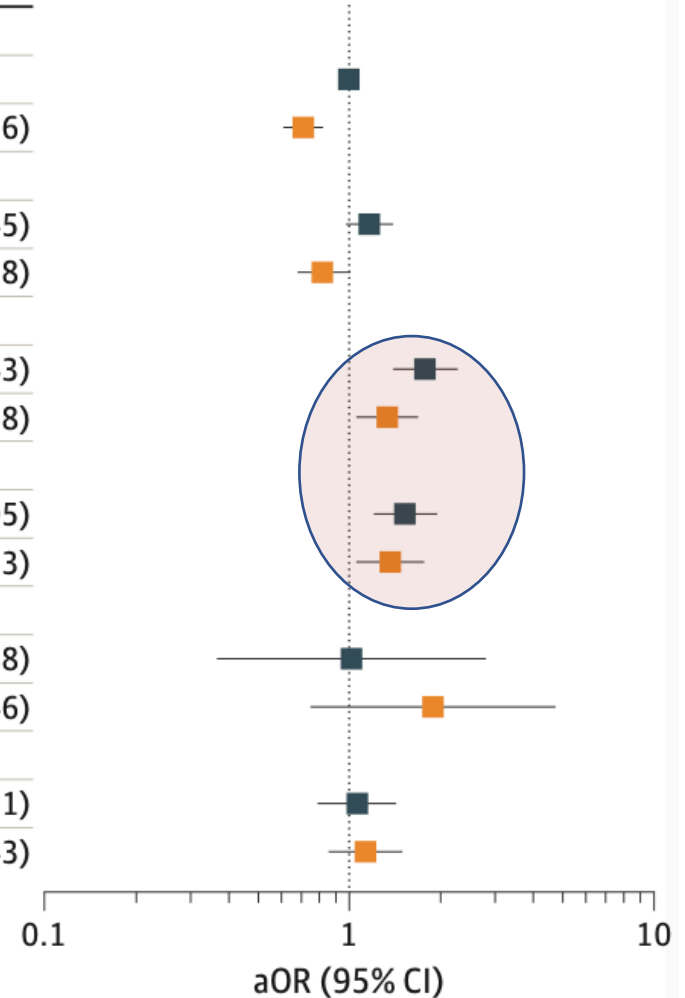
Focusing on the racial/ethnic:

- Black and Hispanic medical students, both male & female, less likely to place in residency even after controlling for USMLE Step 2



B Odds of being unplaced by sex and racial/ethnic groups, adjusted for USMLE step 2 scores

Group	aOR (95% CI)
White	
Male	Reference
Female	0.65 (0.56-0.76)
Asian	
Male	1.22 (1.02-1.45)
Female	0.81 (0.66-0.98)
Black/AA	
Male	1.90 (1.49-2.43)
Female	1.33 (1.06-1.68)
Hispanic	
Male	1.62 (1.28-2.05)
Female	1.34 (1.03-1.73)
AIAN/HNPI	
Male	1.04 (0.38-2.88)
Female	1.77 (0.70-4.46)
Multiracial	
Male	1.13 (0.84-1.51)
Female	1.08 (0.82-1.43)



Ouch

Health Workforce Policy Brief

September 2018



THE CECIL G. SHEPS CENTER FOR
HEALTH SERVICES RESEARCH

Carolina Health Workforce Research Center
<http://www.healthworkforce.unc.edu>

Title VII funding not associated with practice outcomes in cross-sectional study of physicians graduating medical school between 2004-2010

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Outcomes: job placement

- **National Provider Index**
 - All HIPPA covered practitioners
 - Large-scale tracking studies (e.g., Nguyen et al 2022)
- **Survey of graduates**
 - Alumni affairs at your school?
 - Development office at your school/hospital?

Wrapup: action items for equity

- **Review current metrics for application and grant reporting**
- **Implement and test new metrics**
 - More measures with a time element (e.g., turnover)
 - HSRA assessment of reported data over time
- **Persist**

Disclosures

- This presentation has been approved by Sam the rural health advoCATE.



Thanks!

- Our web site:
 - rhr.sph.sc.edu
- Core funding from:
 - Federal Office of Rural Health Policy, Health Resources & Services Administration, USDHHS
- Contact:
 - jprobst@sc.edu



The Rural Health Research Gateway provides access to all publications and projects from eight different research centers.

Visit our website for more information.

ruralhealthresearch.org

Sign up for our email alerts!

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