

Health Equity: The Basics of Bias in Diabetes in NH/PI

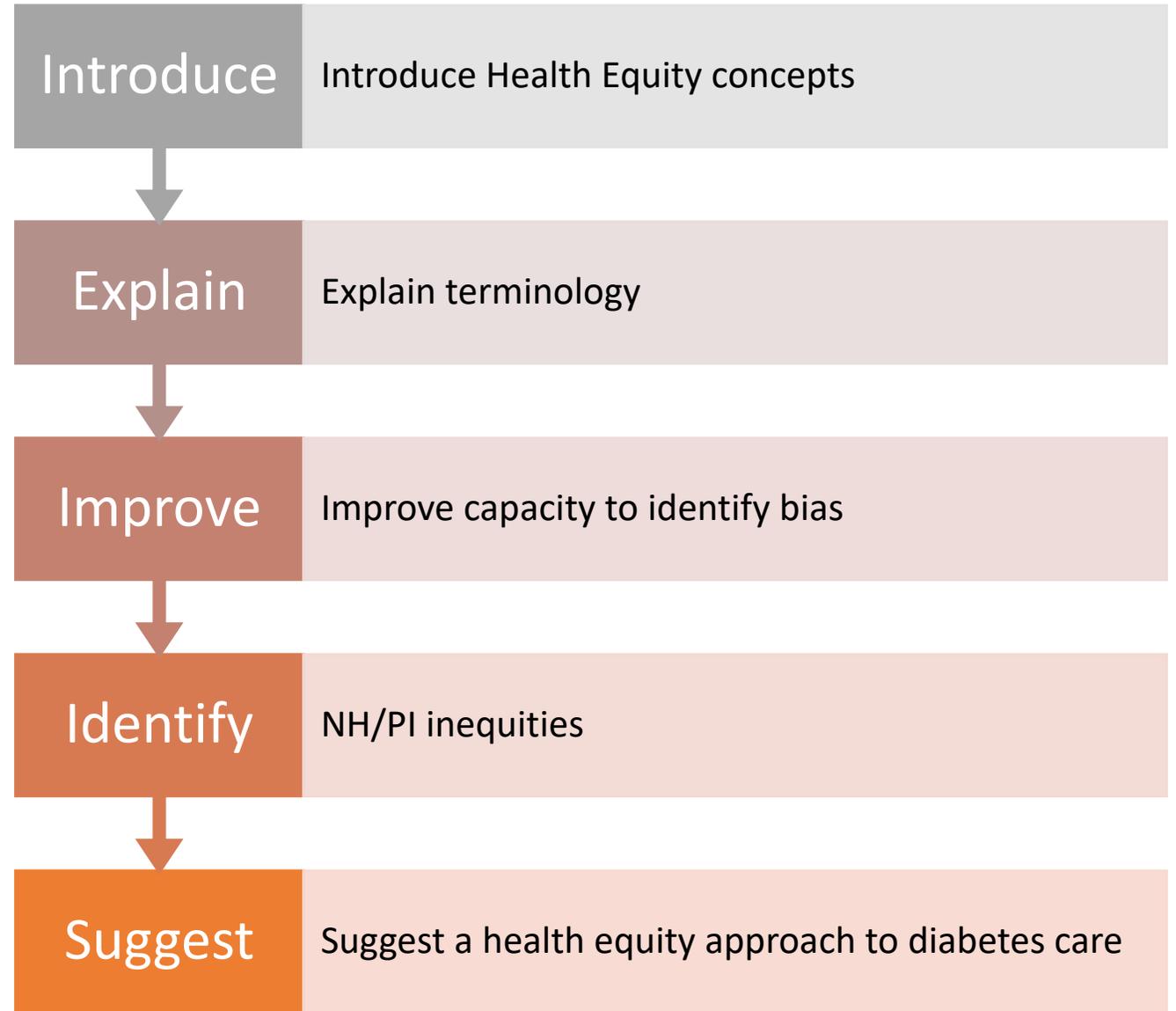
Raynald Samoa MD

City of Hope

Land Acknowledgement

I formally recognize the original stewards of the lands our institutions stand on and their connection to it. The Gabrielino/Tongva tribe are recognized as the original inhabitants of these lands and their absence in this space speaks to the violent history they endured including their forced relocation, enslavement, and exposure to Old World diseases. This led to the rapid collapse of Tongva society ways and their eradication.

Objectives



Agreements

All questions
are welcome

The intent is
to learn

No harm
space

Definition: Health Equity

“Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.”

<https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity-.html>

Definition – Health Disparity

- “A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”

<https://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>

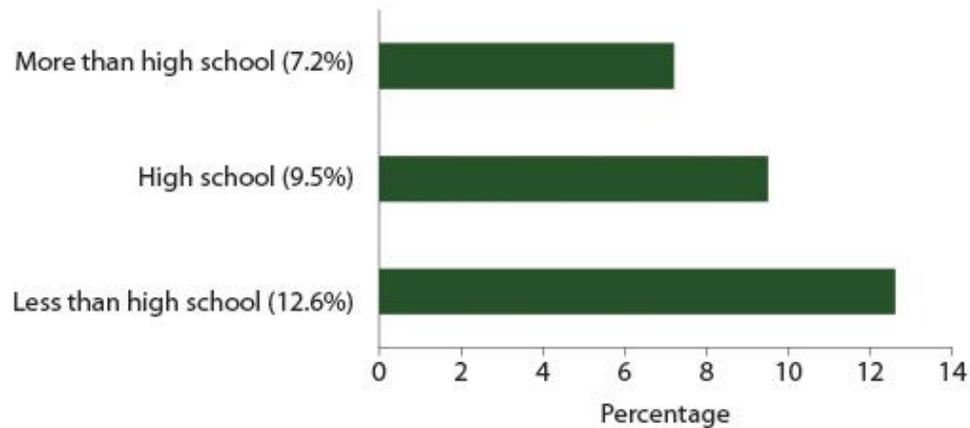
U.S. Department of Health and Human Services. The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I report: Recommendations for the framework and format of Healthy People 2020 [Internet]. Section IV: Advisory Committee findings and recommendations.

Examples of Health Disparity

<https://www.cdc.gov/diabetes/library/reports/reportcard.html>

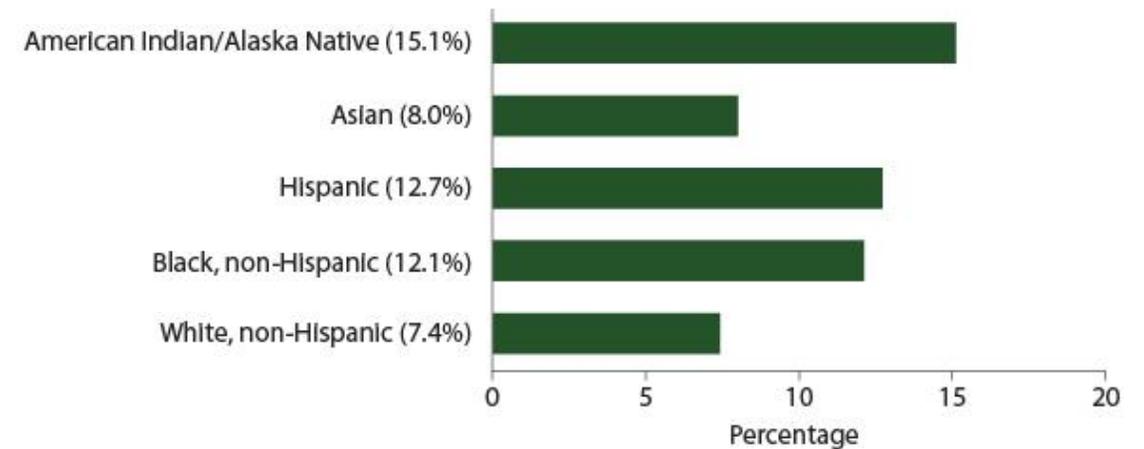
Percentage of US Adults Aged 18 or Older with Diagnosed Diabetes, by Education Level, 2013-2015

2017 Diabetes Report Card



Percentage of US Adults Aged 18 or Older with Diagnosed Diabetes, by Racial and Ethnic Group, 2013-2015

2017 Diabetes Report Card



***Age-adjusted percentage of persons 18 years of age and over with diabetes in Native Hawaiian/Pacific Islanders, 2018 was 19.8%**

Examples of Health Disparity

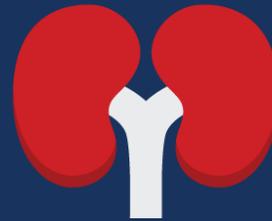
Diabetes disproportionately affects racial/ethnic minority populations.

- Compared with white adults, the risk of having a diabetes diagnosis is
 - **77% higher among African Americans,**
 - 66% higher among Latinos/Hispanics, and
 - 18% higher among Asian Americans (1).

1. Diabetes Care 2016 May; 39(5): 743-749. <https://doi.org/10.2337/dc15-13231>.

Examples of Health Disparities in Diabetes

African Americans, Native Americans and non-White Hispanics have:



3-7X

incidence of kidney and liver failure



2-4X

the rate of amputations than Whites

Examples of Health Disparity

- Pacific Islander women with diabetes had 2 x a higher risk of MI than Whites with diabetes

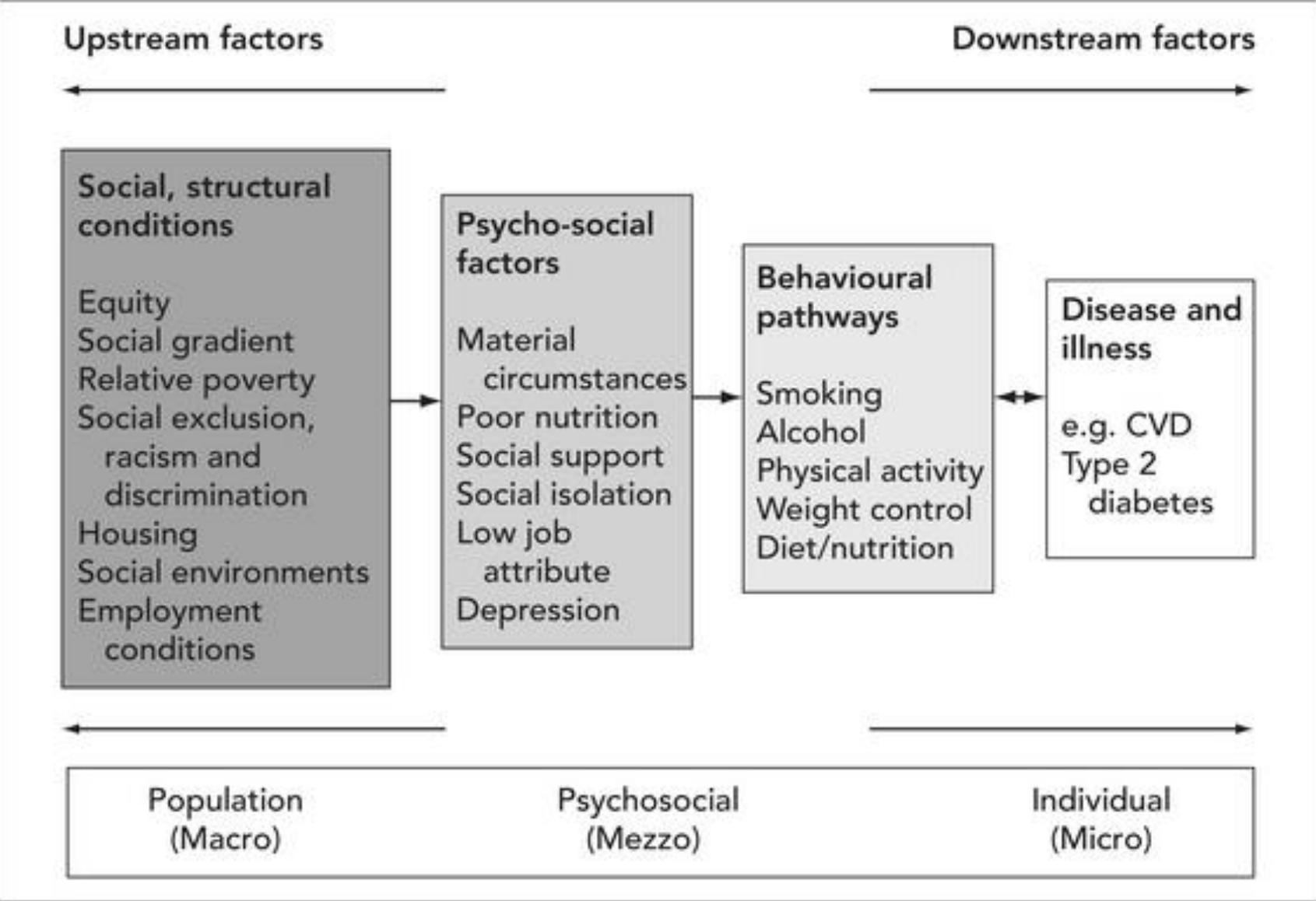
Kanaya AM, Adler N, Moffet HH, et al. Heterogeneity of diabetes outcomes among asians and pacific islanders in the US: the diabetes study of northern california (DISTANCE). *Diabetes Care*. 2011;34(4):930-937. doi:10.2337/dc10-1964

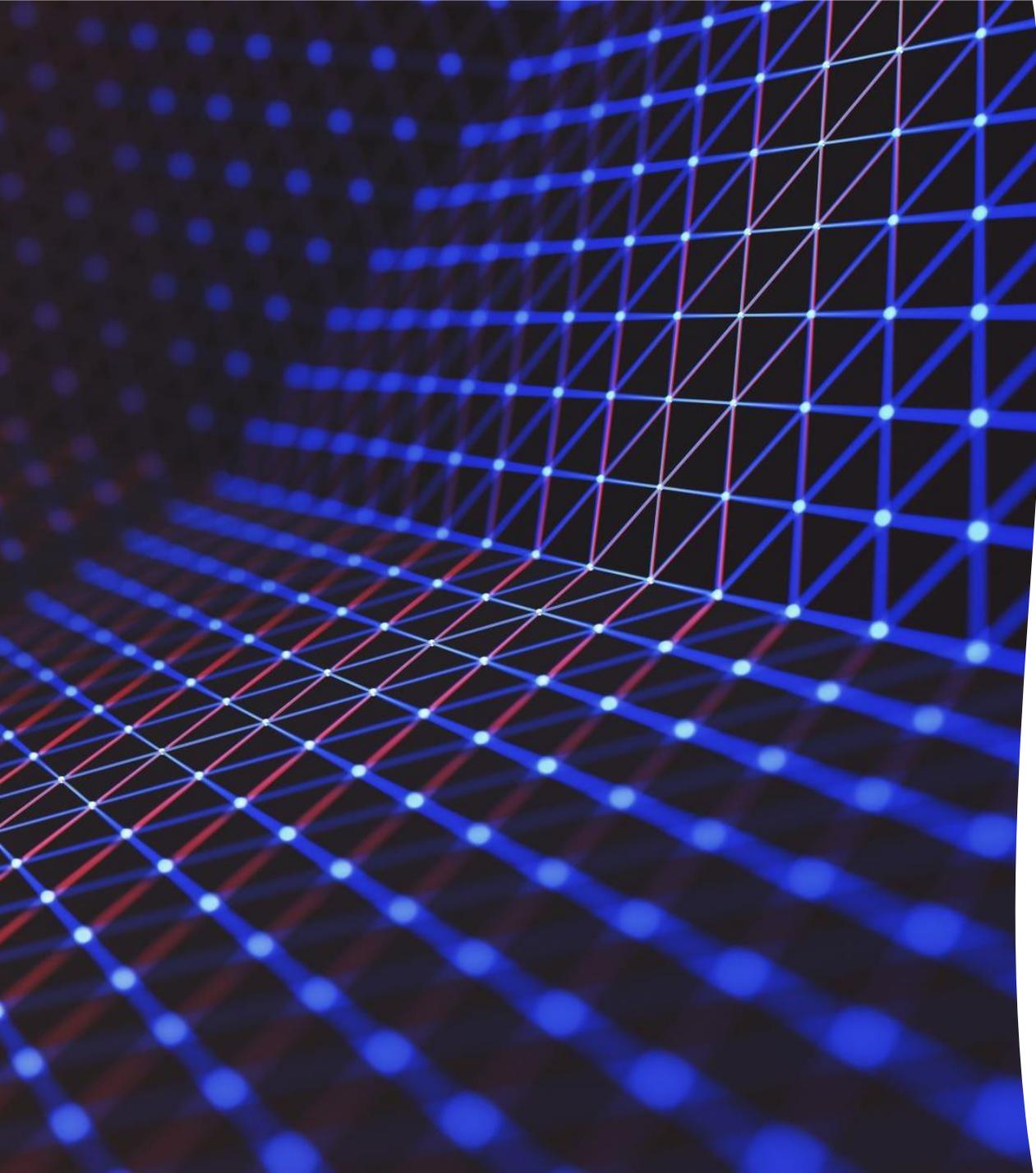
Biological Predisposition vs Environmental Impact

Upstream determinants are those that occur at the macro level and include global forces and government policies

Midstream determinants are intermediate factors such as health behaviors

Downstream determinants occur at the micro level and include one's genetics.





Limitations of Biological Predisposition

Genetic mutations in racial/ethnic minorities linked to increased risk of diabetes complications have been uncovered

Goal of therapy still revolves around optimal glycemic control to prevent and manage diabetes complications

Genetic mutations have not been reported to correlate with difficulty in optimizing glycemic control

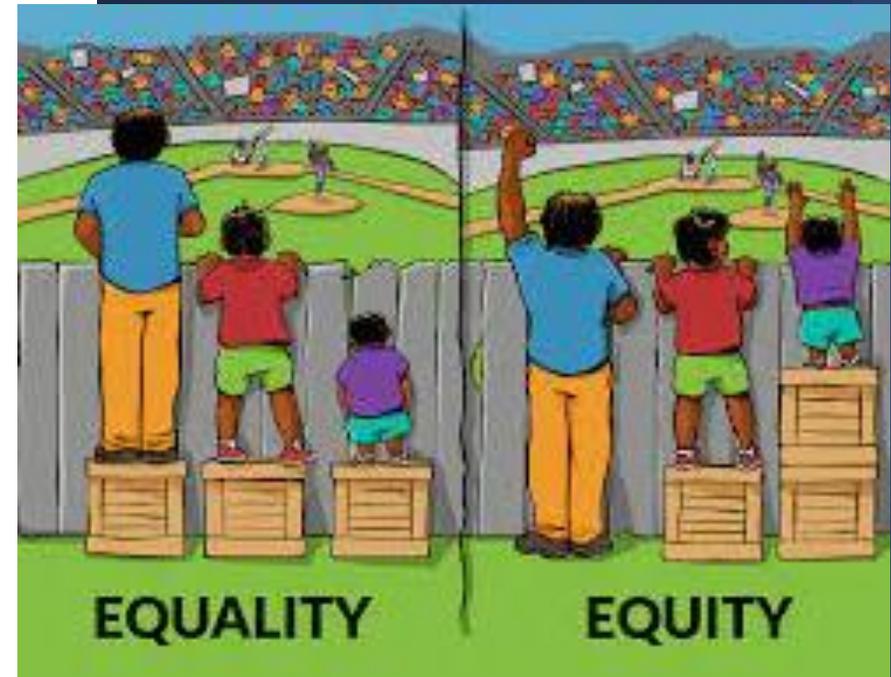
“Precision Medicine” plagued by gaps in research and lack of a usable infrastructure to interpret data

▼
Quiz:
Which stream?

- Growing up in Chernobyl in the 1990s
- Eating predominantly fast food
- Living near fast food restaurants
- Measuring shoe size by using x-ray box
- A1c
- Not exercising or walking
- Not living in a safe neighborhood to walk at night
- PTSD from a police interaction
- Sleeping 2 to 3 hours a night
- High Homa-IR
- Significant family history of diabetes

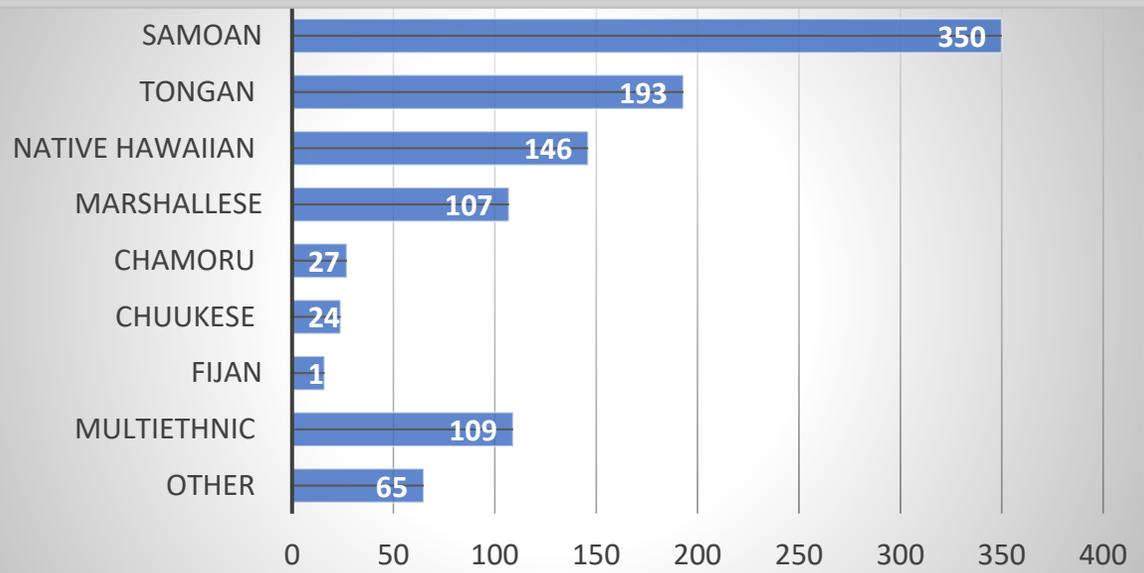
Definition: Health Equity vs Health Equality

- [Health equality](#) means everyone has the same opportunities. Examples could include a community center offering free or low-cost checkups to everyone.
- Health equity means that people have opportunities based on their needs.
- For example, if a clinic offers free checkups every morning, a person who must work during the morning cannot take advantage of this service. While the clinic offers checkups to everyone on the same terms, some people still cannot take advantage of the service.
- Health equity would involve offering alternative checkup times in the afternoon or evening, so everyone can access the service at a time that suits them.



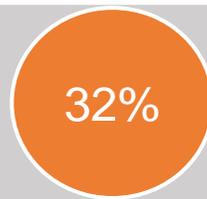
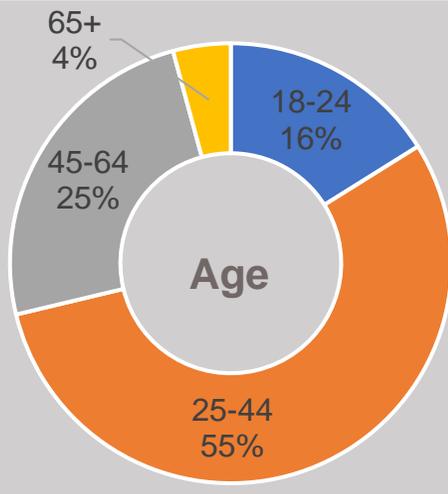
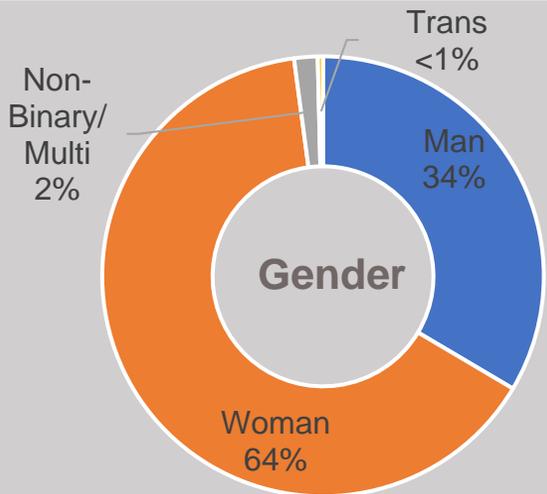
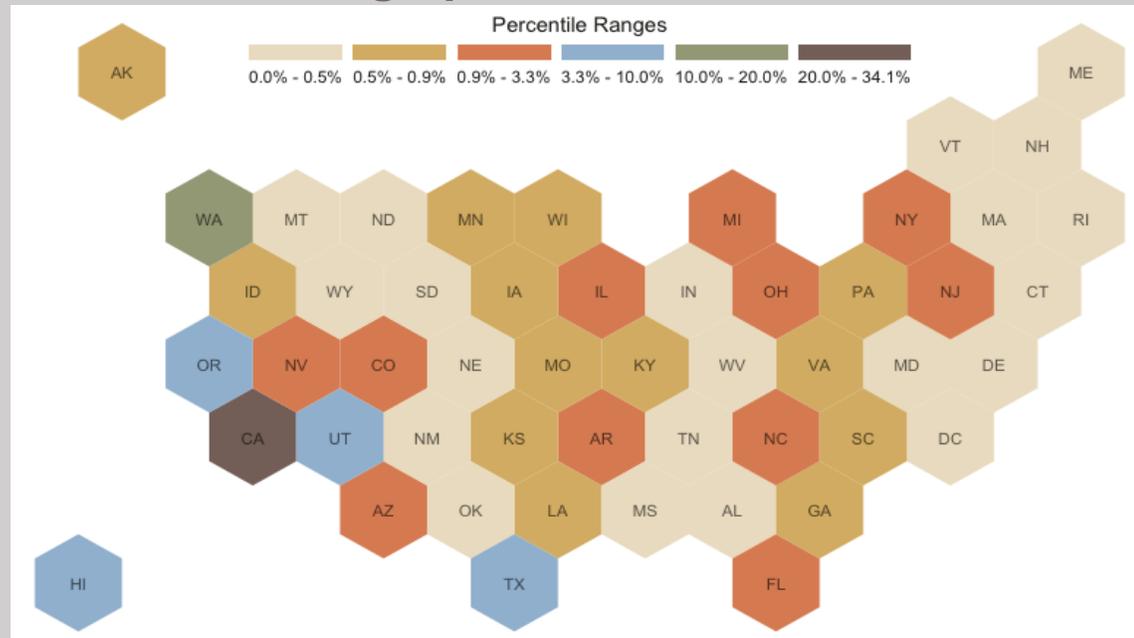
Native Hawaiian and Pacific Islander Sample Demographics (N = 1,262)

Ethnicity



Ethnicity data are missing for some respondents.

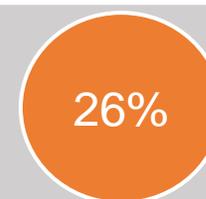
Geographic Distribution



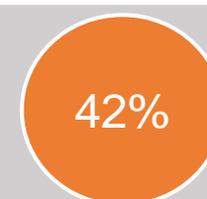
Foreign Born



Children under 18 at Home



Adults 65 or older at Home



Essential Worker

<https://www.aapicovidneeds.org/>

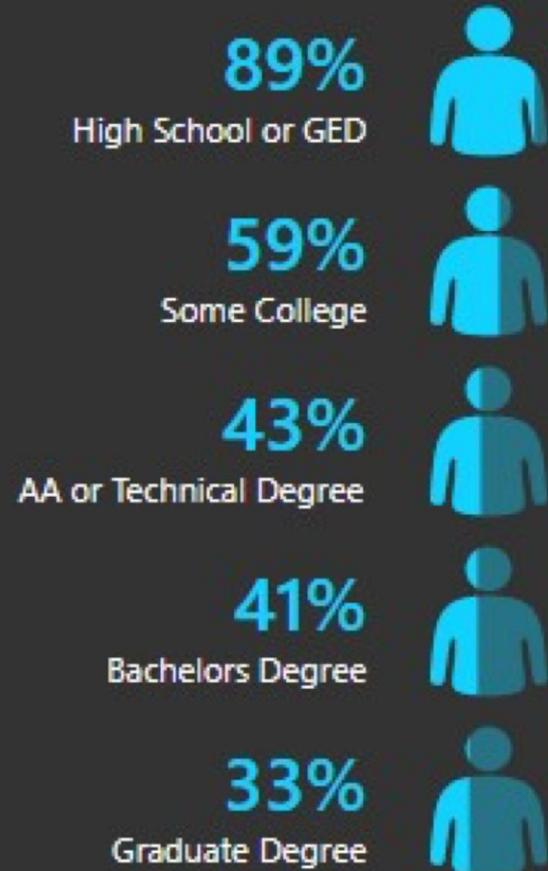


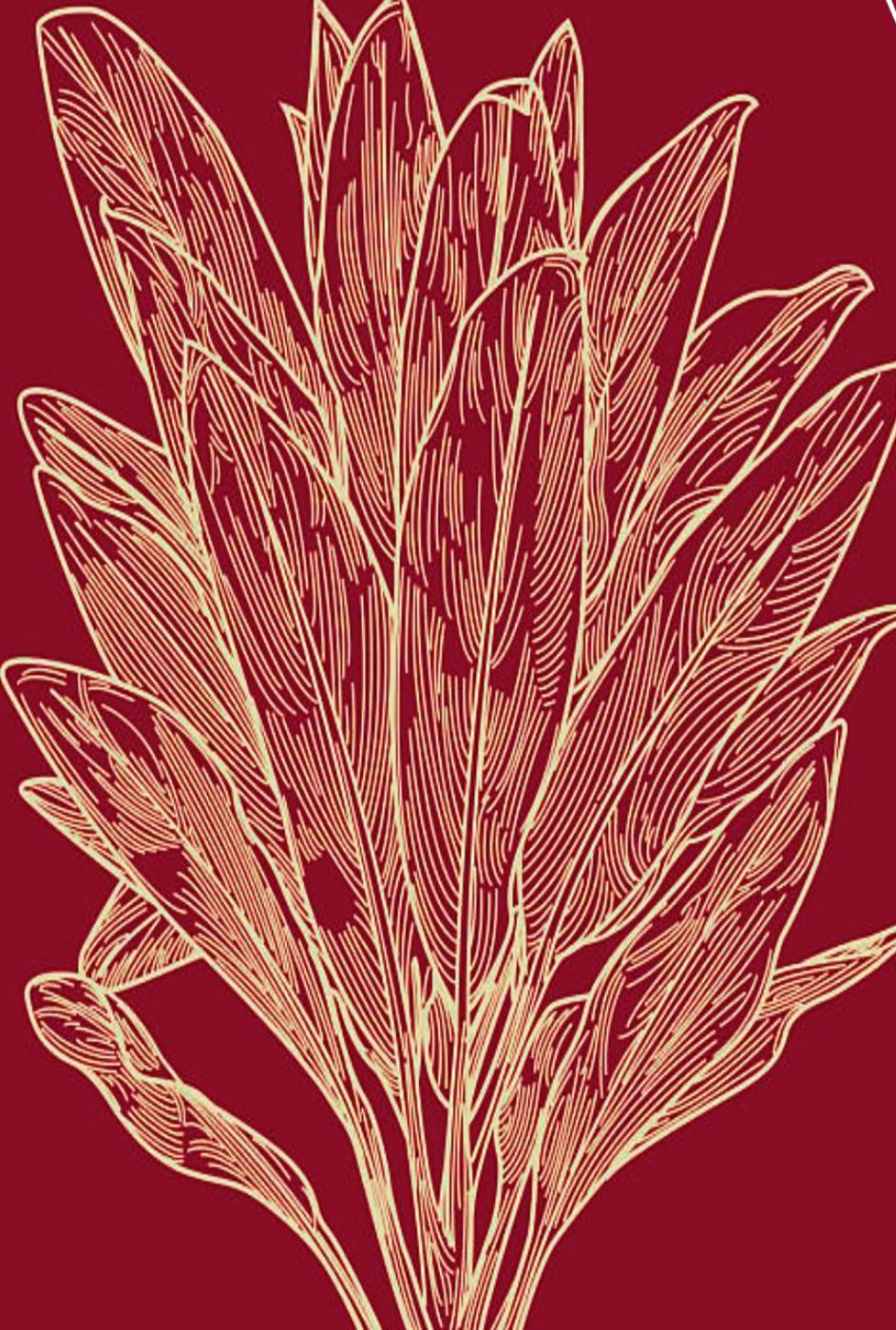
An example
of health
inequity

Native Hawaiians and Pacific Islanders have the highest rates of COVID-19 in California and the highest mortality rate of any ethnic/racial group

The vaccine hesitancy rate is 38%

NH/PI Vaccine Hesitancy by Education





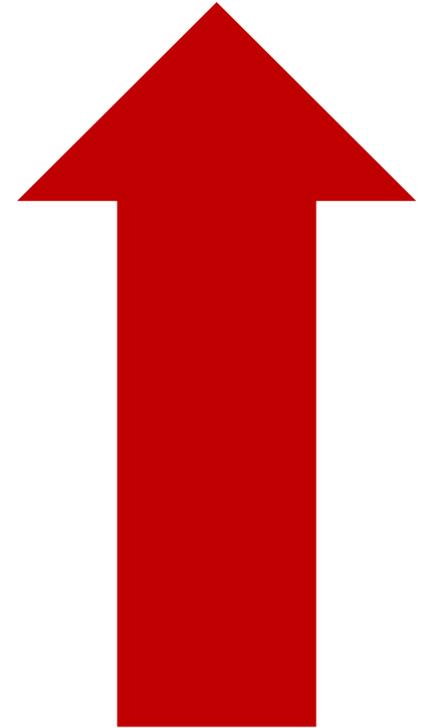
NH/PI VACCINE HESITANCY BY INCOME

52% 
Less than \$25,000

46% 
\$25,000-\$49,999

36% 
\$50,000-\$99,999

27% 
\$100,000 and above



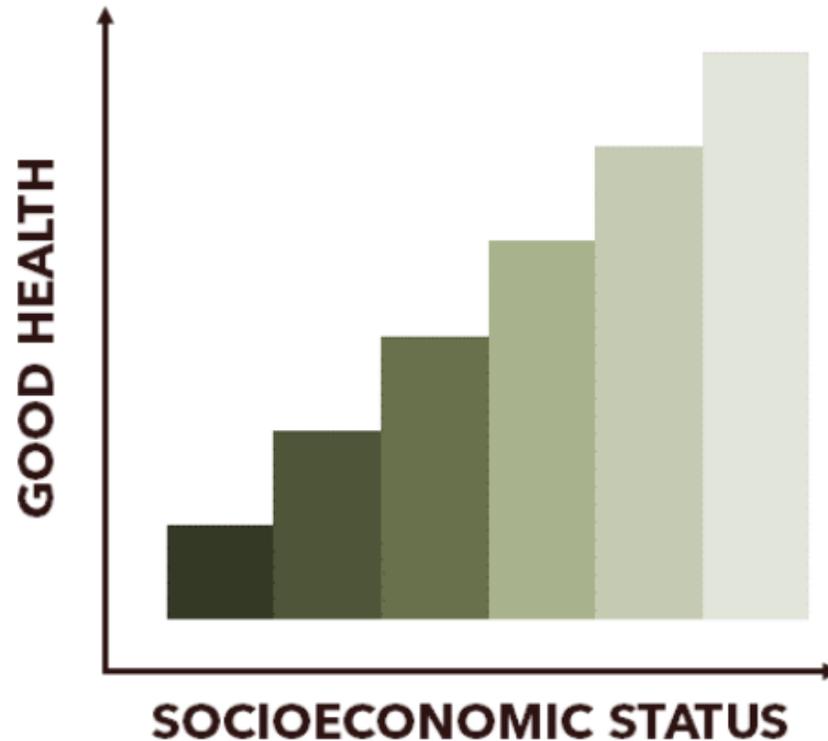
Health Equality is intact as
vaccine availability is high

The Gap

Health Equity requires
addressing the gap left by
the socio-economic gradient
causing vaccine hesitancy

Protective Health Gradient

- Vaccine Administration
- Adherence to medications
- Eating healthier
- Exercising regularly
- Routine Check-ups
- Cancer screening



Social Determinants of Health

Definition:
Social
Determinants
of Health

- From Healthy People 2030:
- Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Definition: Social Determinants of Health

SDOH can be grouped into 5 domains:

Social Determinants of Health





Houston,
we have a
problem

Diversity in Subgroups

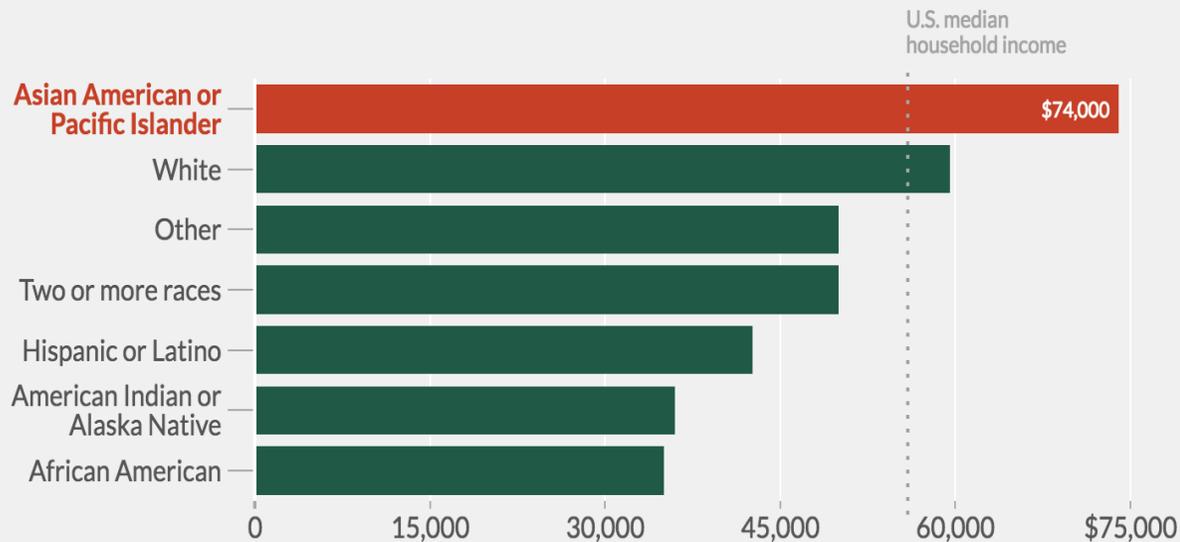
- Socioeconomic indicators pattern on hesitancy not consistent across all groups
- Larger subgroups were more likely to show a pattern where lower SEP respondents had higher levels of vaccine hesitancy
- Half of the categories did not have an association between these measures and vaccine hesitancy

	Total	Respondents	Hesitant (%)
Native Hawaiian	131	31	23.7%
Other Pacific Islander	117	27	23.1%
Samoan	262	90	34.4%
Multiethnic	93	41	44.1%
Marshallese	71	34	47.9%
Tongan	155	88	56.8%

Asian American and Pacific Islander households have the highest income compared to other groups

Median income of Asian Americans and Pacific Islanders tops all groups

Median household income, 2013-2015



Source: Authors' analysis of the U.S. Census Bureau, 2013-2015 American Community Survey 1-Year Estimates (pooled data).

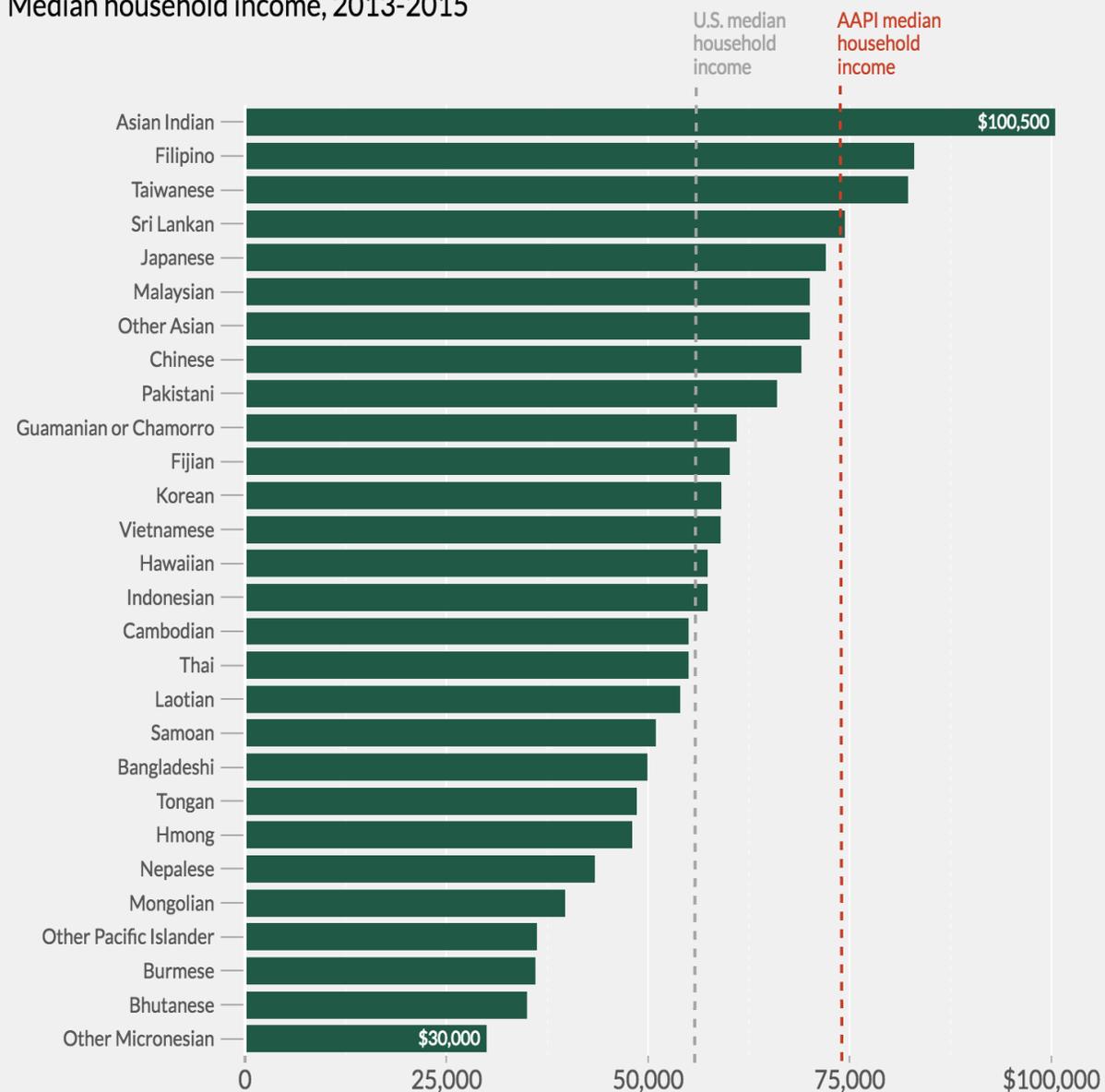
Note: All race and ethnicity categories are for the respective race or ethnicity category alone. For this calculation, a household's race is determined by the race or ethnicity of the head of household.



<https://equitablegrowth.org/how-data-disaggregation-matters-for-asian-americans-and-pacific-islanders/>

Unpacked, Asian Americans and Pacific Islanders' income is wide-ranging

Median household income, 2013-2015



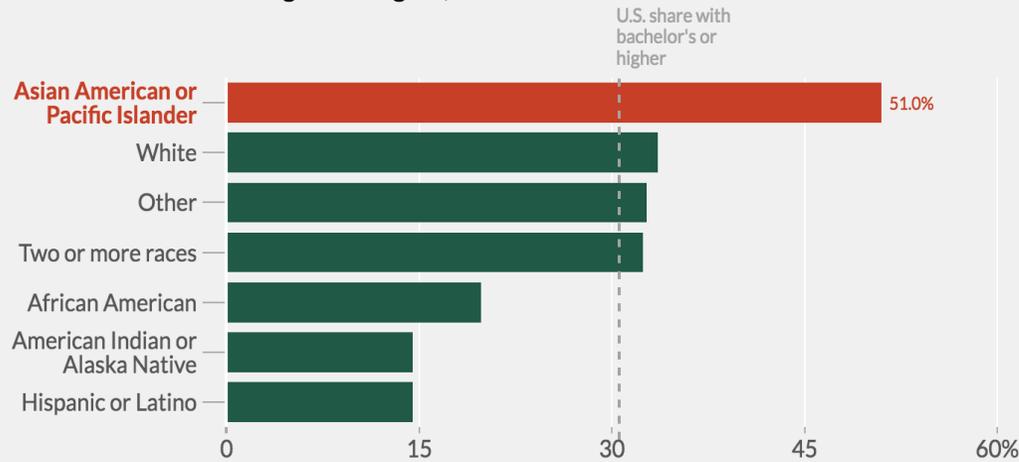
Source: Authors' analysis of the U.S. Census Bureau, 2013-2015 American Community Survey 1-Year Estimates (pooled data).

Note: All race and ethnicity categories are for the respective race or ethnicity category alone. For this calculation, a household's race is determined by the race or ethnicity of the head of household.



The Case for Data Disaggregation

Asian Americans and Pacific Islanders have the highest share of college grads Share with a bachelor's degree or higher, 2013-2015

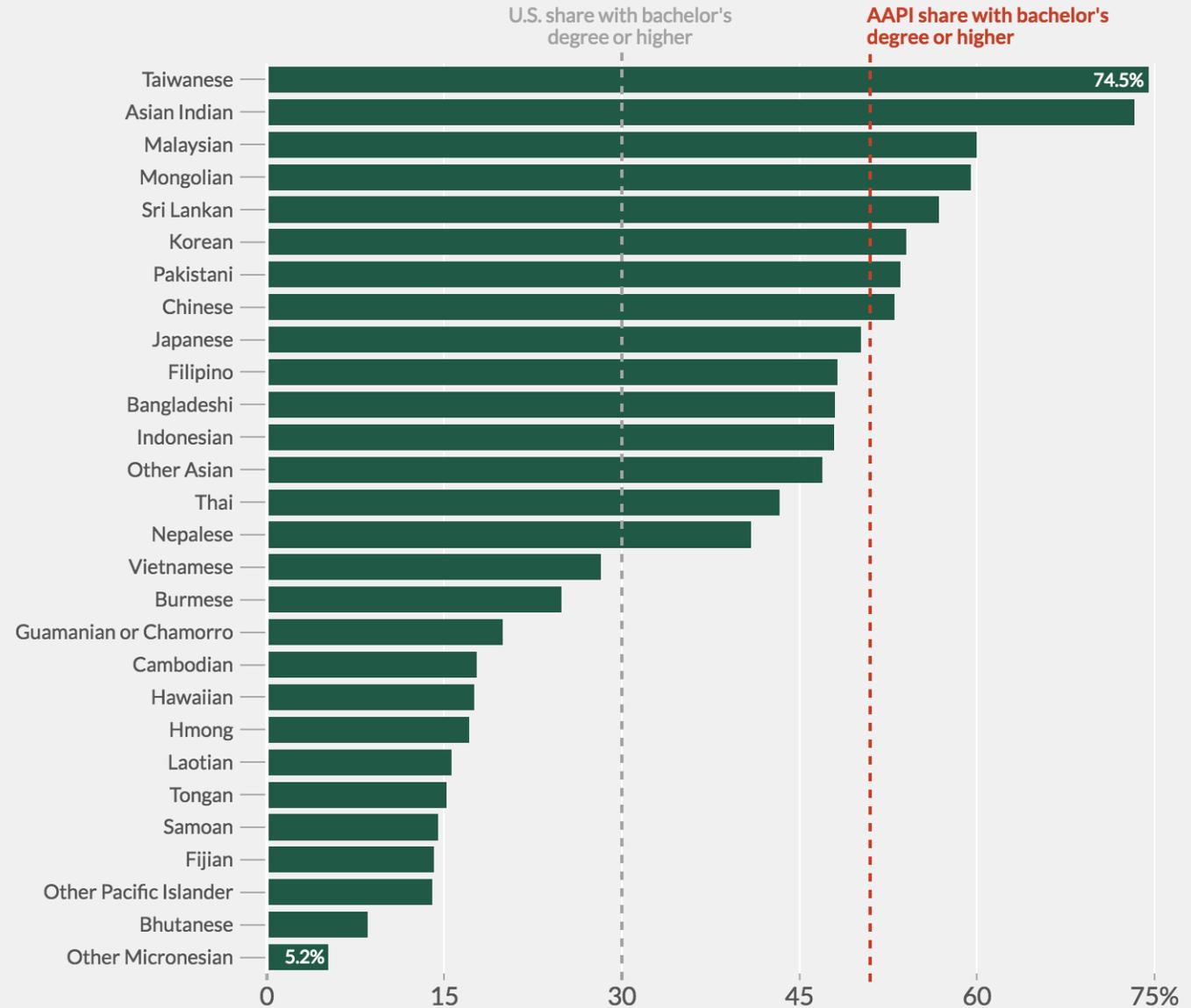


Source: Authors' analysis of the U.S. Census Bureau, 2013-2015 American Community Survey 1-Year Estimates (pooled data).

Note: All race and ethnicity categories are for the respective race or ethnicity category alone. For this calculation, we only include individuals age 25 and over.



Unpacked, Asian Americans and Pacific Islanders' college attainment highly differs Share with a bachelor's degree or higher, 2013-2015



Source: Authors' analysis of the U.S. Census Bureau, 2013-2015 American Community Survey 1-Year Estimates (pooled data).

Note: All race and ethnicity categories are for the respective race or ethnicity category alone. For this calculation, we only include individuals age 25 and over.



<https://equitablegrowth.org/how-data-disaggregation-matters-for-asian-americans-and-pacific-islanders/>

Opportunity: Equity Data Workgroup

- Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the federal government
- Works across all federal agencies
- Report released 4/2022
 - Make Disaggregated Data the Norm While Protecting Privacy
 - Catalyze Existing Federal Infrastructure to Leverage Underused Data
 - Build Capacity for Robust Equity Assessment for Policymaking and Program Implementation
 - Galvanize Diverse Partnerships Across Levels of Government and the Research Community
 - Be Accountable to the American Public

Health Equity for NH/PI requires
Effective Data Disaggregation

NH/PI Diabetes Disparity

- The prevalence of self-reported diagnosis of diabetes among NHPs ranges from 12.0 to 38.4% compared to 9.4% in the general US population¹⁻⁵
- Pacific Islanders have higher rates of ESRD and lower extremity amputations than many other groups⁶

1. Centers for Disease Control and Prevention. Summary health statistics: National Health Interview Survey, 2014. 2014.
2. Centers for Disease Control and Prevention. Summary health statistics: National Health Interview Survey, 2016. 2016
3. Galinsky A, Zelaya C, Barnes P, Simile C. Selected health conditions among Native Hawaiian and Pacific Islander adults: United States, 2014 NCHS data brief no. 277, Hyattsville: National Center for Health Statistics; 2017.
4. Galinsky A, Zelaya C, Simile C, Barnes P. Health conditions and behaviors of Native Hawaiian and Pacific Islander persons in the United States, 2014. Hyattsville: National Center for Health Statistics; 2017.
5. McElfish, P. A., Purvis, R. S., Esquivel, M. K., Sinclair, K. A., Townsend, C., Hawley, N. L., Haggard-Duff, L. K., & Kaholokula, J. K. (2019). Diabetes Disparities and Promising Interventions to Address Diabetes in Native Hawaiian and Pacific Islander Populations. *Current diabetes reports*, 19(5), 19. <https://doi.org/10.1007/s11892-019-1138-1>
6. Kanaya, A. M., Adler, N., Moffet, H. H., Liu, J., Schillinger, D., Adams, A., Ahmed, A. T., & Karter, A. J. (2011). Heterogeneity of diabetes outcomes among asians and pacific islanders in the US: the diabetes study of northern california (DISTANCE). *Diabetes care*, 34(4), 930–937.

How do we improve
health equity through
diabetes care?

**We eliminate oppressive bias as much as possible
from our clinical processes.**

Structuring Bias: The 4 “I”s

- Ideological
- Institutional
- Interpersonal
- Internalized



Ideological

- First, any oppressive system has at its core the idea that one group is somehow better than another, and in some measure has the right to control the other group.
- This idea gets elaborated in many ways--more intelligent, harder working, stronger, more capable, more noble, more deserving, more advanced, chosen, normal, superior, and so on.
- The dominant group holds this idea about itself. And, of course, the opposite qualities are attributed to the other group--stupid, lazy, weak, incompetent, worthless, less deserving, backward, abnormal, inferior, and so on.

Example:

1. When all young black men are immediately deemed dangerous that is ideological racism

Institutional

- The idea that one group is better than another group and has the right to control the other gets embedded in the institutions of the society
- The laws, the legal system and police practice, the education system and schools, hiring policies, public policies, housing development, media images, political power, healthcare policies and healthcare delivery reflect this idea.
- Institutional oppression does not have to be intentional.
- If a policy unintentionally reinforces and creates new inequalities between privileged and non-privileged groups, it is considered institutional oppression.

Example:

1. When a woman makes two thirds of what a man makes in the same job, it is institutionalized sexism.

Interpersonal

- The idea that one group is better than another and has the right to control the other, which gets structured into institutions, gives permission and reinforcement for individual members of the dominant group to personally disrespect or mistreat individuals in the oppressed group.
- Prejudice + Power = Oppression
- Most people in the dominant group are not consciously oppressive.
- They have internalized the negative messages about other groups and consider their attitudes towards the other group quite normal.

Example:

1. Calling Mexicans rapists is interpersonal racism

Internalized

- The fourth way oppression works is within the groups of people who suffer the most from the mistreatment.
- Oppression always begins from outside the oppressed group, but by the time it gets internalized, the external oppression need hardly be felt for the damage to be done.
- This is the end goal of oppression
- The marginalized groups believes the stereotype without any pressure from the dominant group

Example:

1. When Pacific Islander high school students do not take college prep classes because they are intimidated is internalized racism.
2. When a trans woman feels they will never be a "real woman" is internalized transphobia

Quiz

Identify the corresponding bias with each scenario

- A. Ideological
- B. Institutional
- C. Interpersonal
- D. Internalized

1. When one out of every four African-American young men is currently in jail, on parole, or on probation

2. When psychiatric institutions and associations “diagnose” transgender people as having a mental disorder.

3. When people on welfare are labeled as lazy

4. When a gay teen is called a slur

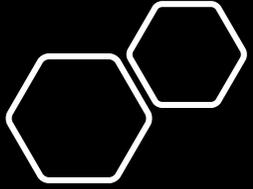
5. When a random Muslim man is called a terrorist

6. When an immigrant is ashamed of their accent

7. Calling **SARS-CoV-2 virus** the “China Virus”

How can you identify Bias?

Start with yourself

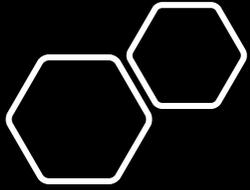


Exercise –

Where are you from?

Taiye Selasi, "Where are you a Local?"

The three "R"s

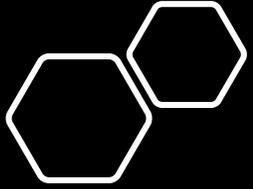


1st R: What
are your
rituals?

What rituals did you grow up with?

Where they cultural or regional?

Which ones do you still partake?

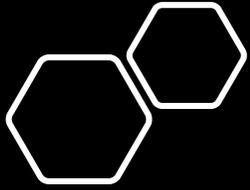


2nd R: What
are your
relationships?

Whom do you interact with
that shapes your day?

Who do you talk to regularly?

I don't mean social media



3rd R: What are your restrictions?

Our experience of our rituals and relationships is heavily influenced by our restrictions.

Where can you live? What passport do you hold?

Are you restricted by bias such as racism, sexism, homophobia?

Taking what
we learned
today to clinic

ID/CC: 48 y/o Hispanic male here for diabetes follow up

Interval Hx: Patient last seen almost a year ago as he missed several of his appointments. He notes that misses at least one of his insulin injections almost daily. He does not exercise. He did not bring in his meter. His A1c has been 10 or greater for the past several years. His triglycerides are elevated, and his LDL is under 100 mg/dL on statin therapy. When asked about his diet, he says he has been trying to eat less tortillas with dinner.

Your patient is not the problem. Your patient and you are working together to solve the problems

Health Equitable Approach to Diabetes Care

Aspect of Diabetes Care

- Attendance

- Adherence to therapy

How question was posed?

- How come you haven't been coming to your visits?
- Are you checking your blood sugars?
- How many times do you miss your insulin injections?

Equitable Approach

- Thank you for coming in today. How can we help you get your care regularly?

- How do you know your blood sugars are safe?
- What are some of the obstacles you face in injecting your insulin regularly?

Health Equitable Approach to lifestyle modifications

Aspect of Diabetes Care

- Exercise

- Diet

How question was posed?

- Do you exercise?
- What are you eating?

Equitable Approach

- How hard is it to exercise?
- What gets in the way of you exercising?
- Who cooks for you? What decisions do you make regarding the food you eat?

Health Equitable Approach to Diabetes Treatment Plan

Assessment:

Type 2 Diabetes: Not controlled and not adherent to therapy. Patient is higher than Hemoglobin A1c target which is less than 7%. With little data to available to titrate patient's insulin therapy and with definitely elevated blood sugars to tend with will increase patient's insulin doses. Patient counseled on importance of adherence to diabetes therapy to prevent complications.

Plan:

1. Increase insulin doses by 10%
2. Refer to case management

Assessment:

Type 2 Diabetes: Not controlled and not adherent to therapy. We reviewed obstacles to adherence such as difficulty with transportation, lack of refrigeration to store insulin at work, motivation and misinformation regarding medication side effects. We discussed ways to circumvent transportation issues. We also reviewed different ways to administer insulin at work. We agreed on goals of therapy, which would be to prevent complications and decrease reliance on diabetes medications to optimize blood sugars which will require checking blood sugars more regularly. I also reviewed the side effects of insulin with patient.

Plan:

1. Referred patient Low Income Fare is Easy (LIFE) Metro
2. Referred patient Medi-Cal Transportation Services
3. Instructed patient on using an insulated bag with reusable gel packs to store insulin
4. Discussed possibility of using an insulin pump. Patient will consider.
5. We will look into obtaining a continuous glucose monitor.
6. Patient agrees if he has questions regarding medication side effects, he will pose them on his visit.

Health Equitable Approach to Lifestyle Modification Treatment Plan

Assessment:

I counseled patient on getting routine exercise to decrease his insulin resistance. I also talked to patient on cutting carbohydrates from his diet.

Plan:

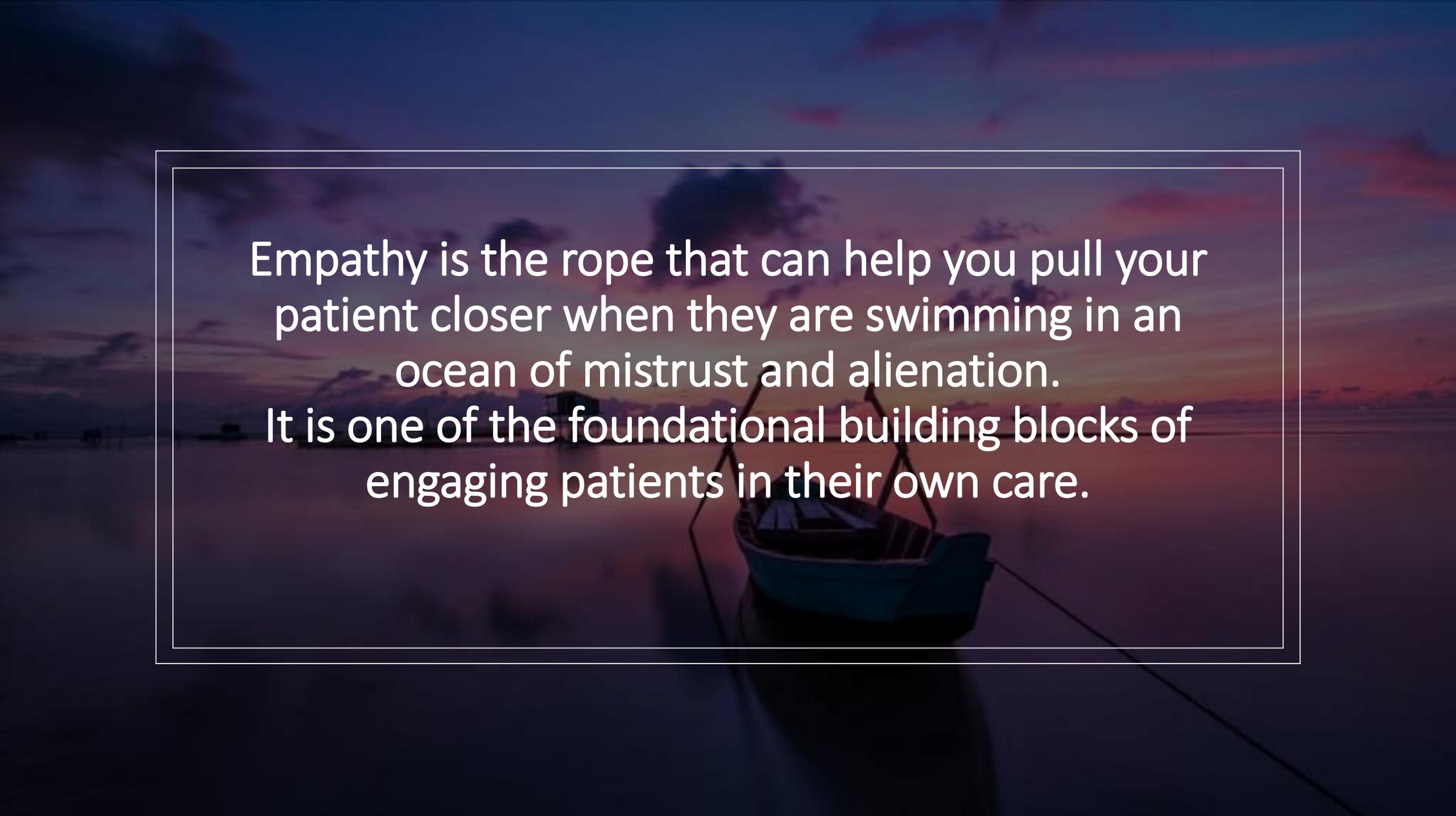
1. Refer to dietician

Assessment:

Patient not exercising regularly due to fatigue likely from his lack of sleep which is influenced from the stress he is experiencing. We discussed the pathophysiology of type 2 diabetes including the development of insulin resistance and relative insulin deficiency. We discussed strategies to reduce insulin resistance through increasing his physical activity, eating healthier, getting better sleep and improving his stress management. I paid particular attention to addressing the importance of safeguarding one's mental health to optimize the chances of engaging in healthy behaviors more consistently. We identified strategies to increase patient's physical activity.

Plan:

1. Referred patient LAC Dept of Mental Health iPrevail
2. Patient has agreed to go walking nightly after dinner with his wife and mother.
3. I gave the patient a recipe for Guatemalan Garnachas
4. If patient's weight does not improve, he has agreed to meet with our dietician to develop a culturally appropriate grocery list within the family's budget.
5. Patient will stop watching TV or use his phone after 8pm.

A small boat is positioned in the lower right foreground, floating on a calm body of water. The background features a sunset or sunrise sky with soft, colorful clouds in shades of purple, pink, and blue. The water reflects the sky and the boat. A white text box with a thin border is centered over the image, containing the following text:

Empathy is the rope that can help you pull your patient closer when they are swimming in an ocean of mistrust and alienation. It is one of the foundational building blocks of engaging patients in their own care.

Resources

- <https://www.ama-assn.org/delivering-care/health-equity/health-equity-cme-education-resources>
- <https://www.familydocs.org/category/health-equity/>
- <https://www.solvingdisparities.org/tools/roadmap/equity-resources>
- <https://www.instituteoftheequity.org/resources-reports/doctors-for-health-equity-world-medical-association-report/doctors-for-health-equity-wma-full-report-pdf.pdf>
- <https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/sdoh-workbook.pdf>
- <https://med.nyu.edu/departments-institutes/population-health/divisions-sections-centers/health-behavior/sites/default/files/pdf/csaah-health-atlas.pdf>

Thank you
