WHAT ARE SOCIAL AND CULTURAL DETERMINANTS OF HEALTH?

- **Social Determinants of Health**
  - The economic, social, and environmental conditions – and their distribution among the population – that influence individual and group differences in health status.

- **Cultural Determinants of Health**
  - The socio-cultural conditions that influence individual and group differences in health status.
    - The degree to which a person or group can assert their cultural identity in society without discrimination or marginalization.
    - The degree to which opportunities in the larger society are present to exercise one’s cultural identity and practices.
    - The degree to which policies support or do not support indigenous rights.
WHO ARE MOST AFFECTED BY SOCIAL INEQUITIES?

- Native Peoples and African Americans
- Women, children, and elderly
- The poor and marginalized
- Those who are politically underrepresented
- The undereducated
- Those living in impoverished neighborhoods
Health and Social Problems are Worse in More Unequal Countries

Index of:
- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility

Health and Social Problems are Worse in More Unequal US States

# Estimated Deaths Attributable to Social Factors in the US

<table>
<thead>
<tr>
<th>Factor</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low education</td>
<td>245,000</td>
</tr>
<tr>
<td>Racial segregation</td>
<td>176,000</td>
</tr>
<tr>
<td>Low social support</td>
<td>162,000</td>
</tr>
<tr>
<td>Individual level poverty</td>
<td>133,000</td>
</tr>
<tr>
<td>Income inequality</td>
<td>119,000</td>
</tr>
<tr>
<td>Area level poverty</td>
<td>39,000</td>
</tr>
</tbody>
</table>

**In comparison:**

- Acute MI: 192,898
- Cerebrovascular disease: 167,661
- Lung cancer: 155,521

Estimated Deaths Attributable to Social Factors in the US. Galea S et.al. AJPH: June 16, 2011; eprint.
COMMON SOCIAL DETERMINANTS

- Income & income inequality
- Education
- Race/ethnicity/gender & related discrimination
- Built Environment
- Stress
- Social support
- Early child experiences
- Employment
- Housing
- Transportation
- Food Environment
- Social standing
HEALTH & SOCIAL INEQUITIES BY ETHNIC GROUP IN HAWAIʻI

Data from the State of Hawaii Behavioral Risk Factor Surveillance System
MORBIDITY AND MORTALITY

- Average life expectancy is 68.3 years
  - 13.8 years shorter than Japanese Americans (82.1)
  - 7 years shorter than the general U.S. population (75.2)
- Disease onset is 10 years earlier than other ethnic groups.

FUTURE PROJECTION OF NATIVE HAWAIIAN POPULATION

Native Hawaiian population projections, 2005 to 2050

Year


Population

Hawai‘i

Continent

161,507 239,655 355,896 637,298 450,655

987,602

He lei poina ‘ole ke keiki

(A lei never forgotten is a child)
Mohala i ka wai, ka maka o ka pua
Flowers thrive where this is water, as thriving people are found where living conditions are good
A subordinate social position is associated with...
- Immunosuppression (a body’s decreased ability to ward off infections).
- Risk for stress-related diseases such as diabetes, heart disease and psychiatric disorders (Sapolsky, 2004).

In humans, the most common form of hierarchical ranking is socioeconomic status (SES).
- Lower SES = higher risk for higher morbidity and mortality (Lorant et al., 2003).
- Income inequality (poverty amid plenty) associated with worse health outcomes and higher mortality rates than poverty alone (Wilkinson, 2000).
- Social capital (a person’s social networks) decreases \( \rightarrow \) increase in psychological stressors and decrease in social support (Lorant et al., 2003).
Single strongest predictor of health is one’s position in society.

Ethnic discrimination imposes an added health burden.

Distribution of wealth and educational opportunities are set along ethnic lines in Hawaiʻi (Okamura, 2008).

Native Hawaiians, other Pacific Islanders, and Filipinos are at the greatest disadvantage.

Experimentally induced social status found to influence mood and increase systolic blood pressure (Mendelson, Thurston, & Kubzansky, 2008).
A stronger Hawaiian identity is associated with more depression, suicide, and substance use in Native Hawaiian adolescents. (Yuen et al., 2000; Glanz et al., 2005; Kaholokula et al, 2008)

- Threats to identity and not the identity itself is the issue.
- More likely to report experience of racism. (Kaholokula et al., 2012)

Odd ratio = 2.12 (CI= 95% 1.23-3.65, p = .01)

Controlled for age, education, BMI, Hawaiian ancestry, triglycerides, and fasting insulin

PERCEPTIONS OF RACISM

Over the past 12 months...

- 48% of Native Hawaiians report being discriminated against ‘often’ to ‘most of the time.’
- 52% report being discriminated against ‘sometimes.’


The Stanford Native community, protesting the use of “Native” themes at campus frat parties in 2009.
Perceived racism measure (OQ) significantly associated with hypertension status (Odds ratio = 1.25)

### PERCEIVED RACISM & CORTISOL AS A PHYSIOLOGICAL INDEX OF STRESS IN KĀNAKA ‘ŌIWI

**Note.** OQ-A = attributed perceived oppression scale; BMI = body mass index; SBP = systolic blood pressure; DBP = diastolic blood pressure; HCSS = Hawaiian cultural subscale; ACSS = American cultural subscale; PSS = Perceived Stress Scale.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1*</th>
<th></th>
<th></th>
<th>Model 2**</th>
<th></th>
<th></th>
<th>Model 3***</th>
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<td>$P$</td>
<td>$\beta$</td>
<td>SE</td>
<td>$P$</td>
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## PERCEIVED RACISM & SYSTOLIC BLOOD PRESSURE IN KĀNAKA ‘ŌIWI

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1*</th>
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<th>Model 3***</th>
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<td>SE</td>
<td>$P$</td>
<td>$\beta$</td>
<td>SE</td>
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<td>4.77</td>
<td>3.20</td>
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</tbody>
</table>

**Note.** OQ-F = felt perceived oppression scale; BMI = body mass index; HCSS = Hawaiian cultural subscale; ACSS = American cultural subscale; PSS = Perceived Stress Scale.

*Model 1: $R^2 = 28$, F(6, 142) = 9.03, $P < .0001$

**Model 2: $R^2 = 34$, F(8, 139) = 8.49, $P < .0001$

***Model 3: $R^2 = .36$, F(11, 139) = 6.66, $P < .0001$
Native Hawaiians who experience high levels of racism are...

- 25% more likely to have hypertension.  
  (Kaholokula et al., 2010)

- 3x more likely to have excess body weight.  
  (McCubbin & Antonio, 2012)

- More likely to have lower diurnal cortisol levels.  
  (Kaholokula et al., 2012)

- More likely to use anger coping and become disengaged, which leads to greater psychological distress.  
  (Kaholokula et al, manuscript in preparation)
Nā Pou Kīhi
Realizing Mauli Ola

Ka Wai ola

Ke ao Ōiwi

Ka Mālama Āina

Ka ʻAi Pono
<table>
<thead>
<tr>
<th>Nā Poukihi (the corner posts)</th>
<th>Principles/Strategies</th>
<th>Examples of Goals</th>
</tr>
</thead>
</table>
| Ke Ao ‘Ōiwi (Achieving a culturally-nurturing space) | Optimum health of Kānaka ‘Ōiwi is achievable when society values their social group and provides the sociocultural space for their modes of living and aspirations. | • Positive cultural identity development  
• Hawaiian/English linguistic landscape  
• ‘Ōiwi-focused media  
• Strong ‘Ōiwi political influence  
• Cultural-based public education |
| Ka Mālama ‘Āina (Creating healthier communities/environments) | Optimum health of Kānaka ‘Ōiwi is achievable in safe and well-resourced communities as to provide opportunities for healthy living. | • Economic self-sufficiency  
• Food sovereignty and security  
• Strong civic participation  
• Access to walking/biking/hiking trails  
• Expanded/synergized role of trust founded organizations in community development |
| Ka ‘Ai Pono (Accessing healthier lifestyles) | Optimum health of Kānaka ‘Ōiwi can only be achieved when healthy patterns of living are accessible, promoted, and practiced; contingent upon Ke Ao ‘Ōiwi and Ka Mālama ‘Āina. | • Community health promotion programs  
• Access to technology to enhance lifestyle goals  
• Affordable/accessible Hawaiian foods  
• Tax benefits to promote healthy living |
| Ka Wai Ola (Achieving social Justice) | Optimum health of Kānaka ‘Ōiwi is achievable through social justice (equitable share of the benefits and burdens of society) and indigenous rights; cumulative effect of Ke Ao ‘Ōiwi, Ka Mālama ‘Āina, and Ka ‘Ai Pono. | • ‘Ōiwi values/practices applied to legislative decision-making  
• Livable wages  
• Obesity prevalence <15%; diabetes prevalence <5%; average life expectancy 81 years of age  
• Kānaka ‘Ōiwi equitably represented in business, education, politics, and media |
Nā Pou Kīhi
A U.S. National Prevention Focus

National Prevention Council Action Plan
IMPLEMENTING THE NATIONAL PREVENTION STRATEGY

Ke Ao ʻŌiwi  Ka Mālama ʻĀina  Ka ʻAi Pono  Ka Wai Ola

Source: Healthcare.gov
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- National Heart, Lung, and Blood Institute (U01HL079163)

The content is solely the responsibility of the presenter and authors and does not necessarily represent the official views of the National Institute on Minority Health and Health Disparities or National Center for Research Resources of the National Institutes of Health.