Surveillance for health disparities and the social determinants of health: data and health equity

Ned Calonge, MD, MPH
President and CEO
Key terms

- Health equity
- Health disparities
- Social determinants of health
Health equity

- Attainment of the highest level of health for all people
- Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities

Healthy People 2020
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:
  • racial or ethnic group
  • religion
  • socioeconomic status
  • gender
  • age
  • mental health
  • cognitive, sensory, or physical disability
  • sexual orientation or gender identity
  • geographic location
  • other characteristics historically linked to discrimination or exclusion

Healthy People 2020
<table>
<thead>
<tr>
<th><strong>ISABELLA</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>50% ↑ risk of <strong>OBESITY</strong></td>
<td></td>
</tr>
<tr>
<td>40% ↑ risk of <strong>DIABETES</strong></td>
<td></td>
</tr>
<tr>
<td>3-fold ↑ risk of <strong>DIABETIC MORTALITY</strong></td>
<td></td>
</tr>
<tr>
<td>20% ↑ risk of <strong>STROKE MORTALITY</strong></td>
<td></td>
</tr>
<tr>
<td>30% ↑ risk of <strong>NO RECOMMENDED BREAST CANCER SCREENING</strong></td>
<td></td>
</tr>
<tr>
<td>2-fold ↑ risk of <strong>CERVICAL CANCER</strong></td>
<td></td>
</tr>
<tr>
<td>3-fold ↑ risk of <strong>TEEN PREGNANCY</strong></td>
<td></td>
</tr>
<tr>
<td>50% ↑ risk of <strong>INFANT MORTALITY IN 1ST YEAR OF LIFE</strong></td>
<td></td>
</tr>
</tbody>
</table>

**DEDICATED TO ACHIEVING HEALTH EQUITY FOR ALL COLORADANS**
# Rebecca

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of Obesity</td>
<td>40% ↑</td>
</tr>
<tr>
<td>Risk of Diabetes</td>
<td>2-fold ↑</td>
</tr>
<tr>
<td>Risk of High Blood Pressure</td>
<td>40% ↑</td>
</tr>
<tr>
<td>Risk of Stroke Mortality</td>
<td>14% ↑</td>
</tr>
<tr>
<td>Risk of Cervical Cancer</td>
<td>45% ↑</td>
</tr>
<tr>
<td>Risk of Cancer Mortality</td>
<td>75% ↑</td>
</tr>
<tr>
<td>Risk of Teen Pregnancy</td>
<td>25% ↑</td>
</tr>
<tr>
<td>Risk of Infant Mortality in 1st Year of Life</td>
<td>3-fold ↑</td>
</tr>
</tbody>
</table>

ADVANCING THE HEALTH & WELL-BEING OF THE PEOPLE OF COLORADO
Sexually transmitted diseases, 2002–06

Source: Colorado eHARS, HIV/AIDS Reporting System, STD Management Information System, STI/HIV Surveillance Program, STI/HIV Section, Colorado Department of Public Health and Environment
Tuberculosis incidence, 2002–06

Source: Tuberculosis Program, Disease Control and Environmental Epidemiology Division, Colorado Department of Public Health and Environment

Rate per 100,000

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2.4</td>
</tr>
<tr>
<td>White</td>
<td>0.5</td>
</tr>
<tr>
<td>Latino</td>
<td>6.3</td>
</tr>
<tr>
<td>Black</td>
<td>11.0</td>
</tr>
<tr>
<td>Asian</td>
<td>21.3</td>
</tr>
<tr>
<td>Amer. Indian</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Acute Hepatitis B, 2002–06

Source: Viral Hepatitis Program, Disease Control and Environmental Epidemiology Division, Colorado Department of Public Health and Environment
Other health disparities

- Perinatal and infant mortality
- Child and adult obesity
- Child oral health
- Teen fertility
- Diabetes mortality
- Liver disease mortality
- Motor vehicle injury fatality
- Homicide mortality

- Mental health
- Low birth weight
- Suicide
- Cervical cancer incidence and mortality
- Lung cancer incidence and mortality
- Prostate cancer mortality
- Diabetes incidence and mortality
Social determinants of health

- The social determinants of health are the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness.

- These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

Social determinants of health

Think in terms of opportunities and barriers:

• Early childhood development, schools, education, literacy
• Economy, jobs, employment, occupation, working conditions, income, wealth
• Housing, transportation, public safety, parks and recreation, healthy food access
• Social status, culture, social network, political clout, justice
• Environment, pollution, hazards
Washington D.C.:
Short Distances to Large Disparities in Health

Potential health impact of improving education

- Deaths potentially averted by medical advances (see footnotes)
- Deaths potentially averted by eliminating education-associated excess mortality (see footnotes)

Colorado high school graduation rates, 2007

Source: Colorado Dept. of Education
Colorado unemployment rate, 2006

Source: U.S. Bureau of the Census, American Community Survey
Colorado median household income, 2006

Source: U.S. Bureau of the Census, American Community Survey
Colorado poverty rate (all people), 2006

Source: U.S. Bureau of the Census, American Community Survey
Education demographics (Denver)

Educational Attainment
(of adults ages 25-64)
Denver Metro, 2006-2010

- White:
  - BA or higher: 48%
  - AA degree: 23%
  - Some college: 18%
  - HS Diploma: 11%
  - Less than HS: 4%

- Black:
  - BA or higher: 23%
  - AA degree: 27%
  - Some college: 29%
  - HS Diploma: 11%
  - Less than HS: 11%

- Latino:
  - BA or higher: 13%
  - AA degree: 5%
  - Some college: 18%
  - HS Diploma: 36%
  - Less than HS: 12%

- API:
  - BA or higher: 39%
  - AA degree: 32%
  - Some college: 6%
  - HS Diploma: 15%
  - Less than HS: 21%

- All:
  - BA or higher: 39%
  - AA degree: 22%
  - Some college: 8%
  - HS Diploma: 22%
  - Less than HS: 11%
Denver life expectancy
Colorado population by race/ethnicity 2010

Source: Colorado State Demography Office.
Changing demographics

U.S. Decadal Growth Rates for Population by Race/Ethnicity, 1980-2010

- White: 4%, 3%, 1%
- Black: 11%, 15%, 12%
- Latino: 48%, 61%, 43%
- API: 94%, 49%, 43%
Colorado Changing Demographics, 1980-2040

- Year 1980: 83% White, 3% Other, 4% API, 4% Latino, 2% Black
- Year 1990: 81% White, 4% Other, 4% API, 4% Latino, 2% Black
- Year 2000: 74% White, 4% Other, 4% API, 4% Latino, 2% Black
- Year 2010: 70% White, 4% Other, 4% API, 4% Latino, 2% Black
- Year 2020: 65% White, 4% Other, 4% API, 4% Latino, 2% Black
- Year 2030: 61% White, 4% Other, 4% API, 4% Latino, 2% Black
- Year 2040: 56% White, 4% Other, 4% API, 4% Latino, 2% Black
The Colorado Trust
Theory of Change

INTERMEDIATE
OUTCOMES

STRATEGIES
- Policy & Advocacy
- Community-based Participatory Grantmaking
- Data & Information

Policy options are researched, developed and implemented to support health equity.
Data systems and routine monitoring of health inequities are put in place; more effective policy and programs are developed.
Communities have the ability to organize all groups and act in a manner that promotes and realizes health equity.

LONG-TERM
OUTCOMES

Reduce disparities and improve social determinants of health affecting vulnerable populations.

VISION
All Coloradans have fair and equal opportunities to lead healthy, productive lives regardless of race, ethnicity, income or where we live.

DEDICATED TO ACHIEVING HEALTH EQUITY FOR ALL COLORADANS
Theory of Change

Upstream impact

<table>
<thead>
<tr>
<th>Advocacy and Policy</th>
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<tr>
<td>Community Partnerships</td>
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Downstream impact

Data and Information

DEDICATED TO ACHIEVING HEALTH EQUITY FOR ALL COLORADANS
Intersection of health, place and equity

- Health
  - Health facilities
  - Schools/Child care
  - Community Safety/violence
  - Transportation/Traffic patterns
  - Work environments
- Environment
  - Housing
  - Parks/Open Space playgrounds
- Equity
  - Access to Healthy Food
  - Schools/Child care

Brian Smedley, Joint Center for Political and Economic Studies