Health Disparities:
Impact on Minnesota
Implications for the Future

Minnesota’s Health Insurance Exchange
Challenges and Opportunities

Edward P. Ehlinger, MD, MSPH
Commissioner of Health
Minnesota Department of Health
January 17, 2012
Martin Luther King, Jr.
Born January 15, 1929

• “When the Constitution was written, a strange formula to determine taxes and representation declared that the Negro was 60 percent of a person. Today another curious formula seems to declare that he is 50 percent of a person. Of the good things in life he has approximately one-half those of Whites; of the bad he has twice those of Whites...
...Thus, half of all Negroes live in substandard housing, and Negroes have half the income of Whites. When we turn to the negative experiences of life, the Negro has a double share. There are twice as many unemployed. The rate of infant mortality (widely accepted as an accurate index of general health) among Negroes is double that of Whites.”

Where Do We Go From Here: Chaos or Community? (Beacon Press (1968)), Martin Luther King, Jr.
Disparities in Home Ownership and Housing Stress

• Homeownership rate in 2010
  – African Americans - 45.0 %
  – Latinos - 47.0 %
  – Whites - 74.7 %

• Foreclosure rates
  – African Americans - 7.9 %
  – Latinos 7.69 %
  – Whites 4.52 %.

• Center for American Progress

*Results among Hispanics should be interpreted cautiously. There were only 94 Latino homeowners in the sample. Hispanics may be of any race. Whites and Blacks include only non-Hispanics. Displayed income categories are for family incomes.

Note: n=1,307 Homeowners with a mortgage.
Disparities in Wealth

- The median wealth of white households is 20 times that of black households and 18 times that of Hispanic households.
  
  - Pew Research Center analysis of government data from 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Ethnicity</th>
<th>Median Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Whites</td>
<td>$113,149</td>
</tr>
<tr>
<td></td>
<td>Hispanics</td>
<td>$6,325</td>
</tr>
<tr>
<td></td>
<td>Blacks</td>
<td>$5,677</td>
</tr>
<tr>
<td>2005</td>
<td>Whites</td>
<td>$134,992</td>
</tr>
<tr>
<td></td>
<td>Hispanics</td>
<td>$18,359</td>
</tr>
<tr>
<td></td>
<td>Blacks</td>
<td>$12,124</td>
</tr>
</tbody>
</table>
Disparities in Wealth

- The disparities have long been present but are now increasing.
  
  – Pew Research Center analysis of government data from 2009
Disparities in Income

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

Disparities in employment

The unemployment rate of African Americans increased substantially faster than that of whites, regardless of breakdowns by gender, education, and age, since the start of the Great Recession.

“Twin Cities unemployment divide for black, white people is nation's widest”

Laura Yuen, Minnesota Public Radio October 12, 2011

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**TABLE 1**
The black and white gap
Differences in unemployment rates for African Americans, broken down by subgroups, since start of Great Recession

<table>
<thead>
<tr>
<th>Unemployment rate for….</th>
<th>Fourth quarter 2007</th>
<th>Second quarter 2009</th>
<th>Second quarter 2011</th>
<th>Difference between African Americans and whites for respective groups in second quarter 2011 (in percentage points)</th>
<th>Change since start of Great Recession (fourth quarter 2007 to second quarter 2011)</th>
<th>Difference in change since start of Great Recession between African Americans and whites for respective groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>8.4</td>
<td>14.8</td>
<td>16.1</td>
<td>8.2</td>
<td>7.7</td>
<td>3.8</td>
</tr>
<tr>
<td>White</td>
<td>4.0</td>
<td>8.3</td>
<td>7.9</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American men</td>
<td>9.2</td>
<td>18.0</td>
<td>18.3</td>
<td>10.0</td>
<td>9.1</td>
<td>4.9</td>
</tr>
<tr>
<td>White men</td>
<td>4.1</td>
<td>9.2</td>
<td>8.3</td>
<td>4.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American women</td>
<td>7.6</td>
<td>12.1</td>
<td>14.1</td>
<td>6.7</td>
<td>6.5</td>
<td>3.0</td>
</tr>
<tr>
<td>White women</td>
<td>3.9</td>
<td>7.2</td>
<td>7.4</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American, no high school</td>
<td>13.6</td>
<td>20.7</td>
<td>26.0</td>
<td>140</td>
<td>12.4</td>
<td>7.2</td>
</tr>
<tr>
<td>White, no high school</td>
<td>6.8</td>
<td>13.6</td>
<td>12.0</td>
<td>5.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American, high school</td>
<td>7.3</td>
<td>13.9</td>
<td>15.9</td>
<td>7.5</td>
<td>8.6</td>
<td>4.1</td>
</tr>
<tr>
<td>White, high school</td>
<td>3.9</td>
<td>8.5</td>
<td>8.4</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American, college</td>
<td>3.0</td>
<td>7.6</td>
<td>6.9</td>
<td>3.0</td>
<td>3.9</td>
<td>1.8</td>
</tr>
<tr>
<td>White, college</td>
<td>1.8</td>
<td>4.1</td>
<td>3.9</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American, 35 to 44</td>
<td>6.4</td>
<td>12.2</td>
<td>12.6</td>
<td>6.1</td>
<td>6.2</td>
<td>2.8</td>
</tr>
<tr>
<td>White, 35 to 44</td>
<td>3.1</td>
<td>6.9</td>
<td>6.5</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American, 65+</td>
<td>4.4</td>
<td>6.9</td>
<td>9.4</td>
<td>3.5</td>
<td>5.0</td>
<td>2.3</td>
</tr>
<tr>
<td>White, 65+</td>
<td>3.2</td>
<td>6.2</td>
<td>5.9</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All unemployment rates are in percent. All changes and differences are in percentage points.
Disparities in Education

NAEP Percentage of All Students At or Above Proficient in 4th Grade Reading: 2009

Top Ten States

- WA
- OR
- CA
- AZ
- NM
- NV
- UT
- ID
- MT
- WY

Bottom Ten States

- TX
- OK
- KS
- NE
- SD
- ND
- MN
- IA
- MO
- WI

Middle States

- WA
- OR
- CA
- AZ
- NM
- NV
- UT
- ID
- MT
- WY

Source: National Assessment of Educational Progress
Disparities in Education

NAEP Percentage of Black Students At or Above Proficient in 4th Grade Reading: 2009

Top Ten States
Bottom Ten States
Middle States
No Data

Source: National Assessment of Educational Progress
Death rates for men and women
1982–1996, by educational attainment

1 = less than ninth grade;
2 = some high school;
3 = high school graduate;
4 = some college;
5 = college graduate;
6 = graduate school.

MEN

WOMEN

©2002 by Oxford University Press
Steenland K et al. Am. J. Epidemiol. 2002;156:11-21
Infant mortality rates by maternal race and ethnicity, 2007

Source: NCHS linked birth/infant death data set, 2007
Minnesota Infant Mortality Rate / Disparity Ratio Comparison

Infant Mortality Rate

- African American: 16.5
- American Indian: 16.5
- Asian: 6.2
- Hispanic: 7.3
- White: 6.5

Infant Mortality Disparity Ratio

- American Indian: 1989-1993: 9.4
- Hispanic: 1989-1993: 4.6

Martin Luther King, Jr.
Born January 15, 1929

• "Of all the forms of inequality, injustice in health is the most shocking and the most inhumane."

  – The Rev. Martin Luther King, Jr., at the Second Annual Convention of the Medical Committee for Human Rights, Chicago, March 25, 1966
Minnesota Uninsurance Rates by Race/Ethnicity

Source: Minnesota Department of Health, Minnesota Health Access Survey
The Uninsured in MN

• There were 4,588,000 Minnesotans under the age of 65 during 2007-2008

• 1,105,000 (24.1%) were uninsured
  – More than two-thirds (68.3%) went without health insurance for six months or longer
  – Most (82.4%) are members of working families
  – 46.6 percent had income below 200% of poverty
  – 17.1 percent had income at/above 200% of poverty

Families USA (March 2009):
Disparities in Access to Healthcare

• Lack a usual source of healthcare
  – Hispanic Americans  30 %
  – African Americans  20 %
  – White Americans  16 %
    • Hispanic children are nearly three times as likely as non-Hispanic white children to have no usual source of health care.

• Reliance on hospitals or public clinics for usual source of healthcare
  – African Americans  16%
  – Hispanic Americans  13%
  – White Americans  8%
Disparities in Diagnosis and Treatment

• Heart Disease: African Americans 13% less likely to undergo coronary angioplasty and 33% less likely to undergo bypass surgery than whites.

• Asthma: Among children hospitalized for asthma – percentage given prescription for preventive medicine
  – African Americans 7%
  – Hispanic Americans 2%
  – White Americans 21%

Agency for Healthcare Research and Quality
Disparities in Diagnosis and Treatment

• Breast cancer: Length of time between abnormal screening and diagnosis is twice as long for African Americans and Hispanic Americans than for White Americans

• HIV: African Americans less likely to be on treatment

• Nursing Home Care: Minority residents less likely to have glasses or hearing aids

• Multiple other examples in prenatal care, diabetes, colon cancer screening, immunizations, etc.
Leading Causes of Disease 2010

**Minnesota**
1. Cancer
2. Heart Disease
3. Stroke
4. Accidents
5. Chronic Lower Resp
6. Alzheimer’s
7. Diabetes
8. Kidney Disease
9. Suicide
10. Flu/Pneumonia

**US**
- Heart Disease
- Cancer
- Chronic Lower Resp
- Stroke
- Accidents
- Alzheimer’s
- Diabetes
- Kidney Disease
- Flu/Pneumonia
- Suicide
# Mortality Disparity Ratios by Race/Ethnicity, Minnesota 2006-2010

## African American / Best Ratio

<table>
<thead>
<tr>
<th>Cause</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest</strong></td>
<td></td>
</tr>
<tr>
<td>Homicide</td>
<td>11.8</td>
</tr>
<tr>
<td>Cancer</td>
<td>2.6</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Lowest</strong></td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>1.4</td>
</tr>
<tr>
<td>Suicide</td>
<td>1.2</td>
</tr>
<tr>
<td>Motor Vehicle Death*</td>
<td>1.0</td>
</tr>
</tbody>
</table>

## American Indian / Best Ratio

<table>
<thead>
<tr>
<th>Cause</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest</strong></td>
<td></td>
</tr>
<tr>
<td>Unintentional Injury</td>
<td>4.2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3.6</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>Lowest</strong></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>2.4</td>
</tr>
<tr>
<td>Infant Mortality</td>
<td>2.1</td>
</tr>
<tr>
<td>Stroke</td>
<td>1.4</td>
</tr>
</tbody>
</table>

1- Ratios are calculated by dividing the rate for each racial/ethnic population rate by the Best rate among the populations.

*- Best Rate

CLRD – Chronic Lower Respiratory Disease

Source: Minnesota Center for Health Statistics, Minnesota Department of Health
## Mortality Disparity Ratios\(^\text{1}\) by Race/Ethnicity, Minnesota 2006-2010

<table>
<thead>
<tr>
<th>Cause</th>
<th>Ratio</th>
<th>Cause</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td>Highest</td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>1.5</td>
<td>Motor Vehicle</td>
<td>1.3</td>
</tr>
<tr>
<td>Stroke</td>
<td>1.4</td>
<td>Unintentional Injury</td>
<td>1.2</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1.3</td>
<td>Diabetes</td>
<td>1.2</td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td>Lowest</td>
<td></td>
</tr>
<tr>
<td>CLRD(^*)</td>
<td>1.0</td>
<td>Cancer(^*)</td>
<td>1.0</td>
</tr>
<tr>
<td>Unintentional Injury(^*)</td>
<td>1.0</td>
<td>Heart Disease(^*)</td>
<td>1.0</td>
</tr>
<tr>
<td>Suicide(^*)</td>
<td>1.0</td>
<td>Stroke(^*)</td>
<td>1.0</td>
</tr>
</tbody>
</table>

1- Ratios are calculated by dividing the rate for each racial/ethnic population rate by the Best rate among the populations.  
* Best Rate  
CLRD – Chronic Lower Respiratory Disease  
Source: Minnesota Center for Health Statistics, Minnesota Department of Health
# Mortality Disparity Ratios\(^1\) by Race/Ethnicity, Minnesota 2006-2010

## White / Best Ratio

<table>
<thead>
<tr>
<th>Cause</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest</strong></td>
<td></td>
</tr>
<tr>
<td>Heart Disease</td>
<td>2.5</td>
</tr>
<tr>
<td>Cancer</td>
<td>2.0</td>
</tr>
<tr>
<td>CLRD</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Lowest</strong></td>
<td></td>
</tr>
<tr>
<td>Infant Mortality*</td>
<td>1.0</td>
</tr>
<tr>
<td>Diabetes*</td>
<td>1.0</td>
</tr>
<tr>
<td>Homicide*</td>
<td>1.0</td>
</tr>
</tbody>
</table>

---

1- Ratios are calculated by dividing the rate for each racial/ethnic population rate by the Best rate among the populations.

* Best Rate

CLRD – Chronic Lower Respiratory Disease

Source: Minnesota Center for Health Statistics, Minnesota Department of Health

- $1.4 trillion
  - Combined costs of health inequalities and premature death
- $229.4 billion
  - Savings in direct medical care expenditures if health disparities for minorities eliminated
- 30.6%
  - Percentage of direct medical care expenditures for African-Americans, Asians, and Hispanics due to health disparities
- >$1 trillion
  - Reductions in indirect costs associated with illness and premature death if health inequalities for minorities eliminated

Joint Center for Political and Economic Studies
# Minnesota Population Change: 1990-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>94,944</td>
<td>171,731</td>
<td>274,412</td>
<td>189.0</td>
</tr>
<tr>
<td>American Indian</td>
<td>49,909</td>
<td>54,967</td>
<td>60,916</td>
<td>22.1</td>
</tr>
<tr>
<td>Asian</td>
<td>77,886</td>
<td>143,947</td>
<td>216,390</td>
<td>177.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>53,884</td>
<td>143,382</td>
<td>250,258</td>
<td>364.4</td>
</tr>
<tr>
<td>White</td>
<td>4,130,395</td>
<td>4,400,282</td>
<td>4,524,062</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Total Population</strong></td>
<td><strong>4,375,099</strong></td>
<td><strong>4,919,479</strong></td>
<td><strong>5,303,925</strong></td>
<td><strong>21.2</strong></td>
</tr>
</tbody>
</table>

Source: US Census, the population for Census data is from 100-percent data based on single race categories

1 The added value of each population group does not add up to “Total Population” because Hispanic, who can be any race are not counted in the total and because “Some other race alone” and “Two or more races” are not shown.
## Immigrants living in Minnesota, 2010

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>Foreign-born Population</th>
<th>Percent Foreign-born Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
<td>2010</td>
</tr>
<tr>
<td>African American</td>
<td>4,929</td>
<td>76,517</td>
</tr>
<tr>
<td>American Indian</td>
<td>638</td>
<td>928</td>
</tr>
<tr>
<td>Asian</td>
<td>76,771</td>
<td>131,824</td>
</tr>
<tr>
<td>Hispanic</td>
<td>49,664</td>
<td>96,217</td>
</tr>
<tr>
<td>White</td>
<td>113,039</td>
<td>131,500</td>
</tr>
</tbody>
</table>

Source: US Census, Race Alone
## The “Real” Top Causes of Death U.S.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Number of Deaths</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>435,000</td>
<td>18%</td>
</tr>
<tr>
<td>Diet/activity</td>
<td>365,000</td>
<td>15%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>85,000</td>
<td>4%</td>
</tr>
<tr>
<td>Microbial agents</td>
<td>75,000</td>
<td>3%</td>
</tr>
<tr>
<td>Toxic agents</td>
<td>55,000</td>
<td>2%</td>
</tr>
<tr>
<td>Firearms</td>
<td>29,000</td>
<td>1%</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>20,000</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>43,000</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Illicit use of drugs</td>
<td>17,000</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Source: Mokdad et al, JAMA 2004 March 10; 291 (10):1238-45
Major Social Causes of Death

- Less than High School graduation  245,000
  - (over 1 million deaths could have been avoided between 1996 to 2002 if all adults in US would have had a college education)
- Racial segregation          176,000
- Low social support         162,000
- Individual level poverty   133,000
- Income inequality          119,000
- Community level poverty    39,000

Galea, et.al., American Journal of Public Health August 2011, Vol 101 no. 8
Social Factors Affecting Health
Survey of Primary Care Clinicians

• 75% Lack of motivation to make healthy decisions
• 65% Insufficient access to mental health services
• 64% Limited education about making health decisions
• 56% Lack of access to adequate health insurance
• 52% Low household income
• 38% Cost of nutritious food
• 31% Living conditions
• 29% Too few primary care physicians
• 21% Lack of access to adequate child care
Healthcare is a Social Determinant

• “Social determinants usually identified as influencing health and health equity include those such as housing, employment and education. Growing evidence shows that health systems are themselves social determinants. They are seen more commonly as ‘downstream’ determinants (for example, in the extent to which they allow access by the disadvantaged to health care services), but health systems have ‘upstream’ influence as well, extending even to impacts on the broader socio-political environment.”

• “Health systems are a vital part of the social fabric, providing not only services and influencing health, but also reflecting the dominant social values.”
Healthcare is a Social Determinant

• “Overall, the evidence demonstrates that, when appropriately designed and managed, health systems can address health equity. They do this when they specifically address the circumstances of socially disadvantaged and marginalized populations, including women, the poor and other groups excluded through stigma and discrimination. They also generate wider benefits: a sense of life security, well-being, social cohesion and confident expectation of care in times of illness; and they may be influential in building societal and political support for health equity.”

  — The World Health Organization’s Commission on the Social Determinants of Health
Determinants of Health

• Genetic predisposition
• Individual choices and behaviors
• Physical environment
• Social determinants
• Health Care
  – Access to healthcare
  – Continuity in health coverage
  – Quality of healthcare
    • Disease specific care
    • Prevention
“Exchange” levers to influence disparities

- Stability of coverage
- Networks to include
  - Community health centers
  - Community providers
  - Behavioral and mental health services
- Services to include:
  - Care coordination
  - Preventive services
  - Home visiting
  - Community Care Teams
- Workforce
  - Interpreters
  - Navigators
  - Community Health Workers
  - Other kinds of providers
- Emphasis on primary care
- Transportation
- Integration with public health and social services
- Individual and community education
- Data collection on race, ethnicity, and language
- Tracking of progress
World Health Organization
Social Determinants of Health Framework

STRUCTURAL DETERMINANTS OF HEALTH INEQUITIES

INTERMEDIARY DETERMINANTS OF HEALTH

IMPACT ON EQUITY IN HEALTH AND WELL-BEING
The possibilities of the “Exchange” and other Health Reform efforts

• “The Association of American Medical Colleges has documented the incredibly important role that Medicare and Medicaid played in helping to desegregate hospitals. Medicare was the lever that lifted equity and equality in healthcare.”

  • John Eisenberg, MD, Director, Agency for Healthcare Research and Quality, January 14, 2000