Addressing health inequalities in the United States: Key data trends and policy action

Sara N. Bleich
*Johns Hopkins Bloomberg School of Public Health*, sbleich@jhsph.edu

Marian P. Jarlenski
mjarlens@jhsph.edu

Caryn N. Bell
cbell@jhsph.edu

Thomas A. LaVeist
*Johns Hopkins University Bloomberg School of Public Health*, tlaveist@jhsph.edu

Follow this and additional works at: [https://uknowledge.uky.edu/frontiersinphssr](https://uknowledge.uky.edu/frontiersinphssr)

Part of the Health and Medical Administration Commons, Health Policy Commons, Health Services Administration Commons, and the Health Services Research Commons

**Recommended Citation**
DOI: 10.13023/FPHSSR.0204.01

This Article is brought to you for free and open access by the Center for Public Health Systems and Services Research at UKnowledge. It has been accepted for inclusion in Frontiers in Public Health Services and Systems Research by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.
Addressing health inequalities in the United States: Key data trends and policy action

Abstract
Health inequalities, which have been well documented for decades, have recently become policy targets in the United States. This report summarizes current patterns and trends in health inequalities, commitments to reduce health inequalities, and progress made to eliminate health inequalities. Time trend data indicate improvements in health status and major risk factors but increases in morbidity, with black and lower-education individuals experiencing a disproportionate burden of disease. A common policy response has been priority setting in the form of national objectives or goals to address health inequalities. More research and better methods are needed to precisely measure relationships between stated policy goals and observed trends in health inequalities. Despite these challenges, the United States has made commitments to advancing research and policy to eliminate health inequalities. There remain considerable opportunities for local public health systems and practitioners to develop innovative solutions to address the problem of health inequalities, particularly related to action steps, and for researchers to address knowledge gaps in the scientific literature related to the evaluation and measurement of progress aimed at addressing health inequalities.

Keywords
health inequality, trends, race/ethnicity, policy

Cover Page Footnote
This Frontiers article is a modified version of the following article: Bleich SN, Jarlenski MP, Bell, CN, LaVeist, TA. Annu Rev Public Health. 2012 Apr; 33:7-40. Copyright 2012 by Annual Reviews. All rights reserved

This Article is available in Frontiers in Public Health Services and Systems Research: https://uknowledge.uky.edu/frontiersinphssr/vol2/iss4/1
Over the past three decades a sizable body of literature has documented pervasive and systematic inequalities in health. In addition to representing a societal injustice, health inequalities are expensive; between 2003 and 2006 health inequalities were estimated to cost $1.24 trillion (1). Using national-level datasets, this report summarizes patterns and trends in health inequalities. Time trend data generally indicate improvements in health status and major risk factors, but increases in morbidity, with black and lower-education individuals experiencing a disproportionate burden of disease. We also identified key policy activities related to health inequalities, cataloging whether each activity was primarily focused on information, priority setting, or action. The most common policy response has been priority setting in the form of national objectives or goals to address health inequalities. There are considerable opportunities for local public health systems and practitioners to develop innovative solutions to address the problem of health inequalities, particularly related to action steps. There are also considerable opportunities for researchers related to the evaluation and measurement of progress aimed at addressing health inequalities, particularly the relationship between stated policy goals and observed trends. This Frontiers article is a shorter version of “Health inequalities: Trends, Progress and Policy,” which was published in the Annual Review of Public Health, Volume 33 (2012). Please enjoy complimentary access, courtesy of the Annual Review of Public Health. Click here to access the review:

METHODS

A series of national-level datasets were used to describe trends in health inequalities beginning in 1980 among adults aged 20 and older. The year 1980 was selected as the starting point as that was the year of the landmark Black Report that drew international attention to the issue of health inequalities (2). The data are age-adjusted and, where possible, broken down by population subgroup (e.g., gender, race/ethnicity, SES). Three broad categories of health indicators are described in the full report (3); in this abridged report we include one example of each – health status (life expectancy at birth), behavioral risk factors (smoking), and morbidity (obesity). We also identified key policy activities related to health inequalities, cataloging whether each activity was primarily focused on information (descriptive reports or data), priority setting (policy actions or documents that include goals, objectives, or targets) or action (activities that change programs or law or that create accountability to the public).
METHODS

Table 1 displays trends in life expectancy, smoking, and obesity by sex, race/ethnicity, and education. Trend data generally indicate improvements in life expectancy and smoking, but increases in obesity, with black and lower-education individuals experiencing a disproportionate burden of disease. The gap between the best- and worst-off groups over time varies by health indicator. Inequalities between racial/ethnic groups have decreased with respect to life expectancy. Inequalities in smoking prevalence have increased between racial/ethnic groups but decreased between education strata. Inequalities in obesity prevalence have decreased between racial/ethnic groups and between education strata over time, although it is important to note that the prevalence of obesity has increased in all groups over time.

Table 2 displays key policy activities related to health inequalities by year. Most major policy actions to address health inequalities in the U.S. have involved priority setting, primarily focused on race/ethnicity. One of the first relevant activities was the U.S. Department of Health and Human Services (HHS) Secretary’s Task Force Report on Black and Minority Health, published in 1985, which documented strikingly worse health outcomes among minority racial/ethnic populations as compared to white Americans. More recently, the Affordable Care Act of 2010 (ACA) seeks to improve data collection on sociodemographic characteristics and health, and calls for cultural competency training.

The body of research describing trends and patterns of health inequalities has helped move the issue onto the policy agenda and, subsequently, spur political action. As a result, attention has now shifted towards the implementation and monitoring of strategies to reduce or eliminate health inequalities. Methods to measure and infer relationships between stated policy goals and observed trends in health inequalities represent a relatively new area of research. As such, there is not universal agreement about what types of data collection and methods can best connect policy-making to practice.

Separate from, but related to, methodological issues, are data collection and reporting practices that influence the policy-making environment to address health inequalities. At the national level, the Agency for Healthcare Research and Quality (AHRQ) publishes a congressionally mandated annual health care disparities report. The report documents differences in access and utilization of health care.

Despite the challenges of implementation and evaluation, the U.S. appears committed to sustained research and policy initiatives to eliminate health inequalities and has begun efforts to explore new methods for this. For example, the NIH is exploring research methods that promote community engagement and focus on the
social determinants of inequalities. The recently enacted ACA is likely to benefit minority populations as racial/ethnic minorities tend to be over-represented among the uninsured.

In recent years, there has been significant research progress in how to better measure health inequalities. One example is the Exploring Health Disparities in Integrated Communities Study (EHDIC) – a multi-site study of race disparities within communities in the U.S. where blacks and whites live together and where there are no race differences in socioeconomic status (SES) (5). Results from the EHDIC study point to the importance of understanding social and environmental exposures – i.e., the role of social context – when developing and evaluating policies aimed at addressing health inequalities. In particular, the findings indicate that in a racially integrated community without race differences in income, black-white race disparities in hypertension, female obesity and diabetes were attenuated or eliminated, as compared to a nationally representative sample of the U.S. population. These results are striking given decades of research documenting large and persistent race disparities in these areas. The finding that inequalities in health status are linked to social context may pave the way for creative policy solutions focused on contextual rather than individual-level factors. The environment can be modified through a variety of policy levers, unlike individual characteristics such as race or ethnicity, which are immutable.
Table 1. Trends in age-adjusted health status (life expectancy), risk factors (smoking), and morbidity (obesity), overall and by demographic characteristics, %

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life expectancy at birth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>73.7</td>
<td>74.7</td>
<td>75.4</td>
<td>75.8</td>
<td>76.8</td>
<td>77.4</td>
<td>77.9</td>
</tr>
<tr>
<td>Male</td>
<td>70.0</td>
<td>71.1</td>
<td>71.8</td>
<td>72.5</td>
<td>74.1</td>
<td>74.9</td>
<td>75.4</td>
</tr>
<tr>
<td>Female</td>
<td>77.4</td>
<td>78.2</td>
<td>78.8</td>
<td>78.9</td>
<td>79.3</td>
<td>79.9</td>
<td>80.4</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>70.7</td>
<td>71.8</td>
<td>72.7</td>
<td>73.4</td>
<td>74.7</td>
<td>75.4</td>
<td>75.9</td>
</tr>
<tr>
<td>Female</td>
<td>78.1</td>
<td>78.7</td>
<td>79.4</td>
<td>79.6</td>
<td>79.9</td>
<td>80.4</td>
<td>80.8</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63.8</td>
<td>65.0</td>
<td>64.5</td>
<td>65.2</td>
<td>68.2</td>
<td>69.3</td>
<td>70.0</td>
</tr>
<tr>
<td>Female</td>
<td>72.5</td>
<td>73.4</td>
<td>73.6</td>
<td>73.9</td>
<td>75.1</td>
<td>76.1</td>
<td>76.8</td>
</tr>
<tr>
<td><strong>Smoking (current)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25.1</td>
<td>22.9</td>
<td>22.0</td>
<td>20.5</td>
<td>20.6</td>
<td>20.4</td>
<td>20.3</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>25.7</td>
<td>24.2</td>
<td>23.6</td>
<td>22.4</td>
<td>22.3</td>
<td>22.3</td>
<td>22.4</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>25.0</td>
<td>21.9</td>
<td>21.0</td>
<td>19.1</td>
<td>21.9</td>
<td>20.3</td>
<td>20.3</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21.0</td>
<td>16.7</td>
<td>14.7</td>
<td>13.3</td>
<td>13.6</td>
<td>14.3</td>
<td>13.0</td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td>19.3</td>
<td>18.2</td>
<td>16.2</td>
<td>15.4</td>
<td>13.2</td>
<td>13.1</td>
<td>13.6</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than HS grad</td>
<td>34.1</td>
<td>29.6</td>
<td>29.9</td>
<td>27.9</td>
<td>28.2</td>
<td>28.3</td>
<td>27.7</td>
</tr>
<tr>
<td>HS grad</td>
<td>28.6</td>
<td>29.5</td>
<td>28.4</td>
<td>25.5</td>
<td>26.1</td>
<td>27.4</td>
<td>28.0</td>
</tr>
<tr>
<td>More than HS</td>
<td>17.1</td>
<td>16.8</td>
<td>16.2</td>
<td>15.7</td>
<td>15.5</td>
<td>15.1</td>
<td>14.8</td>
</tr>
<tr>
<td><strong>Obesity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.3</td>
<td>31.0</td>
<td>30.7</td>
<td>32.4</td>
<td>34.5</td>
<td>34.1</td>
<td></td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>21.1</td>
<td>29.1</td>
<td>30.6</td>
<td>31.2</td>
<td>33.3</td>
<td>32.9</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>30.0</td>
<td>41.6</td>
<td>39.5</td>
<td>45.8</td>
<td>45.9</td>
<td>44.7</td>
<td></td>
</tr>
<tr>
<td>Mexican-American</td>
<td>28.2</td>
<td>36.3</td>
<td>30.7</td>
<td>37.5</td>
<td>34.3</td>
<td>40.8</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than HS grad</td>
<td>24.5</td>
<td>33.1</td>
<td>32.0</td>
<td>34.2</td>
<td>35.5</td>
<td>37.7</td>
<td></td>
</tr>
<tr>
<td>HS grad</td>
<td>25.0</td>
<td>34.7</td>
<td>32.2</td>
<td>34.5</td>
<td>38.9</td>
<td>35.3</td>
<td></td>
</tr>
<tr>
<td>More than HS</td>
<td>18.5</td>
<td>27.8</td>
<td>29.6</td>
<td>30.8</td>
<td>32.1</td>
<td>32.1</td>
<td></td>
</tr>
</tbody>
</table>

Notes (life expectancy): Data is reported in 5-year increments beginning in 1980 up until 2005. After 2005, we include the most recent year of data which is 2007.
Source (smoking): National Health Interview Survey
Notes: Data is reported for 1990 or earliest year and bi-annually beginning in 2000 up until 2008. After 2008, we include the most recent year of data which is 2009. Includes adults aged 20 and older.
Survey question (smoking): Ever smoked 100 cigarettes and currently smoke (every day or some days)
Source (obesity): National Health and Nutrition Examination Survey

Notes (obesity): BMI>=30 kg/m^2 (obtained from measured height and body weight)
<table>
<thead>
<tr>
<th>Policy Action (Year)</th>
<th>Summary</th>
<th>Key Relevant Recommendations/Activities</th>
<th>Focus(^1) (Information, Priority setting, Action step)</th>
</tr>
</thead>
</table>
| Report of the Secretary’s Task Force on Black and Minority Health (1980)          | Landmark report which drew national attention to health inequalities by race/ethnicity; created the Office of Minority Health in the U.S. Department of Health and Human Services | • Recommended that government disseminate public education materials targeted to minority populations  
• Recommended that patient education be responsive to needs of minority populations  
• Recommended government coordination and collaboration with private-sector organizations to respond to needs of minority communities | ☐ Action step  
☑ Information  
☑ Priority setting |
| Healthy People 2000 (1991)                                                        | Set national health objective to reduce health disparities by 2000; identified 22 priority areas for health gains | • Set goal of increasing years of health life in the U.S. population  
• Set goal of reducing health disparities in the U.S.  
• Set goal of achieving access to preventive services for all | ☑ Action step  
☐ Information  
☑ Priority setting |
| U.S. National Institutes of Health (NIH) Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research (1994) | Required inclusion of women and minority groups in all clinical research that receives funding from the NIH | • Required inclusion of women and minorities such that valid analyses of intervention effects could be measured  
• Supported outreach efforts to enroll women and minorities in clinical research | ☑ Action step  
☐ Information  
☐ Priority setting |

\(^1\) Information is defined as reports or data that provide descriptive information. Priority setting is defined as policy actions or documents that include goals, objectives, or targets. Action steps are defined as policy actions that change programs or law or that create accountability to the public.
<table>
<thead>
<tr>
<th>Policy Action (Year)</th>
<th>Summary</th>
<th>Key Relevant Recommendations/Activities</th>
<th>Focus ¹ (Information, Priority setting, Action step)</th>
</tr>
</thead>
</table>
| Minority Health Research & Education Act (2000) | Created of National Center on Minority Health and Health Disparities in NIH; authorized more than $60 million for research and education | • Created education loan repayment for health inequalities research  
   • Directed the U.S. Agency for Healthcare Research and Quality to conduct research into health inequalities | ☑ Action step  
☐ Information  
☐ Priority setting |
| Healthy People 2010 (2001)               | Set national health objective to eliminate health disparities by 2010; identified 10 leading health indicators to measure progress | • Identified increased quality of life and years of healthy life as areas of a national focus | ☑ Action step  
☐ Information  
☑ Priority setting |
| Patient Protection & Affordable Care Act (2010) | Increased data collection and reporting on race/ethnicity and language; supported cultural competency training; changed NIH Center on Minority Health and Disparities to an Institute of the NIH | • Requires all federally supported health programs to collect data on race, ethnicity, and primary language spoken; and required that such data be used to monitor inequalities  
   • Establishes a national strategy to improve care delivery, including reduction of inequalities  
   • Provides grants for community programs to address health inequalities and promote wellness  
   • Provides financial support for students from under-represented backgrounds seeking to work in medically under-served areas  
   • Supports development of cultural competency and health inequalities curricula for use in health professions education | ☑ Action step  
☐ Information  
☐ Priority setting |
<table>
<thead>
<tr>
<th>Policy Action (Year)</th>
<th>Summary</th>
<th>Key Relevant Recommendations/Activities</th>
<th>Focus[^] (Information, Priority setting, Action step)</th>
</tr>
</thead>
</table>
| Healthy People 2020 (2011) | Set national health objective to achieve health equity, eliminate disparities, and improve the health of all groups, by 2020; identified four key health measures | • Recommends that national health objectives be measured by health status, health-related quality of life, determinants of health, and health disparities | ✓ Action step  
☐ Information  
☐ Priority setting |
IMPLICATIONS

Compared to several decades ago, there has been enormous progress in knowledge related to health inequality in the U.S. However, large gaps remain in our understanding of the mechanisms underlying health inequalities and the most effective methods for evaluating progress toward the reduction or elimination of health inequalities. In the absence of consensus regarding the most accurate measures of progress, it is difficult for policy responses to move beyond goal-setting and data collection efforts. Despite these challenges, the U.S. has made several national commitments to advancing research and policy to eliminate health inequalities.

While much can be learned from existing efforts, there remains considerable opportunity for local public health systems and practitioners to develop innovative solutions to address the problem of health inequalities, particularly related to action steps. Specific actions include: systematic reporting of health inequalities by socioeconomic indicators, coordination across governmental entities focused on health inequality, and encouragement of sustained political will focused on the elimination of health inequalities.

There are also considerable opportunities for researchers to address knowledge gaps in the scientific literature related to the evaluation and measurement of progress aimed at addressing health inequalities. Some concrete areas of future focus might include: improving the comparability of health indicators across individuals and over time; enhancing the knowledge base related to the determinants of health inequalities with a particular focus on social context and other environmental-level factors (rather than individual-factors); refining existing measures of inequality so that they might better evaluate the health indicator being measured; and developing new measures of inequality particularly targeted at capturing progress among sub-populations.
**SUMMARY BOX:**

**What is Already Known about This Topic?**
National-level patterns and trends in health inequalities by sex, race/ethnicity, and socioeconomic status in the U.S. are well documented in the literature.

The reduction or elimination of health inequalities has become a national policy target.

**What is Added by this Report?**
Despite challenges of implementation and evaluation, the U.S. has made commitments to advancing research and policy to eliminate health inequalities.

Policy responses have included priority setting via national objectives or goals, information gathering and dissemination, and action steps to change health programs or law.

**What are the Implications for Public Health Practice, Policy, and Research?**
There are considerable opportunities for local public health systems and practitioners to develop innovative solutions to address the problem of health inequalities, particularly related to action steps.

There are considerable opportunities for researchers to address knowledge gaps in the scientific literature related to the evaluation and measurement of progress aimed at addressing health inequalities, particularly the relationship between stated policy goals and observed trends.


