U.S. Health In International Perspective: Shorter Lives, Poorer Health

Institute of Medicine Report April 2013

ACP September 9, 2016
Introduction

• Wealth vs. health
  – Americans live shorter lives and experience more injuries and illnesses than people in other high-income countries
  – 2011 report by National Research Council
    • American >50 have a slower pace in the increase of life expectancy than other high income countries

• U. S. spending per capita for health care

• NIH request to NRC and IOM
National Academies

• **National Academy of Science**—distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare

• **National Academy of Engineering**—parallel organization of outstanding engineers

• **Institute of Medicine**—members of appropriate professions in the examination of policy matters pertaining to the health of the public

• **National Research Council**—working arm of the national academies--to associate the broad community of science and technology with the Academy’s purposes of furthering knowledge and advising the federal government
Formation of Panel

- **Panel on Understanding Cross-National Health Differences Among High-Income Countries**
  - Examine whether the U.S. health disadvantage exists across the life span, exploring potential explanations, and assessing the larger implications of the findings

- 16 comparable high income or “peer countries”
Experts on the Panel

- Medicine
- Epidemiology
- Demography
- Other fields of Social Sciences
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*WHO Human Mortality Database 2007*
U.S. Health disadvantage spans many types of illness and injury

- Infant mortality and low birth weight
- Injuries and homicides
  - MVA, violence, especially in children and young adults
- Adolescent pregnancy and sexually transmitted infections
  - highest pregnancy rate and more likely to acquire STD
- HIV and AIDS
  - 2nd highest prevalence of HIV, 1st -- incidence of AIDS
- Drug-related deaths
  - 1st drugs/ETOH (excluding DUI)
National Overdose Deaths
Number of Deaths from Prescription Drugs

Source: National Center for Health Statistics, CDC Wonder

https://www.drugabuse.gov/.../overdose
U.S. Health disadvantage spans many types of illness and injury

- **Obesity and diabetes**
  - #1 obesity rate, high prevalence rate in children
  - >age 20—highest prevalence rate of diabetes and blood glucose
- **Heart disease**
  - Death rate second highest
  - Reach age 50 with less favorable cardiovascular profile
- **Chronic lung disease**
  - More prevalent and associated with higher mortality
- **Disability**
  - older U.S. adults report higher prevalence of arthritis and activity limitations
Age Related

- Deaths before age 50 are responsible for 2/3 of the difference in life expectancy between men in the U.S. and 1/3 for women compared to peer countries.
- Since 1980, first or second lowest probability of surviving to age 50.
- As adults, greater morbidity and mortality.
Mortality Rates in the U.S. 2010

- **Number of deaths:** 2,468,435
  - Heart disease: 597,689
  - Cancer: 574,743
  - Chronic lower respiratory diseases: 138,080
  - Stroke (cerebrovascular diseases): 129,476
  - Accidents (unintentional injuries): 120,859
  - Alzheimer's disease: 83,494
  - Diabetes: 69,071
  - Nephritis, nephrotic syndrome, and nephrosis: 50,476
  - Influenza and Pneumonia: 50,097
  - Intentional self-harm (suicide): 38,364

- **Death rate:** 799.5 deaths per 100,000 population
- **Life expectancy:** 78.7 years
- **Infant Mortality rate:** 6.15 deaths per 1,000 live births

*Center for Disease Control 2010 Mortality rates*
Mortality Rates

- Americans faced the second highest risk of dying from non-communicable diseases in 2008 (418/100K WHO 2011)
- Fourth highest risk of dying from communicable diseases
- Unintentional injuries leading cause of death in U.S. age 1-44
- Death rates from c-v diseases have decreased everywhere but less in U.S.
FIGURE 1-1 Mortality from noncommunicable diseases in 17 peer countries, 2008. SOURCE: Data from World Health Organization (2011a, Table 3).
FIGURE 1-2  Mortality from communicable diseases in 17 peer countries, 2008. SOURCE: Data from World Health Organization (2011a, Table 3).
FIGURE 1-3 Mortality from injuries in 17 peer countries, 2008. SOURCE: Data from World Health Organization (2011a, Table 3).
Dr. James M. Jackson Office
190 Southeast 12th Terrace
U. S. National Register of Historic Places
Currently: Dade Heritage Trust
He may not be much, but he IS a medical student.
“What accounts for the paradoxical combination in the U.S. of relatively great wealth and high spending on health care with relatively poor health status and lower life expectancy?”
Why are Americans so Unhealthy?

• **Health systems**
  – Relatively large uninsured population with limited access to primary care
  – Lapses in the quality and safety of care outside of hospitals

• **Health behaviors**
  – Americans drink and smoke less but consume the most calories
  – Higher rates of drug abuse
  – Higher rate of traffic accidents with drugs/alcohol
  – Firearms in violence
PROPOSED FOOTBALL STADIUM
UNIVERSITY OF MIAMI
CORAL GABLES, FLORIDA

EDWARD J. GERRITS INC., CONTRACTOR
JOHNSON / ROMANOWITZ / ARCHITECTS
MIAMI, FLORIDA
LEXINGTON, KY.
Why are Americans so Unhealthy?

• **Social and economic conditions**
  – Income of Americans is higher but higher levels of poverty, income inequality, and lower rates of social mobility
  – Other countries have better education of young people which also affects health
  – Americans benefit less from safety net programs that can buffer the negative health effects of poverty and other social disadvantages

• **Physical environments**
  – Designed around automobiles
  – Less physical activity that contributes to obesity
Infant Mortality Rate--2011

- 1 Sweden 2.2
- 2 Finland 2.3
- 3 Japan 2.4
- 4 Norway 2.6
- 5 Portugal 2.7
- 6 Denmark 3.1
- 7 Italy 3.2
- 8 Germany 3.3
- 9 France 3.4
- 10 Netherlands 3.4
- 11 Austria 3.5
- 12 Spain 3.5
- 13 Switzerland 4.0
- 14 Australia 4.1
- 15 United Kingdom 4.4
- 16 Canada 4.9
- **17 United States 6.4**

13 September 2012
The UN Inter-agency Group for Child Mortality Estimation released the latest estimates on child mortality.
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Fatal and Nonfatal Firearm-Related Injuries, Overall and by Race/Ethnicity, Sex, and Disposition

- Estimated average of 115,000 firearm-related injuries occur annually
- Approximately 30% resulted in death
- Both fatal and nonfatal firearm-related injury rates were highest among persons aged 15--24 years
  - black males in that age group had the highest risk
  - rates for Hispanics were generally less than those for blacks, but higher than those for white, non-Hispanics
- The firearm-related death rate for males was six times higher than that for females
- The nonfatal firearm-related injury rate for males was eight times higher than that for females
Incidence and Prevalence of Traumatic Brain Injury in the United States

- (TBI) is a leading cause of death and disability among children and young adults in the United States. Each year an estimated 1.5 million Americans sustain a TBI
- 230,000 people are hospitalized and survive
- 50,000 people die
- 80,000 to 90,000 people experience the onset of long-term disability
- Highest risk in adolescents, young adults, and >75
- Causes
  - Violence, especially suicidal behavior and assaults that involve firearms--the leading cause of TBI-related death
  - Falls--the leading cause of TBI among the elderly
  - Motor vehicle crashes--the leading cause of TBI resulting in hospitalization.

Can U.S. health care disparities be fully explained by people who are uninsured or poor?

• Even advantaged Americans are in worse health than similar individuals in other countries
• Health disadvantage is more pronounced among socioeconomically disadvantaged groups
Possible Explanations for the U.S. Health Disadvantage

• U.S. health care is highly fragmented
  – Limited public health and primary care resources
  – Pre-natal care
  – Inaccessible or unaffordable

• Americans less likely to smoke or drink but consume the most calories per capita

• Higher rates of poverty and income inequality
  – U.S. children are more likely than children in peer countries to grow up in poverty and less will improve their SES than in peer countries
No Single Factor Fully Explains the U.S. Health Disadvantage

• Health care system cannot account for transportation-related accidents or violence

• Individual behaviors may contribute to overall disadvantage

• Problem is not confined to socially or economically disadvantaged Americans

• Substance abuse, physical illness, criminal behavior, family violence—related to a more stressful environment??

• Asthma rates higher--unhealthy housing and polluted air??
U.S. does have a health advantage when compared to peer countries

- Lower cancer death rates—higher rates of cancer screening and survival
- Greater control of blood pressure and cholesterol
- Americans who reach age 75
- Lower stroke mortality
- Lower rates of current smoking
- Higher average household income
- Suicide rates do not exceed international average
- Immigrants better health than native born Americans
Recommendations Related to Research

• HHS, NIH, NCHS should join with international partners such as WHO, OECD to improve the quality and consistency of data sources available for cross-national health comparisons

• Support the development for more refined analytical methods and study designs for cross-national health comparisons

• NIH and other agencies should commit to a coordinated portfolio of investigator-initiated and invited research devoted to understanding the factors responsible for the U.S. health disadvantage
Recommendations Related to Policy

• Achieve established national health objectives directed at the specific disadvantages documented in the report and use strategies and approaches identified as effective

• Philanthropy and advocacy communities should organize a comprehensive media and outreach campaign to inform the general public about the U.S. health disadvantage

• Analytic review of the available evidence on
  - Effect on policies where U.S. has a health disadvantage
  - How these policies have varied over time across high-income countries
  - Extent to which these policy differences may explain cross-national health differences in one or more health domains
Summary

- Pursue national health objectives
  - Application of effective strategies and policies to reform the health system, promote healthy behaviors, and improve health related social conditions and community environments
- Alert the public and stimulate a national discussion
- Importance of child and family services, support for education, social services that safeguard young people
  - Infant mortality, adolescent homicides
- Identify innovative policies
  - What has worked in other countries and may have applications with adaptations in the U.S.
  - Series of issue-focused investigative studies to seek explanations for the specific health disadvantages
Cost of Inaction

- U.S. will continue to fall behind other peer countries on health outcomes and mortality
- Drain on life and health may ultimately affect the economy and the prosperity of the United States as other countries reap the benefits of healthier populations and more productive workforces
Conclusions

• U.S. health disadvantage has multiple causes and involves some combination of
  – Inadequate health care
  – Unhealthy behaviors
  – Adverse economic and social conditions
  – Environmental factors

• Economic Consequences
  – Shorter lives and poorer health will harm the economy as health care costs rise
Do we really have the best health care system in the world for those who can access it?
References

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- Traumatic Brain injury report to Congress
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  - http://www.childmortality.org/
- U.S. Health in International Perspective: Shorter Lives, Poorer Health
- World Health Organization Mortality Statistics
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BUILD THE UNIVERSITY OF MIAMI