Understanding and Improving Health:
Lessons from Kentucky and America’s “Poorest State”

Randy Wykoff, MD, MPH & TM
Dean, ETSU College of Public Health
Director, Center for Rural Health Research
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Life Expectancy Change in the 20th Century

- 1900: 47.3
- 1950: 77
- 2000: 77
The “Virginia Health Bulletin” 1908 and 1909

CAUSES OF DEATH
RICHMOND, VA.

276

TUBERCULOSIS

SCARLET FEVER
41

DIPHTHERIA
16

INFLUENZA
12

TYPHOID
52

WHOOPING COUGH
75

CANCER
Cause of Death—United States 1909

- Tuberculosis
- Heart Disease
- Pneumo/Flu
- Diarrhea
- Stroke
- Nephritis
- Accidents
- Cancer
- Prematurity
- Senility
Cause of Death—United States 2005

- Tuberculosis
- Heart Disease
- Pneumo/Flu
- Diarrhea*
- Stroke
- Nephritis
- Accidents
- Cancer
- Prematurity
- Alzheimer's
Life Expectancy Change in the 21st Century

- 2014: 78.9
- 2015: 78.7
- 2016: 78.6
In 2019, for Life Expectancy the United States Ranks:

39th

Behind---
Monaco, Japan, Singapore, San Marino, Iceland, Andorra, Guernsey, Israel, Switzerland, South Korea, Australia, Italy, Luxembourg, Sweden, Canada, France, Jersey, Liechtenstein, Norway, Spain, Austria, Bermuda, Netherlands, Cayman Islands, Isle of Man, New Zealand, Belgium, Slovenia, Finland, Denmark, Ireland, Germany, Portugal, United Kingdom, Greece, Taiwan, Turks and Caicos
Life Expectancy: All 222 Countries in the World: Male (black) and Female (red) with USA shown with Arrows
<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>YPLL</th>
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Precocious (Early) Death Rates:
United States 2018

The Precocious Death Rate in Kentucky is 41.0% Higher Than the National Median

America’s Health Rankings 2018:
A Quick History of Understanding “Health” . . .

- Early Life Experiences
- Economy
- Income
- Education
- Work
- Community
- Race and Ethnicity
- Housing
- Access
- Behavior
- Sanitation
- Injury
- Genetics

COLLEGE of PUBLIC HEALTH
EAST TENNESSEE STATE UNIVERSITY
Fatal Occupational Injuries: 2017

Infectious Disease by State

Mean z score of the incidence of chlamydia, pertussis and Salmonella per 100,000 population

-0.017 to -0.457
-0.456 to -0.190
-0.189 to 0.047
0.048 to 0.440
0.441 to 0.990
Data Unavailable

America’s Health Rankings 2018:
The rate of adult smoking in Kentucky is 54% higher than the national rate.
The rate of adult obesity in Kentucky is 18.4% higher than the national median.
Drug Deaths

The rate of drug deaths in Kentucky is 62.4% higher than the national median.
The percent of adults in Kentucky who have a college degree is 82.9% of the national median.

Percent of High School Sophomores Who Complete College in Ten Years Based on Parents’ Education Level
Changes in Expected Age at Death (at Age 25)
White Men: 2010 - 2017

Changes in Expected Age at Death (at Age 25)  
Black Men: 2010 - 2017

High School

Some College

College

+0.90yrs

-0.48yrs

-0.3yrs

Changes in Expected Age at Death (at Age 25)
White Women: 2010 - 2017

+0.78 yrs

-1.13 yrs

--0.59 yrs

Changes in Expected Age at Death (at Age 25)
Black Women: 2010 - 2017

High School: +0.64yrs
Some College: --0.33yrs
College: +1.69yrs

Cause of Life Expectancy Change
White Men and Women with College or More: 2010 - 2017

The percent of children living in poverty in Kentucky is 34.9% higher than the national median.
Relative Risk of Dying Before the Age of 65
By Income: United States

Reaching for a Healthier Life:
Facts on Socioeconomic Status and Health in the United States

1967: Ratio = 11.4:1
2016: Ratio = 16.5:1

48% INCREASE

Source: Income and Poverty in the United States, 2016. U.S. Census Bureau
https://www.census.gov/content/dam/Census/library/publications/2017/demo/P60-259.pdf
Economic Mobility Across Generations: Where Will You End Up Based on Where Your Started

Raised in Bottom 1/5

Pursuing the American Dream: Economic Mobility Across Generations
Pew Charitable Trusts:
http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2012/pursuingamericandreampdf.pdf
Social Mobility in the United States

If you are born to parents living in the bottom fifth of income in the United States. . . . .

Your chance of making it into the top fifth is only 4 percent (one in 25), and. . . . .

Your chance of making it into the top half is only about 20 percent (one in five).
Economic Mobility Across Generations: Where Will You End Up Based on Where You Started

Raised in Bottom 1/5
- Bottom 1/5: 4%
- Fourth 1/5: 9%
- Third 1/5: 17%
- Second 1/5: 43%
- Top 1/5: 4%

Raised in Top 1/5
- Bottom 1/5: 40%
- Fourth 1/5: 27%
- Third 1/5: 23%
- Second 1/5: 10%
- Top 1/5: 8%

Pursuing the American Dream: Economic Mobility Across Generations
Pew Charitable Trusts:
http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2012/pursuingamericandream.pdf
What Can We Do To Improve Health in Kentucky?
What Can We Do To Improve Health in the United States?

*We need to work together* to assure access to health care, especially primary care, mental health and preventive services;

*We need to work together* to implement evidenced-based programs related to diet, exercise, smoking and substance abuse; and

*We need to work together* to enhance economic opportunity and improve educational achievement;
Health and Social Conditions of the Poorest Versus Wealthiest Counties in the United States

Olivia Egen, MPH, Kate Beatty, PhD, David J. Blackley, DrPH, Katie Brown, MPH, and Randy Wykoff, MD

Objectives. To more clearly articulate, and more graphically demonstrate, the impact of poverty on various health outcomes and social conditions by comparing the poorest counties to the richest counties in the United States and to other countries in the world.

Methods. We used 5-year averages for median household income to form the 3141 US counties into 50 new "states"—each representing 2% of the counties in the United States (62 or 63 counties each). We compared the poorest and wealthiest "states."

Results. We documented dramatic and statistically significant differences in life expectancy, smoking rates, obesity rates, and almost every other measure of health and well-being between the wealthiest and poorest "states" in the country. The populations of more than half the countries in the world have a longer life expectancy than do US persons living in the poorest "state."

Conclusions. This analysis graphically demonstrates the true impact of the extreme socioeconomic disparities that exist in the United States. These differences can be obscured when one looks only at state data, and suggest that practitioners and policymakers should increasingly focus interventions to address the needs of the poorest citizens in the United States. (Am J Public Health. 2017;107:130–135. doi:10.2105/AJPH.2016.303515)
Where Do Men Live Longer Than in America’s “Poorest State?”

The Five Wealthiest (Green) and Five Poorest (Red) Counties in Kentucky
The percent of adults in Kentucky is 68% higher in the five poorest counties.
The percent of adults in Kentucky who are obese is 11.3% higher in the 5 poorest counties.
The percent of adults with some college in Kentucky’s poorest counties is just over half the rate of the richest counties.
The percent of children in Kentucky who live in poverty is almost five times higher in the 5 poorest counties.

- 9.4% in 5 Richest Counties
- 45.8% in 5 Poorest Counties
The Premature Death Rate (YPLL) is over twice as high in the 5 poorest counties.
Premature Death Rate (YPLL): Kentucky: Richest vs. Poorest County

Oldham: 5681
McCrea: 13563
### Premature (Early) Death Rates:
Where would Kentucky be if it were like Oldham or McCreary

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The “Virginia Health Bulletin” 1908 and 1909
How High is the Wall in Your Town?
This Doesn’t Just Impact The Poor
It Impacts All of Us.

• “For unto whomsoever much is given, of him shall be much required.” Luke 12:48
• “Those who withhold in miserliness what Allah has given them out of His grace should not take it as good for them. Instead, it is bad for them.” Quran 3:180
• “Teach this simple truth to all: A generous heart, kind speech, and a life of service and compassion are the things which renew humanity.” Siddhartha Gautama Buddha
• “It is not enough to be compassionate. You must act.” H.H. Dalai Lama Tesin Gyatso
• “The best way to find yourself is to lose yourself in the service of others.” Mahatma Gandhi
• “Help thy brother’s boat across, and lo! thine own has reached the shore.” Hindu Proverb
• “The agony of the poor impoverishes the rich. . .We are inevitably our brother’s keepers because we are our brother’s brother.” Martin Luther King, Jr.
Please Feel Free to Contact Me. . .

Randy Wykoff, MD, MPH & TM
Professor and Dean
College of Public Health
Director
Center for Rural Health Research
East Tennessee State University

(423) 439-4243
wykoff@etsu.edu