Commentary
Overview of Trends and Differentials

Planning Meeting on Socioeconomic Status and Increasing Mid-Life Mortality

June 16, 2017
Maxine Weinstein
Georgetown University
Survival in the Context of Other High-Income Countries

It’s Not Just Middle Aged Non-Hispanic Whites

• We don’t look very good at any age (well, ages 80+ don’t look so bad)
• Infant mortality is high
• Early survival (to age 50) doesn’t look too great
• But neither does later survival
Infant Mortality is High

The infant mortality rate is higher in the U.S. than in comparably wealthy countries

Deaths per 1,000 live births, in years, 2011

- United States: 6.1
- Canada: 4.8
- United Kingdom: 4.3
- Switzerland: 3.8
- Australia: 3.8
- OECD Comparable Country Average: 3.7
- Netherlands: 3.6
- Germany: 3.6
- Austria: 3.6
- France: 3.5
- Belgium: 3.4
- Sweden: 2.1


Peterson-Kaiser Health System Tracker
Probability of Survival to Age 50

Expectation of Life at Age 50

Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006–2011
Case – Deaton A Few Concerns

1. Andrew Gelman – Inadequate controls for changes in the age distribution. After adjusting for age the increase is [only] about 4%

2. Apples and Oranges— Malcom Harris and Others

Figure 1.1 All-cause mortality by race and ethnicity, ages 50-54 from Case and Deaton (Brookings).
3. Lagged Selection Bias – Jenn Dowd and Amar Hamoudi

HealthAffairs

Differences In Life Expectancy Due To Race And Educational Differences Are Widening, And Many May Not Catch Up

S. Jay Olshansky1,*, Toni Antonucci2, Lisa Berkman3, Robert H. Binstock4, Axel Boersch-Supan5, John T. Cacioppo6, Bruce A. Carnes7, Laura L. Carstensen8, Linda P. Fried9, Dana P. Goldman10, James Jackson11, Martin Kohli12, John Rother13, Yuhui Zheng14 and John Rowe15

http://content.healthaffairs.org/content/31/8/1803.full
Recent Trends in U.S. Adult Mortality: Is it a Lost Generation or Lost Generations? An Age-Period-Cohort Perspective

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Apr 28, 2017
Zang et al. Results

• Net of age composition and cohort effects, mortality rates for ages 45-54 show increases in the 1990s followed by a leveling off in the 2000s among non-Hispanic White females, and non-Hispanic White males show slight declines in the mid-1990s followed by a leveling off.

• Mortality rates have increased in the early and middle adulthood age groups (ages 25-34 and 35-44) since the 1990s among non-Hispanic White females.

• We identified four “lost generations”: non-Hispanic White Baby Boomers (only early- Baby Boomers for males), non-Hispanic White late-Generation Xers, Hispanic late-Generation Xers, and non-Hispanic Black male late-Generation Xers.

• Generally speaking, drug poisoning contributes to the non-Hispanic White “lost generations” to a large extent. Suicide and alcohol-related diseases can partially explain the mortality increase among non-Hispanic White early-Baby Boomers, as well as Hispanic and non-Hispanic Black male late-Generation Xers, but the magnitude is very small.
Zang et al. Results (Cont’d.)

• Instead of only focusing on non-Hispanic Whites, we find non-Hispanic Black and Hispanic late-Generation X also experienced increasing mortality in adulthood. Thus, Case and Deaton (2015)’s argument that “the midlife mortality reversal was confined to White Non-Hispanics” can be misleading if not explained accurately.

• We show that mortality rates have increased in the early and middle adulthood age groups (ages 25-34 and 35-44) since the 1990s among non-Hispanic White females. This suggests that the definition of “midlife” in Case and Deaton (2015) needs to be extended.

• Our results suggest that Case and Deaton (2015)’s observation of “lost generation” may be driven by increasing mortality among female late-Baby Boomers with ages 45-55. Therefore, their argument that “those currently in midlife may be a ‘lost generation’”, which refers to late-Baby Boomers and early-Generation Xers, can be misleading.

• We find distinct gender mortality patterns that are specific to cohort. This suggests that we need to treat the results in Case and Deaton (2015), which are obtained from pooling male and female mortality, with caution.
Case Deaton 2017

Figure 1-7

Appendix Figure 3
Drug, alcohol and suicide mortality
white non-Hispanics by birth cohort, all education levels
5. Noise?

• Cause of death data are problematic at best
• Not a whole lot of deaths at middle ages
• What kind of numbers are we actually looking at when we get into the kitchen and start slicing and dicing by age, sex, education, income, geography, and race/ethnicity?
Case & Deaton, 2017

Is There Any Trend?

Figure 1.3

All-cause mortality rates
ages 45-54

Age-adjusted mortality rates
ages 45-54, base year=2010
6. Geography

“The epidemic spread from the southwest, where it was centered in 2000, first to Appalachia, Florida and the west coast by the mid-2000s, and is now countrywide (Figure 1.6)”

“Coumas” – blend of counties and Public Use Microdata Areas

Figure 1.6 Drug, alcohol and suicide mortality, white non-Hispanics ages 45-54

Case-Deaton, 2017
Change in mortality risk, 25–45, 2000–2014
Change in mortality risk, 45–65, 2000–2014
Landscapes of Despair

“This was not new; it had been happening for fifteen years. And there was more to it than drugs. This scourge was…connected to the conflation of big forces: economics and marketing, poverty and prosperity. Forgotten places of America acted like the canaries in those now-shuttered Appalachian coal mines. Just no one in the country listened much until more respectable types sounded the same alarm.” – Sam Quinones
Hee Haw

“Hee Haw was an American television variety show featuring country music and humor with fictional “Kornfield Kounty” as a backdrop. It aired on CBS from 1969-1971 followed by a 21-year run in local syndication. The show was inspired by Rowan & Martin’s Laugh-In, the major difference being that Hee Haw was far less topical, and was centered on country music and rural culture.”
Gloom, Despair, and Agony

Video: https://www.youtube.com/watch?v=ZAAKPJEq1Ew
Hypothesized explanations

- Health behaviors including drug and alcohol abuse
- Economic insecurity – Joblessness, Income
- Perceived deprivation – Andrew Cherlin
- Changes in work-family context
Fig. 2. Mortality by cause, white non-Hispanics ages 45–54.
Shannon Monnat, June 16 2017

DAS Mortality Rates are Higher among Whites

http://scholars.unh.edu/cgi/viewcontent.cgi?article=1291&context=carsey
Why Are White Death Rates Rising?
Andrew J. Cherlin   Feb. 22, 2016

Whites’ Rising Death Rates
Percent change in mortality since 2000 among those ages 25 to 54.

-10%  +10%
-20%  +11%

Non-Hispanic whites

-14

Hispanics

-23

Non-Hispanic blacks

The Least Optimistic
Percent responding that their standard of living is “much better” or “somewhat better” than their parents among those ages 25-54 without four-year college degrees.

68%
67%
47%

Hispanics
Non-Hispanic blacks
Non-Hispanic whites

https://www.nytimes.com/2016/02/22/opinion/why-are-white-death-rates-rising.html,
The Opinion Pages
Changes in Work-Family Context

- Rising rates of single parent families and increasing numbers of employed women with children at home.
- These trends result in increased exposure to work-family conflicts, exacerbated by a paucity of social protection policies, and may: a) cause women to exit the work force; and/or b) amplify work-family strain.
- Work-family conflict may have particularly acute health consequences for single mothers and those of lower socioeconomic status, who are likely to hold inflexible jobs.

Contributions of Specific Economic & Family Distress Indicators to Mortality Rates

Drugs, Alcohol, Suicide

<table>
<thead>
<tr>
<th>Predictor</th>
<th>% Increase in Deaths per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>% separated/divorced</td>
<td>8</td>
</tr>
<tr>
<td>% single parent families</td>
<td>7</td>
</tr>
<tr>
<td>% households with public assistance income</td>
<td>6</td>
</tr>
<tr>
<td>% Poverty (age 25-54)</td>
<td>5</td>
</tr>
<tr>
<td>% Less than 4-year college degree (age 25+)</td>
<td>4</td>
</tr>
<tr>
<td>% w/work disability (age 21-64)</td>
<td>3</td>
</tr>
<tr>
<td>% households with supplemental security income</td>
<td>2</td>
</tr>
<tr>
<td>% Unemployed/Not in Labor Force (age 25-54)</td>
<td>1</td>
</tr>
</tbody>
</table>

Fully adjusted models w/state fixed effects;
Bars represent % increase in mortality rate for 1 SD increase in value of predictor.
What are the take-aways?

• Drug related deaths are clearly rising among whites
• Jenn Dowd – Should we just because we can? What do these trends mean?
• Are we too focused on the trees? What about black mortality? It’s not just middle-aged non-Hispanic whites.