Understanding Recent Trends in Mortality
(In the United States)

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Looking at Mortality Trends

Age Groups
• Young (<18)
• Middle Age (18-64)
• Elderly (65+)

Measures
• Annual change in $\text{MR}_a$ from 1999-2016
• Show by race/ethnicity
Annual Percent Change in Mortality by Ethnicity and Age, 1999-2016

Higher mortality for prime age non-Hispanic whites
Annual Percent Change in Mortality by Ethnicity and Age, 1999-2016

- ‘Normal’ mortality declines at younger ages
- ‘Normal’ mortality declines at older ages

- Non-Hispanic Whites
- Non-Hispanic Blacks
- Hispanics
Age, cohort, or period effects (APC)

- Impossible to tell apart
- Q: have older cohorts seen a recent increase in mortality?
Cohort or Year Effects?

Relative Mortality by Cohort, Non-Hispanic Whites, 1999-2016

Relative Mortality (1999=1)

1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
1999 2001 2003 2005 2007 2009 2011 2013 2015

50-54
45-49
40-44
55-59
60-64
80-84
75-79
70-74
65-69
The Rise in Mid-Life Mortality

Figure 5. Deaths of Despair by Country for Age 50–54, 1989–2014

Deaths per 100,000

United Kingdom

Germany

United States, WNHs

Sweden

France

Canada

Australia

Year


Sources: National Vital Statistics System; Human Mortality Database; WHO Mortality Database; authors’ calculations.

a. Deaths of despair refer to deaths by drugs, alcohol, or suicide.
What’s going on in the elderly?

Medical care, but not so expensive.

Figure 3: Change in death rates per 100,000 Medicare beneficiaries from 1999 to 2012

Cardiovascular disease
Cancer
Dementia/Alzheimer's and other mental health
diseases
Diseases of nervous system and sense organs
Diabetes and other endocrine disease
Respiratory symptoms, COPD, Asthma
Infectious diseases and pneumonia
Gastro and liver disease
Renal disease and other genitourinary diseases
Blood disorders
Accidents
Frailty
All other diseases
Control of Cardiovascular Risk Factors

- NHANES I (1971-74)
- NHANES II (1976-80)
- NHANES III (1988-94)
- NHANES (1999-02)
- NHANES (2003-06)
- NHANES (2007-10)
- NHANES (2011-14)

Percent

Hypertension  High Cholesterol

- Hypertension: Blue line
- High Cholesterol: Red line
A unified theory: The Battle Between Technology v. Economics

Technology
- Medical technology:
  - Cardiovascular drugs
- Environmental
  - Less-polluting activities
  - Safety innovations (cars)
- Aided by (some) policy
  - Medicare, Medicaid, WIC/Head Start

The Bad
- Economic dislocation
- Aided by (some) policy
  - Tax policy