

STATE of the UNION

A stylized graphic of the American flag, featuring a blue field with white stars and red and white horizontal stripes.

HEALTH

Mark Duggan
Stanford University

Gender Inequalities in Health: The Case of Mortality

March 16, 2017

Mark Duggan
Stanford University

Valerie Scimeca
Stanford University

Overview

Trends in life expectancy from 1970 - 2010:

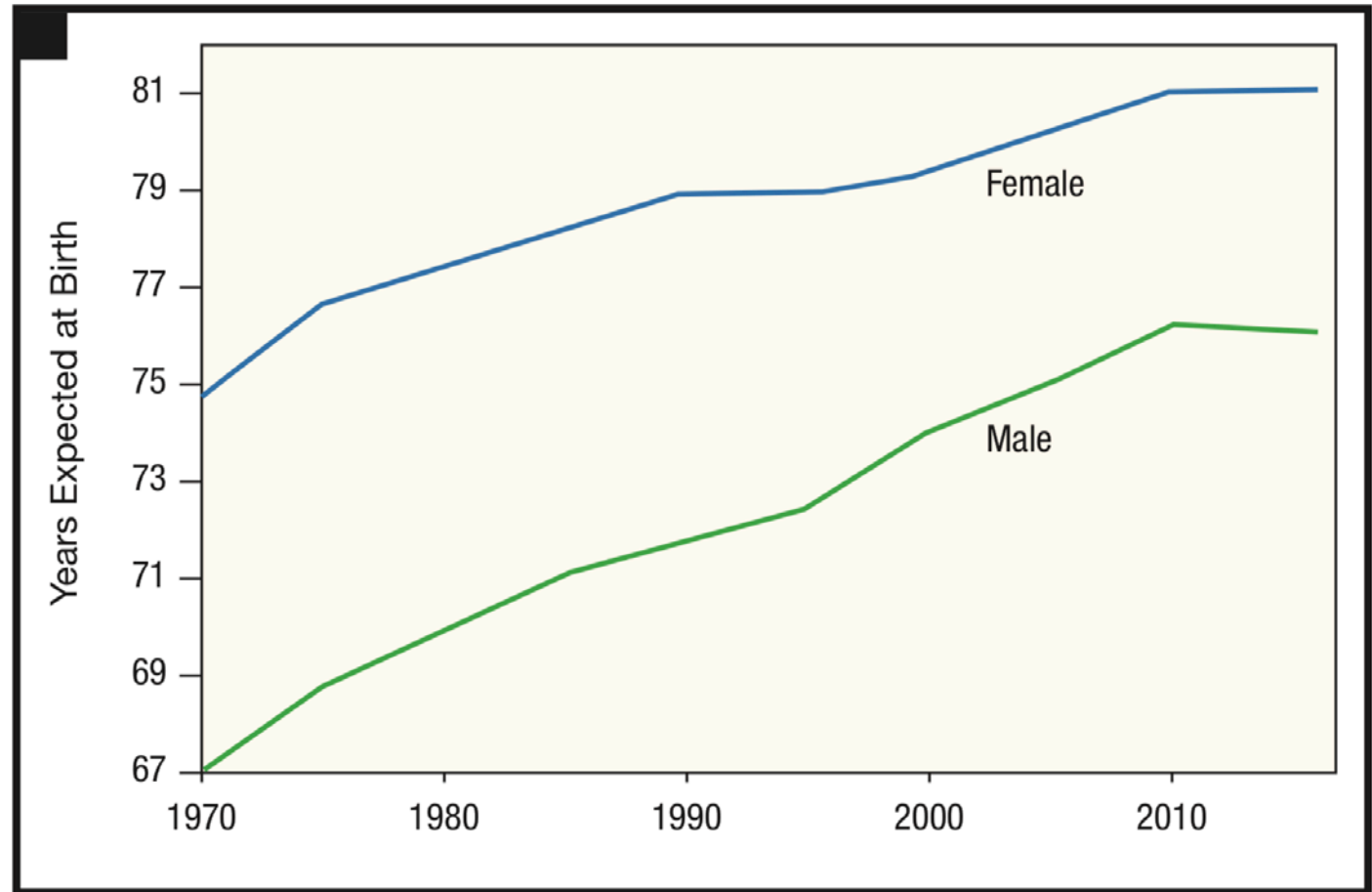
1. The average life expectancy, which has been steadily increasing for decades, has stagnated since 2010.
2. The gender gap in life expectancy favors women, but has narrowed in recent decades from 7.6 years in 1970 to 4.8 years in 2010.

Life expectancy is the typical measure of health, particularly because it's very clear.

However, there are important elements of health that it does not capture.

Trends in Life Expectancy by Sex

| | 1970 | 2010 | Change |
|---------------|------|------|--------|
| Female | 74.7 | 81.0 | + 6.3 |
| Male | 67.1 | 76.2 | + 9.1 |
| Female - Male | 7.6 | 4.8 | - 2.8 |

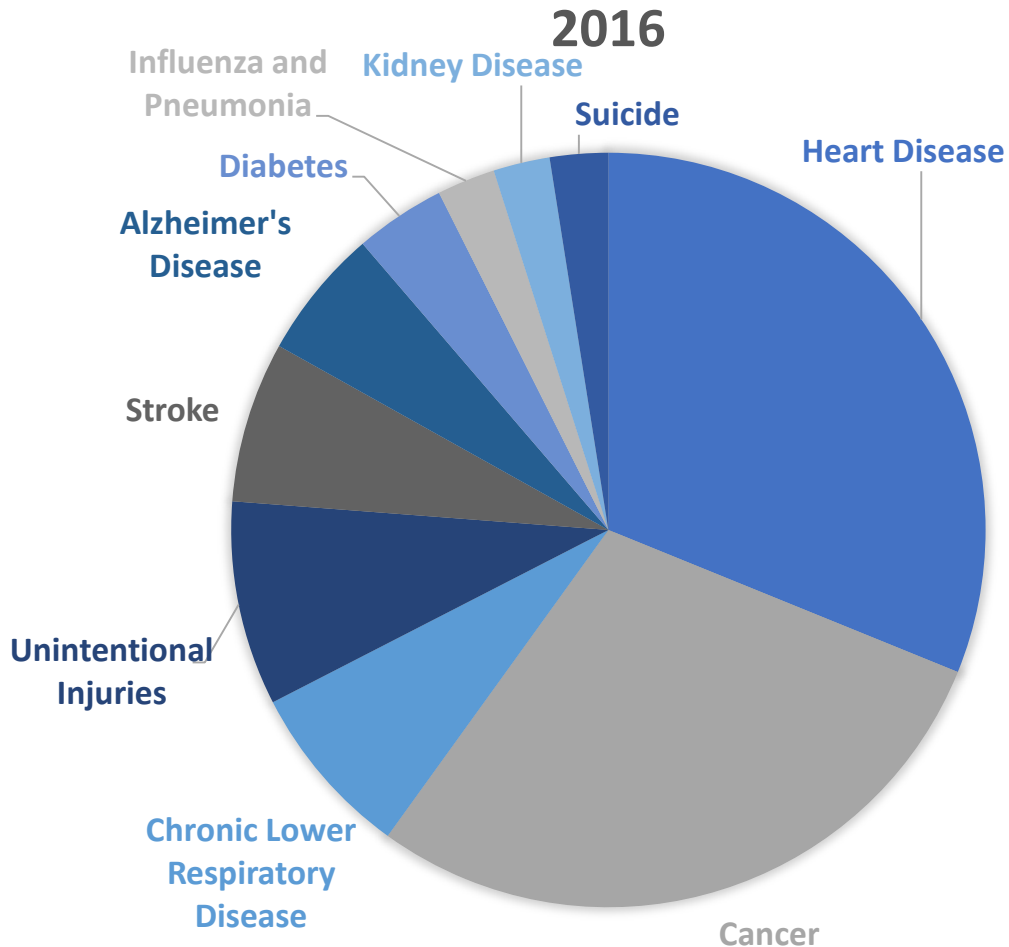


Source: 1970–2010 data from Arias et al., 2017, Table 19; 2016 data from Kochanek, Kenneth D., Sherry L. Murphy, Jiaquan Xu, and Elizabeth Arias. 2017. "Mortality in the United States, 2016." *National Center for Health Statistics Data Brief*, Figure 1.

Males Remain Significantly More Likely to Die at Every Age

| Age | 5 | 15 | 25 | 35 | 45 | 55 | 65 | 75 | 85 | 95 |
|-------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|--------|
| Male 2014 | 0.016% | 0.040% | 0.135% | 0.172% | 0.31% | 0.78% | 1.58% | 3.63% | 9.82% | 26.03% |
| Female 2014 | 0.012% | 0.019% | 0.052% | 0.093% | 0.20% | 0.48% | 0.98% | 2.53% | 7.38% | 21.47% |
| Ratio | 1.40 | 2.07 | 2.57 | 1.84 | 1.54 | 1.63 | 1.61 | 1.43 | 1.33 | 1.21 |

Stagnation in Life Expectancy Since 2010



- Deaths from cancer and heart disease have fallen since 2010 – but at a slower rate than previously
- Deaths from unintentional injuries, Alzheimer's disease, and suicide have risen substantially since.
- Suicides and unintentional injuries have greater effects on life expectancy, since they're more common among younger age groups.
- Among deaths of unintentional injuries, motor vehicle incidents and poisonings, which include drug overdoses, are the most common.

Stagnation in Life Expectancy

TABLE 1. Age-Adjusted Rates for the Top 10 Causes of Death

| Cause of Death | 2010 | 2016 | Percent Change | 2010 Male/Female Ratio | 2015 Male/Female Ratio |
|------------------------------------|-------|-------|----------------|------------------------|------------------------|
| Heart Disease | 179.1 | 168.5 | -7.6% | 1.6 | 1.6 |
| Cancer | 172.8 | 155.8 | -9.8% | 1.4 | 1.4 |
| Chronic Lower Respiratory Diseases | 42.2 | 40.6 | -3.8% | 1.3 | 1.2 |
| Unintentional Injuries | 38.0 | 47.4 | +24.7% | 2.0 | 2.1 |
| Stroke | 39.1 | 37.3 | -4.6% | 1.0 | 1.0 |
| Alzheimer's Disease | 25.1 | 30.3 | +20.7% | 0.8 | 0.7 |
| Diabetes | 20.8 | 21.0 | +1.0% | 1.4 | 1.5 |
| Influenza and Pneumonia | 15.1 | 13.5 | -10.6% | 1.4 | 1.3 |
| Kidney Disease | 15.3 | 13.1 | -14.4% | 1.4 | 1.4 |
| Suicide | 12.1 | 13.5 | +11.6% | 4.0 | 3.5 |
| All Other Causes | 187.4 | 191.1 | +1.8% | 1.3 | 1.3 |
| Overall | 747.0 | 733.1 | -2.4% | 1.4 | 1.4 |

Source: 2010 and 2015 data from Table 17. "Age-Adjusted Death Rates for Selected Causes of Death, by Sex, Race, and Hispanic Origin: United States, Selected Years 1950–2015." National Center for Health Statistics; 2016 data from Kochanek et al., 2017. Rates are per 100,000 population.

Increase in Suicide Rates, Especially Among Women

TABLE 2. Suicide Rate by Gender and Age in 2000 and 2015

| Age Group | Male Suicide Rate | | | Female Suicide Rate | | | Male/Female Ratio | |
|-----------|-------------------|------|----------------|---------------------|------|----------------|-------------------|------|
| | 2000 | 2015 | Percent Change | 2000 | 2015 | Percent Change | 2000 | 2015 |
| 15–19 | 13.0 | 14.2 | +9% | 2.7 | 5.1 | +89% | 4.8 | 2.8 |
| 20–24 | 21.4 | 24.2 | +13% | 3.2 | 5.5 | +72% | 6.7 | 4.4 |
| 25–34 | 19.6 | 24.7 | +26% | 4.3 | 6.6 | +54% | 4.6 | 3.7 |
| 35–44 | 22.8 | 25.9 | +14% | 6.4 | 8.4 | +31% | 3.6 | 3.1 |
| 45–54 | 22.4 | 30.1 | +34% | 6.7 | 10.7 | +60% | 3.3 | 2.8 |
| 55–64 | 19.4 | 28.9 | +49% | 5.4 | 9.7 | +80% | 3.6 | 3.0 |
| 65–74 | 22.7 | 26.2 | +15% | 4.0 | 5.7 | +43% | 5.7 | 4.6 |
| 75–84 | 38.6 | 35.2 | -9% | 4.0 | 4.6 | +15% | 9.7 | 7.7 |
| 85+ | 57.5 | 48.2 | -16% | 4.2 | 4.2 | 0% | 13.7 | 11.5 |
| Overall | 17.7 | 21.1 | +19% | 4.0 | 6.0 | +50% | 4.4 | 3.5 |

Note: Overall death rate is age-adjusted.

Source: Table 30. "Death Rates for Suicide, by Sex, Race, Hispanic Origin, and Age: United States, Selected years 1950–2015." National Center for Health Statistics.

Important Takeaways

- Average health in the United States, as measured by life expectancy, has not improved during the last several years for men or women.
 - Drug poisoning deaths and the increasing suicide rate are the driving factors.
- Although the female life expectancy is still higher than that for males, the gap has narrowed by more than one-third from 1970 to 2010 (7.6 to 4.8 years).
- Drug deaths have hit men and women about equally hard
- Recent increase in the suicide rate has disproportionately affected women.