Premature Death Report
2017

Riverside University HEALTH SYSTEM
Public Health
Epidemiology & Program Evaluation
INTRODUCTION: What is Premature Death?

Premature death is a death that occurs before 75 years, a standard used in public health practices worldwide. By measuring premature death rather than overall death, the attention is focused on lives that could have been extended. Premature deaths are influenced by the environment and conditions of where people live, learn, work and play. These conditions are known as social determinants of health (SDOH) and affect a wide range of health risks and outcomes. We know that poverty limits access to healthy foods and safe neighborhoods and that there are striking differences in communities with poor SDOH such as unstable housing, low income or unsafe neighborhoods. In 2015, 45% of residents (7,819 people) who died in Riverside County were younger than 75. Cancer, heart disease, unintentional injury, chronic obstructive pulmonary disease (COPD) and cirrhosis are the top five causes of premature death in the county. Riverside University Health System—Public Health (RUHS-PH) is dedicated to advancing health equity and reducing the risk of preventable disease by improving the conditions of our community and supporting healthier lifestyles. By continuously reviewing these indicators, RUHS-PH is monitoring the health of Riverside County residents in order to help build and sustain communities that promote health.

KEY FINDINGS

- After nearly a decade of decline, premature death rates began to rise in 2014.
- In 2015, 7,819 people died prematurely—this was an increase of about 500 people in one year.
- Premature death rose in 2015 across the full range of racial/ethnic groups.
- Premature death has consistently been highest among American Indians and Blacks. In 2015, these groups experienced more years of life lost than other racial/ethnic groups.
- Unintentional injury or “accidents,” suicide and homicide accounted for 36,676 years of potential life lost (YPLL) or 34% of all years lost.
- Men are dying prematurely at a higher rate than women in Riverside County.
- From 2011–2015, premature death contributed to 56% of all death, meaning nearly 40,000 deaths could have been prevented in men and women under 75.
Years of Potential Life Lost (YPLL): Why do we use this?

Years of potential life lost (YPLL) is used to measure premature death before age 75. If we expect residents to live at least 75 years, then people who die earlier are considered to have died prematurely. For instance, someone who dies at age 65 loses 10 years of potential life, while a person who dies at age 40 loses 35 years of potential life. To calculate total YPLL, we add up all the years of potential life lost and identify which cause of death led to the greatest amount of premature death. To identify the leading causes of premature death, cause of death was ranked by YPLL and number of deaths.

Years of Potential Life Lost (YPLL) by Causes of Death

Riverside County, 2015

- In 2015, cancer, heart disease, unintentional injury, COPD and stroke were the top causes of premature death in Riverside County. These deaths accounted for 67% of all premature death.
- Unintentional injuries (816 deaths), suicide (236 deaths) and homicide (108 deaths) cause 34% of YPLL, but only 15% of premature deaths, highlighting the impact of injuries on younger residents.
- Cancer accounted for 27% of all deaths in 2015 and also contributed to 27% of YPLL, indicating that it is a leading cause of death and years of life lost.
- Heart disease accounted for 20% of all death and also contributed to 19% of YPLL, indicating that it is also a leading cause of death and years of life lost.

Total Premature Deaths: 7,819 deaths

Top 10 Premature Deaths, 2015

<table>
<thead>
<tr>
<th>Causes of Death</th>
<th>Deaths</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>2,154</td>
<td>27.5%</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1,606</td>
<td>20.5%</td>
</tr>
<tr>
<td>Unintentional Injury</td>
<td>816</td>
<td>10.4%</td>
</tr>
<tr>
<td>COPD</td>
<td>386</td>
<td>4.9%</td>
</tr>
<tr>
<td>Stroke</td>
<td>315</td>
<td>4.0%</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>306</td>
<td>3.9%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>268</td>
<td>3.4%</td>
</tr>
<tr>
<td>Suicide</td>
<td>236</td>
<td>3.0%</td>
</tr>
<tr>
<td>Homicide</td>
<td>108</td>
<td>1.4%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>86</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Total Years of Life Lost: 133,801
Premature Death by Race/Ethnicity

Years of Potential Life Lost (YPLL) by Race/Ethnicity
Riverside County, 2015

- Native Americans and Blacks are dying at a younger age compared to other racial/ethnic groups.
- Native Americans and Blacks account for only 11% of total years of life lost; however, they have the highest YPLL rates. Indicating a disparity in premature death among these racial/ethnic groups.
- The YPLL rate for Blacks is more than three times the rate of Asian/PI’s, and more than twice the rate of Hispanics.
- The YPLL rate for Native Americans is more than three times the rate of Asian/PI’s, and more than three times the rate of Hispanics.

### YEARS OF POTENTIAL LIFE LOST (YPLL), 2015

**By Race/Ethnicity and Cause of Death**

<table>
<thead>
<tr>
<th></th>
<th>Asian/PI</th>
<th>Black</th>
<th>Hispanic</th>
<th>Native American</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>#1</strong> Cancer</td>
<td>1,587 yrs</td>
<td>2,634 yrs</td>
<td>Unintentional Injuries 10,402 yrs</td>
<td>Unintentional Injuries 387 yrs</td>
<td>Cancer 14,992 yrs</td>
</tr>
<tr>
<td><strong>#2</strong> Heart Disease</td>
<td>817 yrs</td>
<td>2,497 yrs</td>
<td>Cancer 9,491 yrs</td>
<td>Heart Disease 296 yrs</td>
<td>Unintentional Injuries 13,700 yrs</td>
</tr>
<tr>
<td><strong>#3</strong> Unintentional Injuries</td>
<td>749 yrs</td>
<td>Unintentional Injuries 1,993 yrs</td>
<td>Heart Disease 5,417 yrs</td>
<td>Cancer 197 yrs</td>
<td>Heart Disease 11,468 yrs</td>
</tr>
<tr>
<td><strong>#4</strong> Suicide</td>
<td>355 yrs</td>
<td>Homicide 1,069 yrs</td>
<td>Suicide 2,232 yrs</td>
<td>Cirrhosis 156 yrs</td>
<td>Suicide 3,870 yrs</td>
</tr>
<tr>
<td><strong>#5</strong> Stroke</td>
<td>291 yrs</td>
<td>Diabetes 520 yrs</td>
<td>Homicide 2,177 yrs</td>
<td>Diabetes 77 yrs</td>
<td>Cirrhosis 2,985 yrs</td>
</tr>
</tbody>
</table>

- Cancer, unintentional injury and heart disease are the leading causes for YPLL for all race/ethnicities.
- Cancer was the largest contributor to YPLL for Asian/PI, Black and White residents. Unintentional injury was the largest contributor to YPLL for Hispanic and Native American residents.
### 2017 Premature Death Report

- Premature death rates for all race/ethnicities decreased from 2006 (398.7 deaths per 100,000 population) to 2015 (326.5 deaths per 100,000 population).
  - Asian/PI premature death rate dropped from 261.9 to 218.9 (per 100,000 population) from 2006 to 2015.
  - Black premature death rate remained relatively stable from 519.0 to 516.9 (per 100,000 population) from 2006 to 2015.
  - Hispanic premature death rate dropped from 324.5 to 268.1 (per 100,000 population) from 2006 to 2015.
  - Native American premature death rate dropped from 656.6 to 567.8 (per 100,000 population) from 2006 to 2015. Rates for Native Americans may fluctuate due to small population numbers.
  - White premature death rate dropped from 423.7 to 365.2 (per 100,000 population) from 2006 to 2015.

- In 2011, a drop in premature death mirrored the overall death rate in Riverside County and California. This decrease was also seen among Asian/PI, Hispanic, White and Native American populations. However, there was a rise in premature death among Blacks in 2011.

- An increase in premature death rates was seen in Asian/PI, Hispanic, and Native American populations from 2014 to 2015. Rates for Blacks and Whites remained relatively stable.
Premature Death by Sex

In 2015, men accounted for 84,166 years lost; while females accounted for 49,635 years lost. Men are dying prematurely at a higher rate than women in Riverside County.

Unintentional injury, cancer and heart disease were the leading contributors to years lost in both males and females.

- **YPLL for Unintentional Injury:**
  - FEMALE: 7,383 years
  - MALE: 17,564 years
- **YPLL for Cancer:**
  - FEMALE: 14,268 years
  - MALE: 13,743 years
- **YPLL for Heart Disease:**
  - FEMALE: 5,999 years
  - MALE: 13,934 years

Females account for more YPLL than males in cancer and pneumonia.
Leading Causes of Death and Premature Death
Riverside County, 2011-2015

The five leading causes of death in Riverside County are unintentional injury, cancer, heart disease, COPD and stroke. Together, they account for 67% of all Riverside County deaths in 2015, with similar rates in prior years. From 2011–2015, premature death contributed to 56% of all death, meaning nearly 40,000 deaths could have been prevented in men and women under 75.

- 82% of all unintentional injury death was premature
- 54% of all cancer death was premature
- 35% of all heart disease death was premature
- 33% of all COPD death was premature
- 31% of all stroke death was premature

What’s next?

Future studies will address primary drivers of premature death in recent years. Both unintentional injury (motor vehicle, fall, pedestrian, etc.) and intentional injury (homicide, suicide, etc.) cause a substantial portion of preventable deaths. In Riverside County, 4 in 5 deaths due to unintentional injury were premature. Death from homicide, suicide, assault and opioid overdose contribute to higher years of life lost.

Leading causes of premature death are considered preventable through behavior modification and surrounding environmental and social change. Changes in our behaviors such as eating well and staying active, not smoking, limiting alcohol consumption and regularly visiting the doctor for immunizations and screenings are key to our health. The conditions in which we live, work, learn and play also have a major impact on our health. Access to social and economic opportunities, safety in neighborhoods, quality of education, social support and resources available in communities also determine health. Differences in deaths among those over 75 years and premature death provide us with insight into the burden of disease and injury in the county. By investigating how YPLL and premature death relate to life expectancy, we can promote health equity in our communities and support healthy behaviors that can lead to longer and healthier lives. Preventing the loss of life in younger individuals and prolonging disease onset during productive years of life is vital for the health of our community.
References


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