

Premature death from opioid-related causes imposes an enormous and growing public health burden across the United States

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Background

Why is this important?

- Opioids are a group of drugs that are used to relieve pain. There has been growing concern over the increased use of opioids in North America because their use has been associated with serious adverse effects including, death, fatal and non-fatal overdoses, falls, fractures and motor vehicle accidents.
- Despite these concerns, there is little recent evidence demonstrating the burden of opioid-related deaths in the United States (US).

What were we investigating?

- This study sought to examine the burden of opioid-related death in the US.

Key Points

- The percentage of deaths attributable to opioids in the US has increased considerably over the last 15 years.
- In 2016, 1 in 65 deaths in the US were opioid related, with the burden highest among young adults (aged 25 to 34) where 1 in 5 deaths were opioid-related.
- Overall, opioid-related deaths resulted in over 1.6 million years of life lost in the US in 2016; young adult men accounted for nearly one-quarter of of this burden.

Study Details

How was the study conducted?

- We conducted a repeated cross-sectional study of all opioid-related deaths in the US between 2001 and 2016 using the US Centres for Disease Control and Prevention (CDC) WONDER Multiple Cause of Death Online Database.
- Opioid-related deaths were defined as those in which a prescription or illicit opioid contributed substantially to an individuals' cause of death. We stratified patients into seven age groups at the time of death: 0-14 years, 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, and 65 years or older.
- We quantified the burden of opioid-related death in two ways. First, we identified the proportion of all deaths in each age group that were opioid-related using age-specific all-cause mortality estimates as the denominator. Second, we calculated the Years of potential Life Lost (YLL) due to opioid-related death using methods adapted from the Global Burden of Disease study.

For more information

Gomes T et al. The burden of opioid-related mortality in the United States. JAMA Open Network, 2018.

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What did we find?

- The number of opioid-related deaths in the US increased 345% from 9,489 in 2001 (33.3 deaths per million population) to 42,245 in 2016 (130.7 deaths per million). The proportion of deaths attributable to opioids similarly increased, rising 292% (from 0.4% to 1.5%) over this same period.
- The largest absolute increase in the percentage of deaths attributable to opioids between 2001 and 2016 was observed among those aged 25 to 34 years (15.8% increase from 4.2% in 2001 to 20.0% in 2016), followed by those aged 15 to 24 years (9.4% increase from 2.9% to 12.4%). However, the highest relative increases occurred among older adults aged 55 to 64 years (754% increase from 0.2% to 1.7%) and the elderly (635% increase from 0.01% to 0.07%).
- Opioid-related deaths were responsible for 1,681,359 YLL (5.2 YLL/1,000 population) in 2016, however this burden varied by age and sex.
- Adults aged 25 to 34 and those aged 35 to 44 experienced the highest burden from opioid-related deaths (12.9 YLL/1,000 population and 9.9 YLL/1,000 population, respectively).
- Among men aged 25 to 34 years, this rate of YLL rose to 18.1 YLL/1,000 population, and the total YLL in this population represented nearly one-quarter of all YLL in the US in 2016 (411,805 of 1,681,359; 24.5%).

Recommendations

Policymakers

- The burden of premature death from opioid-related causes, particularly among youth and young adults, highlights the need for tailored programs and policies that focus on appropriate prescribing and harm reduction strategies among high risk populations.

Physicians

- Physicians should carefully consider the risks of adverse events and addiction before prescribing opioids to high risk populations. Further, they should continuously monitor the use and ongoing need for these drugs in their patients, and consider a slow, safe taper of dose when deemed appropriate.

Patients

- If you are taking an opioid for pain management, talk to your doctor about appropriate doses and therapy duration.