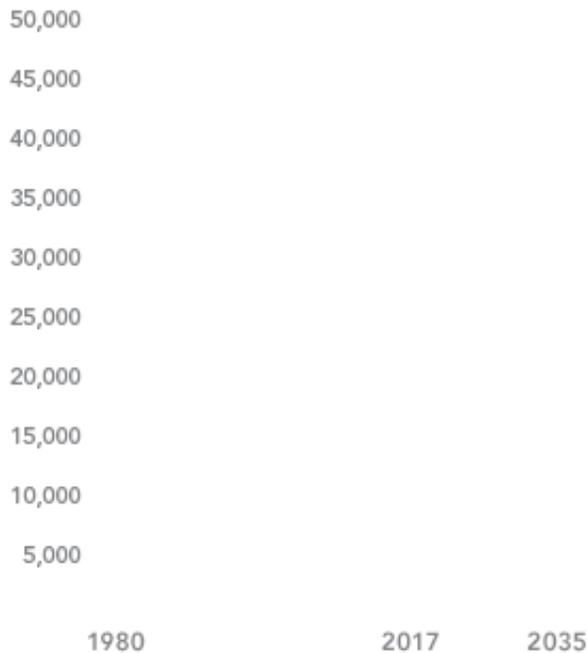


Drug overdose epidemic to recede soon

January 6 2015



The epidemic of drug overdose deaths will peak in 2017 then recede until 2035 according to researchers at the Mailman School of Public Health, Columbia University. Credit: Mailman School of Public Health, Columbia University

A study by researchers at Columbia University's Mailman School of Public Health is the first to apply Farr's Law on the rise and fall of epidemics to an outbreak that isn't, strictly speaking, infectious in origin: drug overdoses.

At present, more than 40,000 Americans die every year by unintentional

[drug](#) overdose—a number that has ballooned tenfold since 1980.

In a study of smallpox in the mid-1800s, pioneering British epidemiologist William Farr discovered that the rate and duration of the epidemic's rise was mirrored in its decline. Using Farr's Law, the Mailman School researchers project that the drug overdose epidemic will peak at about 50,000 annual deaths in 2017 before declining to a non-epidemic state of approximately 6,000 deaths in the year 2035—at roughly the same rate seen before the start of the epidemic. Results appear online in the journal *Injury Epidemiology*.

Guohua Li, MD, DrPH, professor of Epidemiology and director of the Center for Injury Prevention at the Mailman School, and colleagues posit that Farr's Law can be extended to outbreaks that don't involve an infectious agent like a virus or bacteria. In recent years, they write, scientists have developed a theory of "social contagion" that says behavioral disorders and conditions like obesity spread through social networks much like infectious outbreaks.

"To some extent, drug use is a social behavior and has the potential to spread like a contagious disease among individuals in a network," explains Salima Darakjy, a doctoral student in Epidemiology and the study's first author.

The researchers believe the overdose rate has already slowed, driven by a decline in deaths from prescription painkillers, which account for two-thirds of all the deaths. Tighter rules on painkillers have led some users to switch to heroin, which is cheaper and more readily available. But while this substitution effect is concerning, Dr. Li says it's unlikely to alter the course of the epidemic.

On the other hand, the epidemic of drug overdoses—like most epidemics—won't end by itself. Public health efforts must continue even

as the epidemic wanes. "A decline in [overdose deaths](#) shouldn't be used as justification to pull back," Dr. Li stresses. "That would be wrong. If there is no intervention then the epidemic will last much longer."

The researchers' projections, which use National Center for Health Statistics data, assume continued [public health](#) resources to prevent overdoses. Congress has committed \$20 million in 2015, a slight increase over 2014.

"If the [epidemic](#) of [drug overdoses](#) is indeed waning," the researchers conclude, "it may imply that the intensified efforts in recent years, such as enhanced prescription drug monitoring, are working and should be continued."

Provided by Columbia University's Mailman School of Public Health

Citation: Drug overdose epidemic to recede soon (2015, January 6) retrieved 19 September 2024 from <https://medicalxpress.com/news/2015-01-drug-overdose-epidemic-recede.html>

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