

Peak in deaths at beginning of month due to substance abuse, government payments, says new UC San Diego study

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PEAK IN DEATHS AT BEGINNING OF MONTH DUE TO SUBSTANCE ABUSE, GOVERNMENT PAYMENTS, SAYS NEW UC SAN DIEGO STUDY

A new study examining fluctuations in mortality has found that significantly more deaths occur in the U.S. during the first week of each month, and that this peak in deaths may be due to substance abuse by people who receive government support payments at the beginning of the month.

According to the study, to be published in the July 8 issue of the *New England Journal of Medicine*, in any given year, there were about 4,320 more deaths in the first week of all months than in the last week of the previous months. This dip and peak in deaths at the end and beginning of the month was termed the "boundary effect" by the study's authors, University of California, San Diego sociologist David Phillips, psychologist Nicholas Christenfeld, and undergraduate Natalie Ryan.

Although this boundary effect held true for many forms of mortality, the study found that death rates at the beginning of the month were higher by about 14 per cent than were death rates at the end of the month when substance abuse was mentioned on the death certificate. The boundary effect was also particularly prominent when the death was due to a car accident, suicide, or homicide, and was more pronounced for non-whites than for whites. This dip-peak in deaths was also more prominent during the winter months than at other times of the year.

"We suspect that this boundary effect may be due to substance abuse-related activity," said Phillips, a well-known authority on mortality trends. "The beginning of the month can be linked to unpleasant events for some, like evictions and bill payments. In addition, many types of payment, like social security, welfare, and military benefits traditionally arrive at the beginning of each month, providing recipients with fresh funds to purchase alcohol and other drugs."

According to Phillips, this governmental support (made at the beginning of the month) is typically made in the form of cash (i.e. check), and thus can be easily converted into drugs or alcohol. In contrast, support from private agencies tends to be provided in the form of food, clothing, and shelter -- not money -- and hence cannot be readily used to buy drugs or alcohol. Not surprisingly, the demand for support from private agencies is typically highest at the end of the month, when more liquid forms of support from government agencies have perhaps been exhausted.

"Our data suggest that if people who receive governmental support were to be provided for in a manner comparable to the private agencies," Phillips said, "We might see a drop in substance abuse-related deaths at the beginning of the month."

According to Phillips, previous studies have found increases in certain forms of death at different times of the year. For example, alcohol-related deaths occur most often in winter, as do deaths from influenza, motor vehicle

deaths increase on long holiday weekends, and deaths from heart attacks occur most frequently on Mondays. In addition, previous research has documented that suicides increase at the beginning of each month and decrease at the end of each month.

A previous study published in the New England Journal of Medicine found that increased substance abuse among schizophrenic veterans in Los Angeles following their receipt of federal payments led to increased psychiatric hospitalizations at the beginning of the month.

The study by Phillips and his co-authors, however, is the first large-scale study, to document a peak in many forms of death at the beginning of the month, and it is also the first study to link this peak in deaths to substance abuse and poverty.

The study was based on an examination of all U.S. computerized death certificates from 1973 to 1988 (the first and last years providing exact dates of death), in all 31,976,612 U.S. deaths. The boundary effect occurred for deaths from a wide range of causes, for both men and women, and in large urban areas as well as smaller communities.

"Fluctuation in substance abuse seems to be the best single explanation for many of our findings, given that the boundary effect is most pronounced for those individuals whose death certificates indicate substance abuse," said Phillips "If this conclusion is correct, perhaps the lowered mortality rate at the end of each month provides some glimpse of what could be realized if drug and alcohol consumption were reduced. Reducing discretionary funds available for drugs and alcohol might also reduce the monthly peak in deaths."

Phillips, a professor of sociology in UCSD's Division of Social Sciences, has written widely on mortality trends and statistics, including suicide and the role of psychosomatic factors in causing and postponing death. Christenfeld, a professor of psychology in UCSD's Division of Social Sciences, has collaborated with Phillips on numerous studies. Their recent studies have documented an increase in deaths due to medication errors, higher suicide rates in communities with legalized gambling, and a higher risk of heart attacks among residents and visitors to New York City.

Note: Professor Phillips is available for interviews and can be reached at (858) 5340482 or dphillips@ucsd.edu

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