

Study finds seasonal trends in suicide attempts

February 27 2014, by Katy Cosse



Studying national records of suicide attempts by poisoning, University of Cincinnati and Cincinnati Children's Hospital Medical Center researchers found trends in the season, week and day of suicide attempts.

Lead author Gillian Beauchamp, MD, and co-authors Shan Yin, MD, MPH. and Mona Ho, shared their findings, "Variation in Suicide Occurrence by Day and During Major American Holidays," in the *Journal of Emergency Medicine*.

Beauchamp is a fourth-year resident at the UC Department of Emergency Medicine and a UC Health emergency medicine physician. Yin is medical director of the Cincinnati Drug and Poison Information Center, an emergency medicine physician at Cincinnati Children's and assistant professor of pediatrics at UC.

In their study, Beauchamp, Ho and Yin reviewed all calls recorded in the National Poison Database System (NPDS) coded as "suspected suicide" from 2006 through 2010. The NPDS contains data from the country's 57 poison centers and maintained by the American Association of Poison Control Centers.

After studying 1.065 million calls for suspected suicide by ingestion, the team found that the beginning of the week, spring and fall, and New Year's Day were associated with higher numbers of ingestions with suicidal intent.

For adults, Sunday and Mondays were most common for ingestions, with Mondays and Tuesdays being most common for teenagers (under 19). Spring and fall had more exposures than summer and winter.

"It could be interpreted that New Year's Day, Sunday and Monday, and the spring season have similar symbolic representations in that they all represent a new beginning—of the year, of the week, and of the season which most represents new life," says Beauchamp, who also works as a UC Health emergency medicine physician. "It is possible that individuals see these times as positive events but become disappointed when their life circumstances remain unchanged."

The U.S. Centers for Disease Control and Statistics report 6,398 poisoning suicide attempts resulting in death in the United States in 2009. Though poisoning is the most common method of attempted suicide in the U.S., it has relatively low rates of completion compared to

more violent methods.

Research shows there are potential opportunities for intervention—it is estimated that up to two-third of individuals who commit suicide had contact with a physician in the month before their death, and 43 percent of them had been seen in an emergency department in the year before their death.

"If we can identify patterns of suicide, we can look at the factors that could possibly be changed to inform prevention strategies, both in the [emergency department](#) and with individual clinicians," says Beauchamp.

"Patients experiencing suicidal ideation on a Sunday, or on holidays like New Year's Day, may have limited access to clinician or therapist. These patients could benefit from a 24-hour help hotline, an emergency facility, or walk-in clinics."

With multiple studies showing a worsening suicide epidemic internationally, Beauchamp says it's crucial that physicians and public health officials have as much information as they can about factors, like seasonality, that affect suicide attempts.

"Though suicide attempts are extremely complex combinations of many factors that cannot be explained by temporal factors," she adds, "we hope that better information on seasonal trends can help stem the tide of suicide attempts and reach the most at-risk patients."

She notes that further studies are needed to determine which specific approaches would be most effective in preventing [suicide attempts](#) during these higher-risk days and seasons.

More information: Gillian A. Beauchamp, Mona L. Ho, Shan Yin, Variation in Suicide. "Occurrence by Day and during Major American

Holidays," *Journal of Emergency Medicine*, Available online 22 January 2014, ISSN 0736-4679, [dx.doi.org/10.1016/j.jemermed.2013.09.023](https://doi.org/10.1016/j.jemermed.2013.09.023).

Provided by University of Cincinnati

Citation: Study finds seasonal trends in suicide attempts (2014, February 27) retrieved 10 April 2024 from <https://medicalxpress.com/news/2014-02-seasonal-trends-suicide.html>

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