From City Hall to Grove Hall have come expressions of outrage over the violent crime spree that spoiled the Fourth of July for residents in Roxbury, Dorchester and Mattapan, especially the families of the four men who died from gunfire.

Although the anger, frustration and shock are absolutely justified and understandable, we should not be overly surprised by the Independence Day bloodshed. Hot weather, a day without the structure of work or school, and, of course, alcohol provide a dangerous mix, resulting in a spike in crime seen time and time again.

Using crime incident data for Boston for 2000 through 2010, I've calculated the average number of violent offenses (homicide, forcible rape, robbery and aggravated assault) that were reported to the Boston police for each day of the year. As shown in the figure below, the incidence of violent crime tends to follow an upside U pattern through the year, rising and falling with the temperature. However, the pattern reflects much more than the possible effects of short tempers during heat waves. Rather, with warmer weather, residents spend more time outdoors interacting with neighbors and strangers alike, increasing the opportunities for conflict.

Straying from the relatively smooth pattern over the year are three clear outliers: January 1, July 4, and October 31. Each of these three special occasions invites celebratory behavior that can easily spin out of control. So, as we reflect on the senseless loss of life that took place on the violent Fourth, we should also
consider strategies for reducing the risk that always seems to ruin the fun and festivities for crime victims and their families.