

# The Impact of Violent Crime on Health in Arkansas

## FACT SHEET

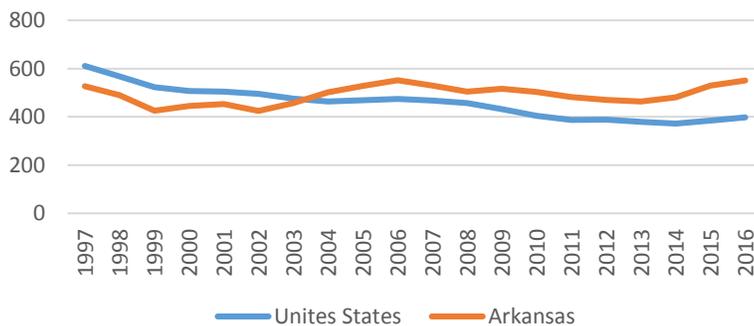
• March 2018

In 2016, the City of Little Rock was among 50 mid-sized cities selected to participate in the Invest Health initiative. A project of the Robert Wood Johnson Foundation and Reinvestment Fund, the initiative brought together diverse leaders from health and other sectors to identify and develop strategies to improve neighborhoods facing the biggest barriers to health. Strategies could focus on factors affecting the health and well-being of a neighborhood, such as expanding access to jobs, increasing affordable housing, and boosting the availability of nutritious food—as well as reducing crime rates and isolation. During the project, the city experienced a rash of homicides, prompting the need to further examine the link between violent crime and health. This fact sheet explores national, state, and local violent-crime data, describes the direct and indirect health impacts of violent crime, and documents some interventions with positive outcomes.

## VIOLENT CRIME

The Federal Bureau of Investigation (FBI) separates crime into two main classifications, violent crime and property crime. Violent crime is comprised of four offenses: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault—all of which involve either force or the threat of force. Property crime includes burglary, larceny-theft, motor vehicle theft, and arson—all of which relate to the taking of money or property without force or threat of force against the victims.<sup>1</sup>

Figure 1. Rate of Violent Crime in Arkansas and the United States, 1997-2016<sup>1</sup>



### Violent Crime Landscape: U.S., Arkansas, and Little Rock

The rate of violent crime in Arkansas has increased during the past two decades, from nearly 525 incidents per 100,000 people to just over 550 per 100,000 people. Over the same period, the rate in the United States has dropped from nearly 610 incidents per 100,000 to less than 400 per 100,000 (see Figure 1).<sup>1</sup>

During the past decade, Little Rock has seen yearly violent crime totals as low as approximately 2,200 incidents, and as high

as nearly 3,300 (see Figure 2). The number of homicides dropped by half from 2007 to 2010, but in 2017 nearly matched the 2007 high of 54 with 53 (see Figure 3).<sup>2,3</sup> In 2017, the number of homicides for the year was 26 percent higher—and overall violent crime was 6 percent higher—than in 2016.<sup>4</sup> During 2017, homicides occurred in most areas of Little Rock, but the greatest numbers were found south of I-630 and east of University Ave.<sup>5</sup>

Figure 2. Number of Violent Crimes in Little Rock, 2007-2017

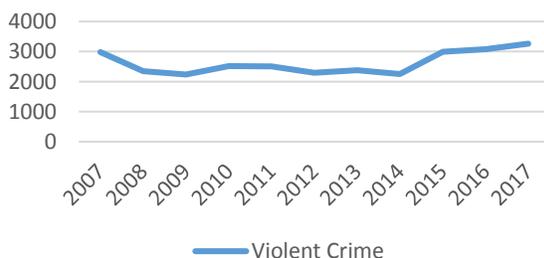
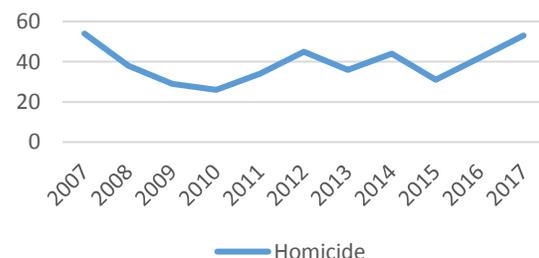


Figure 3. Number of Homicides in Little Rock, 2007-2017



## HEALTH IMPACT OF VIOLENT CRIME

Physical injuries, death, disability, and neighborhood stress are the most evident consequences of violent crime. Disability-adjusted life years (DALYs) are a summary of the years lost to ill-health, premature death, or living with a disability. The World Health Organization (WHO) estimated for 2015 that 1,044,000 DALYs were lost to interpersonal violence in the United States, approximately the same number as hemorrhagic stroke or the combined total of ovarian and prostate cancer.<sup>6</sup>

### Reduction in Physical Activity

Violent crime also affects health in indirect ways. Physically active people have a lower risk for heart disease, high blood pressure, type 2 diabetes, and depression, and have enhanced bone health.<sup>7</sup> Violent crime, however, impedes such activities. Studies show that violent crime and a perceived lack of safety from crime are significant barriers to drawing people outside. A correlation between the local rate of violent crime and walking found that an increase in crime leads to a statistically significant reduction in time spent walking, as well as time spent engaging in other physical activity, including cycling, swimming, and visiting the gym.<sup>8</sup> Davison and Lawson noted a significant inverse association between measured crime rates and self-reported physical activity among adolescents.<sup>9</sup> Children in New Jersey (ages 6-14) were asked to name the number one thing that would make them unwilling to play outside. Girls named inclement weather, hot temperatures, and a fear of gangs or crime. Similarly, boys mentioned bad weather, a preference for indoor activities (such as video games), and a fear of gangs or crime.<sup>10</sup>

#### Violent Crime's Indirect Impact on Health

- Increased risk of depression, chronic stress, and anxiety
- Decreased physical activity
  - Increased risk of type 2 diabetes and coronary heart disease
- Increased risk of obesity
- Increased risk of asthma attacks

### Increase in Chronic Disease and Mental Distress

Exposure to community violence (ECV) includes proximity to violence, such as assault or rape, either by observation or direct victimization. ECV and chronic psychosocial stress have been linked to poor health.<sup>11</sup> In adults with asthma, ECV was associated with increased emergency care and hospitalizations.<sup>12</sup> Sundquist et al. found an association between the increase in neighborhood violent crime and the increased risk of coronary heart disease.<sup>13</sup> To reduce this risk, they recommended improving neighborhood safety and social stability. A study on local area crime and mental health found that local property crime caused considerable mental distress, while violent crime, in a larger area around where people lived, reduced mental wellbeing. Depression and anxiety were greater among women.<sup>14</sup>

Adverse Childhood Experiences (ACEs) are stressful or traumatic events occurring primarily within the family. These events include physical and emotional abuse or neglect, witnessing domestic violence, and other household challenges. These events are associated with the development of risky health behaviors, chronic health conditions, low life potential, and early death.<sup>15</sup> The 2016 National Survey of Children's Health indicates that 9.7 percent of Arkansas children have witnessed domestic violence in the home, compared to 5.7 percent nationally. Furthermore, 5 percent of Arkansas children have been a victim of, or a witness to, neighborhood violence, compared to 3.9 percent nationally.<sup>16</sup> The World Health Organization has suggested adding ECV as an additional ACE category.<sup>17</sup>

### Increase in Obesity and Poor Nutrition

A Healthy Eating Research review found many intertwined behavioral and biological pathways that are changed by exposure to acute and chronic stress and have an impact on the risk of obesity development.<sup>18</sup> Factors from prenatal stress to neighborhood safety have been associated with a child's susceptibility to excessive weight gain and obesity during childhood. Similar to the Sundquist study recommendations, the Healthy Eating Research review suggested a variety of community changes, from safe places for recreational activity to zoning for green spaces (such as parks) and healthy food outlets.

Neighborhood crime may also contribute to an unhealthy food environment. A 13-year study in Baltimore that compared neighborhoods to themselves over time, found an increase in violent crime was significantly associated with an increase in the percentage of unhealthy food outlets.<sup>19</sup>

## INTERVENTIONS WITH POSITIVE IMPACTS

One of the nine priority areas of Healthy Active Arkansas<sup>20</sup> includes a focus on the need for a safe, supportive built environment—including sidewalks, bike lanes, and parks—to encourage people to be outside walking, running, playing, and shopping. A “greening” vacant lots program in Philadelphia suggests the work may reduce crime and improve health. The program’s partners removed trash and debris, planted grass and trees to create a park-like atmosphere, and added low, wooden perimeter fences to preserve upkeep and deter dumping. This “greening” was associated with a 5 percent reduction in gun assaults, as well as increased exercise and reduced stress among residents living in the area with the improved lots.<sup>21</sup> A follow-up study looked at the cost-benefit of the vacant lot remediation, as well as an abandoned-building remediation program, also in Philadelphia. Firearm violence was reduced 39 percent around the buildings, with an associated societal return on investment (ROI) of \$79 for each dollar spent on remediation. The societal ROI for the vacant lot remediation program was \$333.<sup>22</sup>

Finally, Business Improvement Districts (BID) promote economic development through community change. A BID typically focuses on safety, sanitation, and environmental design changes of common public space areas such as sidewalks. A study of the development of 30 BIDs and social control efforts that focused on crime prevention, beautification, sanitation, and public safety advocacy in blighted areas of Los Angeles was associated with a 12 percent reduction in robbery and an 8 percent reduction in violent crime.<sup>23</sup> Culyba et al. found that the presence of street lighting, illuminated walk/don’t walk signs, painted crosswalks, public transportation, parks, and maintained vacant lots were significantly associated with a decreased risk of adolescent homicide.<sup>24</sup>

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