

Racial/Ethnic Disparities in the Use of Lethal Force by US Police, 2010–2014

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Objectives. To update previous examinations of racial/ethnic disparities in the use of lethal force by US police.

Methods. I examined online national vital statistics data for deaths assigned an underlying cause of “legal intervention” (*International Classification of Diseases, 10th Revision*, external-cause-of-injury codes Y35.0–Y35.7, excluding Y35.5 [legal execution]) for the 5-year period 2010 to 2014.

Results. Death certificates identified 2285 legal intervention deaths (1.5 per million population per year) from 2010 to 2014. Among males aged 10 years or older, who represented 96% of these deaths, the mortality rate among non-Hispanic Black and Hispanic individuals was 2.8 and 1.7 times higher, respectively, than that among White individuals.

Conclusions. Substantial racial/ethnic disparities in legal intervention deaths remain an ongoing problem in the United States. (*Am J Public Health.* 2017;107:295–297. doi: 10.2105/AJPH.2016.303575)

A recent report by Fryer on racial/ethnic disparities in the use of force by police in selected cities in the United States attracted widespread publicity, largely because of its unexpected finding of no statistically significant differences in the use of lethal force by police during encounters with White, Black, or Hispanic individuals.^{1,2} A different conclusion is apparent when a population-level perspective is taken. That approach aims to identify all such deaths in a population and reflects not only the outcomes of police encounters, the focus of Fryer’s investigation,¹ but also the likelihood of police encounters. That difference matters. For example, Sikora and Mulvihill³ examined national vital statistics data and found that during 1988 to 1997, the rate of deaths resulting from legal interventions by police or other law enforcement agents among males aged 10 years or older was more than 3 times greater among Black than among White persons. More recently, DeGue et al.⁴ studied data from 17 states from 2009 to 2012 from the National Violent Death Reporting System and found that mortality rates were 2.8 times higher among Black than among White individuals for deaths resulting from

the use of force by law enforcement. For 2013, Crosby and Lyons⁵ observed a 4-fold higher rate of legal intervention deaths among Black men compared with White men, with Hispanic men having intermediate rates, with data from the same system.

This article provides an update on racial/ethnic disparities in legal intervention deaths nationwide.

METHODS

I used national vital statistics and census data from the Centers for Disease Control and Prevention’s Wide-Ranging Online Data for Epidemiologic Research (WONDER) system to examine legal intervention deaths.⁶ These were deaths assigned an *International Classification of Diseases, 10th Revision (ICD-10)*, external-cause-of-injury code of

Y35.0 to Y35.4 or Y35.6 to Y35.7, which represent deaths resulting from “injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal action.”⁷ This included legal interventions involving firearm discharge (Y35.0), explosives (Y35.1), gas (Y35.2), blunt objects (Y35.3), sharp objects (Y35.4), other specified means (Y35.6), or unspecified means (Y35.7) and excluded deaths involving legal execution (Y35.5).⁷

I examined deaths for 2010 to 2014, the most recent 5-year interval available in the WONDER system. Per criteria established by the National Center for Health Statistics, underlying cause of death, age at death, race, and ethnicity were based on data recorded on death certificates and obtained from the WONDER system’s “Underlying Cause of Death” query utility, as were death rates based on US census population estimates and 95% confidence intervals.⁶

RESULTS

Death certificates identified 2285 legal intervention deaths (1.5 per million population per year) from 2010 to 2014 in the United States, of which 96% resulted from firearm discharge, all but 5 were among persons aged 10 years or older, and 96% were among males. Among males 10 years or older, although non-Hispanic White males accounted for the largest number of deaths,

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the number of deaths per million population among non-Hispanic Black and Hispanic males were 2.8 and 1.7 times higher, respectively, than among White males (Table 1). American Indians or Alaska Natives accounted for fewer than 2% of legal intervention deaths but had a rate similar to that of Blacks. Asians or Pacific Islanders accounted for fewer than 3% of legal intervention deaths and had the lowest rates (Table 1). Among males aged 15 to 24, 25 to 34, 35 to 44, and 45 to 54 years, there were 4.1, 6.1, 4.9, and 3.2 legal intervention deaths per million population per year, respectively, with non-Hispanic Black males having the highest rates across these age groups (10.9, 12.6, 8.0, and 5.2 per million population per year, respectively).

Among all legal intervention deaths, 35% of the decedents resided in large central metropolitan areas (counties that contain all or part of the principal city in metropolitan statistical areas with populations of at least 1 million⁶), 52% resided in other metropolitan areas, and 13% resided in nonmetropolitan areas.

For the 17 states in which Crosby and Lyons observed 222 legal intervention deaths in 2013 when using the National Violent Death Reporting System,⁵ there were 137 (38% fewer) such deaths detected in 2013 when using the death certificate data in WONDER.

DISCUSSION

During 2010 to 2014, approximately 450 deaths occurred each year, nearly all among men, resulting from the use of lethal force by

law enforcement officers in the United States, as recorded in national vital statistics. Multiplying this estimate for probable underascertainment based on the 17-state comparison with the National Violent Death Reporting System, which uses more comprehensive methods to identify and characterize violence-related deaths,^{4,5} there may have been more than 700 legal intervention deaths per year in the United States during this period. Regardless of undercounting in vital statistics, the pattern of racial/ethnic disparities is similar in the 2 systems, with the most recent data from both showing the highest rate of legal intervention deaths among Black individuals, an intermediate rate among Hispanic individuals, and a lower rate among White individuals.

The distinction between the approach by Fryer,¹ whose study garnered substantial national media attention because of his finding of no statistically significant differences in the use of lethal force by police during encounters with Black, White, or Hispanic individuals, and the population-based approach to assessing mortality rates is important for understanding racial/ethnic disparities in legal intervention deaths. Population-level observations based on vital statistics or the National Violent Death Reporting System reflect not only the mix of factors that could lead to the use of lethal force in a given encounter, the focus of Fryer's study, but also differences in the likelihood of police encounters among White, Black, and Hispanic individuals. As exemplified by studies of juvenile arrests,⁸

traffic stops,⁹ and stop-and-frisk procedures,¹⁰ substantial evidence indicates that Black individuals and, to a lesser extent, Hispanic individuals are more likely than White individuals to be stopped by police or arrested. Altogether, this larger combination of factors adds up in a way that results in higher rates of legal intervention homicides among Black and Hispanic individuals than among White individuals.

Comparison of studies of legal intervention deaths that used different approaches and data sources identify inherent tradeoffs and complementary utilities. For population-level studies, vital statistics data are more recent and available from all states, whereas data from the National Violent Death Reporting System are more complete and provide descriptions of the circumstances surrounding each death in participating states.^{4,5} In contrast to studies based on mortality data, Fryer used a mosaic of information resources, including police data and reports from multiple cities and a large national survey to study interactions with police. This approach allowed for assessment of a spectrum of nonlethal uses of force during police encounters. Given the relative rarity of the use of lethal force and difficulties in obtaining sufficient data to quantify its use or potential use, Fryer's assessment of disparities in the use of lethal force was possible for only 1 city (Houston, TX) on the basis of records from 2000 to 2015 for all officer-involved shootings and a sample of arrests for crimes, such as aggravated assault on a police officer or resisting arrest, when lethal force might be necessary.¹

TABLE 1—Legal Intervention Deaths Among Males Aged 10 Years or Older, by Race and Hispanic Ethnicity: United States, 2010–2014

Race/Ethnicity	No. of Deaths	Midinterval (2012) Population	Deaths per Million Population ^a (95% CI)
Non-Hispanic			
White	1 091	87 725 142	2.5 (2.3, 2.6)
Black or African American	554	16 194 058	6.8 (6.3, 7.4)
Asian or Pacific Islander	52	7 081 468	1.5 (1.1, 1.9)
American Indian or Alaska Native	37	1 077 708	6.9 (4.8, 9.5)
Hispanic	447	21 738 363	4.1 (3.7, 4.5)
Total^b	2 181	133 816 739	3.3 (3.1, 3.4)

Note. CI = confidence interval

^aRates based on population counts for 2010–2014.

^bTotal includes 6 decedents for whom Hispanic ethnicity was unspecified.

PUBLIC HEALTH IMPLICATIONS

As the United States seeks solutions to the problems underlying highly publicized instances of deaths among Black men during police encounters, being clear about the numbers from different studies and what they mean, or do not mean, is essential. **AJPH**

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HUMAN PARTICIPANT PROTECTION

Institutional review board approval was not needed because this study did not involve human participants as

defined by the Office for Human Research Protections of the US Department of Health and Human Services.

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