






Violent deaths among individuals subject to domestic violence protection orders in King County, Washington, USA, 2014–2020

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ABSTRACT

Objectives Individuals (ie, respondents) subject to domestic violence protection orders have threatened or engaged in one form of violence perpetration and may be at increased risk for experiencing others forms of violence, including violent death.

Methods Using a cohort of granted domestic violence protection orders in King County, Washington, USA, from 2014 to 2020 (n=3543), we calculated standardised mortality ratios for violent death, including suicide, homicide, legal intervention and undetermined intent, comparing domestic violence protection order respondents to King County residents adjusting for year, age, sex, and race and ethnicity through indirect standardisation.

Results There were 66 deaths among domestic violence protection order respondents; 25.8% were violent deaths and 52.9% of violent deaths involved firearms. The standardised mortality ratio for violent death was 3.71 (95% CI: 2.16 to 5.93) among domestic violence protection order respondents compared with King County residents.

Conclusion The domestic violence protection order process may provide an opportunity for referrals to services to address shared risk factors for violence perpetration and victimisation.

INTRODUCTION

Experiencing or perpetrating one form of violence increases the risk for future violence.¹ A domestic violence (DV) protection order (DVPO) is a court document completed by the petitioner (usually the victim-survivor) seeking a protection order from the court against the abuser, referred to as the respondent. Respondents in DVPOs have engaged in DV perpetration, and therefore, may increase the likelihood for experiencing other types of violence due to shared risk factors including substance use, lack of non-violent social problem-solving skills, family conflict and social norms that support aggression.¹

Involvement in the criminal legal system is a risk factor for violent death.² For example, among persons released from prison in Washington state, the leading causes of death were drug overdose, followed by cardiovascular disease, homicide and suicide.³ Criminal legal system involved populations have also shown elevated risk for suicide including persons who were recently arrested^{4–6} and persons under community supervision (ie, probation and parole).⁷ In Washington in 2003, 19% of men aged

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Perpetrators of domestic violence have threatened or engaged in one form of violence perpetration and may be at increased risk for experiencing others forms of violence, including violent death.
- ⇒ As involvement in the criminal legal system is also a risk factor for violent death, civil legal system involved domestic violence protection order respondents may be at high risk for suicide, homicide and other forms of violent death.

WHAT THIS STUDY ADDS

- ⇒ We found that domestic violence protection order respondents have an elevated risk for violent death compared with the population of King County, Washington.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ Those involved in the civil legal system may have shared risk factors for violent death as other legal system involved populations.
- ⇒ Threats of suicide by domestic violence protection order respondents should not be dismissed and may indicate risk of suicide in addition to risk of harm to the victim-survivor.

18–60 years who died by suicide had a DVPO or DV criminal charge before their death.⁸ High rates of suicide have also been noted among protection order respondents in central Florida.⁹

Legal intervention deaths occur when police, other law enforcement agencies or military on duty kill someone when responding to disturbances, arresting or attempting arrests and performing other legal actions. One study found that 13.9% of legal intervention deaths were DV related.¹⁰ Similarly in Washington, 13.5% of fatal police shootings were related to DV.¹¹ When examining homicides, suicides and legal intervention deaths that included DV survivors, DV perpetrators and corollary victims, more than 1 in 10 violent deaths had DV circumstances.¹²

Given the research on violent death among people with a history of criminal legal system involvement and violence associated with DV, civil legal system involved DVPO respondents may have an elevated risk for suicide, homicide and other forms of violent death. The current study examined



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violent deaths and firearm-related violent deaths among a cohort of DVPO respondents compared with the population of King County, Washington. Understanding if DVPO respondents have an elevated risk of violent death may provide opportunities to prevent violence to the victim-survivor as well as to the respondent.

METHODS

Using data from a larger project in King County, Washington, a random sample of 55% of all granted DVPO petitions was collected ($n=3543$) from 1 January 2014 to 31 December 2020, except for 2017. This larger study sought to evaluate implementation of Washington's DV-related firearm prohibitions (RCW9.41.800) by the courts and the Regional Domestic Violence Firearms Enforcement Unit (RDVFEU).¹³ The evaluation study did not collect information from 2017 as the RDVFEU officially began on 1 January 2018 with a pilot programme beginning in mid-2017. Therefore, cases from 2017 were not available in the current study.

As some respondents appeared on multiple petitions in the random sample, records from 3430 unique DVPO respondents were linked to death records from Washington Department of Health from 1 January 2014 to 31 October 2020. Deterministic and probabilistic linkages based on first name, last name, date of birth and sex were conducted using The Link King software, a SAS plug-in developed by Washington Division of Alcohol and Substance Abuse.¹⁴ Death certificates are certified by medical examiners and coroners across the state and filed with state vital statistics. Death records include demographic information about the individual, date, manner and cause of death. We used the International Classification of Diseases Version 10 (ICD-10) code reported to examine the outcomes of suicide (X60-X84, Y87.0, U03); homicide (X85-Y09, Y87.1, U01); undetermined intent (Y10-Y34, Y87.2); and legal intervention (Y35-35.7, excluding Y35.5 legal executions). Additionally, firearm-related violent deaths were examined. Deaths of undetermined intent are unable to be definitively classified as homicide, suicide or unintentional. These were included in violent deaths consistent with the Centers for Disease Control and Prevention (CDC)'s National Violent Death Reporting System.¹⁵

Statistical analysis

We calculated mortality rates, standardised mortality ratios (SMRs) and 95% CIs comparing DVPO respondents to King County residents adjusting for year (ie, 2014–2016; 2017–2018;

and 2019–2020), age (ie, 18–24; 25–34; 35–44; 45–54; 55–64; and 65 and older), sex (ie, male and female) and race and ethnicity (ie, white, non-Hispanic; white, Hispanic; black or African American; American Indian or Alaskan Native; and Asian or Pacific Islander) through indirect standardisation. Black or African American, American Indian or Alaskan Native and Asian or Pacific Islander residents may identify as Hispanic or non-Hispanic. Data for county residents were from CDC's Wide-ranging ONLine Data for Epidemiologic Research (CDC WONDER).¹⁶ Analysis was performed in R (V.4.2.2) using the package PHEindicatorMethods (V.2.0.0) and exact CIs to account for small sample sizes (R Foundation for Statistical Computing, Vienna, Austria).

RESULTS

Overall, the average age of DVPO respondents was 37.3 years (SD: 11.3), and 87.1% were male. Race and ethnicity of DVPO respondents was reported by court officers with 48.3% reported as white, non-Hispanic; 16.9% white, Hispanic; 25.0% black or African American; 1.6% American Indian or Alaskan Native; and 8.2% Asian or Pacific Islander. The average follow-up time was 3.4 years (SD: 2.1). There were 66 deaths among DVPO respondents during the study period. One-quarter ($n=17$) were violent deaths. Half ($n=9$) of violent deaths involved firearms.

Over the study period, the rate of violent death in King County, Washington, was 21.3 per 100 000. The adjusted rate of violent death for DVPO respondents was 78.7 per 100 000 (95% CI: 45.8 to 126.1; [table 1](#)). The SMR for violent deaths was 3.71 (95% CI: 2.16 to 5.93) among DVPO respondents compared with King County residents ([table 1](#)). A similar ratio was observed for firearm-related violent deaths (3.68 95% CI: 1.68 to 6.99) and non-firearm related violent deaths (3.73; 95% CI: 1.61 to 7.35) ([figure 1](#)). Suicide was 3.15 (95% CI: 1.36 to 6.21) times as high among DVPO respondents compared with King County residents. Though there were relatively few cases of deaths of undetermined intent and legal intervention, the SMRs for these causes of death were significantly higher among DVPO respondents compared with King County residents. For homicide deaths, there was a similar trend; however, this finding was not statistically significant (SMR: 2.57; 95% CI: 0.70 to 6.58).

DISCUSSION

We found that DVPO respondents had an elevated risk for violent death compared with the population of King County, Washington. Those involved in the civil legal system may

Table 1 Year-age-sex-race-ethnicity-adjusted rates and standardised mortality ratios (SMR) of violent death and firearm-related violent death among DVPO respondents compared with all King County residents, 2014–2020.

	Observed	Expected	King County rate per 100 000	Crude rate per 100 000	Adjusted rate per 100 000	95% CI	SMR	95% CI
Total								
Violent death	17	4.6	21.25	131.12	78.74	45.84 to 126.07	3.71	2.16 to 5.93
Firearm death	9	2.4	9.45	69.42	34.82	15.92 to 66.11	3.68	1.68 to 6.99
Non-firearm death	8	2.1	11.79	61.70	44.00	19.00 to 86.70	3.73	1.61 to 7.35
Intent of violent death								
Death								
Suicide	8	2.5	15.38	61.70	48.51	20.94 to 95.59	3.15	1.36 to 6.21
Homicide	4	1.6	3.79	30.85	9.76	2.66 to 24.98	2.57	0.70 to 6.58
Undetermined	3	0.3	1.58	23.14	14.10	2.91 to 41.28	8.96	1.85 to 26.18
Legal intervention	2	0.2	0.49	15.42	6.15	0.74 to 22.21	12.48	1.51 to 45.08

DVPO, domestic violence protection order.

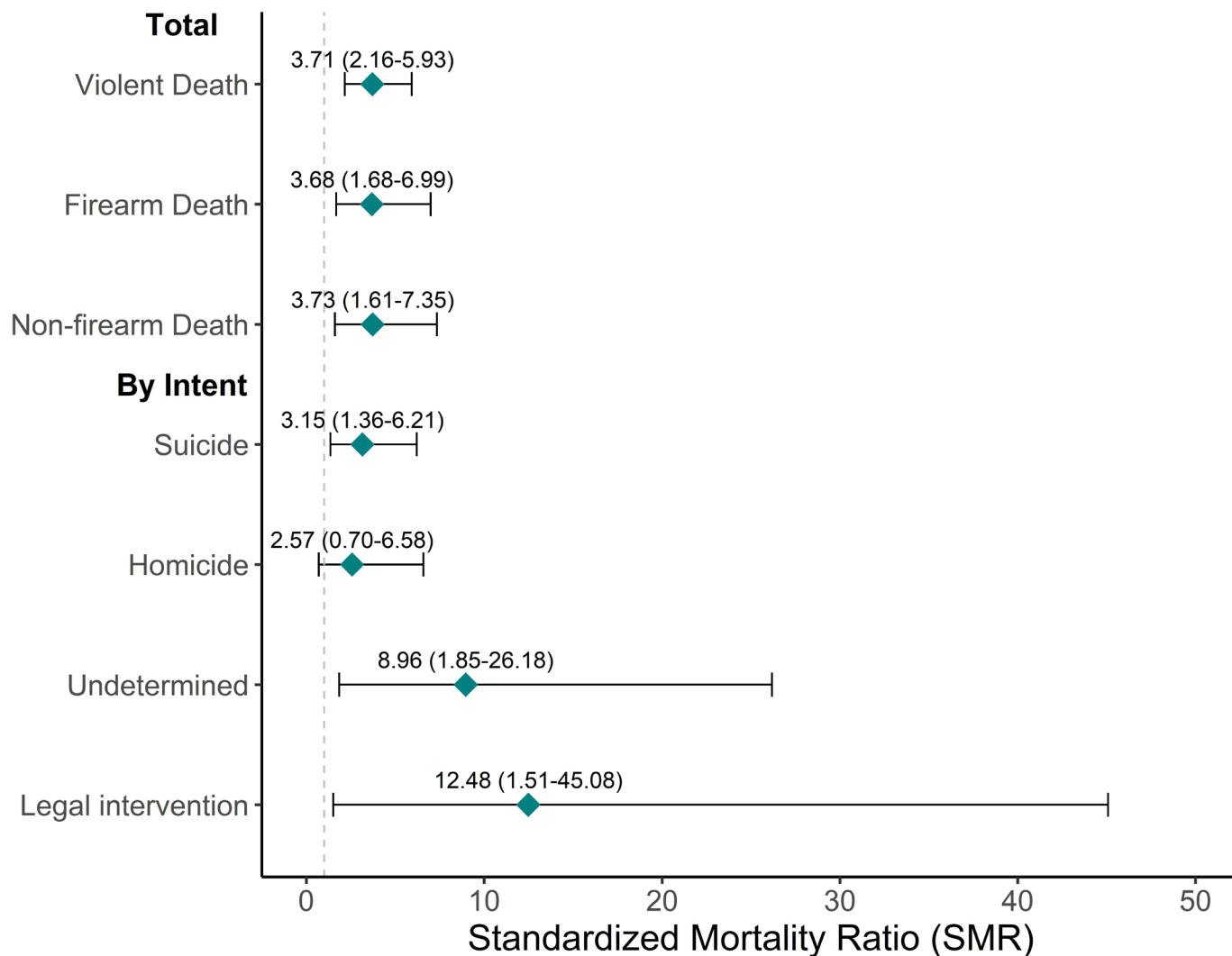


Figure 1 Year–age–sex–race–ethnicity-adjusted SMRs of violent death and firearm-related violent death among domestic violence protection order respondents compared with all King County residents, 2014–2020.

have shared risk factors for violent death as other legal system involved populations. Half of all violent deaths involved firearms. In Washington, in 2014, an order to surrender firearms was made mandatory for DVPOs involving intimate partners (Wash. Rev. Code Ann. § 9.41.040(2)(a)). Some DVPO respondents may not fall into this category, or firearms may still be accessible even though prohibited.

Our study found that DVPO respondents had three times the rate of suicide compared with the population of King County, Washington. Perpetrators of DV may threaten suicide as a form of coercive control over the victim-survivor.¹⁷ However, threats of suicide should not be dismissed and may indicate risk of suicide by the respondent in addition to risk of harm to the victim-survivor.¹⁸ Additionally, some undetermined or legal intervention deaths may be suicide related or ‘suicide by cop’.¹⁰ Suicide interventions such as screening and brief safety planning interventions, including lethal means access, could be adapted for DVPO respondents to reduce the risk of suicide, including homicide–suicide.

Examining the circumstances surrounding deaths of civil legal system involved perpetrators of DV may provide further understanding for violent injury and death prevention. This could include examining whether, for legal intervention deaths, the precipitating event was related to the DVPO (eg, responding to

a violation) or for respondents that died by homicide, examining the relationship to the perpetrator. The timing between issuance of the DVPO and death is also an area for future research. Mental health, economic and housing stability and social connectedness risk factors may have preceded the DVPO or have been compounded by civil legal system involvement. Coercive control could moderate violent death risk among perpetrators of DV or be salient for specific types of violent death (eg, those who are also violent outside of the home).¹⁹

This study has limitations. Though we observed higher mortality rates among DVPO respondents compared with the general population, there were relatively few cases of violent death, and thus, some estimates were imprecise, particularly when examining by intent. Undetermined intent deaths may be misclassified suicides or unintentional injuries²⁰; therefore, we included deaths of undetermined intent as violent deaths and as a separate category. To standardise by race and ethnicity, we created categories that do not reflect all respondents’ experiences, identity and culture, particularly for multiracial and multiethnic respondents. Finally, respondents may have moved outside of Washington state and died which would not be captured in our data. If we presume no difference in risk of violent death between people who relocated compared with those that do not, our results may have been attenuated.

CONCLUSION

We observed an overlap of perpetrating and experiencing violence among DVPO respondents. The DVPO process may provide an opportunity for referrals to services to address shared risk factors for violence perpetration and victimisation.

Contributors KD: conceptualisation; methodology; formal analysis; and writing—original draft. AME: conceptualisation; resources; data curation; and writing—review and editing. DB, ICR and FPR: conceptualisation and writing—review and editing. AR-R: conceptualisation; resources; writing—review and editing; supervision; and funding acquisition.

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Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by University of Washington institutional review board (Reference Number: STUDY00012046). This study used administrative data from court records.

Provenance and peer review Not commissioned; externally peer reviewed.

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