Alcohol Consumption Before Fatal Suicides

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Introduction

This report examines alcohol consumption before fatal suicides. The purpose is to understand the relationship between alcohol consumption and suicide, and to examine groups who may be at-risk for suicide due to alcohol consumption.

Data Sources

Data in this report come from the Virginia Violent Death Reporting System (VVDRS). Virginia is one of the eighteen states that participate in the National Violent Death Reporting System (NVDRS).[1] Data entered into the VVDRS come from several sources, primarily the Office of the Chief Medical Examiner (OCME), law enforcement, Vital Records, and the Department of Forensic Science (DFS). Information about alcohol testing and results is supplied by toxicology reports produced by DFS at the request of the OCME. Information about circumstances is gathered from law enforcement and OCME reports.

The Sample

Persons discussed in this report died from self-inflicted suicidal injuries between 2003 and 2007, and were tested, post-mortem, for the presence of alcohol. Because this report investigates the relationship between non-fatal alcohol consumption and suicide it excludes persons who fatally poisoned themselves with alcohol (n = 95).

In the time period of this study most persons who committed suicide were tested post-mortem for the presence of alcohol (96%). Among these persons tested for alcohol, 31% had a positive result for alcohol and 19% had a blood alcohol concentration level, or BAC, greater than or equal to (≥) 0.08 (see Table 1). [2]

Table 1. Suicides and Toxicology Testing for Alcohol in Virginia: 2003-2007

	#	%
All Suicide Victims*	4,219	100
Tested for Alcohol	4,060	96
Positive Result for Alcohol (any BAC)	1,249	31
BAC ≥ 0.08	786	19

*Excluding those who fatally poisoned themselves using alcohol.

[1] To read more about the NVDRS, see http://www.cdc.gov/ViolencePrevention/NVDRS/index.html.

[2] In Virginia, a BAC ≥ 0.08 is the legal standard for driving while intoxicated. For this report, a BAC ≥ 0.08 is considered an increased level of alcohol.

Concepts about Alcohol Use and Suicide

A common conception is that alcohol is consumed before suicide attempts to intentionally lower inhibitions and allow the suicide to proceed. While this certainly occurs, narratives of completed suicides indicate two *primary* (but not exclusive) ways alcohol interacts with suicide attempts.

First, there are suicides where persons have existing problems with alcohol and alcohol use before suicide represents a regular activity. Second, there are suicides where alcohol use may have lowered inhibitions against committing suicide, but not as part of an *intentional* suicide plan. Rather, alcohol use was *incidental* and helped facilitate the decision to commit suicide by exaggerating life stressors while simultaneously decreasing reluctance to commit suicide. These two suicide types overlap, as persons who have alcohol problems may also be reacting to life stressors.

Suicide and Alcohol Problems

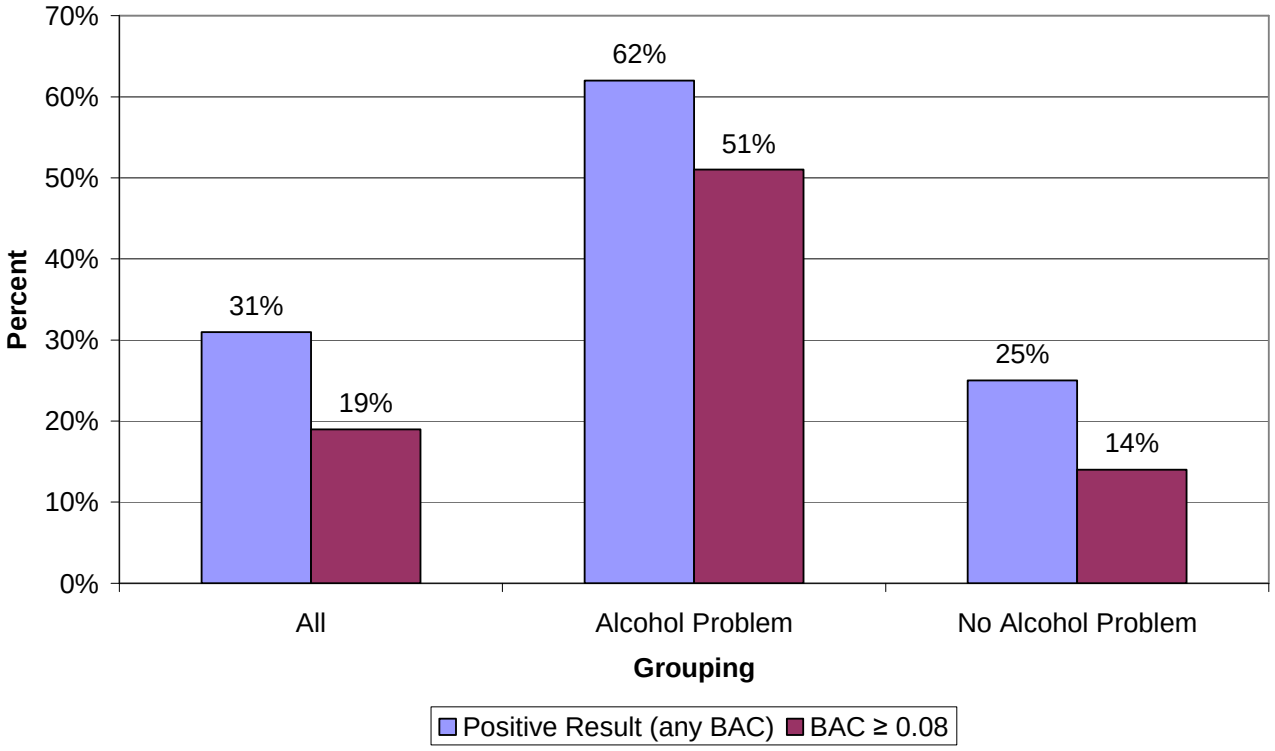
The VVDRS collects data about whether suicide victims had alcohol problems. In the NVDRS coding schema, persons with alcohol problems are perceived by themselves or others to have a problem with controlling use of, or to be addicted to, alcohol. This includes persons participating actively in sobriety programs, such as Alcoholics Anonymous.[3]

Suicide victims with alcohol problems (n = 594) are disproportionately White (94%) and male (81%); White males comprise three-fourths (75%) of suicide victims who have an alcohol problem compared to two-thirds (67%) of suicide victims overall. Suicide victims with an alcohol problem are over-represented among those who consumed alcohol before suicide, comprising 15% of all suicide victims, 30% of those with positive results for alcohol, and 38% of those with a BAC $\geq$ 0.08.

Fundamental differences in toxicology results suggest that those with an alcohol problem may have used alcohol as part of a regular course of events. Among those with an alcohol problem, 62% had a positive result for alcohol and 51% had a BAC $\geq$ 0.08; among those without an alcohol problem (n = 3,329), 25% had a positive result for alcohol and 14% had a BAC $\geq$ 0.08 (see Figure 1).

[3] To read the coding manual description of this and other characteristics in this report, see the NVDRS coding manual at http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/vs3/NVDRS_Coding_Manual_Version_3-a.pdf

Figure 1. Alcohol Test Results and Alcohol Problems For Suicide Victims in Virginia: 2003-2007



Decreased Inhibitions and Increased Reactions to Life Stressors

Another way to understand how alcohol consumption interacts with suicide is to consider the impact of life events (or "circumstances") on alcohol consumption before suicide. This report examines four circumstances. The first two circumstances, intimate partner problems and a crisis in the past two weeks, are, by nature, volatile and frequently produce strong reactions.

Intimate partner problems are conflicts with a current or former intimate partner (e.g., boyfriend, spouse) at the time of the suicide. These conflicts may appear minor (a disagreement over money) or major (filing for divorce; infidelity). A crisis in the past two weeks is defined from the perspective of the suicide victim and occurred sometime in the past two weeks. The crisis can be of any magnitude and can include events ranging from an argument with a friend to learning of a terminal health problem. These crises tend to be more immediate; preliminary research from two VVDRS data-years indicates that 68% of persons with a crisis in the past two weeks actually had a crisis in the past 24 hours.[4]

The other two circumstances, physical health problems and mental health problems, can also be volatile by nature, but often unfold on a longer time-scale and may not be related to crisis-like

[4] Beginning with the 2007 database, all suicides coded for a crisis in the past two weeks could also be noted as having a crisis in the past 24 hours.

problems. Physical health problems are any physical ailments or illnesses the victim cites as a reason for the suicide.[5] Mental health problems are any mental illnesses, ranging from mild clinical depression to schizophrenia to dementia.

Analysis of these four circumstances was conducted on three groups of suicide victims: all suicide victims, those with alcohol problems, and those without alcohol problems. This type of analysis was done to understand the different ways these circumstances affected suicide victims with and without alcohol problems.

Among those with an intimate partner problem and/or a crisis in the past two weeks (and who did *not* have a physical health problem or a mental health problem), 41% had positive results for alcohol and 29% had a BAC $\geq$ 0.08. Amongst those with an alcohol problem, the percentage with positive results for alcohol increases (74%) as does the percentage with a BAC $\geq$ 0.08 (66%). For those without an alcohol problem, these percentages decrease (see Table 2).

Table 2. Alcohol Test Results (Percentage) and Selected Circumstances*

	Positive Result (any BAC)	BAC ≥ 0.08
Intimate Partner Problem and/or Crisis in Past Two Weeks	41	29
Intimate Partner Problem and/or Crisis in Past Two Weeks; Alcohol Problem	74	66
Intimate Partner Problem and/or Crisis in Past Two Weeks; no Alcohol Problem	36	24

*Excludes persons with a mental health problem or physical health problem

Among those with a mental health problem or physical health problems (and who did *not* have an intimate partner problem or a crisis in the past two weeks), 22% had positive results for alcohol and 12% had a BAC $\geq$ 0.08. Amongst those with an alcohol problem, the percentage with positive results for alcohol increases (55%) as does the percentage with a BAC $\geq$ 0.08 (40%). For those without an alcohol problem, these percentages decrease (see Table 3).

Table 3. Alcohol Test Results (Percentage) and Selected Circumstances*

	Positive Result (any BAC)	BAC ≥ 0.08
Physical Health Problem or Mental Health Problem	22	12
Physical Health Problem or Mental Health Problem; Alcohol Problem	55	40
Physical Health Problem or Mental Health Problem; no Alcohol Problem	18	7

*Excludes persons with an intimate partner problem or a crisis in the past two weeks

[5] In the absence of any clear information about why an individual commits suicide, physical health problems can be endorsed if the health issue in question is terminal or debilitating.

Suicide victims with an alcohol problem, an intimate partner problem, or a crisis in the past two weeks are over-represented among those with positive results for alcohol.[6] Persons with at least one of these three traits comprise 25% of this sample, 36% of those with a positive result for alcohol, and 41% of those with a BAC $\geq$ 0.08. Conversely, those without an alcohol problem, an intimate partner problem, or a crisis in the past two weeks represent 45% of this sample, 29% of those with a positive result for alcohol, and 22% of those with a BAC $\geq$ 0.08.

Conclusion

If alcohol was consumed before suicide simply to "get up the nerve" to carry out a suicide, it would be seen more often in those with chronic, ongoing issues. Suicides related to intimate partner problems and recent life crises are typically more impulsive and therefore less likely to involve planning. Suicides related to physical health problems and mental health problems tend to be less impulsive, and will be more likely to involve such planning.

This is not to deny that individuals consume alcohol to intentionally lower their inhibitions about committing suicide; this is something that certainly does occur. However, alcohol use before suicide may largely be a function of two primary issues. First is the issue of ongoing and preexisting alcohol problems where alcohol consumption is a regular activity. Second is the issue of persons experiencing immediate life stressors where the influence of alcohol may be exaggerating their reactions. For both types, alcohol may lower the inhibition to commit suicide, but not likely as part of an intentional plan.

[6] This excludes persons who had a mental health problem or a physical health problem.