



# Systematic Evaluation of Awareness and Use of the North Carolina Violent Death Reporting System

Lillie Armstrong, Genevieve Olson, Eyerusalem Tessema, Jessica Tufte

Injury & Violence Prevention Branch  
Scott Proescholdbell, MPH & Nidhi Sachdeva, MPH  
Marcy Boynton, PhD & J. Michael Bowling, PhD



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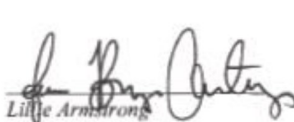
The quantitative survey and data analysis process would not have been possible without the team's faculty advisor, Marcy Boynton, PhD, who made herself and her knowledge readily available to us when we most needed it. J. Michael Bowling, PhD, provided very appreciated feedback and humor.

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Thank you!

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Lillie Armstrong  
Student

  
Genevieve Olson  
Student

  
Eyersalem Tessema  
Student

  
Jessica Tufte  
Student

**BRFSS** Behavioral Risk Factor Surveillance System, maintained by the CDC

**CDC** Centers for Disease Control and Prevention

**IVPB** Injury and Violence Prevention Branch at the North Carolina Department of Public Health

**MPH** Master of Public Health

**NC** North Carolina

**NC-DHHS** North Carolina Department of Health and Human Services

**NC-DPH** North Carolina Division of Public Health

**NVDRS** National Violent Death Reporting System

**NC-VDRS** North Carolina Violent Death Reporting System

**UNC** University of North Carolina at Chapel Hill

**US** United States

**VDRS** Violent Death Reporting System

**WISQARS** Web-based Injury Statistics Query and Reporting System, maintained by the CDC

**YRBSS** Youth Risk Behavior Surveillance System, maintained by the CDC

# Systematic Evaluation and Framework Analysis of NC-VDRS

## Executive Summary

Injury and Violence Prevention Branch  
NC Department of Health and Human Services

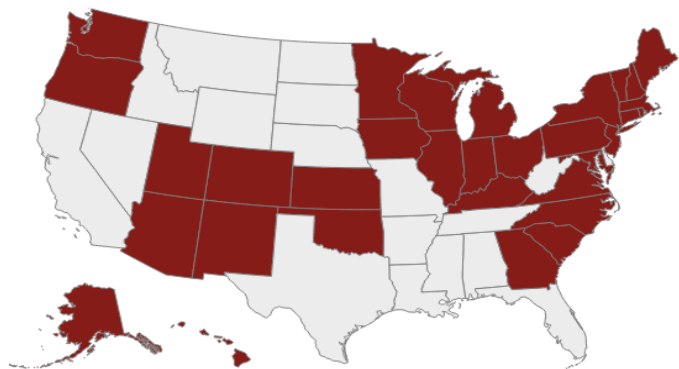
### Significance of Problem

Each year, over 55,000 people in the US die as a result of violence and nearly 2,000 people die each year from violence in the state of NC (NCDPH IVPB, 2015). The vast majority of violent deaths are preventable. The first step to effectively preventing violent deaths is having data that is accurate and accessible to policy makers, practitioners, researchers, and policy makers.

The documentation of violent deaths has been a difficult endeavor for multiple reasons: there are inconsistencies between reports from law enforcement and medical facilities regarding violent deaths, mental health stigma is widespread, and the political climate surrounding gun control has led to a lack of funding around research explicitly around gun violence.

The North Carolina Violent Death Reporting System (NC-VDRS) is a comprehensive, statewide, population-based surveillance system developed by the Centers for Disease Control and Prevention (CDC) that tracks violent deaths across North Carolina. Since the system was established in 2004, the Injury and Violence Prevention Branch (IVPB) of the North Carolina Division of Public Health (NDPH) has collected detailed data on more than 20,000 violent deaths. This system is intended to provide data to communities and researchers to inform intervention and evaluation efforts and help prevent future violent deaths. The purpose of this project is to better understand current awareness and use of NC-VDRS and its resources.

### States with CDC Violent Death Reporting Systems



Lillie Armstrong · Genevieve Olson · Eyerusalem Tessema · Jessica Tufté  
Scott Proescholdbell, MPH · Nidhi Sachdeva, MPH *Preceptors* // J. Michael Bowling, PhD · Marcy Boynton, PhD *Faculty Advisors*  
University of North Carolina at Chapel Hill – Gillings School of Global Public Health

### What Is Violent Death?

The CDC defines violent death as “death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community” (2014).

This includes:

- Intentional self-harm (suicide)**
- Assault (homicide)**
- Unintentional firearm injury deaths**
- Legal intervention**
- Deaths with undetermined intent**

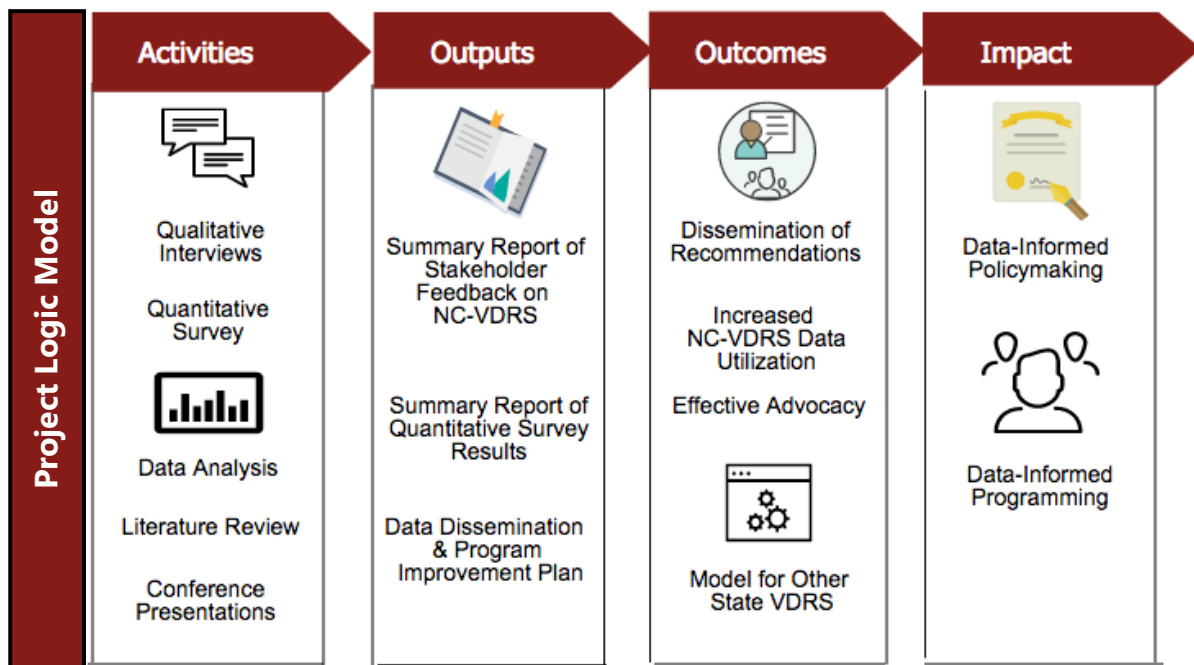
### Project Goal

To evaluate awareness and data utilization of NC-VDRS using qualitative and quantitative methods.

### Major Activities

- Literature Review**
- Survey Distribution**
- Qualitative Interviews**
- Data Analysis**
- Survey Development**
- Data Dissemination**

Semi-structured key informant interviews were conducted with NC-VDRS stakeholders (N=12) and presented in a qualitative data report. These interviews were used to develop and inform a quantitative online survey to assess current awareness and use of NC-VDRS. The survey was distributed to IVPB e-Newsletter recipients. Respondents (N=119) included local Health Department staff, law enforcement officials, researchers, and other community partners. The research team performed descriptive analysis to assess current stakeholder awareness and report usefulness of NC-VDRS resources and data as it is currently presented through IVPB. The survey evaluated NC-VDRS data sources, including annual reports, fact sheets, e-Newsletter, website, and the data request process.



## Project Deliverables

### I. Summary Report of Stakeholder Feedback on NC-VDRS

- Assessed current use of NC-VDRS surveillance system based on state and national stakeholder input about current perspectives on data use, data dissemination, and system visibility
- Developed qualitative interview guide (IRB exempt)
- Submitted qualitative summary report, "Assessing NC-VDRS Use and Dissemination: Results from Qualitative Interviews with NC-VDRS Stakeholders," to IVPB for use by NC-VDRS program staff, system evaluators, IVPB stakeholders

### II. Summary Report of

### Quantitative Survey Results

- Created quantitative survey based on key informant interview results from Deliverable I
- Distributed quantitative survey to 500+ current IVPB newsletter recipients through Constant Contact system
- Performed data collection and analysis to create summary report of quantitative results to facilitate improved NC-VDRS database utilization and data dissemination
- Submitted quantitative summary report, "Assessing NC-VDRS Use and Dissemination: Results from Quantitative Survey of NC-VDRS Contacts," to project team for use by NC-VDRS program staff, evaluators, IVPB stakeholders

### III. NC-VDRS Data Dissemination &

### Program Improvement Plan

- Developed data-informed recommendations to improve violent death reporting within and outside of NC
- Created qualitative and quantitative research-based recommendations report
- Submitted recommendations report, "Recommendations to Increase NC-VDRS Resource Awareness and Utilization," to project team for use by NC-VDRS program staff, system evaluators, IVPB stakeholders, CDC program staff

## Implications

Despite several years of existence, it is unclear the extent to which local prevention groups have used NC-VDRS data to inform programming up to this point. NC-VDRS data have the potential to inform data-driven violence prevention programming and policy advocacy. This study informs IVPB and NC-VDRS staff of the lack of stakeholder awareness of NC-VDRS and its resources, creating a starting point from which to make efforts toward increasing use of NC-VDRS data.

## Conferences and Presentation of Research

Data, conclusions, and system recommendations based on this project have appeared at the 2016 North Carolina Health Department Directors Meeting, the 2016 Annual Meeting of the Safe States Alliance, the Spring 2016 NC-VDRS Advisory Board Meeting, and the 2016 Conference of State and Territorial Epidemiologists.

### **Introduction**

Violent death poses a significant public health problem in the US, in part, because it accounts for more deaths annually than HIV, prostate cancer, and skin cancer combined (NC IVPB, 2015a; CDC, 2015c). The National Violent Death Reporting System (NVDRS) defines violent death as a “death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community” (CDC, 2014). Each year, over 55,000 people in the US die as a result of violence and these deaths occur across all age groups (NC IVPB, 2015a; NC IVPB, 2015c). Among people aged 15-24 years, homicide is the second leading cause of death, and suicide is among the top four causes of death among persons aged 10-54 years (NC IVPB, 2015a; NC IVPB, 2015c). Documentation and monitoring of violent deaths are difficult because of inconsistent reports from law enforcement and medical facilities, the political climate around gun control, and mental health stigma. NVDRS was developed in response to both the high incidence of these deaths and gaps in consistent and accessible data.

According to the Centers for Disease Control and Prevention (CDC), in order to address and reduce violent death, practitioners and violent death prevention-focused organizations must first understand trends and disparities, including the behavioral, environmental, and social determinants behind violent deaths (CDC, 2015a). Tracking violent death data through violent death reporting systems (VDRS) provides an essential tool for addressing violent deaths by increasing and strengthening the violent death evidence available for effective, evidence-based violence prevention initiatives. This has resulted in assisting organizations to create targeted violence prevention efforts, supporting evaluation efforts of violence prevention interventions, and working toward improving the public’s access to violent death information (CDC, 2015a).

The following sections provide a brief overview of VDRS at the national and state levels, and provide context on current VDRS dissemination practices to support the 2015/2016 Capstone team’s work evaluating North Carolina’s VDRS (NC-VDRS).

### **History of Violent Death Reporting Systems**

NVDRS is a relatively new system for the violence prevention community. In 2002, the CDC created the NVDRS in order to alert state and local actors to the high number of violent deaths across the United States (US). Each state provides data from their individual VDRS to CDC for inclusion in the NVDRS. Key stakeholders of the NVDRS include local and state health departments, law enforcement agencies, academic institutions, as well as community and advocacy organizations. Currently, 32 states receive funding to implement this system with the goal of eventually including all 50 states (CDC, 2015b).



Prior to the establishment of the NVDRS, significant gaps in violent death data collection and reporting existed (Campbell et al., 2006). These gaps contributed to uninformed public discourse, policy development lacking real-world data, and prioritization of public health and safety issues that lacked appropriate and representative data on violent death in the US. Since its inception, NVDRS data and data dissemination efforts have helped build alliances and collaborative efforts between key stakeholders, facilitating the recognition of violent death as a public health problem via outreach and media attention, which acted as a catalyst for new projects; enhanced surveillance of special populations and utility for evaluation; and identified key, location-specific circumstances or contexts for targeted violence prevention planning and intervention (Campbell et al., 2006).

### **Background of NC-VDRS**

In North Carolina (NC), injury and violence are the third leading causes of death. Additionally, injury and violence are the leading causes of total years lost of life (NC IVPB, 2015a). In NC, suicide and homicide are the leading causes (roughly two-thirds and one-third, respectively) of the approximately 1200 violent deaths that occur annually (NC IVPB, 2014).

To track these deaths, NC received federal funding in 2003 to create NC-VDRS, making it among the first states to establish an in-state VDRS (NC IVPB, 2015b). The NC-VDRS is a comprehensive, statewide, population-based surveillance system developed by the National Center for Injury Prevention and Control at the CDC to track violent deaths across the state (NC IVPB, 2015b). Since 2004, NC-VDRS has been collecting data on homicides, suicides, deaths of undetermined intent, unintentional firearm-related deaths, and deaths from legal intervention (NC IVPB, 2010). The system collects these data from a variety of sources, including death certificates, medical examiners' records, law enforcement reports, and State Bureau of Investigation reports on all deaths caused by violence that occur in NC (NC IVPB, 2010). Each of these specific data sources contributes to NC-VDRS's comprehensive violent death data, including details on work and education status, toxicology, medical history and manner of death, and perpetrator data, weapon information, and past criminal history (NC IVPB, 2010).

### **Relevance and Representability of NC-VDRS**

As one of the oldest VDRS programs, NC-VDRS serves as a model for other states that are currently developing or modifying their own surveillance systems (personal communication with Scott Proescholdbell, August 12, 2015). By collecting information from a variety of sources in a single reporting system, the NC-VDRS aims to strengthen joint response to violence and violent death from law enforcement, health officials, public officials, and advocacy groups. NC's system data aggregation and dissemination techniques are therefore relevant to other state health departments, policymakers, and advocacy groups with national or local interests. For example, the fact sheets and issue-specific reports generated to share and promote NC-VDRS data are key resources for informing policy makers of violent death issues and can be tailored for both national and local audiences.

Currently, the North Carolina State Department of Public Health's (NC-DPH) Injury and Violence Prevention Branch (IVPB) disseminates state-level data to over 500 stakeholders from academic, nonprofit, and governmental organizations through the IVPB quarterly e-Newsletter (personal communication with Scott Proescholdbell, August 12, 2015). While NC-VDRS stakeholders consider the system relevant and useful, a 2009 system evaluation revealed stakeholders had concerns with the system's complexity, completeness of law enforcement data, and the timeliness of data dissemination (Dailey et al., 2012). Moreover, IVPB is concerned that only a small number of current and potential data users and collaborators are actively accessing NC-VDRS data (personal communication with Scott Proescholdbell, August 12, 2015). Due to these concerns, the IVPB is seeking ways to improve the system, specifically around data dissemination and presentation methods.

### **Disseminating Violent Death Reporting System Data**

The more stakeholders who are aware of the availability of VDRS data, the more likely there will be interventions created based on these data and increased advocacy for measures to decrease the number of violent deaths. Other states implementing a VDRS program have employed creative and effective dissemination methods of potential interest to NC IVPB. One such example is the Virginia Violent Death Reporting System (VVDRS) (Safe States Alliance, 2013). The Virginia Department of Health staff used VVDRS data to give tailored data presentations on regional suicide rates and causes. Summit participants examined at state and local resources and developed a regional suicide prevention plan to address at-risk populations and the specific circumstances associated with suicide in their communities. VVDRS staff have provided data, radio and newspaper interviews, and tailored education on suicide in the state. Specialized VVDRS reports on the circumstances of particular types of violent death—such as people who are killed at work and the prevalence of suicide among members of the military—have garnered extensive interest from the media, data users, and stakeholders.

In order to improve the quality and relevance of NC-VDRS data dissemination and presentation methods, IVPB sought input from stakeholders on ways to improve data use and dissemination. While it was clear that over 500 individuals were sent quarterly IVPB e-Newsletters containing information on available NC-VDRS data resources, it was unknown how many individuals accessed and used the data in their work. The extent to which the NC-VDRS data have been used in evidence-supported programming and interventions was unclear as well. Additionally, it was unknown if current data dissemination methods and data resource formatting and content were useful or accessible for NC-VDRS stakeholders. In order to increase the utility of NC-VDRS data to best inform the development, implementation, and evaluation of violence prevention strategies, and in order to track the progress and success of these strategies over time, the system required deliberate evaluation with a specific focus on identifying possible improvements to data dissemination, timeliness of data, program functioning, and communication processes with stakeholders to reduce stakeholder barriers keeping them from effectively using these data.

### **2015-16 UNC Gillings Health Behavior IVPB Capstone Project**

To achieve IVPB's evaluation goals, the 2015-16 UNC Gillings Health Behavior Capstone team assessed the effectiveness of the current methods of NC-VDRS data dissemination and made recommendations in order to improve them. These recommendations included how to improve data access and increase data usage to stakeholders based on information gained from key-informant interviews and a quantitative survey of current IVPB e-Newsletter recipients. By encouraging data use, effective dissemination, and engaging with stakeholders, IVPB hopes to promote integration of accurate and representative data in fact-based violence and violent death prevention and reduction strategies in NC. Given NC-VDRS's well-regarded status among VDRS states, it may also be used as a model for other state VDRS programs and data use projects.



# Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

## Deliverable I: Summary Report of NC-VDRS Stakeholder Feedback

### Deliverable Purpose

To interview highly engaged stakeholders identified by the Injury and Violence Prevention Branch (IVPB) about their experience and familiarity with the North Carolina Violent Death Reporting System (NC-VDRS), other state VDRS (Violent Death Reporting System) programs, and applications of surveillance data.

The results of these interviews were used to develop the quantitative survey (Deliverable II).

### Contributions

Each team member aided in the development of the key stakeholder interview guide and individually conducted three qualitative interviews. Each member summarized key points from their interviews and shared their results with the team. Lillie Armstrong and Genevieve Olson synthesized the twelve interview notes into a single comprehensive summary report.

### Audience

NC-VDRS program staff and Advisory Board members, future evaluators, IVPB employees, injury and violence prevention stakeholders.

### Steps

1. Developed qualitative research questions and interview guide for key stakeholder interviews
2. Submitted IRB application and received exemption status
3. Identified and contacted sixteen key stakeholders for interviews
4. Conducted twelve 20-30 minute key stakeholder interviews via the phone or in person
5. Collected and compiled interviews notes
6. Finalized *Summary Report of Stakeholder Feedback on NC-VDRS* and submitted for internal review by IVPB staff

### Results and Key Findings

- Awareness of NC-VDRS was high among interviewed stakeholders
- Use of individual NC-VDRS resources was varied, with few stakeholders having made data requests previously
- Suggested improvements to dissemination methods included:
  - Use of infographics in future resource development
  - Increased use of social media platforms
  - Distribution of data sets to academic settings for student use
  - Tailored newsletter distribution
  - Increased engagement with community-based organizations
- Aside from NC-VDRS, stakeholders used Centers for Disease Control and Prevention (CDC) WISQARS™ (Web-based Injury Statistics Query and Reporting System) due to its ability to easily disaggregate data

### Next Steps

IVPB staff and NC-VDRS Advisory Board members will use the results from the key stakeholder summary report, in combination with the quantitative results, to improve dissemination methods and increase NC-VDRS awareness and use among other key stakeholders.



# Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

## Introduction

Master of Public Health students at the University of North Carolina at Chapel Hill's (UNC) Gillings School of Global Public Health, Department of Health Behavior, conducted key informant interviews as part of a year-long collaborative Capstone project with the North Carolina Division of Public Health (NCDPH), Injury and Violence Prevention Branch (IVPB). This project was developed to evaluate stakeholder awareness and use of North Carolina Violent Death Reporting System (NC-VDRS), a state-based surveillance system modeled on the National Violent Death Reporting System (NVDRS). To gain an introductory understanding of the history, current use, and potential use of NC-VDRS, Capstone team members conducted semi-structured qualitative interviews with IVPB identified NC-VDRS stakeholders. The results of these interviews will be shared with IVPB to illustrate how public health leaders use NC-VDRS in their current and past work. Key stakeholders invited to participate in these interviews work at state public health departments, universities, the Centers for Disease Control and Prevention (CDC), and health and community-based organization in and outside of North Carolina (NC). Capstone members used information gained from these interviews to inform the development of a quantitative NC-VDRS user survey.

## Methods

*Research Questions* The goal of these interviews was to gain a better understanding of current NC-VDRS use, solicit potential improvements to data usability, and discover possible methods of effective data dissemination. The following research questions lead interview guide development:

- How do stakeholders currently use NC-VDRS?
- What do state and national stakeholders think of the current method of data dissemination? Are there other dissemination methods elsewhere that are effective?
- How do stakeholders currently obtain other data on violent death that they use?

Interview questions included stakeholder awareness of NC-VDRS, system use, motivation for use, use of other databases or surveillance systems, and recommendations for dissemination and data visibility. For a copy of the interview guide in its entirety, see Appendix 3.

*Interview Process* After receiving UNC IRB-exemption, the team selected 16 potential interview candidates from a list of 63 NC-VDRS stakeholders shared by the head of the Injury Epidemiology and Surveillance Unit at NCDPH. Capstone students contacted selected individuals and scheduled interviews based on informant availability. Each of the four student investigators completed three interviews for a total of twelve interviews: eleven conducted via phone and one conducted in-person. Of the twelve interviewees, eleven consented to being

## Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

recorded during the interview. Interviewers compiled notes from each interview and conducted analyses of key stakeholder interviews. Each interview lasted approximately 20-30 minutes, however, two interviews spanned closer to one hour in length.

*Participants* For participant characteristics, please refer to Table 1: *Demographic Characteristics of NC-VDRS Stakeholder Interview Participants*

<b>Total Participants</b>	<b>12</b>
<b>Male</b>	<b>4</b>
<b>Female</b>	<b>8</b>
<b>Organization Location</b>	
<b>North Carolina</b>	<b>6</b>
<b>Out-of-State</b>	<b>4</b>
<b>National</b>	<b>2</b>
<b>Type of Organization</b>	
<b>Academic</b>	<b>1</b>
<b>Governmental Organization</b>	<b>6</b>
<b>Policy/Research</b>	<b>4</b>
<b>Community-based Organization</b>	<b>1</b>

### Findings

For a community... not to have comprehensive data on injury and death due to behaviors that are occurring within that community—which means they are preventable—is immoral... We see the Violent Death Reporting System as being [an] extremely moral and ethical and needed and necessary and compassionate and rational response to a community that is losing... that is having lives taken from it...at a rate of about every other week... for decades. What is so frustrating for us, and what I think we grieve the most... is that these are preventable deaths.

[Executive Director, Community-Based Organization, Durham, NC]

#### Familiarity and Current Data Use

All respondents were familiar with NC-VDRS, but their reasons for using NC-VDRS data varied greatly. The majority of informants had not made a specific data request and instead utilized reports generated by IVPB. A few stakeholders mentioned visiting the NC-VDRS website, while others described accessing the data through third-party distributors, such as through another organization’s listserv.

#### Increasing NC-VDRS Data Use

Two informants mentioned the potential use of NC-VDRS data as teaching tools in academic settings. While

## Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

neither informant had experience using the dataset directly, they both suggested disseminating the dataset to professors at local universities in order to facilitate use by students. One informant suggested emailing professors at schools to solicit interest in the database and perhaps offering tailored datasets to allow students to explore basic data manipulation and analysis. They suggested using the datasets in sociology or public policy methods courses and felt students would be genuinely interested in the violent death data. Another informant stated that increasing student access and use of the datasets would be a great way to expand awareness of the NC-VDRS. They recommended disseminating the data to graduate public health students in order to facilitate student research. One informant emphasized that academics in their state are excited about this high-quality, well-structured resource—their office receives approximately one data request per week for identified (non-de-identified) data. It is unclear, however, whether academics using the data in instruction or independent research, or whether requests are coming from in-state or other areas.

One informant explicitly recommended the creation of regional epidemiologist positions (based on the availability of CDC funding), employing epidemiologists who would be able to monitor and analyze regional data trends without being involved in day-to-day operations of state health departments and programs.

Stakeholders also emphasized the necessity of engaging community-based organizations in data use projects. According to one informant, these organizations are able to organically circulate and share surveillance information (reports, infographics) and raw data, and to humanize and contextualize NC-VDRS data through advocacy and organizing work.

One NC-based interviewee suggested the possibility of conducting exploratory studies and analyses across data sources (other surveillance systems and databases), offering as an example the ability to compare differing rates of suicide or violent death based on medical history or disease diagnosis. They conceded that it would be difficult to establish temporality in any potential relationships observed.

### Data Presentation

Several stakeholders suggested using NC-VDRS data to create issue-specific reports, such as reports on suicide among the elderly or among children. One informant commented that issue-specific reports were particularly useful when interacting with policymakers, especially when reports were presented in short, infographic-heavy formats. In a similar recommendation, one informant suggested issue-specific “snapshots” of interesting or noteworthy data, which IVPB could share with interested parties.

Informants consistently emphasized the usefulness and potential applications of infographics. As one stakeholder stated, “The age of long, text-heavy annual reports is coming to an end.” Infographics, particularly in presentations, can be used and then reused across agencies and in reports. They are also easier to share and consume on social media, a data dissemination method discussed below.

## Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

### Dissemination Methods

The timeliness of data was a key factor for one stakeholder. They revealed that data released by NC-VDRS is not as relevant as it seems due to delays in compiling data from all NC-VDRS sources which can take up to 18 months. They stated that at any given time, the NCDPH is handling death records/data from three separate years; because of this overlap they are constantly busy. An informant familiar with the NVDRS reported similar delays due to the difficulties in collecting law enforcement data from states with centralized law enforcement systems. This delay for NC, however, is partly due to the division's effort to build relationships with law enforcement, where in some cases, the release of data needs to be withheld while sensitive cases are still under investigation. The stakeholder commented this establishment of trusting relationships with law enforcement is key to the success of the NC-VDRS.

One stakeholder suggested “data release parties” for members of the local media when new reports are slated for dissemination. Based on similar events held for a state crime department's data releases, the stakeholder recommended gathering members of the press and other media for special events aimed in both increasing interest in NC-VDRS data and allowing the media to ask pertinent and contextualizing questions. The stakeholder commented that after holding such events, members of the media were able to ask informed questions of state staff at the public release of the reports. Department staff were also better able to anticipate questions from the media. This specific recommendation was echoed by another informant who works with an NC community-based organization and who emphasized the need for communication and relationships with members of the press.

Many recommendations from key informants for improving data dissemination focused on in-person meetings and events. One state VDRS director suggested inviting groups with shared issues of interest to presentations or webinars to share tailored materials and data applications. These meetings provide an opportunity to teach stakeholders how to navigate the database, facilitate networking between violence prevention organizations, and provide faster feedback and monitoring of health issues (specific recommendations include veterans' welfare groups, non-governmental organizations, mental health and suicide prevention groups, and domestic abuse/intimate partner violence prevention and support organizations).

Another informant reinforced the value of these face-to-face meetings particularly when soliciting involvement from community members without professional or academic experience with data use or population health. These relationships can be established with both enthusiastically participating organizations and departments and with people who may be resistant or hesitant to use NC-VDRS data on their own (law enforcement and criminal justice professionals). Explicit causes of resistance or hesitation were not suggested, but may include unawareness of available data or how data could be incorporated into current work. One informant suggested contacting individuals in departments with low use of NC-VDRS data, determining interests or promising potential applications, and tailoring messages and materials accordingly.



## Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

When asked about the current IVPB e-Newsletter, one informant stated that e-Newsletters could be useful in disseminating data, however, it must be done in a more targeted manner. This presents questions about the current effectiveness of the e-Newsletter and which elements (e.g. distribution, subject matter, presentation of information) should be more targeted. Another stakeholder described including different NC-VDRS reports in their own organization's monthly newsletter. One informant made a general recommendation to send materials to employees at a number of levels or within various departments at active or potential stakeholder/user agencies or organizations to promote system use.

One out-of-state informant recommended a Facebook presence for releasing and promoting surveillance data. Another informant uses Facebook and Twitter to link data to national awareness campaigns (e.g. September is suicide prevention awareness month) and to connect available data and resources to social trends and media coverage. One informant asked if there is a way to make NC-VDRS more visible in search engine results. However, investigators learned that agency social media accounts are overseen by the NC Department of Health and Human Services (NC-DHHS) and, therefore, require prior approval before any posts are finalized. This rule limits the ability of the NCDPH to increase the NC-VDRS social media presence in a timely manner, but may be avoided by preparing text and images that can be pre-approved for future distribution.

Another out-of-state informant discussed a turning point in use and visibility of surveillance data in their state: their agency had success reaching more people and utilizing data after a state politician became interested in emerging data on suicide trends among middle-aged white men. Associated media coverage encouraged state agency relationships with regional mental health agencies, which partnered with the state to develop region-specific data reports and associated suicide stressors/precursors. These partnerships have developed into a “regular feedback loop” of data dissemination and intrastate information and response.

### Other Sources of Violent Death Data

One informant described using CDC's WISQARS to access violent death data. Although the informant was involved in the development of the NC-VDRS, they preferred to use WISQARS for violent death data due to its ease of disaggregating and sorting data by demographic variables. They also described the usefulness of the CDC data in generating both national comparisons of violent death data and comparisons of violent death data to other causes of death. They stressed the importance of being able to situate violent death statistics in relation to other causes of death (such as cancer) in order to communicate the relative impact of this public health topic. The informant said they would be more likely to access NC-VDRS data directly if it had the same demographic disaggregation capabilities as WISQARS, as well as the ability to compare data across diseases or health outcomes.

Two respondents reported being satisfied with available data and resources—national and other state-based systems—and felt no particular need to use NC-VDRS. They emphasized being overwhelmed with already-utilized

## Assessing NC-VDRS Use and Dissemination Results from Qualitative Interviews with NC-VDRS Stakeholders

data resources, and were unlikely to begin using NC-VDRS data though they knew it was available and well regarded.

### Study Limitations

The sample size ( $N = 12$ ) was small; therefore the recommendations solicited may not represent the experiences or attitudes of all NC-VDRS users. Similarly, the contacted stakeholders were predominantly leaders within their organizations. As such, the study may not capture the data use patterns of those in non-executive levels of contacted organizations. While investigators attempted to select interviewees from a wide array of backgrounds, participants were primarily selected based on investigators' interests. This non-random selection process may have biased the sample.

The IVPB e-Newsletter listserv contains over 531 individuals who have been added to the listserv by IVPB staff or have self-selected to be added. While this listserv contains many contacts, there are likely people not included on the listserv who might have both an interest or have utilized NC-VDRS resources before. Therefore, the sample is not representative of all NC-VDRS stakeholders.

In future iterations of the key stakeholder interviews, data collection could be improved by contacting individuals at different administrative levels within organizations and by using random sampling for stakeholder selection. Due to time constraints and the limited goals of this phase of interviews (familiarization, survey development), the student investigators did not utilize these methods.

### Conclusions

Informants recommended a number of ideas and methods for NC-VDRS data dissemination, use, and system improvement, as well as demonstrated working knowledge of the system and resource availability. Respondents emphasized an evolution of data presentation, notably the use of infographics that can easily be shared across social media platforms, within and across agencies, and which can succinctly present noteworthy data and the value of in-person meetings and data sharing events. Use of social media platforms by a state government agency may pose organizational or regulatory challenges, but the fact that this recommendation came from informants currently working in other state governments suggests that it could be a helpful and feasible method of sharing current information and data. Establishing an NC-VDRS social media presence could also help to promote multi-level use and visibility within organizations, allowing employees and contacts to quickly view and share pertinent information without navigating mailing lists and detailed reports.



# Summary Report of Quantitative Survey Results

## Deliverable II: Summary Report of Quantitative Survey Results

### Deliverable Purpose

To assess current awareness, utilization, and overall opinions of NC-VDRS resources (e-Newsletter, data request process, website, fact sheets and annual reports) and dissemination methods among 119 state and national stakeholders in order to inform data dissemination and program improvement plan .

### Contributions

Team members collaborated to develop the quantitative survey. Eyerusalem Tessema and Jessica Tufte took the lead on reviewing, finalizing and launching the survey through Qualtrics. Eyerusalem then took lead on analyzing the quantitative data results. Genevieve Olson and Jessica integrated data within the summary, and Lillie Armstrong formatted the data. Each team member contributed to writing the summary report and results of the quantitative survey.

### Audience

NC-VDRS program staff and Advisory Board members, future evaluators, IVPB employees, injury and violence prevention stakeholders.

### Steps

1. Developed survey questionnaire through consultation with survey development specialist
2. Distributed survey to 500+ NC-VDRS local, state and national stakeholders through IVPB quarterly e-Newsletter
3. Collected, compiled and analyzed survey data from 119 survey respondents using StataSE 14
4. Compiled summary report of quantitative survey

### 5. Presented results at:

- State Health Director's Conference  
Raleigh, NC - January 22, 2016
- NC-VDRS Advisory Board  
Chapel Hill, NC - March 24, 2016
- Safe States Annual Meeting  
Albuquerque, NM - April 13, 2016
- Conference for State and Territorial Epidemiologists  
Anchorage, AK - June 21, 2016

### Results and Key Findings

- Low awareness of NC-VDRS resources among stakeholders, especially for the data request process
- Use and purpose of utilization of individual NC-VDRS resources varied based on occupation
- Stakeholders who have used NC-VDRS resources indicated ease of access to these resources and stated that the resources were fine in their present state

### Next Steps

IVPB staff and NC-VDRS Advisory Board members will use the summary report of quantitative survey results in combination with the qualitative results to improve dissemination methods and increase NC-VDRS awareness and use among other key stakeholders.

Possible collaboration between Capstone team members and IVPB staff to write a manuscript for publication to ameliorate the current lack of available literature on evaluation of state-based VDRS and the National Violent Death Reporting System (NVDRS).



## Summary Report of Quantitative Survey Results

### Abstract

The North Carolina Violent Death Reporting System (NC-VDRS) is meant to provide data to communities and researchers to inform intervention and evaluation efforts and help prevent future violent deaths. The extent to which these individuals use available NC-VDRS resources, however, was unknown prior to this study. The purpose of the quantitative analysis was to better understand awareness and use of NC-VDRS and available data through a quantitative online survey distributed to IVPB e-Newsletter recipients (N=531). Respondents (N=119) included local health department staff, law enforcement officials, researchers, and other community partners. Current stakeholder awareness and reported utilization of NC-VDRS resources were assessed. The survey evaluated NC-VDRS data sources including: annual reports, fact sheets, e-Newsletters, website, and the data request process. Analyses show that e-Newsletter subscribers are most aware of the website and least aware of the availability of data requests. The top reason for not accessing data sources was a lack of awareness, suggesting the need for improved data dissemination methods. By understanding awareness levels of the NC-VDRS and the current use of violent death data, public health practitioners can take next steps toward developing effective data-driven programming.

### Methods

*Survey Development* Three sources informed the final quantitative survey: (1) data gathered from semi-structured qualitative key informant interviews with NC-VDRS stakeholders (N=12), (2) information from a literature review on the state and national violent death reporting systems, and (3) guidance from staff at the NC Division of Public Health's (NC-DPH) Injury and Violence Prevention Branch (IVPB).

*Research Objectives* The quantitative survey centered on four main questions developed based on findings from the qualitative key informant interviews and support from IVPB staff:

- What is the current level of awareness of NC-VDRS resources?
- What are the current uses of NC-VDRS resources?
- What are perceived issues with NC-VDRS resources?
- What changes could be made to improve NC-VDRS resources and information?

*Participants* The survey was distributed through Qualtrics to 531 IVPB e-Newsletter recipients through IVPB's Constant Contact e-mailing system. Local county-level health directors were contacted individually via email in addition to the initial survey email to encourage participation. All of the IVPB e-Newsletter recipients were sent four follow-up emails to remind them to take the survey. Respondents included local health department staff, law enforcement officials, researchers, and other community partners (see Table 1). Of 155 total respondents, 119

were counted toward the completed sample.

*Data Analysis* Descriptive analyses were performed using StataSE 14 to calculate frequencies for the following measures:

- Participant Demographics
- Reported Use of NC-VDRS Resources
- Reported Purpose of Using NC-VDRS Resource
- Reported Reasons for Not Using NC-VDRS Resources
- Suggested Improvements to NC-VDRS Resources
- Reported Ease of Use

### Findings

#### Participants

Demographic variables were recorded for each participant who completed the survey. Respondents primarily identified as white (n=90, 87.38%), female (n=70, 67.31%) and in possession of master's or doctoral degrees (n=86, 83.49%). Respondents either self-identified or were classified based on job title into seven occupational categories. Of the 119 participants, the majority were classified as directors within their organization (n=60, 50.42%), with assistant directors and researchers accounting for 14% and 13% of the respondent pool respectively. Data analyst, law enforcement, healthcare specialist and administration/clerical staff each accounted for less than 8% of the total respondent pool. For full demographic responses, see Table 2: *Participant-Reported Demographics* (next page).

#### Reported Use of NC-VDRS Resources

Respondents were asked whether they had previously used each NC-VDRS resource. Among the 119 respondents, over 65% of respondents (n=70) indicated having used the website previously. Approximately half of respondents indicated previous use of the annual report and fact sheets (n=57, 50.00%; n=52, 47.71%). Despite the survey being largely distributed through the e-Newsletter listserv, only one-third of all respondents reported having used the e-Newsletter previously (n=36, 33.33%). Data requests represented the least used resource, with only 9.5% (n=10) of respondents reporting previous use. See Table 3: *Reported Use of NC-VDRS Resource* (next page).

Reported use of each resource was further disaggregated by job title. Among directors (n=39, 70.9%), assistant directors (n=9, 60.0%), healthcare specialists (n=6, 75.0%), and data analyst (n=2, 100%) the website was the most frequently reported used resource. Of the two data analysts surveyed, both reported only having used the website and no other resources. Researchers most frequently reported use of the annual report (n=12, 75.0%), however, with exception of the data request, over half of all researchers surveyed reported using each of the other resources as well.

Table 2  
*Participant-Reported Demographics (N=119)*

	n	%
<b>Job Type</b>		
Director	60	50.42
Assistant Director	17	14.29
Research	16	13.45
Administration	9	7.56
Healthcare	9	7.56
Law enforcement	6	5.04
Data analysis	2	1.68
<b>Education</b>		
High School, Bachelors	17	16.51
Master or Doctoral	86	83.49
<b>Age</b>		
25-44	30	29.13
45-54	30	29.13
55+	43	41.74
<b>Gender</b>		
Female	70	67.31
Male	33	31.73
Other	1	0.96
<b>Race</b>		
White	90	87.38
Black/African American	10	9.71
Hispanic or Latino	1	0.97
American Indian or Alaska Native	1	0.97
Asian	1	0.97

Table 3  
*Reported Use of NC-VDRS Resource (N=119)*

Resource	n	%
Website	70	65.42
Annual report	57	50.00
Fact sheet	52	47.71
E-newsletter	36	33.33
Data request	10	9.52

Across all job titles, the data request function was the least utilized tool; still, among researchers surveyed, 40% reported having previously made a data request. In addition, researchers were proportionally the most likely to report having used the e-Newsletter, fact sheets, and annual report across all job titles.

With exception of the data analysts, those in administrative or clerical roles were the least likely to report having used each of the five data resources across all job titles. See Table 4: *Reported Use of NC-VDRS Resource Disaggregated by Job Title* (below).

**Table 4**  
*Reported Use of NC-VDRS Resource Disaggregated by Job Title*

	Annual Report		Fact Sheet		E-Newsletter		Website		Data Request	
	n	%	n	%	n	%	n	%	n	%
Director	30	51.72	30	53.57	21	37.50	39	70.91	2	3.70
Assistant Director	4	26.57	6	40.00	2	13.33	9	60.00	1	6.67
Researcher	12	75.00	11	68.75	8	53.33	10	66.67	6	40.00
Administrative	2	22.22	1	12.50	1	12.50	2	25.00	0	0.00
Healthcare	5	55.56	3	37.50	3	37.50	6	75.00	1	14.29
Law Enforcement	4	80.00	1	25.00	1	25.00	2	50.00	0	0.00
Data Analyst	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00

Reported Purpose of Using NC-VDRS Resources

Respondents were asked to select their purpose for using each previously utilized resource. Among the 57 respondents who had previously used the annual report, 54% indicated using the resource for needs assessments (n=31), 37% for working toward decreasing the number of violent deaths (n=21), 32% for advocacy (n=18), and 30% for program monitoring and evaluation (n=17). Of the 52 respondents who had previously used the fact sheets, 62% reported using the resource for needs assessments (n=32), 35% for working toward decreasing the number of violent deaths (n=18), 35% for grants/other funding applications (n=18), while 35% reported using resources for advocacy (n=18). The most frequently reported purpose for using the e-newsletter was for conducting needs assessments (n=18, 50%), working toward decreasing the number of violent deaths (n=14, 39%), and advocacy (n=12, 33%). Among the 70 respondents who had used the website, 64% reported using the resource for needs assessments (n=45), with 36% reported using the annual report for program monitoring and evaluation (n=25) and 36% for advocacy (n=25). While only 10 respondents reported using a data request, 60% reported using a data request for report/manuscript writing (n=6) and 40% reported using it for needs assessment (n=4).

Needs assessments were the most commonly reported purpose for using each NC-VDRS resource, with the exception of the data request. At least one-third of respondents for each resource reported using the tool for advocacy or working toward decreasing the number of violent deaths. Nearly one-quarter of all respondents for each resource indicated they used the tool for grant/other funding applications or report/manuscript writing. Media

requests were the least reported reason for using each resource, accounting for less than one-fifth of all responses for each resource.

For full survey results, see Table 4: *Reported Purpose for Using NC-VDRS Resource* in Appendix 5.

### Reported Reasons for Not Using NC-VDRS Resources

When asked why they did not use a specific resource previously, the majority of respondents indicated they had not known about the resource previously—indicating low awareness of NC-VDRS resources. Nearly 60% of respondents who reported not having used the annual report (n=31) or website (n=19) previously reported not using the resource because they had not heard of it. Moreover, over 70% of those who had not used the fact sheets (n=35) or e-Newsletter (n=43) reported not being aware of the resources. Finally, nearly 50% of the 98 respondents who had not made a data request reported not being aware of the resource.

Other reasons for not using a resource accounted for less than 20% of all responses per resource. Less than 5% of respondents indicated their reason for not using a particular resource was due to having other preferred sources, not using data often, data not being timely, data not being interactive or data taking too long to receive. For the data request, 20% of those who had not made a data request previously indicated they did not need these data (n=20). For all resources, less than 10% of respondents indicated they were not sure how the resource contributed to their work.

For full survey results, see Table 5: *Reported Reasons for Not Using NC-VDRS Resources* in Appendix 5.

### Suggested Improvements to NC-VDRS Resources

For the annual report, fact sheets, e-Newsletter and website, respondents were asked to indicate suggestions for improving each resource. The most frequent response for each resource was that the resource was fine as it was (annual report n=22, 20.56%; fact sheet n=29, 36.71%, e-Newsletter n=20, 52.63%, website n=34, 35.05%). Less than 4.5% of respondents across each resource suggested changes to content or content length. Updating the information more frequently was suggested by 14%, 10% and 6% of respondents for the annual report, fact sheets, and website respectively. Among respondents, less than 11% suggested more frequent distribution of each resource, a greater ability to interact with the resource, more visual representations, formatting, organization or appearance changes.

For full survey results, see Table 5: *Suggested Improvements to NC-VDRS Resources* in Appendix 5.



### Reported Ease of Use

For each resource, over 90% of respondents who had used the resource previously reported it was easy or very easy to use.

### **Discussion**

The majority of respondents held director positions within their organization. We attribute the high representation of directors to additional, targeted emails sent to directors of local health departments after sending the survey through the Constant Contact mailing list. IVPB staff felt it could use its more direct relationship with local health department directors to specifically encourage their participation in the survey and have diverse representation across the state.

Awareness of NC-VDRS respondents was lower than predicted. Overall, the majority of respondents indicated they had not known about a given resource before participating in this survey. This means that even among e-Newsletter recipients, awareness of resources, including the e-Newsletter itself, was low.

Over 70% of those who had not previously used the fact sheets or e-newsletter reported not being aware of either resource. These results contradicted previous findings from the qualitative analysis which suggested that among key NC-VDRS stakeholders, awareness of the system and its applications were high. Considering this survey was distributed to individuals already signed up to receive the quarterly newsletter, awareness of NC-VDRS was estimated to be considerably higher. This all suggests that low use is strongly tied to low awareness, even among people currently receiving IVPB newsletters.

NC-VDRS resources were overwhelming reported as easy-to-use, again suggesting that low resource use was not due to the resources themselves and more related to awareness. When asked to evaluate each resource, the most common response was again that the resource is fine as it currently is. Less common suggestions for resource improvement included changes to content or content length and updating the content more frequently. Overall, people who do use NC-VDRS resources are satisfied with them but have specific suggestions for how to improve the resources.

Differences in resource utilization by profession offer opportunities for tailoring materials and messages to specific audiences.

### **Limitations**

Local health department directors were overrepresented due to the additional, targeted follow-up email sent specifically to health department directors requesting their participation in this survey. This means the experiences and awareness presented by health department directors may be over-represented and their responses may not

generalize to other data users or non-users, depending on context.

Additionally, disaggregating responses by job title shows a limited representation of some job categories. The skip patterns and questions based on experience and individual use caused some questions to have a small pool of eligible respondents. This indicates that some of our findings may not be representative of overall users' experiences in the same field or type of work.

The IVPB e-Newsletter contains over 531 individuals who were added to the listserv by IVPB staff or have self-selected to receive it. While this listserv contains a lot of individuals, there is no assurance that there aren't people outside of the listserv who might have both an interest or have utilized NC-VDRS resources before. Therefore, the sample may not be representative of all NC-VDRS stakeholders.

### **Conclusions**

Resource awareness was markedly lower than expected based on earlier qualitative findings. The fact that resource users reported so few problems with current resources, however, strongly suggests that the issue with low utilization of NC-VDRS data is low resource awareness and not the resources' content or structure. As such, we recommend specific improvements to NC-VDRS data dissemination methods in order to increase awareness, and subsequently, use of resources among NC-VDRS stakeholders. Moreover, since this study suggests varied resource use across different job titles, we recommend further tailoring resource distribution to satisfy the needs of prospective stakeholders. These specific recommendations are explored further in the attached recommendations report.

## Deliverable III: NC-VDRS Data Dissemination & Program Improvement Plan

### Deliverable Purpose

To provide a list of implantable data-based recommendations to increase stakeholder awareness and use of NC-VDRS resources.

### Contributions

All team members contributed to recommendation development based on qualitative and quantitative findings. The team developed recommendations to present at the NC-VDRS Advisory Board Meeting that were then compiled and expanded for the Improvement Plan. All team members contributed to the planning and writing of the Data Dissemination and Program Improvement Plan.

### Audience

NC-VDRS program staff and Advisory Board members, future evaluators, IVPB employees, injury and violence prevention stakeholders.

### Steps

1. Performed review and comparison of qualitative and quantitative results
2. Synthesized recommendations based on stakeholder recommendations, results from the quantitative survey, and other examples of increasing awareness and use of data
3. Presented results to:
  - NC-VDRS Advisory Board  
Chapel Hill, NC - March 24, 2016
  - Safe States Annual Meeting  
Albuquerque, NM - April 13, 2016
  - Conference for State and Territorial Epidemiologists  
Anchorage, AK - June 21, 2016
4. Submitted Recommendations Report on April 27, 2016, to IVPB staff

### Results and Key Findings

Recommendations to increase NC-VDRS awareness and improve resource formatting include:

- Tailor communications to identified target (professional, community) audience
- Create visual representation of data
- Create packaged data sets
- Disaggregate data
- Tailor and target information packets
- Encourage student use of data
- Run annual meetings and webinars
- Hold press events for the media
- Present findings at a conference
- Publish findings

### Next Steps

Establish plan for current or future IVPB staff members, future Capstone teams, or potential practicum or internship students to implement identified recommendations.

Areas for future research:

- Conduct focus groups for new resource formats with non-NC-VDRS users
- Evaluate baselines of awareness and utilization in other states with VDRS programs
- Assess awareness of NC-VDRS beyond IVPB e-Newsletter recipients
- Pilot recommendations within NC-VDRS, IVPB
- Research large dataset marketing strategies



# Recommendations to Increase NC-VDRS Resource Awareness and Utilization

## Summary

*This report provides recommendations to increase awareness and utilization of North Carolina Violent Death Reporting System (NC-VDRS) data and resources to inform both programming and policy to prevent future violent deaths in North Carolina (NC). This recommendation report is the first of its kind in both NC and nationwide regarding data dissemination of state-based violent death reporting system data.*

Master of Public Health (MPH) students at the University of North Carolina at Chapel Hill's (UNC) Gillings School of Global Public Health, Department of Health Behavior developed these recommendations with guidance from North Carolina Division of Public Health's (NCDPH) Injury and Violence Prevention Branch (IVPB) staff, NC-VDRS Advisory Board members, and UNC faculty. The ten recommendations outlined in this report are based on findings from both qualitative and quantitative research findings conducted with NC-VDRS stakeholders. These recommendations aim to meet the following goals: 1) format and tailor data resources; 2) increase awareness and utilization efficacy of stakeholders; and 3) conduct targeted outreach.

Taken together, the recommendations and action plans form a strategic plan that can be implemented by IVPB to increase awareness and utilization of NC-VDRS resources in order to increase the number of stakeholders using data to prevent violent death in NC.

## Context for Recommendations

In the fall of 2015, UNC MPH students conducted 12 semi-structured qualitative interviews with IVPB identified NC-VDRS stakeholders (results seen in the qualitative report, "Assessing NC-VDRS Use and Dissemination: Results from Qualitative Interviews with NC-VDRS Stakeholders") and a quantitative online survey distributed to IVPB e-Newsletter recipients with 119 respondents (results seen in the quantitative report, "Summary Report of Quantitative Survey Results"). The following recommendations are based on a combination of results from the qualitative and quantitative studies, evidence from practice in similar fields, evidence from practice in same field in different states, and suggestions made by NC-VDRS Advisory Board members.

This recommendation report is the culminating product of aforementioned research findings and reports, recommendations from IVPB and NC-VDRS Advisory Board members, findings from a preliminary literature review that scanned national and state-based violent death reporting system, and workshop attendance at the 2016 NVDRS (National Violent Death Reporting System) Surveillance Academy.

## Key Finding: Low Awareness of Resources

Stakeholder awareness of NC-VDRS resources was lower than initially expected. Overall, the majority of respondents indicated they had not known about a given resource before participating in the quantitative survey. This means that even among newsletter recipients, awareness of resources, including the newsletter itself, was

low. Based on this finding, the team decided to focus primarily on recommendations for effectively increasing stakeholder awareness of NC-VDRS and its resources.

**Key Finding: Resource Formatting**

Among quantitative survey participants, 90% responded that current NC-VDRS resources are either easy or very easy to use. However, when given the opportunity to make recommendations to resource formatting and useability, respondents provided specific suggestions of how NC-VDRS might improve existing resources and develop new resource formats. Improving resource formatting is the secondary aim of the following recommendations.

**Recommendations to Increase Awareness and Utilization of NC-VDRS Resources**

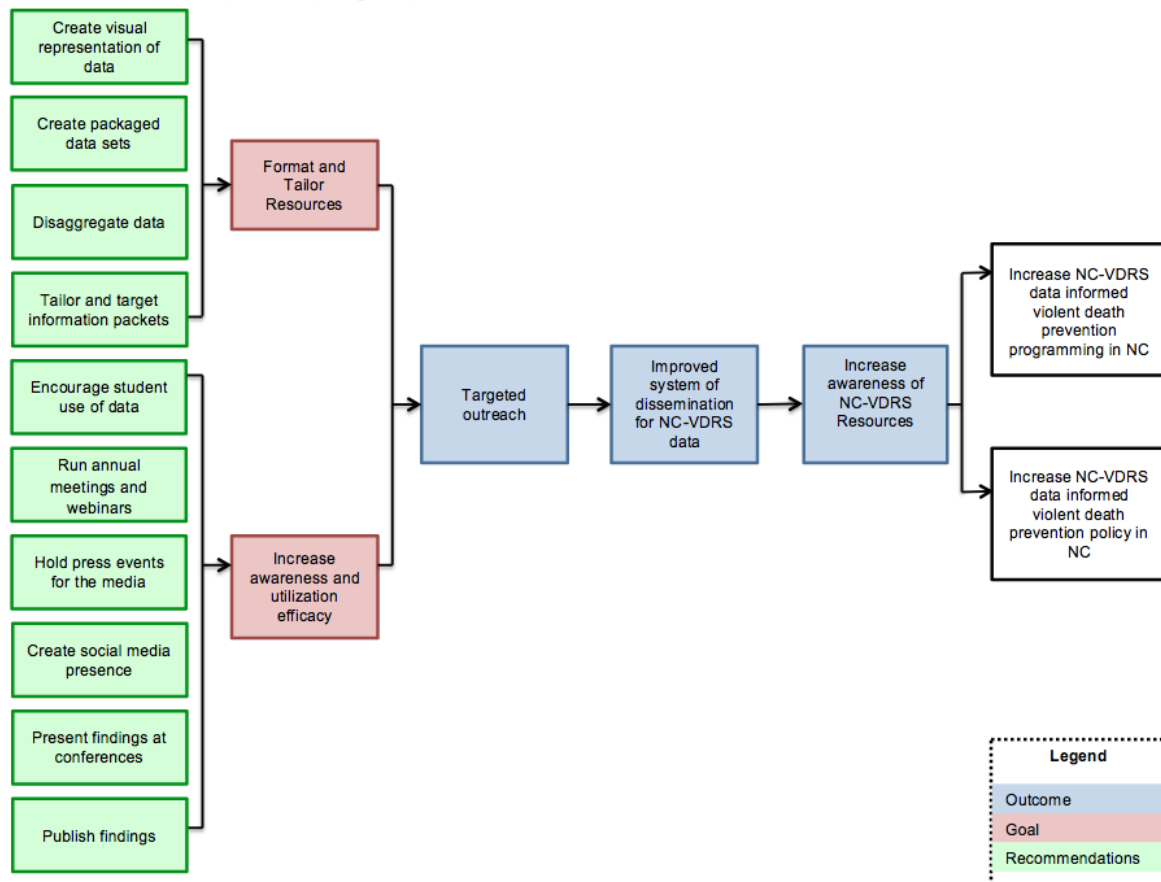
Two goals were developed to increase awareness and utilization of NC-VDRS. Each set of recommendations have specific action steps in order to reach NC-VDRS stakeholders effectively.

Goal 1. Format and tailor data resources

Goal 2. Increase awareness and utilization efficacy of stakeholders

The theory of change model below outlines steps to increase awareness and thus utilization of NC-VDRS resources through the 10 recommendations based on the two goals above. Implementing the three goals is projected to improve NC-VDRS data dissemination efforts, which will increase awareness of NC-VDRS resources.

Figure 1: *Theory of Change Model of Impact of Recommendations on Violent Death Prevention in NC*



## Recommendations to Increase NC-VDRS Resource Awareness and Utilization

### *Resource Formatting and Tailoring Recommendations (Goal 1)*

#### Recommendation 1 Visual Representations of Data

Based on feedback from qualitative interviews and the quantitative survey, NC-VDRS resources are functional as they are, but use of the resources would be easier if they were not as text-heavy and used more visual representations of data. Participants expressed that they can process data much more quickly when looking at a visual representation compared to reading paragraphs of text. Additionally, data figures would have the potential to be used in other documents and on social media platforms. Participants highlighted access to infographics as useful.

#### Recommendation 2 Data Packets Organized by Population, Locality, and Type of Violent Death

A problem with the current state of NC-VDRS resources is that if someone works with a specific population, in a specific area, and/or on a specific topic, it is time-consuming or not relevant to use NC-VDRS data in a meaningful way because you can only look at large pieces of data that might combine topic areas or locations. By creating ready-to-use data packets on certain topics, IVPB could easily distribute data to relevant stakeholders who would be able to immediately use it.

#### Recommendation 3 Data Disaggregation Capabilities

Some participants admitted to using WISQARS instead of NC-VDRS because of WISQARS data disaggregation functions, despite working in NC. If NC-VDRS had these capabilities, it would enable users to tailor data to their own needs without burdening NC-VDRS staff with individual data requests. However, this change might not be necessary if there are enough ready-to-use data sheets/infographics approved for distribution.

#### Recommendation 4 Tailored Information Packets

Participants in both the qualitative and quantitative studies recommended tailoring data to specific NC-VDRS stakeholders to encourage data and resource use. The quantitative survey found that the majority of local health directors use NC-VDRS' annual report. By distributing annual reports directly to NC health directors, and including specific data use examples or recommendations, NC-VDRS can encourage higher use of annual reports within local health departments, and potentially increase demand for other system resources.

This method benefits not only for local health directors, but also researchers or community groups that do work with populations or issues with specific relevance to violent death prevention work, such as youth suicide, domestic violence homicides, or accidental deaths by firearm.

### *Stakeholder Awareness and Utilization Recommendations (Goal 2)*

#### Recommendation 5 Student Use of Data

Based on the team's own experiences and feedback in the qualitative interviews, encouraging student use of NC-VDRS data and resources could be a possible way to increase awareness of NC-VDRS among future violent

## Recommendations to Increase NC-VDRS Resource Awareness and Utilization

death prevention stakeholders as well as faculty. This could include using a canned NC-VDRS dataset developed by IVPB for public health students to use in their biostatistics or epidemiology coursework. The dataset would allow students to be exposed to the different variables contained within NC-VDRS and gain a greater familiarity and/or interest in violence prevention. In addition, the dataset would also help to inform relevant schools/departments of the availability of NC-VDRS data for student projects. Exposing students to a data set would therefore increase awareness of violent death data sets to these upcoming professionals and also increase their efficacy to effectively process and utilize the data.

Additional insight for student use of VDRS data can be gained from other states' current practices. At the 2016 NVDRS Surveillance Academy hosted by CDC, Illinois VDRS representatives shared two additional methods to increase student participation. Firstly, professors could help students access the data for use in a master's thesis or doctoral dissertation. Illinois VDRS reported using this strategy to help increase the number of manuscripts and conference presentations related to their state's VDRS. Secondly, encouraging student use of the data by employing students to help with NC-VDRS data entry/collection increases awareness of the data. Illinois VDRS utilizes public health students to compile medical examiner records with law enforcement data and draft the required narratives for each violent death case. Students could be hired as part-time research assistants or interns. This opportunity may also inspire students' continued interest in available state and national VDRS (Violent Death Reporting System) data and lead to professional roles in injury and violence prevention work.

### Recommendation 6 Annual Meetings/Webinars on NC-VDRS Data Trends and Resources

Based on feedback from both the qualitative interviews and the Spring 2016 NC-VDRS Advisory Board meeting, having regular meetings and/or webinars centered around the idea of informing stakeholders about new data, data trends, and conducting tutorials on how to use the data could be helpful in both increasing awareness and utilization efficacy. This could have a particular impact on relevant community based organizations who are unfamiliar with how to use data in their work or with how to use the NC-VDRS resources effectively for their needs. Again, targeting specific stakeholders who these activities might benefit via existing communication networks and new ones, such as social media platforms (see Recommendation 8) would be beneficial in increasing awareness of NC-VDRS and its resources.

South Carolina has previously led successful statewide violence prevention planning meetings, which met after the release of their key publications:

In 2005, the South Carolina VDRS and its co-sponsors convened a statewide violence prevention and data dissemination meeting, attracting approximately 200 participants from a variety of constituencies, including coroners' offices, law enforcement agencies, social services, public health, grassroots programs, and state and local agencies. This and an earlier 2004 conference were driven by data and findings from the South Carolina VDRS. Keynote speakers and workshop were comprised of national, regional, and state experts in their fields. Sessions were planned around suicide prevention, homicide prevention, sexual assault, and domestic violence

prevention. The Prevention and Data Dissemination meeting increased the visibility and utilization of the state VRDS program for programmatic efforts and created the environment for diverse stakeholders to forge new partnerships for prevention and child death review—all issues addressed by the NVDRS. The South Carolina VDRS program subsequently received requests for additional analysis and invitations to present to special groups including community coalitions and county sheriff task forces, and stakeholders also referred media to the VDRS for data, as well. Significantly, the meetings increased interaction among stakeholders who traditionally do not meet, such as coroners and local mental health professionals. (Campbell et al., 2006)

Given the wide success of this annual meeting in increasing stakeholders' awareness of state VDRS data, increasing engagement with data, increasing utilization efficacy, and increasing interaction between stakeholders who are otherwise contained within their own silos, these annual meetings should be adapted from South Carolina and implemented in NC.

### Recommendation 7 Data-Release Events for Media Outlets

Based on feedback from the qualitative interviews and real-world examples of success, holding press events for NC-VDRS data releases could be a way of gaining a wider audience in the public and also help to inform current stakeholders in the community of the existence of NC-VDRS data. For example, Virginia hosted a press release in 2005 from the Office of the Commissioners of Health and had garnered significant media attention (Campbell et al., 2006). After the press release, “they received about 20 requests for interviews with newspaper, or talk radio and the report drew prominent coverage from the Washington Post” (2006). The success in Virginia shows that there is real opportunity to garner wider coverage and draw interest from both key violence prevention stakeholders and also increase awareness and interest of community members both in NC and nationwide.

### Recommendation 8 NC-VDRS Presence on Social Media Platforms

Based on feedback from the qualitative interviews and real world examples, the team thought it could be helpful to have a social media presence in order to increase awareness of NC-VDRS. The advantage of using these platforms for communication is that they are predicated on sharing information with connections. Should a tragic violent death-related event occur, using a pre-prepared NC-VDRS data sheet on the topic would be a relevant thing to spread around. This would encourage conversations about the event based in fact while simultaneously increasing awareness of NC-VDRS. Organizations like the Trevor Project, dedicated to increasing awareness of LGBTQ youth suicide incidence and improving connection to care for LGBTQ youth, offer promising models of how to integrate public health messaging on social media platforms.

### Recommendation 9 Presentation of Findings at Conferences, Meetings

The Capstone team and preceptors decided that an important way to help increase awareness of NC-VDRS and its resources is to present this project's findings at relevant meetings and conferences both within NC and nationally. This informs violent death prevention stakeholders about NC-VDRS and the importance of awareness of other state-level violent death reporting systems that are producing viable datasets. Since this evaluation is the



first of its kind, it is imperative to share findings so that they can inform dissemination practices of other state-based violent death reporting systems.

Findings and recommendations from this project have appeared at the following meetings and conferences:

- North Carolina State Health Director's Meeting (January 21st, 2016) - Raleigh, NC
- NC-VDRS Advisory Board Meeting (March 24th, 2016) - Chapel Hill, NC
- Safe States Annual Meeting (April 13th, 2016) - Albuquerque, NM
- Conference for State and Territorial Epidemiologists (June 21st, 2016) - Anchorage, AK

### Recommendation 10 Submission of Findings for Publication

Members of the NC-VDRS Advisory Board recommend publishing the Capstone team's findings to help create a presence for state-level VDRS data in the literature, given the current lack. This would provide a resource for future work and research on the dissemination of state-level violent death data, as well as other future formative work on state-level VDRSs.

### **Areas for Future Research**

Given the narrow scope of this project and the data gathered, the team developed a list of potential areas of future research in order to increase NC-VDRS and other states' VDRS awareness and usability, pilot recommendations laid out in this report, and find other relevant big-data dissemination methods that are applicable to VDRS data dissemination. These areas of future research include:

#### 1. Focus Groups with Non-Users Regarding NC-VDRS Resources

Research regarding the development of new formatting for NC-VDRS resources would be extremely useful to IVPB staff who work on NC-VDRS. It would be interesting to learn which specific formats of resources NC-VDRS stakeholders find most useful.

#### 2. Determination of Other State VDRS Dissemination Efforts

Given the current and complete lack of literature on VDRSs in other states, it would be helpful for other researchers to look at the dissemination efforts of other state systems, in addition to other areas of potential research around state VDRSs.

#### 3. NC-VDRS Awareness Beyond e-Newsletter Recipients, Engagement with Other Potential Stakeholders

This project only looked at awareness of stakeholders who receive IVPB's quarterly e-Newsletter. It would be interesting and important to learn whether or not all violent death prevention stakeholders were reached in this project.

#### 4. Pilot Report Recommendations

Piloting the recommendations in this report would be an important step to understanding effective violent death data dissemination strategies in order for North Carolina and other states to change their dissemination methods respectively. It is possible that North Carolina could be a model for other state VDRS dissemination methods.

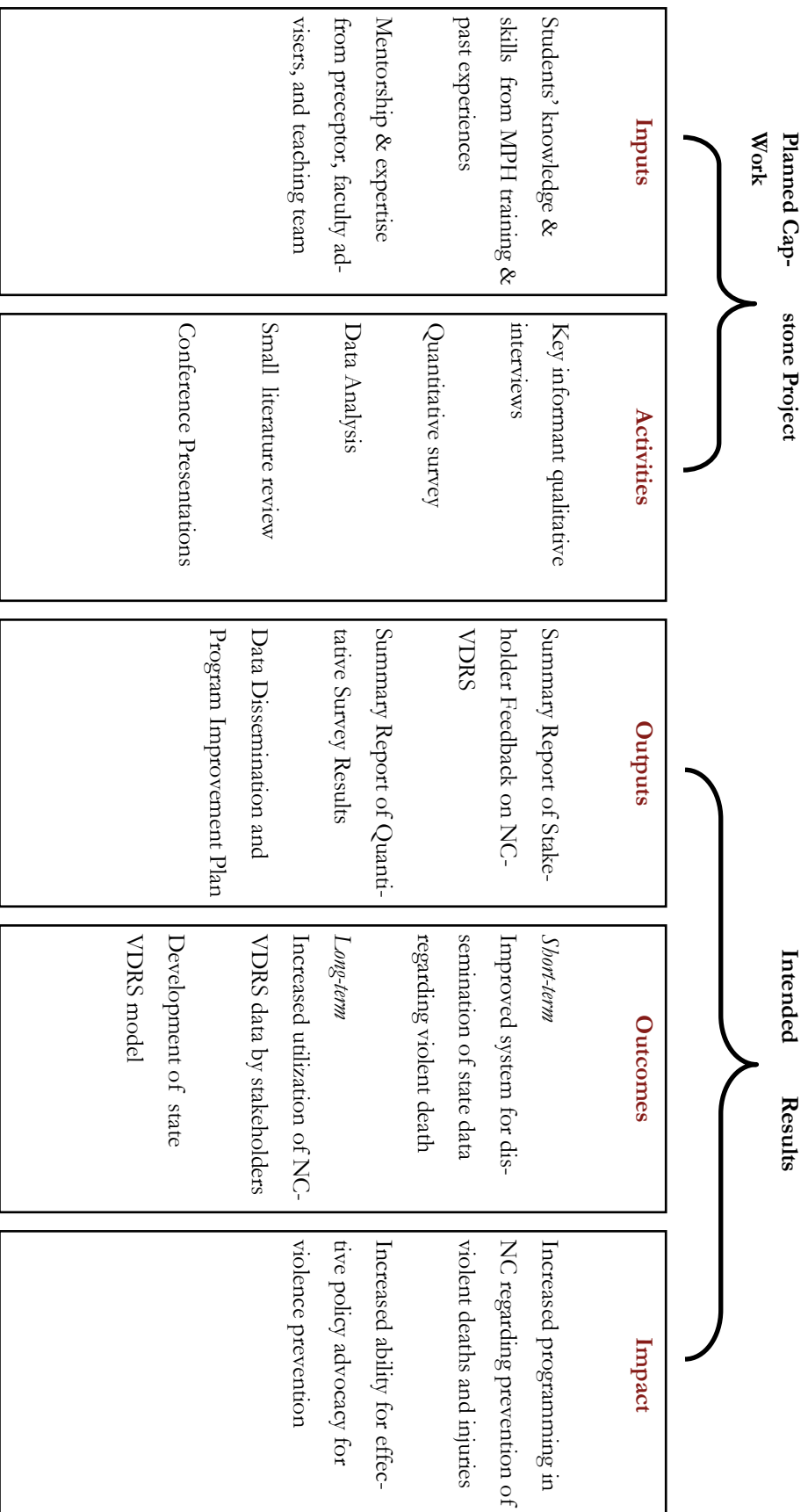
#### 5. Review of Large Dataset Marketing Strategies

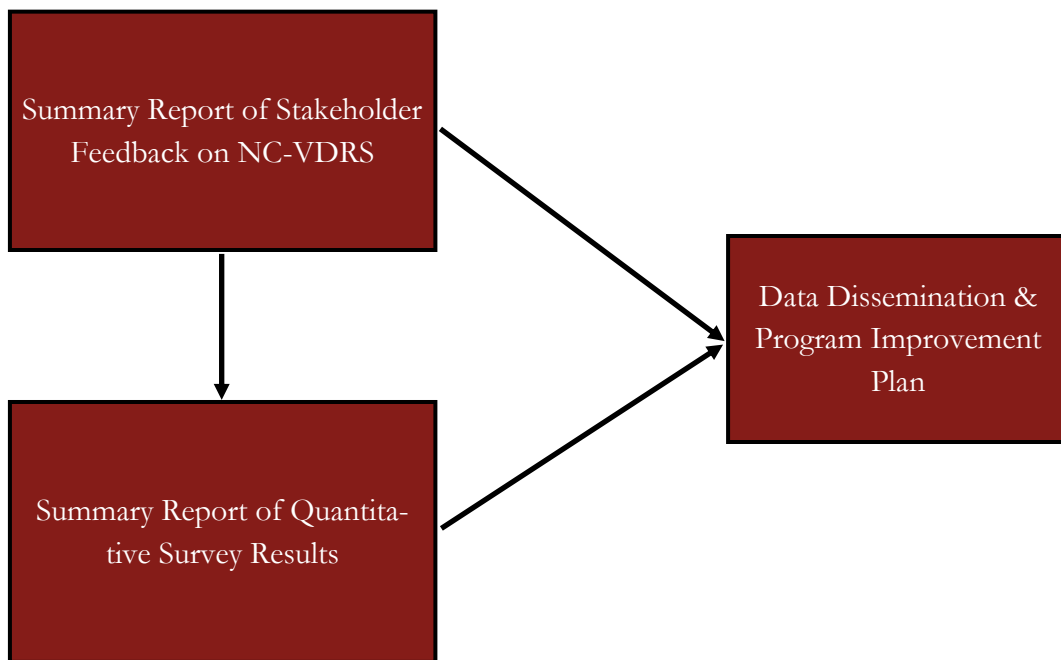
Understanding in much greater detail the ways in which other big data sets, such as YRBS and BRFSS, have gained such marked notoriety in the relevant professional world would be helpful in thinking even further in regards to increasing dissemination and awareness of NC-VDRS and other state VDRSs.

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**Capstone Project Goal:** To evaluate the statewide NC-VDRS and make dissemination and utilization recommendations





### NC-VDRS Key Informant Interview Guide

#### *Population of Interest*

Key stakeholders of the NC-VDRS including leaders public health departments, universities, and health organizations both in and out of NC and the CDC.

#### *Consent*

Thank you for volunteering for this interview. My name is \_\_\_\_\_ and I'm a graduate student at UNC's School of Public Health. I am conducting this interview in partnership with the North Carolina Division of Public Health's Injury and Violence Prevention Branch. We are hoping to gain a better understanding of how current public health leaders, like you, use the North Carolina Violent Death Reporting System (NC-VDRS) in their work.

This interview is completely confidential and all personal identifying information such as names and places will be removed from the interview transcript and will not be shared with others, so please feel free to share your honest feedback to help inform the program. Your participation is voluntary. You may decline to answer any of the questions or stop the interview at any time. Do you have any questions?

If it is all right with you, I would like to record this session and take notes for my own use. Would that be OK?

[If OK...I will begin recording now. Thank you.]

[If not OK...Would it be all right to begin the interview without recording?]

Ok. Let's begin!

#### *Research Question 1*

How do stakeholders currently use the NC-VDRS?

#### *Interview Questions 1*

1. Could you tell me about your experience or familiarity with the North Carolina Violent Death Reporting System?
2. How did you originally find out about the NC-VDRS?
3. When was the last time you used NC-VDRS data or made a data request?  
*If more than a year ago*—What are some reasons that you have not utilized the database in the last 6 months or a year?
4. How often do you use NC-VDRS data?  
What are your goal(s) when using the data?

#### *Research Question 2*

What do state and national stakeholders think of the current method of data dissemination? Are there other dissemination methods elsewhere that are effective?

### *Interview Questions 2*

1. If you have received data in the past, how did you request it?  
Could you please describe the process you went through to obtain the data?  
How would you change or improve this data delivery process?
2. What are some barriers to accessing NC-VDRS database for stakeholders?  
How could we improve stakeholder access to the database?
3. Based on your experiences with other data sources, what are the most effective dissemination methods you have seen?
4. How could we increase visibility of NC-VDRS for potential users?

### *Research Question 3*

How do stakeholders currently obtain other data on violent death that they use?

### *Interview Questions 3*

1. Outside of the NC-VDRS, what other methods or sources do you currently use to obtain violent death data at the national or state-level?  
How did you become connected with these resources?  
What makes these data sources accessible? Effective?

Is there anything else you would like to add?

Thank you for your time today and for sharing your insights!

### NC-VDRS Constant Contact Survey

#### *Introduction*

Thank you for participating in this survey examining use of the North Carolina Violent Death Reporting System (NC-VDRS). We are conducting this survey in partnership with UNC School of Public Health with the hope of gaining a better understanding of how current public health leaders, researchers, prevention programs, law enforcement and others like you, use NC-VDRS in your work. This survey should take you approximately 8-10 minutes to complete. Please contact Scott Proescholdbell, Head of the Injury Epidemiology and Surveillance Unit, at [scott.proescholdbell@dhhs.nc.gov](mailto:scott.proescholdbell@dhhs.nc.gov) or Nidhi Sachdeva, Injury Prevention Consultant, at [nidhi.sachdeva@dhhs.nc.gov](mailto:nidhi.sachdeva@dhhs.nc.gov) for more information or with questions about this survey.

A00. The following set of questions addresses your professional background and your current work environment. Which of the following best describes the type of organization for which you work?

- Local government (1)
- State government (2)
- Federal government (3)
- Law enforcement (4)
- Direct social or human services (non-medical, non-governmental) (5)
- Community organization (6)
- University/college or research organization (7)
- Healthcare/medicine (8)
- Non-profit (9)
- Advocacy (10)
- Faith-based (11)
- Media (12)
- Other (please specify): (13) \_\_\_\_\_

A10. What is your current job title?

A20. How large is your department, site, or office? (This is the number of people you work with, directly or indirectly, on a regular basis).

- Between 1 and 9 full time employees (FTEs) (1)
- Between 10 and 29 FTEs (2)

- Between 30 and 49 FTEs (3)
- Between 50 and 69 FTEs (4)
- Between 70 and 89 FTEs (5)
- 90 or more FTEs (6)
- Unsure (7)

A30. How large is your entire organization?

- Fewer than 10 full time employees (FTEs) (1)
- Between 10 and 49 FTEs (2)
- Between 50 and 99 FTEs (3)
- Between 100 and 249 FTEs (4)
- More than 250 FTEs (5)
- Unsure (6)

A40. How did you receive this survey link?

- Directly from the NC-VDRS email listserv (1)
- From your supervisor (2)
- From a colleague (3)
- Other (please specify): (4) \_\_\_\_\_
- Unsure (5)

A50. Please select the violent death topic(s) of greatest relevance to your work (select all that apply):

- Homicide (1)
- Suicide (2)
- Unintentional firearm deaths (3)
- Death by legal intervention (refers to people killed by on-duty law enforcement officers) (4)
- Other (please specify): (5) \_\_\_\_\_
- N/A (6)



A60. Please select the population(s) of primary interest to you (select all that apply):

- Infants or children (under the age of 10) (1)
- Adolescents or young adults (ages 11-18) (2)
- Adults (ages 19-64) (3)
- Older adults (ages 65 and above) (4)
- Women (5)
- Men (6)
- Lesbian, gay, bisexual, transgender, and/or queer/questioning (LGTBQ) (7)
- Racial/ethnic minority group(s) (please specify): (8) \_\_\_\_\_
- Active military members or veterans (9)
- General public (10)
- Other (please specify): (11) \_\_\_\_\_

A70. Please select the issue(s) of primary importance to your work (select all that apply):

- Aging (1)
- Bullying (2)
- Child abuse or neglect (3)
- Disability (4)
- Firearm safety or violence (5)
- General crime prevention (6)
- General injury prevention (7)
- Health disparities (8)
- Interpersonal violence (9)
- Intimate partner violence (10)
- Mental health (11)
- Personal or financial crisis (12)
- Prescription drug use (13)
- Prisoner re-entry (14)
- Sexual violence or assault (15)
- Substance use (16)
- Other (please specify): (17) \_\_\_\_\_

A80. Which statement describes your involvement with NC-VDRS? (Select all that apply)

- I provide data for NC-VDRS to North Carolina's Division of Public Health (1)
- I use data from NC-VDRS to help inform my organization's mission (2)
- I am an advisory board member (3)
- I work for another state VDRS program (4)
- I have no affiliation or contact with NC-VDRS (5)
- Other (please specify): (6) \_\_\_\_\_

B10. Have you ever read the NC-VDRS annual report?

Yes (1)

No (2)

Unsure (3)

*If Yes is selected, then skip to* How do you access the annual report(s)...

*If Unsure is selected, then skip to* Have you ever used the NC-VDRS fact sheets...

B11. What are some reasons you have not used the NC-VDRS annual report? (Select all that apply)

- I didn't or don't know about it (1)
- I wasn't sure how it could contribute to my work (2)
- I have other source(s) that I prefer using (3)
- I don't use data very often (4)
- Information provided is not timely/up-to-date (5)
- Data are not interactive (6)
- I don't need these data (7)
- Other (please specify): (8) \_\_\_\_\_

*If What are some reasons you have... is greater than or equal to 0, then skip to* Have you ever used the NC-VDRS fact sheets...

B12. How often do you currently access the NC-VDRS annual report(s)?

- Less than once a year (2)
- Once a year (3)
- 2-4 times a year (4)
- Once a month (5)
- 2-4 times a month (6)
- More than five times a month (7)

B13. How do you access the annual report(s)? (Select all that apply)

- Newsletter (1)
- Website (2)
- Printed copy (3)
- Other (please specify): (4) \_\_\_\_\_

B14. Thinking back to the last time you accessed an NC-VDRS annual report, how easy or difficult was it to access?

- Very Difficult (1)
- Difficult (2)
- Easy (3)
- Very Easy (4)

B15. Which of the following describes your purpose for using NC-VDRS annual report(s)? (Select all that apply)

- Needs assessment(s) (1)
- Working toward decreasing the number of violent deaths (2)
- Program evaluation or monitoring (3)
- Grant or other funding application(s) (4)
- Advocacy (5)
- Report or manuscript-writing (6)
- Media request (newspaper, TV, radio, or other request for information to be used in the public) (7)
- Other (please specify): (8) \_\_\_\_\_

B16. What specific improvements to the NC-VDRS annual report(s) might increase your satisfaction with them?  
(Select all that apply)

- Formatting (more user-friendly) (1)
- Appearance (more visually appealing) (2)
- Organization (3)
- More visual representations of data (4)
- More key/summary points (5)
- More frequent distribution (6)
- Less frequent distribution (7)
- Update information in it more frequently (8)
- Increased ability to interact with it (9)
- Different content (10)
- Less content (11)
- More content (12)
- Other (please specify): (13) \_\_\_\_\_
- I think the NC-VDRS annual report(s) is/are fine now (14)

B20. Have you ever used the NC-VDRS fact sheets? (example as displayed below)

- Yes (1)
- No (2)
- Unsure (3)

*If Unsure is selected, then skip to Have you used the NC-VDRS quarterly...*

*If Yes is selected, then skip to How did you access the NC-VDRS fact sheets...*

B21. What are some reasons you have not used the NC-VDRS fact sheets? (Select all that apply)

- I didn't or don't know about it (1)
- I wasn't sure how it could contribute to my work (2)
- I have other source(s) that I prefer using (3)
- I don't use data very often (4)
- Information provided is not timely/up-to-date (5)

- Data are not interactive (6)
- I don't need these data (7)
- Other (please specify): (8) \_\_\_\_\_

If What are some reasons you... *is greater than or equal to 0, then skip to* Have you used the NC-VDRS quarterly...

B22. How often do you currently access the NC-VDRS fact sheets?

- Less than once a year (2)
- Once a year (3)
- 2-4 times a year (4)
- Once a month (5)
- 2-4 times a month (6)
- More than 5 times per month (7)

B23. How did you access the NC-VDRS fact sheets?

- Newsletter (1)
- Website (2)
- Hard Copy (4)
- Other (please specify): (3) \_\_\_\_\_

B24. Thinking back to the last time you accessed the NC-VDRS fact sheets, how easy or difficult was it to access?

- Very Difficult (1)
- Difficult (2)
- Easy (3)
- Very Easy (4)

B25. Which of the following describes your purpose for using the NC-VDRS fact sheets? (Select all that apply)

- Needs assessment(s) (1)
- Working toward decreasing the number of violent deaths (2)
- Program evaluation or monitoring (3)
- Grant or other funding application(s) (4)

- Advocacy (5)
- Report or manuscript-writing (6)
- Media request (newspaper, TV, radio, or other request for information to be used in the public) (7)
- Other (please specify): (8) \_\_\_\_\_

B26. Which of the following potential changes to the NC-VDRS fact sheets would increase your satisfaction with them? (Select all that apply)

- Formatting (more user friendly) (1)
- Appearance (more visually appealing) (2)
- Organization (3)
- More visual representations (4)
- More key/summary points (5)
- More frequent distribution (6)
- Less frequent distribution (7)
- Update the information in it more frequently (8)
- Increase ability to interact with it (9)
- Different content (10)
- More content (11)
- Less content (12)
- Other (please specify): (13) \_\_\_\_\_
- I think the NC-VDRS fact sheets are fine now (14)

B30. Have you ever used the NC-VDRS quarterly e-newsletter update ("NC-VDRS Updates from Injury and Violence Prevention Branch")?

- Yes (1)
- No (2)
- Unsure (3)

*If Yes is selected, then skip to* How often do you currently access the...

*If Unsure is selected, then skip to* Have you ever used the NC-VDRS website?

B31. What are some reasons you have not used the NC-VDRS quarterly e-newsletter update? (Select all that apply)

- I didn't or don't know about it (1)
- I wasn't sure how it could contribute to my work (2)
- I have other source(s) that I prefer using (3)
- I don't use data very often (4)
- Information provided is not timely/up-to-date (5)
- It takes too long to receive information (6)
- I don't need these data (7)
- Other (please specify): (8) \_\_\_\_\_

*If* What are some reasons you... *is greater than or equal to 0, then skip to* Have you ever used the NC-VDRS website?

B32. How often do you currently access the NC-VDRS quarterly e-newsletter update?

- Less than once a year (2)
- Once a year (3)
- 2-4 times a year (4)
- Once a month (5)
- 2-4 times a month (6)
- More than 5 times a month (7)

B33. How did you access the NC-VDRS quarterly e-newsletter update?

- Link included in E-mail listerv (1)
- Website (2)
- Other (please specify): (3) \_\_\_\_\_

B34. Thinking back to the last time you access the NC-VDRS quarterly e-newsletter update, how easy or difficult was it to access?

- Very Difficult (1)
- Difficult (2)
- Easy (3)
- Very Easy (4)

B35. Which of the following describes your purpose for using the NC-VDRS quarterly e-newsletter update?  
(Select all that apply)

- Needs assessment(s) (1)
- Working toward decreasing the number of violent deaths (2)
- Program evaluation or monitoring (3)
- Grant or other funding application(s) (4)
- Advocacy (5)
- Report or manuscript-writing (6)
- Media request (newspaper, TV, radio, or other request for information to be used in the public) (7)
- Other (please specify): (8) \_\_\_\_\_

B36. Which of the following potential changes to NC-VDRS quarterly e-newsletter update would increase your satisfaction with them? (Select all that apply)

- Formatting (more user friendly) (1)
- Appearance (more visually appealing) (2)
- Organization (3)
- More visual representations (4)
- More key/summary points (5)
- More frequent distribution (6)
- Less frequent distribution (7)
- Increased ability to interact with it (8)
- Different content (9)
- Less content (10)
- More content (11)
- Other (please specify): (12) \_\_\_\_\_
- I think the NC-VDRS quarterly e-newsletter updates are fine now (13)

B40. Have you ever used the NC-VDRS website?

- Yes (1)
- No (2)
- Unsure (3)



*If Yes is selected, then skip to* How often do you currently access the...

*If Unsure is selected, then skip to* Have you made a data request to NC-VD...

B41. What are some reasons you have not used the NC-VDRS website? (Select all that apply)

- I didn't or don't know about it (1)
- I wasn't sure how it could contribute to my work (2)
- I have other source(s) that I prefer using (3)
- I don't use data very often (4)
- Information provided is not timely/up-to-date (5)
- Data are not interactive (6)
- I don't need these data (7)
- Other (please specify): (8) \_\_\_\_\_

*If What are some reasons you... is greater than or equal to 0, then skip to* Have you ever made a data request to...

B42. How often do you currently access the NC-VDRS website?

- Less than once a year (2)
- Once a year (3)
- 2-4 times a year (4)
- Once a month (5)
- 2-4 times a month (6)
- More than 5 times a month (7)

B43. Thinking back to the last time you accessed the NC-VDRS website, how easy or how difficult was it to access?

- Very Difficult (1)
- Difficult (2)
- Easy (3)
- Very Easy (4)

B44. Which of the following describes your purpose for using the NC-VDRS website? (Select all that apply)

- Needs assessment(s) (1)
- Working toward decreasing the number of violent deaths (2)
- Program evaluation or monitoring (3)
- Grant or other funding application(s) (4)
- Advocacy (5)
- Report or manuscript-writing (6)
- Media request (newspaper, TV, radio, or other request for information to be used in the public) (7)
- Other (please specify): (8) \_\_\_\_\_

B45. Which of the following potential changes to the NC-VDRS website would increase your satisfaction with it? (Select all that apply)

- Formatting (more user-friendly) (1)
- Appearance (more visually appealing) (2)
- Organization (3)
- More visual representations (4)
- More key/summary points (5)
- Updating the information in it more frequently (6)
- Increased ability to interact with it (7)
- Different content (8)
- Less content (9)
- More content (10)
- Other (please specify): (11) \_\_\_\_\_
- I think the NC-VDRS website is fine now (12)

B50. Have you ever made a data request to NC-VDRS?

- Yes (1)
- No (2)
- Unsure (3)

B54. Which of the following describes your purpose for using NC-VDRS data requests? (Select all that apply)

- Needs assessment(s) (1)
- Working toward decreasing the number of violent deaths (2)
- Program evaluation and monitoring (3)
- Grant or other funding application(s) (4)
- Advocacy (5)
- Report or manuscript-writing (6)
- Media request (newspaper, TV, radio, or other request for information to be used in the public) (7)
- Other (please specify): (8) \_\_\_\_\_

B55. How satisfied were you with the NC-VDRS data request process?

- Dissatisfied (1)
- Neutral (2)
- Satisfied (3)

*If Dissatisfied is selected, then skip to What about the data request process l...*

*If Satisfied is selected, then skip to What about the data request process m...*

*If Neutral is selected, then skip to end of block*

B55.a. What about the data request process made you satisfied?

*If What about the data request... is not empty, then skip to end of block*

*If What about the data request... is empty, then skip to end of block*

B55.b. What about the data request process left you dissatisfied?

*If What about the data request... is empty, then skip to end of block*

*If What about the data request... is not empty, then skip to end of block*

D00. Do you access violent death data resources other than NC-VDRS?

- Yes (1)
- No (2)

*If No is selected, then skip to end of block*

D10. What other data resources do you currently access? (Select all that apply)

- Death certificates through National Vital Statistics System (NVSS) (1)
- National Electronic Injury Surveillance System (NEISS) (2)
- National Violent Death Reporting System (NVDORS) (3)
- CDC Web-based Injury Statistics Query and Reporting System (WISQARS) (4)
- Other states' VDRS (5)
- State Vital Records and Medical Examiner's office (6)
- Local Data (8)
- Other (please specify): (7) \_\_\_\_\_

E00 Which of the following methods would help you learn more about NC-VDRS? (Select all that apply)

- Targeted/tailored communications regarding the data and information available (1)
- Social media posts (Facebook, Twitter, LinkedIn, ResearchGate, etc.) (2)
- Access to more peer-reviewed articles based on these data (3)
- Student/faculty projects using data (4)
- Presentations about what to use the data for (5)
- Webinars about what to use the data for (6)
- Other (please specify): (7) \_\_\_\_\_
- None of the above (8)
- I already know enough (9)

F00 Are you...

- Female (1)
- Male (2)
- Other (please specify): (3) \_\_\_\_\_

F10. Which of these groups best represents your race? (Select all that apply)

- American Indian or Alaska Native (1)
- Asian, or Pacific Islander (2)
- Black or African American (3)
- White (4)
- Other (please specify): (5) \_\_\_\_\_

F20. Are you of Hispanic or Latino origin?

- No (1)
- Yes (2)

F30. What is the highest degree or level of school you have completed?

- Less than high school (1)
- High school diploma or equivalent (2)
- Some college credit, less than one year (3)
- One or more years of college, no degree (4)
- Associate's degree (5)
- Bachelor's degree (6)
- Master's degree (7)
- Professional or doctoral degree (8)

F40. Please select the appropriate range for your age.

- Less than 18 years old (1)
- 18 through 24 (2)
- 25 through 34 (3)
- 35 through 44 (4)
- 45 through 54 (5)
- 55 through 64 (6)
- 65 and above (7)

F45. If there is anything you would like to add that has not been included in this survey, please use the space provided to do so.

F50. Thank you for your time and participation in this survey. We appreciate your feedback about awareness and use of the North Carolina Violent Death Reporting System! Please contact Scott Proescholdbell, Head of the Injury Epidemiology and Surveillance Unit, at [scott.proescholdbell@dhhs.nc.gov](mailto:scott.proescholdbell@dhhs.nc.gov) or Nidhi Sachdeva, Injury Prevention Consultant, at [nidhi.sachdeva@dhhs.nc.gov](mailto:nidhi.sachdeva@dhhs.nc.gov) for more information or with questions about this survey. To learn more about the Injury and Violence Prevention Branch or NC-VDRS, please visit [www.injuryfreenc.ncdhhs.gov](http://www.injuryfreenc.ncdhhs.gov).

## Appendix 5: Additional Qualitative Results Tables

Table 5

*Reported Purpose for Using NC-VDRS Resource*

Purpose of Use	Annual report		Fact sheet		E-newsletter		Website		Data request	
	n	%	n	%	n	%	n	%	n	%
Needs assessment	31	54	32	62	18	50	45	64	4	40
Working towards decreasing number of violent deaths	21	37	18	35	14	39	24	34	1	10
Program measures and evaluation	17	30	10	19	7	19	16	23	2	20
Grant/other funding application	14	25	18	35	8	22	25	36	3	30
Advocacy	18	32	18	35	12	33	25	36	1	10
Report/manuscript writing	14	25	14	27	7	19	17	24	6	60
Media request	9	16	11	21	5	14	14	20	1	10
Other	11	19	12	23	6	17	7	10	1	10

Table 6

*Reported Reasons for Not Using NC-VDRS Resources*

Reason	Annual report n (%)	Fact sheet n (%)	E-newsletter n (%)	Website n (%)	Data request n (%)
I didn't or don't know about it	31 (59.62)	35 (74.47)	43 (70.49)	19 (57.58)	47 (47.96)
I wasn't sure how it could contribute to my work	3 (5.77)	1 (2.13)	4 (6.56)	2 (6.06)	8 (8.16)
I have other source(s) that I prefer using	1 (1.92)	0 (0)	3 (4.92)	2 (6.06)	2 (2.04)
I don't use data very often	2 (3.85)	0 (0)	2 (3.28)	1 (3.03)	4 (4.08)
Information provided is not timely/up to data	2 (3.85)	0 (0)	0 (0)	0 (0)	2 (2.04)
Data are not interactive	2 (3.85)	0 (0)		0 (0)	1 (1.02)
I don't need these data	3 (5.77)	5 (10.64)	4 (6.56)	5 (15.15)	20 (20.41)
It takes too long to receive Information			0 (0)		1 (1.02)
Other	8 (15.38)	6 (12.77)	5 (8.20)	4 (12.12)	13 (13.27)

Table 7

*Suggested Improvements to NC-VDRS Resources*

Suggested Improvement	Annual report		Fact sheet		E-newsletter		Website	
	n	%	n	%	n	%	n	%
Formatting	8	7.48	5	6.33	4	10.53	11	11.34
Appearance	9	8.41	4	5.06	2	5.26	8	8.25
Organization	3	2.8	1	1.27	1	2.63	5	5.15
More visual representations of data	11	10.28	4	5.06	0	0	8	8.25
More key/summary points	19	17.76	8	10.13	4	10.53	7	7.22
More frequent distribution	6	5.61	6	7.59	3	7.89		
Less frequent distribution	0	0	0	0	0	0		
Update information in it more frequently	15	14.02	8	10.13			6	6.19
Increased ability to interact with it	8	7.48	7	8.86	1	2.63	10	10.31
Different content	1	0.93	1	1.27	0	0	1	1.03
Less content	1	0.93	3	3.8	1	2.63	0	0
More content	2	1.87	0	0	1	2.63	4	4.12
Other	2	1.87	3	3.8	1	2.63	3	2.09
Resource is fine as is	22	20.56	29	36.71	20	52.63	34	35.05