Preventing Unintentional Drug Overdose in North Carolina by Advocating for Policies that Support Overdose Prevention

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UNC Honor Pledge: We certify that no unauthorized assistance has been received or given in the completion of this work.

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Acronyms

CDC	Centers for Disease Control and Prevention
HB	Health Behavior
HIV	human immunodeficiency virus
IRB	Institutional Review Board
JLF	John Locke Foundation
NC	North Carolina
NCGA	North Carolina General Assembly
NCHRC	North Carolina Harm Reduction Coalition
OD	overdose
OPR	opioid pain reliever
QOL	quality of life
UNC	University of North Carolina at Chapel Hill
US	United States

Executive Summary

The main purpose of this Capstone project was to develop and promote a policy, which became the 911 Good Samaritan and Naloxone Access bill, to reduce unintentional drug overdose deaths in North Carolina (NC). The team's partner organization, North Carolina Harm Reduction Coalition (NCHRC), solicited the Capstone team's help in raising awareness about NC's overdose problem, developing a policy solution, and advocating for state-level policy change. The Capstone project increased NCHRC's capacity to advocate for the 911 Good Samaritan and Naloxone Access bill, strengthened NCHRC's relationship with the North Carolina General Assembly (NCGA) and community stakeholders, raised awareness of the problem of drug overdose, and resulted in the passage of the policy into law.

In 2010, unintentional poisoning, which typically involves drugs, became the second leading cause of injury death for all ages in the United States. Between 1997 and 2001, drug overdose deaths more than doubled in NC. Opioid pain relievers (OPR) accounted for 88% of the increase in drug-related deaths. Many overdose prevention efforts have focused on the supply side, with policies dictating prescribing practice or drug abuse screening and prevention. Although these efforts can prevent an overdose from happening, overdoses will still occur even with the best prevention efforts. Achieving a broader reduction in fatal overdose requires a more targeted policy-level intervention.

For this Capstone project, the team produced five deliverables. Deliverable 1 was a literature review of the impact of drug overdose in NC and a fact sheet for distribution to stakeholders. Deliverable 2 consisted of policy recommendations, based on the literature review, intended to guide legislative sponsors in drafting a bill. Deliverable 3 was a presentation to the John Locke Foundation (JLF), a policy think tank, to educate their members and elicit support for the policy. Deliverable 4 was a drug overdose prevention summit in Raleigh to raise awareness and support among various stakeholders, including legislators, for the 911 Good Samaritan and Naloxone Access bill. Lastly, Deliverable 5 included the development of educational materials to raise awareness about the new law.

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Introduction

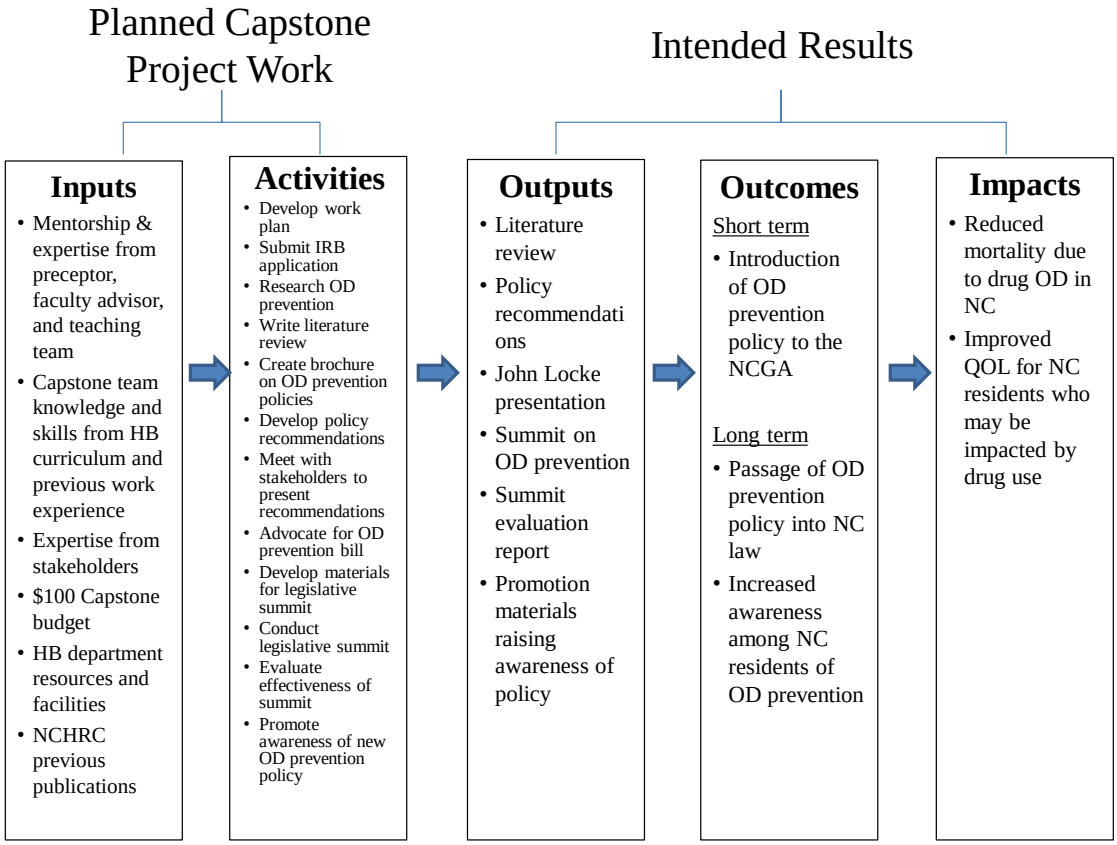
North Carolina (NC) has a disproportionately high drug overdose death rate compared with the national average (North Carolina State Center for Health Statistics, 2009). One purpose of this Capstone project was to recommend policy solutions that will reduce unintentional drug overdoses in NC to legislators and a policy think tank, based upon a review of the overdose literature. Capstone project work also involved advocating for policy recommendations and attending meetings with stakeholders, which served to strengthen advocacy ties between North Carolina Harm Reduction Coalition (NCHRC), the North Carolina General Assembly (NCGA), and the community.

The Capstone work over the past year has been in partnership with NCHRC, a comprehensive harm reduction program based in Durham, NC with a mission to "encourage and motivate the acceptance of harm reduction strategies in North Carolina through education, interventions, advocacy, and resource development." (North Carolina Harm Reduction Coalition, 2013). In addition to providing services, NCHRC creates resources for and builds coalitions among law enforcement, drug users, and sex workers. Most pertinent to this project, NCHRC advocates for harm reduction policies on both the local and state levels. NCHRC's Executive Director and our preceptor, Robert Childs, submitted a Capstone project proposal to foster a partnership with the University of North Carolina at Chapel Hill (UNC) Gillings School of Global Public Health, to bring more attention to overdose prevention in NC and to advocate for a policy that could reduce unintentional drug overdose deaths in the state.

The Capstone project included five deliverables: a literature review, policy recommendations, a presentation to the John Locke Foundation (JLF), a legislative summit on overdose prevention, and an educational campaign. Project work was negotiated by Capstone team members, the Capstone faculty advisor, and NCHRC, outlined in a work plan, and given an exemption by the UNC IRB #12-1861. Figure 1 depicts a logic model of the work including inputs, activities, outputs, outcomes, and impact of the project. Logic models are a tool used in public health to provide a visual summary of a project or program, including preparatory work (inputs), project activities, and intended effects of the project (outputs, outcomes) (Glanz, Rimer, & Viswanath, 2008). The primary input for this project has been

mentorship from the preceptor on legislative advocacy. NCHRC's advocacy and stakeholder engagement strategies have guided activities and products throughout the project. Much of the advocacy activities (published op-eds, letters to the editor, phone calls to legislators) and educational materials (fact sheets, wallet-sized informational cards) were part of the preparation for the overdose prevention summit. The summit, a forum to educate legislators and community members on overdose prevention in NC, led to the introduction and passage of the 911 Good Samaritan and Naloxone Access law by the NCGA. This law is intended to reduce unintentional drug overdose mortality in NC and ultimately to improve the quality of life of residents who are directly or indirectly affected by unintentional drug overdose.

Figure 1. Logic Model of Capstone Project



This Capstone summary report, in conjunction with the Capstone project deliverables discussed below, replaces the Graduate School's Master's thesis requirement and serves as a record of this two-semester mentored learning experience. The following background section of the report presents a review

of the relevant literature and demonstrates the burden of unintentional drug overdose in NC. This section also provides a rationale for the methods used throughout this Capstone project for addressing unintentional drug overdose as a public health issue. The deliverables section details the purpose, activities, findings, and recommendations for each deliverable. Next, the discussion section explains the Capstone project in greater detail, including lessons learned and skills gained throughout this process. This section also describes how the Capstone team engaged stakeholders and the strengths and limitations of the strategies used. Finally, the summary report concludes with a discussion of the impact of this project on NCHRC and on unintentional drug overdoses in the state of NC.

Background

Unintentional drug overdose: Scope of the problem

In 2010, unintentional poisoning outranked motor vehicle crashes as the leading cause of injury death in the United States (US) for people aged 25 to 64 and became the second leading cause of injury death for all ages (Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2010). The Centers for Disease Control and Prevention (CDC) defines unintentional poisoning as "the use of drugs or chemicals for nonmedical purposes in excessive amounts, such as an 'overdose'" (Centers for Disease Control and Prevention, 2012b). Ninety-two percent of unintentional poisonings involve drugs, so the terms "drug overdose" and "unintentional poisoning" are used interchangeably in the literature (Dasgupta, Sanford, Albert, & Wells Brason, 2010). In 2008, opioid pain relievers (OPRs), including hydrocodone, oxycodone, and methadone, which are prescribed to relieve pain, were involved in 74% of prescription drug overdose deaths. OPRs currently account for more overdose deaths than cocaine and heroin combined (Centers for Disease Control and Prevention, 2011; Dasgupta, Sanford, Albert, & Wells Brason, 2010; National Institute on Drug Abuse, 2011).

In 2007, drug overdose claimed the lives of nearly 100 people per day in the US (Centers for Disease Control and Prevention, 2010; Centers for Disease Control and Prevention, 2011). Overdose deaths have tripled since 1991, mirroring marked increases in the sales of prescription OPRs (Centers for Disease Control and Prevention, 2011; Dasgupta, Sanford, Albert, & Wells Brason, 2010; Paulozzi,

Budnitz, & Xi, 2006). Between 1992 and 2002, poisoning rates increased 190% for women, 99% for men, 152% among whites, and 33% among African Americans (Paulozzi, Ballesteros, & Stevens, 2006). The largest increases were seen for people aged 15-24 and 40-59, with a 300% increase for ages 40-59. Non-medical use of OPRs is also more common among women and whites (Paulozzi, Ballesteros, & Stevens, 2006).

Like the US, NC has seen steady increases in drug overdose deaths. Between 1997 and 2001, drug overdose deaths more than doubled in NC (Sanford, 2002). In 2006, NC reported 10.2 drug overdose deaths per 100,000 people, exceeding the national average of 9.14 (Dasgupta, Sanford, Albert, & Wells Brason, 2010). Among drug overdose deaths during this time period, an analysis by the CDC and NC Department of Health and Human Services Injury and Violence Prevention Unit found that the mean age of victims was 39 (Sanford, 2002; State of North Carolina Department of Health & Human Services Division of Public Health Epidemiology Section: Communicable Disease Branch, 2011). Of those, 80% were white, two-thirds were male, and three-quarters suffered from a chronic health problem such as substance abuse, mental illness, or chronic pain. Overdoses involving prescription pain medication accounted for 88% of the overall increase in drug-related deaths during this time period (Sanford, 2002).

Although drug overdose affects a wide range of demographic groups, some populations are more susceptible to unintentional overdose than others. For instance, individuals recently released from incarceration are 12 times more likely to die of an overdose than the general public. This may be due to decreased drug tolerance and the stress of re-entry into society (Binswanger et al., 2007; Merrall et al., 2010; Rosen, Schoenbach, & Wohl, 2008). Human immunodeficiency virus (HIV) positive individuals are also at higher risk because of liver damage resulting from their illness (Green, McGowan, Yokell, Pouget, & Rich, 2012; Sackoff, Hanna, Pfeiffer, & Torian, 2006; Tyndall et al., 2001; Wang et al., 2005). As of December 2010, 35,000 individuals were living with HIV in NC, representing a large group of people at increased risk for drug overdose mortality (State of North Carolina Department of Health & Human Services Division of Public Health Epidemiology Section: Communicable Disease Branch, 2011). Veterans of the wars in Iraq and Afghanistan are another vulnerable population relevant to NC (How

North Carolina Ranks, 2010). High rates of mental health issues and chronic pain treatment make this population more susceptible to unintentional drug overdose (Drug Policy Alliance [DPA], 2009; Seal et al., 2012). One-third of soldiers take prescription medication, and of those, half are taking OPRs (American-Statesman Investigative Team, 2012).

Drug overdose is a growing public health concern, and the increased use of prescription pain medication has played a significant role (Dasgupta, Sanford, Albert, & Wells Brason, 2010). As a result, a wide variety of populations are affected by overdose, which suggests the need for policy-level interventions. Many overdose prevention efforts have focused on the supply side, such as policies dictating prescribing practice, or drug abuse screening and prevention. Although these efforts can prevent an overdose from happening in the first place, overdoses will still occur even with the best prevention efforts. A 2010 report by Dasgupta and colleagues (2010) argues that "overdose potential must be seen as a separate but parallel phenomenon that can exist in the absence of abuse, diversion, and addiction […] A rescue response is often needed, because overdoses are still going to occur despite prevention efforts" (p. 34). This "rescue response" involves prompt intervention and treatment of a potential overdose. A variety of factors can lead to a fatal drug overdose, but not every overdose needs to end in a fatality (Dasgupta, Sanford, Albert, & Wells Brason, 2010). The window of time between overdose and death provides a valuable opportunity to save lives. Capitalizing on this opportunity requires a more targeted policy-level intervention in the form of a 911 Good Samaritan and Naloxone Access law.

Policy solution: 911 Good Samaritan

Calling 911 is often the first step in promptly treating an overdose. However, numerous studies suggest that bystanders or those who witness an overdose frequently choose not to call 911 because they fear police involvement (Baca & Grant, 2007; Banta-Green, Kuszler, Coffin, & Schoeppe, 2011; Lewis & Marchell, 2006; Oster-Aaland, 2011; Pollini, 2006; Seal et al., 2003; Tobin, Davey, & Latkin, 2005; Tracy, 2005). The proportion of respondents who reported calling 911 varied from 23% to 67% in five studies surveying drug users in metropolitan areas who had witnessed an overdose (Baca & Grant, 2007; Pollini, 2006; Seal et al., 2003; Tobin, Davey, & Latkin, 2005; Tracy, 2005). Fear of police involvement

was reported as a major factor in delaying or avoiding a 911 call, and in four of the five studies, it was the number one reason respondents gave for not calling 911 when witnessing an overdose.

Ten states have responded to these statistics by enacting 911 Good Samaritan laws, which provide protection for the caller and overdose victim from criminal prosecution for drug possession (Davis, 2012). To date, 10 states have passed Good Samaritan laws, and two others have passed laws permitting or requiring courts to take Good Samaritan status into consideration at sentencing (Davis, 2012). Several other states have 911 Good Samaritan laws under consideration in their legislatures (Cadore, 2012; Moraff, 2012). Most states have only recently enacted their Good Samaritan laws, so little evaluation research exists on their effectiveness. However, a study examining the effects of Washington's 911 Good Samaritan law suggests that it may be effective in encouraging 911 calls: 88% of opiate users surveyed indicated they would be more likely to call 911 during a future overdose after becoming aware of the Good Samaritan law (Banta-Green, Kuszler, Coffin, & Schoeppe, 2011). Studies examining amnesty policies related to alcohol use on college campuses report similar findings (Oster-Aaland, 2011). An evaluation of Cornell University's medical amnesty policy reported consistent increases in 911 calls for alcohol-related emergencies and a decrease in the percentage of students who report fear of getting in trouble as a barrier to calling 911 (Lewis & Marchell, 2006).

Policy solution: Naloxone access

In 2008, OPRs were involved in 74% of all prescription overdose deaths in the US. However, many of these deaths could have been easily reversed with the administration of naloxone, a non-addictive prescription medication with no known side effects (Piper, 2008; Warner, Chen, Makuc, Anderson, & Miniño, 2011). Emergency medical personnel have used naloxone to treat opioid overdose for over three decades, but more than half of overdose victims die before medical help arrives (Dasgupta, Sanford, Albert, & Wells Brason, 2010). This suggests that bystanders may be in the best position to successfully reverse an overdose because they are often the "first responders" on the scene (Dasgupta, Sanford, Albert, & Wells Brason, 2010; Kim, 2009). Currently NC physicians hesitate to prescribe naloxone to drug users or potential bystanders because they fear charges related to third party liability,

i.e., the use of a prescription medication by someone other than the person for whom it was prescribed (Beletsky et al., 2007). Bystanders also fear prosecution based on third party liability laws even though they are often in the best position to reverse an overdose. Naloxone distribution programs, including the NC-based Project Lazarus, have assisted in reversing numerous opioid overdoses by distributing naloxone to drug users and training them on how to administer it (Dasgupta, Sanford, Albert, & Wells Brason, 2010; Kim, 2009; Maxwell, 2006; Seal, 2005; Sherman, 2008; Walley et al., 2012).

A survey of 188 community-based overdose prevention programs attests to naloxone's success in reducing overdose-related deaths (Centers for Disease Control and Prevention, 2012a). Since 1996, these programs report training and distributing naloxone to over 50,000 people, which has resulted in 10,171 overdose reversals. An evaluation of Chicago's naloxone distribution program reports similar findings: after a fourfold increase between 1996 and 2000, overdose deaths decreased 20% in 2001 with the introduction of naloxone distribution and training (Maxwell, 2006). Multiple studies report that drug users trained in naloxone administration were safely and consistently able to reverse opioid overdoses as successfully as medical personnel (Green, Heimer, & Grau, 2008; Piper, 2008; Seal, 2005; Sherman, 2008). In 2001, New Mexico made it easier to prescribe and administer naloxone legally. Since then, seven other states have amended their laws to allow naloxone to be prescribed to potential overdose bystanders (Davis, 2012). Mounting evidence of naloxone's success has prompted researchers to recommend an extensive scale up of naloxone access, but laws limiting the prescription and use of naloxone continue to prevent access for those who need it most (Dasgupta, Sanford, Albert, & Wells Brason, 2010; Kim, 2009).

Drug overdose poses a significant mortality burden in the US. In addition, NC's drug overdose death rate exceeds the national average, and NC state policies lag behind other states when it comes to drug overdose prevention. Policies that favor naloxone access and 911 Good Samaritan laws have proven to be effective in reducing overdose deaths, therefore the Capstone team advocated for these policy solutions in NC.

Deliverables

This section provides a detailed description of each of the deliverables completed for this project. Capstone work was outlined in a work plan, and deliverables were reviewed by Capstone mentors (i.e., preceptor, faculty adviser, teaching team) and relevant stakeholders before final drafts were completed. Deliverable 1 (Table 1) involved writing a literature review on the extent and impact of the drug overdose epidemic in NC, as well as creating a fact sheet for distribution at the NC overdose prevention summit. The purpose of this deliverable was to develop both detailed and concise summaries of the scope of the problem and to create materials useful both for the summit and future NCHRC activities. Deliverable 2 (Table 2) involved writing policy recommendations based on the literature review (Deliverable 1) and identifying policy solutions. The purpose of this deliverable was to guide conversations with state legislators on policy solutions to the drug overdose burden in NC and to ultimately find a sponsor for the bill. Deliverable 3 (Table 3) involved editing, preparing, and delivering a presentation to JLF, an influential policy think tank based in Raleigh, NC. The purpose of this deliverable was to educate members of JLF about the scope of drug overdose in NC, to provide the opportunity to receive feedback on the proposed 911 Good Samaritan and Naloxone Access legislation, as well as to garner their political support. Deliverable 4 (Table 4) consisted of planning and hosting a legislative summit on overdose prevention in Raleigh, NC on February 5, 2013, and included creating a portfolio of educational summit materials. The purpose of the summit was to raise awareness and support among various stakeholders, including legislators and the general public, for 911 Good Samaritan and Naloxone Access legislation. This deliverable also included extensive advocacy activities as well as an evaluation of the summit, all of which are outlined below. Deliverable 5 (Table 5) included developing a fact sheet and wallet card about the 911 Good Samaritan and Naloxone Access law, a wallet card with instructions on how to administer naloxone, and writing a public service announcement about the 911 Good Samaritan and Naloxone Access law. The purpose of this deliverable was to provide materials that can be used to raise awareness and to educate the general public about the 911 Good Samaritan and Naloxone Access law.

Table 1. Deliverable 1

Deliverable 1: Literature Review	
Format:	Five-page narrative report
Purpose:	• To demonstrate the significance and burden of drug overdose in NC and to summarize current overdose prevention policies and their impact for NCHRC and other stakeholders

Activities:	• Searched for literature on PubMed and Google Scholar using combinations of search terms including: unintentional poisoning; overdose; drug overdose; accidental overdose; opioid overdose; veterans; HIV infection; North Carolina; prison; emergency services; fear; fear of police
	• Drafted a literature review encompassing the following:
	  ○ an epidemiological assessment of negative health impacts of drug overdose in the US overall and in NC
	  ○ a review of drug overdose policies in other states
	  ○ a review of the effects of 911 Good Samaritan and naloxone access policies
	• Drafted a four-page overdose overview fact sheet of the literature review suitable for public distribution
	• Disseminated the fact sheet to attendees at a legislative summit in Raleigh, NC in February 2013

Key Findings:	• Literature review served to familiarize the Capstone team with the background of the unintentional drug overdose burden, as well as with effective strategies for addressing it • Important themes of the literature review included 911 Good Samaritan policies, naloxone access policies, OPR related overdose, increasing overdose rates, overdose and veterans, and overdose and incarcerated populations • Fact sheet served as a useful overview material for attendees at the legislative summit
Recommendations:	• Recommend that NCHRC continue to use the literature review to educate the public about unintentional drug overdose • Recommend that NCHRC use the literature review to inform future outreach activities and policy work • Recommend that NCHRC update the literature review on a quarterly basis to provide policy and epidemiological updates

Table 2. Deliverable 2

Deliverable 2: Policy Recommendations	
Format:	• Two recommendations stated in three-page report
Purpose:	• To recommend policy solutions for the problem of drug overdose mortality to NC legislators
Activities:	• Drafted a proposal for two policy recommendations based upon the literature

	review (Deliverable 1): 911 Good Samaritan and Naloxone Access law • Collected feedback from a public health attorney on legal terminology, recommendation format, and policy specifics • Finalized policy recommendations based on feedback
Key Findings:	• Translating information from the literature into policy language requires legal and policy expertise, clear and deliberate language, and stakeholder review • Applicability was limited because legislators wrote their own version of bill • Relevant components of a policy recommendation include background on the issue, description of the recommendations, proposed draft language, and a discussion of the policy's impact • Soliciting feedback from an attorney ensures that the language is legally correct, interpreted as intended, and depending on the attorney's expertise, provides insight into the broader legal context
Recommendations:	• Recommend framing the creation of the document as an educational exercise for future students or identifying another use for the document when such policies will be drafted by legislators separately • Recommend that policy recommendations, when possible, be framed with a strong epidemiological or scientific basis and precedent of success • Recommend that future policy recommendations be concise, well-organized, and have a clear plan for expert review to maximize their utility

Table 3. Deliverable 3

Deliverable 3: John Locke Foundation Presentation	
Format:	• 46-slide PowerPoint Presentation
Purpose:	• To educate members of JLF on burden of overdose in NC and proposed 911 Good Samaritan and Naloxone Access legislation • To solicit feedback from JLF members on the proposed legislation and garner political support
Activities:	• Drafted presentation content including an overview of NCHRC and its work, definition of harm reduction, overdose in NC, policy recommendations, and supporting research • Tailored presentation to the target audience through addition of content about proposed legislation and information of interest to this audience, e.g., cost-effectiveness of policy • Presented on January 28, 2013 and responded to questions from audience at JLF
Key Findings:	• Presentation was effective at raising awareness about overdose and the policies that have the potential to reduce the number of fatal overdoses • Presentation helped build a coalition of support and preempt political opposition • Potential objections to proposed 911 Good Samaritan and Naloxone Access legislation identified by audience members included cost of the policy, cost and availability of naloxone, potential side effects of naloxone, and

	potential moral hazard objections • Hearing potential counterarguments helped inform future educational and advocacy materials in which these objections could be addressed
Recommendations:	• Recommend that NCHRC utilize presentation for future educational sessions with conservative/libertarian political groups, making necessary changes to reflect the passage of the 911 Good Samaritan and Naloxone Access legislation • Recommend that presenters build in 3-4 weeks to prepare and tailor future presentations, as well as clearly define the presentation's goals and objectives

Table 4. Deliverable 4

Deliverable 4: Summit on Overdose Prevention	
Format:	• 24-page portfolio of summit materials
Purpose:	• To raise awareness and support among stakeholders, legislators, and the general public for 911 Good Samaritan and Naloxone Access legislation • To gather feedback from attendees to improve future similar endeavors by NCHRC
Activities:	• Organized and planned necessary steps to host a summit for legislators, stakeholders, and community members on overdose prevention in NC including reservation of NC legislative auditorium, speaker invitations and confirmations, day-of scheduling and slides, food and beverages, summit registration, and summit informational packets • Prepared a save the date flyer for email distribution in promotion of the summit and flyer for physical distribution and promotion • Prepared informational materials for distribution at the summit including: the four-page overdose overview fact sheet from Deliverable 1; a one-page fact sheet on why NC needs a naloxone access policy; and a one-page fact sheet on why NC needs a standing order policy for naloxone • Advocated for 911 Good Samaritan and Naloxone Access legislation including making calls, sending emails, and face to face meetings with NC legislators • Participated in media advocacy for 911 Good Samaritan and Naloxone Access legislation including two op-eds submitted to newspapers and online sources around the state resulting in publications in six sources; one published blog post; 16 Letters to the Editor submitted to newspapers around the state resulting in three publications • Sent invitations for summit including emails and phone calls to NC legislators, NCHRC tweets, Facebook posts, listserv emails, compilation of a summit mailing list and subsequent emails • Drafted form to collect feedback from summit attendees • Hosted the summit on February 5, 2013 • Collected feedback from summit attendees • Produced an evaluation report for NCHRC use based on attendee feedback and demographics
Key Findings:	• Bipartisan support for 911 Good Samaritan and Naloxone Access legislation

	among summit attendees • Attendee feedback highlighted strength of personal stories and appreciation for a broad diversity of speakers including local experts in the field • Attendees highly valued educational aspects of the summit
Recommendations:	• When preparing for a legislative summit: o Engage a broader range of stakeholders, including opponents of 911 Good Samaritan and Naloxone Access legislation o Plan for roughly four weeks of intensive media and direct advocacy to encourage attendance o Work with legislative assistants to put event date on legislator's calendar o Contact legislators' offices to remind and encourage them to attend • When hosting a legislative summit: o Remind attendees to fill out both sides of evaluation form or make all forms one-sided o Include break in the middle if time permits o Provide speaker bios in summit packets so attendees know background of speakers o Make speaker slides available to attendees online • When evaluating a legislative summit: o Create and pilot test a short evaluation survey, including qualitative and quantitative questions, to maximize participant response o Disseminate results to summit planners, organization leadership, and interested stakeholders o Create a brief summary report with key findings and survey results • Using materials for future events: Disseminate informational materials to other organizations and states that may be pursuing similar overdose prevention policies

Table 5. Deliverable 5

Deliverable 5: Educational Campaign	
Format:	• Educational materials including one-page fact sheet, two informational wallet cards, radio public service announcement (PSA)
Purpose:	• To inform stakeholders and the community of the new 911 Good Samaritan and Naloxone Access law
Activities:	• Developed fact sheet to be disseminated to stakeholders and community members about the 911 Good Samaritan and Naloxone Access law; the fact sheet provides information on who is protected under the law and under which conditions, as well as where to get more information about the law • Developed informational wallet cards, one on the new law and one with instructions on the use of naloxone kits, to be disseminated to stakeholders and community members • Wrote script for a radio public service announcement (PSA) summarizing 911 Good Samaritan and Naloxone Access law, including information on who is protected under the law and under which conditions, and where to get more information

Key Findings:	• Educational materials need to be accessible to a diverse audience, including low literacy populations • Having a specific target audience, e.g., law enforcement, drug users, and harm reduction workers, helped guide the development of each educational campaign tool • Developing a successful education campaign on policy change requires using multiple media, e.g., print brochures, wallet cards, radio announcements • Translating law into plain language takes time and review by legal experts
Recommendations:	• Recommend that NCHRC disseminate materials to stakeholders including law enforcement, drug users, prescribers, and other NC harm reduction organizations to increase knowledge and awareness of the 911 Good Samaritan and Naloxone Access law • Recommend that NCHRC share materials with other harm reduction organizations in other states trying to promote similar legislation

Discussion

Stakeholder engagement: Strengths and limitations

Stakeholder engagement played a huge role in the success of this project. This section will cover the strengths and limitations of stakeholder engagement, lessons learned throughout the project, and the impact of the project on the partner organization, NCHRC, and the Capstone Team members. Broader implications of this project's work will be discussed in addition to recommendations for the future use of project deliverables.

The relationship forged between the Capstone team and the partner organization, NCHRC, was critical to initiating and maintaining relationships with project stakeholders. Regular meetings with the Capstone preceptor and NCHRC Executive Director, Robert Childs, provided insight into NCHRC as an organization and allowed for regular feedback on deliverables. After the first meeting with Robert, he introduced the team via email to Corey Davis, a local public health attorney and policy expert, who provided resources for the literature review, the legal language needed in the policy recommendations, and review of the educational campaign materials for legal accuracy. Robert also introduced the team to Chad Sanders, whose sister died of drug overdose in 2006 while in college. One team member interviewed Chad for an op-ed advocating for the 911 Good Samaritan and Naloxone Access legislation, which was published in two local newspapers, demonstrating the value of framing the issue in a heartfelt,

personal way. Chad and his family also presented his sister's story at the overdose prevention summit. Feedback from summit attendees highlighted the importance of personal stories in garnering support for the legislation. Not only did the story put a face on overdose, but it also dispelled the myth that all drug overdose victims are street drug users.

Guidance from NCHRC staff members maximized the team's ability to accomplish project goals. Preceptor Robert Childs advised the team on how to frame the issue for a conservative, Republican audience. His direction prompted team members to frame the legislation as a cost-effective, pro-law enforcement solution rather than a public health solution. He also stressed the importance of maintaining frequent contact with legislators, which led the team to prioritize calling, emailing, and visiting individual legislators to voice support for the legislation. NCHRC Program Coordinator, Tessie Castillo, provided similar guidance by leading the team's media advocacy efforts.

Leilani Attilio, NCHRC Overdose Prevention Coordinator, is a registered nurse and US army veteran. The team met with her prior to the John Locke Foundation presentation because she had presented to this group before and knew some of the objections and concerns they might express. As a result, the team addressed some of these concerns in the presentation. For example, reducing public costs and government interference were two issues Leilani speculated the audience would be interested in from her prior interactions with JLF, so the team created a specific slide to show the projected cost savings of the policy.

The team's participation in NCHRC outreach activities served to demonstrate the importance of project goals and ensured that deliverables incorporated the needs of drug users, a group that will directly benefit from the new law. At the start of the project, the preceptor and a small group of NCHRC outreach workers met with the team for a harm reduction training, including former and current sex workers and drug users. By making this the first step in the project, the team felt more aware of the issues facing drug users, which provided team members with specific reasons why 911 Good Samaritan and Naloxone Access legislation was needed. For example, one drug user described in detail how he had saved someone's life from an opioid overdose using naloxone. This type of personal testimony was recounted

when team members met with legislators and other stakeholders to help bolster arguments for the legislation. Team members also observed a harm reduction outreach session in a local jail. Not only did this experience demonstrate harm reduction in action, it allowed team members to interact with a population at high risk for overdose. Like the informal training, this experience gave confidence and credibility to the team when meeting with legislators and stakeholders. Team members could reference testimonials from these interactions with potential beneficiaries, which helped personalize the issue and generate interest among legislators.

In addition to building a relationship with the partner organization, staff, and outreach workers, the team also actively engaged legislators by calling, emailing, and meeting face-to-face to ask for their support of the 911 Good Samaritan and Naloxone Access legislation. Team members also attended the Child Fatality Task Force meeting were they were able to hear the perspective of medical board members, legislators, and law enforcement officials. Some attendees voiced concerns over a 911 Good Samaritan law in NC because of fear that it may lead to increased drug use or drug-related crime, or that it would give drug dealers a get out of jail free card. Team members also attended several legislative hearings for the bill at the NCGA, which provided the team with the opportunity to hear additional legislator concerns and to physically show support for the legislation. Thus, stakeholder engagement was critical to the development, implementation, and ultimately, the success of the Capstone project.

Engaging with stakeholders proved essential to the success of the project, but there are additional strategies that would have further strengthened the project. Attending NCHRC staff meetings would have helped to facilitate the relationship with staff members, as well as clarify the organizational structures and processes relevant to project work. The team was able to forge these relationships eventually, but it would have been valuable to build rapport with these individuals earlier in the project. Additionally, attending a street outreach session would have provided a deeper understanding of harm reduction and the importance of NCHRC's outreach work, especially from the perspective of local drug users. Attending many of these activities was complicated by the conflicting schedules of team members and the fast-paced nature of policy work. The tasks and activities necessary in policy advocacy can change by the hour. Legislator

statements or hesitations put pressure on advocates to increase advocacy efforts. Amendments can be filed almost at will, potentially changing the nature or the implications of the bill. In fact, although a positive change, an amendment to provide immunity for underage alcohol possession/consumption was added late in the legislative process. The team's ability to respond quickly to these changes often took priority over making time for direct outreach events.

The project preceptor and faculty advisor each have myriad connections in the field of overdose prevention, but reaching beyond those connections could have strengthened project work. Examples of additional contacts include substance abuse treatment facilities, scientists researching effects of drug abuse, and medical personnel like Emergency Medical Technicians (EMTs). Also, it would have been beneficial to receive clearer guidance on exactly how to engage certain stakeholders. For example, the intended audience for the policy recommendations was unclear, and in the end, the recommendations were not used to educate legislators. Having a clearer goal in mind for the policy recommendations, reaching out to additional stakeholders, and engaging more closely with existing stakeholders are a few strategies that could have strengthened this project. Notwithstanding the nature of policy work and the limitations of the Capstone team's efforts, the project proved successful in the end with the passage of the 911 Good Samaritan and Naloxone Access legislation, which became law on April 9, 2013.

Lessons learned

The Capstone team developed many valuable skills that will serve team members well in future public health endeavors. Through researching policy solutions and rallying bipartisan support, team members acquired policy development skills. The team also gained skills in advocacy, including calling representatives to voice support, writing op-eds and Letters to the Editor for publication around the state, and attending legislative meetings and sessions at the NCGA. An important skill in media advocacy is how to "frame" an issue or policy to appeal to different audiences. For example, stressing the prevalence of prescription drug overdose and highlighting the diversity of overdose victims—from US veterans to the elderly—engenders the support of political conservatives. In talking with members of the JLF, for

example, it was more appropriate to link overdose prevention policies to cost savings and freedom from government interference.

Capstone team members also acquired knowledge about the epidemiology of overdose in the US and NC and the principles of harm reduction, including ways to make drug use safer. More importantly, the team learned about drug use and overdose from a personal perspective from those who have been directly affected. Through interactions with families of overdose victims, drug users, and sex workers, team members developed sensitivity to these populations. Working with any vulnerable population requires cultural sensitivity in order to be successful. This experience reinforced that lesson and provided tools to continue to build on that sensitivity in future work.

Impact on Capstone partner organization

This Capstone project increased NCHRC's capacity to advocate for the 911 Good Samaritan and Naloxone Access bill by providing the organization with promotional and educational materials related to the proposed legislation. In addition, the Capstone team enabled the organization to hold the overdose prevention summit by planning the logistics of the summit, personally inviting members of the NCGA, utilizing social media, sending emails, and posting flyers to promote the event. The team has supplied NCHRC with a portfolio of all of the summit-related materials that were developed to help them plan and promote future events, as well as educational materials to be distributed to promote overdose prevention education and awareness of the new law.

Impact on content area

The Capstone project strengthened NCHRC's relationship with the NCGA, raised awareness of the problem of drug overdose, and resulted in the passage of the first Republican-introduced 911 Good Samaritan and Naloxone Access law the in the US. If implemented as intended, this new law will significantly benefit drug users and their family and friends, enabling them to survive drug overdoses and pursue treatment, and ultimately improve the quality of life of NC residents affected by drug overdose. In addition, the passage of such a law in a more politically conservative state will likely encourage a broader

group of states to adopt similar policies in the future. This could have a tremendous impact on fatal drug overdose in the US and the dissemination of other harm reduction-based policies.

Future recommendations

In future Capstone projects with NCHRC, the team recommends broadening stakeholder engagement reach to those outside of the preceptor's network, such as people in the medical community, the Sheriff's Association, local researchers, local drug treatment centers, and addiction specialists. Other recommendations include attending NCHRC staff meetings to build rapport with staff members and become more familiar with the breadth of the organization's work and frequent face-to-face meetings with preceptor Robert Childs, since this type of interaction proved the most valuable in this project. Engaging in face-to-face meetings with legislators would be another way to garner as much support as possible for future policy initiatives. Legislators respond positively to face-to-face meetings because it shows effort and dedication to the issue.

Conclusion

Through engagement with NCHRC and stakeholders such as legislators, law enforcement, and community members, the Capstone team was able to assist in successfully passing legislation to reduce unintentional drug overdose deaths in NC. The team supported NCHRC's efforts to advance policy change by applying public health expertise developed in the Master's program. By educating stakeholders and community members on the burden of drug overdoses in NC and possible policy solutions, the team made a significant contribution to the passage of the 911 Good Samaritan and Naloxone Access Law. In addition to helping prevent overdose deaths in NC, this project enabled the Capstone team to gain valuable policy and advocacy skills. Interventions at the policy level such as this have the greatest potential for creating sustainable behavior change.

References

American-Statesman Investigative Team. (2012). **Prescription drug abuse, overdoses haunt veterans seeking relief from physical, mental pain**. Retrieved 10/3, 2012, from http://www.statesman.com/news/news/prescription-drug-abuse-overdoses-haunt-veterans/nSPLW/

Baca, C. T., & Grant, K. J. (2007). What heroin users tell us about overdose. *Journal of Addictive Diseases, 26*(4), 63-68. doi: 10.1300/J069v26n04_08

Banta-Green, C., Kuszler, P., Coffin, P., & Schoeppe, J. (2011). Washington's 911 good samaritan drug overdose law-initial evaluation results. *Alcohol & Drug Abuse Institute, University of Washington, November*,

Beletsky, L., Ruthazer, R., Macalino, G. E., Rich, J. D., Tan, L., & Burris, S. (2007). Physicians' knowledge of and willingness to prescribe naloxone to reverse accidental opiate overdose: Challenges and opportunities. *Journal of Urban Health, 84*(1), 126-136.

Binswanger, I. A., Stern, M. F., Deyo, R. A., Heagerty, P. J., Cheadle, A., Elmore, J. G., & Koepsell, T. D. (2007). Release from prison--a high risk of death for former inmates. *The New England Journal of Medicine, 356*(2), 157-165. doi: 10.1056/NEJMsa064115

Cadore, Y. (2012). In Robert Childs (Ed.), *911 good sam advocacy*

Centers for Disease Control and Prevention. (2010). WONDER [database]. atlanta, GA: US department of health and human services. Retrieved 10/23, 2012, from http://wonder.cdc.gov/

Centers for Disease Control and Prevention. (2011). **Morbidity and mortality weekly report (*MMWR*),**
Vital signs: Overdoses of prescription opioid pain relievers --- united states, 1999--2008. Retrieved 10/11, 2012, from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6043a4.htm

Centers for Disease Control and Prevention. (2012a). Community-based opioid overdose prevention programs providing naloxone — united states, 2010. *Morbidity and Mortality Weekly Report, 61*(6), 101.

Centers for Disease Control and Prevention. (2012b). **Poisoning in the united states: Fact sheet**. Retrieved 10/11, 2012, from http://www.cdc.gov/homeandrecreationalsafety/poisoning/poisoning-factsheet.htm

Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2010). Web-based injury statistics query and reporting system (WISQARS). Retrieved 10/11, 2012, from http://www.cdc.gov/injury/wisqars/

Dasgupta, N., Sanford, C., Albert, S., & Wells Brason, F. (2010). Opioid drug overdoses: A prescription for harm and potential for prevention. *American Journal of Lifestyle Medicine, 4*(1), 32-37.

Davis, C. (2012). *Legal interventions to reduce overdose mortality: Naloxone access and overdose good samaritan laws.* ().The Network for Public Health Law.

Drug Policy Alliance (DPA). (2009). *Healing a broken system: Veterans battling addiction and incarceration.* (No. Issue Brief).

Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2008). Health behavior and health education: theory, research, and practice. Jossey-Bass.

Green, T. C., McGowan, S. K., Yokell, M. A., Pouget, E. R., & Rich, J. D. (2012). HIV infection and risk of overdose: A systematic review and meta-analysis. *AIDS (London, England), 26*(4), 403-417. doi: 10.1097/QAD.0b013e32834f19b6

Green, T. C., Heimer, R., & Grau, L. E. (2008). Distinguishing signs of opioid overdose and indication for naloxone: An evaluation of six overdose training and naloxone distribution programs in the united states. *Addiction, 103*(6), 979-989. doi: 10.1111/j.1360-0443.2008.02182.x

Kim, D. D. (2009). Expanded access to naloxone: Options for critical response to the epidemic of opioid overdose mortality. *American Journal of Public Health (1971), 99*(3), 402-407.

Lewis, D. K., & Marchell, T. C. (2006). Safety first: A medical amnesty approach to alcohol poisoning at a U.S. university. *International Journal of Drug Policy, 17*(4), 329-338. doi: 10.1016/j.drugpo.2006.02.007

Maxwell, S. S. (2006). Prescribing naloxone to actively injecting heroin users A program to reduce heroin overdose deaths. *Journal of Addictive Diseases, 25*(3), 89-96.

Merrall, E. L., Kariminia, A., Binswanger, I. A., Hobbs, M. S., Farrell, M., Marsden, J., . . . Bird, S. M. (2010). Meta-analysis of drug-related deaths soon after release from prison. *Addiction (Abingdon, England), 105*(9), 1545-1554. doi: 10.1111/j.1360-0443.2010.02990.x

Moraff, C. (2012, August 9, 2012). Calling 911 should not get you arrested: Bucks county rep's harrisburg bill could prevent drug overdose deaths. *Philadelphia Magazine,*

National Institute on Drug Abuse. (2011). Research reports: Prescription drugs: Abuse and addiction. Retrieved 10/11, 2012, from http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/what-are-opioids

North Carolina Harm Reduction Coalition. (2013). North carolina harm reduction coalition. Retrieved September 1, 2012, from www.nchrc.org

North Carolina Quick Facts. (n.d.). Retrieved March 1, 2013 from http://data.osbm.state.nc.us/staterank/state_rankings.pdf

North Carolina State Center for Health Statistics. (2009). Detailed mortality statistics. Retrieved, 2012, from http://www.schs.state.nc.us/SCHS/data/dms/dmsnojs.cfm

Oster-Aaland, L. (2011). The impact of an online educational video and a medical amnesty policy on college students' intentions to seek help in the presence of alcohol poisoning symptoms. *Journal of Student Affairs Research and Practice, 48*(2), 141.

Paulozzi, L. J., Ballesteros, M. F., & Stevens, J. A. (2006). Recent trends in mortality from unintentional injury in the united states. *Journal of Safety Research, 37*(3), 277-283.

Paulozzi, L. J., Budnitz, D. S., & Xi, Y. (2006). Increasing deaths from opioid analgesics in the united states. *Pharmacoepidemiology and Drug Safety, 15*(9), 618-627.

Piper, T. T. M. (2008). Evaluation of a naloxone distribution and administration program in new york city. *Substance use & Misuse, 43*(7), 858-870.

Pollini, R. R. A. (2006). Response to overdose among injection drug users. *American Journal of Preventive Medicine, 31*(3), 261-264.

Rosen, D. L., Schoenbach, V. J., & Wohl, D. A. (2008). All-cause and cause-specific mortality among men released from state prison, 1980-2005. *American Journal of Public Health, 98*(12), 2278-2284. doi: 10.2105/AJPH.2007.121855

Sackoff, J. E., Hanna, D. B., Pfeiffer, M. R., & Torian, L. V. (2006). Causes of death among persons with AIDS in the era of highly active antiretroviral therapy: New york city. *Annals of Internal Medicine, 145*(6), 397-406.

Sanford, C. (2002). *Deaths from unintentional drug overdoses in north carolina: A DHHS investigation into unintentional poisoning-related deaths.* (). North Carolina: North Carolina Department of Health and Human Services.

Seal, K. H., Shi, Y., Cohen, G., Cohen, B. E., Maguen, S., Krebs, E. E., & Neylan, T. C. (2012). Association of mental health disorders with prescription opioids and high-risk opioid use in US veterans of iraq and afghanistan. *JAMA: The Journal of the American Medical Association, 307*(9), 940-947.

Seal, K. K. H. (2005). Naloxone distribution and cardiopulmonary resuscitation training for injection drug users to prevent heroin overdose death: A pilot intervention study. *Journal of Urban Health, 82*(2), 303-311.

Seal, K. H., Downing, M., Kral, A. H., Singleton-Banks, S., Hammond, J. P., Lorvick, J., . . . Edlin, B. R. (2003). Attitudes about prescribing take-home naloxone to injection drug users for the management of heroin overdose: A survey of street-recruited injectors in the san francisco bay area. *Journal of Urban Health : Bulletin of the New York Academy of Medicine, 80*(2), 291-301. doi: 10.1093/jurban/jtg032

Sherman, S. S. G. (2008). A qualitative study of overdose responses among chicago IDUs. *Harm Reduction Journal, 5*(1), 2.

State of North Carolina Department of Health & Human Services Division of Public Health Epidemiology Section: Communicable Disease Branch. (2011). *North carolina epidemiologic profile for HIV/STD prevention & care planning.* ().

Tobin, K. E., Davey, M. A., & Latkin, C. A. (2005). Calling emergency medical services during drug overdose: An examination of individual, social and setting correlates. *Addiction, 100*(3), 397-404. doi: 10.1111/j.1360-0443.2005.00975.x

Tracy, M. M. (2005). Circumstances of witnessed drug overdose in new york city: Implications for intervention. *Drug and Alcohol Dependence, 79*(2), 181-190.

Tyndall, M. W., Craib, K. J., Currie, S., Li, K., O'Shaughnessy, M. V., & Schechter, M. T. (2001). Impact of HIV infection on mortality in a cohort of injection drug users. *Journal of Acquired Immune Deficiency Syndromes (1999), 28*(4), 351-357.

Walley, A. Y., Doe-Simkins, M., Quinn, E., Pierce, C., Xuan, Z., & Ozonoff, A. (2012). Opioid overdose prevention with intranasal naloxone among people who take methadone. *Journal of Substance Abuse Treatment,* doi: 10.1016/j.jsat.2012.07.004; 10.1016/j.jsat.2012.07.004

Wang, C., Vlahov, D., Galai, N., Cole, S. R., Bareta, J., Pollini, R., . . . Galea, S. (2005). The effect of HIV infection on overdose mortality. *AIDS (London, England), 19*(9), 935-942.

Warner, M., Chen, L. H., Makuc, D. M., Anderson, R. N., & Miniño, A. M. (2011). *Drug poisoning deaths in the united states, 1980–2008.* (NCHS data brief No. 81). Hyattsville, MD: National Center for Health Statistics.