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Measuring the Impact: A RE-AIM Framework for Evaluation of a Needle Exchange Program

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Measuring the Impact: A RE-AIM Framework for Evaluation of a Needle Exchange Program

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Abstract

Background: Needle exchange programs (NEPs) have been widely documented over the past three decades as an effective and economic approach to controlling human immunodeficiency virus (HIV). As of July 1st, 2016, these programs have been legalized in North Carolina.

Purpose: To perform stage 1 of an evaluation of a needle exchange program in North Carolina by utilizing a public health framework: the Reach, Efficacy, Adoption, Implementation, and Maintenance (RE-AIM). *Methods:* First, the RE-AIM framework was used to create a plan for a program evaluation of a local NEP. Then, the first stage of the evaluation was completed. NEP program participants were interviewed to discuss their motivations, barriers, and use of the program's services. Additionally, a survey was distributed to local law enforcement officers to assess their experiences, knowledge and attitudes of needle exchange and the laws governing it in North Carolina. *Results:* Generally, program participants believe the NEP provides a non-judgmental atmosphere and a sense of community. They also wish for alternate hours and more advertising regarding programs that are offered. Twenty three percent of area police incorrectly believe possession of syringes and other supplies from a needle exchange is illegal. *Conclusions:* The NEP should concentrate on increasing awareness of the programs they offer and investigate providing alternate hours of operation. Furthermore, local area police may need additional training regarding the legality of needle exchange in this area, including how to respond to scenarios that impact drug users. *Implications for Practice:* The RE-AIM framework was provided to the NEP for further evaluation. Offering training for local area police may increase their knowledge of the law and improve relations with participants of the NEP. More flexible hours at the NEP site may make their services more accessible to a variety of people.

Keywords: harm reduction, needle exchange, RE-AIM, program evaluation.

RE-AIM Evaluation of a Needle Exchange Program in Greensboro, North Carolina

Background and Evidence of Problem

In the United States, blood borne pathogen transmission has long been a topic of concern in public health. One of the highest-risk behaviors for becoming infected with blood borne pathogens like human immunodeficiency virus (HIV), Hepatitis B, and Hepatitis C is injection drug use. This is particularly true when a person is sharing or using dirty needles because blood-to-blood contact is one of the most efficient methods for virus transmission. There is a relatively small percentage of Americans who have HIV attributed to drug use, but this population makes up a much larger portion of deaths from AIDS. While only eight percent of all HIV infections in the United States were due to injection drug use in 2013, in 2012, 26% of deaths among people who had Acquired Immune Deficiency Syndrome (AIDS) were injection drugs users (Centers for Disease Control and Prevention [CDC], 2015). Moreover, nearly half of these cases were African American, and over 60% were homeless or had been incarcerated (CDC, 2015). Furthermore, injection drug use often leads to poor judgment and sexual risk taking, which increases the chance of HIV transmission from other methods (CDC, 2015).

Not only is HIV a health issue on the national scale, it also has a large negative impact locally. Southern states now account for 54% of all new HIV infections despite only having 37% of the nation's population (CDC, 2016a), and North Carolina is no exception. There are an estimated 50,000 persons who inject drugs (PWID) living in North Carolina (Human Rights Watch, 2011). From 2012 to 2014, the new HIV diagnosis rate per 100,000 population in North Carolina was higher than the national average (CDC, 2016b). Guilford County is of particular concern, with a new HIV infection rate of 21.7 per 100,000 population surpassing both the national and state averages (Guilford Assessment Team, 2016).

The reasons behind an elevated HIV diagnosis rate in North Carolina are varied and

complex. Disparities in socioeconomic status, income inequality, and access to health care are more widespread issues in the South compared to other geographic areas in the United States (U.S.) (CDC, 2016a). In addition, cultural factors in the South may also play a role. Conservative ideologies and a general discomfort with open discussion about sexuality and injection drug use may prevent people from accessing much-needed care or getting the education they need to protect themselves from HIV and other infections (CDC, 2016a).

Prevention practices on the policy level have also not been up to par until recently. Needle exchange, also called syringe exchange (NEP/SEP), is the practice of providing PWID with clean needles in exchange for used needles to reduce the risk of contracting HIV or viral hepatitis as a result of sharing needles. NEPs may also offer other services including counseling on risk reduction, referrals to mental health care or other services, and provision of naloxone to prevent deaths from opioid overdoses. This method of prevention has been employed in many locations both globally and in the United States with success (Aspinall et al., 2014; Fernandes et al., 2017; Hurley, Jolley, & Kaldor, 1997) However, until recently, NEPs were considered illegal in North Carolina. The state has historically favored abstinence-only measures as a means of keeping PWID safe from infection. On July 11th, 2016, NEPs were granted legal status in this state (HB 972, 2016). There was a hurry to establish multiple NEP sites all across the state, and in under a year, there were over twelve (North Carolina Harm Reduction Coalition [NCHRC], n.d.). Some of these NEPs have been operating illegally for many years, and now struggle to transition into legal public health service organizations.

Problem Statement

Risk of NEP ineffectiveness in North Carolina is indicated by a lack of formal program evaluation that could provide necessary information for program developers how to improve such programs. Additionally, formal program evaluation could provide necessary

information to key stakeholders and public health officials regarding their value. After the legalization of needle exchange programs in North Carolina, multiple upstart NEPs became established in this state. Many of these programs struggle to obtain comprehensive public health evaluation information regarding their impact in North Carolina; lack of resources, staffing and excessive needs to provide direct services limit their ability to evaluate their programs. This led the DNP candidate to recognize that providing a framework for evaluation would be an essential first step in the public health evaluation of local NEPs. This project utilized an evidence-based model to provide that framework, as well as initial evaluation data and a framework for further public health impact evaluation.

Review of the Literature

A review of the literature was completed by searching the National Guideline Clearinghouse (NGC), Cochrane review, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and PubMed. Search terms included the medical subject heading (MeSH) term “needle exchange program” as well as the variants “needle exchange,” “syringe exchange” and “syringe exchange program.” These search terms were also combined with “implementation” to find best literature of models of NEPs. Only research articles written in English, from peer-reviewed sources, with full text available were included for further review. Articles that did not focus on needle exchange as the primary intervention, such as supervised injection facilities, were excluded from review. The review of literature on the Cochrane Library was not limited by dates as many reviews found compiled hallmark studies that documented NEP impact over the past three decades. PubMed and CINAHL searches were limited to articles published since 2010.

From the Cochrane Library, five research studies were found according to the parameters listed. All five studies were included for review. CINAHL yielded 101 studies, and PubMed yielded 230 studies. Reviewing the NGC did not produce any guidelines with

needle exchange as the focus of intervention. Studies from CINAHL, PubMed, and Cochrane were examined for appropriateness of this literature review. Any articles where the primary intervention or variable was not needle exchange were excluded. Articles were evaluated using the Johns Hopkins Nursing Evidence-Based Practice Model (JHNEBP) (Newhouse, et. al., 2005). Needle exchange is a public health intervention and it is difficult to find randomized controlled trials (RCTs) that capture the strength of the evidence for this intervention. Multiple levels of evidence, from summative reviews to guideline recommendations, qualitative reviews and quasi-experimental studies were utilized. However, only articles with good or high-quality evidence (level A or B) were included. Eleven studies were included for further review; five systematic reviews, four qualitative studies, one organizational case study, and one expert opinion based on mathematical modeling of financial data.

Establishing Needle Exchange Programs as Effective

There is a wealth of evidence demonstrating the effectiveness of needle exchange in reducing the spread of HIV. Three systematic meta-analyses from the Cochrane review, fit for inclusion in the Cochrane Database of Abstracts of Reviews of Effects (DARE), provide sound evidence over the course of three decades regarding the benefit of needle exchange provision on decreasing HIV transmission (Aspinall et al., 2014; Hurley et al., 1997; Leonard, Forrester, Navarro, Hansen, & Doucet, 1999). Moreover, qualitative data demonstrates that PWID also find value in needle exchange programs as a harm reduction measure, but negative contacts with local law enforcement often impede their usage (McNeil & Small, 2014). Furthermore, it is estimated that between 194,816 HIV infections would be averted yearly with an estimated \$10 to \$50 million increase in funding for needle exchange programs, which would provide a much better return on investment than treating HIV (Nguyen, Weir, Des Jarlais, Pinkerton, & Holtgrave, 2014).

Ideal Provision of Needle Exchange Programs

Although needle exchange programs are effective in reducing the spread of HIV, the question about the availability of a best practice model of implementation arose when developing this project. Six studies were found that examined models, best practices, as well as barriers and facilitators to needle exchange programs (Allen, Ruiz & O'Rourke, 2015; Burr et al., 2014; Downing et al., 2005; Jones, Pickering, Sumnall, McVeigh & Bellis, 2010; Koo et al., 2015; Strike et al., 2011). A meta-analysis of different methods of NEP provision asserted that although certain qualities may make them more effective (i.e., mobile exchange sites), no one implementation model is superior to others (Jones et al., 2010). Burr et al. (2014) described an implementation model where nurses were integrated into existing needle exchange programs in New Jersey in order to provide a wealth of services to previously underserved clients, thereby attracting a much larger population to receive necessary treatment (2014). Two studies (Downing et al., 2005; Koo et al., 2015) examined barriers to NEP success, finding that law enforcement preconceptions and lack of strong leadership or resources are often the largest barriers NEPs face, while community involvement and cultural sensitivity can positively impact the success of an NEP. Moreover, the success of an NEP is founded on six key strategies: political/cultural sensitivity, community involvement, good leadership, access to needed resources, utilization of evidence-based practice, and resisting fear of repercussions. In addition, although NEP program managers may be receptive to evidence based practice and do their best to implement evidence based strategies in their programs, legislative and sociopolitical factors, as well as other methods of harm reduction, need to be considered before instituting best practice protocols in needle exchange programs (Allen et al., 2015; Strike et al., 2011).

Theoretical Framework: RE-AIM

The RE-AIM framework for public health program evaluation (Glasgow, Vogt, & Boles, 1999) is the model the DNP candidate used to evaluate the NEP in Guilford County, North Carolina (Appendix A). The acronym RE-AIM stands for:

- *Reach* to the intended population;
- *Efficacy* of the program;
- *Adoption* by target staff, settings, or institutions;
- *Implementation* of the program, including costs, consistency and application; and
- *Maintenance* of the intervention over time (Glasgow et al., 1999)

Glasgow, Vogt & Boles argue that models that purport a program's impact to be a product of the reach and efficacy ($R \times E = I$) of the program may fail to fully evaluate the scope of the program. The three added dimensions of adoption, implementation, and maintenance provide added insight to the program evaluator. This framework is appropriate for programs that offer multilevel interventions that influence policy, individuals, and communities (Glasgow et al., 1999).

Project Design

This project was the creation of a framework for public health impact evaluation of a NEP in Guilford County, North Carolina using RE-AIM, and a collection of initial public health impact evaluation data.

Project Site and Population

The NEP where this project occurred is one branch of a national organization that is primarily composed of individuals who have a personal history or ongoing relationship with drugs. The purpose of the organization is to provide advocacy, support, leadership, organizing, and community awareness surrounding the topic of drug use. What sets this organization apart from others is that the strategic planning for the organization is entirely

determined by current or former persons who use drugs. They strongly believe that many drug policies carried out by individuals who have little or no knowledge of drug use do more harm than good for their population.

The needle exchange program is in Greensboro, North Carolina and primarily serves clients in Guilford County. However, as many other areas of the state have been lacking an NEP for so long, this program also makes arrangements to get needles and supplies to other cities and towns if needed. The total population of Guilford County is 488, 406 (U. S. Census Bureau, 2010). It is estimated that approximately 3.51% of the population of Guilford County used an illicit substance other than marijuana in the past month (Substance Abuse and Mental Health Service Administration [SAMHSA], 2014). This is the population that the NEP primarily serves, and it has been operating for many years. However, until July of 2016, this operation was considered illegal in the state of North Carolina.

The NEP provides two types of exchange service. One is a fixed site location in downtown Greensboro that has office hours on Monday, Tuesday and Friday afternoons or by appointment for needle exchange and supply pick up for its clients. The other is a delivery service where a client would call program volunteers to have supplies dropped off to them. As of March 2017, the NEP implemented a program entry form for all new participants. When new participants complete this form, they are asked about demographic information and practices of substance use. They are then assigned a unique identifier and given a card identifying them as participants of the NEP. This form collects demographic information as well as practices of substance use. Return participants in the program are provided with a card containing a unique identifier so that each visit to procure supplies can be logged.

Besides providing clean needles and supplies for PWID, the NEP also provides many other services. They provide naloxone and naloxone training for opioid overdoses. Staff

may also make referrals to suboxone clinics, mental health, or other outside depending on the needs of the participant. The NEP has also sponsored many community organizing groups, harm reduction and safe drug use counseling, focus groups on hepatitis C and other diseases affecting PWID, support groups for drug users and their families, and education and resources on many topics affecting persons who use drugs.

Goals and Objectives

The goals of this project followed the RE-AIM theoretical framework for public health evaluation (Glasgow et al., 1999). There were six goals. The initial goal was to create a framework for public health program impact evaluation that could be used by the needle exchange program in an ongoing basis. The five additional goals followed the RE-AIM model to provide evidence of the NEP’s *reach*, *efficacy* as a public health program, *adoption* in the community, *implementation* strategy, and *maintenance* and sustainability. While planning this project, additional objectives for each goal were added to create a plan for data collection. These are found in Table 1.

Table 1

Project Goals and Objectives

Goals	Objectives
1. Create clear and specific plan for program evaluation according to RE-AIM prior to project implementation.	1. Review RE-AIM website, seminal paper, and associated resources for strategy ideas, implementation methods, and data collection and analysis measures. 2. Collaborate with executive director at NEP to determine most useful and extractable measures for evaluation. 3. Create proposed list of objectives, measures, and instruments to be utilized under each RE-AIM domain to evaluate.
2. Provide evidence of the NEP’s <i>reach</i> during project implementation.	1. Determine the target population for services at the NEP. 2. Determine the representativeness of the target population of Guilford County. 3. Determine the number and characteristics of people the NEP served. 4. Determine the amount of injection supplies the NEP has provided. 5. Determine the number of naloxone kits the NEP has provided.

- | | |
|--|---|
| | 6. Identify barriers participants have to accessing services at the NEP. |
| | 7. Identify facilitators participants have to accessing services at the NEP. |
| 3. Provide evidence of the NEP’s <i>efficacy</i> as a public health program during project implementation. | <ol style="list-style-type: none"> 1. Provide evidence of the potential impact the NEP has had on HIV rates in program participants and in Guilford County. 2. Provide evidence the NEP has had on safe injection supply disposal. 3. Provide evidence of the potential impact the NEP has had on needle stick injuries to law enforcement officers in Guilford County. 4. Provide evidence of the potential impact the NEP has had on opioid overdose reversals in Guilford County. 5. Identify unexpected or unwanted outcomes of the program. |
| 4. Provide evidence of the NEP’s <i>adoption</i> in the community during program implementation. | <ol style="list-style-type: none"> 1. Provide evidence of the impact the NEP and legislature has had on the knowledge and attitudes of needle exchange among law enforcement officers in Guilford County. 2. Identify and describe key relationships the NEP has with other organizations. 3. Determine if program participants refer others to utilize services at the NEP. |
| 5. Provide evaluation of the NEP’s <i>implementation strategy</i> | <ol style="list-style-type: none"> 1. Identify if the NEP program is being delivered as it was intended. 2. Identify costs associated with the program. 3. Determine if the NEP is delivered in accordance with state law and other NEP program exemplars. |
| 6. Provide evidence of the NEP’s <i>maintenance</i> and sustainability | <ol style="list-style-type: none"> 1. Determine the ratio of new and return users for supplies at the NEP. 2. Identify legal/ advocacy efforts on behalf of the NEP. 3. Provide evidence on the sustainability of the program. 4. Assist in identifying future directions for the NEP. |
-

This was an ambitious project, and not all the initial outlined objectives could be met, but as developed is a contribution to ongoing evaluation. Further discussion can be found in the Results section.

Data Collection and Analysis

The collection of data for the first stage of this program evaluation followed a mixed methods approach. This included brief structured interviews with NEP program participants and an anonymous survey distributed to local law enforcement.

Interviews with NEP participants. NEP program participants were recruited by program staff to participate in a brief interview with the DNP candidate. Returning NEP participants over the age of 18 were offered information about the project and asked to participate in the program evaluation. The DNP candidate maintained regular hours at the NEP site to facilitate these in-person interviews. The interview consisted of 13 open-ended questions that assessed self-reported barriers and facilitators to accessing services at the NEP, motivations to participate, frequency of use of NEP program services, changes in health and habits since becoming a participant of the NEP, and suggestions for program provision (Appendix B). Each interview took approximately 15 minutes to complete, and participants were free to refuse to answer any question. Interviews were audio recorded with the participant's consent and transcribed by the DNP candidate. NVivo software was used to conduct thematic analysis of the participant responses.

Survey of law enforcement officers. An anonymous online survey was distributed to all law enforcement officers with the local area police department (Appendix D). The survey collected data on self-reported needlestick injuries while working as law enforcement in Guilford County, level of experience working with persons who inject drugs or use other illicit substances, and knowledge of laws governing needle exchange. Additionally, the survey included a 5-point Likert-type scale. This assessed officer's fear of future needlestick injuries while working, attitudes regarding the efficacy of needle exchange programs on public health, and personal practices of arrest and confiscation of paraphernalia. Officers were free to skip any question. The survey took approximately ten minutes to complete. Survey data was exported to Excel, and data were analyzed using the descriptive statistics package.

Ethical Considerations and Protection of Human Subjects

The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB) approval for expedited review was obtained prior to initiating this project. Informed consent forms were signed by NEP program participants prior to participating in interviews (Appendix G). All participants were protected by Health Insurance Portability and Accountability Act of 1996 (HIPAA); and since this project did not involve an intervention, there was no elevated risk to the client above their regular participation in services provided by the NEP. Interview participant confidentiality was assured by coding the participants using individual identification numbers. Interviews with program participants were audio recorded with their consent to allow for further qualitative analysis, and names were not audio recorded. Informed consents and the list of interview participants with their identifying numbers were kept in a locked filing cabinet in a secured location. Furthermore, participation in the interview did not affect whether they could receive services at the NEP.

This evaluation also included the use of an online survey for law enforcement officers. This survey was structured so as not to collect any personal identifying information to protect the privacy of those completing it. The officers were asked to agree to an informed consent prior to completing the survey (Appendix G). There was no increased risk of completing this survey above their normal duties, and their employers did not have access to their responses or know whether they completed a survey. The online service where surveys were stored, esurveycrator.com ensured confidentiality of information stored in the cloud in their privacy policy.

Results

The initial outlined project included multiple objectives to provide a robust public health impact evaluation of the NEP. However, due to time constraints, it was not possible to address each objective as originally outlined. The process of program evaluation is never

truly complete. To assist with further evaluation efforts, the RE-AIM framework for NEP evaluation was provided to the NEP, including specific measures and instruments to gather data as the program moves forward (Appendix A). This project was intended to be the first stage of program evaluation. Thus, it was imperative to gather information from two groups of key stakeholders: the NEP program participants, as well as local law enforcement officers. By gathering information from these two groups, the DNP candidate was able to provide the NEP with new data that can help mold future directions. The results of the interviews with NEP participants and surveys of law enforcement officers are detailed below.

Interviews with NEP Participants

Nine NEP participants were interviewed by the DNP candidate. Most interviews were audio recorded and transcribed with the participant's consent; for the two participants that did not consent to audio recording copious notes were taken to best capture the participant's words. Recordings were transcribed and imported into NVivo 11 Pro. Responses to each question were coded and grouped, and the DNP candidate used thematic analysis to find overall themes among the participants' responses. The complete codebook participant responses to interview questions can be found in Appendix C.

Inviting atmosphere of the program. NEP participants reported several motivations to use the services offered at the NEP. However, the most frequently reported reason to use the services was to prevent the spread of disease to themselves or others. Participants also frequently reported that they enjoy coming to the NEP because the staff are friendly, and the exchange provides a non-judgmental atmosphere. This was the most frequently cited facilitator to program use. One participant reported: *"There's no judgement—the people here don't judge you. At the hospital if they see a scar, they treat you like crap."* Another participant stated: *"I'm not judged. I'm not wearing a sign on my chest."* Another participant alluded to the presence of stigma surrounding drug use and PWID, stating *"I don't really find*

that anybody here passes judgement. It's the people outside of here." Participants frequently referred to the exchange as a place of relaxation and refuge, with one participant stating: *"I mean there have been times that I've just come here, I've come here, like not even when I need anything. Just to hang out and like, do homework, [mess] around for an hour and stuff."* Participants discussed the sense of community and networking they had discovered at the exchange, often citing the names of key staff and volunteers as friends or someone they would call in case of an emergency.

Safety. All participants also reported they felt safe at the exchange. Additionally, some participants mentioned that the provision of naloxone (Narcan) was a key reason why they continued to go to the exchange for supplies and other services. One participant reported:

"I mean, one life saved is enough reason for me to come back, I swear it is. And I know I talk about it every time I come up here, but you know--thank God for this place. It's a very good reason. If it wasn't for this place I'd have never had what I needed to save a person's life. It's just amazing that that happened. It's a miracle. I swear it is, this place is a miracle. It's a godsend."

Most participants also referred others to use the services at the exchange or stated they would bring others with them to get supplies. The majority also stated that they would purposely pick up supplies for others as well. However, over half of the participants stated that they did not attend group sessions or any other programs offered at the exchange and had not in the past. This may be due to the fact that as of this writing, only a few group sessions are offered, including weekly Narcan training and a weekly women's group. Many participants expressed interest in attending groups if more were offered.

Increased confidence and knowledge. Participants reported a variety of unexpected outcomes as a result of participating in services at the exchange. These included their increased knowledge or increased confidence as a member of the community of people who use drugs. One participant stated regarding their increase of knowledge, *"I mean--I just like*

the simple fact that I can guide people in a safer direction. If they're gonna use, at least be safe about it.” Another reported regarding her increased level of confidence as a person who uses drugs:

“It's just made me feel--when I did participate in the women's group--a news crew was here. Another time in my life I would have felt really embarrassed and not wanted to be on that. But I didn't care if I was. I felt comfortable, you know, identifying myself with this group.”

Another interviewee reports that the presence of staff encouraged him to speak with others about the exchange, stating:

“I just kind of watching [the executive director], you know, build this up, from pretty much, you know--nothing. It kind of you know, gives me the influence to--you know. That's why I talk to people to get 'em, like [the executive director] would do.”

Most participants also reported that as a result of using services at the exchange, they were only using needles once before discarding them. Some reported that while this is something they have always done, others stated that when they were purchasing supplies from the pharmacy, they might use a syringe more than once to save money. This finding is directly in line with the mission of the needle exchange. Additionally, some participants reported that since using services at the exchange, their drug usage had decreased, with one participant stating, *“Yeah, [I'm] using less overall. Less frequently and with a lot less, desperation I guess. I just feel like I'm in a better place.”* Although it is not the express mission of the exchange to get people to stop using drugs, they do provide support and education for individuals who express an interest in decreasing or quitting their use.

Barriers to program use. Reported barriers to program use were mixed. Most participants stated that they would like to see the hours change and had a variety of opinions on what would work best—from holding regular banking hours, to opening a few hours each day in lieu of the current extended hours three days a week, to hosting weekend hours. Many participants also reported they would like to participate in more groups or programs, but either did not know when they were or were afraid they would be poorly attended by others.

Participants wanted more networking or advertising within the community to expand the reach of the exchange, with one participant stating, *“If a mother and father in this neighborhood lost their son because of an overdose or something, I don’t think they’d turn their back on this place. I think we should make those connections.”* Another cited barrier was feeling like there was not a large enough variety of needles and syringes.

Summary. Participants had many positive things to say about the NEP. They enjoyed the non-judgmental atmosphere and caring staff at the program site and reported feeling safe using the exchange for services. Many reported feeling increasingly knowledgeable about health issues that may impact drug users or feeling more confident identifying themselves with the community of PWID. However, some cited barriers to program use, including inconvenient hours and poor awareness of the groups and programs the NEP offers to participants.

Survey of Law Enforcement Officers

Data from the police officer surveys were exported from esurveycreator.com into an Excel spreadsheet. The descriptive analysis package was used to analyze results. The link to the online survey was sent to officers via an email listserv, and the survey link was open between December 12th, 2017 through January 29th, 2018. It was distributed to 650 law enforcement officers. There were 68 survey responses, giving a response rate of approximately 10%. The survey included questions about officer’s history of needlestick injuries, experience with persons who use drugs, two true/false questions assessing their knowledge of North Carolina law governing needle exchange, and a table with Likert-type scales where their agreement with various statements was assessed. The scale items were coded with a corresponding number to allow for statistical analysis of the data. Table 2 discusses how the Likert-type scales were coded.

Table 2

Likert-Type Scale Codes

Likert-Type Scale Choice	Assigned Number
Strongly Disagree	1
Disagree	2
Neutral/No Opinion	3
Agree	4
Strongly Agree	5

Experience with the population of PWID or persons who use other substances was an important aspect to measure when considering the knowledge and attitudes of police towards NEPs. Sixty-six police officers responded to the level of experience they had working with people who inject drugs or using other substances in their capacity as law enforcement within Guilford County. Over half (52%) reported that they were very experienced working with this population, 44% reported some or occasional experience, and 4% reported little or no experience.

The survey included questions regarding the police officers' experience with and attitudes towards needlestick injuries. Six police officers (9%) reported a history of having a needlestick injury while working as law enforcement in Guilford County. Four out of the six (67%) reported the needlestick injury occurred five or more years ago, while two police officers reported that the injury occurred one or two years ago. No officers reported more than one needlestick injury while working as law enforcement in Guilford County. The clear majority of all respondents (82%) either agree or strongly agree that they are worried they may be stuck by a needle while on the job. Furthermore, only 18% agree or strongly agree that needle exchange programs decrease the risk of needlestick injuries for police. One quarter of police respondents (25%) agree or strongly agree that the presence of the NEP makes it more difficult to be a law enforcement officer in Guilford County. Table 3 and

Figure 1 contain more information regarding police officer attitudes about needlestick injuries and the safety of NEPs according to the Likert-type scale.

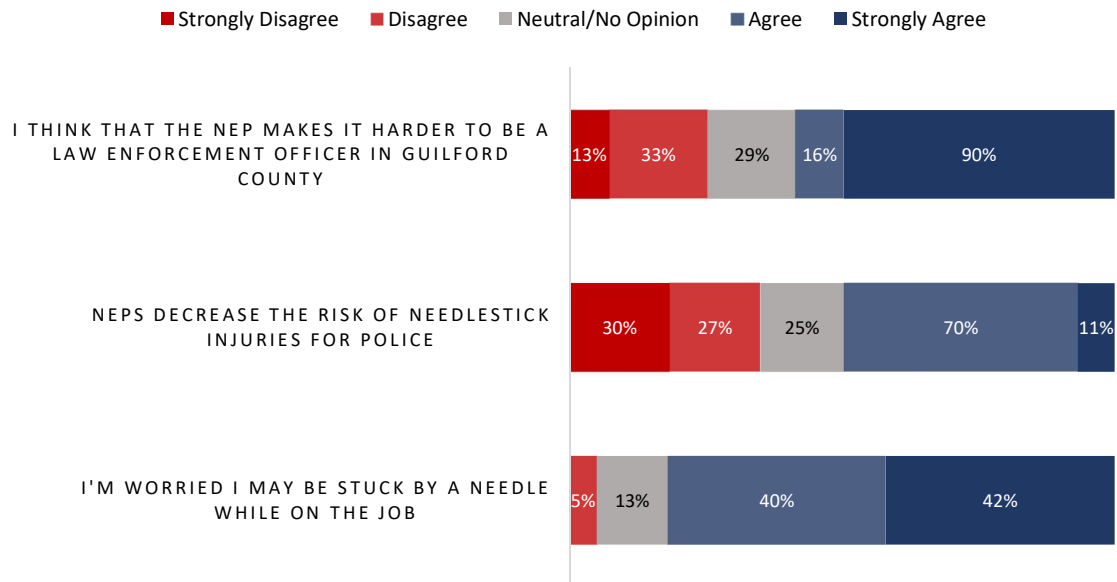
Table 3

Police Officer Attitudes About Needlestick Injuries and Safety of NEPs

Statement	Number of Respondents (n)	Median	Mean (M)	Standard Deviation (SD)
I am worried I may be stuck by a needle while on the job	55	4	4.18	.86
Needle exchange programs decrease the risk of needlestick injuries for police	55	2	2.44	1.29
I think that the needle exchange program makes it harder to be a law enforcement officer in Guilford County	55	3	2.76	1.15

Figure 1

Police Officer Attitudes About Needlestick Injuries and Safety of NEPs



The survey also included questions regarding the officer’s knowledge of the effectiveness of needle exchange and its legality in North Carolina. Over half of police respondents (60%) disagree or strongly disagree that needle exchange programs do not

promote drug use. The majority of respondents either disagreed (44%) or had no opinion (29%) with the statement that the NEP was improving the public’s health by providing clean injection supplies and naloxone to PWID. However, over half of police respondents (65%) agree or strongly agree that needle exchange programs help prevent the spread of HIV and hepatitis C. Officers were asked if organizations that provide clean needles and supplies to PWID are legal in North Carolina. Over three quarters of respondents (86%) answered correctly that needle exchanges are legal. Officers were also asked if carrying a needle, syringe or other supplies obtained from a needle exchange program was legal in North Carolina. Almost a quarter (23%) answered incorrectly—that this practice is illegal. Table 4 and Figure 3 contain more information regarding police officer attitudes about the effectiveness of NEPs according to the Likert-type scale.

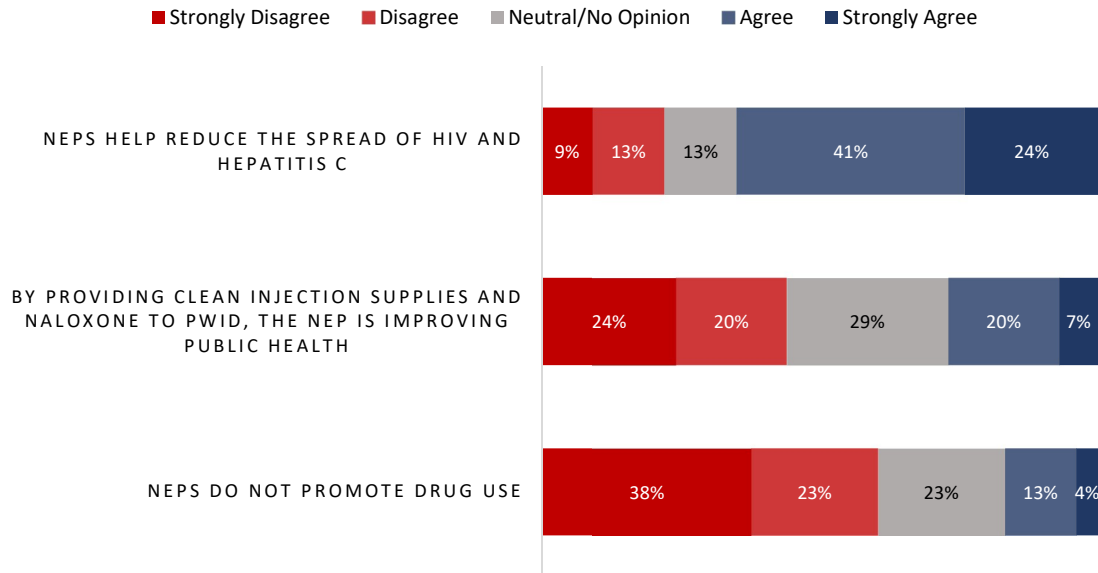
Table 4

Police Officer Attitudes About Effectiveness of NEPs

Statement	Number of Respondents (n)	Median	Mean (M)	Standard Deviation (SD)
Needle exchange programs do not promote drug use	53	2	2.23	1.20
By providing clean injection supplies and naloxone to persons who use drugs, the needle exchange program is improving public health	55	3	2.67	1.25
Needle exchange programs help reduce the spread of HIV and hepatitis C	54	4	3.57	1.25

Figure 2

Police Officer Attitudes About Effectiveness of NEPs



Officers were also asked what they might do in certain scenarios. About half (49%) agree or strongly agree that they would treat possession of a syringe that a person got from the needle exchange program to be probable cause for further search, 36% disagreed or strongly disagreed, and 15% had no opinion on the matter. 15% of police respondents agree or strongly agree that they would arrest a person if they had syringes or other injection supplies obtained from a needle exchange program, about half (55%) disagree or strongly disagree that they would do this, and about a third (30%) had no opinion. Lastly, over half of respondents (59%) agree or strongly agree that they would not confiscate a syringe during an encounter if drugs were not present, 15% disagreed or strongly disagreed with this statement, and about a quarter (26%) had no opinion on this scenario. The high levels of neutral responses for these three scenarios may speak to the necessity of situational context that police must have before deciding on a course of action during any police encounter. Table 5 and Figure 3 contain more information regarding police officer attitudes about scenarios involving PWID according to the Likert-type scale.

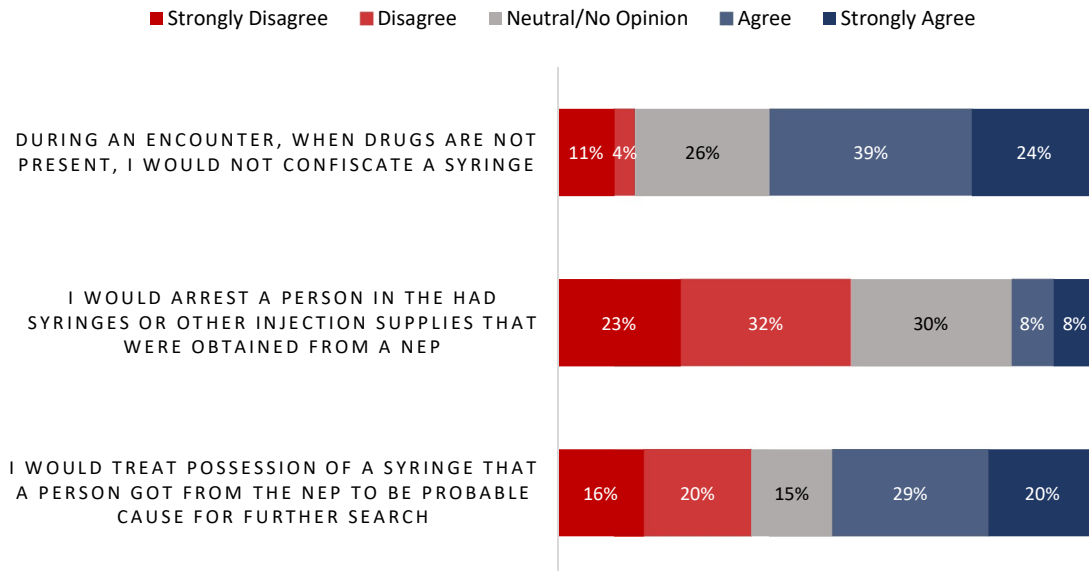
Table 5

Police Officer Attitudes About Scenarios Involving PWID

Statement	Number of Respondents (n)	Median	Mean (M)	Standard Deviation (SD)
I would treat possession of a syringe that a person got from the needle exchange program to be probable cause for further search	55	3	3.16	1.40
I would arrest a person if they had syringes or other injection supplies that were obtained from a needle exchange program	53	3	2.45	1.15
During an encounter, when drugs are not present, I would not confiscate a syringe	54	4	3.54	1.19

Figure 3

Police Officer Attitudes About Scenarios Involving PWID



Facilitators and Barriers

This project had a few facilitators to its implementation. The primary facilitator was that the NEP staff were highly invested in the outcome of this project and offered much

support and collaboration during its implementation. Another facilitator was that this first stage of NEP program impact evaluation cost hardly anything to complete.

There were barriers to the implementation of this project as well. Originally, the DNP candidate had planned to collect data on each point outlined in the RE-AIM framework for evaluating this NEP. However, the project was quite ambitious given the time frame allotted for the project's completion. Additionally, much of the project's original timeline was skewed by the necessity of prolonged review by the UMass IRB. This was a process that the DNP candidate had not adequately planned for, and thus the project was reframed to allow for completion within the time limit. However, the original framework for evaluation of the NEP is still a valuable tool that can be carried forward by the NEP program staff and any other future collaborators. The work of public health program evaluation is never truly finished. To provide the most value to the NEP, the DNP candidate chose the points of data collection that would be the most informative to the program—interviews with participants and surveys of police. These tools provided information that the NEP would not have had access to otherwise.

Another barrier to this project's completion was the difficulty in recruiting NEP participants to partake in an interview. This is understandable, as this is a population that may be wary of persons they deem to be "outsiders." The difficult recruitment process was further inhibited by the necessary process of informed consent to partake in an interview. The NEP does not require first or last names to be used by participants to receive their services, and many participants had questions regarding providing any personal identifying information to the DNP candidate. To combat this, the DNP candidate spent regular hours at the NEP site to encourage participants to view her as a trustworthy figure. Additionally, confidentiality procedures were carefully reviewed with each participant who was interviewed.

Discussion

This project was the first stage in performing a public health impact evaluation of the NEP serving Guilford County, North Carolina. Although all the original outlined objectives could not be met due to time constraints, the provision of the outlined framework for NEP evaluation (Appendix A) will still be helpful for the continued evaluation of this program. This project focused on obtaining data from two groups of people whose vested interests will strongly impact the success of the NEP within the greater Guilford community: the NEP participants themselves, and the local police officers who are responsible for enforcing laws surrounding NEPs and the people they serve. At least one objective from the RE-AIM domains of *reach*, *efficacy*, *adoption* and *maintenance* were addressed with this project. The domain of *implementation* was not addressed.

Reach

For the domain of *reach*, data was collected on the following objective: identify some barriers and facilitators participants have accessing services at the NEP. Participants largely agreed that a facilitator for obtaining supplies and services at the NEP is the non-judgmental atmosphere the staff strive to maintain. Many spoke of the NEP site being a place of refuge and providing a sense of community. Reported barriers to program use were mixed, but many participants reported that the hours the NEP is open are not ideal for them. Some suggested having daily or weekend hours to improve the ability of participants to get supplies when needed. Additionally, participants reported that they were unsure when groups were offered.

Efficacy

Two objectives concerning the program's *efficacy* were addressed: provide evidence of the potential impact the NEP has had on needlestick injuries to law enforcement officers in Guilford County, and identify unexpected or unwanted outcomes of the program. Nine

percent of police report a history of needlestick injury as a law enforcement officer in Guilford County, and two-thirds of these report that the injury occurred five or more years ago—prior to the legalization of NEPs in North Carolina. While it is not possible to infer a causal relationship between the legalization of syringe exchange and the reduction of needlestick injuries among law enforcement in Guilford County, the two may be related. Further research could be done to determine if the NEP in Guilford County has reduced the numbers of needlestick injuries among local police. However, local police officers generally fear that they will be stuck by a needle while working as law enforcement with Guilford County, and do not believe that NEPs reduce needlestick injuries to police. Perhaps more education with local police on strategies to work with people who use substances may help alleviate this fear, as well as provide them with the evidence base supporting NEPs. Additional training of police officers regarding NEPs and the laws that govern them has helped improve officer knowledge in other cities in the United States (L. Beletsky, Grau, White, Bowman, & Heimer, 2011; Leo Beletsky et al., 2011).

When determining unexpected outcomes of the program, speaking with program participants was key. Many participants reported that because of the connections and knowledge they receive at the NEP, they feel an increased level of confidence and less shame surrounding their use of substances. This finding is directly in line with the program's mission to provide advocacy for people who use drugs. Additionally, many participants reported that they had decreased their drug use since becoming involved with the program. Although abstinence is not the program's mission, program staff are supportive if a participant expresses a desire to slow or quit the use of drugs.

Adoption

This evaluation addressed two objectives in the *adoption* domain: provide evidence of the impact the NEP and legislature has had on the knowledge and attitudes of needle

exchange among law enforcement officers in Guilford County, and determine if program participants refer others to utilize services at the NEP. When speaking to program participants, it is the consensus that they use word of mouth to refer others to the program. Many also reported physically bringing others to enroll in services at the NEP, or specifically took extra supplies to give to others. It can be inferred that the services offered by the NEP are well-received by its intended community. However, the findings among local police do not speak to the same level of adoption—although most believe that NEPs reduce the spread of HIV and hepatitis C, the majority also disagree with the statement that NEPs do not promote drug use. Although the law legalizing NEPs was passed in 2016—over a year prior to this project—many police are still not aware of the legality of these programs. Fourteen percent believe NEPs are illegal in this area; and almost a quarter of police respondents (23%) believe that carrying a syringe, needle or other injection supplies obtained from an NEP is illegal in this area. These findings are startling and may speak to the variations of responses to scenarios involving those who use drugs.

Maintenance

Lastly, this project collected data on the *maintenance* objective: assist in identifying future directions for the NEP. It is important to note that this is an ongoing process in program evaluation. However, using information gleaned from interviews with participants, the NEP may want to focus on determining if alternate hours may be beneficial to a wider variety of participants. Additionally, increased advertising or word of mouth campaigns would be useful to promote use of the program. The program may want to explore providing a larger variety of groups or social and networking gatherings—these may also be constructive in promoting advocacy efforts among drug users in the state of North Carolina.

The program should also consider education efforts among area police to increase knowledge of the legality of needle exchange in this area. The NEP can look to its program

partner, the North Carolina Harm Reduction Coalition (NCHRC), for assistance in this important task. They may also consider additional measures to provide their own participants with the knowledge they need to protect their own rights in the case of an encounter. It is not possible to say that increased training would drastically improve the relationship between two groups of people that historically do not have positive experiences together—the police and drug users. However, the NEP may find that arming their participants with the knowledge and tools they need to protect their rights during an encounter and providing training to local area police would be a positive first step. Lastly, the program should consider use of the provided framework (Appendix A) for ongoing public health impact evaluation.

Conclusion

This project provided a local NEP with a framework based on the RE-AIM model to evaluate their public health impact in Guilford County. Initial data was collected from two groups of stakeholders as the first stage of this evaluation: program participants and local police. While the work of program evaluation is never truly complete, this project provided essential first steps and findings may guide future outreach, education, and advocacy efforts by the NEP. Findings from this project as well as the framework for continued public health impact evaluation will be provided to the NEP.

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Appendix A

RE-AIM Framework for NEP Evaluation

RE-AIM Dimension	Objectives	Measures	Instruments
Reach	<ol style="list-style-type: none"> 1. Determine the target population for services at the NEP. 2. Determine the representativeness of the target population of Guilford County. 3. Determine the number and characteristics of people the NEP served. 4. Determine the amount of injection supplies/ naloxone kits the NEP has provided. 5. Identify some barriers and facilitators participants have to accessing services at the NEP. 	<ul style="list-style-type: none"> • Demographics of target population for the NEP • Demographics of Guilford County population • Number of individual participants served by NEP from March 2017 to September 2017 for supplies visits • Number of injection supplies provided by the NEP from March 2017-September 2017 • Number of naloxone kits provided by the NEP from March 2017-September 2017 • Number of participants in group sessions • Types of group sessions offered • Number tested for HIV • Demographics of NEP program participants • Participant responses to barriers and facilitators to program use • Staff perspectives on barriers and facilitators to program use 	<ul style="list-style-type: none"> • Staff reported objectives for the target population of services at the NEP • Entry form used since March 2017 that logs new participant demographics and characteristics • Data pulled from NEP database that logs client identifier cards to record number of visits and number served for supplies • Inventory of supplies/ naloxone kits provided to participants • Demographic information on the Guilford County from North Carolina State Center for Health Statistics or other local data repositories • Data on number tested for HIV at program site from March 2017-September 2017 • Reports from group sessions • Interviews with program participants

RE-AIM Dimension	Objectives	Measures	Instrument
Efficacy/ Effectiveness	<ol style="list-style-type: none"> 1. Provide evidence of the potential impact the NEP has had on HIV rates in program participants and in Guilford County. 2. Provide evidence the NEP has had on safe injection supply disposal. 3. Provide evidence of the potential impact the NEP has had on needle stick injuries to law enforcement officers in Guilford County. 4. Identify unexpected or unwanted outcomes of the program. 	<ul style="list-style-type: none"> • Incidence and prevalence of HIV in Guilford County • Incidence and prevalence of HIV among PWID in Guilford County • Incidence and prevalence of HIV among program participants • Numbers of safe needle/ supply disposal at the NEP • Self-reported needle stick injuries to law enforcement officers in Guilford County • Reported unexpected outcomes by NEP program staff • Reported unexpected outcomes by program participants 	<ul style="list-style-type: none"> • NC State Center for Health Statistics and other public data repositories • Data on HIV incidence/ prevalence among those tested at NEP • NEP program participant self-reported HIV status upon entry into program • NEP numbers of safe needle/ supplies disposals • Online survey for law enforcement officers in Guilford County • NEP staff reported unexpected outcomes • Interviews with program participants
RE-AIM Dimension	Objectives	Measures	Instrument
Adoption	<ol style="list-style-type: none"> 1. Provide evidence of the impact the NEP and legislature has had on the knowledge and attitudes of needle exchange among law enforcement officers in Guilford County. 2. Identify and describe key relationships the NEP has with other organizations. 3. Determine if program participants refer others 	<ul style="list-style-type: none"> • Law-enforcement officer reported knowledge and attitudes regarding needle exchange • NEP program staff-reported relationships with other organizations • Follow-up with key stakeholders 	<ul style="list-style-type: none"> • Online survey provided to law enforcement officers of Guilford County • NEP staff reported information on relationships with other organizations • Conversations with key stakeholders from identified

	to utilize services at the NEP.	from identified organizations as indicated <ul style="list-style-type: none"> • Program participant reported information on their own referral practices 	organizations, as indicated <ul style="list-style-type: none"> • Interviews with NEP program participants
RE-AIM Dimension	Objectives	Measures	Instrument
Implementation	<ol style="list-style-type: none"> 1. Identify if the program is being delivered as it was intended. 2. Identify costs associated with the program. 3. Determine if the NEP is delivered in accordance with state law and other NEP program exemplars. 	<ul style="list-style-type: none"> • Review of formal or written policies for program delivery and documentation • Observations of program delivery and documentation • Discussion with NEP executive director about any informal policies • Review of budget/ financials for program • Review of current NC State legislature governing NEP provision • Review of other exemplars for NEP programs 	<ul style="list-style-type: none"> • Formal or written policies for program delivery and documentation • Observations of program delivery and documentation • Informal policies for program delivery • Budget/ financials for program • NC State legislature • Policies and protocols from NEP program exemplars
RE-AIM Dimension	Objectives	Measures	Instrument
Maintenance	<ol style="list-style-type: none"> 1. Determine the ratio of new and return users for supplies at the NEP. 2. Identify legal/ advocacy efforts on behalf of the NEP. 3. Provide evidence on the sustainability of the program. 4. Assist in identifying future directions for the NEP. 	<ul style="list-style-type: none"> • Number of new participants from March 2017-September 2017 • Number of returning participants from March 2017-September 2017 • Review of state legislature governing NEP delivery • Staff reported information on legal culture/ 	<ul style="list-style-type: none"> • NEP program entry form for new participants • NEP internal database for return participants • State laws governing NEP delivery (including any bills not yet signed) • Staff reported information on legal culture/ advocacy efforts and future goals

		<p>potential changes to legislature or advocacy efforts</p> <ul style="list-style-type: none"> • Program Sustainability Assessment Tool Score • Participant reported information on what they'd like to see from the program, what motivates them to participate • NEP staff reported goals for the program 	<ul style="list-style-type: none"> • Program Sustainability Assessment Tool • Interviews with program participants • Conversations with NEP staff
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Appendix B

Interview Questions for NEP Participants

1. What are your reasons for participating in this program?
2. How often would you say you get supplies at the exchange?
3. Do you typically get supplies just for you, or for other people as well?
4. Do you participate in any groups or other programs here? Which ones? Anywhere else?
5. What would motivate you to come to groups or other programs?
6. What are some things that encourage you or make it easier for you to get supplies or participate in any other programs here?
7. What are some things that make it more difficult for you to get supplies or participate in any other programs here?
8. How can those things be changed to make it easier for you?
9. Do you feel safe when using the exchange for supplies or other programs?
10. Have you encouraged anyone else to use the services offered at the exchange?
11. Have your health or habits changed since you started participating in services at the exchange? How so?
12. Has participating with the exchange changed your life in any way that you did not expect?
13. What do you think the exchange needs to do to serve you better in the future?

Appendix C

NVivo Codebook from Participant Interviews

Name	Description	References
Q01 Reason to Participate	What are your reasons for participating in this program?	
Access to Narcan		1
Benefits Others		2
Cheaper than Purchasing		2
Disease Prevention	Sometimes referred to as "staying clean" by participants	8
Good Community of People		3
Increased Knowledge		1
Judgement Free Environment		2
Q02 How Often Get Supplies	How often would you say you get supplies at the exchange?	
Every Few Weeks		1
It Varies		2
Once a Month		5
Once a Week		1
Q03 Supplies for Others	Do you typically get supplies just for you, or for other people as well?	
For Others		6
Just Myself		3
Q04 Participation in Groups and Programs	Do you participate in any groups or other programs here? Which ones? Anywhere else?	

Name	Description	References
Fentanyl Strip Testing		1
No Participation		5
OD Training on Sundays		3
One on Ones with Staff and Volunteers		2
Women's Group		1
Q05 Motivation to Attend Groups	What would motivate you to come to groups or other programs?	
If Hours Were Good		2
Internal Motivation	No external factors would encourage a participant to come, just their own drive, motivation, or current relationship with drug use would be motivation enough.	3
Judgement Free Environment and Sincere Facilitators		2
Knowing When They Were		2
Nothing Would Motivate		2
Want More People to Attend		1
Q06 Facilitators to Program Use	What are some things that encourage you or make it easier for you to get supplies or participate in any other programs here?	
Friends Come Here as Well		1
Have the Supplies I Need		2

Name	Description	References
Location is Good		3
No Judgement		5
No Line or Waiting		1
Provision of Narcan		2
Q07 Barriers to Program Use	What are some things that make it more difficult for you to get supplies or participate in any other programs here?	
Denied Any Barriers		3
Feels Obligated to Bring Back Used Needles		1
Hours Aren't Ideal		3
Location Isn't Ideal		1
Personal Relationship with Addiction	Not feeling the internal motivation to seek resources or assistance from the exchange.	1
Stigma	Feeling judged by others outside of the program who may know what you are doing and why you are going to the exchange.	1
This Program Isn't Well Known		1
Q08 Change Barriers	How can those things be changed to make it easier for you?	
Assist with Transportation		2
Change the Hours		2
Get the Word Out		1
Leave Supplies Out		1

Name	Description	References
Provide Different Needle Sizes		1
Q09 Feel Safe	Do you feel safe when using the exchange for supplies or other programs?	
Yes		9
Q10 Referrals	Have you encouraged anyone else to use the services offered at the exchange?	14
No		1
Yes		8
Q11 Change of Health or Habits	Have your health or habits changed since you started participating in services at the exchange? How so?	
Better Relationships with Others		1
Reports No Change		2
Using Drugs Less		3
Using Needle Only Once		5
Q12 Change Life	Has participating with the exchange changed your life in any way that you did not expect?	
Improved Confidence, Less Shame		3
More Knowledge and Awareness		2
Networking with This Community		1
No Life Changes		2
Saved a Life Through Use of Narcan		1

Name	Description	References
Q13 Suggestions	What do you think the exchange needs to do to serve you better in the future?	
A Better Variety of Supplies and Needle Sizes		1
Change the Hours		3
HIV and Hep C Testing		1
More Advertising or Getting Word Out		1
More Groups		2
More Locations		1
More Staff		1
No Suggestions		1

Appendix D**Survey Questions for Law Enforcement Personnel**

Have you ever been stuck by a needle during an encounter while working as law enforcement in Guilford County?

- Yes
- No

If yes, how many times?

- 0
- 1
- 2
- 3 or more

If yes, when was the last time?

- Within the past year
- 1 year ago
- 2 years ago
- 3 years ago
- 4 years ago
- 5 or more years ago

Do you have experience working with people who inject drugs or use other substances in your capacity as law enforcement in Guilford County?

- I have very little or no experience with this population.
- I have some or occasional experience with this population.
- I am very experienced working with this population.

Without using any other resources, please indicate whether the following statements are true or false.

1. Organizations that provide people who inject drugs with clean needles, syringes and other supplies (needle exchange programs) are not legal where I police.
TRUE FALSE
2. Carrying a syringe, needle, or other injection supplies retrieved from a needle exchange program is not legal where I police.
TRUE FALSE

Please indicate whether you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Neutral/ No Opinion	Agree	Strongly Agree
I am worried I may be stuck by a needle while on the job.					
Needle exchange programs decrease the risk of needle stick injuries for police.					
By providing clean injection supplies and naloxone to persons who use drugs, the needle exchange program is improving public health.					
I think that the needle exchange program makes it harder to be a law enforcement officer in Guilford County.					
I would treat possession of a syringe that a person got from the needle exchange program to be probable cause for further search.					
Needle exchange programs do not promote drug use.					
Needle exchange programs help reduce the spread of HIV and hepatitis C.					
I would arrest a person if they had syringes or other injection supplies that were obtained from a needle exchange program.					
During an encounter, when drugs are not present, I would not confiscate a syringe.					

Appendix E

Extended Results from Law Enforcement Surveys

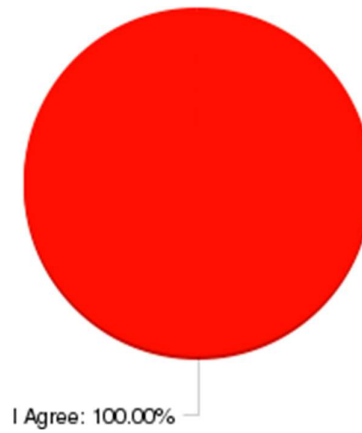
Needle Exchange Survey for Law Enforcement Personnel

1. By clicking “I agree” below you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study. Please print a copy of this page for your records. *

Number of participants: 68

-68 (100 .0%): I Agree

- (0 .0%): I Do Not Agree



2. Have you ever been stuck by a needle during an encounter while working as law enforcement in Guilford County? Number of participants: 66

6 (9.1%): yes

60 (90 .9%): no



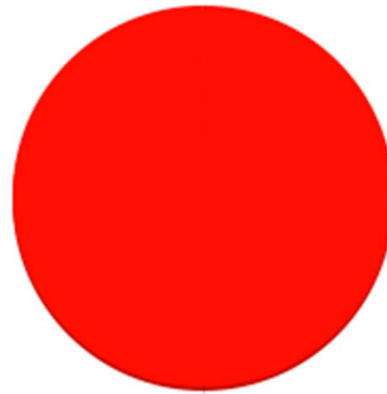
3. If yes, how many times?

Number of participants: 6 6

(100 .0%): 1

- (0 .0%): 2

- (0 .0%): 3 or more



1: 100.00%

4. If yes, when was the last time?

Number of participants: 6

- (0 .0%): Within the past year

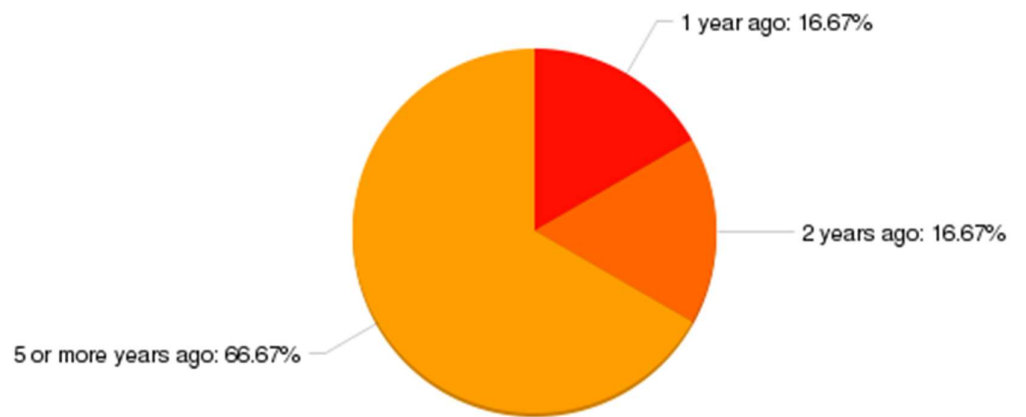
1 (16.7%): 1 year ago

1 (16.7%): 2 years ago

- (0 .0%): 3 years ago

- (0 .0%): 4 years ago

4 (66.7%): 5 or more years ago



5 or more years ago: 66.67%

1 year ago: 16.67%

2 years ago: 16.67%

5. Do you have experience working with people who inject drugs or use other substances in your capacity as law enforcement in Guilford County?

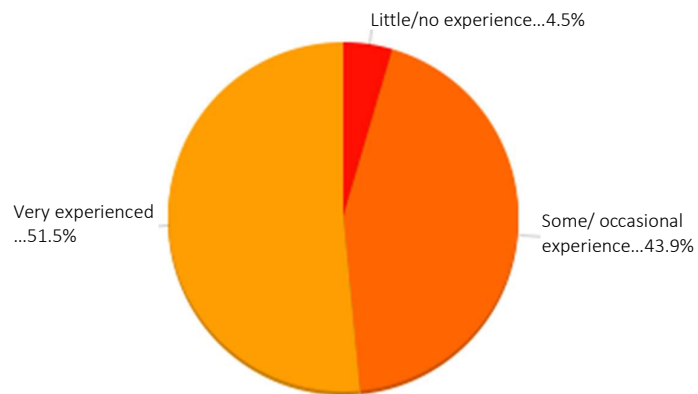
Number of participants: 66

3 (4.5%): I have very little or no experience with this

population.

29 (43.9%): I have some or occasional experience with this population.

34 (51.5%): I am very experienced working with this population.

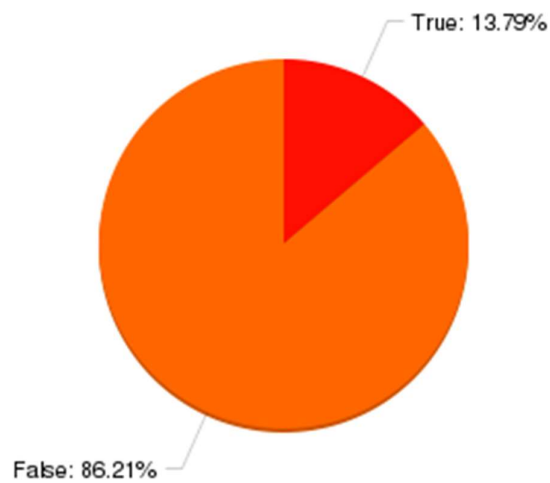


6. Organizations that provide people who inject drugs with clean needles, syringes and other supplies (needle exchange programs) are not legal where I police.

Number of participants: 58

8 (13.8%): True

50 (86.2%): False

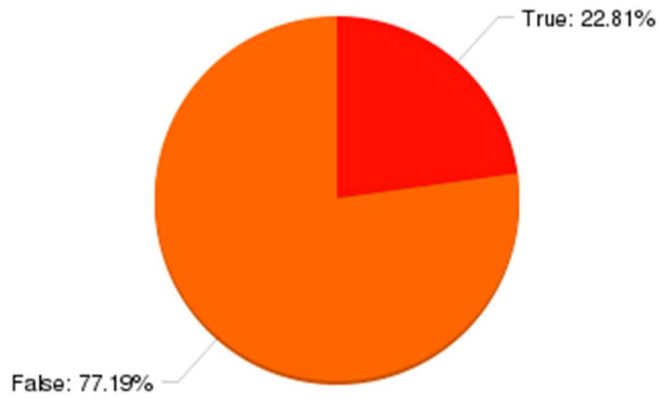


7. Carrying a syringe, needle, or other injection supplies retrieved from a needle exchange program is not legal where I police.

Number of participants: 57

13 (22.8%): True

44 (77.2%): False



8. Please indicate whether you agree or disagree with the following statements.

Number of participants: 55

	Strongly Disagree (1)		Disagree (2)		Neutral/No Opinion (3)		Agree (4)		Strongly Agree (5)		Ø	±
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%		
I am worried I may be stuc...	-	-	3x	5.45	7x	12.73	22x	40.00	23x	41.82	4.18	0.86
Needle exchange program...	16x	29.09	15x	27.27	14x	25.45	4x	7.27	6x	10.91	2.44	1.29
By providing clean injectio...	13x	23.64	11x	20.00	16x	29.09	11x	20.00	4x	7.27	2.67	1.25
I think that the needle exh...	7x	12.73	18x	32.73	16x	29.09	9x	16.36	5x	9.09	2.76	1.15
I would treat possession o...	9x	16.36	11x	20.00	8x	14.55	16x	29.09	11x	20.00	3.16	1.40
Needle exchange program...	20x	37.74	12x	22.64	12x	22.64	7x	13.21	2x	3.77	2.23	1.20
Needle exchange program...	5x	9.26	7x	12.96	7x	12.96	22x	40.74	13x	24.07	3.57	1.25
I would arrest a person if th...	12x	22.64	17x	32.08	16x	30.19	4x	7.55	4x	7.55	2.45	1.15
During an encounter, when...	6x	11.11	2x	3.70	14x	25.93	21x	38.89	11x	20.37	3.54	1.19

