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AN IMPLEMENTATION ANALYSIS OF NEEDLE EXCHANGE PROGRAMS IN KENTUCKY: IMPLEMENTATION BARRIERS AND FACILITATORS IDENTIFIED BY STAKEHOLDERS

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AN IMPLEMENTATION ANALYSIS OF NEEDLE EXCHANGE PROGRAMS IN
KENTUCKY:
IMPLEMENTATION BARRIERS AND FACILITATORS IDENTIFIED BY
STAKEHOLDERS

By:
Samantha Jane Harris

A capstone project submitted to the faculty of the Martin School of Public Policy and Administration at the University of Kentucky as a final requirement to earn a Master in Public Administration degree with a focus in Health Policy.

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Executive Summary

Kentucky law authorizes county health departments to implement harm reduction needle exchange programs given that the county receives approval from all governing authorities including the local and/or district boards of health, the county government, and the city government in the jurisdiction in which the exchange is intended to operate. As of April 2016, five county health departments operate needle exchange programs and around 20 other county health departments are seeking approval from their governing authorities or beginning to discuss engaging in this process.

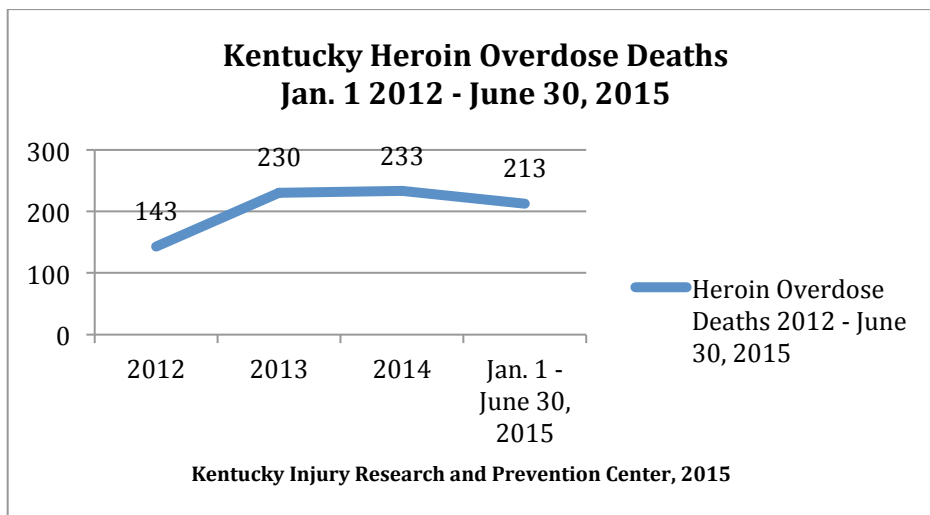
I conducted qualitative interviews with key stakeholders in the implementation process to determine the facilitators and barriers of needle exchange program implementation. In counties that have implemented programs, the political climates were supportive or became supportive after being educated about harm reduction. However, in two counties that are currently stalled in implementation efforts, education alone has not proven to be an effective facilitator at all levels of government. Instead, the political leaders either will not agree that the program is needed or cannot agree on the logistics of the intended program. This is due in part to the influence of the political climate.

The implications of this study are that disseminating knowledge about evidence-based policies and the process of implementation is complex, particularly with needle exchange program implementation, due to a lack of understanding or a lack of acceptance of evidence based research and due to debate among governing authorities. The findings of this study show that implementation facilitators such as presenting evidence-based research and gaining support from key partners alone do not cause approval. Other factors such as acceptance by all stakeholders, recognition of the drug issue, the climate, and the views of the electorate are more influential in policy decision-making.

Background

Kentucky Governor Steve Beshear signed Senate Bill 192, the “Heroin Bill,” into law in March 2015 in response to the growing heroin epidemic in the state. Kentucky is ranked third in the nation in overdose deaths (Kentucky Attorney General, 2016). There has been a large spike in overdose deaths in the past two years compared to 2012, when there were 143 (Brown, and Ingram, 2012). In 2013 and 2014, there were 230 and 233 overdose deaths respectively in Kentucky (Brown, and Ingram, 2013; Brown and Ingram, 2014). The Kentucky Injury Research and Prevention Center released the most recent report on Kentucky overdose fatalities; it reports 213 fatalities from January 1, 2015 to June 30, 2015 alone, showing that the overdose death rate continues to climb (Figure 1) (Kentucky Injury and Prevention Research Center, 2015).

Figure 1: Kentucky Heroin Overdose Deaths 2012 – June 30th, 2015



In addition to the rise in heroin overdose deaths, blood borne diseases are increasing in conjunction with injection drug use. Injection drug use is a common route by which blood borne diseases are spread due to unsafe injection practices such as needle sharing. Of people identified for being at risk for contracting hepatitis C, 73% are

injection drug users (Zibbell, et. al, 2015). Hepatitis C is common among injection drug users, infecting nearly one-third of users ages 18-30 and 70-90% of older or former users (Centers for Disease Control, 2016). The incidence of acute hepatitis C in Kentucky is highest in the United States at a rate of 5.1 per 100,000 residents compared to the national average of 0.7 per 100,000 residents (Centers for Disease Control Kentucky State Health Profile, 2015). In Kentucky, 7.4% of hepatitis C cases were diagnosed solely due to injection drug use and an additional 3.2% of cases were diagnosed in injection drug users who also participate in male-to-male sexual contact (Centers for Disease Control Kentucky State Health Profile, 2015). Between 2009 and 2012, hepatitis C prevalence in Kentucky, Tennessee, Virginia, and West Virginia increased by 364% among young adults ages 30 and below (Zibbell, et. al, 2015). In Boone, Campbell, Grant, and Kenton counties in Northern Kentucky, 1,132 people were diagnosed with hepatitis C in 2015, a 27% increase from the 891 cases of 2014 (Northern Kentucky Health Department, 2015). This number is one of the highest in the country and higher than the Kentucky state average.

Hepatitis B is another infectious disease that can be transmitted by intravenous drug use. The number of hepatitis B diagnoses increased by 114% in Kentucky, Tennessee, and West Virginia from 2006-2013 (Harris et. al, 2016). Kentucky is ranked the second highest for hepatitis B incidence at 4.9 per 100,000 residents, compared to the national average of 1.0 per 100,000 residents (Centers for Disease Control, 2015).

Injection drug users are also at risk for contracting HIV/AIDS. In 2010, 8% of all new HIV diagnoses were attributed to injection drug use and another 4% of diagnoses were from injection drug users who also participate in male-to-male sexual contact,

meaning a total of 12% of those who contract HIV infections are participating in injection drug use (Centers for Disease Control HIV, 2015). In Kentucky, 10% of those currently living with HIV/AIDS reported that they inject drugs (Figure 2) (Kentucky HIV/AIDS Surveillance Report, 2015). The Centers for Disease Control noted that the HIV rates in Kentucky pose a high risk for an outbreak (Figure 3) (Lama, WDRB, 2016).

To assist in preventing the spread of diseases by supplying needles and to provide injection drug users with further treatment options for contracted diseases and substance use disorder, KY SB192 granted health departments permission to operate Harm Reduction and Syringe Exchange Programs (HRSEPs), commonly referred to as needle exchange programs, syringe access programs, or syringe access and exchange programs. Harm reduction based philosophies acknowledge that behaviors that put health at risk will occur, but attempt to minimize the harms associated with behaviors such as injection drug use (Jarvinen, 2008; Lushin and Anastas, 2011). Efforts that assist in prolonging the life span of drug users will minimize harm to the injection drug user and the public until the person abusing substances is able to seek treatment (Lushin and Anastas, 2011).

Needles on average cost \$0.17 and injection drug users inject drugs an estimated 1,000 times annually. At this rate, the annual cost of needles is \$170 per injection drug user. Alternatively, the cost of lifetime treatment for hepatitis C ranges from \$100,000-\$300,000 and HIV costs up to \$618,000 (Kentucky Public Health, 2015). Needle exchange programs are proven to reduce needle sharing and the transmission of infectious diseases among injection drug users and are also proven to not increase drug use (Buchanan, et al. 2003; Downing, et al. 2005). Rather than enable drug use, needle

exchange programs are shown to enable treatment; program participants are five times more likely to enter treatment than nonparticipants (Hagan, et al. 2000).

The primary purposes of needle exchange programs are to

- (1) *Reduce the spread of blood borne pathogens among intravenous drug users and to the public/police/first-call responders who are at risk for contracting hepatitis C, hepatitis B, or HIV/AIDS through needle sticks and sexually transmitted diseases by distributing needles and safely disposing of returned needles;*
- (2) *Receive referrals from police, emergency medical services, and others for needle exchange services and disease testing, education on safer injection practices, and counseling;*
- (3) *Provide treatment referrals to intravenous users for blood borne diseases and/or substance use disorder and other health and social services* (Kentucky Department of Public Health, 2015).

Under Kentucky statutory law, county, city-county, and district boards of health are to adopt the administrative regulations necessary to protect the health of the people (KRS 212.230).¹ KY SB192 stipulated that in order to operate needle exchange programs, the departments must receive the consent of the district or local board of health, the legislative body of the county, and the legislative body of the city in which the needle exchange is intended to operate (KRS 218A.500(5)(b)). There are 61 health departments in Kentucky and there are three different health department structures including a single county department, a district department made up of multiple counties,

¹ The activities and programs health departments initiate might require approval by local governing authorities. Needle exchange programs require approval from all governing authorities where the program is intended to operate, as precedent by a ruling in *Bullitt Fiscal Court v. Bullitt County Board of Health* in 2014 where the board of health instituted a smoking ban and the county's fiscal court believed the board was not within its authority to do so.

or an independent department. The department structure and intended location of the program determine the approval needed.

While needle exchange programs have existed in the United States since the 1980s, since the passage of KY SB192, programs have been met with challenge in many governing bodies and across communities. Currently, the Kentucky General Assembly is hearing HB160 that would require a strict one-for-one needle exchange model, despite studies showing that the most successful programs do not limit the number of needles distributed (Kochems, 1996). In April 2016, the federal government lifted a ban against using federal funds for needle exchange programs that had been in place since 1989. Because Kentucky is at high risk for an HIV outbreak and the highest in the nation in hepatitis C incidence, the state may be a future recipient of federal funding to support program operations with the stipulation that funds may not go toward the purchase of the needles themselves.

Each county determines the model of its needle exchange. The different model options, from most to least effective, include 1) a needs-based negotiation model that does not set any limit on the number of needles distributed, 2) a one-for-one plus exchange model where a portion of needles must be returned in order for more to be distributed, or 3) a strict one-for-one exchange model that provides participants with the number of needles that they returned (Kentucky Public Health, 2015).

The programs currently operating in Kentucky are showing some initial successes measured by the number of participants, participant retention, the exchange ratio of needles, the number of participants tested and referred to treatment for diseases, and the number of participants referred to treatment for substance use disorder. Pendleton County

has had 14 participants, all of whom have been tested for infectious diseases. One participant was identified with hepatitis C and the health department arranged treatment for that individual. Of the 14 participants, 4 have been referred to treatment for substance use disorder. In Fayette County's one-to-one plus exchange, as of March 18th, 2016, 8,712 needles had been distributed and 8,418 needles had been returned, which is nearly a one-to-one exchange rate. In Jefferson County's needs-based exchange, where at least half of participants are hepatitis C positive, there have been 2,717 participants and more than 1,200 have returned after the initial visit. The return ratio of needles is better than a two-to-one ratio. Treatment referrals for addiction treatment have been made for 163 participants.

Research Question

Kentucky's SB192 allows health departments, boards of health, and city and county governments to adopt needle exchange programs as health and government officials see fit for their communities. Consequently, the specific activities vary across the state (Table 1). This implementation study analyzes the process of needle exchange program adoption in Kentucky since the passage of KY SB192. Themes were derived from interviews with stakeholders in four counties that have successfully launched programs and in two counties that have been unsuccessful at gaining approval from all necessary governing bodies. This study identifies key themes of implementation from a combined total of fifteen counties², including counties that have not yet pursued approval from governing authorities. By conducting interviews with key stakeholders in the

² Four stakeholders interviewed are district health department directors or serve on district boards of health. The counties represented in this study include Anderson, Boone, Bourbon, Campbell, Carroll, Fayette, Gallatin, Grant, Harrison, Jefferson, Jessamine, Kenton, Leslie, Owen, and Perry counties.

implementation process, this study identifies what has made implementation possible in certain counties and what has inhibited it in others.

Table 1: County Approval Status as of April 8, 2016³

Counties with Needle Exchange Currently Implemented as of April 8, 2016	Counties with Full Needle Exchange Program Approval but not yet in Operation	Counties with Partial Needle Exchange Program Approval	
Fayette	Carter	Allen	Boone
Jefferson	Clark	Bourbon	Campbell
Jessamine	Elliott	Carroll	Gallatin
Pendleton	Franklin	Greenup	Leslie
Grant	Knox	Kenton	Perry
	Harrison	Owen	

Literature Review

In public health, the Centers for Disease Control defines implementation studies as the, “systematic study of how a specific set of activities and designated strategies are used to successfully integrate an evidence-based public health intervention within specific settings” (Health and Human Services, 2007). Implementation studies define a program, assess the degree to which the program is meeting the intended target, and discover what processes implementers are following to meet the intended outcome (Scheirer, 1994).

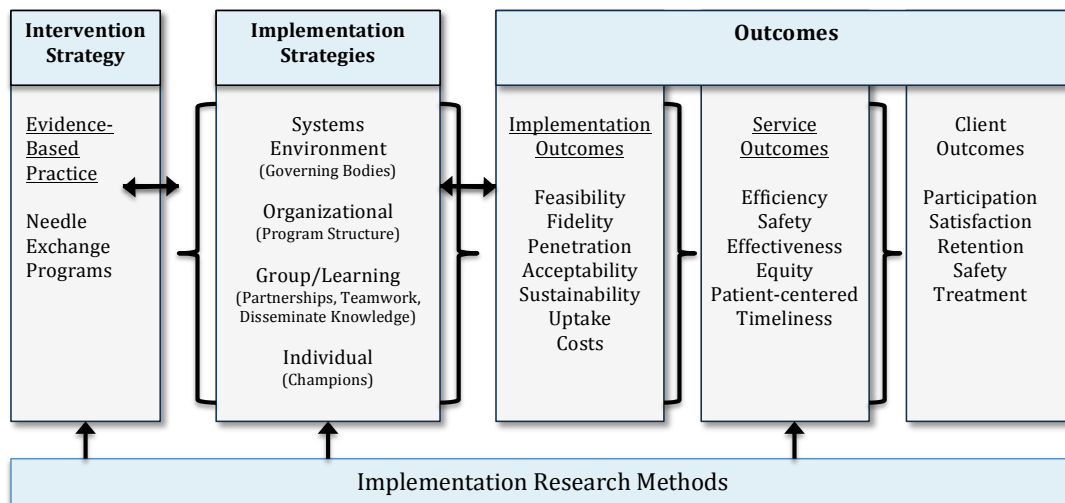
Often, legislatures pass evidence-based intervention policies without a strategic plan to disseminate knowledge to key actors, such as health officials and municipal leaders, about the processes required to put the legislation into practice (Taxman & Belenko, 2012). Therefore, a lag often exists between the state adoption of a policy and

³ This list may not be all-inclusive; all counties were not surveyed on their status. Leslie and Perry board of health approved a needle exchange but the health departments do not have the resources or personnel to operate a program.

the implementation of that policy by key actors (Downing, et al. 2005). Implementing evidence-based programs often requires processes that aim to increase receptiveness to and the sustainability of programs prior to the program's successful implementation (Proctor, et al., 2009). Needle exchange programs are particularly difficult to implement due to the stigmatization of injection drug users, policymakers satisfying the beliefs of the electorate, and a lack of understanding of evidence-based research (Allen, et al. 2014).

Proctor (2009) defines the stages of implementation in a theoretical framework that incorporates strategies and outcomes of implementation (Figure 4). The implementation outcomes defined in the model include feasibility, fidelity, penetration, acceptability, sustainability, uptake, and costs (Proctor, et al., 2009; Proctor, et al. 2011). The feasibility, sustainability, and cost of a program refer to whether the program's intent is actually feasible and sustainable in terms of capacity, operations, setting, and other related factors (Proctor, et al. 2009; Proctor, et al., 2011). The fidelity of a program measures whether the program is implemented as intended (Proctor, et al. 2009, Proctor, et al. 2011). Program penetration refers to whether the program reaches the intended participants (Proctor, et al. 2009, Proctor, et al. 2011). The acceptability of a needle exchange program refers to the level of acceptance among governing authorities and stakeholders.

Figure 4: Proctor's Stages of Implementation Applied to Needle Exchange Programs

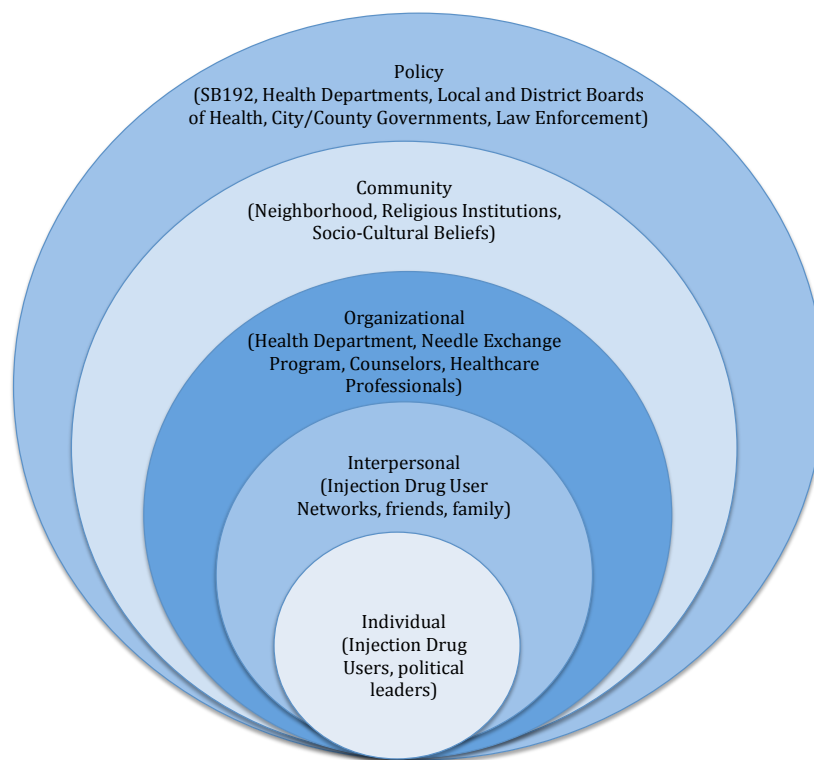


Source: Adapted from Proctor, et al., 2009 pg. 16; Proctor, et al. 2011 pg. 66

The absence of acceptability is a common barrier to implementation (Proctor, et al. 2011). This means the program is in misalignment with the climate. Klein and Sorra attribute implementation success in part to the fit of the program with the climate, defined as the employee or stakeholder perception of the, “events, practices, and procedures and the kinds of behaviors that are rewarded, supported, and expected in a setting” (Klein and Sorra 1996; Schneider, 1990). There must be a perceived benefit to the program on an organizational, political, community, and participant level for a program to be successfully implemented. Program stakeholders such as staff, administrators, governing authorities and law enforcement officers can improve the fit of a program with the climate (Schoenwald & Hoagwood, 2001). Uptake refers to whether programs will also begin to occur in other areas of the state (Proctor, et al. 2009; Proctor, et al. 2011). Service and client outcomes are important for measuring implementation effectiveness, as they measure whether the program is meeting its intended target (Proctor, et al. 2009).

The Social Ecological Model is a philosophy of public health that aims to analyze the effect of prevention strategies (Paleau, 2013; McLeroy, 1988, Bronfenbrenner, 1977). The Social Ecological Model says that behavior affects and is affected by multiple influences including intrapersonal, interpersonal, organizational, community, and policy levels, and that individual behaviors are shaped by social environments (McLeroy, 1988). The Social Ecological Model can also be used to understand the participation of injection drug users in needle exchange programs and to understand the multiple influences on program adoption and implementation (Figure 5).

Figure 5: Social Ecological Model of Needle Exchange Programs



Source: Adapted from Paleau, 2013, pg. 20

Studies show that political and socio-cultural environments have a stronger influence over whether a needle exchange program is established than the incidence of

blood borne pathogens (Paleau, 2013; Gent, 2000; Tempalski et. al, 2007). Public health officials objectively recognize the need for a needle exchange program based on disease rates, needle-sharing activity in a community, and used needles found in the community. In order for a needle exchange program to exist in Kentucky counties, governing authorities that reflect the socio-cultural environment must also recognize a need for a program. Elected officials may fear negative feedback from constituents and fear losing an election if they vote in favor of the program (Paleau, 2013; Buchanan et al., 2003; Downing et al., 2005).

Researchers defined six thematic approaches that assisted in needle exchange program implementation in a 2005 study of 13 cities in the United States with needle exchange programs. These themes include presenting the exchange program with sensitivity to political and cultural norms, building support from coalitions and communities, strong leadership, access to resources, using evidence-based research to educate others, and resisting fear of repercussions and political hostility (Downing, et al., 2005). Communities with needle exchange programs most commonly have politically engaged citizens, advocacy organizations and task forces, and have public support (Buchanan et al., 2003; Tempalski et al., 2007). Predictors identified in previous studies for communities with needle exchange programs include populations at risk for HIV, the number of same sex households, the number of religious traditionalists, the number of political conservatives, the presence of an HIV advocacy organization, and the percentage of people who have higher education degrees (Tempalski et al., 2007; Gent, 2000).

A survey conducted by the Kentucky Health Department Association released in January 2016 reported that 74 of the 108 county health departments, represented by 57 survey respondents, were actively engaged (from educating the public to speaking with stakeholders) in promoting a needle exchange program (Kentucky Health Department Association, 2016). Of the 34 counties in which the health department was not engaged in promoting an exchange program, 24 reported the county did not have plans to become engaged. Of those 24, 17 said that there was not support from the board of health at that time and therefore they could not move forward, 17 reported a lack of funding, six respondents identified that the community did not have an injection drug use problem or that there was a lack of data to indicate need, and two reported that the county has Methadone Clinics. Other reasons reported included a lack of personnel, not seeing the program as a public health issue, and that a neighboring county was implementing a program.

The barriers to gaining governing authority approval were identified by 52 survey respondents. The barriers identified included the belief that needle exchange programs enable drug users was identified by 42 respondents, followed by 33 responding that there is a lack of funding, and 18 reported a lack of empathy toward those with substance use disorder. Other barriers identified include the beliefs that the program is illegal (seven respondents), there is not a drug issue (three respondents), and that used needles are not found in the community (two respondents).

Research Design

Implementation stakeholders (n=21) who are actively engaged in the implementation process answered qualitative telephone interview questions about the

process of needle exchange implementation in their respective counties. The stakeholders interviewed include five local health department directors, three district health department directors, four local board of health chairs, one district board of health chair, one public safety chair, four mayors or mayor staff persons, and three judge executives. One mayor also serves on the district board of health and one judge also serves on the board of health in their regions/counties. These stakeholders were selected because each is a key player in the implementation process. The implementation stakeholders interviewed represent a total of 16 counties.⁴

To determine what factors make a significant impact on successfully launching a program, four counties (Fayette, Jefferson, Jessamine, Pendleton) that are currently operating exchanges were compared to two counties that are currently stalled in the process of gaining full approval from all governing authorities (Bourbon and Kenton). I used data collected from 13 stakeholders in the four counties that are currently operating programs and data collected from five stakeholders in the two counties who have not received full approval to analyze what has facilitated or stalled implementation efforts in those areas. The remaining four stakeholders from Anderson, Harrison, Leslie, and Perry counties and district board of health members in Northern Kentucky provided information about implementation in counties that have not launched programs or in counties that have not yet gained approval from all governing authorities. In April, Harrison County received full approval to operate a program but has not yet launched an exchange. Anderson County is beginning to discuss pursuing a needle exchange program

⁴ The counties represented in this study are Anderson, Boone, Bourbon, Campbell, Carroll, Fayette, Gallatin, Grant, Harrison, Jefferson, Jessamine, Kenton, Leslie, Owen, and Perry counties. Three interviews were held via e-mail.

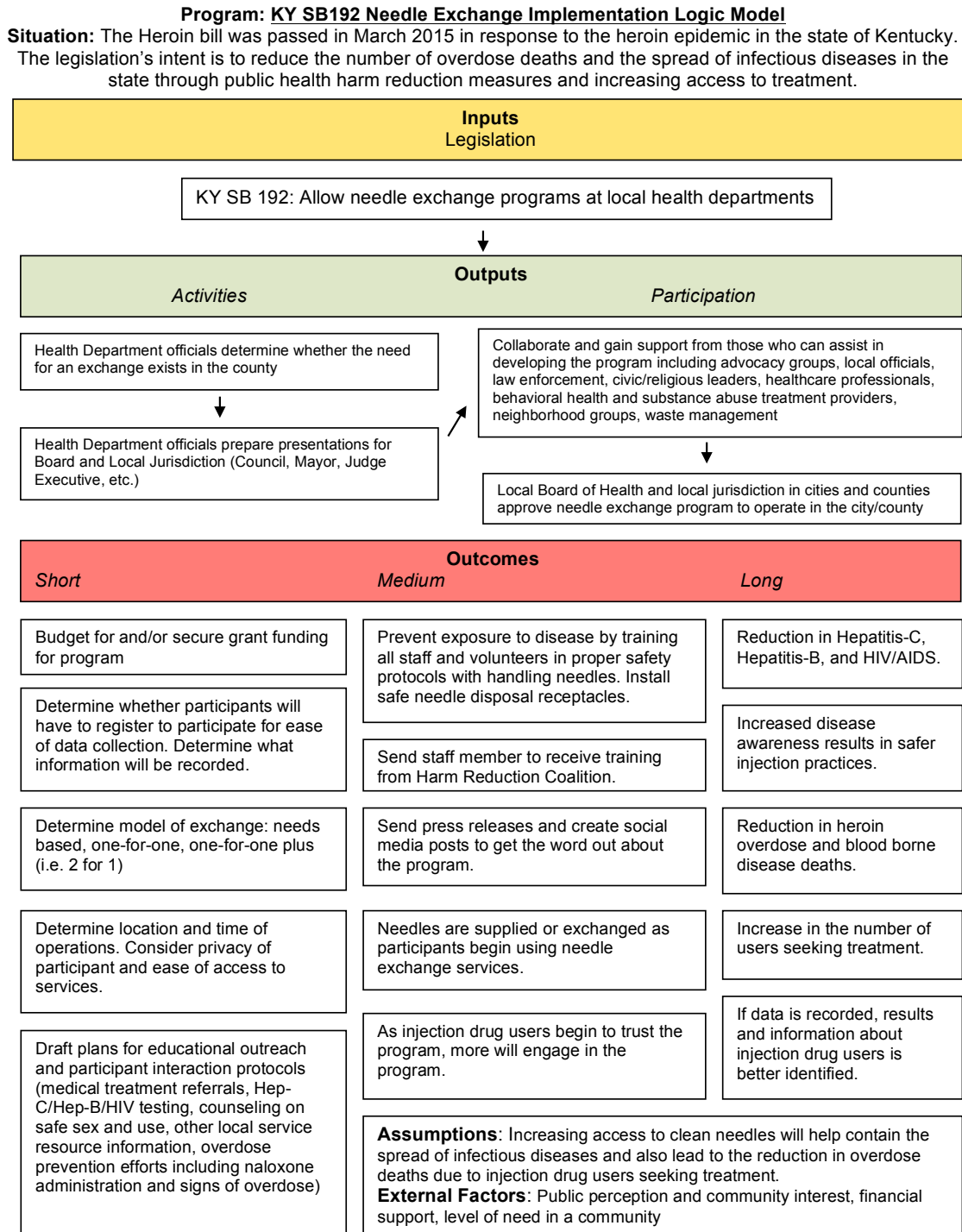
and the health department plans to host a meeting with key stakeholders from all governing authorities to discuss whether the county health department will pursue this venture. Perry and Leslie counties received board approval for a program to operate within the counties but the program is unfeasible for the health departments at this time due to a lack of both funding and personnel.

As set forth by KY SB192, health departments may operate needle exchange programs given that approval is gained from the local and/or district board of health, the county legislative body, and the legislative body of the city in which the exchange is intended to operate. The key actors of the approval process include the county health department director and health department staff members, the board of health chair and board members, the mayor and council members, and the judge and members of the fiscal court. Boards of health are comprised of appointed members in the community who work in various fields. The board of health determines whether a program will benefit a community's health and safety. After the health department develops a resolution, the health department presents the resolution to the board of health. If the board of health approves the resolution, the health department then approaches the city and county governing authorities to gain approval from both entities to operate a program. City commissioners, mayors, magistrates, and judges are elected positions and are comprised of individuals from various fields of work.

The role of the health department in the approval process is to design the needle exchange program and educate key actors, community partners, and the public about the public health concern that needle exchange programs would assist in eliminating. Once approval is reached, the health department is able to implement the needle exchange

program. I created a logic model of implementation based on conversations with key stakeholders about the implementation process (Figure 6).

Figure 6: Logic Model of SB192 Needle Exchange Program Implementation



In addition to telephone interviews with key actors, I collected data on HIV, hepatitis C, and hepatitis B rates from the Centers for Disease Control and Kentucky Department of Public Health. I also collected data from news reports and meeting minutes. Two interview subjects provided supplemental information including a Kentucky Health Department survey from January 2016 on the needle exchange program status in Kentucky counties and a logic model and timeline of implementation in Northern Kentucky. A contact log of key stakeholders was constructed and maintained. Each respondent was asked a set of standard questions depending on their position. The questions were structured to ask process related questions to the health department directors and to ask governing authority members questions about the process of approval through their board or council. The questions are provided in the appendix of this report.

The stakeholders provided information about the implementation process including what facilitated implementation and what barriers were overcome or are currently stalling implementation efforts. The stakeholders also provided information about the logistics of the program's operations and how decisions about the program's logistics were reached such as the hours of operation, what supplies would be distributed, and what additional services would be offered. Stakeholders from counties who are operating exchanges reported early indications of program success such as the rate of needles exchanged, the number of participants returned, the number of participants tested for diseases, and the number of participants referred to substance use disorder treatment. To analyze data, I used a grounded theory approach and conducted a thematic content analysis. The grounded theory approach is a common technique used in qualitative

analysis that involves the inductive identification of themes and sub-themes that theories and findings can then be derived from (Paleau, 2013; Glaser and Strauss, 1967).

I transcribed interviews and then used the software NVivo to code themes from each interview. NVivo is commonly used to code qualitative interviews and sort quotes into categories. After the initial coding process, I sorted the codes by the frequency the stakeholders referenced each code (Table 2).

Table 2: Most Referenced Topics Identified by Stakeholders

Most Referenced Topics	Number of Sources	Frequency of References
Public health issue	19	40
Providing treatment access	16	25
Political climate	14	36
Drug issue	14	32
Enabling drug use	14	25
“Champion”/work group	14	31
Education/Evidence Based Presentations	14	47
Community partnerships	13	28
High disease rate	17	39
Program funded/cost savings	13	19
Model of exchange	11	18
Trust barrier	10	18

I used the most frequently referenced topics to inform the identification of major themes and subcategories and used the Social Ecological Model to sort the themes (Table 3). After the coding process, I created an excel spreadsheet to report what themes stakeholders from each county referenced and interpreted what accounted for the difference between counties that have been able to implement programs and those that have not. The codes from the initial coding process are provided in the appendix of this report (Table 4).

Table 3: Overall Themes and Subcategories within the Social Ecological Model

Major Theme	Subthemes
Public Health Issue	<ul style="list-style-type: none"> • Climbing disease rates • Cost savings associated with disease • Fact-based public health issue • Needles found in community, public safety risk of needle sticks • Proximity to Scott County, Indiana
Political Climate Acceptability (Policy)	<ul style="list-style-type: none"> • Political environment supportive of initiative to combat disease and heroin addiction • Political authorities do not recognize need for program • Political authorities lack of understanding of the program • Political authorities concerned with losing support of electorate
Socio-cultural Acceptability (Community)	<ul style="list-style-type: none"> • Fear of enabling drug use, hurting county image if drug problem is recognized, attracting users to community, increasing drug use and crime, more syringes in community, poor behavior from participants • Stigma/lack of empathy for drug users • Do not want tax dollars spent on enabling drug use or to fund drug users from other counties
Operational Components (Organizational)	<ul style="list-style-type: none"> • Providing on site counseling and/or access to treatment • Adequate personnel/feasibility • Secured funding/costs • “Champions” identified (leaders of the program implementation) • Model of exchange <ol style="list-style-type: none"> 1. Best practices based model 2. One-for-one plus chosen when it is the best fit with climate 3. One-for-one perception as best practice/legislative intent • Needles given reflect user preference • Needles given reflect community preference (one-use only retractable needles) • Trust barrier considered in program design/penetration • Location disagreement as a barrier • Waiting for other counties to implement programs/uptake
Partnerships (Interpersonal)	<ul style="list-style-type: none"> • Community partnerships formed to facilitate approval • Community partners funding • Community partners assisting in disposal • Learning from/visiting other programs in and out of state
Education (Individual)	<ul style="list-style-type: none"> • Research based evidence presentations to educate stakeholders/partners • One-on-one meetings with stakeholders and partners • Community education • Focus groups with drug users • Educating drug users on public health • Trust barrier

Results

County health departments that are currently operating programs or that have gained full approval followed similar implementation strategies. This research finds that the political climate and socio-cultural context, which are often interrelated, have the largest influence over program adoption (Table 5). This chart was created to determine what is accounting for the stalled implementation in Bourbon and Kenton counties.

Table 5: County Comparison of Barriers/Facilitators

	Fayette	Jefferson	Jessamine	Pendleton	Bourbon	Kenton	Harrison	Anderson
Addressed as Public Health Issue	x	x	x	x	x	x	x	x
Treatment access wanted by governing authorities	x	x	x	x		x	x	
Political climate approved after educated	x	x	x	x		x	x	
Political climate will approve with stipulations						x		
Political climate portrays lack of understanding					x			x
Drug issue not recognized by governing authority party					x			
Enabling drug use belief present (governing authority and/or community)	x	x	x		x	x	x	x
"Champion" and/or work group established	x	x	x	x	x	x	x	x
Education/Evidence Based Presentations as facilitators	x	x	x	x	x	x	x	
Community partnerships in place	x	x	x	x	x	x	x	x
Funding in place	x	x	x	x	x	x	x	
Model of exchange as barrier					x	x		
Trust barrier as something to continue to overcome	x	x		x				
Trust barrier is a concern			x		x	x	x	
Disagreement on location of program						x		

Common facilitators expressed included focusing on the public health issue, recognition of the drug issue in the county, a champion who led the process, community partnerships, using evidence based research to educate stakeholders and the community, and secured funding for the program. Nearly all counties had these components in place. Common barriers included the stigmatization of drug users and the perception that needle

exchange programs enable drug use. Another barrier that all programs must overcome is the trust barrier between program operators and injection drug users who are to participate in the program. In Bourbon County, barriers to implementation include that governing authorities do not recognize the drug issue, do not understand the public health issue, and do not prioritize connecting drug users to treatment. In Kenton County, barriers to implementation include a disagreement among political leaders about the location of a program and the model of the exchange (one-for-one model, mobile unit, etc.).

Operational Components

Health departments first determine if the department wants to pursue a program and if the department has the capacity and resources to do so. Once a health department decides to pursue a program, champions are identified. Champions are implementation leaders who take on the responsibility of designing and presenting the program to key stakeholders. One stakeholder said that the program champion in their county, “was very good at bringing together a lot of the important players in the community so that we would all be on the same page and start off in a way that was effective and in a way that would work for this community.” Stakeholders in other counties that are operating programs or in the process of gaining approval also identified the presence of champions.

Health department champions conduct research and look at other programs across the nation and state to determine what has worked and what might work in their county. The Harm Reduction Coalition, an advocacy group out of New York City that provides training services on needle exchange programs, often trains health department staff and aids in the program design. Health department champions in Fayette County and Jefferson County held focus groups with drug users to determine preferred injection

supplies to eliminate the barrier of users not using products offered and also asked about what conditions must be present for drug users to feel comfortable participating in the program.

A stakeholder identified that retractable one-use-only needles are often more expensive and are less preferred by injection drug users than standard needles because,

“Research shows that drug users do not use the retractable needles because the drug gets stuck in the needle when it retracts. One, they are more expensive and two, they don’t really use them so there was no point in trying to move those forward.”

Jessamine County is distributing one-use-only retractable needles. Harrison County is planning to use this type of needle. The reason for using retractable needles is that is often more politically palatable, and eliminates concern about needle sticks in the community, the re-use of needles, or needle sharing. However, if the needles are not popular among injection drug users, the program may not be utilized to the fullest extent possible.

Drug users expressed two major concerns including confidentiality and reassurance that they would not be arrested. Stakeholders frequently identified that there is a trust barrier between drug users and the needle exchange program. Once a few participants gain initial trust, knowledge about programs is spread by word of mouth. After a program is designed, the health department forms community partnerships, secures funding, and delivers evidence-based research to governing authorities about the rate of infectious disease in the county and identifying needle sharing as a known cause.

Several stakeholders reported that there was incidence of a shift in perception in counties that successfully gained full or partial approval when the health department champions presented governing authorities and others with research findings about

needle exchange programs and their effectiveness at reducing the spread of disease, reducing risk to the public, and increasing access to treatment. Most stakeholders emphasized the importance of educating elected officials and identified that stigmatization or a lack of empathy toward injection drug users is a common barrier. One stakeholder said,

“The barriers are a lack of education and the biases that we were socialized into. People who are addicted to heroin will tell you, ‘I don’t like this,’ and ‘I do not want to live this way,’ but they are really trapped in their disease. All of us were socialized into this thinking that heroin addicts are engaged in illegal behavior and are bad people. I heard one elected official refer to them as, ‘creatures of the night.’ These personal biases, whether it was how you were socialized in your family or what your religion has taught you, are really discrimination.”

Approaching the policy topic with sensitivity and with a focus on the public health issue rather than engaging in a moral discussion about drug use is a common strategy among health leaders seeking program approval. However, these implementation strategies are not successful in all counties that have sought program approval. Bourbon County has been unable to change the fiscal courts’ perception and Kenton County is caught in a political debate about program logistics.

The Political Climate

Stakeholders from Fayette, Jefferson, and Pendleton counties said that the political climate was supportive of the needle exchange program and that governing authorities understood the program from a public health and heroin epidemic standpoint. Stakeholders referenced the recent outbreak in Indiana as a facilitator to opening the policy stream in Kentucky. Stakeholders identified the governing authorities’ desire to combat disease and enhance treatment access, the proximity to outbreaks, and the

presence of used needles in the community as facilitators to implementing the programs.

A Jefferson County stakeholder said,

“It was a good time politically to move a needle exchange program forward with the outbreak in Austin, Indiana. The mayor was very supportive and our council was very supportive from the start. I gave some presentations, background info, and talked about the program we wanted to do but I did not have to do any hard sell convincing. People were very supportive.”

A Fayette County stakeholder said,

“The city was aware and recognized the need for it. They had been working on this with the heroin task force that’s been around for a few years so the heroin issue was already on people’s minds and in the forefront of their thoughts. It really wasn’t that we had to do any major push for this, people were expecting it and ready for it.”

Stakeholders in Jessamine, Bourbon, and Harrison counties identified the counties as small, rural and conservative. The approach to gaining approval through education, personal meetings, and more conservative based designs (type of exchange model, hours of operation, etc.) reflect these demographic characteristics.

Once educated about the program’s benefits, a stakeholder said,

“Like most of us, the first thing we do is have a knee jerk reaction and think no, we’re not going to do anything to support peoples illegal drug habits but we find used needles and that is a public health hazard. If heroin addicts are using clean needles they will not be contracting HIV or hepatitis C. It is a huge expense if people develop those diseases; it is a public health nightmare in affordability. Once we saw these things, coupled with there being a qualified trained drug counselor -- that to me was a key element. If we were able to make the difference in 1 out of 10 peoples lives over a period of time that would be huge. Once you open your mind and listen to the positives of the program, I wanted to be in the forefront and wanted us to be a leader and on the cutting edge of things that are beneficial to public health and beneficial to our citizens.”

Another said that,

“Here in the fiscal court, if we voted before educating the court it would have failed but once we educated everyone about the public health issue and explained the program to them, everyone understood it.”

However, not all political leaders initially support or change their views on needle exchange programs, the model of the exchange, or the location of the exchange. The political climate and socio-cultural perception of needle exchange programs are inhibiting approval at the Bourbon County fiscal court despite the board of health and city commission approving the program, despite the support of community partners, despite educating leaders, and despite the conservative based program design. After the program was rejected at the county level in Bourbon County, a stakeholder noted that, “I didn’t do anything different when I approached them, so that goes to show that you’re dealing with different groups of people.” The stakeholder also noted that the electorate also likely influenced the court members and identified a lack of understanding of the public health issue and a lack of recognition of the drug issue as the main barriers to approval at the county level. One stakeholder said,

“I felt like we’d educated them but part of the people who make decisions here do not want to admit that we have a problem or think that by having this program we would be admitting there is a drug problem. They can’t see that we wouldn’t be encouraging drug use. All of their friends feel the same. You can bury your head in the sand for quite awhile and that is what has happened.”

Similarly, another stakeholder said that,

“Elected officials are going to go with what they believe and they are often going to go by what the electorate, the people who support them and who they surround themselves with, think. Rather than looking at their charge as elected leaders in taking the steps that are necessary to protect their communities from disease, they are often times more worried about getting reelected.”

Therefore, evidence-based research, support from key partners, and conservative based programs alone do not cause approval. Other factors such as acceptance by all stakeholders, recognition of the drug issue, the climate, and the views of the electorate are more influential to policy decision-making.

Like Bourbon County, the politics surrounding the needle exchange program in Kenton County has stalled implementation efforts. The health department's resolution was amended by the City of Covington and Kenton County Fiscal Court. The resolutions between the city and county do not match and a voting process must occur to make the resolutions agree. Currently, the resolutions created by the fiscal court and city commission say that in order for Kenton County to operate a program, two neighboring counties must also do so.⁵ The Kenton County health department's program design includes a needs-based model but the resolution requires the program to operate a one-for-one exchange.

Evidence-based research shows that programs with the least amount of restrictions are proven to be the most successful (Kochems, 1996). Jefferson County operates a needs-based model of exchange and has seen success in the return ratio, which is attributed by stakeholders to establishing trust among participants and providing participants with the preferable supplies for injection drug use. Despite evidence that needs based exchanges are the most effective, there remains debate between policymakers about the model exchanges should follow, described by a stakeholder below.

“Unfortunately a one-for-one exchange is often what government and elected officials want to have, where a person only gets what they bring in. The fact that people are sharing tells you that they do not have enough to stop sharing, so if all you do is replace what they are already using, there will still be sharing that continues to go on. Therefore, you defeat the whole purpose of the program, which is primarily to stop the spread of disease.”

A stakeholder from a county preparing to seek approval shared an opposing view that,

⁵ Grant County is currently operating a program, so Kenton County needs one additional county to agree to launch one.

“If we do it, it is going to be a one-for-one exchange. That was the intent of the law; it was not intended just to give out free needles like another county is currently doing. It will be an exchange.”

Further, the Kenton County exchange is to operate out of a mobile unit as opposed to the proposed needs-based model run out of the health department. Operating a program out of a mobile unit differs from operating in a health department. As one stakeholder explained,

“The mobile unit sounds good but you are talking about equipping a van for a four hour time period once a week and that is very costly. Because they don’t want to have the program right out of the health centers where we already have employees working, now you have to take an employee out of the health center and take them offsite not knowing whether someone will show up or not. It is kind of a hit or miss and if the employee were still in the health center, they would have other activities they could be taking part in. You have the staff issue of taking it out of the health department, you have more liabilities, and you have to equip a vehicle. There are several obstacles there.”

The reasons for the proposed mobile exchange include the apprehension of attracting more drug users into an area that is already heavily populated with social services, the belief that needle exchanges are a medical issue and should therefore be located by the hospital, that the program will be more acceptable to elected officials and the community at an alternate location, and the fear that participants will not be good actors in the program and may inject in the parking lot and cause motor vehicle collisions near the facility. Needle exchange program operators in Jefferson and Fayette counties identified that program participants have been good actors regardless of the program’s location. There are rules on being a good actor in the program that participants comply with and there is a mutual respect and trust among participants and program operators. As one stakeholder described,

“Everybody has been very respectful. Their behavior has been fine. They really understand the rules.”

Another commented that,

“They are very grateful for the caring staff and that people are taking the time to teach them safer injection practices. I know people are scared of the population but they are humans and you are providing a service. They haven’t caused any trouble.”

As more counties implement programs, other counties are more likely to follow suit and the uptake of programs will increase. For example, because other smaller counties have implemented programs, the Anderson County Health Department has started the approval process and plans to model the program after neighboring counties. A stakeholder noted that, “there is no need to reinvent the wheel.” Once Kenton County governing authorities reach a resolution that all parties are agreed upon, other counties in the region will likely follow suit. Potential federal funding or other funding sources for programs would also open the policy window for areas that cannot afford to start programs, such as in Perry or Leslie County. One stakeholder identified that,

“There should be at least some threshold of funding for these smaller communities. These smaller areas may not be able to do it yet but it is not because they do not have the issue, so if they aren’t funding it now and can’t, I suspect that they will wish they could. It is out there and it is not going anywhere at the moment.”

Finally, the climbing disease rates in the state coupled with the increasing number of drug overdoses and fatalities will continue to open the policy window. As one stakeholder explained,

“As the people that sit on the fiscal courts and city councils have friends and family members who have problems with heroin, it comes home and they become a bit more empathetic.”

Recommendations

I recommend that funding through the federal government, the state, or Kentucky State Health Department be made available for implementation in the departments that are unable to self-fund or secure grant funding for programs. I also recommend that the state not pass HB160 because the one-for-one needle exchange model is proven to not be as effective at reducing the spread of disease as needs-based models (Kochems, 1996). The passage of HB160 would inhibit the primary function of needle exchange programs, which is to reduce the sharing of needles, and by extension reduce the risk of infection in the community. Studies have shown that eventually, needs-based programs achieve a close to one-for-one exchange rate. Requiring a one-for-one model by law will inhibit departments from providing the supplies necessary to ensure safe injection practices and reduce the risk of the spread of infectious diseases.

It is important that needle exchange program operators monitor data so that process evaluations can be conducted once a program launches. Counties operating programs should have data collection methods in place including recording the zip code of participants, whether the participant returned, whether the participant sought additional treatment, the number of needles distributed and exchanged, sex, sexual orientation, reported sharing activity, reported drugs used, race, gender, and whether the participant was tested for diseases or pregnancy.

Process evaluation determines what a program's intent is, what is being delivered, and identifies gaps between the plan and its delivery (Scheirer, 1994). In the absence of a process evaluation, decision makers lack a full understanding of what was done and where observed outcomes may originate. Benefits of a process evaluation include

feedback on the quality of the operations, knowing whom the program is reaching and to what extent, increasing knowledge of which components cause what outcomes, and gaining a better understanding of what is working and what is not to better tailor the program to meet the needs of the population (Scheirer, 1994). Once a program is launched, the adaptability of the program to meet the needs of the population should be in flux. Not only does process evaluation capture important data that will assist counties in measuring program success, such as the injection drug use and disease rates in the county, but evaluations also assist in the expansion of programs across the state through the dissemination of knowledge.

The dissemination of knowledge is not only important between stakeholders in the implementation process in each county, but also between stakeholders from different counties. An established network of communication between health department directors and other key stakeholders allows for the sharing of materials such as evidence-based research presentations and data findings to help inform other programs in planning and implementation. Directors of health departments should continue the practice of inviting stakeholders from other counties to walk through their program and continue to share experiences about program implementation.

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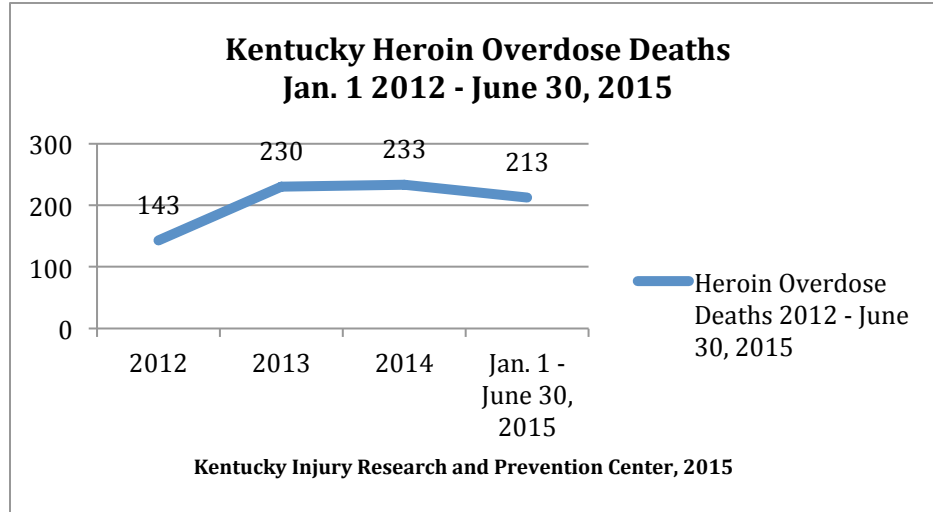
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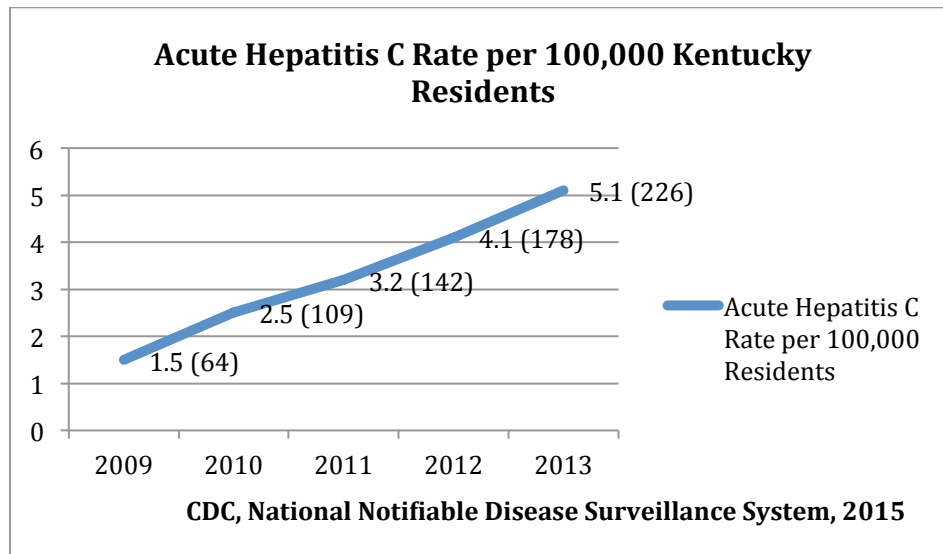
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Appendix

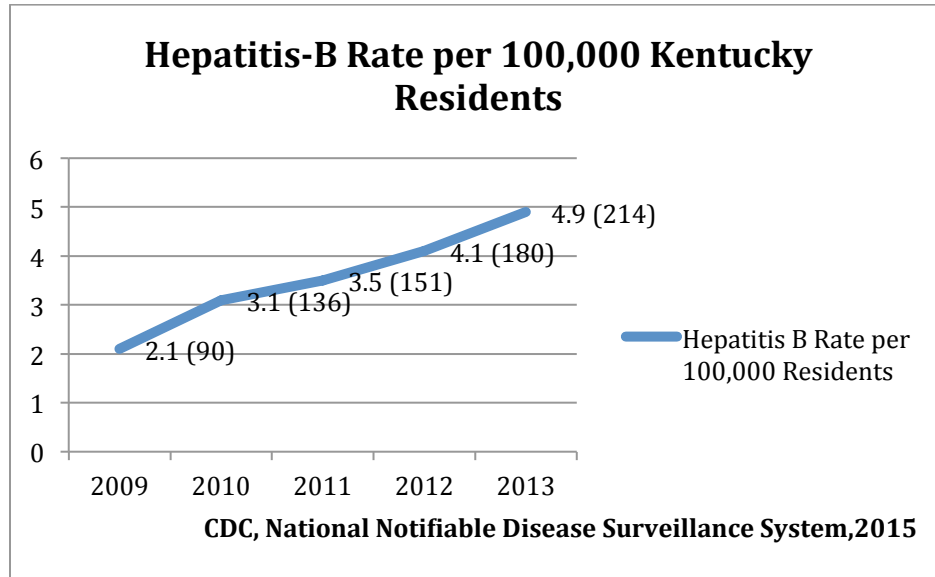
I. *Figure 1: Kentucky Heroin Overdose Deaths 2012 – June 30th, 2015*



II. *Figure 2: Acute Hepatitis C Rate per 100,000 Kentucky Residents*



III. Figure 3: Hepatitis B Rate per 100,000 Kentucky Residents

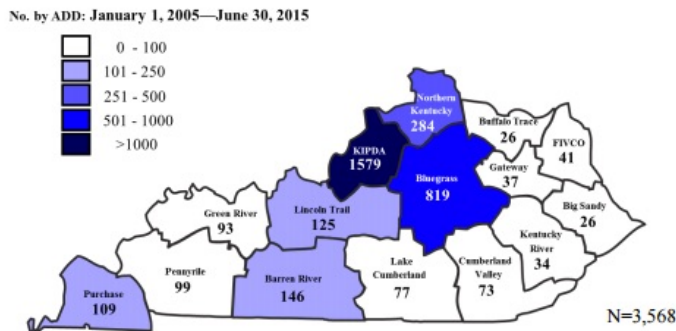


IV. Figure 4: HIV Diagnoses by Area Development District (ADD), January 1, 2005-June 30, 2015, Kentucky

Kentucky HIV/AIDS Surveillance Report: June 30, 2015

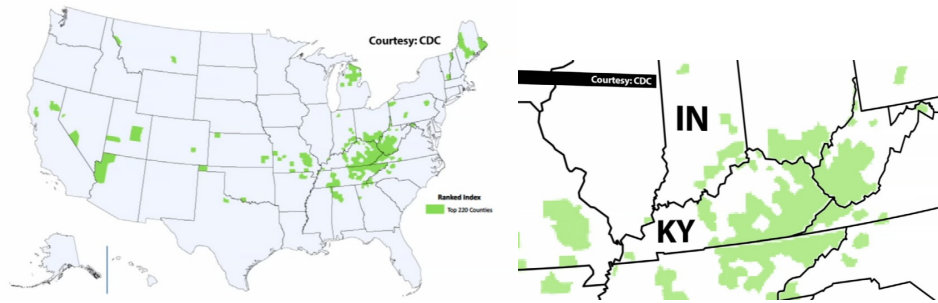
HIV Diagnoses by Area Development District (ADD), January 1, 2005-June 30, 2015, Kentucky

Figure 19. Number of HIV Disease Diagnoses within each Area Development District of Residence at Time of Diagnosis, for the Most Recent 10.5 years, January 1, 2005—June 30, 2015, Kentucky



Source: Kentucky HIV/AIDS Surveillance Report, 2015.

V. *Figure 5: Risk for HIV Outbreak, CDC*



Source: Risk for HIV Outbreak- WDRB news courtesy of CDC, 2016.

VI. Interview Questions

Health Department Director

- a. I understand that _____ city/county has/has not implemented a needle exchange program.
- b. Which factors led to determining there was a need for a needle exchange program?
- c. Can you tell me about the process by which the needle exchange was approved (or not approved) and the issues that were raised in the discussion of implementing it?
- d. Once approved, what processes were followed to launch the exchange?
- e. When did the health department approve the program?
- f. When did the county's (city's) governing body approve the program?
- g. What date did the exchange officially begin? If it has yet to begin, why is that?
- h. What are the operating hours and location of the program?
- i. How many individuals have been served and what is the number of needles distributed and returned?
- j. What is the model of the exchange: a needs-based negotiation, a one-for one exchange, or a one-for one plus exchange (such as 2 to 1)?
- k. People have different opinions about what model to use for an exchange. What were the opinions in (_____)_ county/city.
- l. Is HIV or Hep-C testing offered? Why or why not?
- m. What difficulties have been encountered in the approval and/or implementation process? Which, if any, of these challenges are currently being faced?
- n. Beyond containing the spread of infectious diseases, what are the other goals of the exchange and are these goals being met?
- o. Do you have any supporting documents that you are able to share related to the program's implementation that might be of use to my study?

Chair of Board of Health

- a. I understand that _____ city/county has implemented a needle exchange program.
- b. What is/was the role of the Board of Health in the implementation process?
- c. Can you tell me about the process by which the needle exchange was approved (or not approved) by the Board of Health and the issues that were raised in the discussion of implementing it?
- d. What was the vote count when the exchange program was approved/not approved?
- e. What difficulties have been encountered in the approval and/or implementation process that you are aware of? Which, if any, of these challenges are currently being faced?

Judge Executive/Mayor

- a. I understand that _____ city/county has implemented a needle exchange program.
- b. Can you tell me about the process by which the needle exchange was approved (or not approved) by the local government and the issues that were raised in the discussion of implementing it?
- c. What was the vote count when the exchange program was approved/not approved?
- d. What difficulties have been encountered in the approval and/or implementation process that you are aware of? Which, if any, of these challenges are currently being faced?

VII. *Table 4: Themes Identified in Initial Coding Process Prior to Resorting into Overall Themes*

1. Access to treatment as a goal
2. Adequate personnel to operate program
3. Allows outside county participants
4. Do not want to fund outside county participants
5. Belief program enables drug use
6. Belief program facilitates treatment
7. Best practices/needs-based model of exchange
8. Change in thinking did not occur after discussions
9. Change in thinking occurred after discussions
10. City/county cannot agree on program details
11. Community partnerships formed
12. Concerns about location
13. Cost savings of program as a facilitator
14. Cost of program as barrier
15. Data collected in program
16. Desire to spread social services across county
17. Did not engage community
18. Disagreement on model of exchange
19. Distributes preferred needle type to drug users
20. Distributes retractable one-use only needles
21. Education as a tool with participants
22. Education as a tool with governing authorities
23. Education as a tool with the public
24. Education not being enough
25. Establishing relationships of respect/trust with participants
26. Evidence based presentation delivered to governing authorities
27. Evidence based research to guide program planning
28. Fact-based/public health approach to program
29. Fear of attracting crime

30. Fear of community image going down
31. Fear of increasing drug use
32. Fear of increasing needles found
33. Fear of needle sticks; especially law enforcement, EMS, and children
34. Fear of not getting reelected
35. Fear of poor participant behavior
36. Focus groups with injection drug users to inform program planning
37. Formed a work group
38. Governing authority desire to be a leader in the state
39. Harm Reduction Coalition training
40. Lack of community interaction/political engagement
41. Lack of personnel to operate program
42. Looking to expand services
43. Media not an effective tool
44. Medical issue, not public health issue
45. Mobile exchange preferred over health department location
46. Naloxone as a part of the needle exchange service
47. Opposition to outside county participants
48. Political values of county
49. Presence of advocates
50. Privacy of drug user considered
51. Program "Champion" (people present that took the initiative to lead approval process, often including personal meetings between health department director and other stakeholders/partners)
52. Program funding not secured
53. Program funding secured from city
54. Program funding secured from grants
55. Proximity to Southern Indiana outbreak
56. Recognized high disease rate/public health issue by health department
57. Recognized high disease rate/public health issue by community
58. Recognized high disease rate/public health issue by board of health
59. Recognized high disease rate/public health issue by county

60. Recognized high disease rate/public health issue by city
61. Recognized incidence of heroin/drug issue by health department
62. Recognized incidence of heroin/drug issue by community
63. Recognized incidence of heroin/drug issue by board of health
64. Recognized incidence of heroin/drug issue by county
65. Recognized incidence of heroin/drug issue by city
66. Recognized presence of used needles in community
67. Religious beliefs of county
68. Require disease testing
69. Results of data collected in program thus far
70. Services offered include all "best practices" services
71. Services offered include basic exchange and referrals
72. Size of county
73. Stigmatization of drug users/lack of empathy
74. Strong community engagement
75. Structuring program to fit the socio-cultural context
76. Support of media
77. Supportive political climate
78. Tax-dollars should not be spent on this
79. Trust barrier of drug users participating in program
80. Trust of "Champion" from governing authority as facilitator
81. Unrecognized incidence of heroin/drug issue
82. Visited other local exchanges to inform planning
83. Waiting for other counties to implement programs