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Needle exchange policy adoption in American cities: *Why not?*

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> 'There is no longer doubt that these (NEP) programs work, yet there is a striking disjunction between what science dictates and what policy delivers … little qualitative and quantitative research has been done in HIV prevention policy, and no body of evidence exists to inform the field about the factors that influence policy…'
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> *The National Institutes of Health Consensus Development Conference Statement, 1997*

The spread of the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) through intravenous drug use (IDU) is a profound public health problem in the United States. According to the Centers for Disease Control's (CDC) August 1998 *Mortality and Morbidity Weekly Report*, 36% of the 641,000 AIDS cases in the U.S. reported to the CDC occurred among IDUs, their sexual partners, and their offspring (CDC, 1998). Approximately 50% (or 40,000) of annual *new* HIV infections occur among IDUs, their sexual partners, and their offspring (CDC, 1997).

Armed with such grave statistics, AIDS activists are 'hitting the streets,' working to facilitate the implementation of legal needle exchange programs (NEPs) in various cities as a way of combating the spread of HIV and AIDS. NEPs are programs that utilize syringe exchange (i.e., exchanging a used needle for a new one) as a method of combating the spread of HIV. What's striking about this movement to implement NEPs, however, is that, while virtually every scientific body that has studied the effects of NEPs supports the argument that they reduce the spread of HIV/AIDS, including the National Research Council, the CDC, and the American Public Health Association, many local governments are refusing to give NEPs serious consideration as a viable policy alternative in reducing the spread of AIDS (National Commission on AIDS 1991; the GAO 1993).[1]

The puzzle then becomes: if HIV/AIDS is spreading most rapidly among IDUs, and if NEPs are proven to reduce the spread of HIV/AIDS among this high risk population (and do not promote increased drug use), why do some cities choose to adopt this method of stemming the spread of HIV while others do not? Why do some locales adopt NEPs while other communities do not?

This paper shows that understanding the adoption of *legal* NEPs as a way of combating the spread of HIV/AIDS is a matter of understanding not only the statistically significant *determinants* of public policy regarding NEPs but also the broad *processes* of NEP policy adoption at the local level. Specifically, this paper investigates the determinants of NEP adoption and explores how these determinants 'play out' in relation to actual political processes of policy adoption in U.S. cities.

This paper proceeds as follows. First, it reviews the history of and debates surrounding NEPs in the United States. Second, it reports results from a quantitative analysis of the policy determinants involved in the adoption of NEPs at the local level. Third, it conducts a qualitative case study of the adoption of NEPs in two U.S. cities: Denver and Seattle. Finally, it posits an explanation of how and why NEPs are successfully adopted in some cities, whereas other local polities are able to effectively delay or deny such policies from reaching the public agenda and being acted upon.

The history of needle exchange policy in the United States

The AIDS epidemic first appeared in the U.S. in the early 1980's, primarily in the coastal cities of New York and San Francisco and mainly within the gay male population (Shilts, 1987; CDC, 1997). By the mid-1980s, physicians, public health experts, and medical personnel across the U.S. became increasingly aware of the spread of AIDS among the IDU population (Lane, 1993; Dempsey, 1997; National Research Council, 1995).[2] Throughout the 1980's and into the 1990's, the number of AIDS cases due to IDU climbed to well over 25%; by the end of 1997, approximately one-third of all AIDS cases were directly related to IDU (CDC, 1997; NIH, 1997).

Beginning in the late 1980's, and with HIV/AIDS due to IDU on the rise, policy officials, academics, and experts across the nation touted the success of NEPs as a way of reducing the spread of the disease among this high risk population. A 1993 study by the School of Public Health at the UC-Berkeley in conjunction with the Institute for Health Science Policy Studies at the UC-San Francisco reported that:

> …the need for a comprehensive approach to disease prevention among IDUs remains as critical now as it was at the beginning of the HIV epidemic … for active IDUs who will not or cannot stop injecting drugs … [they] must use a sterile syringe for each injection…

Reports such as this one, espousing the utility of clean syringes in halting the spread of HIV, are now commonplace.[3] In a NEP, IDUs are given the opportunity to purchase or receive sterile needles for injection purposes, with the intent of stopping the intermingling of HIV-infected blood among IDUs who share syringes. Countries across Euroope (e.g., Switzerland and the Nether-

lands) have long heralded the positive effects of NEPs in reducing the spread of HIV among IDUs (Lane, 1993; Kirp and Bayer, 1992).

The first NEP in the U.S. began operating out of Tacoma, Washington in 1988. The Tacoma NEP is still in operation today and is successful at stemming the spread of HIV via IDU in the area, as well as in getting intravenous drug users into hospitals and treatment programs (Dempsey, 1997; Lane, 1993). NEPs in other cities like Chicago, New York, and New Haven provide further evidence that NEPs work to reduce the spread of HIV/AIDS in the U.S. (CDC, 1997; National Research Council, 1995; NIH, 1997).

Currently, there are over 100 legal NEPs operating all across the United States; in almost every case, these exchanges are successful at reducing the number of AIDS victims contracting the disease from IDU (CDC, 1988; NASEN, 1998).[4] Most of these exchanges work out of mobile vans, parking lots, and public health departments; some exchanges operate from tables set up on sidewalks in areas of cities that are known for their high rates of drug use (CDC, 1998; Lane, 1993).

In addition to scientific studies from leading academic institutions and health organizations, Health and Human Services secretary Donna Shalala reports in February 1997 that:

> 'Studies indicate that NEPs can have an impact on bringing together 'difficult to reach' populations into systems of care that offer drug dependency services, mental health, and medical and support services. These studies also indicate that NEPs can be an effective component of a comprehensive strategy to prevent HIV and other blood-born infectious diseases in communities that choose to include them. To further lend credence to NEPs and their effectiveness, the National Institute of Medicine of the National Academy of Sciences, the National Commission on AIDS, the Office of Technology and Assessment, the General Accounting Office, the National Urban League, the American Public Health Association, the U.S. Conference of Mayors, and the American Medical Association all endorse NEPs as an effective means of stemming the spread of HIV/AIDS.'

Nonetheless, the Clinton Administration refuses to lift the ban on federal funding for NEPs, a provision of the 1990 Ryan White Act, as a way of combating HIV.[5] Even though the scientific evidence concerning HIV/AIDS and IDU shows that using a sterile needle each time an IDU injects will help to stop the spread of the AIDS virus, many cities in America are unable or unwilling to establish a legal NEP.

Needle exchange adoption: The current debate

Proponents of NEPs argue that they are necessary because, in study after study, NEPs are shown to reduce the spread of HIV/AIDS while not increasing drug

use (CDC, 1998; NIH, 1998; NRC, 1995; Lane 1993). In addition, NEPs provide a means for public health officials to locate IDUs and get them into treatment programs, stemming the overall incidence of drug use in the U.S. (CDC, 1998; NIH, 1998). Also, NEPs are cost-effective: on average, lifetime treatment for an AIDS victim nears $260,000 (*The Rocky Mountain News* 11/2/97). The lifetime cost per IDU for needle exchange is $12,000 (*The Denver Post* 2/16/97). Finally, those advocating the adoption of NEPs point to the growing number of women and children who are infected with the virus due to heterosexual contact with a male IDU. Fifty percent of all children born with AIDS by 1997 were the offspring of IDUs or their sexual partners (CDC, June 1997). Proponents claim that these 'innocents,' particularly children, are needlessly becoming victims of a disease that could easily be contained through the availability and use of clean needles (Kirp and Bayer, 1993; Stryker and Smith, 1993).

Opponents of needle exchange argue that there are objections to NEPs on moral grounds: NEPs condone drug use, an 'immoral' behavior (Kirp and Bayer, 1993; The Family Research Council, 1997; Focus on the Family, 1998; Drug Watch Colorado, 1997). In addition, opponents argue that NEPs 'send out the wrong message that injecting drugs is okay' (Drug Watch Colorado, 1997; The Family Research Council, 1997). Law enforcement officials have long been opposed to NEPs as well. Many prosecutors and police officials across the nation argue that NEPs are simply not the right answer to reducing the spread of HIV/AIDS, citing that NEPs undermine authority and American society's 'War on Drugs,' (Dempsey, 1997; Lane, 1993; *The Denver Post* 2/16/97).[6] Finally, opponents across the board argue that they are unconvinced by the statistics surrounding the effectiveness of NEPs. New Jersey Governor Christine Todd Whitman, who takes a hard line against NEPs, recently stated that published reports by the CDC, the NIH, and the Surgeon General, which prove the effectiveness of NEPs at reducing the spread of HIV/AIDS, are 'dubious' at best (*The New York Times* 2/2/99).

The research plan

The debate over NEP adoption is certain to continue for some time. As the AIDS virus spreads through the IDU population, as well as to partners and children, more communities will be faced with this public policy dilemma. In order to investigate why cities adopt NEPs, this study utilizes a multi-method approach. The research plan begins with a quantitative analysis of aggregate-level, cross-sectional data on various cities and explores the relevant social and economic characteristics of various cities to determine if there are overall patterns of association (i.e., determinants) between the independent variables and the presence of NEPs (see Table 1 for a complete list of variables, including how they were coded, in the study. See Table 2 for a list of summary statistics for all variables). It then turns to an investigation of the actual *process* of policy

Table 1. List of variables.

	Data source	How measured	Time period
Dependent			
Presence/absence of needle exchange policy	NASEN	If NEP present, value = 1; otherwise 0	Thru Jan 1998
Independent			
Demographic variables			
Percent homosexual	U.S. Census	Percentage of all households which are same-sex households	1990
Percent college educated	Rutger's State of the Cities database	Percentage of people living in city who have received college education	1990
Percentage change in AIDS cases	CDC	Percentage change in number of AIDS cases from 1993 to 1997	1993–1997
Fiscal health	Ladd and Yinger: *America's Ailing Cities, 2nd ed.*	Standardized fiscal health index	1990
Percent intravenous drug users	CDC	Percent of intravenous drug users in city	1998
Institutional variables			
Urban form of government	Municipal Yearbook 1988	If Mayor-council, value = 1; otherwise 0	
City council election structure	Municipal Yearbook 1987	If district or ward-based value 1; otherwise 0	
Political and ideational variables			
Recent religious traditionalists	*Churches and Church Membership in the United States*	Percent of total population in the county that is fundamentalist[a]	1990
Political climate	Rutger's State of the Cities database	Percent of total population in city that voted republican in 1988 presidential election	1996

[a] Fundamentalists are defined as those affiliated with: Churches of God; Mormons; Churches of Christ; Church of the Nazarene; Mennonites; Conservative Baptist Association; Missouri Synod Lutherans; Pentecostal Free Will Baptists; Pentecostal Hilines; The Salvation Army; Seventh Day Adventists; Southern Baptists; Wisconsin Synod Lutherans; National Baptist Convention; American Baptist Association; Christian Reform; Brethren, and AME Zion. See Wald, Buton, and Rienzo, 1996; Meier and Johnson, 1990; and Smith 1990 for further discussion and clarification of religious fundamentalism.

Table 2. Summary statistics for all variables.

	Minimum	Maximum	Mean	Standard deviation	N
Dependent					
Presence/absence of needle exchange policy	0	1	0.26	0.44	74
Independent					
Democraphic variables					
Percent homosexual[a]	–8.1	–4.1	–6	0.71	67
Percent college educated	7.5	34.8	20.5	5.8	74
Percentage change in AIDS cases[a]	–7.5	–3.8	–5.9	0.87	59
Fiscal health	–137	44	–10.1	34	47
Percent intravenous drug users[a]	–5.3	–2.2	–3.7	0.65	59
Institutional variables					
Urban form of government	0	1	0.55	0.5	74
City council election structure	0	2	1.5	0.7	73
Political and ideational variables					
Percent religious traditionalists[a]	1.4	3.8	2.5	0.61	70
Political climate	35	68	53.1	7.5	73

[a] The natural log of all values was used for this variable.

innovation by undertaking qualitative case studies of the adoption of NEPs in two communities.

Quantitative analysis

The dependent variable

The dependent variable is the presence or absence of **legal** needle exchange policies in a community as of January 1998.[7] The sample for this study is from the Rutger's University 'State of the Cities' database and includes sixty-four of the largest cities in the United States.[8] This database was chosen for analysis because it is one of the most thorough, credible, and complete sources of contemporary urban, city, and/or metropolitan-level information containing data on a variety of variables.[9]

Data and measures: Independent variables

The first hypothesis is that the political climate of a city is an important determinant in the adoption of NEPs at the local level.[10] More specifically, cities most likely to adopt NEPs are those in which the majority of the population is *not* socially conservative. Social conservatives tend to be less 'tolerant' of

Table 3. Needle exchange adoption list of hypotheses and results.

H_1: *Cities most likely to adopt NEPs are those in which the majority of the population is not socially conservative* Result: Statistically significant
H_2: *Cities most likely to adopt NEPs are those in which the majority of the population is not religiously traditional (i.e., fundamentalist)* Result: Statistically significant
H_3: *Cities that have a Mayor-council form of government are more likely to have a NEP in place than are cities governed by a Council-manager system* Result: Statistically significant
H_4: *Cities with ward or district based electoral systems are likely to have a NEP* Result: Not statistically significant
H_5: *The greater the percentage of college education in a community, the more likely that a NEP is in place in that city* Result: Not statistically significant
H_6: *As the percentage change in the number of AIDS cases in the metropolitan area increases, the likelihood that a NEP will be in place also increases* Result: Not statistically significant
H_7: *The larger the percentage of same sex households in a city, the likelihood of the presence of a NEP in place in that city will increase* Result: Statistically significant
H_8: *The larger the index of fiscal health in a city, the more likely that a NEP will be in place* Result: Not statistically significant
H_9: *The larger the number of intravenous drug users in a city, the more likely the city is to have a NEP* Result: Not statistically significant

diverse interpretations of social mores and lifestyles than social liberals.[11] In addition, social conservatives tend to be unwilling to institute new policies and try new ways of problem solving, like NEPs, and instead fight to conserve the status quo (Wald, Button and Reinzo, 1996). Also, NEPs are inextricably linked to one's 'worldview,' to 'core beliefs' about the social world and about the ways in which people *should* conduct their lives (Cobb and Elder, 1997). These beliefs about society and individual behavior are often deeply rooted and become important when they are threatened. When fears or threats regarding a group's beliefs are invoked, existing worldviews often become linked to political grievances, spurring action on the part of interested groups and public officials (Cobb and Ross, 1997).[12]

Independent variables explored in this analysis include: political climate in the city; percentage of religious traditionalists; urban form of government; city council election structure; percentage of college educated in the city; percentage change in number of AIDS cases in the metropolitan area; percentage of homosexuals in the city; fiscal health of the city; and the percentage of IDUs in the city.

Political and ideational variables

Political climate. Percentage voting Republican in the city in the 1988 presidential election is included in the analysis as a measure of political climate (i.e., social conservatism) within a city.[13] From 1980 until 1992, social conservatives dominated the country's political climate led primarily by Republican President Ronald Reagan. Vice President Bush's platform in his bid for the Presidency in 1988 was a continuation and mandate of Reagan-era, conservative social policies. As such, it is reasonable to assume that the percentage voting Republican for president in 1988 is a good measure of the political climate in a city. Socially conservative individuals believe in a less diverse interpretation of social mores and modern ideas about 'human standards' and 'alternative' lifestyles and therefore promote the status quo (Wald, 1997; Fowler and Hertzke, 1995). IDU is often considered an 'alternative' lifestyle, as something deviating from the status quo. Consequently, it is plausible that a political climate dominated by socially conservative ideas would be opposed to the adoption of a NEP in their community. Data for this variable are taken from the Rutger's State of the Cities database. The expectation is that this variable will be negatively related to the presence of a NEP. That is, the larger the percentage voting Republican in the 1988 presidential election, the less likely a city is to have a NEP.

Percentage of religious traditionalists in county. Issues that directly relate to notions of morality, like needle exchange, are often inextricably linked to religious beliefs (Fowler and Hertzke, 1995). Attitudes about a variety of issues tend to be rooted in the *religion* of a particular group (Alvarez and Brehm, 1995; Fried, 1988; Luker, 1984). When a particular religious belief comes into tension with a policy that is being considered, political controversy often arises. Discussion about NEP adoption in a community tends to tap into deep-seated beliefs, particularly those grounded in religion and related to drug use and morality. Religious traditionalists, those who push for a return to more traditional, moralistic family values, argue that drug use is immoral and, by connection, so are NEPs (Focus on the Family, 1997; see also The Christian Coalition web site). Given this, the percentage of religious traditionalists in a county is included in the analysis. The data for this variable were taken from the 1990 *Churches and Church Membership*. Traditionalist religions include all Fundamentalists. The classification scheme used to determine these religious demarcations was taken from Wald, Button, and Rienzo (1996), Meier and Johnson (1990), and Smith (1990).[14] The expectation is that the relationship between the presence of a NEP and the percentage of religious traditionalists in a county to be negatively related. That is, the larger the percentage of religious traditionalists in a county, the less likely there will be a NEP.[15]

Institutional variables

Urban form of government. Currently, urban governments primarily exist in either Council-manager or Mayor-council forms.[16] Mayor-council forms of governance tend to be more *responsive* than Council-manager forms to the needs and demands of various interested groups within a community (Lineberry and Fowler, 1967). It seems reasonable that those cities that have a Mayor-council form of government are more likely to be responsive to local groups advocating alternative ways of dealing with AIDS and IDU. Data from this variable are taken from the 1988 Municipal Yearbook. The hypothesis is that cities that have a Mayor-council form of government are more likely to have a NEP in place than are cities governed by a Council-manager system.

Urban city council election structure. District or ward elections in a city allow for interest groups within a geographic area to effectively mobilize for policy change, as council members are forced to meet the demands of their constituents within their urban district or ward (Lineberry and Fowler, 1967). In the case of NEP, groups within a city (e.g., homosexuals) may effectively push for AIDS-related policy adoption if they are mobilized as a voting block and are able to exert pressure on local ward or district representatives (Lineberry and Fowler, 1967; Shilts, 1987). Data for this variable are taken from the 1987 Municipal Yearbook. The expectation is that this variable is positively related to the presence of a NEP. That is, cities with ward or district based electoral systems are likely to have a NEP.

Demographic variables

Percent college educated. As in previous studies of policy adoption (Walker 1969; Gray, 1973), percent college-educated is included in the analysis. Polls show that people who have a college education are more tolerant of alternative views and lifestyles than are people who do not have such education (Verba, Schlozman and Brady, 1995). As a result, it seems likely that those cities which have a higher percentage of college-educated people are more likely to have NEPs, which are designed specifically for those who lead alternative lifestyles, than are those cities with a smaller percentage of college-educated citizens. Data for percent college-educated is taken from the Rutger's State of the Cities database. The expectation is that this variable will be positively related to the presence of a NEP: the greater the percentage of college educated in a community, the more likely that a NEP is in place in that particular city.

Rate of change in percentage of metropolitan AIDS cases. As the number of AIDS cases in a metro area grows over time, the problems associated with HIV/AIDS become more severe; NEPs are one alternative to containing the AIDS virus. The greater the rate of increase in percent of AIDS cases, the more likely local governing officials may be to adopt practices which aid in stemming

the spread of the disease. Data for percentage change in AIDS cases for each city is from the CDC HIV/AIDS Surveillance Reports for 1993 and 1997. The expectation is that this variable to be positively related to the presence of a NEP. That is, as the percentage change in the number of AIDS cases in the metropolitan area increases, the likelihood that a NEP will be in place also increases.

Percent homosexual population in the city. AIDS initially spread most rapidly through the homosexual population (<http://www.cdcnac.org/abstracts/>, trends section). As a result, many gays, particularly men living in large urban areas, mobilized in the mid-1980's and fought for the rights and needs of AIDS victims to be addressed by government (Kayal, 1993; Shilts, 1987). As such, it seems reasonable to assume that this same group would also favor NEPs as yet another way to combat AIDS. Consequently, a determinant of the strength of this group, as measured by the percentage of self-reported same sex households in each urban area in the 1990 Census, is hypothesized to effect whether a city adopts a NEP.[17] The expectation is that this variable will be positively related to the presence of a NEP. That is, the larger the percentage of same sex households within the city, the likelihood of the presence of a NEP in place in that city will increase.

Fiscal health. The state policy adoption literature shows that resources are important determinants of policy adoption (Walker, 1969; Gray, 1973; Cyert and March, 1963). Larger, more urbanized states score 'high' on adoption (Rogers, 1962). While such results are pertinent at the state level, I also suspect that they are imporant determinants at the local level. Decision-makers who can *afford* to take risks on new programs, those that possess 'slack resources,' are likely to take risks and allow adoption of new programs. Fiscal health indices at the local level reflect the resource base from which local governing officials must operate. Data for this variable is taken from a 1990 measure developed in Llad and Yinger's *America's Ailing Cities*. The expectation is that fiscal health will be positively related to the presence of a NEP. That is, the larger the index of fiscal health in a city, the more likely that a NEP will be in place.

Percentage of intravenous drug users in city. As more and more cities face relatively high levels of IDU in their city, and consequently more HIV/AIDS as a result, they may be more inclined to adopt NEPs. Percentage of IDU is, therefore, included in this study. The data for this variable were taken from the CDCs 1996 study, 'The Estimated Prevalence and Incidence of HIV in 96 [sic] Large U.S. Metropolitan Areas,' (Holmberg, 1996). The expectation is that this variable will be positively related to the presence of needle exchange policy: the more IDUs in the city, the more likely the city is to have a NEP.

Method

In order to analyze the determinants of NEP adoption in the various cities in the sample, I first investigate the bivariate relationship between the dependent and independent variables in the analysis. I then utilize a logistic regression approach to estimate the probability or likelihood of the presence or absence of needle exchange policies in a community based on the values of the independent variables[18] included in the analysis.[19]

Results of quantitative analysis

The results of the bivariate correlations of each independent variable with the presence/absence of a NEP (see Table 4 for results of the two-tailed tests) show that the fiscal health of a city, political climate, form of city government, religious traditionalism, and the percent of same sex households are all significant in relation to NEP.[20] Bivariate regression analyses of the independent variables on the presence of NEPs resulted in the following significant variables: percentage of same-sex households; political climate; percentage of religious traditionalists; and form of government. These four variables were included in the full logistic regression model.[21] The percentage of IDUs, the percentage change in AIDS cases, percentage college educated, and the form of election were insignificant in the bivariate case and not included in the final model. The original hypotheses are not supported with regard to these variables.

The results of the logistic regression model are presented in Table 5.[22] Three of the variables, percentage of same-sex households, government form, and the political climate/religious traditionalism measure, are all significant at the $p < 0.10$ level or higher and are in the expected direction. Political climate/religious traditionalism and percentage same sex were the strongest predictors of the presence of a NEP, with $p < 0.03$ for each. The greater the percentage of social conservatives/religious traditionalists in a city, the less likely the city is to have a NEP in place. This finding supports the general hypothesis that political climate and religious traditionalism matters: socially conservative, religiously traditional cities, which tend to be less tolerant of a diverse interpretation of social mores and lifestyles, are less likely to have a NEP. In addition, the results show that as the percentage of same sex households in a community increases, so does the likelihood of the presence of a NEP. Also, Mayor-council forms of urban government are more likely than Council-manager forms to have a NEP in place, which supports the original hypothesis.

Diagnostic tests on the significance of the model show the following. First, the chi-square test of the model yields significant results (see Table 4).[23] Second, note that the Aldrich-Nelson pseudo-R^2 for the logit regression is 0.46. This means that 46% of the variance in the adoption of NEPs at the local level can be explained by the independent variables included in the model. It is possible, however, that the skewed nature of the dichotomous dependent variable is affecting the results.[34]

Table 4. Correlations between NEP and independent variable measures.

	Nep	City health	Election	College	Political climate	Form of govt	Intra-venous drug use	Religion	% change in AIDS	% same sex
Nep	1.00									
City health	–0.31[a]	1.00								
Election	0.15	–0.23	1.00							
College	–0.02	0.51[a]	0.06	1.00						
Political climate	–0.42[a]	0.22	–0.04	–0.08	1.00					
Form of govt	0.28[a]	–0.39[a]	0.14	–0.06	–0.23[a]	1.00				
Intravenous drug use	–0.04	–0.04	–0.02	–0.16	0.02	0.02	1.00			
Religion	–0.30[a]	0.13	–0.04	0.12	0.52[a]	–0.22[a]	–0.33	1.00		
Change in rate of AIDS	0.05	–0.01	0.08	0.00	0.18	0.18	0.82[a]	–0.35	1.00	
% same sex	0.33[a]	0.29[a]	0.31	0.55[a]	0.11	0.11	0.26[a]	–0.33[a]	0.45[a]	1.00

[a] $p < 0.10$, based on two-tailed tests of significance.

Table 5. Results of multivariate model of NEP and Independent variables.

Full logit model		
Dependent variable		
Presence/absence of needle exchange policy		
Independent variables	B	*p*
Demographic variables		
Percent homosexual	1.17	$p < 0.03$
Institutional variables		
Urban form of government	1.36	$p < 0.07$
Political and ideational variables		
Political climate/religious traditionalism	−0.13	$p < 0.03$

Pseudo R-squared: 0.47
Chi-square = 20.6; significant at $p < 0.0004$
N = 63

Qualitative analysis

The strength of any quantitative analysis lies in its ability to find and explain overall patterns of covariance and relationships among the data. However, one of the greatest weaknesses of this approach is its inability to really 'get at' an understanding of the *process* and *politics* which surround particular phenomenon, like NEP adoption. Therefore, once the patterns of association have been recognized and the relevant variables relating to the presence of NEPs have been identified by the quantitative analysis, that knowledge can be applied to two particular cases. In this study I investigate Denver (which delayed the adoption of a NEP for years) and Seattle (which implemented legal needle exchange in 1990).[25]

Agenda Formation: A Process Model

The Agenda Formation/Agenda Process Model is a means for understanding the process of policy adoption at all levels of government (Kingdon, 1984). The Agenda Formation Model focuses not on the aggretage, quantitative determinations of policy choice but on the more qualitative *processes* by which these choices are made. It underscores the mechanisms by which ideas reach the public and formal agendas and opens the lid on the 'black box of policy-making.'

Agendas and policy windows

The agenda process or 'garbage can model,' as originally laid out by March, Cohen, and Olson, and as applied by Kingdon, takes us one step beyond the various determinants that factor into policy adoption (Kingdon, 1984; Cobb

Table 6. The problem, policy, and political streams.

Seattle
The problem Increasing HIV due to IDU in late 1980s
The policy NEPs to operate out of county health dept
The politics ACT-UP pushes local officials to adopt NEP; city officials pass ordinance to allow NEP operation in April 1989, with endorsement of local health department officials, law enforcement, and the community Liberal political climate provides additional support
Denver
The problem HIV rates due to IDU become increasingly prevalent in early 1990's; innocent women and children are infected
The policy Proposal to allow operation of NEPs in three areas of city, pending approval by state legislature to reverse drug paraphernalia laws
The politics Local interest groups push for NEP approval By Denver City Council in 1994; action delayed by Mayor until 1997, when reversal of opinion and endorsement by Mayor leads to Council approval. Community groups and members of the community are behind NEP implementation. Currently, NEP operations in Denver are pending an amendment to state paraphernalia laws, which is unlikely Conservative political climate prohibits statewide amendment of paraphernalia laws

and Elder, 1983).[26] Kingdon's model allows us to look to the various problem, policy, and political streams in order to understand the underlying process involved in the adoption of NEPs. Kingdon argues that the process of agenda formation is best understood as 'highly fluid and loosely coupled,' a process whereby various 'streams' of problems, policies, and politics 'flow through and around the government independent of one another' (Kingdon, 1984; p. xiii).[27]

According to Kingdon, policy entrepreneurs and participants within and outside government lie in wait of particular opportunities to attach their solutions to problems. Solutions float around in a kind of 'primeval soup' where they continually combine and recombine with other solutions via a process of persuasion and diffusion among key actors in a policy community. These problems and solutions are coupled, often times within the political stream, where consensus building for particular policy choices is governed by a system of loose bargaining. In addition, Kingdon argues that what's critical to understanding the agenda process is the political opportunity created by policy windows. 'Policy windows' are brief periods in the political process during which opportunities exist for ideas to reach the formal agenda and political change to occur.

Kingdon argues that while focusing events, such as a disaster or crisis, often times spark the attention of government officials, *indicators* also work to bring **problems** to the attention of public officials. Indicators used to assess the strength of or change in a situation are often used to define a problem; once that problem has been defined, governmental attention is shifted to focus on it and action occurs (Kingdon, 1984; Cobb and Elder, 1983). This process of problem definition structrues the *problem stream*.

Kingdon points out that critical to the *policy stream* is the role policy entrepreneurs and policy communities play. Policy enterpreneurs have incentives to push their 'pet proposals' or solutions through policy windows. As a result, these entrepreneurs, through a process of combination and recombination of ideas, work to see that their policy proposals are seriously considered. Kingdon argues, however, that the *readiness* of a viable solution or alternative to a particular problem also greatly enhances the chances that the policy proposal will be considered seriously by decision-making officials (Kingdon, 1984).

Within the *political stream*, Kingdon notes that there are various electoral and interest group pressures to which governmental officials must be aware and respond. The combination of electoral incentives and interest group pressure provides officials with various incentives for allowing some subjects high onto the agenda while making it impossible for other issues to reach such status. In addition, within the political stream exists the political *mood* or *climate*, which can greatly affect the promotion of some alternatives to the agenda while simultaneously constraining others. When large groups of individuals find agreement among common lines regarding a particular policy, important impacts on public policy outcomes are often the result.

Agenda formation models: A critique

Kingdon's model helps us to explain why the confluence of the three streams occurs as a result of political opportunities (i.e., the opening of 'policy windows) afforded various groups and issues in order for them to reach agenda status. However, Kingdon's model is insufficient in helping us to understand why particular political opportunities do not arise, keeping the streams from having an opportunity to come together and produce policy change. One way to understand this 'non-coupling' is to consider the role that *agenda denial* plays.

In the process of agenda formation, policy innovations are proposed and advocates work to 'expand the scope of conflict,' involving more actors and a wider range of interests, in order to see that their needs and wants are recognized by political officials (Schattschneider, 1960). However, it is the case that not all issues are expanded; there is a restrictive element to the process as well.[28] Some issues and groups are often *denied* agenda access, restricting the scope of conflict (Cobb and Ross, 1997; Cobb and Elder, 1983).

Recent work on agendas, particularly that by Cobb and Ross, suggests that agenda conflicts, particularly those which result in denial, are clashes between 'initiators and opponents' over competing worldviews and social values, the

result being verbal attacks, the symbolic redefinition of issues, and, ultimately, agenda denial on the part of governmental officials and decision makers. Cobb and Ross suggest that in order to understand the process of policymaking, we must look beyond the economic and material resources of individuals and groups within society and consider the *symbolic processes* involved in explaining why some issues are denied agenda access.[29] Actors who feel that their interests, and ultimately their worldview, are being threatened by the introduction of new policies to the formal agenda utilize various strategies to deny agenda access.

For both of the cities in this analysis, the next section conducts an in-depth case study of the adoption of NEPs using newspaper accounts, personal interviews with relevant actors in the policy making process, and archival data. In doing so, the purpose is to locate the various political, problem, and policy streams which intermingle to create an open policy window through which NE policy passes and is implemented. In the case of Seattle, Kindon's garbage can framework is sufficient to explain the presence of NEPs. However, agenda denial strategies work to keep the problem, policy, and political streams from coupling in Denver, effectively delaying NEPs from being adopted. This analysis helps to explain the presence of different outcomes in seemingly similar cities.

The problem stream

Seattle. Problems arise when conditions come to be defined as such, spurring officials to take action (Kingdon, 1984). Such is the case of AIDS and IDU in Seattle. Seattle was one of the first cities in the United States to legally adopt a NEP when it did so in April 1989. During that year, the Seattle-King County Health Department officials estimated that the HIV/AIDS infection rate among the city's 12,000 IDUs was at approximately nine percent (or 1100 people) (*The Seattle Times* 3/22/89). Health Departments across the state of Washington at that time reported that roughly 75% of the state's IDUs shared needles (*The Seattle Times* 5/9/89). City health officials estimated that the number of AIDS cases stemming exclusively from IDU more than tripled in 1988 (*The Seattle Times* 3/23/89). In addition, trends in the incidence of cases showed that since mid-1982, 13% of the AIDS cases reported in Seattle were due to IDU – and over half of those people had died by 1988 (*The Seattle Times* 3/23/89). Concern over the growing magnitude and severity of the problem, as shown by relevant indicators, prompted interested groups and health officials to push for a NEP to be adopted (*The Seattle Times* 3/23/89).

Denver. The number of HIV/AIDS cases reported in Colorado at the end of 1996 was approximately 15,000, with nearly 6,000 of those cases being reported in the Denver metro area alone (*The Denver Post* 2/16/97). In addition, Colorado had an estimated 15,000 people who inject illicit drugs, such as heroin, cocaine, or amphetamines, with about 11,000 of them in the Denver

metro area (*The Denver Post* 2/16/97). A state health report published in September 1997 showed that those Coloradans contracting the disease most quickly are women who shoot drugs or have sex with men who do, as well as those children born to infected mothers (*The Denver Post* 2/16/97). The indicators surrounding the spread of HIV/AIDS show that HIV contraction associated with IDU is a serious problem in Denver, and the condition is only expected to get worse (Denver Commission on HIV Planning, 1997).

The policy stream

Seatle. According to Kingdon, policy communities are comprised of specialists (e.g., researchers, professionals, and interest group advocates) who have in common a concern with one area of policy. These communities provide a forum from which a wide range of ideas or policy solutions arise and are debated, considered and promoted. While many policy communities are highly fragmented, others tend to be 'close-knit.' A closely-knit policy community 'generates common outlooks, orientations, and ways of thinking' (Kingdon, 1984: p. 119).[30] The AIDS policy community in Seattle provides an instructive example of a tightly knit policy community. In Seattle, AIDS activists from the pro-AIDS interest group ACT-UP (AIDS Coalition to Unleash Power), physicians, specialists within the local medical community, and public health officials form a tightly knit policy community. People within this community have a common concern: to reduce the spread of HIV/AIDS. As the AIDS epidemic related to IDU worsened in the late 1980s, specialists within this community began considering solutions to this problem; the one readily agreed upon by all members of the policy community was NEP (*The Seattle Times* 3/22–23/89).[31]

Like policy solutions that enjoy strong consensus, solutions that are 'ready' (i.e., those that are technically feasible and acceptable to the policy community), also stand a greater chance of survival and access to the formal agenda (Kingdon, 1984). NEPs in Seattle provide a case in point. Not only did members within the AIDS policy community, like ACT-UP, have a solution 'ready' when the problem surrounding HIV/AIDS and IDU grew, but their policy proposal (to implement a NEP) was technically feasible (an NEP was already working to reduce the spread of HIV/AIDS among IDUs in nearby Tacoma, WA)[32] and acceptable to members within the AIDS policy community (county health officials, local physicians and medical directors, and the interest groups involved all supported needle exchange) (*The Seattle Times* 3/23/89).

ACT-UP, with the backing of the various members of the AIDS policy community, began operating an illegal NEP in Seattle on March 22, 1989 with the intention of getting the attention of local governing officials to legally support and adopt NEPs (*The Seattle Times* 3/22/89). In Seattle, as in any tightly knit policy community, there was consensus among specialists that NEP is a viable method for stemming the spread of HIV/AIDS among IDUs. In April 1989, the City Council, with the endorsement of the Mayor, city public health officials, and law enforcement personnel, voted unanimously to allow

the takeover of the needle exchange program from ACT-UP by the King County Health Department (*The Seattle Times* 4/11/89). By the summer of 1989, Seattle had a fully operating and legal NEP in place. The close knit nature of the AIDS policy community in Seattle, along with the widespread agreement over the NEP paradigm and readiness of NEP as a policy solution, helped to structure and 'anchor' the AIDS agenda squarely around NEP, allowing greater ease of passage for a legal NEP in Seattle.

Denver. While the AIDS policy community in Seattle was the prime motivator behind the adoption of legal NEPs there, in Denver individuals and policy entrepreneurs play more of a critical role. Policy entrepreneurs invest their resources – time, energy, reputation, and money – in hopes of a future return; they are *advocates* for the prominence of a policy solution (Kingdon, 1984). Political entrepreneurs have incentives to take part in the advocacy role. One incentive that prompts advocacy is group interests (Kingdon, 1984; Lasswell, 1971). In Denver, PEERS (People Engaged in Education and Reduction Strategies), a local arm of the national Harm Reduction Coalition[33] supported and advocated the implementation of NEPs because they view them (NEPs) as part of their larger group interest in 'harm reduction.'

Political entrepreneurs also advocate proposals because they want to promote their values or affect the shape of public policy (Kingdon, 1984; Schneider and Teske, 1992). PEERS, believing that, for better or worse, licit and illicit drug use is part of our world, works to promote policies that attempt to reduce the harmful effects of that drug use. It advocates that the quality of individual and community life and well being are criteria for successful drug interventions and policy strategies (Harm Reduction Coalition, 1997). This is why they pushed for the implementation of NEPs in Denver.

According to Kingdon, policy ideas do not merely 'float' within the policy stream; they combine and recombine in patterns that insure survival (Kingdon, 1984; Cohen, March and Olsen, 1972). Three criteria for policy survival are present in the case of Denver. First, in order for policy entrepreneurs to see their policy accepted not only by the policy community but also by the larger group of governmental officials and decision-makers, they must be able to attach that solution to a particular problem. In Denver, PEERS attached the harm reduction solution of NEPs to the problem of AIDS, increasing its (the policy proposal's) chance for survival.

Second, the chances for success of a policy solution to survive and be addressed by the formal agenda are increased if a period of 'softening up' occurs before the proposal is seriously considered. Political entrepreneurs work to 'soften up the policy community in which they operate, as well as the larger public, getting them used to new ideas and building support for their proposals … then when a short-run opportunity to push their proposal comes, the way has already been paved … without this, a proposal sprung even at a propitious time is likely to fall on deaf ears' (Kingdon, 1984: p. 128). Denver's policy entrepreneurs and their actions are, again, a case in point. PEERS and

other relevant interest groups (like the Colorado AIDS Project and the Governor's AIDS Council) began pushing for the implementation of a NEP bill in Denver by introducing legislation in the Colorado House of Representatives to amend state paraphernalia laws as early as 1996, aiding in 'softening up' the process through which needle exchange could be viewed as a viable policy alternative in Denver (*The Denver Post* 2/16/97).

Finally, the survival of a policy solution often depends on technical feasibility and efficiency (Kingdon, 1984; Lasswell, 1971). In the case of NEPs in Denver, political entrepreneurs, like PEERS, claimed that NEPs were easy to implement and that other local programs already in force across the nation 'worked' in reducing the spread of AIDS among IDUs (PEERS Fact Sheet, 1997). In addition, they argued that NEPs were efficient (i.e., cost effective) (Harm Reduction Coalition, 1997). Through the coupling of the policy stream with the problem stream in Denver, then, NEPs as a method of combating HIV/AIDS appeared to enjoy an even greater opportunity to reach the formal agenda.[34]

The political stream

Seattle. The political stream is often the place where the problem and policy streams come together (Kingdon, 1984). Within the political stream, the mood or public opinion surrounding a particular policy position can become extremely pertinent to agenda access the policy passage. In addition, organized political forces and patterns of support or opposition to agenda items are an integral part of the political stream. If organized groups find consensus on a policy solution, political leaders and officials have an impetus to move on that proposal (Kingdon, 1984; Lasswell, 1971).

Political climate/religious traditionalism in Seattle was a large component in the passage of its NEP. Given the results of the quantitative analysis, this is hardly surprising. Seattle has long-held a tradition of less socially conservative politics and policies than most cities. Seattle has become, over the last decade or so, a major 'trend setter' in American politics and culture (Barone and Ujifusta, 1998). Today, Seattle is known as a 'liberal bastion' (Barone and Ujifusta, 1998). In addition, Erikson, Wright, and McIver (1993) report in their study of public opinion and policy in the states that Washington is one of the most consistently ideological liberal states over time. It is no wonder, then, that with such a progressive heritage and a strong socially liberal climate, that Seattle passed a NEP in the late 1980s.

Also important to the adoption of a NEP in Seattle was the presence of interested groups that could advocate NEP as a solution to AIDS and pressure local officials to act; in Seattle, ACT-UP played a pivotal role in doing just this (*The Seattle Times* 3/23/89). Consequently, local law enforcement and health department officials decided to enact a NEP to combat AIDS via IDU (*The Seattle Times* 3/23/89). Because there was cohesion among organized interests (e.g., ACT-UP, physicians, etc.) in response to the problem of AIDS and NEP, local officials, including the Seattle mayor and members of the City Council,

had an impetus to move on the NEP policy proposal. City Council approval of NEPs provided a policy window, allowing the problem, policy, and political streams to couple and policy change to occur.[35] Given the significance of the same sex variable in the quantitative analysis, the actions of ACT-UP that we find in the case of Seattle are not surprising: many pro-AIDS interest groups, like ACT-UP, are organized and maintained through the efforts of gay men (Kayal, 1993; Shilts, 1987).

Denver. Within the political stream, government leaders often face situations surrounded not by consensus but by conflict (Kingdon, 1984; Schattschneider, 1975). If there is conflict among organized political forces, political leaders are forced to pay attention to the price that may be paid for attempting to push an idea; electoral incentives often give officials a reason to favor or oppose particular agenda items (Kingdon, 1984). This notion is demonstrated in the case of Denver.

In 1994, when PEERS and other interest groups first began pushing for the implementation of legal NEPs in Denver, Mayor Wellington Webb refused even to discuss the issue (*The Denver Post* 2/16/97). Webb, as a first term mayor in 1994, most likely did not yet enjoy the electoral security to support such a controversial and, technically, illegal program.[36] Due to the legal conflict surrounding NEPs, Webb was forced to pay attention to the various costs associated with confronting the law, and he originally denied NEPs agenda access.

Despite opposition, PEERS continued pushing strongly to get NEPs recognized as a viable policy solution to the problem of AIDS and IDU. By 1996, efforts mounted to introduce a bill into the State Legislature in order to amend current paraphernalia laws and allow a legal NEP to operate in Denver (*The Denver Post* 2/16/97). Extreme opposition to needle exchange arose from such powerful interest groups as the Denver Police Union, Colorado Drug Watch, and the Family Research Council, an arm of the Christian Coalition (*The Denver Post* 10/15/97). These opponent groups argued that, not only was a NEP illegal under current state laws, but legalizing it would give drug users the instrument with which they can break the law (i.e., the law prohibiting illicit drug use), as well as send the wrong message about doing drugs to childeren (The Family Research Council, 1997; *The Denver Post* 10/15/97).

Given the significance of the political climate/religious traditionalism measure in the quantitative analysis, it is not surprising that we find more 'conservative and traditional' groups in society, like the Family Research Council, as being a key part of the puzzle of explaining the inability to adopt a NEP in Colorado. It is also not surprising that Colorado has yet to implement a NEP given the political climate of the state. While Denver tends to be staunchly Democratic and somewhat progressive, the state of Colorado on the whole is quite socially and economically conservative. In fact, from 1990–1995, the majority of growth in the state was due to an influx of 'high-tech, family-oriented cultural conservatives,' (Barone and Ujifusta, 1998). This conservative political climate no doubt has made an impact on the overall ability to pass and implement a legal

NEP in Denver. In addition, because there was such conflict surrounding the issue of NEPs, Webb was forced to account for the electoral costs involved in opposing such powerfully organized interests as the Christian Coalition, and he further denied the policy.

An alternative hypothesis: Agenda denial

The presence of a policy window creates an opportunity for the problem, policy, and political stream to couple and for political entrepreneurs to push their pet proposals (Kingdon, 1984). In Seattle, a political opportunity or 'window' allowed these three streams to come together and NEP to be adopted. In Denver, however, the active *agenda denial* on the part of Webb to consider needle exchange halted the opening of a policy window, preventing the streams from coupling. Because public officials and issue opponents tend to be risk averse, they will do what is necessary to protect their own long-term self-interests; this is the essence of agenda denial. Denver was unable to implement legal NEPs not only because of elements in the political stream but because various political actors were denying NEPs agenda status, preventing a policy opportunity for the streams to couple.

NEP is a controversial issue. It is primarily associated with IDUs, a negatively constructed population who, according to some, 'get what they deserve.' NEPs conjure up images of criminality – shooting drugs, getting high, stealing to pay for the next fix – all of which carry very negative connotations which do not always resonate well with constituents. In Denver, opponents of NEP were virulent in their opposition because of the effect such a policy would have on their worldview. Groups like the Family Research Council and law enforcement officials were concerned that NEPs condoned 'immoral' behavior, behavior these groups found 'unacceptable' (Colorado Drug Watch, 1997; The Family Research Council, 1997). Consequently, these organized interests have incentives to block NEP from serious consideration on the formal agenda.

In order to protect their long-term self-interests, elected officials often use strategies of agenda denial, particularly when they are faced with difficult symbolic issues (like needle exchange) (Cobb and Ross, 1997). Webb had incentives to actively deny needle exchange agenda status rather than engage strong opposition to such a proposal due to the virulent opposition from affected groups. According to officials at PEERS, Webb refused to side step the state laws and allow NEPs to operate in Denver because he feared the repercussions of doing such (Daurer, 1997). As a result, Webb actively denied needle exchange agenda access. What strategies did he utilize in order to keep needle exchange off of the formal agenda?

Low-cost strategies, such as denial that the problem exists, are used as one of the initial steps in the process of agenda denial. Simple ignorance of the problem suffices to keep issues off of the agenda. Webb originally utilized this strategy of agenda denial in 1994 by refusing even to discuss the possibility of NEPs (*The Denver Post* 2/16/97; Daurer 1997).

When low-cost strategies fail to keep issues off of the agenda, opponents will

often employ more medium-cost strategies, such as symbolic placation. One of the most common symbolic placation strategies is to create a committee to investigate the problem (Cobb and Ross, 1997). Commission creation works to diffuse a conflict and can weaken the momentum of issue proponents (Cobb and Ross, 1997). Webb utilized a strategy of symbolic placation when PEERS and other organized interests began pushing strongly for adoption of NEPs in Denver in 1996: he formed the Denver Human Services Planning Committee that year in order to investigate ways to 'reduce the costs … associated with transmittable diseases associated with illicit-drug use' (*The Rocky Mountain News* 2/25/96). In doing so, Webb was able to act as though he was 'doing something' on the part of NEPs even though he may have been purposely avoiding the issue.

Denial then acquiescence: How NEP got on the agenda

Agenda access was delayed for NEPs since its inception as a policy solution in 1994 until 1997. Webb's decision and consequent actions used to deny the issue of NEP made clear the role of agenda denial strategies in the NEP debate in Denver. So what changed in Denver that allowed the Denver City Council to pass an ordinance allowing legal adoption of NEP?

Webb's denial of a NEP effectively delayed it access to the agenda for three years, from 1994 to 1997. However, pressure from scientific organizations that endorse needle exchange (e.g., the CDC, the National Center for Health Statistics, and the California School of Public Health in San Francisco), as well as statistics reported to him by his own planning commission, forced Webb to reconsider the case of NEP in Denver. Also, Webb was troubled by the growing incidence of HIV/AIDS in newborn children (*The Denver Post* 10/14/97). In addition, pressure was mounting for Denver to act, as most other mayors of major cities like New York, Chicago, and Seattle had fully supported, endorsed, and implemented such policies (NASEN, 1998; *The Seattle Times* 3/23/89). In addition, the electoral security gained from his reelection in 1995 no doubt provided Webb with the degree of political comfortability needed to reverse his position and support a NEP in Denver.[37] It is significant to note that Webb's reversal of opinion is indicative of the strength of context-sensitive case studies: the quantitative model would not have predicted this result.

Discussion and conclusion

Debates over the adoption of NEPs continue to rage throughout the nation. This study sheds some light on the underlying determinants and processes under which policies, like NEPs, are adopted at the local level. Political climate/religious traditionalism, as evidenced by the degree of social conservatism/religious traditionalism in a city, is a key determinant of the presence of a NEP; investigation of the process of adoption in the qualitative case studies reinforces this explanatory angle. It is also evident that demographic factors,

such as concentrations of same-sex households, are significant determinants of NEPs at the local level. In Seattle, the AIDS-rights group, ACT-UP, an organization originally supported primarily by gay men, was a critical component in the passage of a NEP there. Finally, the form of city government, significant in the quantitative model, also played out to a large degree in the qualitative analyses of both Seattle and Denver: mayoral responsiveness, which is greater in Mayor-Council system, lead to the passage of ordinances in both cities. In the case of Colorado, however, the State Legislature worked to block the amendment of state laws, allowing NEPs to operate.

Models of agenda formation which account for the various processes through which problems and issues, like NEP, rise to prominence are useful for explaining the presence of such items on the formal agenda. However, these models are insufficient to explain the way in which some programs and issues are denied agenda status even when conditions supporting adoption in other cities are present. Strategies of agenda denial take us one step further in explaining why some problems or items are never provided a political opportunity for passage.

Future research in the area of NEP policy adoption needs to be expanded to include case studies of other cities. In order to understand agenda denial across various contexts, case studies of individual cities, and policy processes within those cities, are necessary. Investigation of the contextual processes will help to identify crucial variables important within the process of needle exchange adoption in each city. In addition, further investigation of the ways in which the media and officials frame the issue of NEP would be extremely useful for 'shedding more light' on the policy adoption process surrounding NEP. Preliminary analyses suggest that the way in which the interested parties and media in the two cities in the qualitative analysis framed the issue of NEP may have a good deal to do with whether a NEP was able to pass. For example, in Seattle, it seems that the issue of NEP was framed as one of 'public health,' whereas, in Denver, NEPs seemed to be pitched in more moral or ideological ways.

Understanding the adoption of policies at the local level is central to our understanding of the democratic process, more generally. Which groups are heard, how their needs are dealt with, and the ways in which the decision process unfolds across various policy contexts all work to inform us of the ways in which the wants and needs of particular groups in our society are addressed within the political system. Future research in this area will not only enlighten us as to the process of democratic governance in regards to NEP, but it will also show us how various groups, interests, and individuals involved in local decision-making are responding to one of the deadliest epidemics known to humans. Such research may prove not only interesting to policy practitioners and activists, as well as scholars of urban politics and policymaking, but it may save thousands of lives in the end.

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Notes

1. Alternatives to needle exchange, such as informing addicts about the dangers of HIV/AIDS, promoting condom usage during sexual intercourse, and educating the public through mass campaigns designed to inform people about the dangers of sharing needles, are still appropriate and popular ways of educating people about how to protect themselves from contracting HIV/AIDS. However, these efforts have not been overwhelmingly successful at preventing AIDS among the IDU population, as it is a population that's 'hard to reach' (House, 1997).
2. Because HIV/AIDS is spread through bodily fluids, such as semen and blood, needle sharing among IDUs, which often times involves the mixing of residual blood in the syringe and the injector's blood, can promote the spread of the disease.
3. See CDC, NIH, and NIDA home pages on the Internet, as well as reports by the National Research Council (<http://www.nas.edu.nrc/>) and the Kaiser Family Foundation (<http://www.kff.org>).
4. This paper considers only *legal* NEPs. Illegal NEPs also operate in various cities across the U.S. but were excluded from the analysis because the determinants and processes behind the establishment of such programs are likely quite different than those of legal NEPs.
5. In 1998, the 106th Congress revisited the issue of allowing federal AIDS funding to be used on needle exchanges in states and cities; however, the use of these funds for such purposes was, again, denied.
6. Early in the epidemic, many African American churches and leaders were opposed to NEP adoption in their communities. They believe that drug use is a much bigger issue within their communities than is AIDS, and therefore efforts should be launched to stem the tide of that problem first; once drug use in the community decreases, so will the number of HIV-IDU related cases, or so the argument goes (Kirp and Bayer, 1993; Lane, 1993; Dempsey, 1997; CDC, 1997). However, as the HIV/AIDS virus becomes increasingly prevalent among black IDUs, more and more black leaders and churches are changing their position (Dempsey, 1997).
7. Data indicating the presence or absence of legal needle exchange policies was obtained from the North American Syringe Exchange Network (NASEN).
8. The sample for this study was chosen based on data availability, as aggregate, urban level data is often difficult to obtain on a variety of measures. Data for this subset of American cities was taken from the 1996 State of the Cities database, Prepared by the Center for Urban Policy Research, Rutgers, The State University of New Jersey, for U.S. Department of Housing and Urban Development Office of Policy Development and Research, April 1996.
9. I also performed some initial analyses of the presence/absence of NEPs using the 1996-1997 Fiscal Austerity and Urban Innovation (FAUI) dataset. However, due to the nature of the universe of cases in the FAUI database, in which cities with NEPs are severely underrepresented and in which the majority of cases in the dataset have much smaller populations than most major metropolitan areas, I decided to use the Rutger's database for the final analysis. Had I used the FAUI database, I would have lost more cases from my (already small) dataset due to missing data.
10. For a list of hypotheses and the results, see Table 3.
11. By 'tolerant' I mean individuals willing to accept the various 'worldviews' and alternative behaviors of others, especially those that they disagree with, as valid.

12. That action may be to either allow or deny the adoption of a particular policy (Cobb and Ross, 1997).
13. This measure was used, as it is the one included in the dataset that came closest to capturing the essence of 'social conservatism.' I also created a measure of social conservatism within the FAUI dataset, measuring whether there was support for abortion, busing, sexual education in schools, and gun control. Preliminary analyses using this data suggested that social conservatism is a highly significant predictor of the presence of a NEP. As such, I included a similar measure in my final analysis using the Rutger's database.
14. Religious fundamentalists include the following: Churches of God; Mormons; Churches of Christ; Church of the Nazarene; Mennonities; Conservative Baptists Association; Missouri Synod Lutherans; Pentecostal Free Will Baptist; Pentecostal Holiness; The Salvation Army; Seventh Day Adventists; Southern Baptists; Wisconsin Synod Lutherans; National Baptist Convention; American Baptist Association; Christian Reform; Brethren; AME Zion.
15. While county-level measures are not the same as strictly urban or metropolitan area measures, they nonetheless capture the essence of city and metro area measures, as most large metropolises make up entire counties. For example, Cook County is comprised primarily of the city of Chicago.
16. Some cities do demonstrate a hybrid of the two, although this is not the norm.
17. While this measure of the percentage of homosexuals living in a city is somewhat suspect, given that two same-sex college roommates would also qualify under this category, it is nonetheless the best estimate of the number of homosexuals living in a city that is currently available.
18. K-S Lillifor tests of normality of the separate independent variables shows that four of the independent variables were non-normally distributed. Due to the non-normal distribution of the percent IDU, percent tradition religion, percent rate of change in the number of AIDS cases, and the percent of same-sex households, these variables were transformed by taking their respective natural logs. The natural log values passed the K-S Lillifor test and were then used in the full model.
19. Logistic regression is an appropriate technique when analyzing dichotomous dependent variables because of its ability to bound all values of the dependent variable between 0 and 1, as well as its inherent ability, due to its functional form, to correct for problems related to heteroskedasticity (i.e., large error variance).
20. Fiscal health and form of government are also highly correlated with NEP and with one another ($r = -0.39$; $p < 0.01$). Due to this multicollinearity, I dropped the fiscal health measure from the analysis, retaining form of government. The literature on urban government structures suggests that Council-manager type governments tend to have lower taxes than do Mayor-council governments and, therefore, a weaker fiscal base from which to operate (Lineberry and Fowler, 1967). Given that, the results found here are not surprising. Government form was also chosen over fiscal health because of data availability.
21. Percentage of religious traditionalists and the measure of political climate were highly correlated in the bivariate case. This is not a surprising finding, given the fact that religious traditionalists are likely political conservatives. Because the effects of these two variables are extremely difficult to separate, both were included in the multivariate model as a single measure: political climate/religious traditionalism.
22. Note that the dependent variable is highly skewed toward cities that do *not* have a NEP in place. While I have tried my best to include the total universe of cities that do have a NEP, data limitations (i.e., missing data on key variables and cities) do not permit a larger number of cities with NEPs in the data set.
23. An insightful reviewer suggests that factor analyzing the correlation matrix (Table 4) might improve upon the current analysis by allowing for an improved position from which to observe the connection between NEP and the other variables. While this is a useful suggestion seems a worthwhile avenue of investigation, it is nonetheless out of the scope of this study.
24. Skewed dichotomous dependent variables are cause for concern because of the effect that they

potentially have on interpretation and inference. In addition, a pseudo-R^2 calculated for an equation with a variable of this nature (i.e., highly skewed) could usually be adjusted upward in this case, ultimately explaining more variance. However, the caveat is that adjusting this diagnostic upward can create other data problems and therefore the author chose not to report this 'inflated' measure.

25. Denver and Seattle are appropriate comparison cities because they both have similar electoral systems (i.e., non-partisan mayor-council, however Seattle's council elections are held 'at large,' whereas Denver's are a mix of district and at-large), are approximately the same size in terms of population, have a similar number of AIDS cases, are major urban centers within each state, and have nearby communities that have already legally adopted a NEP. In addition, both cities have had similar rates of increase in the number of HIV/AIDS cases over time (CDC Surveillance Reports 1997).
26. This section of the paper is based primarily on Kingdon (1984), unless otherwise noted.
27. Kingdon's notion of the various 'streams' builds off of Cohen, March, and Olsen's 'garbage can model' of decision making. Cohen, March, and Olsen contend that the garbage can process is one that takes into account the way in which various participants – both inside and outside of government – make decisions (Cohen, March and Olsen, 1972). One of the central tenets of the garbage can model is the process of *coupling* of problems and solutions; the shifting combination of politics, problems, and solutions come together to make action on a particular issue occur (Cohen, March and Olsen, 1972).
28. This section of the paper is primarily based on Cobb and Ross (1997) unless otherwise noted.
29. Traditional theories of interest groups and social movements suggest that resources are key to gaining agenda access (McCarthy and Zald, 1977; McAdam, 1982).
30. Kingdon's references to and insights regarding the initial phases of any policy decision process are appreciated; see also Lasswell (1963; 1971), Downs (1971), and Hilgartner and Bosk (1988) regarding the importance of the *intelligence* and *promotion* phases of the decision process.
31. The number of King County AIDS cases stemming exclusively from IDU more than tripled in 1987 (*The Seattle Times 3/22/89*). solutions to this problem which were floated include needle exchange, the handing out of bleach for sterilizing syringes, and the distribution of condoms to IDUs (*The Seattle Times 3/22/89*).
32. The Tacoma-Pierce Health Department reports that almost 90% of people do not share needles after participating in an exchange, up from 66% who do not participate (*The Seattle Times 3/23/89*).
33. The Harm Reduction Coalition fosters alternative models to conventional health care and drug treatment and challenges traditional methods of reducing drug-related harm (The Harm Reduction Coalition, 1997). Harm Reduction efforts were first begun in Europe in the late 1980s (Drugs and HIV in the Rocky Mountain Region Conference, 1997).
34. Other local interest groups or policy entrepreneurs involved in the push to implement needle exchange were the Colorado AIDS Project, the Governor's AIDS Council, and the lobbyist group of Menendez and Associates. However, the greatest amount of activity surrounding the adoption of needle exchange came from PEERS.
35. While the State of Washington did have an anti-drug law which prohibited the sale of hypodermic needles for any purpose other than medical needs (as did Colorado), a 1988 AIDS Prevention Bill passed by the State Legislature provided a legal exception to that law for NEPs. This exception was later legally contested by various state legislators when the issue of NEPs in Spokane was raised in 1992, however the State Supreme Court unanimously agreed that NEPs were legal under state laws, citing that local health boards and health officers have extraordinary powers to control contagious diseases (*Seattle Times 11/5/92*).
36. NEPs are illegal under current Colorado drug paraphernalia laws. Despite legal opposition, however, some urban areas within the state have implemented legal syringe exchanges, including the university community of Boulder, located 30 miles northwest of Denver. In 1989, Boulder District Attorney Alex Hunter proclaimed a 'public health crisis' in regard to HIV/AIDS and intravenous drug use in Boulder. Almost immediately, the Boulder Public Health

Department began operating a needle exchange (*The Daily Camera 1/25/89*). DA Hunter instructed local law enforcement officials to 'turn their heads' when they see NEPs in operation, ignoring state paraphernalia laws (*The Daily Camera 2/14/89*). In addition, Hunter stated that he refuses to prosecute anyone arrested for possession of needles or syringes who is a participant in a NEP (*The Daily Camera 2/14/89*).

37. While the city of Denver now officially endorses NEPs, the State Legislature in Colorado is unwilling to allow exceptions to the current drug paraphernalia law, effectively keeping NEPs from legally operating in Denver. In spring 1998, the Legislature once again denied NEPs as a way of combating HIV/AIDS, dividing primarily along party lines once again. Given Mooney and Lee's (1995) evidence that the legislative process may 'grind to a halt' when issues surrounding morality-based politics arise, it is not surprising that we see the adoption process stalled at this stage.

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