

Police Training to Align Law Enforcement and HIV Prevention: Preliminary Evidence From the Field

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Having identified gaps in implementation of Rhode Island's syringe access law and police occupational safety education, public health and police professionals developed police training to boost legal knowledge, improve syringe access attitudes, and address needlestick injuries. Baseline data (94 officers) confirmed anxiety about needlestick injuries, poor legal knowledge, and occupational risk overestimation. Before training, respondents believed that syringe access promotes drug use (51%), increases likelihood of police needlestick injuries (58%), and fails to reduce epidemics (38%). Pretraining to posttraining evaluation suggested significant shifts in legal and occupational safety knowledge; changes in attitudes toward syringe access were promising. Training that combines occupational safety with syringe access content can help align law enforcement with public health goals. Additional research is needed to assess street-level effect and to inform intervention tailoring. (*Am J Public Health*. 2011;101:2012-2015. doi:10.2105/AJPH.2011.300254)

KEY FINDINGS

- Baseline data from an in-service training to align policing and public health efforts targeting injecting drug users in Rhode Island suggested that police have negative attitudes toward syringe access initiatives, poor knowledge of syringe possession law, and inaccurate assessment of occupational risk related to needlestick injuries, paralleled by high anxiety toward this risk.
- In-service 30-minute training combining occupational safety information with public health content significantly improved trainees' legal and occupational safety knowledge; although positive, shifts in attitudes toward syringe access initiatives failed to reach significance.
- Evaluations of future training should include linked pretraining and posttraining samples, limit participant distraction, and adopt parallel surveillance components to assess shifts on the street level.
- Additional interventions, including management and peer-driven efforts, may be needed to help shift entrenched police attitudes toward syringe access initiatives.

IN RESPONSE TO THE

confirmed effectiveness and cost-effectiveness of syringe access initiatives to reduce injection-related disease transmission, jurisdictions including Rhode Island authorized syringe exchange programs and deregulated over-the-counter syringe sales.¹ Police in Rhode Island remained misinformed about these policies or boycotted them as enabling illegal injection drug use.² Mistrust and lack of clarity about criminal law discourage injecting drug users (IDUs) from engaging in safe injection and acknowledging syringe possession during searches, leading to increased risk of police needlestick injuries.³ Police occupational safety trainings typically fail to address needlestick injuries.²

TRAINING

Public health researchers from Brown University used funding from a local foundation to collaborate with a municipal police department to educate officers on syringe policy and community-level disease prevention. To address key gaps in occupational knowledge and maximize police receptivity, the training bundled public health content with occupational safety information⁴

(see the box on the next page).

The university team and the Police Department Planning and Training team jointly developed the curriculum. The designated Planning and Training sergeant was briefed on the material, practiced delivering the content, and received feedback from the principal investigator (L.B.) and departmental leadership. Training fidelity was ensured by the presence of the principal investigator at several sessions. This 30-minute module was part of a larger in-service training initiative, delivered over 6 sessions.

ASSESSMENT

Assessment was conducted by self-administered paper survey immediately before and after training. Officers were asked whether syringe access initiatives promote needlestick injuries, drug use, and HIV and HCV spread. Occupational safety and procedure topics covered included HIV and HCV risks from needlestick injuries and information on basic occupational safety precautions when conducting searches. Officers' occupational anxiety was captured by a scale constructed from 2 questions: (1) "needlestick injuries are an

important concern to me” and (2) “getting HIV or other infectious diseases from drug users is a big concern for me.” A legal knowledge question assessed awareness of syringe possession law. For ease of interpretation, descriptive results were dichotomized by grouping according to the 4 possible responses: “strongly agree” with “agree” and “strongly disagree” with “disagree” responses. To preserve information, ordinal responses (i.e., strongly agree, agree, disagree, strongly disagree) were retained to examine the association between having undergone training and outcomes by using ordinal logistic regression. The significance level for all analyses was set at $P < .05$.

Individual responses could not be linked because of administrative difficulties, so baseline and posttraining data were treated as independent cross-sectional samples. Needlestick-resistant gloves were provided as an incentive for evaluation participation.

DISCUSSION

Police practices are understood to substantially shape public health prevention efforts targeting IDUs, including syringe exchange programs.^{5,6} Beyond 2 small qualitative studies,^{2,7} however, little is known about police knowledge, attitudes, or other factors that may influence these practices. This evaluation represents the first quantitative assessment of police in this domain.

Table 1 shows that 94 officers (88% of all participants) responded to the baseline survey, and 78 (73%) responded to the post-training survey. No significant demographic differences were observed between the baseline and posttraining respondents.

At baseline, respondents indicated that syringe access initiatives promote drug use (51%), increase the likelihood of police needlestick injuries (58%), and fail to reduce disease spread (38%). Only 7% correctly understood the Rhode

TABLE 1—Sociodemographic Description of Participating Police Officers, by Training Group: Rhode Island Law Enforcement Syringe Training Initiative, 2006

	Baseline, % (n = 94)	Posttraining, % (n = 78)
Age, y		
21–30	25.5	25.6
31–40	45.7	46.2
≥ 41	28.7	28.2
<i>P</i>		.99 ^a
Years in department		
< 10	55.8	50.6
≥ 10	44.2	49.4
<i>P</i>		.52 ^a
Race/ethnicity		
African American	3.3	1.3
White	89.1	90.7
Hispanic	4.3	5.3
Other	3.3	2.7
<i>P</i>		.85 ^a
Gender		
Men	94.6	92.1
Women	5.4	7.9
<i>P</i>		.52 ^a

^aReferent group is the baseline group.

TRAINING CONTENT

The training intervention used consisted of a 30-minute PowerPoint-assisted oral presentation by a departmental training specialist.

Topical domains covered include the following:

1. Description of and rationale behind public health programs targeting injecting drug use—the description of syringe exchange program components (with emphasis on wraparound services, including referrals to drug treatment); public health evidence that syringe exchange programs and pharmacy access to clean syringes help reduce the spread of blood-borne infections and improve cost-effectiveness of public health outreach; and evidence that syringe exchange programs may help avert occupational needlestick injuries among police.¹
2. Occupational safety, including basic virology and needlestick injuries after exposure procedures, such as the essentials of how HIV, HCV, and other blood-borne viruses are transmitted; relevant prevalence, incidence, and seroconversion risk statistics; basic prevention strategies for each exposure route; and departmental protocols for reporting and responding to accidental needlestick injuries.
3. Laws, regulations, and procedures related to drug enforcement activities, such as implications of the liberalized syringe regimen on search activities; standards for considering syringe possession as probable cause for a search or evidence of illegal activity; and the importance of communicating the legality of syringe possession to IDUs during pat downs or other searches.

Note. See <http://www.policingforhealth.org> for the detailed description and materials.

Island syringe possession law. Six (6.4%) officers reported occupational needlestick injuries, and average occupational needlestick injuries anxiety was extremely high at 7.49 (SD = 1.04; observed range = 5–8; possible range = 1–8). African American and older officers were more likely to report lifetime needlestick injuries. Correct knowledge of occupational health risks from needlestick injuries varied by infectious disease: 92% correctly identified HCV transmission as the more likely risk inherent to needlestick injuries, but only 13% understood that the risk of HIV transmission from needlestick injuries is relatively low (Table 2).

Compared with the baseline, respondents had greater odds of

correctly reporting that HIV risk from needlestick injuries was not high (odds ratio [OR] = 3.22; 95% confidence interval [CI] = 1.78, 5.83) after training. Similarly, officers had greater odds of correctly stating after the training that syringes cannot be confiscated if drugs are not present (OR = 9.16; 95% CI = 4.80, 17.51; Table 2). Despite the presentation of extensive content on syringe access, respondents' attitudes and knowledge on these programs improved only slightly (no significant changes observed), underscoring entrenched cultural and professional beliefs.^{2,7}

Low knowledge and poor attitudes about public health initiatives and regulations confirm earlier findings highlighting poor penetration of information in these domains among police.² The finding that—even at baseline—trainees scored comparatively better on items related to occupational safety issues supports the promise of using occupational safety content as a vehicle to deliver a broader set of public health content. Nonetheless, opinion on public health topics was far from monolithic; cultivating relationships with well-informed and positively disposed officers can help facilitate better alignment between law enforcement and public health professionals.⁸ Our findings affirm that most officers before the training wrongly perceived HIV risk to be high from needlestick injuries despite the actual risk being low.⁹ This can be a source of unnecessary anxiety that adds to other stressors involved in law enforcement work,¹⁰ leading to additional hostility from police officers toward IDUs and syringe access initiatives.

If translated into street-level practice, improved knowledge of

TABLE 2—Descriptive Statistics and Crude Associations of Training Participation on Attitudes Toward Harm Reduction Programs, Knowledge of Health Risks From Needlestick Injuries, and Intended Behavior on Search Regulations: Rhode Island Law Enforcement Syringe Training Initiative, 2006

Outcomes ^a	Baseline, % (n = 94)	Posttraining, % (n = 78)	OR (95% CI) ^b
Harm reduction programs			
Harm reduction programs do not promote drug use			1.02 (0.59, 1.76)
Disagree	51.1	48.1	
Agree	48.9	52.0	
Harm reduction programs do not increase risk of needlestick injuries for police			1.17 (0.68, 2.03)
Disagree	57.5	48.7	
Agree	42.6	51.3	
Harm reduction programs help reduce HIV and HCV spread			1.26 (0.72, 2.21)
Disagree	37.6	30.7	
Agree	62.4	69.3	
Health risks from needlestick injuries			
HCV risk from needlestick injuries is relatively high			0.91 (0.51, 1.62)
Disagree	8.5	17.1	
Agree	91.5	82.9	
HIV risk from needlestick injuries is relatively low			3.22*** (1.78, 5.83)
Disagree	86.8	55.9	
Agree	13.2	44.2	
Search procedures and regulations			
Would wear gloves when doing search			1.68 (0.88, 3.18)
Disagree	5.4	2.6	
Agree	94.6	97.4	
When drugs are not present, would not confiscate syringe			9.16*** (4.80, 17.51)
Disagree	91.3	34.2	
Agree	8.6	65.8	
Would not throw syringes down storm drain			0.72 (0.32, 1.64)
Disagree	6.4	7.9	
Agree	93.5	92.1	

Note. CI = confidence interval; OR = odds ratio.

^aFor descriptive results, ordinal responses of outcomes are shown as binary here for ease of interpretation.

^bFor ordinal regression analyses, responses were kept ordinal.

P* < .05; *P* < .01; ****P* < .001.

syringe possession law can facilitate better alignment between policing and HIV prevention targeting IDUs by reducing unjustified syringe confiscation and interference with syringe access initiatives.⁶ Simultaneously, the reduction in unauthorized confiscation of syringes can

promote communication between police and IDUs, thus reducing the risk of occupational needlestick injuries.³ The fact that even in this small sample, African American officers faced significantly higher odds of reporting needlestick injuries may have important parallels to racial

disparities in other occupational safety injuries.¹¹

Limitations of this study included restricted funding, which constrained training and evaluation length and scope; inability to link baseline and posttraining responses, which hampered analytical capabilities; and 16%

attrition, largely because of respondents being summoned to attend to administrative questions from the department. Attitudinal, knowledge, or other unobserved factors may have influenced the respondents' motivation to fill out a pretest but not the posttest survey, but there is no reason to believe that such an influence on attrition was systematic in this case. For example, it is not clear that positive attitudes toward syringe access initiatives make respondents any more likely to complete the posttraining questionnaire, compared with those whose negative attitudes may motivate the completion of the questionnaire to express one's protest. This study covered a small convenience sample of officers, limiting generalizability.

NEXT STEPS

Data indicated that engaging police by bundling occupational safety with content addressing community-level disease prevention represents a promising structural intervention to harmonize law enforcement practices with public health goals, but additional research is needed to evaluate and tailor such training. Future evaluations should encompass larger samples; baseline and posttraining responses should be individually linked. Attrition should be minimized by restricting trainee distractions; shorter training may preserve effectiveness while minimizing attrition. Efforts should be made to pair training interventions with research to evaluate the effect of the training on the street level. Management and peer-driven interventions, such as those incentivizing police and

public health collaboration and censoring unauthorized syringe confiscation and other practices that run counter to public health goals, may be needed to reinforce training messages and shift entrenched attitudes. ■

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Contributors

L. Beletsky conceptualized the training and collaborated with B. Moreau in its design and implementation. A. Agrawal conceptualized and finalized additional statistical analyses, with input from L. Beletsky and R. Heimer. P. Kumar and N. Weiss-Laxer conducted initial statistical analyses. All authors contributed to the formulation and editing of the article.

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Human Participant Protection

Brown University's institutional review board reviewed and approved the project.

References

- Burris S. Non-prescription syringe access. In: *Project on Harm Reduction in the Health Care System*. 2008. Available at: <http://www.temple.edu/lawschool/aidspolicy>. Accessed March 12, 2011.
- Beletsky L, Macalino GE, Burris S. Attitudes of police officers towards syringe access, occupational needle-sticks, and drug use: a qualitative study of one city police department in the United States. *Int J Drug Policy*. 2005;16:267–274.
- Groseclose SL, Weinstein B, Jones TS, Valleroy LA, Fehrs LJ, Kassler WJ. Impact of increased legal access to needles and syringes on practices of injecting-drug users and police officers—Connecticut, 1992-1993. *J Acquir Immune Defic Syndr Hum Retrovirol*. 1995;10:82–89.
- Davis CS, Beletsky L. Bundling occupational safety with harm reduction information as a feasible method for improving police receptiveness to syringe access programs: evidence from three U.S. cities. *Harm Reduct J*. 2009;6:16.
- Burris S, Blankenship KM, Donoghoe M. Addressing the "risk environment" for injection drug users: the mysterious case of the missing cop. *Milbank Q*. 2004;82:125–126.
- Beletsky L, Grau LE, White E, Bowman S, Heimer R. The roles of law, client race and program visibility in shaping police interference with the operation of US syringe exchange programs. *Addiction*. 2011;106:357–365.
- Beyer L, Crofts N, Reid G. Drug offending and criminal justice responses: practitioners' perspectives. *Int J Drug Policy*. 2002;13:203–211.
- DeBeck K, Wood E, Zhang R, Tyn-dall M, Montaner J, Kerr T. Police and public health partnerships: evidence from the evaluation of Vancouver's supervised injection facility. *Subst Abuse Treat Prev Policy*. 2008;3:11.
- Cardo DM, Culver KH, Ciesielski C, Srivastava PU, Marcus R, Abiteboul D. A case-control study of HIV seroconversion in health-care workers after percutaneous exposure. *N Engl J Med*. 1997;337:1485–1490.
- Waters JA, Ussery W. Police stress: history, contributing factors, symptoms, and interventions. *Policing: An International Journal of Police Strategies & Management*. 2007;30:169–188.
- Murray LR. Sick and tired of being sick and tired: scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. *Am J Public Health*. 2003;93:221–226.