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Implementing Opt-Out Programs at Los Angeles County Jail: A Gateway to Novel Research and Interventions

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Abstract

Routine opt-out screening and vaccination programs are effective methods for improving public health in correctional populations. Jail-based rapid testing for HIV, hepatitis B and C, tuberculosis, syphilis, gonorrhea, and chlamydia can improve urban health by increasing diagnosis and linkage to care for infectious diseases. In addition, jail-based vaccination programs would significantly benefit community health and lower costs associated with tertiary level care. The paucity of ethical and rigorous scientific research among incarcerated populations excludes these marginalized members of society from potential advancements in correctional medicine and public health. Routine opt-out testing programs would not only benefit the health of the correctional population but also serve as platforms for future research. Trials measuring the efficacy of new rapid tests, screening methods, novel vaccine delivery systems, or accelerated vaccine regimens would be greatly beneficial.

Keywords

opt-out screening; rapid testing; vaccination; jail health care; inmates

Routine screening and vaccination using an opt-out strategy can be an effective method for improving public health in correctional populations and the community at large. Individuals aware of their health conditions are more likely to seek treatment and adjust behavior to protect themselves and others (Marks, Crepaz, Senterfitt, & Janssen, 2005). Opt-out policies have been shown to improve the utilization and effectiveness of HIV screening by streamlining the informed consent and counseling process, standardizing the concept, and reducing the burden on limited medical staff (Lifson & Rybicki, 2007). The Centers for Disease Control and Prevention (CDC) recommends routine opt-out HIV testing for

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correctional populations (CDC, 2009). Such routine opt-out testing programs should be extended to cover other infectious diseases.

In the United States, approximately 800,000 individuals are in jail at any given time, with jails processing an estimated 13 million admissions per year (Sabol & Minton, 2008). Jails house a highly transient population, composed of inmates with short sentences and detainees awaiting trial (Perkins, Stephan, & Beck, 1995). The health of the correctional population is poorer than that of the general population. Inmates generally bear a greater burden of infectious disease, with higher rates of tuberculosis, hepatitis C, and HIV. Moreover, approximately one quarter of all HIV-positive and one third of all hepatitis C-positive individuals pass through the correctional system each year (Hammett, Harmon, & Rhodes, 2002; Wilper et al., 2009). Due to short incarceration periods, providing medical and public health services can be difficult. This difficulty is exacerbated by a lack of screening and primary health care. Routine opt-out screening and preventive measures have the potential to improve correctional health care.

The increased prevalence of disease in correctional settings provides an opportunity for high-impact public health interventions. Jail-based populations regularly interact with the general population due to short incarceration periods and high rates of recidivism (Perkins et al., 1995). Incarcerated individuals often come from socially marginalized and medically underserved communities and typically lack medical insurance coverage or have difficulty accessing medical services. Jails can serve as venues for implementing prevention programs, delivering medical care, and improving continuity of care upon release. To better describe this issue, we use the Los Angeles County Jail (LACJ) to illustrate opportunities for public health research and interventions related to routine opt-out programs.

Los Angeles County Jail

With an average daily population of nearly 20,000, the LACJ is the largest jail in the United States (Minton & Sabol, 2009). The LACJ processes approximately 180,000 inmates each year. Each day, 400 to 600 inmates enter through the inmate reception center, where they undergo booking and processing, including medical and mental health screening (Unpublished data: Inmate Reception Center, Los Angeles County Sheriff's Department, 2007).

The LACJ's inmate population is comprised predominantly of racial and ethnic minorities (Table 1). The proportion of African Americans in the jail is more than three times that of Los Angeles County as a whole. The percentage of Hispanic inmates nearly mirrors their community composition, and Asian/Pacific Islanders and Native Americans are largely underrepresented in the jail (U.S. Census Bureau, 2009).

Since nearly all inmates are released back into their home communities, their health is intimately connected to that of the local population. Most (75%) inmates at the LACJ are released after serving short sentences, typically 10 to 20 days; 25% are in jail for less than 5 days. The communities to which inmates return are largely comprised of the socioeconomically disadvantaged and racial and ethnic minorities known to have poor access to health care. In Los Angeles County, where 16% of the population lives below the poverty line, the number of uninsured residents and homeless people is higher than that of any other county in the nation. According to the Los Angeles County Public Health Department (2009), approximately 19% of county residents have been reported to be in fair or poor health, 20% lacked a regular source of care, and 27% had difficulty accessing medical services.

Disease-Specific Programs

There is a tremendous opportunity to improve inner-city health by reaching the nearly 200,000 individuals incarcerated in the county jail each year. Jail-based rapid testing for HIV, hepatitis B and C, tuberculosis, syphilis, gonorrhea, and chlamydia can improve urban health by increasing diagnosis and linkage to care for infectious diseases. These infections are significant problems for incarcerated populations and the communities they come from; rapid identification and treatment would aid in alleviating these infections. Furthermore, vaccine programs for hepatitis B and influenza would significantly benefit community health and lower costs associated with their treatment in a tertiary setting.

Sexually Transmitted Infections (STIs)

Routine opt-out testing of inmates also has the potential to diagnose a large portion of STIs in the community. When the Cook County Jail in Chicago stopped offering routine chlamydia and gonorrhea testing to all male inmates, approximately 90% fewer detainees were diagnosed with either disease and citywide diagnosis in males and females decreased by 9.3% for chlamydia and 12.9% for gonorrhea (Broad et al., 2009). When New York City began routine testing for chlamydia and gonorrhea among incarcerated men less than 35 years of age, the citywide diagnosis of chlamydia and gonorrhea increased by 59% and 4%, respectively (Pathela et al., 2009).

Researchers have highlighted the cost-effectiveness of routine rapid syphilis testing and have demonstrated that routine rapid screenings detect more cases of syphilis than risk-based testing (Cohen, Scribner, Clark, & Cory, 1992; Tuli & Kerndt, 2009). Los Angeles County has a relatively high prevalence of HIV but few individuals are diagnosed early, particularly among Blacks and Latinos (Johnson et al., 2003). Although the CDC recommends that rapid HIV tests be used in jails, most correctional facilities employ conventional HIV testing (ELISA test followed by confirmatory Western blot analysis), which takes up to 1 week to provide definitive results, delays referral for medical care and case management, and may be more expensive than rapid testing. Evidence from the Rhode Island Department of Corrections indicate that one third of all HIV cases in Rhode Island were diagnosed through routine testing at correctional facilities (Desai, Latta, Spaulding, Rich, & Flanagan, 2002) and rapid HIV testing. Based on voluntary testing among men who have sex with men at LACJ, Javanbakht et al. (2009) found high prevalence of HIV (13.4%), chlamydia (3.1%), gonorrhea (1.7%), and syphilis (1.6%). Therefore, routine opt-out rapid testing at LACJ would greatly improve HIV detection in Los Angeles County and reduce costs compared to traditional methods. To this end, we recently initiated a study to assess a rapid HIV testing algorithm that, if successful, would provide inmates with definitive HIV results in 1 hour, rather than 1 week, along with timely referral to medical care (Rurangirwa et al., 2008).

Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Influenza

There are indications that many of the 40 million deaths that occurred worldwide during the 1918 influenza pandemic were attributable to secondary bacterial pneumonia and that men aged 25 to 40 (an age range that largely characterizes the inmate population) were disproportionately affected (Awofeso, 2004; Brundage & Shanks, 2008; Morens & Fauci, 2007). MRSA is a well-established problem in correctional settings: A recent study indicated that 16% of all inmates incarcerated in a county jail were colonized with MRSA (Farley et al., 2008), yet there are no data measuring the incidence rate of MRSA colonization or infection during incarceration. Furthermore, MRSA is known to cause severe necrotizing pneumonia, often following an influenza infection (Chickering & Park, 1919; David, Mennella, Mansour, Boyle-Vavra, & Daum, 2008; Etienne, 2005; Farley et al., 2008;

Moran & Talan, 2009; Pan et al., 2003). Given the novel H1N1 influenza pandemic currently circling the globe, the possibility of synergistic infections with devastating consequences should be addressed.

Public Health Opportunities in Jail

Inmates temporarily displaced in the county jail for short stays can potentially amplify transmission of a pandemic flu virus by becoming infected during incarceration and exposing other members throughout the general community upon release. Alternatively, the jail population can serve as an important part of the overall prevention effort by receiving flu vaccine, effectively interrupting transmission by accessing a significant portion of the underserved inner-city population. Routine opt-out vaccination would result in better coverage than traditional opt-in vaccination strategies. In the past, traditional strategies combined with limited medical personnel have enabled medical services at LACJ to vaccinate only about 4% ($n = 7,172$) of the inmate population (Table 2). Most of those vaccinated were incarcerated for much longer than the median length of stay. Greater efforts to target inmates for routine influenza vaccination as they come into the inmate reception center would greatly improve vaccine coverage for the jail and benefit the community.

The Los Angeles County Sheriff's Department has developed new strategies to improve the quality and effectiveness of communicable disease screening and prevention to protect this underserved population and the inner-city communities from which most inmates are temporarily displaced. Of note, the incremental public health successes realized by the sheriff's department would not have been possible without the collaboration of colleagues in the Los Angeles County Department of Public Health and the excellent relationship between the jail infection control and epidemiology unit and the progressive senior leaders of the jail. Some of our current projects include:

- Comprehensive MRSA surveillance and control program (all inmates with a skin or soft tissue infection are tested for MRSA) that has resulted in a reduced disease burden during each of the past 2 years (data to be published).
- A seasonal influenza vaccination program for general population inmates, the only one of its kind in a U.S. jail (Namjoshi et al., 2009).
- Hepatitis A/B immunization program (combined hepatitis A/B immunization using the Food and Drug Administration approved accelerated dosing schedule) for high-risk men who have sex with men and general population inmates.

Although inmates are nationally recognized by the CDC as a high-priority population, the potential to maximize public health through interventions in the jail setting remains largely unrealized. Despite existing resources and hardworking, committed staff, there are many obstacles to providing screening and targeted health interventions in LACJ. As with other correctional departments across the country, the Los Angeles County Sheriff's Department, which oversees jail administration, must balance expanding current medical and public health programs with maintaining continuity of care as inmates cycle between the community and the jail. Follow-up care is often necessary to complete treatment regimens and to provide results from tests sent to private laboratories when jails lack the resources to maintain adequate laboratories on-site. Rapid diagnostics, test and treatment strategies, and accelerated vaccination schedules are well suited for this high-turnover environment. Furthermore, coupled with behavioral risk factor surveys, these highly effective public health interventions could be used to tailor programs to particular groups and thus reduce cost. Finally, connections to community agencies and health care providers must be established to maintain continuity of care as individuals are displaced during their typically short sentences in the jail.

In the United States today, 1 in 33 Americans is incarcerated at some point, and high rates of recidivism and the transient nature of this population make correctional health truly a community issue. Jails are microcosms of marginalized communities: Correctional populations represent a large and vulnerable segment of the population that is notoriously difficult to reach. The correctional setting presents an opportunity to access a significant subset of this population and provide ethical, evidence-based interventions.

Many public health programs require greater funding than is currently available, particularly for ethical and rigorous scientific research. Important research that could improve the health of the incarcerated, and which cannot be duplicated in any other setting, remains largely unexplored. One reason for this is well-intentioned efforts to protect inmates due to historical exploitation of the incarcerated as a population of convenience. Ironically, the restrictive regulations protecting them from coercive research also limit access to the benefits of medical research. The paucity of ethical and rigorous scientific research among incarcerated populations excludes these marginalized members of society from the potential benefits of advancements in correctional medicine and public health. Correctional public health is made more difficult because of the serious lack of evidence-based interventions that address the problems affecting correctional populations.

Conclusion

Compared to the general population, individuals incarcerated in U.S. jails are more likely to be Black or Hispanic, experience adverse socioeconomic status, suffer from a disproportionately high burden of infectious diseases, and engage in high-risk behaviors that enhance transmission and acquisition of infectious diseases, such as regular drug use and sex-related offenses, both of which place individuals at risk for contracting communicable diseases. Although jail is often the only opportunity to access this elusive population and perform communicable disease testing, less than 5% of jails even offer HIV testing and even fewer offer testing for viral hepatitis, STIs, or latent tuberculosis, or vaccination against viral hepatitis. To develop strategies to reduce rates of infection and direct future research, it is necessary to characterize the disease burden and epidemiology of these diseases in the jail population.

Routine opt-out programs would not only benefit the health of the correctional population but also serve as platforms for future research and cost analyses. The high burden of disease and the large, diverse inmate population at the LACJ make it an ideal setting for public health interventions and research. Ethical research in the correctional setting must result in benefits for the populations being studied. Trials measuring the efficacy of new rapid tests, screening methods, novel vaccine delivery systems, or accelerated vaccine regimens would be greatly beneficial to this population and should involve collaborations between jails and public health authorities. Rapid, cost-effective interventions would help address the short stays and limited resources in the jail setting while also helping to alleviate the high infection rates that characterize these populations. Despite all of these potential benefits to the correctional population as well as the communities from which they are temporarily displaced, rigorous and ethical research to assess the effectiveness and cost of such interventions in the correctional setting is severely lacking. Our primary aim is to add to the literature with our current data (in press), complete additional public health interventions and research projects, and encourage other correctional institutions to do the same.

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Table 1

Demographic Information for Los Angeles County Jails, 2008

Race/Ethnicity	Sex	Total Bookings		Total Person Days		Length of Stay (Days)		Age	
		n	%	n	%	M	Mdn	M	M
Asian/Pacific Islander	F	148	0.5	4,753	0.6	32.1	10	32.4	
African American	F	11,675	43.2	359,783	43.9	30.8	14	34.7	
Hispanic	F	8,817	32.6	256,028	31.3	29.0	11	30.9	
Native American	F	30	0.1	1,396	0.2	46.5	18	36.9	
Other	F	669	2.5	23,979	2.9	35.8	13	33.3	
White	F	5,711	21.1	173,079	21.1	30.3	14	35.7	
All	F	27,050	100.0	819,018	100.0	30.3	13	33.6	
Asian/Pacific Islander	M	690	0.5	27,304	0.4	39.6	11	32.7	
African American	M	45,632	29.9	2,066,310	32.6	45.3	19	36.0	
Hispanic	M	79,534	52.0	3,205,479	50.5	40.3	13	30.7	
Native American	M	102	0.1	3,708	0.1	36.4	10.5	39.9	
Other	M	4,147	2.7	179,385	2.8	43.3	15	33.1	
White	M	22,713	14.9	861,023	13.6	37.9	15	37.2	
All	M	152,818	100.0	6,343,209	100.0	41.5	15	33.3	

Table 2

Inmates Receiving Influenza Vaccination, 2007–2008

	<u>Persons Vaccinated</u>		<u>Length of Stay (Days)</u>			<u>Age</u>	
	N	%	M	Mdn		M	Mdn
Asian	24	0.3	106.1	74		35.0	
Black	2,224	31.0	95.4	59		41.3	
Hispanic	3,626	50.6	103.0	70		33.6	
Native American	8	0.1	78.4	72		49.6	
Other	224	3.1	96.4	69.5		35.9	
Pacific Islander	6	0.1	64.6	43		33.0	
White	1,060	14.8	93.0	62		38.9	