

# Responding to an H1N1 Outbreak in an Urban Jail Setting: The NYC Experience

By Erik Berliner

**A**t 7 p.m. on Friday, May 15, 2009, the New York City Department of Correction (DOC) received a call from the New York City Department of Health and Mental Hygiene (DOHMH) confirming that an inmate in the DOC's custody had the H1N1 influenza, commonly known as swine flu. During the next six weeks, the DOC and the DOHMH managed a crisis during which 109 confirmed cases of H1N1 were identified, 63 housing areas were placed on medical restriction and nearly 20,000 individual precourt screenings were conducted.

## DOC Background

The DOC operates 14 facilities, including nine jails on Rikers Island, one in lower Manhattan, one in the Bronx and three additional facilities that have been closed for several years due to low populations and the need to physically renovate them. The department's average daily population is approximately 13,500 inmates spread across the 11 fully operational jails. In the fiscal year that ended June 30, 2009, the department managed more than 100,000 admissions and transported approximately 1,500 inmates per day to the various courts throughout the city.

New York City has a somewhat unique health care structure. Inmates are committed to the custody of the DOC, which is responsible for their care, custody and control. However, the New York City Charter specifies that inmate medical care is the responsibility of the DOHMH, which contracts out the provision of direct service health and mental health care to a private prison

health services vendor, while directing policy and providing oversight and management. The DOC Health and Mental Health Services Division acts as a facilitator for health care delivery within the facilities; as a conduit for communication and problem resolution between the DOC and DOHMH; as the health and mental health liaison to the DOC uniformed custodial staff; and as a project manager for health care-related issues.

Like nearly all large jail systems, the DOC has had a pandemic flu plan for several years. In the wake of the 2006 avian flu scare, Commissioner Martin Horn established a Pandemic Flu Task Force that was chaired by the department's chief of administration and included various DOC representatives from the divisions of Health and Mental Health Services, Environmental Health, Nutritional Services, Transportation, Employee Health Management, Criminal Justice Bureau responsible for liaison with the court system, Custody Management, Support Services, and Emergency Preparedness.

The plan that grew out of this task force was shared with the DOHMH for its own planning purposes and had been vetted by the Centers for Disease Control and Prevention. The plan's focus was on controlling the spread of influenza through the population by limiting the mingling of newly admitted inmates with already-housed inmates, separating those known to be exposed to the influenza virus and those believed not to have yet been exposed, and significantly reducing the number of inmates sent to court by expanding the use of video teleconferencing.

## Emergence of H1N1

New York City had experienced a mild wave of H1N1 concern several weeks before the DOC's index case was identified. When this strain first appeared in Mexico, some visiting high school students contracted it and returned to Queens and spread the virus, necessitating the temporary closure of their high school. In the midst of this mini-crisis, the DOC and DOHMH instituted increased surveillance for the flu during the intake process; distributed to the facilities significant amounts of personal protection equipment for staff; and developed teams of specially equipped correctional officers to transport inmates believed to be sick to the facility clinics. However, the panic was short-lived. Within a couple of weeks, the DOHMH announced that it was standing down from its incident command system. Three days later came the phone call about the DOC's first case.

The decisions made on that first night had long-lasting impact. In the initial telephone conversation between the DOC and the DOHMH, it was agreed that the index case's housing area would be placed on medical restriction — a designation short of quarantine that directed that no inmates were transferred into or out of the unit except for medical services and that there be no movement by inmates from that housing area to congregate services, including visits, or to court.

It was decided that anyone exhibiting influenza-like illness symptoms — a fever of 100.4 degrees Fahrenheit or higher with a cough and/or sore throat — was to be immediately transferred to the DOC's contagious disease unit for isolation. The unit contains 140 negative pressure respiratory isolation cells built at the height of the city's tuberculosis epidemic in the early 1990s. The on-duty tour commander assembled a team of correctional officers to escort inmates from the affected housing area to a facility miniclinic to conduct screening for influenza-like illness on all inmates housed with the index case. Correctional and medical staff members assigned to these tasks were afforded the opportunity to wear protective masks and latex gloves.

Horn directed the DOC's officer of the day — the rotating chief responsible for first-line managerial response to all major incidents that occur off-hours — to respond to the facility to both manage the situation and closely monitor staff morale and signs of panic. He directed the chief of administration to prepare the department's Health Management Division (the employee health arm) and to brief the unions. The officer of the day ensured that personal protection equipment was distributed to all staff who requested it in the affected facility and also that personal protection equipment was made available to staff in all DOC facilities, with announcements made at roll call to that effect. The assistant commissioner for environmental health also responded to the facility to personally oversee the sanitization efforts. In addition, either the warden or a deputy warden addressed every roll call during the weekend. Finally, the department's Emergency Operations Center was activated.

On Saturday morning, May 16, Horn convened an emergency planning meeting with all of the chiefs, several key civilian senior managers and representatives from the DOHMH to prepare for the potential of additional cases among inmates or staff. The group discussed how to handle Monday morning court production, ultimately deciding that

medical staff would screen all court-bound inmates for influenza-like illness prior to their departure in the morning. However, in some ways, the most complicated decision concerned new admissions to the system and transfers between jails. The initially affected facility was the Anna M. Kross Center. This jail is the primary intake facility for all special population inmates (e.g., detox, methadone maintenance, mental health) and has a large general population segment as well. On any given day, nearly one-quarter of the DOC population lives in the Anna M. Kross Center. Closing this facility to new admissions and general population transfers would cause an immediate disruption of standard procedures in the other jails. In the end, the DOC decided to close the jail to new inmates and within one week had significantly limited the disease's reach within that facility.

During that first weekend, 11 additional inmates were screened as possible H1N1 cases and were transferred to the contagious disease unit, all from the Anna M. Kross Center. Quickly thereafter, the DOC began to see influenza-like illness in other locations. Of particular concern were two early cases from an infirmary housing area set up specifically for inmates with HIV/AIDS; this underlying medical condition is known to severely compromise one's ability to fight off an influenza illness. Late on Monday, May 18, confirmation came back that six of the inmates who were screened over the weekend as having influenza-like illness were positive for H1N1, which necessitated the placement of six additional housing areas on medical restriction. In the end, 11 housing areas from the Anna M. Kross Center were put on restriction over a two-week period during the early part of the crisis. In the next wave of infection, the illness spread to two other facilities, a general population intake jail that saw 11 housing area restrictions and the adolescent facility, which saw 20 housing areas restricted as the virus spread rapidly through the young male population. More than two-thirds of the cases were concentrated in these three jails, and other facilities experienced only relatively isolated medical restrictions.

## Specific Considerations

There were several components of the DOC's response plan that contributed to the effective containment of the H1N1 virus. Combined, these efforts were able to control the crisis. Specific considerations follow.

**Medical screenings.** The medical response began with screening. The city's Emergency Medical Service routinely conducts tuberculosis screening in the prearrest holding pens in the courthouses. That screening was expanded to include influenza-like illness symptoms, with positive cases diverted to area hospitals. Next, DOC staff conducting the initial intake asked newly admitted inmates whether they were experiencing fever, sore throat or a cough. Any inmates who screened positive for influenza-like illness were required to wear a surgical mask, isolated in designated pens and provided special transportation to their facility, where they were immediately directed to medical staff for full evaluation. Medical staff also conducted screening for influenza-like illness during its standard new admission exam, at all medical encounters (e.g., sick call, follow-up, mental health), and prior to court production or discharge to state prison or psychiatric hospital.

The medical protocol employed by the DOHMH involved isolation of all inmates with influenza-like illness and confirmatory testing. When an inmate was transferred from general population to the contagious disease unit, medical staff screened the entire housing area every other day. Confirmed cases necessitated housing area restrictions and daily in-house screening. The restrictions lasted for seven days (the full incubation period for H1N1) from the date the last influenza-like illness case left the housing area. Those in the affected and restricted housing areas with underlying medical conditions that may have adverse reactions to the flu were treated with prophylactic Tamiflu.

**Housing-area medical restrictions.** It is believed that the medical restriction procedures put in place played a significant role in limiting the further spread of the disease. By controlling contact with others, the DOC prevented those who were known to have been exposed to H1N1 from passing it along. This process was not without significant consequence, however. The cancellation of visits was extremely unpopular among the restricted inmates, as was the inability to attend court. However, throughout the process, daily communication with the affected inmates helped to maintain a lower-than-usual incidence of fighting or disruptive behavior on these units. Wherever possible, extra recreation sessions were held for these units after all other inmates had exited the yard and at the conclusion of their restrictions, again when possible, special family days were held to allow for extended visitation. At no point did the city curtail visiting or other normal and routine operations.

**Sanitization.** Every affected housing area was sanitized, as were all common areas such as clinics, gyms, law libraries, mess halls and schools. Special “clean teams” received training on proper sanitization procedures and were outfitted with protective suits and masks. The entire Anna M. Kross Center facility was sanitized during a seven-day period and then the clean teams followed the spread of the illness throughout the system.

**Court production.** In consultation with the Mayor’s Office, the Office of Court Administration and the Legal Aid Society, the DOC’s court-production protocols maintained the flow of inmates to their court appearances. By agreement of all parties, inmates from medically restricted housing areas were held back from court appearances unless specifically required by the judge. Even then, they were only transported to court if they screened negative for influenza-like illness and wore a surgical mask for their entire time out of the restricted housing area. All other inmates were transported to court each day, but only after a screening by medical staff for influenza-like illness. During the several weeks that this protocol was in place, nearly 20,000 inmates were screened with fewer than 10 held back from court appearances. Custody management staff were in constant communication with the courts in order to ensure no inmate’s rights were compromised during the crisis. As part of this effort, courts and attorneys were

encouraged to make use of the department’s robust video capacity rather than needlessly transporting inmates to court. A near doubling in the use of video conferencing occurred during this period to conduct court business. The city’s probation department started a bail-expediting program to help inmates with low bails reach out to potential sureties in the belief that the fewer inmates entering the system who might be infected or who could become infected, the better off everyone would be.

**Staff protection.** During the course of the crisis, three correctional officers and two civilian DOC employees were known to have contracted the H1N1 virus. Due in large part to the quick, aggressive response both by the facility staff and the executive team, the department did not experience a significant rise in staff sick rate during the six weeks of the crisis. The DOC took a number of early steps both to ensure that staff felt comfortable coming to work and to provide them with the tools necessary to remain safe while on the job. The distribution and availability of personal protection equipment was a significant factor. While several staff chose not to avail themselves of the masks and gloves, many did so. The Health Management Division established a 24-hour hotline for staff who had questions about H1N1 and the department’s response, and sent medical staff to each facility to provide on-site counseling upon request.

The Health Management Division has a standard protocol for conducting contact investigations that calls for contacting staff known to have potentially been exposed to an infectious disease. In the case of H1N1, the department expanded upon that protocol and had the Health Management Division reach out proactively to any staff who may have worked in

a housing area from which a case was confirmed to check on their condition and ensure that they were advised to contact their private physicians for testing and treatment if they were experiencing any symptoms. Additionally, division physicians and nurses were detailed to the jails to offer on-site consultation and advice to concerned staff. The DOC’s primary focus was ensuring staff felt comfortable coming to work. At the same time, Health Management Division staff and the administration office were tracking staff call-outs to determine whether a change in approach was necessary.

**Labor relations task force.** At various points through the crisis, the union representing correctional officers requested a larger voice in making decisions about how to manage the crisis. As a result, a labor relations task force was formed to provide a forum in which information could be exchanged and the union’s views could be heard. This task force remains in effect so that the union can be included in revisions to the department’s pandemic flu planning for the future.

**DOC administrators view these events as successful crisis management that has provided the department with good experience for future pandemic planning.**

## General Findings

A full epidemiological study has not yet been conducted, but a back-of-the-envelope assessment of what the DOC experienced reveals that the H1N1 crisis occurred in waves. The Anna M. Kross Center was the epicenter for approximately two weeks. The disease next affected the adolescent population for about two weeks. In addition to its targeting of adolescents in the general civilian population, H1N1 was most virulent among this group in the correctional setting in part because adolescent inmates do not observe the social distancing and other personal hygiene guidelines as readily as adult inmates, and because they congregate far more regularly than their adult counterparts. Despite the rapid spread among the adolescents, the illnesses they experienced were generally mild.

In total, 63 housing areas departmentwide, encompassing eight of the 11 operating facilities, were put on medical restriction. At the height, approximately 1,000 inmates were on medical restriction and 95 inmates missed their court appearances. Although there were no confirmed or suspected cases among this population, all pregnant female inmates were moved to one housing area and placed on a precautionary restriction. The same applied to the nursery, which houses infants and their incarcerated mothers, since both infants and pregnant women can have severe reactions to the flu. There were 109 confirmed cases, relatively mild, and, as of this writing, all 109 ill

inmates have completed their courses of treatment and either been returned to their general population housing or discharged from custody. There were no inmate fatalities.

In general, DOC administrators view these events as successful crisis management that has provided the department with good experience for future pandemic planning. In the several months since the initial outbreak, the department has been preparing for the expected resurgence of the disease in the fall, in conjunction with its partners at DOHMH. It has revised its plans to include the lessons learned from the spring and has worked to fine tune those plans to include more scalability and flexibility. Should the disease return, no matter how virulent or severe, the department is now better able to manage the situation with minimum disruption to standard procedure.

---

*Erik Berliner is assistant commissioner for the New York City Department of Correction's Health and Mental Health Services Division.*