

# Improvements in Correctional HIV Services: A Case Study in Delaware

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## Abstract

This article describes the experience and outcomes of the National Institute on Drug Abuse-funded Criminal Justice Drug Abuse Treatment Studies HIV Services and Treatment Implementation in Corrections protocol in the state of Delaware. The protocol was designed to test the effectiveness of a change team model in improving HIV services in correctional settings. In Delaware, a team was created with representatives from correctional and community agencies to work on improving linkage to HIV care for individuals released from incarceration. The team made improvements in the entire HIV service continuum: linkage to HIV care, HIV education, and HIV testing. The experiences in Delaware and the findings from this study suggest that the use of a change team model is a viable method for making organizational change in correctional settings.

## Keywords

HIV/AIDS, correctional health care, process improvement, case study

In 2008, the National Institute on Drug Abuse (NIDA) launched the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS), a cooperative agreement of scholars working to develop a better understanding of the organizational issues that can facilitate or undermine implementation of evidence-based services in correctional settings (Ducharme, Chandler, & Wiley, 2013). As part of the CJ-DATS studies and under NIDA's priority domain of improvements in HIV care in correctional facilities, the HIV Services and Treatment Implementation in Corrections (HIV-STIC) protocol was developed (Belenko et al., 2013). The HIV-STIC multisite research program conducted cluster randomized trials to test an organizational process improvement strategy for

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more effectively implementing improvements in the HIV services continuum including HIV prevention, education, and testing for individuals under correctional supervision, and linkage to HIV care for individuals returning home from incarceration (O'Connell, Swan, Martin, et al., 2013). Each of the nine research centers (each linked with a criminal justice partner organization) conducted either one or two cluster randomized trials on matched pairs of facilities to test the effectiveness of a change team process improvement model for improving HIV services in correctional settings, compared to a control arm that received a directive from correctional administrators to improve HIV services.

Nine research centers from across the country and their criminal justice partners participated in the HIV-STIC study. Among these were the Center for Drug and Health Studies (CDHS) at the University of Delaware and the Delaware Department of Correction (DE DOC). Each criminal justice partner (typically an administrator from the research center's criminal justice partner organization) decided on the component of the HIV services continuum (i.e., prevention, testing, or linkage to care) that they believed needed the most improvement in their local system. In the experimental condition, a modified NIATx process improvement strategy (McCarty et al., 2007) was used to guide the development of a local change team that consisted of frontline staff who work directly with the HIV services that the site wanted to improve. An "external coach" who is trained in the NIATx treatment model (McCarty et al., 2007) was hired to facilitate the change process. The sites in the control condition received a directive from the criminal justice partner to improve services related to the chosen component of the continuum and were left to use whatever approach they chose to implement the improved HIV services. Prior to randomization, all study sites received baseline training that included content on each area of the continuum, with extended focus on that site's area of improvement. (For a complete review of CJ-DATS and the HIV-STIC protocol, please see Belenko et al., 2013; Ducharme et al., 2013.)

## **HIV-STIC in Delaware**

Because of its small size, Delaware does not seem a likely candidate for ranking high in HIV/AIDS prevalence by state, yet Delaware is disproportionately represented in HIV/AIDS statistics. Delaware is at the confluence of a number of HIV transmission risk factors, including location in the Northeast corridor of the drug and sex trades, significant at-risk populations in minority communities, heavy tourist influxes in beach communities, high prevalence of injection drug use, and a high percentage of the population under criminal justice supervision (Ratnayake, 2011). These factors combine to place Delaware in the top 20 states in the nation with the highest prevalence of HIV/AIDS in the correctional population as of 2010 (Maruschak, 2012). When examined by gender, Delaware ranks among the top 15 states with the highest percentage of female HIV/AIDS cases in the state's prison population (1.8%; Maruschak, 2012). Delaware's percentage of the total HIV/AIDS cases among males in the state's prison population places it at 16th in the country (Maruschak, 2012).

### *Linkage to HIV Care for Individuals Returning Home From Custody*

To date, there is no cure for HIV or AIDS due to numerous complications (Weeks & Alcamo, 2010). However, antiretroviral (ARV) medication has been shown to effectively manage the virus so that the infected individual remains relatively healthy despite being HIV positive. Furthermore, research is now showing that managing the virus through ARVs can prevent transmission of HIV to noninfected people. Medication disruption, in addition to making the infected individual vulnerable to the effects of the virus, can lead to development of drug-resistant strains of the virus (Weeks & Alcamo, 2010). Viral resistance reduces the effectiveness of ARVs, making it more difficult to stop the

epidemic and threatening public health. Therefore, linkage to and retention in HIV treatment, and particularly adherence to ARV medication regimens, are essential for keeping individuals healthy and preventing further transmission of the virus (J. Baillargeon et al., 2009; Moir et al., 2010; Volkow & Montaner, 2010).

The period of reentry to the community from secure custody is of particular importance for disease prevention efforts because individuals often return to previous patterns of high-risk behavior (i.e., unprotected sex, injection drug use) or engage in even higher levels of risky behaviors than they did before they were incarcerated in an attempt to “make up for lost time” (Adams et al., 2011; Braithwaite & Arriola, 2003; Inciardi et al., 2007; MacGowan et al., 2003). Research has shown that the majority of individuals being treated for HIV in correctional facilities experience HIV treatment disruption once they are released into the community (J. G. Baillargeon et al., 2010; J. Baillargeon et al., 2009; Harzke, Ross, & Scott, 2006).

The correctional population in Delaware is no exception to these patterns. In fact, due to the interruption in treatment that has been documented among individuals living with HIV in Delaware’s correctional population, a single pill medication regimen (which should facilitate continuity of care; see Malta, Strathdee, Magnanini, & Bastos, 2008) is often not an option because of the possibility of viral resistance (DE DOC, 2012). In Delaware, 66% of the incarcerated patients who use ARVs are on a multi-tablet regimen versus 35% who are on a single dose of Atripla (DE DOC, 2012). This statistic is problematic for individual and public health and for the systems that are serving these clients, particularly the DOC and the community HIV provider. Thus, the criminal justice partner for CDHS decided that the Delaware sites would focus on improving linkage to HIV care for individuals returning home from custody.

### **Baseline Training**

The curriculum for the baseline training was developed and delivered by outside trainers, who have a long history of work related to HIV prevalence and services in correctional settings,<sup>1</sup> to all participating CJ-DATS study sites in order to ensure quality, consistency, and fidelity of the training. The general areas covered in the training were the HIV services continuum, HIV prevalence and issues among offenders, and evidence-based HIV services in institutional and community corrections for HIV prevention, testing, and linkage to care (O’Connell, Swan, Kramer, et al., 2013).

In Delaware, the primary focus of the baseline training was secure linkage to HIV care in the community for individuals returning home from incarceration in prerelease facilities<sup>2</sup> because of the priority given to this component of the HIV services continuum by the criminal justice partner. Accordingly, the training’s interactive exercises and didactic presentations focused on best practices and existing models of linkage to HIV care for individuals leaving incarceration, as well as local practices, issues, and concerns around this service. The training also included brief presentations and interactive discussions on evidence-based HIV prevention and testing practices and concluded with a training review and “next steps,” which included the directive from the criminal justice partner for staff to improve linkage to HIV care at their own sites. This training and a follow-up e-mail directive from the criminal justice partner were the only intervention that the control sites received.

The training was well received by participants from the experimental and control conditions alike. At the end of the study, a member of the change team from the HIV community organization noted:

The very first meeting that we had when the control group and the testing group got together and exchanged ideas, got to meet people, and just talked about things back and forth, I definitely know that some people were made aware of what was available in the community, how we offered services, [how]

we worked, the staff that we had. A lot of the care providers in the prison system weren't aware of exactly what the patients could get or do get when they get outside.

Likewise, a nurse from one of the control sites who participated in the baseline training noted: "I thought [the baseline training] was very informative because it allowed me to get different resources, put names with faces who I needed to contact, what they did, what each individual's job are."

Thus, even though the control sites did not receive the experimental intervention, they did qualitatively benefit from the training in the form of knowledge and resources gained.

### *Change Team Process and Procedures*

After the baseline training, the research staff met with the criminal justice partner (hereafter referred to as the Executive Sponsor), a facility sponsor (typically a DOC administrator at the facility level), the head nurse for the contracted DOC medical provider, and the NIATx coach to select the change team leader (CTL) and the other change team members. It was agreed that the head nurse present at the meeting was the best candidate for the CTL position. In addition to being the medical supervisor at each of the participating study sites in Delaware, she met the suggested qualities and credentials of the HIV-STIC protocol, including the ability to interact with all levels of management; leadership, communication, and delegation skills; experience making changes; energy and enthusiasm for the task; the ability to instill optimism in order to motivate others and overcome setbacks; and a goal-oriented and systematic approach. Other change team members were counselors and directors from the contracted substance abuse treatment provider who were responsible for discharge planning, nurses from the correctional medical contractor, and a representative from the community HIV provider.

Once the change team was developed, a kickoff meeting was held where the team was informed about the executive sponsor's directive to improve linkage to HIV care using the change team model. At this meeting, the research team also presented the research study and the external coach presented the NIATx model (see [www.niatx.net](http://www.niatx.net)) to the change team members.

A key element to the NIATx approach to process improvement is a "walk-through" of the service that the change team is seeking to improve (McCarty et al., 2007). The purpose of the walk-through is for change leaders to improve their understanding of what the client experiences when trying to access and participate in particular services, including how services are accessed, how the client might feel while trying to access these services, what processes or steps are involved in obtaining services, how long it takes to receive services, and so on. This type of information can then be used to develop strategies for improving the quality and efficiency of service delivery.

In the case of Delaware, the CTL, the community HIV provider representative, and one of the correctional nurses participated in two walk-throughs. First, the participants "walked through" the medical intake and discharge processes in the correctional facility. The community HIV provider representative acted as if she were a new intake who was living with HIV and went through both the intake and discharge process with the correctional nurse. For the second walk-through, the CTL acted as the HIV-positive individual leaving custody and "walked through" the process of finding the community HIV program and going through the intake process.

The walk-through participants then presented their findings at a meeting with the rest of the change team and the coach. The team used these findings to inform the goals and strategies to meet those goals that the team would focus on to improve HIV treatment linkages. Using a rapid cycle testing approach from the NIATx process improvement model (McCarty et al., 2007), the change team held meetings once a month to discuss the changes that were being made and any barriers they were facing in implementing changes, and to present successful changes to the group. Rapid cycle

testing refers to the “Plan-Do-Study-Act” concept, which means that a group brainstorms ideas for a strategy to improve a process or service (Plan). They next take those ideas to action and work on implementing the change (Do). The progress of that implementation strategy, including barriers and facilitators to success, is tracked and the data are presented to the group (Study). Depending on the results, the changes are “adopted,” “adapted,” or “abandoned” by the team (Act). The notion of this process being “rapid” is to engage in discrete, short-term process goals to help dispel the idea that change is too difficult and to achieve short-term goals in less time and burden to the staff (see Belenko et al., 2013, for a more detailed discussion of this process). Once progress was being made and goals were being accomplished, the meetings were reduced to once every other month with a final close-out meeting and celebration that was held about a year after the initial meeting (the close-out meeting is discussed in more detail later in this article).

## Outcomes

Although the focus of the change team efforts was on linkage to HIV care in the community for individuals leaving incarceration, the change team process, particularly the walk-through, led to improvements in each of the areas of the HIV continuum (i.e., linkage to HIV care in the community, HIV prevention, and HIV testing). The improvements to the linkage to care process will be discussed first, followed by improvements made to HIV prevention education services and finally HIV testing improvements.

### *Linkage to HIV Care*

During the time that the project was in place, only five HIV-positive individuals were released from the correctional facilities in the experimental condition, making it difficult to measure improvement in linkage to care at the client level. However, the change team was successful at improving the *process* for linking people to HIV care upon release at the level of the staff members of the organizations involved. The change team process led to improvements in the process for linking individuals to HIV care in the community in two ways: using the walk-through to identify parts of the process that could use improvement and bringing the community and DOC medical providers together to work through the issues uncovered during the walk-through. One finding from the walk-through was that the paperwork that the DOC medical provider completed for people being referred to the community HIV program was redundant to the paperwork that the community HIV program staff completed during the intake process. The change team process brought the community and DOC medical providers together to address this issue. Ultimately, the CTL and the community HIV provider worked together to streamline the DOC discharge planning and paperwork in a way that met the needs of both the DOC and the community provider organizations.

The two key outcomes of this exercise were increased communication between the DOC medical provider and the community HIV provider and significantly reduced discharge paperwork. In the following quote, the CTL describes how they reduced the discharge paperwork and how that improved linkage to HIV care:

There was a six page form that DOC had, they wanted us to do on linkage to care and . . . it mimicked exactly what [community HIV provider] already had. So we got together and we condensed it into a one-page [form] on what they specifically needed. And the one-pager also helped the inmates . . . better understand . . . what our goal is, what we’re trying to do . . . they weren’t going to read the six pages. The six page to one page, it helped with linkage of care in the fact that [the inmates] were able to see what we were doing, why we were doing [it], the importance of it, and also with hooking up with [community HIV provider].

The community HIV provider representative on the change team also discussed how this process improved communication between the DOC medical provider and the community HIV provider:

We started with paperwork and just getting information in the hands of the nurses there on who to contact, how to make the contact with our facilities so that they could schedule appointments for the patients to get information. We talked about what type information [the DOC nurses] would need to collect on their end, to be able to share that information with us in preparation of the patient transitioning [back to the community]. [This information was] as specific as what medicines they were on, what physical history, psychosocial history . . . data collection to share with us. So, communication.

The change team also worked to break down communication barriers by developing a one-page communication form to be faxed between the DOC medical provider and the community HIV provider that included information on individuals being discharged with HIV, their appointments in the community, whether or not they made their appointments in the community, and whether they were reincarcerated.

The community HIV provider described another way that the walk-through helped improve the process of linking people to HIV care when they are released from a correctional facility:

I think one of the most helpful things was what we did in the very beginning by walking through the other person's environment. I think that was huge. I know that the DOC nurses said that they appreciated being able to go and see what goes on [at the community clinic] also because then that gives them a perspective on what they can talk to the patient about and prepare the patient for what to expect. Because I think that not knowing what to expect when you're going into a new environment that you've never been into is a barrier to someone's [treatment] compliance. It's a barrier to them showing up [for care] and if you have someone telling you 'look I've met the people, I've been to the clinic or I've been to that facility, I met some of the people there, they do a good job'. Or, 'you're going to be taken through this process—let me tell you a little bit about the process'. [It] takes away a little bit of the fear or apprehension. I think that that was probably the biggest plus in doing [the walk-through].

The CTL said she was so impressed by this outcome of the walk-through that she had the nurses she supervises who were not involved in this study participate in walk-throughs of the community HIV provider facility and processes:

[The DOC nurses] did a walkthrough at the [community HIV provider] building, they got to see that whole process, meet with other staff members out there, sit in and listen to their whole [intake] process, how the patients are treated out there, and they absolutely gained a whole new insight on when the inmates leave the [correctional] institutions and go out to the outside community provider. And then also, [the DOC nurses] go back . . . one other time, maybe even twice, they've been asked to come back [to the community provider facility]. And I think what the community [provider]'s trying to do is integrate the prison systems . . . Any education that comes up, any community events that occur that have to do with HIV, they're bringing our chronic care nurses in. Just for the education. And so it's teaching our nurses from the inside what's going on on the outside so they can bring that in and continue . . . so that we're not on two different pages. The inmates are being taught what they're going to be taught on the outside. So what they're hearing from us is what they're going to hear when they get to the community. So it's awesome. And it's working.

In sum, as a result of the walk-through and of the change team process putting the community HIV provider and the DOC medical provider in direct contact with a shared goal, the DOC developed a standardized HIV discharge protocol, a community HIV provider contact information sheet, a psychosocial assessment form that went from six pages to one page, and an appointment communication



form designed to ensure continuity of communication and documentation between all sites (i.e., DOC and the community HIV providers' sites). This work led to instructions for the discharge nurses that were easier to interpret and resources for the DOC nurses regarding who to call with questions and reiterated to everyone involved that linking patients directly to care positively impacts treatment compliance and improves patient outcomes. In addition, the walk-through and the breakdown of communication barriers between the DOC and community health providers streamlined the knowledge, education, and training of the nurses and the patients,<sup>3</sup> an outcome that the change team members thought would improve linkage to and retention in HIV care.

### ***HIV Prevention Education***

Results from the walk-through also indicated that improvements in HIV prevention education could be made at other points during an individual's incarceration. Specifically, walk-through participants found that the educational packet given to individuals at their medical intake to the correctional facility was outdated and written at too advanced of a reading level. To address this issue, the CTL and the community HIV provider representative on the change team worked together to update the material in the educational packet and to change the material's language and format to be appropriate for a fifth-grade reading level. This packet was approved by the DOC, and the CTL had the packet translated to Spanish to maximize its reach within the correctional population.

The CTL also ordered a variety of educational DVDs that are presented at a fifth-grade reading level and deal with HIV, hepatitis, and other infectious diseases as well as healthy lifestyles and behaviors in general. At one study site, these DVDs are played weekly at a scheduled time in a multi-purpose room for anyone who is interested. Unfortunately, data were not collected on how many people viewed these DVDs or how often there was an "audience." At the other study site, the DVDs could not be used because TVs and DVD players are contraband due to security issues.

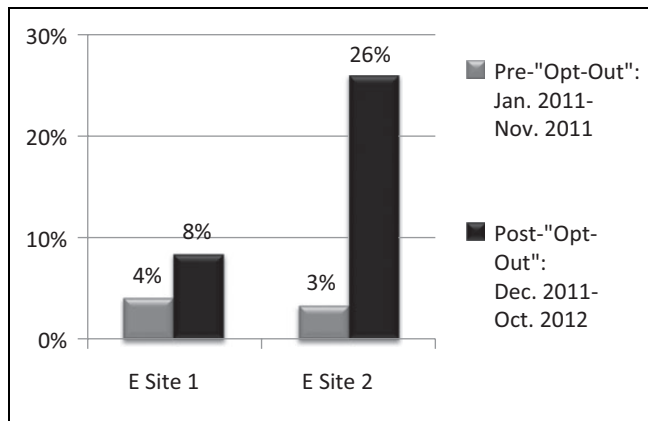
### ***HIV Testing***

Finally, the change team addressed issues related to the third component of the HIV services continuum: HIV testing. The team members discussed the value of learning the HIV status of more inmates and agreed that HIV testing could be improved at the sites. The rapid cycle "Plan-Do-Study-Act" approach was used to add an "opt-out" question and a signed refusal form to the medical intake packet. Now, new inmates going through medical intake were asked whether they wanted an HIV test. If they refused, they were required to sign a refusal form (if they consented, they signed a consent form). The CTL documented the number of HIV tests conducted. Compared to the number of tests conducted previously, the requests for testing jumped dramatically (see Figure 1). Although there was some backlog in entering the lab data into the state system, the number of HIV tests dramatically increased as a result of this change.

At one site, the percentage of inmates tested for HIV doubled in the period after the opt-out question was added. At the second site, the percentage of inmates tested went from only 3% prior to the study to 26% after implementation of the opt-out HIV testing question. It is important to note that the first experimental site (E Site 1) is a larger facility, with an average of 200 intakes per month compared to an average of 50 at the second site (E Site 2). This difference in population size likely affected the higher percentage of tests conducted at Site 2.

### ***Study Close-Out***

At the end of the study, the change team held a celebratory close-out meeting. Participants included the CTL and members, the executive sponsor, the coach, DOC and community HIV provider



**Figure 1.** Percentage of intakes/transfers tested for HIV in experimental sites.

administration, nurses, and doctors, as well as DOC mental health and drug abuse treatment staff and the research team. Participants were from both the experimental and control conditions, and although the study took place at the pre-release facilities, representatives from administration and medical care at the state prisons were also present. The meeting opened with remarks from the executive sponsor on the priority of the project for DOC and some of the general changes made as a result of the study. The coach then presented a general overview of project goals and the change team process. The CTL and the community HIV provider representative on the change team gave a presentation on the specific processes, data, and improvements that were made to all three components of the HIV continuum. The executive sponsor closed the meeting with remarks on sustainability and roll-out of the changes that were made (discussed in the next section).

## Sustainability and System wide Roll-Out of Implemented Practices

### *HIV Services: Linkage to Care*

The changes that were made to improve linkages of care were approved by DOC administration to be implemented as policy statewide. In particular, the updated and streamlined discharge planning paperwork, including the one-page communication form, were written into DOC policy and all sites are required to follow the procedure for using this paperwork as established by the change team. This policy change affects the experimental facilities, the control facilities, and the prison facilities that were not part of the study.

It is important to note that there were no changes in HIV services at the control sites until the changes made in the experimental sites were instituted into policy. When staff members at the control sites were asked about their experiences with this project and whether any changes were made, the most common response was “no changes were made because our process for linking individuals with HIV to care in the community works fine.” Interestingly, this was also the sentiment of many of the change team members before the study began. It was not until after the walk-through that staff members of the experimental site realized where the process could be improved. Having not gone through the walk-through, it follows that staff members at the control sites were not made aware of potential areas of improvement at their facilities. Also, as mentioned previously, the number of individuals living with HIV who were released from the correctional facilities during the project period was small. Therefore, staff members at the control sites were not faced with the process of linking individuals to community HIV providers very often during the study. However, the



structured activities of the change team around the linkage process forced the staff members in the experimental condition to confront the process in a more active way, even if HIV-positive individuals were not frequently being discharged.

At the end of the study period, the CTL received a promotion and now oversees health care procedures at the prison facilities in one of Delaware's counties. In this role, she has taken it upon herself to train her staff in the processes and improvements that were used and made at the study facilities, including conducting a walk-through of the community HIV provider's organization to assist in linkage to HIV care for individuals leaving prison. The CTL also described how the improved communication that was established between the DOC and community medical providers as a result of this study has led to collaborative efforts in education and training of nurses in HIV care-related issues.

### *HIV Services: HIV Testing*

Unlike the discharge planning and paperwork, the improved HIV testing procedures that were implemented by the change team (i.e., asking everyone at intake whether they want an HIV test and documenting the response) were not put into DOC policy. Therefore, sustainability of these procedures has to rely on staff training and buy-in of the new procedure. At two of the experimental sites, the practice has been sustained because the medical staff has been trained in the practice and realizes the importance of HIV testing as a result of participating in this project. However, the staff at the other experimental site completely turned over after the CTL was promoted. As a result, no one was trained in the new HIV testing procedure and the testing has dropped off at that site since the end of the project. This drop-off illustrates an important barrier to sustaining organizational change, especially in correctional settings: staff turnover. When staff turnover is at a high frequency, training of the new staff in current practices is critical in order for those changes to be sustained. That said, it is also important to realize that, in correctional settings especially, policy has a stronger influence than practice. In other words, if the testing procedures had been institutionalized as policy, the practices would be required of all staff and would be less affected by staff turnover.

With respect to facilities that were not included in this study, the CTL has trained her new staff at the prisons to follow the intake testing procedure that was developed by the change team. Again, this procedure has yet to be institutionalized into policy and so its occurrence is dependent on the CTL training her staff and holding them responsible for carrying out the process.

It is important to note that since the completion of the study, the state of Delaware has passed an opt-out testing law that is effective statewide. It is not clear at the time of this writing how the new law will affect the HIV testing in the correctional facilities, but the law could influence DOC policy that would then facilitate the sustainability of improved HIV testing in correctional settings in Delaware.

### *HIV Services: HIV Prevention Education*

Finally, with respect to the improvements made to HIV education as a result of this study, the updated educational packets have been added to the required medical intake packets at each facility. Also, at the facilities where the educational DVDs were able to be used, they have become part of the practice at that facility. Both of these changes have been instituted at the prisons as a result of the CTL's promotion.

The DOC administration has also initiated an HIV education training seminar at all DOC sites, including the project sites. This practice change was not a direct result of the change team's activities, but it did stem from the increased awareness of the need for HIV education created by the work of the change team.

## Moving Forward

Several of the participants in this study, and particularly DOC administration, have expressed enthusiasm for the use of the change team model to make improvements in both policy and practice in Delaware's correctional facilities. As a result, the administration has begun using this model for other issues, such as improving linkage to care for all chronic care individuals returning to the community and implementing procedures for other policy issues such as the Prison Rape Elimination Act. On the community side, the HIV community provider administration has adopted some of the strategies, such as the use of walk-throughs of their own clinic, to help decide how to implement new practices into their organizational structure.

## Conclusion

Approximately 7 years ago, DOC administration met with the community HIV provider administration to discuss ways to improve communication between the two organizations and link HIV-positive patients to care upon release from a DOC facility. The administrators also discussed ways to improve the communication in reverse, specifically, how DOC medical staff could get important information from the community provider about an inmate (e.g., medication, health problems, lab results) so the staff could better care for that individual during incarceration. As a result of these discussions, the administrators developed a contact list of personnel at the community HIV program's statewide locations and a designated contact person (usually the infection control nurse) at each DOC site. The community HIV provider also shared forms used for charting (i.e., CD4/viral load flow sheet, psychosocial assessment form, problem list) to aid the DOC clinicians if they wanted to adapt these for their own use.

Although there was administrative interest and effort in making these improvements, the individuals involved were unable to implement and sustain the new practices and procedures. However, as this study demonstrates, the change team model led to (1) improvements in communication between the DOC medical and community HIV provider staff, (2) new forms and planning processes that improved linkages to care being implemented into DOC statewide policy, and (3) changes to other components of the HIV services continuum, including HIV testing and education. What made the work of the CJ-DATS project's change team successful compared to 7 years ago?

To start, past attempts to improve linkage to care did not have a formal process for implementing the new forms and procedures, no administration mandate or policy change, and no process for evaluating change. The administrators and the community providers did not meet face-to-face with the clinicians doing the work at each of the DOC facilities. Also, there was a lack of understanding between the two organizations about how each system worked and what communication barriers existed, and the community providers have admitted to a lack of appreciation for the workload and volume of paperwork of DOC medical staff. The paperwork on the DOC side was extreme and, in many cases, outdated and/or incomplete. There was no substantial buy-in by the DOC medical staff; some completed the paperwork and followed the process while others did not. In addition, DOC medical staff turnover was such that often the new nurse was not aware of the process or had not been oriented to the process, and forms for the process were either not available (disappeared) or were "just a bunch of papers in a notebook and no one told them how they were to be used." In many cases, it was not the fault of the medical staff; rather, the process was not set up to stand alone or to withstand changes in personnel.

In contrast, the modified NIATx model for implementing change as developed by the HIV-STIC protocol provided participants with a process to implement and a method to evaluate changes from the start. Moreover, by meeting with all key players involved in the practice that the team sought to improve, and by walking through the process at each other's facilities, staff on each side of the

correctional wall gained an appreciation of system-level barriers and workload challenges experienced by the other. Through this process, communication between the organizations was established and continues. The collaborative work and involvement of staff at all levels of the institution in the process of identifying, improving, and implementing change provided buy-in at each level and contributed to the successful outcomes.

Importantly, the change team also had a “champion” as their CTL: someone who was invested and passionate about the changes being made and who took the changes to other facilities after her promotion, despite those changes not being institutionalized as policy. Finally, another factor that contributed to the success of the change team was the accountability and visibility that came from being involved in a major national research collaborative with the University of Delaware. The HIV-STIC protocol provided the structure for implementing change, and the prestige of the research study and the university, along with the visibility of success through publications such as this, provided an incentive to succeed.

While both of these factors (i.e., the champion CTL and her promotion and the visibility of the change team through its involvement in this national study) contributed to the change team’s success in Delaware, both have implications for the generalizability of this success. In other words, while these factors were facilitators to success in Delaware, other institutions interested in implementing a similar process may not have a champion CTL or be involved in a national research study, and thus may not experience success with a similar strategy.

In sum, the experiences of the change team in Delaware have illustrated that HIV services are indeed a continuum and improving one area of the continuum can and often does lead to improvements in the other areas. The team started with the goal of making improvements to linkage to HIV care and, as a result, realized that linking individuals to HIV care requires knowledge of individuals’ HIV status. Therefore, the team decided to work on improving HIV testing as well. Also, as a result of the walk-through and improved communication with the community HIV provider, it became clear that improvements were needed in the HIV education that inmates were receiving. Although there were barriers to complete implementation of the improvements the change team wanted to make to the HIV services continuum, several factors related to the change team process contributed to the overall success of this project in Delaware. These include selecting a CTL who was a champion for the changes being made, multilevel staff involvement and buy-in, a breakdown of communication silos, accountability from DOC administration, and visibility through participation in a research project.

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### **Authors’ Note**

The contents of this article are solely the responsibility of the authors and do not necessarily represent the views of the Department of Health and Human Services, NIDA, the DE DOC, or CCHS.

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## Notes

1. The training was conducted by The Bridging Group, Oakland, CA; see <http://thebridginggroup.com> for more information.
2. Prerelease facilities in Delaware include traditional work release, substance abuse treatment, and intensive community supervision programs. The length of stay for individuals in these facilities is typically less than 1 year, with an average of 4 to 6 months.
3. The impact of this project on inmates' perceptions and knowledge of HIV services in correctional facilities is currently under review elsewhere. Contact the corresponding author for more information.

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