

Routine HIV Screening as a Standard of Care: Implementing HIV Screening in General Medical Settings, 2013-2015

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Abstract

Objective: We implemented routine HIV screening as part of the 4-year Care and Prevention in the United States Demonstration Project, whose aim was to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States. We describe the capacity-building efforts to implement routine HIV screening and provide lessons learned and implications for practice.

Methods: From January 2013 through September 2015, the Public Health Institute of Metropolitan Chicago (PHIMC) implemented routine HIV screening in 7 health care systems in Illinois by providing capacity-building assistance focused on systems and operational infrastructure, staff member skills and organizational structure, and clinic culture. Each site received funding to integrate routine HIV screening into the existing clinic flow, engage the entire health care team in the process, and transform the system and shift clinic culture to sustain HIV screening.

Results: All 7 systems established policies and procedures to implement routine screening, 5 systems integrated HIV test ordering and documentation into their electronic health records, and 4 systems established a third-party billing and reimbursement process for testing. The 7 systems conducted a total of 49 285 tests and identified 160 people living with HIV. The number of tests increased by more than 40% each year.

Conclusions: PHIMC identified the following practices for consideration when implementing routine HIV screening in general medical settings: create a culture that supports HIV screening, use champions in clinics, integrate HIV screening into clinic flow and electronic health records, and train clinic staff members on HIV messaging. Incorporating these practices can help other clinical settings build capacity to make routine HIV screening a standard of care.

Keywords

capacity building, HIV, routine HIV screening, standard of care

In September 2006, the Centers for Disease Control and Prevention (CDC) issued revised recommendations for HIV testing and encouraged health care providers to test all patients aged 13-64.¹ CDC estimated that 1.1 million people aged 13 and older were living with HIV in the United States in 2015, and approximately 15% of infected people were unaware of their status.² Of the estimated 37600 people diagnosed with HIV in 2014, 23% were simultaneously diagnosed with AIDS, indicating they were likely infected for years without knowing their status.³ Although the revised recommendations were intended to address the persistently high estimates of the number of people with undiagnosed HIV infection or a late diagnosis of HIV infection, routine screening in health care settings has not been widely adopted. Integrating routine HIV screening (including routine, voluntary HIV screening as a normal part of medical practice¹) into general medical settings may help normalize HIV testing as a standard of care, encourage patients to find out their HIV status, and facilitate linkage to care among people with HIV.^{4,5}

Funded by the US Department of Health and Human Services Secretary's Minority AIDS Initiative Fund, the Care and Prevention in the United States (CAPUS) Demonstration

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Health System	No. of Clinics Within Health System	Clinic Types Within Health System	Geographic Classification	Non-Hispanic African American and Hispanic/Latino Race/Ethnicity (%)	Implementation Year
System I	7	 Local health department clinics^b Federally Qualified Health Centers^c 	Suburban	 Non-Hispanic African American (28) Hispanic/Latino (57) 	2013
System 2	6	 Emergency departments Immediate care clinics 	Suburban	 Non-Hispanic African American (40) Hispanic/Latino (25) 	2013
System 3	28	 Federally Qualified Health Centers^c 	Suburban/rural	 Non-Hispanic African American (42) Hispanic/Latino (5) 	2013
System 4	4	• County hospital health clinics ^d	Urban/suburban	 Non-Hispanic African American (62) Hispanic/Latino (19) 	2013
System 5	4	 Hospitals Federally Qualified Health Centers^c 	Urban/suburban	 Non-Hispanic African American (66) Hispanic/Latino (18) 	2014
System 6	2	 Emergency departments 	Urban	 Non-Hispanic African American (62) Hispanic/Latino (3) 	2014
System 7	2	• Federally Qualified Health Centers ^c	Suburban	 Non-Hispanic African American (22) Hispanic/Latino (33) 	2015

Table 1. Characteristics of the 7 participating health systems selected to implement routine HIV screening services as part of the CAPUS Demonstration Project,^a Illinois, 2013-2015

Abbreviation: CAPUS, Care and Prevention in the United States.

^aThe CAPUS Demonstration Project was a 4-year (2012-2016) cross-agency demonstration project led by the Centers for Disease Control and Prevention to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶

^bLocal health department clinics are operated by the local county health department.

^cFederally Qualified Health Centers are primary care clinics that qualify for federal funding under US Public Health Service § 330 and provide comprehensive health services to underserved areas or populations.

^dCounty hospital health clinics are hospital health system entities that are operated by the county, not by or under the authority of state or local health departments.

Project (hereinafter, CAPUS) was a 4-year (2012-2016), cross-agency demonstration project led by CDC with the goal of reducing HIV-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶ Eight states received CAPUS funding: Georgia, Illinois, Louisiana, Mississippi, Missouri, North Carolina, Tennessee, and Virginia. One of the primary aims of CAPUS was to decrease the proportion of racial/ethnic minority groups with HIV who have undiagnosed infection, by expanding and improving HIV testing capacity and addressing the social and structural factors that influence HIV outcomes. To meet this objective, the Illinois Department of Public Health (IDPH) partnered with the Public Health Institute of Metropolitan Chicago (PHIMC), a nonprofit organization, to expand routine HIV screening among African American and Hispanic/Latino people as a standard of care in general medical settings in areas throughout Illinois with a high prevalence of HIV.

PHIMC has provided capacity-building assistance for routine HIV screening since 2007. Although the organization was successful in testing large numbers of people, past testing efforts were not successful at fully integrating HIV screening into general medical care. With support from IDPH and informed by guidance from the National Association of Community Health Centers' *A Model to Integrate* *Routine HIV Screening Services in Federally Qualified Health Centers*,⁷ PHIMC built upon its experiences to develop and refine its current model for screening, which employs a broad array of capacity-building efforts to integrate routine HIV screening into general medical care. We describe the capacity-building efforts to implement routine screening, report program outcomes from implementation, and provide recommendations and implications for practice.

Methods

PHIMC partnered with 7 health care systems in Illinois to implement routine HIV screening from January 2013 through September 2015 (Table 1). Using epidemiological profile maps of HIV incidence by race/ethnicity and ZIP code, PHIMC identified 53 clinics in areas with a high prevalence of HIV/AIDS and large populations of African American and Hispanic/Latino residents. Capacity-building efforts focused on systems and operational infrastructure, staff member skills and organizational structure, and clinic culture. Although each clinical site applied the tools and resources best suited to its needs, all 7 health care systems worked to accomplish the same 3 goals: (1) full integration of routine HIV screening into the existing clinic flow, (2) engagement of the entire health care team, and (3)

		Goals	
Characteristic	Full Integration Into Clinic Flow	Engagement of Full Health Care Team	Systems Transformation and Culture Shift
Time needed for implementation	2 to 6 months	I to 3 months	6 months to 1 year
Activities	 Present to executive team to obtain buy-in from leadership. Conduct pre-implementation assessment. Assess clinic flow. Obtain input from staff members to inform implementation plan. Develop implementation plan. 	 Identify champion(s). Introduce HIV screening to clinical and support staff members before implementation. Train all staff members during meetings. 	 Develop policies and procedures for HIV testing and consent documentation. Implement billing and reimbursement process. Develop data collection process to inform programmatic improvements. Add HIV screening to consent-fortreatment forms. Initiate the integration of HIV testing into electronic health records. Develop strategies to address challenges and barriers.

Table 2. Capacity-building goals and activities initiated to support the implementation of routine HIV screening services in health care systems as part of the CAPUS Demonstration Project,^a Illinois, 2013-2015

Abbreviation: CAPUS, Care and Prevention in the United States.

^aThe CAPUS Demonstration Project was a 4-year (2012-2016) cross-agency demonstration project led by the Centers for Disease Control and Prevention to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶

systems transformation and culture shift to sustain HIV screening implementation (Table 2).

assessments were used to inform the training and technical assistance PHIMC would provide or coordinate before implementation.

Integration of Routine HIV Screening Into Clinic Flow

Implementing a new practice can be a major change for a clinical system. Gaining buy-in at the executive level is essential to successfully promoting routine HIV screening to staff members and patients. PHIMC met with leadership teams from each health care system to promote the value and benefits of routine HIV screening for their patients. Once approval and buy-in were established at the executive level, PHIMC worked to understand how HIV screening could be integrated into clinic workflow. PHIMC conducted pre-implementation assessments at each testing site, focusing on personnel, operational clinic structure, and technology (Table 3). Using recommendations from the National Association of Community Health Centers,⁷ PHIMC worked with organizational management to map out the clinic flow and create an implementation plan that identified the logistics of the HIV screening process and outlined testing protocols and procedures. To ensure a feasible and comprehensive plan, PHIMC engaged health care team members and support staff members to provide feedback in the process. The implementation plan included the following elements: how screening would be promoted to patients, who would initiate conversations, who would offer the screening, how consent would be documented, where screening would be conducted, which screening methods and technology would be used, how and where results would be delivered, and how to link patients with positive results to care. In addition to plan development, the pre-implementation

Engaging the Health Care Team

Integrating routine HIV screening requires engagement of all members of the health care team to establish a shared sense of responsibility. To facilitate this process, each organization identified a staff member to serve as a champion and lead implementation with support from PHIMC. The champions promoted screening, provided daily technical assistance to staff members, acted as a liaison between PHIMC and their respective organizations, and ensured that staff members had the information and resources needed to succeed. To build rapport with staff members and maintain buy-in, champions had to be viewed as peers with shared challenges and goals. Organization leadership supported champions by allocating time, space, and money for them to coordinate trainings, provide technical assistance, and facilitate meetings focused on HIV screening implementation.

PHIMC partnered with the Midwest AIDS Training + Education Center to provide a broad range of trainings, tools, and tailored technical assistance to champions and other clinical and support staff members before and during implementation. The trainings included an introduction to HIV and routine HIV screening, instructions on how to offer HIV screening and deliver test results, and establishment of a linkage-to-care process for people with an HIV-positive diagnosis. Staff trainings were delivered during regular team meetings at the clinic to minimize disruption. HIV messaging trainings and technical assistance were provided for all medical and support staff members to ensure that everyone was able to answer patient **Table 3.** Data collected from clinical systems to implement and monitor the integration of routine HIV screening as part of the CAPUS Demonstration Project,^a Illinois, 2013-2015

		Data Colle	cted	
Characteristics	Pre-Implementation Assessments	Quarterly Narrative Reports	Negative Testing Data	Positive Testing Data
Data type	Qualitative and quantitative	Qualitative	Quantitative	Qualitative and quantitative
Data source	Form, survey, interview	Form, report template	EHR extraction, reported in Microsoft Excel template	EHR extraction, reported through confidential fax line
Data collection time frame or frequency	Once (before implementation of testing)	Quarterly	Monthly	Within 7 days of identification
Data points collected	 Number of clinical sites Types of clinical sites Number of medical providers Average number of patients seen monthly Number of new patients enrolled monthly Patient demographic profile HIV medical care provided Current HIV testing policy Routine HIV testing criteria Process for consent List of patient education materials Testing technology Process for billing 	 Progress toward objectives Changes to structure of clinic and clinic flow Barriers and challenges Strategies to address barriers and challenges Technical assistance needs to overcome challenges Services provided and linkage-to-care information for each patient who tested positive De-identified client reports for each individual with a confirmed positive result 	 Site identification number Test site number Test date Birth year Race/ethnicity Gender Previous HIV test results Current HIV test result Patient receipt of test result Testing technology used 	 Test date Test location Test name Test result Date test result provided Client demographic characteristics Client identified risk Referral and linkage to Ryan White HIV/ AIDS Program case management Referral and linkage to HIV medical care Status and date of first appointment Referral and linkage to partner services

Abbreviations: CAPUS, Care and Prevention in the United States; EHR, electronic health record.

^aThe CAPUS Demonstration Project was a 4-year (2012-2016) cross-agency demonstration project led by the Centers for Disease Control and Prevention to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶

questions, acknowledge patient concerns, promote HIV screening, and reassure patients that routine HIV screening was now a regular medical service offered to all patients.

Systems Transformation and Culture Shift

Transforming the culture and operations of a clinic or system is essential to implementing a sustainable routine HIV screening program. PHIMC partnered with clinic management to develop new policies and procedures, implement billing and reimbursement processes, and revamp clinic documentation processes to include HIV screening. By developing policies and procedures, clinic management communicated to staff members the importance of routine HIV screening and the organization's commitment to implementation. Policies and procedures also outlined processes that standardized routine screening and minimized the administrative burden on health care teams. Implementing billing and reimbursement for routine HIV screening helped change the mind-set that HIV testing was a temporary, grant-

funded activity and provided opportunities for more sustainable financing. PHIMC provided technical assistance in establishing updated documentation for ordering, tracking, and recording HIV tests to match the more streamlined processes of other clinical services. To achieve this alignment, HIV screening was added to general consent-for-treatment forms, and HIV screening orders and consent documentation were integrated into the electronic health record (EHR). Several organizational and systemic barriers were identified during this transition, including perceived burden of time, competing priorities, misconceptions about obtaining and documenting consent, and clinic culture of stigma and disbelief in patient risk for HIV that undermined the importance of routine HIV screening. As these barriers were identified, PHIMC worked with clinic management to develop strategies and provide additional trainings and technical assistance to address them.

PHIMC conducted site visits and conference calls to monitor the implementation process. Qualitative and quantitative methods were used to examine project impact and track

	т	otal	2	2013	2	2014	2	2015
Health System	No. of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)
System I	17263	13 (0.08)	7018	4 (0.06)	6550	7 (0.11)	3695	2 (0.05)
System 2	8182	18 (0.22)	732	1 (0.14)	2747	7 (0.25)	4703	10 (0.21)
System 3	6936	22 (0.32)	2773	2 (0.07)	2517	13 (0.52)	1646	7 (0.43)
System 4	7919	68 (0.86)	357	0	3030	35 (1.16)	4532	33 (0.73)
System 5	1715	8 (0.47)	c	c	235	0	1480	8 (0.54)
System 6	3415	28 (0.82)	c	c	548	3 (0.55)	2867	25 (0.87)
System 7	3855	3 (0.08)	c	g	c	c	3855	3 (0.08)
Total	49 285	160 (0.32)	10880	7 (0.06)	15627	65 (0.42)	22778	88 (0.39)́

Table 4. Number of HIV tests conducted and people identified with diagnosed HIV infection during a medical visit at 7 health systems, by year and health system, as part of implementation of routine HIV screening in the CAPUS Demonstration Project,^a Illinois, 2013-2015^b

Abbreviation: CAPUS, Care and Prevention in the United States.

^aThe CAPUS Demonstration Project was a 4-year (2012-2016) cross-agency demonstration project led by the Centers for Disease Control and Prevention to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶

^bFor 2013 and 2014, testing activities were conducted from January through December. For 2015, testing activities were conducted from January through September.

^cData were not included because the health system had not initiated testing at that time.

programmatic activities (Table 3). Sites submitted process data through quarterly narrative reports that detailed each site's progress toward programmatic objectives. Quantitative data, including data on demographic characteristics, number of tests conducted, and number of people with diagnosed HIV infection, were used to demonstrate program outcomes. Testing data were collected from clinics using EHR systems and HIV testing forms, which were submitted to PHIMC using Microsoft Excel. Data on patients with diagnosed HIV infection and linkage to care were submitted to IDPH through a confidential fax line. PHIMC compiled the process and testing data and shared the summarized results with sites to inform programmatic improvements. All data collected by PHIMC were de-identified; therefore, institutional review board approval was not required.

Results

During the project's nearly 3-year implementation (January 2013 through September 2015), all 7 clinical systems developed the capacity to integrate routine HIV screening into their practices by establishing internal policies and procedures and data-collection processes that facilitated implementation. Although all 7 health care systems implemented routine HIV screening, 4 systems (systems 1, 2, 3, and 4) implemented HIV screening into all clinics within their systems, 5 systems (systems 2, 3, 4, 5, and 6) integrated HIV consent and HIV testing orders into their EHRs, and 4 systems (systems 2, 3, 4, and 6) established billing and reimbursement processes.

By September 2015, the 7 health care systems had conducted a total of 49285 tests; the number of tests conducted increased by 44%, from 10 880 in 2013 to 15 627 in 2014, and by an additional 46% to 22 778 in 2015 (Table 4). The project identified 160 people with diagnosed HIV, for a total positivity rate of 0.32%. Systems 4 and 6 had notably higher HIV positivity rates than the other systems, with rates of 0.86% and 0.82%, respectively.

Of 49285 people tested, 34319 (70%) self-identified as a racial/ethnic minority: 18518 (38%) self-identified as non-Hispanic African American and 15801 (32%) self-identified as Hispanic/Latino. More women (n = 31924, 65%) than men (n = 17209, 35%) were tested, and 18015 (37%) people who were tested reported no previous HIV tests (Table 5). Of 160 people who were diagnosed with HIV infection, 115 (72%) were non-Hispanic African American, 25 (16%) were non-Hispanic white, 11 (7%) were Hispanic/Latino, and 9 (0.2%) were other race/ethnicity. The positivity rate for men was 0.69% and for women was 0.13%.

Linkage data were available for 146 of the 160 (91%) people with diagnosed HIV infection. Of these, 120 (82%) people were referred for medical care and 26 (18%) people declined a medical care referral. Of the 120 people who were referred for medical care, 102 (85%) attended their first medical appointment.

Discussion

This project showed that general health care settings in areas with a high prevalence of HIV/AIDS and large numbers of African American and Hispanic/Latino people can feasibly adopt routine HIV screening as a standard of care. We learned several lessons in the process of implementing integrated HIV screening into general medical settings. These

		Total		2013		2014		2015
Characteristics	No. (%) of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. (%) of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. (%) of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)	No. (%) of HIV Tests Conducted	No. of People With Diagnosed HIV Infection (% Positivity)
Race/ethnicity Non-Hispanic African	18518 (38)	115 (0.62)	2919 (27)	3 (0.10)	5947 (38)	47 (0.79)	9652 (42)	65 (0.67)
American Hispanic/Latino Non-Hispanic	15 801 (32) 11 128 (23)	11 (0.07) 25 (0.22)	4523 (42) 2836 (26)	2 (0.04) 2 (0.07)	5181 (33) 3377 (22)	3 (0.06) 13 (0.38)	6097 (27) 4915 (22)	6 (0.10) 10 (0.20)
writte Other race/ ethnicity ^c	3838 (8)	9 (0.23)	602 (6)	0	1122 (7)	2 (0.18)	2114 (9)	7 (0.33)
Gender Male	17 209 (35)	118 (0.69)	3268 (30)	5 (0.15) 2 (0.03)	5398 (35)	47 (0.87)	8543 (38)	66 (0.77) 22 (0.17)
remale Other ^d	31 724 (62) 152 (<1)	42 (U.13) 0	/0/ 7/0/ 0	2 (U.U3) 0	(co) 41101 (15 (1)	18 (U.18) 0	14 198 (62) 37 (<1)	(c1:0) 77 0
First-time tester Total	18015 (37) 49285 (100)	19 (0.11) 160 (0.32)	4211 (39) 10880	3 (0.07) 7 (0.06)	6292 (40) 15 627	5 (0.08) 65 (0.42)	7512 (33) 22 778	11 (0.15) 88 (0.39)
Abbreviation: CAPUS	, Care and Preven	tion in the United States.						

Table 5. Characteristics of patients screened for HIV and number of people with diagnosed HIV infection identified during a medical visit, by year, as part of implementation of routine HIV

^aThe CAPUS Demonstration Project was a 4-year (2012-2016) cross-agency demonstration project led by the Centers for Disease Control and Prevention to reduce HIV/AIDS-related morbidity and mortality among racial/ethnic minority groups in the United States.⁶ ^bFor 2013 and 2014, testing activities were conducted from January through December. For 2015, testing activities were conducted from January through September.⁶ ^cIncludes American Indian/Alaska Native, Asian, Pacific Islander, and people with other or unknown race/ethnicity.⁶

lessons are consistent with factors that contributed to sustainability and scalability of routine screening programs in other studies that were conducted during a similar time period as this project.⁸⁻¹¹

Develop a Culture That Supports HIV Screening

The integration of routine HIV screening as a standard of care requires a culture shift to adopt several system-wide modifications, including the adoption of policy and procedural changes that align with CDC recommendations for routine HIV screening in health care settings.¹⁰ All members of the health care team share the responsibility. At the executive level, establishing institutional policy and procedural changes is important because it reflects an organization-wide commitment to routine HIV testing and diagnosis.⁸ It is also essential to include members from all levels of the clinic in the transition process to address perceived barriers and create buyin before full implementation.^{8,10,11} Systems in which executive, health care, and administrative staff members fully supported and encouraged testing had fewer barriers to implementation and higher rates of acceptance from patients than did systems without support from all staff members.

Integrate Champions Into the Clinic

Champions were an integral part of integrating routine screening in the CAPUS testing program as well as other HIV testing programs.^{5,9} A champion's ability to build rapport with other members of the health care team was essential for obtaining buy-in from staff members. When champions were viewed as peers rather than outsiders, members of the health care team were more receptive to implementing changes because they felt that the champions understood their needs and priorities. Through the implementation process, PHIMC recognized the need for systems to identify champions with strong leadership skills and subsequently developed tools to recruit people who were effective motivators, problem solvers, decision makers, communicators, organizers, and resource seekers.

Integrate HIV Screening Services Into Clinic Flow and EHRs for Sustainability

Integrating HIV screening into the established clinic flow was an important component of routinizing and sustaining the testing process.^{8,11} This integration ensured that HIV screening fit into the health care team's workflow and was not an added component. Clinic flow integration also allowed screening to be scalable throughout the system during the program and beyond grant funding. Although not all health systems were able to integrate HIV testing services into their EHR systems, this modification also proved to be critical to the success of the systems that did. Collecting testing data in stand-alone testing logs was effective in collating information but created reporting challenges and separated testing from other core services. Modifying the system's EHR to include routine HIV screening helped to streamline the testing process by prompting staff members to test through pop-up EHR reminders, automating test orders in the system to eliminate additional steps, and documenting HIV results in each patient's medical records.^{8,11} Integrating HIV testing into the EHR also allowed health systems to track and measure their performance to guide continuous quality improvement.

Train Clinic Staff Members on HIV Messaging

Throughout implementation of routine HIV screening, PHIMC noted that health care team members were resistant to adopting this new service because of a lack of knowledge about HIV, unfamiliarity with linkage-to-care protocols, and discomfort discussing patient sexual history. Clinics also reported that staff members with the most resistance to testing also had the highest rates of refusal from patients. Patients perceived a staff member's discomfort, lack of understanding, or biases through the staff member's words, tone of voice, or body language. To address this issue, PHIMC focused trainings on opt-out testing language that reinforced the routine nature of HIV screening and provided scripts for staff members to use. Health care team members also received training on the changing demographic characteristics of patients with diagnosed HIV infection and the importance of HIV testing to support early identification and prevention to give them more confidence in talking to patients and answering questions about HIV. Training staff members on HIV messaging, providing role-playing scenarios, and offering standardized scripts equipped staff members with the tools needed to offer and promote services and eased discomfort as staff members became more familiar with providing HIV screening.8,10,11

Address Stigmas That Affect HIV Care

Because of a lack of knowledge about HIV, misconceptions about risk, and discomfort addressing sexual health, some health care providers had difficulty adopting routine HIV screening. Their levels of HIV stigma affected whether or not they offered an HIV test. Throughout CAPUS, PHIMC provided ad hoc trainings to address issues related to stigma as they were reported; however, the need for more strategic training became clear as these issues continued to arise. In response to these issues, PHIMC and IDPH collaborated to develop the Protecting Our Patients campaign, which addresses stigmas that affect patient experiences and health outcomes. The Protecting Our Patients campaign combines storytelling, training, peer support, visual art, and communication strategies to mobilize health care teams to implement routine HIV screening and provide affirming health care for all.

Limitations

This project had several limitations. First, the project was not designed as a research study to test a specific model for integrating routine HIV screening into general medical settings, and it did not include a formal evaluation. As such, we could not make comparisons across sites or test for significance. Second, limitations in the data prevented the collection of baseline HIV testing data; as such, we were unable to show causal changes. Third, incomplete records, lack of standardized data collection and reporting across systems, and inconsistency in data reporting related to targeted versus routine HIV testing data limited our ability to determine absolute increases in HIV screening within each health system. Although not all systems were able to fully adopt the desired systems-level changes (eg, integration of HIV testing into EHR systems or implementing billing and reimbursement strategies), all systems used system-wide strategies that furthered the new integrated testing approach.

Conclusions

The adoption of routine HIV screening as a standard of care in areas with high HIV/AIDS prevalence and large populations of African American and Hispanic/Latino people can play an important role in increasing the number of people who are aware of their HIV infection. Using these strategies, the project was able to integrate HIV screening, identify people with diagnosed HIV infection, and successfully link people to HIV care who otherwise might not have received care. The practices identified through this project can help other clinical settings better serve racial/ethnic minority populations and build capacity to make routine HIV screening a standard of care.

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Declaration of Conflicting Interests

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References

- Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep.* 2006;55(RR14):1-17.
- Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2010-2015. *HIV Surveill Suppl Rep.* 2018;23(1):1-77. http://www.cdc.gov/hiv/ library/reports/hiv-surveillance.html. Accessed October 3, 2018.
- Centers for Disease Control and Prevention. CDC fact sheet: today's HIV/AIDS epidemic. 2016. https://www.cdc.gov/ nchhstp/newsroom/docs/factsheets/todaysepidemic-508.pdf. Accessed September 19, 2018.
- Bassett IV, Walensky RP. Integrating HIV screening into routine health care in resource-limited settings. *Clin Infect Dis*. 2010;50(suppl 3):S77-S84.
- Criniti SM, Aaron E, Hilley A, Wolf S. Integration of routine rapid HIV screening in an urban family planning clinic. *J Midwifery Womens Health*. 2011;56(4):395-399.
- Centers for Disease Control and Prevention. The Care and Prevention in the United States (CAPUS) Demonstration Project. 2016. http://www.cdc.gov/hiv/research/demonstration/ capus/index.html. Accessed September 19, 2018.
- National Association of Community Health Centers. A model to integrate routine HIV screening services in federally qualified health centers. 2009. https://aidsetc.org/resource/integrat ing-hiv-screening-routine-primary-care-health-center-model. Accessed September 25, 2017.
- Lin X, Dietz PM, Rodriguez V, et al. Routine HIV screening in two healthcare settings—New York City and New Orleans, 2011-2013. *MMWR Morb Mortal Wkly Rep.* 2014;63(25): 537-541.
- Harmon JL, Collins-Ogle M, Bartlett JA, Thompson J, Barroso J. Integrating routine HIV screening into a primary care setting in rural North Carolina. *J Assoc Nurses AIDS Care*. 2014;25(1): 70-82.
- Buzi RS, Madanay FL, Smith PB. Integrating routine HIV testing into family planning clinics that treat adolescents and young adults. *Public Health Rep.* 2016;131(suppl 1):130-138.
- Rodriguez V, Lester D, Connelly-Flores A, Barsanti FA, Hernandez P. Integrating routine HIV screening in the New York City community health center collaborative. *Public Health Rep.* 2016;131(suppl 1):11-20.