
Evaluating the implementation of an HIV Workforce Training Program in Philadelphia

**3rd National Ending the HIV Epidemic
Partnerships for Research Meeting**

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Disclosures

- No conflicts of interest to disclose

Ethics Approvals

- This study was approved by the City of Philadelphia Institutional Review Board (2021-46) and was determined exempt from review by the University of Pennsylvania Institutional Review Board (843912)

Background

- Scaling up access to comprehensive, culturally competent, and supportive HIV prevention services is critical to reducing the local HIV burden among sexual and gender minority communities.
- Data from previous evaluation conducted in collaboration with the Philadelphia Department of Public Health (PDPH)
 - Revealed gaps in HIV workforce knowledge about testing and PrEP
 - Identified cultural competency training for counseling sexual and gender minority young adults on HIV/STI prevention, substance use, and mental health as a high priorities
- There are limited evidence-based and empirically tested systems level interventions that respond to the gaps and challenges of serving diverse clients as part of HIV prevention service delivery.
- Goals:
 - Implement and evaluate a Healthforce Capacity Building Program across 10 PDPH supported agencies to assess changes in service quality (e.g., staff knowledge, attitudes and practices) when serving sexual and gender minority clients.
 - Explore participants' endorsements and recommendations of the program for scale across EHE jurisdictions.

The Original Plan

- Develop and implement a workforce training curriculum for staff and leaders at PDPH-supported agencies across the city.
- Agencies were to be randomized into two stepped-wedge clusters to determine when they would receive the intervention.
- Intervention would include
 - Site assessment
 - Webinars
 - In-person training
 - 3 months of technical assistance
- Evaluate both effectiveness outcomes (HIV testing of SGM young adults, PrEP prescriptions) and implementation outcomes (staff knowledge, attitudes and practices regarding testing and PrEP; cultural competency and self-efficacy working with SGM young adults)

Changes from original plan

- COVID Alteration:
 - PDPH created a semester long set of webinars based on their Community Plan to End the HIV Epidemic.
 - This was a modification from the original plan where on-site trainings would be offered, followed by topic-related technical assistance.
 - Webinars were modular and assigned based on agency and role
 - Implementation of Community Plan to End the HIV Epidemic
 - New focus for agencies
 - Low barrier sexual health services: 4 sites
 - Community mobilization: 2 sites
 - Status-neutral testing: 4 sites
 - Delayed launch of training curriculum
 - Change in strategy for training
 - Rather than assessment -> training -> technical assistance, now the health equity and cultural humility content was framed as basic level training, all sites required to meet these standards
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Training Curriculum

Webinar #1: Fundamentals of HIV

Webinar #2: Why HIV Testing

Webinar #3: HIV Testing and Linkage to Care

Webinar #4: COVID-19 and Testing Guidance

Webinar #5: HIV Testing and Other Forms

Webinar #6: PrEP and PEP

Webinar #7: Undetectable = Untransmittable (U=U)

Webinar #8: Introduction to Partner Services

Webinar #9: Talking about Sexual Wellness in the Age of PrEP and U=U

Webinar #10: Philadelphia's EHE Plan and Efforts

Webinar #11: HCV Nonclinical

Webinar #12: Harm Reduction

Webinar #13: Health Equity & HIV

Webinar #14: Cultural Humility for HIV Service Delivery

Webinar #15: LGBTQ+ Competence for HIV Service Delivery

Webinar #16: PrEP and PEP for Specific Priority Populations

Webinar #17: Overview of STIs (Non-Clinical) as They Relate to HIV

Webinar #18: African American and Latinx MSM and Sexual Wellness

Webinar #19: African American and Latinx Gender Diverse Communities and Sexual Wellness

Webinar #20: Medicaid, Commercial Insurance, Patient Access Programs and Enrollment

Webinar #21: Radical Customer Service

Webinar #22: HIV Stigma and Discrimination

Webinar #23: Naloxone/Narcan Training

Webinar #24: HIV Navigation Services

Staff Descriptive Statistics (n=72)

Role, self-report, W1 (when missing, uses FW) (%)

Agency Leadership	19 (26.4)
Frontlines: HIV Testing and PrEP/PEP Navigation	30 (41.7)
Frontlines: Non-HIV Testers and Administrative Staff	19 (26.4)

Program (%)

Community Mobilization	13 (18.1)
Low Threshold Sexual Health Services	25 (34.7)
Status Neutral Testing Services	34 (47.2)

Time working (%)

Less than 1 year	12 (16.7)
1-4 years	14 (19.4)
5-7 years	19 (26.4)
8-15 years	13 (18.0)
15+ years	14 (19.4)

Gender Identity (%)

Cis-man	21 (29.2)
Cis-woman	38 (52.8)
Gender Minority	13 (18.1)

Sexual Orientation (%)

Heterosexual	35 (48.6)
Bisexual/Pansexual/Queer/Other	22 (30.6)
Gay/Lesbian/Same gender loving	15 (20.8)

Race/Ethnicity (%)

Hispanic/Latinx	21 (29.2)
NH-Black or African American	41 (56.9)
NH-White/Multiracial/Other	10 (13.9)

Age (median [IQR]) 36.00 [28.00, 45.50]

Webinar Completion and Satisfaction

- Assigned Trainings Completed (median [IQR]): 50% [16.67%, 67.31%]
 - No differences in completion rate observed by role, program, race/ethnicity, gender identity or sexual orientation
 - No association between completion rate and age or time working in HIV
- Quality of Trainings
 - Fair 8 (11.1)
 - Good or Excellent 45 (62.5)
 - NA 19 (26.4)
- Satisfaction with Trainings
 - Disagree: 4 (5.6)
 - Agree or Strongly Agree: 49 (68.1)
 - NA: 19 (26.4)
- How would you rate the overall quality of the HIV Prevention training program?
 - Poor (n=1; 1%)
 - Fair (n=9; 13%)
 - Good (n=40; 57%)
 - Excellent (n=20; 29%)

Post-training Acceptability by Position

Measured using the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM). Scores can range from 0 to 16.

	Range	Acceptability (alpha=.86) n = 68		Appropriateness (alpha=.95) n = 67		Feasibility (alpha=.93) n = 65	
		m (sd)	p	m (sd)	p	m (sd)	p
Position			.024*		.012**		.109
Frontlines: HIV Testing and PrEP/PEP Navigation (n = 27)	0 – 16	11.67 (1.69)		12.81 (1.77)		12.88 (2.01)	
Frontlines: Non-HIV Testers and Admin Staff (n = 25)	0 – 16	12.20 (1.61)		12.50 (1.79)		11.19 (3.64)	
Agency Leadership (n = 16)	0 – 16	10.25 (3.42)		10.69 (3.44)		12.29 (1.90)	
Agency			.175		.052		.135
Agency 1	9 – 16	13.67 (4.04)		14.67 (2.31)		14.67 (2.31)	
Agency 2	10 – 16	11.80 (1.48)		14.40 (2.19)		14.00 (2.35)	
Agency 3	8 – 16	11.20 (1.79)		10.80 (1.79)		11.20 (3.35)	
Agency 4	11 – 12	12.00 (0.00)		12.00 (0.00)		11.75 (0.50)	
Agency 5	10 – 12	11.75 (0.50)		11.50 (1.00)		12.00 (0.00)	
Agency 6	7 – 16	10.83 (3.06)		13.00 (2.45)		13.00 (2.00)	
Agency 7	0 – 16	8.50 (6.56)		9.25 (6.80)		9.50 (6.81)	
Agency 8	9 – 16	11.54 (1.20)		12.50 (1.17)		11.67 (1.87)	
Agency 9	11 – 16	12.40 (0.91)		12.27 (1.71)		13.14 (1.66)	
Agency 10	8 – 12	11.20 (1.79)		12.00 (0.00)		11.60 (0.89)	
Agency 11	0 – 16	10.50 (1.29)		11.00 (2.00)		11.50 (1.00)	
Full Sample	0 – 16	11.53 (2.28)		12.19 (2.41)		12.25 (2.52)	

Note: *Statistically significant mean differences in **Acceptability** between Agency Leadership and Frontlines Non-Testers (p = .019); ** Statistically significant mean differences in **Appropriateness** between Agency Leadership and Frontlines HIV Testers (p = .012) and between Agency Leadership and Frontlines Non-Testers (p = .043).

3-mo Follow-up Acceptability by Position

Measured using the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM). Scores can range from 0 to 16.

	Range	Acceptability (alpha=.86) n = 68		Appropriateness (alpha=.95) n = 67		Feasibility (alpha=.93) n = 65	
		m (sd)	p	m (sd)	p	m (sd)	p
Position			.802		.037*		.679
Frontlines: HIV Testing and PrEP/PEP Navigation (n = 21)	0 – 16	11.57 (2.96)		12.52 (2.29)		12.29 (2.01)	
Frontlines: Non-HIV Testers and Administrative Staff (n = 30)	0 – 16	11.43 (1.85)		12.37 (1.25)		12.40 (3.64)	
Agency Leadership (n = 18)	0 – 16	11.06 (2.82)		10.78 (3.42)		11.78 (1.90)	
Agency			.338		.395		.641
Agency 1	0 – 16	10.43 (4.04)		10.14 (5.18)		11.29 (4.89)	
Agency 2	10 – 12	11.71 (0.76)		12.00 (0.00)		12.43 (1.62)	
Agency 3	7 – 16	12.00 (2.53)		11.50 (2.95)		14.00 (2.19)	
Agency 4	7 – 12	10.80 (2.17)		12.00 (0.00)		11.80 (0.45)	
Agency 5	11 – 12	12.00 (0.00)		12.00 (0.00)		11.50 (0.71)	
Agency 6	6 – 16	10.60 (2.79)		13.20 (2.17)		12.20 (2.17)	
Agency 7	9 – 13	10.67 (1.53)		11.33 (1.15)		11.67 (1.53)	
Agency 8	4 – 16	10.50 (2.59)		12.43 (1.95)		11.93 (2.62)	
Agency 9	11 – 16	13.08 (1.93)		12.92 (1.75)		12.92 (1.61)	
Agency 10	8 – 15	11.75 (2.50)		10.25 (2.06)		12.00 (0.00)	
Agency 11	7 – 13	10.33 (1.53)		12.33 (0.58)		10.33 (2.87)	
Full Sample	0 – 16	11.38 (2.46)		12.00 (2.38)		12.20 (2.40)	

Note: *Statistically significant mean differences in Appropriateness between Agency Leadership and Frontlines HIV Testers (p = .05); Approaching statistical significance between Agency Leadership and Frontlines Non-Testers (p = 0.06). A small correlation was noted between completion rate and appropriateness (r=.28; p<.05).

Differences in outcome scores (Wilcoxon Sign-Rank test)

	Baseline median [IQR], n=66	3-mo Follow-up median [IQR], n=66	p
Comfort with Duties (range 1-4; alpha = .96)	3.75 [3.45, 3.92]	3.77 [3.15, 4.00]	0.35
Comfort Providing PrEP Navigation (range 1-5; alpha = .95)	4.71 [4.00, 5.00]	4.86 [4.00, 5.00]	0.43
PrEP Beliefs (range 1-5; alpha = .83)	4.67 [4.08, 5.00]	4.50 [4.00, 5.00]	0.59
PrEP Attitude (range 1-5)	5.00 [4.50, 5.00]	5.00 [5.00, 5.00]	0.61
Sexual Health Discussion Barriers (range 0-12)	1.00 [1.00, 2.75]	2.00 [1.00, 3.00]	0.08

Differences in scores from baseline to 3-mo follow-up, grouped by engagement level (Kruskal Wallis test)

	Comfort with Duties, n=48		Comfort Providing PrEP Navigation, n=48		PrEP Beliefs, n=48		PrEP Attitude, n=48		Sexual Health Discussion Barriers, n=48	
	Median Difference [IQR]	p	Median Difference [IQR]	p	Median Difference [IQR]	p	Median Difference [IQR]	p	Median Difference [IQR]	p
Engagement Level	-	0.92	-	0.97	-	0.22	-	0.43		0.69
Low engagement (n=14)	0.00 [-0.15, 0.08]		0.00 [-0.29, 0.43]		0.17 [0.00, 0.50]		0.00 [0.00, 0.00]		-0.50 [-1.00, 0.00]	
Medium engagement (n= 17)	0.00 [-0.09, 0.27]		0.00 [-0.14, 0.00]		-0.08 [-0.42, 0.00]		0.00 [0.00, 0.00]		-1.00 [-2.00, 1.00]	
High engagement (n= 17)	0.00 [-0.08, 0.15]		0.00 [-0.18, 0.00]		0.00 [-0.21, 0.33]		0.00 [0.00, 0.00]		0.00 [-1.00, 1.00]	

Discussion

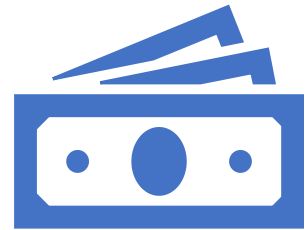
- Next Steps from PDPH
 - Trainings continue to be available and used
 - Education unit was reduced in size, leading to outsourcing of training facilitation to Health Federation
 - Challenges
 - Mandating attendance and getting staff buy-in
 - Some staff felt content was duplicative or redundant with previous trainings
 - Ceiling effects – little room for improvement on key outcomes
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Lessons Learned

- Adaptive education and trainings are needed
 - Low attendance may be due to staff selectively attending trainings they perceive as most relevant
- Trainings should be tailored to the specific audience
 - Consider the context: harm reduction, LGBTQ, trans community, etc.
- Trainings should be tailored to the experience level of the audience
 - Seasoned workforce members may find basic trainings redundant
 - Consider other topics like burnout for experienced staff
 - Leadership needs something different, based on results

Lessons Learned (cont.)

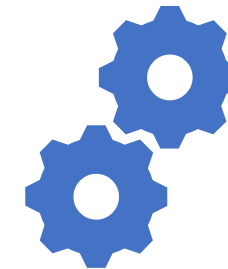


Costs of tailoring and adaptation can be high



Promising strategies:

Interchangeable modules that can be combined to create bespoke curricula



Balancing standardization with customization

Modular approach allows core content with audience-specific components

Thank you!
Questions?