Facilitators and barriers to implementation of low barrier care in HIV care systems in the southern United States

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Abstract

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With antiretroviral therapy effective in both treating and preventing HIV infection, ending the HIV epidemic in the US is now possible. However, navigating the organization of the majority of HIV care in the US is often impossible for populations living unhoused and experiencing untreated severe mental health and/or substance use conditions, contributing to their poor care engagement and viral suppression. One effective intervention for this population is utilization of low barrier care (LBC), or incentivized, walk-in HIV care with wrap-around services and few rules or administrative requirements for services. Yet while public health entities have a rare opportunity through new federal resources to adopt and implement LBC in their jurisdictions, few have chosen to do, including none in the southern US where HIV incidence and poor viral suppression are pronounced. To explore perceptions of LBC as an intervention and potential

facilitators and barriers to its implementation in the southern US we used the Consolidated Framework for Implementation Research to guide a team-based, framework-guided rapid qualitative analysis of data from 25 focus groups and 2 key informant interviews with members of 5 southern HIV care systems. Participants overwhelmingly agreed that LBC would address the needs of a large proportion of persons virally unsuppressed and at risk for transmitting HIV in their jurisdictions. By starting small and building upon existing infrastructure they believed it would be possible to implement LBC, but lack of funding, clinical capacity, HIV-related stigma and policies restricting eligibility for services and use of incentives could inhibit successful implementation.

Introduction

With the advent of antiretroviral therapy (ART), people diagnosed with HIV are able to live almost normal lifespans and achieve a level of viral suppression that prevents transmission of the virus to others.[1,2] When taken as pre-exposure prophylaxis (PrEP), ART can also prevent HIV infection among persons exposed to the virus.[3] If a critical mass of persons at risk for or living with HIV take ART, the opportunity now exists to effectively end the HIV epidemic in the US.[4,5]

As a result, federal, state, and local public health entities have increasingly concentrated resources around strategies to increase utilization of PrEP and ART in their jurisdictions.[5] However, while effective in reducing new HIV infections among large proportions of the US population, these strategies have been less so for a small but significant proportion of persons at risk for or living with HIV who are living unhoused and experiencing untreated mental health and/or substance use disorders.[4,6-9] For these individuals, survival and meeting basic needs often override their ability to keep appointments, fill prescriptions, and consistently take ART.[7]

One evidence-based intervention for this subgroup is creating differentiated systems of care in a jurisdiction, or more specifically, incorporating options for walk in access to HIV prevention and care services with minimal prerequisites for receiving ART, also known as "low barrier care" (LBC).[10-12] Used effectively in many parts of the world,[13] few public health entities in the US have invested EHE funding in models of differentiated care in their jurisdictions, especially in states in the southern US where HIV incidence is higher, rates of viral suppression are lower, and racial and ethnic disparities in clinical outcomes are most pronounced.[14-16]

With the significant infusion of funding through federal Ending the HIV Epidemic (EHE) Initiative, public health entities have a rare opportunity to implement new HIV prevention and care services in their jurisdictions.[5] Yet few EHE jurisdictions to date have elected to adopt

LBC.[17] Thus, the purpose of this study is to engage in formative work to better understand the perspectives of members of southern EHE jurisdictions around LBC as an intervention and to identify organizational and system-level factors that might facilitate or create barriers to its success in their HIV care systems.

The results of this study will help public health entities evaluate the viability of implementing LBC in their jurisdictions and provide government entities with an awareness of barriers and facilitators they can address through policy and funding mechanisms in order to increase the availability and utilization of one of the few strategies currently successful in supporting adherence to ART among populations most often acquiring and transmitting HIV at this point in the epidemic.[10,11]

Methods

Study design

In early 2020 we conducted a rapid qualitative study using multiple jurisdictional situational analyses (case studies) to explore perceptions of LBC as an intervention and factors that may facilitate or create barriers to its implementation in southern US settings. We selected a qualitative approach because we were interested in gaining a holistic understanding of the perspectives of the participants and a rapid qualitative approach in order to be able to quickly provide results to participants as they decided how to use new federal EHE initiative funding.[18-20] Prior studies found that rapid qualitative analyses produce results consistent with traditional methods in significantly less time, supporting the use of qualitative data in actively shaping health services implementation.[20,21] To guide the data collection and analysis we used the Consolidated Framework for Implementation Research (CFIR), a comprehensive framework

used in prior health services research studies to identify factors that affect program adoption and implementation.[22,23] We focused on an organizational unit of analysis for this study and analyzed data differently for organizations that were government/public health entities ("PH") and organizations that delivered services (health care organizations (HCOs) and community-based organizations (CBO)). Words were the data type used for this analysis.

Population and Recruitment

Data for this analysis came from a purposive sample of five federally funded HIV care systems, including two in Louisiana (Baton Rouge and New Orleans) and one each in Texas (Houston) and Mississippi (Jackson). These jurisdictions were selected due to their location in the southern US, inclusion as priority jurisdictions for EHE, varied perspectives from serving populations in Medicaid vs non-Medicaid expansion states, and varied infrastructures due to different levels of political and financial support for public health. We worked with health department leadership in each jurisdiction to identify and invite participants for the focus groups with the goal of identifying a diverse set of key stakeholders in their public health and HIV care systems that could reflect upon both organizational and system level factors that could influence the decision to adopt and/or implement a LBC intervention. Ultimately the focus groups in each jurisdiction included representation from health department leadership, epidemiologists, and staff engaged in disease investigation, partner services, and linkage/re-linkage to care activities; state and local Ryan White program staff and representatives from Ryan White funded organizations; administrators, clinicians, nurses, social workers, and information technology staff from health healthcare organizations; and community representatives.

Data collection

Through twenty-five focus groups and two key informant interviews we elicited perspectives from 144 leaders and staff members comprising the public health and HIV care delivery systems for low income populations in these five jurisdictions. Each question in the semi-structured interview guide was aligned with a CFIR domain and construct. We started by eliciting participants' perspectives of LBC as an intervention, including their overall beliefs about LBC and what components they felt they would need to adapt for it to be successful in their settings. To explore external (CFIR "outer setting") factors we asked about participants' perceptions of the needs of persons living with HIV who were currently out of care, what resources existed and did not exist in their current HIV care system or organization to meet those needs, and what policies might facilitate or create barriers to implementing a low barrier care intervention in their setting. To explore internal (CFIR "inner setting") factors we asked about how well LBC fit within their organization's culture and mission, what resources they would need versus what they already had to implement LBC, and other CFIR constructs relevant to the organization itself. Finally, we asked questions about what they felt they would need in order to implement low barrier care and their perceptions of the most important next steps if their jurisdiction or organization were to choose to do so.

To collect these data, the two study investigators alternated between facilitating the focus groups/interviews while taking notes and solely taking notes. The interview started with an overview to LBC as an intervention and each focus group and interview took approximately one hour. After each focus group/interview, each investigator independently compiled and summarized the responses to each question as captured in their notes. The investigators then combined their summaries into a draft jurisdictional report using a template aligned with CFIR

domains, and in the process clarified and refined summative points as needed until the interviewers reached agreement about each.

To assure the summary reports captured all participants' perspectives, after obtaining verbal consent the investigators recorded each focus group and interview. The study coordinator later listened to the recordings and reviewed the transcriptions of each interview/focus group to assure all perspectives were captured and described accurately in the jurisdictional report and to identify illustrative quotes for each theme. A final draft of each jurisdictional report was sent to the primary contact in each jurisdiction to review with their local partners. The interviewers then communicated with each site to discuss the summaries, identify and make any revisions or clarifications to the report content, and to discuss implications for their jurisdictions. The jurisdictional reports served as templated summaries and the source of data for this analysis.

Data analysis

Data were analyzed using a team-based, framework-guided rapid qualitative analysis - an approach more efficient than traditional qualitative methods and increasingly utilized for studies designed to inform implementation of services.[18,19] For this analysis the summaries of participant perspectives included in each jurisdictional report were first transferred to a MS Excel CFIR construct by summary theme matrix. Two study staff then independently engaged in deductive coding of the summary themes in the matrix using constructs specific to CFIR intervention characteristics, inner setting, and outer setting domains, meeting regularly to compare and refine their applications of constructs. The CFIR constructs most often noted in participants' responses are described below along with illustrative quotes.

Results

Need for LBC

Healthcare Organization (HCO), Public Health (PH), and Community-Based Organization (CBO) participants agreed that there is a subgroup of people with HIV in their jurisdiction who need a different model of HIV care in order to engage in HIV care to the point of sustained viral suppression.

> There is a subset of patients that are not engaged in care. They are actively participating in risky behaviors... they're sharing needles and doing IV drugs, having sex. They're not on meds. They are one piece that's fueling the epidemic... I think there needs to be a solution for them. (HCO)

> Their priorities are not coming to the clinic and they're kind of in and out. That group is going to need something different. (HCO)

> Of new cases (identified in the emergency department), 90% were getting to a treatment prescriber within 30 days. For those that had fallen out of care, we were somewhere between 50% and 60%. So, the same system - and the same health problems or comorbidities they had that kept them out of care the first time were still keeping them out. (HCO)

> I think that you can argue that unless we take different approaches to what we have been doing for the past 20, 30 years we may have very little impact in improving retention and suppression in the remainder of population. (PH)

> All things equal, this population is not achieving health outcomes like everyone else. That screams to me, and should scream to you... that they need something different. (PH)

Fairness was the primary concern among the small number of participants that were hesitant about the idea of adopting LBC in their jurisdiction.

> I'm thinking of equity... how is it fair for one person to get that sort of easy access and everybody else still has to wait way too long for whatever their pressing needs are? (PH/Planning Council)

Intervention Characteristics

Participants' reflections about LBC as an intervention reflected the CFIR constructs of relative advantage, cost and adaptability of the intervention.

Relative Advantage

"Relative advantage" reflects participants' perceptions of the benefits of the intervention over existing or alternate interventions.[22] Participants described LBC as a better approach to providing HIV care to people living houseless and struggling with untreated behavioral health needs than traditional, appointment-based HIV care delivery models.

> It's not giving up hope on them, it's just being realistic that this is, right now, where they're at... and if this literally is where someone stays for the rest of their lives, we need to be trying to

meet them for the rest of their lives with this particular approach. And not expect them to eventually get to the point of using the same care system that everyone else is able to use. (PH/Planning Council)

Cost

"Cost" captures participants' perceptions of the financial and non-financial costs of implementing an intervention.[22] The majority of participants voiced concerns about costs. Members of health care organizations were primarily concerned with operational costs, especially related to paying for non-billable time, such as during lulls between walk-in patients, and the costs due to the time involved in serving high acuity patients that are not fully covered by Medicaid reimbursement rates.

Because you never know if people will show up... and the needs of those patients are such that it would take such a significant amount of your time that you won't be able to see more people. (HCO)

Some participants reflected on the difficulty in serving patients who need walk-in access to care and were concerned that there could be non-financial costs related to staff burnout.

When the relationship is so critical... we have significant burnout. That's a barrier for us... We link our staff to social workers, to EAP (employee assistance programs). We have sessions on self-care. We encourage all those things... But it's still having an impact. Then you have turn over and now we're starting over again and that doesn't help patients. (HCO)

Others were concerned that LBC itself would exacerbate unwanted behaviors among patients.

> I think, too, maybe a loss of discipline among the patients - that they know they got an appointment at a time that is inconvenient for them. They can just show up anytime they want to be seen. (HCO)

Some HIV planning council members feared that people who don't need LBC might use it and as a result deplete the resources they have available for serving their most vulnerable populations.

> This was supposed to be to benefit the hardest to serve. But we had people who went to their case managers and said, "I want my year." And these were people who may or may not have needed the help. The money was exhausted within a month's time, and we had many people who came after that who needed the assistance. Who really needed the assistance. (PH/PC)

Adaptability

"Adaptability" of an intervention refers to if and how the intervention can be adapted for local needs.[22] Prior research has identified three core, or unmodifiable, components to evidence-based low barrier HIV care: walk in appointments (no appointment needed), use of incentives, and consistent staff with whom patients develop trust.[10-12] While all participants agreed with the importance of walk-in access to HIV care and trustworthy, consistent staff, opinions varied regarding the importance of incentives.

Proponents of the use of incentives felt they would be useful if not critical to the success of a low barrier care intervention in their jurisdiction.

> I think for that population, I think that's the only way that you're really going to get people to come in to care. Otherwise, they just have other issues and priorities. (HCO)

> I think an incentive might be the most important. And Snacks. The relationship only goes so far sometimes. (HCO)

> The incentives, that's the only way you can grab a person. If you give them something to look forward to. If you give them like a little gift or whatever. (PH/PC)

> We know incentives work... you could definitely bring our numbers up as it related to being in care if we had a system in place that would allow incentives. (CBO)

> We have (incentives), which has been extremely successful. I mean, I cannot stress enough how both our data and qualitative experience, it's been very, very beneficial for patients. (HCO)

> Well, that's has always been controversial, giving people incentives. But we find that when you put incentives in poor people's hands, and particularly black poor people, it takes on a whole new meaning. (PH)

I think some of our biggest problems are related to stigma, substance use, mental illness - and I don't know that incentives can overcome all of that, but I think they could help. Definitely. (HCO)

Others felt incentives would be important but policy-related barriers would prevent their use.

That, as far as I know, is a nonstarter in our system. We couldn't get approval from compliance... they've been advised that this is a kickback, a Stark Law violation, and they can't do it. (PH)

I know the state has all kinds of rules about providing financial things to individuals because it's a state entity paying a person." (HCO)

I think funders did not want to pay the activation fee. There was some stipulations where funds... government funds could not be used on the activation fee." (HCO)

Among those opposed to the use of incentives, some felt that it would be seen by key stakeholders (especially HIV planning councils) as inequitable.

Instituting that type of incentive for (just) one particular population we have... has gotten significant pushback from our planning council. That would probably be one of our biggest barriers. (PH)

Others worried that managing incentives available only to some patients would be difficult.

> if we tried to build this, where you got some patients coming in and getting extra special treatment and others getting routine treatment who might want that special treatment but don't qualify. I could see that being a real big challenge to manage. (HCO)

> I think it's going to be critical... to carefully delineate who's eligible for this and who's not. You can't do that for all the patients. I think it would be important for us to have a specific, a way to, I don't want to say hide this from the general population of patients, but you've got to... Everyone's going to say, well, why not me? I want to get 50 bucks by for having a viral that's suppressed, even though I've had it suppressed for the last five years. I don't know how you'd do that. (HCO)

> We've had a lot of difficulty, especially as we have one shared space. Patients enrolled in this program and then people who are not enrolled sharing the same waiting room and talking about, "Well, how much is on your card? Or why don't I have a card? We've really struggled with that. It's a daily experience that's been difficult. (HCO)

> We give out bus tokens... it's one of the biggest problems in this clinic - is people, homeless people, from all over the city come that don't have HIV (come to) try to get bus tokens. I mean it doesn't take long before people hear that there's something free, so- (HCO)

> If it's available, of course people are going to take advantage of it. You'll have people who don't need it, but will take it. And you have people that need it, that will be ashamed to come and get it. (CBO)

And a few were concerned that incentives might not work.

> I have a little skepticism around incentives only because we have tested so many versions of incentives in our programs in so many different ways, and we never seem to see it major outcome from them. We believe people will respond - to help behavior change by incentivizing it. We've seen data. We've studied it. We know it. In our programs we tried different ways of doing it... and we just haven't seen... no one's rushing the doors, right? Now, granted, we've had some limitations around (using) cash incentives. (HCO)

Finally, a few participants were opposed to using cash incentives due to their philosophical beliefs about them.

> Okay. I'm going to say - I don't do incentives for people to come in and get healthcare. And I don't do incentives because the incentive - we have a good enough relationship to where they understand that their incentive is good health. That's the incentive. It's because the incentive is not only the healthcare, but that we take what you're telling us to heart. We believe what you're saying... The carrot that we dangle for them is that at the end of 60 to 90 days you'll be virally suppressed in respective of where your viral load is today. That's the carrot that we dangle, and we have seen that be successful in 100% of the patients. (CBO/HCO)

Outer Setting

Participants' reflections about factors outside of their organization that might influence the success of LBC reflected the CFIR constructs of patient needs and resources, cosmopolitanism and external policies and incentives.

Patient Needs and Resources

"Patient needs and resources" reflects participants' awareness of the needs of persons who would receive the intervention and the extent to which resources exist to meet those needs.[22] A common concern for participants was whether they had access to information needed to identify persons in need of LBC in their communities in order to serve them.

> I think public health would have to identify patients for us, because of course we don't have access to public health surveillance. We have access to our population data, so there would have to be identification that would come externally - they are going to have the global perspective. We're not going to have that. (HCO)

> When you sell this to somebody, you also need to be able to demonstrate... that there are identified folks who are outside of care who would need that sort of service - and that they're not going to be open three afternoons a week for potentially 20 patients out of care. I think we would need to show and demonstrate that we have ways of getting folks in there. (PH)

Others felt they already had a population in need of LBC.

> My guess is when you sit down with the medical providers, and you say these are the kinds of patients we're looking for, everyone's going to go "Well I know this guy. I haven't seen him for so long." Right? Because all of us have these patients, right, who are going to need it. So, you'll very quickly identify just from your own group, a whole bunch of patients who are exactly like this. So you've probably known and seen sporadically for years, right? (HCO)

Others had the opposite concern that demand would be too high for their existing capacity.

> If you opened up this, you had like a walk-in half (day), I think we would be immediately overwhelmed. The walk-in day would be crushed like a tsunami. (HCO)

> Even if we did have a number of missed visits... it would be a lot of people. (HCO)

In order to reach people in need of LBC, especially given limited transportation in most areas, participants reflected on locations in which large numbers of LBC patients already congregate.

> We'd need to have a site that's on the street, that's staffed for long hours, not limited hours... and I think about where people, their walking patterns, their access patterns, how they get to where they are. (HCO)

The majority of our homeless patients and the very active drug users that we've not been able to get to the clinic are in walking distance... of a low barrier homeless shelter. I don't know, if that's a feasible location for (co-locating services). (HCO)

When what we want to do is, we want offer provision of services within another medical setting so that people walking in the door aren't noticed for going into HIV services... we need to have PrEP and treatment all under one roof in a very accessible, open door policy in a location that's easy to access for people who are on the street. (HCO)

The need for siting services within walking distance of where people already congregate was in large part related to transportation infrastructure.

It needs to be in a location that's easy to get to - it has to be on the bus line. Transportation is a huge issue. (PH)

I think transportation is a big problem even for people who live within the city and may have access to public transportation. (PH)

If they need transportation we have vouchers, but that is a tremendous barrier. We don't have a good bus system and Medicaid transportation is not very reliable. Medicaid has vans where they go out and pick up patients and bring them to appointments. But like if a patient has a nine o'clock appointment, they pick them up at six in the morning and they don't come back and get them til five in the afternoon. Or they don't show up at all. (HCO)

> It just takes a long time... and there isn't bus service in every part of the county. So that's not going to cover 100% of the people - and it does take a really long time. (HCO)

Others noted that many of their patients avoid riding public transit due to stigma.

> Not to mention that among young Black individuals, there's significant stigma about riding the bus. So many of them don't want to. (PH)

Participants also reflected on the types of infrastructure one would need to safely address the needs of a population with significant behavioral health concerns.

> I think our population that's not accessing (care) is mostly more like a crack population. I'm concerned about doing it (LBC) with them with very limited hours within a building that doesn't already have security... To create that whole extended staff would be very difficult. (HCO)

All participants spent time talking about barriers to LBC related to their jurisdiction's existing clinical capacity. Many of these reflections were about limited physician workforce.

> Our biggest problem: physicians. We need physicians in the city. We can't just put a clinic there without a doctor. (PH)

I do think it would be an option if we had physicians. That's the problem. We have no coverage. (PH)

Your number one is provider resources. Number one is provider resources. (PH)

Our constant struggle is that if you can't staff the clinic correctly, if you don't have a doctor... that is to me where all of our grand ideas about how to build a beautiful system fall apart. (PH)

Provider capacity was a particular concern for suburban and rural areas.

We can't recruit providers. Right now we have two providers that have expressed that they'd like to work here more. But they're also committed to other clinics so they can't give us their time. And that's because of the lack of providers all over the system. (HCO)

For us it's hard to hire in the rural regions... I see agencies that hire just literally whoever can be a warm body and it falls apart in six weeks. (PH)

...we have limited healthcare in a lot of areas where we may have patients, and we may (even) have a doc in that area. There may be a family medicine doc, or an internal medicine doc, but the hurdle with them is getting them to even see HIV patients, much less to do it in a more organized fashion like this. (PH)

Some felt that Federally Qualified Health Centers (FQHCs) could be a source of clinical services as they are located in areas where LBC populations reside, but they may need training to become competent in and comfortable with providing HIV care.

> We have a huge FQHC network... They're already sort of primed for this type of work. You have to have same day, next day appointments available... you should be doing behavioral health integration if you're a good FQHC. So that would be where I would start. (PH)

> They would need some support and technical assistance for their medical staff... just because of their limited exposure (to HIV). But I think they would be receptive. (PH)

> It's just that they don't have experience and they're afraid. They're taught all of these negative things... how complicated the drugs are... It's just ignorance of what you do in an HIV clinic nowadays. Well, every time you prescribe antiretrovirals on the computer when you punch in all the medications, a million drug interactions pop up and the primary care doctors that aren't accustomed to treating these patients, they don't know how significant these interactions all are. And so, they just throw their hands up and say, "You know what, I'm just going to send them to the ID clinic. (PH)

> You need training for those that are not infectious disease, the general practitioners, they would need training. (PH)

> Not all cases of HIV are very simple to treat... usually those complex ones are associated with those individuals who do need low-barrier access. (PH)

> We might be able to squeeze them on the schedule of a nurse practitioner or a PA that is just learning HIV treatment, but then the patient would likely be more complex, so then we'd have a mismatch there. I'm concerned about the more complex patient with a less qualified provider. But I suppose if they ran into that, then they could find (an ID physician). (HCO)

Another common concern was whether they could provide address basic needs among a LBC population, especially on a walk-in basis.

> In my mind, how you go about getting people back into care is to provide things that people need outside of medical care. I mean, obviously the medical care is great, but you want to have the resources to be able to provide folks with housing or transportation or employment services or whatever the case might be. (PH/PC)

> Some of them that really want to get back on their feet, they're in crisis mode. They say, "You keep telling me about going to the doctor's appointment, but I'm just trying to survive today." We understand. We cannot overstep some of that stuff because they're screaming to the top of their lungs, "I'm just trying to survive the day." (CBO)

> I've been thinking about it... the person who just now walked through our door, hypothetically speaking, has been out of care for a year, living on the streets for longer than that. They're

> willing to go to an agency today, but they don't necessarily need to see the doctor or the meds, what they need is to see somebody about food, about housing, about having help with their paperwork, with seeing about getting back into their mental health care or adherence to their mental health meds. They have a wide variety of other more important needs to them... (PH/PC)

> The other thing that is very important in particular is the food security issue. People who don't have food don't take medication. They don't take on an empty stomach... we see that all the time - not taking the medication because they haven't had anything to eat. (HCO)

There were particular concerns about being able to provide LBC patients with walk-in access to mental health services.

> For behavioral health, you can't see anybody that day... maybe the intake worker. Then you come back a month later, hoping that whatever crisis you were in... if you come back a month later, and then you can see someone. (PH)

> We have psych, but the psych has appointments. (HCO)

But perhaps the most frequently noted concern related to LBC was the ability to organize services in ways that overcome the impact of HIV-related stigma in the south.

The stigma here is an outrageous barrier... I really just wish there were places people could just walk into, that I can just walk in this door and I'm not just identified (as HIV+) because I walked on such-and-such floor, because I went in there and someone saw me... That's a large reason why people are not in care. (PH)

Don't create something that people could connect with HIV in any way. (HCO)

If we call it the HIV clinic, well, that perpetuates the stigma (PH/PC)

If we have money just for HIV work... then word will get around and it'll be the place that you go for HIV care. (PH)

The stigma associated with being treated in their area is high enough that people would rather just travel. We have patients that fill medicines in other towns because they don't want it to be mailed to their home and they don't want to pick it up nearby. That's a real thing. (PH)

That's when they had really good retention, actually, because there was no stigma, because everyone was in that building. (HCO)

HIV-related stigma also emerged around clinical capacity, especially in non-urban areas.

The state is short on infectious disease physicians, so trying to get the primary physicians to actually treat people that are HIV positive - stigma is an issue. I know everybody gets tired of

saying "stigma." I'm sorry, but stigma is one of the greatest barriers here for those non-infectious disease docs. (PH)

I wish that we could expand Medicaid, and I wish that we would stop trying to create silos for these patients, and really put them the established healthcare systems... Why can't they go there? They should be able to go to any medical doctor... and be seen for chronic disease management, because that's all this is. I think that's the most frustrating part, is that we have to sit and have focus groups and then further create silos or this "They go here, they go here," we're still isolating them, and that's why they don't want to go there. So, we created it, they're going to go when it's fresh and new and no one knows what is happening there, but the minute everybody figures out- what's happening there, they're not going to go there, either. So, why should they not be able to just go to an internal medicine doctor like H.I.V. negative people do? But no, I'm serious. I think that's the answer. It's not that complicated, and for you to say that you've gone to school all this time, but you don't feel comfortable taking care of that patient, I think that's just... You should not be a doctor. (PH)

It's not the fact that they think that they're going to infect them, or anything like that. It's more the fact that they don't want to be known as a physician that cares for persons who are HIV positive. (PH)

They (people with HIV) are unpredictable as far as their actions, some of them, not all. But that makes them weary about providing care in their primary clinic with the rest of the population. Because they don't know how they're going to act in their offices. (PH)

There are subtle signs, this is the south. And this is real. If you make me feel uncomfortable at my first visit, what on earth makes you think I'm coming back? (CBO/HCO)

I don't know if it's just here in the south... I attended a meeting where it was a bunch of leaders in the room. Healthcare executives. The people that we serve were talked about in such a degrading way because- they called them undesirables. Because they don't have medical insurance they were undesirables. So, no wonder we're only at 50 something percent viral suppression, right? If you're speaking of them as undesirables while they're not in the room, what do you think the climate is when they arrive at the facility? This is why it's okay to say, "You missed your appointment, well I'm not going to see you today. You got to come back in a month and a half." If it's not important to you, why should it be important to me? (CBO)

If you have a positive patient that comes in and you treat them like they are the plague, how far in history have we really come? (CBO)

Cosmopolitanism

When reflecting on what would help address clinical capacity issues in their jurisdictions, PH participants' comments reflected the CFIR construct of "cosmopolitanism" - or the extent to which an organization, PH in this case, is networked already with external organizations.[22]

> Because of consolidation of healthcare systems, they've taken on several rural hospitals, and they have some satellite clinics throughout the state, a very good network. Their pediatrics has a pretty big network of satellite locations... some of them are underutilized. (state PH)

> They have so many satellite clinics and they worked with the city (already). Why would they not be maybe interested in adding more satellite clinics? (local PH)

> Spreading out from the (existing) HIV service world is going to be absolutely paramount... not just going back to the HIV service places and insisting that they change their model, which they should... But a broader approach would probably be better... We like to just be in our Ryan White world and just live in it and it's maybe not the best for this. (PH)

External Policy and Incentives

The final set of outer setting themes coalesced around the CFIR construct of "external policy and incentives," or strategies that incentivize or inhibit implementation of an intervention.[22]

Several participants mentioned federal policies that may create barriers to LBC, such as how to capture LBC within existing Ryan White service categories in order to use those funds for LBC.

> We talked about using the emergency financial assistance service category, but I don't think the light was ever turned on for that. And as in every state community, there's obviously a process for what service categories can be used. (PH)

Most participants described potential barriers to LBC related to local or state requirements for establishing eligibility for health coverage in their jurisdictions.

> As long as I've been here, that is the biggest issue. Getting them eligible for services. 60% of our patients don't have any insurance. So all this stuff is critical." (HCO)

> In order for someone to receive Ryan White services, they have to meet eligibility requirements, which requires them to produce a document that someone who is transient, homeless, has substance use issues -that's not a priority. (PH)

> I think structurally, our biggest barrier is that eligibility. Because even if we do presumptive eligibility, you still have to get people in (to establish eligibility). And people who would be in the LBC demographic, I think there'd be even more barriers to them getting that information into the correct hands so they can get on, Ryan White or whatever programs they will qualify for. (HCO)

> Getting people to have the paperwork prepared within that 30 day period is a huge challenge, especially when something like transportation is an issue. They may live further away. They might live out of the city. That's happened before so if you don't have every piece within that time period, you have to come back. (HCO)

When we find someone with HIV we don't want to tell them, "Okay, come back in a couple of weeks while we figure this out. Come back in a couple months while we figure that out." But if it's not important to you, then it's not going to be important to the patient. (CBO)

Even the well-prepared folks aren't able to get through eligibility the first time. (HCO)

It's a process. A long process. (PH)

For many jurisdictions, requirements that individuals to have identification in order to be eligible for health coverage or health services was a prominent challenge.

That's a huge barrier - without official identification, that becomes an issue with that eligibility process. There are work arounds, but they are really big hoops that you got to jump through. (HCO)

The one thing we run into is if you don't have an ID, that's where it just kind of stops. And we even have some roundabout ways we get with the police department, ask them if they've ever been arrested, can you send us a hot team ID or something from the police department so we can at least get a photo ID. (HD)

The greatest challenge that we have to working with anybody is just the ID, is just having identification. There's nothing that we become more frustrated about than the ID. I'm trying to help John Doe get some sort of assistance. I can't help him get housing assistance, I can't even

help him get into a shelter because he doesn't have an ID. You have to truly babysit them. It has become that serious because they need certain things down there at the clinic. If you just show up ... You can't just say, "My name is Bob," and show up. You have to have some ... Some of them have no identification, nothing. We have to tell them, "Okay. What is it?" "You need a birth certificate." We're driving people to go get the birth certificate, go drive somebody to go to the social security office, you need a little bit more information, you need medical records in order to get your social security card. We have to go make the rounds around the city to accomplish this goal for this one person to walk in that clinic. It's not just as sure as walking in a clinic. (CBO)

Here's the thing. If you walk in and you have nothing, the first thing you have to do is to go and get your medical records - because you can't get a social security card (without medical records), and you have to have a social security card to get an ID. And you have to have an ID in order to be able to go to the shelter. You also have to have a TB skin test. The hardest funding to get is medical records funding. We're able to get ID and the social security card is free. We're able to get money for a birth certificate, but we don't have any funding for medical records. (CBO)

Inner Setting

Participants' reflections about factors inside of their organizations that could influence the implementation or success of LBC best reflected the CFIR constructs of "readiness for implementation" (especially "leadership engagement" and "available resources"), "implementation climate" (particularly "compatibility"), and "culture."

Readiness for Implementation - Leadership Engagement

HCO participants felt that public health would need to lead efforts to adopt LBC in their jurisdictions, including fostering partnerships for LBC, facilitating access to funding, and gaining political and organizational support for LBC - all activities consistent with the CFIR construct of readiness for implementation specific to leadership engagement.[22]

> I think just having someone who's really driving this... we're all so overloaded already.... it just needs to happen in an organized fashion with someone taking the lead. And if we had the health department to assist us, I think that's what we're asking for. (HCO)

The idea of public health leading adoption of LBC in a jurisdiction was well received by health department participants as well.

> It (LBC) would fit right in with our initiatives are in reducing the infections. (PH)

Others described how collaboration with Medicaid would be important to the success of LBC.

> The other thing that I think would be integral for this is a relationship with Medicaid for these patients. I mean, the toughest thing, we're so lucky, we're expanding Medicaid, but many of our patients, especially those that are homeless because they don't have a set address are frequently losing their Medicaid. That's something we bring back to the state. I mean, it's something that is

a constant struggle. It would be really nice to have someone, a direct line of communication in the Medicaid office for this population. (HCO)

But most public health participants were concerned about their capacity to take on implementation of LBC.

Our staffing capacity would hinder anything. Right now we are without a STD/HIV director, who would probably head up parts of this, so I think that is a big gap right now. (PH)

Who's organizing this thing? Who's getting all those clinicians in the room? Because people are already doing so many things outside their scope of work... this to me seems like a really big initiative, which it should be, but there would have to be a specialized taskforce or team who's like - this was their jam. (PH)

In addition to leadership by PH, HCO's emphasized that gaining buy-in from their clinic and health system' leadership would be imperative to the successful implementation of LBC.

I think you can make things happen when you have upper leadership saying it's a priority. (HCO)

...it depends on the buy-in from leadership here. I mean, if there was actual buy-in from leadership that this was a model that we would believe in, then I could see (it working). (HCO)

To me it seems like this is what it would take to get to... 90-90-90 - this is what it would take. The thing is, there has to be... top-down motivation and we're in here at the bottom. We're at the bottom, it feels like. (HCO)

The first barrier is that I have to convince the infectious disease director. (HCO)

We've been through some significant organizational changes over the last few years and we have a new health officer who is really embracing change, embracing new ways of doing things, not the same way we've been muddling through to address problems. So, I think that now is an opportunity. (HCO)

Most participants then described approaches they felt would potentially motivate their leadership to support LBC as an intervention, such as developing a "business plan" to make the case that the intervention would benefit the organization.

We'd have to put together a model, study the cost, and then propose that. (HC))

If we can demonstrate (to leadership) that by engaging people in this clinic, we can prevent emergency department basis or hospitalizations, we can prevent HIV transmission, then I think that we can make the case to sustainability. (HCO)

You need a business plan, a business model, and if you're adding new space that takes it to a different level. No-one wants to take up more facilities costs. (HCO)

Others felt appealing to other potential benefits to the health system could help incentivize HCO leadership to support LBC.

> If a new CEO can come into our organization, that's had some real egg on its face lately, and come up with a real community-wide winner that makes national news about ending the HIV epidemic, that's a huge plus for him, if somebody can get to him and sell the idea to him. (HCO)

> It sounds like our new CEO has been all about innovation. And if somebody can find the right person to get his ear, and get on his radar, and get him to appoint a few other people who want to get in good with him to make this work, then we know how to build a committee and build a work plan and all that kind of stuff. But it's going to take the right folks up there around the table to start with. (HCO)

> If we were going to approach them, I would say that the way to have that hook is to not call it walk-in or not call it community medicine, but one, maybe potentially talk about population medicine. But two, is really call it IPE - because the med school, that's their goal. Because of the accreditation is to have interprofessional education opportunities for all of their students. It means that like they need to make sure that all of their med students are being trained or have exposure to things like public health and that the public health people are having exposure to neuroscience or clinical, those sorts of things. Or allied health, etc.... it's their number one accreditation goal. So, it's going to be a big deal for the next four years. (PH)

Readiness for Implementation - Available Resources

All participants described the need for new resources as critical successful implementation of LBC- themes consistent with the CFIR construct of "readiness for implementation" specific to available resources.[22]

Above all, all participants identified the need for new funding as critical to gaining leadership support for implementation in their jurisdictions.

> But does it generate revenue? I mean, if it's not adding positively to the bottom line, I think that's probably where you're going to see ... I mean, while you may get a doctor on board, you still have to convince the CEO, who's looking at the bottom line. (PH)

> I wish it weren't true but I think I just hear a lot about money. Can we get reimbursed for this? How do I bill for this? How do I code for this?... Is the funding mix to make this attractive or to help clinic administrators feel like they could pay the light bill at the end of the day? (PH)

> I don't think you're going to get them to do it unless... they knew that they'd get free rent, or they have a way to pay their rent... it's a big ask for the COO, or the CFO, when they say, "Wait, somebody could be seeing other patients in that space at that time, and maybe we would make more money." (PH)

Whenever we call them or email them and say, "Hey, we want to tell you about a project," we need to start talking money first. (PH)

For a lot of the folks that we talk to, it's going to come down to reimbursement. (PH)

It's going to be all about the coins. To quote our council members and community, "Can it be funded upfront in a way to make it feasible - because if clinics aren't able to cover their costs in terms of insurance billable and personnel, then it's a nonstarter right there. (PH)

Well, definitely they're going to look for us for financial resources, which we don't have an unlimited amount of. (PH)

I've only talked to one clinic about it and they say, "Hey, we'll do it, but we need the money. We need funds to do that. (PH)

Oh, I mean when there's money in it, people start changing their mind. (HCO)

One of the biggest issues is figuring out the payer for the visit as well as the medications. (HCO)

We definitely need more money. Money for staff, money for incentives. Money for programmatic issues we come across. (HCO)

Several HCO's described the need for new resources to support clinician leaders to lead the implementation within their health system setting.

> In my perfect world we would hire a new person for this because with how we have it structured right now, with between 400-to-700 panel for our providers, it would be really tough to think who would move out of that. How would we do that operationally? I think a vision I would have is someone who would be really committed to this model and really believe in this. I could see it. I think actually a lot of providers would be. I mean, I'd be interested in this model. I mean, it's great. (HCO

> We need someone who's actually able to provide both clinical and administrative oversight. An experienced clinician working in HIV, and I say experienced meaning because sometimes there are many good nurses who understand the HIV care continuum and understand HIV treatment and know that they can provide oversight into the quality provision of those services. And someone with an infectious disease training, interest in HIV. (HCO)

> When we put a new person in, my goal is for them to be charged with some of these special programs, developing special programs. But currently that is one of the challenges. I don't have the bandwidth to do that. And basically all the other doctors are already busy with other stuff. (HCO)

In addition to capacity for clinician leadership, participants described the need for new staff for the LBC sites, especially to manage incentives.

(We need) the bodies, right? We need people to be a staff. We already have an issue with that right now. (HCO)

I can see with the incentives, we'd have to open a little concession stand, because I can see them coming in for the snacks and for the incentives. I can see us being overwhelmed, because sometimes even now when the incentives are due, they'll just show up. It can be a backlog and yeah, I can see us needing someone to pretty much manage that. (HCO)

If we open up more incentives, we would need more social workers because there's more paperwork and more things that need to get done to get them what they need. If we're offering more incentives and help where we can actually get on the ground running with them, we will need extra person or people for that. (HCO)

Participants also emphasized the need to recruit experienced staff less likely to burn out working with patients with behavioral challenges.

It's the trying to find people that have a passion for doing this and not someone who's looking for a, just like I need a paycheck, I'm going to apply to this particular clinic. (PH)

And interviewing for resilience. Which we talk about constantly and also having the appropriate staff. Do not send somebody in their first week out of undergrad to be a social worker. Their degree in psychology for people with severe mental illness and multiple other

issues, don't do it. It's not a good idea. Make sure that people are credentialed and able to continue the work and not burn out in a year so that you can establish that relationship. So you do have the same provider every time you come into the clinic whenever you decide to pop in. (PH)

The next resource concern for most participants was where to place staff who are hired to work in the LBC sites, especially if those sites are set up to be co-located within existing clinics or community organizations that have little or no space for new programming or staff.

And what to do about staffing.... where are we going to put them? (HCO)

If we have more staff is there room for them? There's a space issue. (HCO)

That's a barrier constantly just because as soon as (work) space is open, it's filled. (HCO)

The physical barriers to this are the facilities. I mean, we don't even have offices. Do we have offices for new social workers and new clinicians? (HCO)

And we also don't have enough rooms. To the point where I have people willing to do additional clinics but I don't have the actual exam room for them to work in. And I basically have nowhere to go. Like this building is not getting bigger. (HCO)

Some participants talked about options for addressing space constraints.

We're rotating clinics. We have PrEP on very specific days that we don't have family planning, that sort of thing. So while we work out the space, while we work out the staffing, maybe baby steps, rotate one clinic where we have provider (do HIV) care, maybe only on our clinic's longest days, the rest would be Mondays and it rotates to other days. I mean, start there where you're rotating in each clinic, whatever we decide is going to be doing that rotate them out one day out of the week. (PH)

One thing that comes to mind, of course and probably is obvious - is telemedicine, and do you have to be seen in person? I think the answer is, "No." (PH)

Perhaps instead of people having to come to a clinic which takes space, taking mobile care to people? (HCO)

Culture

Most PH participants identified FQHC's as potential providers of LBC. However, not all of the participants from FQHC's felt LBC was a good fit for their mission.

I think our goal, as an FQHC, a major goal is to create medical homes for people. That's our ultimate goal. So ultimately, our philosophy is we want to give that person a medical home. Ideally, we wouldn't be providing care to someone continuously on a walk-in basis. That wouldn't be our goal. (HCO)

I worry in some ways that FQs are going to mission creep, right? (HCO)

We have a public healthcare system here. It's... publicly funded through taxpayer dollars. They have always been the provider of care to the destitute. That conversation would be worth having with them, because they're the one... funded to provide healthcare. We aren't. And they run hospitals and they run community-based clinics. And they run a program called Healthcare for the Homeless.... so, we have another system for that which in some ways, hasn't forced FQs or other look-a-likes to be in that business in some ways. And they're a taxpayer model, so a little guaranteed funding source there. (HCO)

But we're not trying to push people away. It's just a matter of, can that specific model work with our FQHC, or would it be better suited for something else? (HCO)

Public Health is more equipped to integrate that more readily, I would imagine. It makes more sense. What do they think about all of their community health centers? They have the most of any of us in the community. All their urgent cares that are already open late. All the things they already do as walk-in. I mean, they have walk-in clinics, too. So, wouldn't this model work for them? (HCO)

Finally, a few participants described how their organizational policies would make it difficult to provide LBC services.

It's a system that we work in - it's a bureaucracy... if there's an appointment, there will be a human being scheduled in it. There's really no like, "Let's pay providers to be available for something flexible." That's just not the way they work. We have zero control over our schedules. So even patients that I know need to come in and I try to work them in and I try to block time for them - they will put any patient in there, a different patient than I've requested... So then when that patient does show I'm jammed full, already busting at the seams. Then they'll walk out because they don't want to wait. (HCO)

No birth control, no condoms, no abortions. We can't distribute condoms at our clinic. We can advocate safer practices, we just can't dispense condoms. That's the deal. They have to go find their condoms somewhere else. (HCO)

Implementation Climate - Compatibility

Assuming leadership support, resources, and cultural fit, participants most often next described the importance of gaining staff buy-in for LBC to be successful. These reflections most often aligned with the CFIR construct of "Implementation Climate - Compatibility," or the degree of fit between the intervention, the perceptions of individuals involved in implementation, and existing processes and work flows in the organizational setting.[22]

I think sometimes he and his staff are sometimes far apart on things. He will say, "Yeah, let's do it." But then the staff will be, "Wait, hold up." He'll be open to anything, but not his staff. (PH)

I think getting the physicians and staff to buy in, I think everybody in this clinic, they really only care about the patient and their outcomes. I don't think it will be a hard sell. (HCO)

Most participants felt that by building upon existing clinic services and work flows that integrating LBC would be feasible.

I'm sure that they do bits of it. I think that rapid start can be a platform for expanding this idea... so you've taken one step, and you make that next step and say "It's not just about when you start your meds, it's actually all of your care. (PH)

My gut says one of our operational barriers to a model like this is going to be the same day rapid start. I mean, we have some of it... the navigation, the accessibility of the clinic, the evening hours, the weekend hours. I mean, some of those things are already in place structurally, but until we can have presumptive eligibility and a script day of, (LBC) would still be out of reach. Once we get there, we'll be more flexible to models like this. (HCO)

We have some of our providers currently that can take drop in patients with open panel slots. Some others have a drop-in clinic where that is what they are there for. It is not a clinic that is set up exclusively for drop in, but I bet you they could have the capacity to do that. If they switched the model where that was what they did, I'm sure they could find folks to take advantage of it. (PH)

We already have an FQHC who's providing some HIV care - maybe it could be done in partnership through what they're already doing. (PH)

We don't have exactly this model, but we have pieces of it. (HCO)

I feel like we've started to incorporate some components of (LBC) within our workflow... If they just walk in and say, "I'm here," or if their case manager calls them and says, "You've been out of care." If they answer the phone, we always say, "We'll see you that day." We have had that as a structure. The question that I have is, should we actually be thinking of a separate clinic space in a program? (HCO)

We have some committed case managers for some of the populations that we recognize are higher risk. Especially, our homeless population... Then we have a much larger recovery program where someone doesn't have to commit to recovery, but we have support services for those that are using. I feel like we have some of the components. But the components that we're missing is we don't have that separate space, which I actually think could be really interesting. (HCO)

Finally, participants felt that implementing LBC in their jurisdiction or organization would be most feasible if they were able to start small and grow the services over time.

We don't have (staff) right now. But we could build up to it. (HCO)

I think we could probably, with the staff we have, they could probably dedicate some time to that. I can't see us right now being able to do this every day at all, but maybe once a week. (HCO)

I think the providers that we have have capacity. I don't think any of them have full panels. The providers that we have that do part-time HIV care, they have capacity. It would just be carving out on their schedules to be able to allow that walk-in piece on their schedule. (HCO)

By three o'clock in the afternoon, we're slowing down. So, we actually could have space. We have exam rooms that we have. It would be a little bit of a culture change for us as far as the nursing staff and the social work staff. I think space to provide... If we had any new people, that space is a challenge. But to have the physical space for a clinic with the current staff one day a week, if we had the provider who's willing to do it, because we have nurses here until five o'clock and even somebody until 5:30, so we need providers to be willing to be a part of that. (HCO)

The big issue is that the health department's (clinics have) been gutted financially... We have the infrastructure, we have the buildings... A lot of it's still there, it's just really understaffed. (PH)

Discussion

The vast majority of participants believed LBC would address the needs of persons with HIV in their jurisdictions who, due to a complex mix of factors, are not able to engage in HIV care

through traditional, appointment-based HIV care delivery systems. Those who noted alignment between LBC and organizational mission, the ability to build upon existing relationships and infrastructure (rapid start, incentive programs, urgent walk-in visits, re-engagement in care initiatives, satellite clinics, and telehealth) and were able to identify existing clinical capacity or space near populations that would need LBC were more optimistic about the possibility of implementing LBC. Several participants were concerned about gaining leadership support and identified the need to develop a clear business plan or appealing to other benefits to implementing LBC to gain their buy-in. Some participants were concerned that there would be too little demand to justify the use of resources, while others worried the demand would overwhelm their capacity. Ultimately all felt that PH should lead the overall implementation of LBC as a structural intervention and support HCO's in gaining resources and leadership support to operationalize LBC. Further, HCOs felt they would need to hire new staff to lead, manage and provide LBC services, establish clear eligibility criteria for services (especially incentives), prevent staff burnout, and receive ongoing technical assistance to successfully implement LBC. They also felt that starting small with limited days and hours of services and building upon existing pieces of LBC in their settings would make implementation feasible and successful.

Participants frequently noted concerns about the lack of clinical capacity to support implementation of LBC in their jurisdiction. Some reported a complete lack of clinical providers in areas that would be prioritized for LBC - including many that had recently experienced the gutting of their public health clinical infrastructure due to political policies and budget cuts - while others described how the health systems already present in prioritized areas would be likely be unable to expand to provide low barrier services without additional resources. Having an existing infrastructure that they could build upon to initiate low barrier care was the most

frequently mentioned facilitator among participants. Space and operational considerations (security, building maintenance, lab resources) were also common concerns as was lack of transportation and access to services LBC patients would need, particularly mental health services, housing, and food.

Incentives were seen as important by most for LBC to succeed, but federal and institutional policies affecting or prohibiting the use of incentives were noted as a common and potential barriers to the success of LBC. In addition, some HCO staff were philosophically opposed to the use of incentives and some HIV planning council staff and members were concerned that the use of incentives for some but not all low income persons with HIV would be inequitable. Federal, state, and local administrative policies that require identification and other steps to gain eligibility for health coverage or services were also frequently noted as potential barriers to the success of LBC.

Finally, stigma was a significant concern of members in all focus groups. Participants reported that patients avoid going to clinics where they may be identified or even suspected as having HIV and how HIV-related stigma limits the willingness of primary care providers to provide HIV care. Providing services in status neutral settings and offering training to primary care providers in areas with limited clinical capacity were strategies participants felt might help mitigate the effect of HIV related stigma on the effectiveness of LBC in their jurisdictions.

Conclusions

Members of HIV care systems in the southern US support the adoption and implementation of low barrier HIV care as a strategy for ending the HIV epidemic in the US. Through working together to organize and deliver health services in ways that reduce or eliminate barriers to care

engagement among a specific subset of people living with HIV - those who are unhoused and experiencing untreated mental health and/or substance use conditions - public health and healthcare organizations can increase engagement in HIV care, improve adherence to ART, and ultimately reduce new HIV infections in their jurisdictions. LBC in the southern US needs to be adapted to address HIV-related stigma, challenges with clinical, social service, and transportation infrastructure, and political and philosophical barriers to the use of incentives. Federal, state and local government entities can support the adoption and implementation of LBC through prioritizing and dedicating resources to support the intervention, allowing for the flexible use of those funds to support non-billable provider time and the use of incentives, and modifying or eliminating rules that create barriers to implementing a LBC intervention, such as complex local eligibility requirements for receiving health services. To support LBC implementation in the southern US, future research should investigate the effect of adaptations in the use of incentives as part of LBC on the effectiveness of the model, interventions to prevent the impact of HIV-related stigma on the success of LBC, and effective approaches to leveraging and/or building clinical capacity for LBC services in resource limited jurisdictions.

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