Despite a decline in new HIV cases from 2015 to 2019, HIV remains a significant public health threat in the United States, disproportionately affecting gay, bisexual, and other men who have sex with men (MSM); transgender and gender diverse people; and Black and Hispanic/Latine people [1]. HIV pre-exposure prophylaxis (PrEP) is highly effective when taken as prescribed and is a key component of the federal government’s Ending the HIV Epidemic (EHE) initiative [2]. However, access to and uptake of PrEP are not commensurate with need. Only 25% of people eligible for PrEP were prescribed it in 2020, according to a Centers for Disease Control and Prevention (CDC) analysis, with significant disparities by gender, race, and ethnicity [3]. Efforts to improve equitable scale-up of PrEP are needed.

With funding from the Bureau of Primary Health Care within the Health Resources and Services Administration, the National LGBTQIA+ Health Education Center (the Education Center), a national training and technical assistance partner dedicated to improving the quality of health care for sexual and gender minority people, created an HIV prevention learning collaborative program with three cohorts from 2020 to 2023. A learning collaborative is a “method for supporting practice change in which teams of peers and recognized experts come together to learn from each other and to apply quality improvement methods in a focused topic area [4].” The Education Center’s HIV learning collaborative focused on engaging teams from health centers in high-HIV-burden areas to undertake practice transformation conducive to PrEP delivery. Here, we describe the structure and reach of the learning collaborative and outline key lessons for future training efforts in HIV prevention.
HIV Prevention Learning Collaborative Participants and Structure

The Education Center developed and hosted three cohorts of participants within the HIV Prevention Learning Collaborative program. For the first learning collaborative cohort The Education Center partnered with the Mississippi Collaborative for Inclusive Health Care. The characteristics of the cohorts are summarized in Table 1 and Figures 1 and 2. Because demographic data collection varied among cohorts, participant role group is only available for the October 2021 cohort.

Overall, most participating organizations were health centers. Participant roles varied, with enrollees including medical and mental health providers as well as community health workers and registration staff.

Table 1. Characteristics of HIV prevention learning collaborative cohorts

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Number of Organizations</th>
<th>Number of Individual Enrollees</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2020 - March 2021</td>
<td>11</td>
<td>37</td>
</tr>
<tr>
<td>October 2021</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>January - April 2023</td>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>

Figure 1. Geographic distribution of participating organizations

Map created with mapchart.net.
In each cohort, participants met four times via Zoom for one to one-and-a-half hour sessions. An infectious disease and primary care physician with expertise in HIV prevention and treatment as well as adult education (Kevin Ard) facilitated the conversations; the same facilitator led each of the three cohorts. Each session began with a focused, twenty-minute didactic presentation delivered by the facilitator. Education Center staff selected the topics for didactic presentations based on discussions about learning needs with each participating organization prior to the first session of each cohort. Table 2 shows a selection of didactic topics over the three cohorts. Content varied over time as new evidence and interventions became available; for example, injectable PrEP, which was approved by the FDA late in 2021, featured prominently in the most recent cohort.
Table 2. Selected didactic presentation topics and key content

<table>
<thead>
<tr>
<th>Topic</th>
<th>Key Content</th>
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| HIV testing                          | • HIV testing recommendations  
• Features of different HIV tests (e.g., window periods)  
• Strategies to improve HIV testing uptake |
| Oral PrEP prescribing and monitoring | • Overview of FDA-approved medications for PrEP  
• Selecting a medication for PrEP based on medical comorbidities, the nature of HIV exposure, and logistical considerations  
• Baseline laboratory evaluation  
• Monitoring schedule  
• Assessing and supporting adherence |
| Models of PrEP care                  | • Same-day PrEP  
• Telemedicine for PrEP  
• Community collaborations for PrEP and HIV prevention |
| Impacts of the Covid-19 pandemic     | • Strategies to maintain and expand PrEP delivery during the Covid-19 pandemic |

Following the didactic presentation, the remainder of each learning collaborative session was devoted to discussion of a case or cases presented by the participants. At times, case discussions first occurred in smaller, breakout groups followed by larger group discussion. The cases often simultaneously raised both medical and logistical or programmatic questions. Examples of case topics included:

- Facilitating access to PrEP and/or HIV post-exposure prophylaxis in the setting of cost, transportation, and/or cultural barriers
- Managing PrEP in the setting of intermittent adherence to clinic visits
- Optimizing HIV prevention for transgender and gender diverse people in the setting of legal limitations on gender-affirming care
- Navigating differences in HIV risk perception between clinicians and patients or clients
Summary of Participant Evaluation Surveys

In the October 2021 cohort, participants were invited to complete a brief, seven-question survey after each session inquiring about knowledge gained and satisfaction with the session. Responses are available for the first three of four sessions. Across the three sessions, 16 of 24 (67%) respondents indicated that they gained a moderate level of knowledge from the sessions, and 8 of 24 (33%) respondents indicated they gained a high or extremely high level of knowledge. No respondents identified their knowledge gained as none or minimal. Participants also expressed satisfaction with the sessions: 3 of 24 (12.5%) of respondents described themselves as being satisfied with the training, and 21 of 24 (87.5%) were very or extremely satisfied. The survey also prompted learning collaborative participants to identify how they hope to apply what they have learned; the most common answers, selected consistently by more than half of respondents, were to champion policy or procedural changes in their organizations, disseminate information to colleagues or other staff in their organization, and to improve community outreach efforts and/or build connections to communities served.

These results support the educational value of the learning collaborative. Based on participants’ self-perception of knowledge gained and satisfaction with the sessions, we anticipate maintaining a similar design for future learning collaboratives (e.g., a brief didactic focused on timely topics in HIV prevention followed by in-depth case discussions). However, we aim to optimize data collection about participants’ experiences, assessing knowledge gained and satisfaction more systemically going forward to allow for comparisons not only across sessions within a cohort but also across cohorts.
Key Lessons from the Learning Collaborative Program

With experience facilitating HIV prevention learning collaboratives for three cohorts of health centers across the United States, we have identified four key lessons for HIV prevention training going forward.

1. **Frontline health care workers struggle with logistical and structural barriers to PrEP more so than with medical knowledge:**

   In our sessions, addressing medical knowledge gaps as they pertained to PrEP was straightforward, and prescribers typically demonstrated knowledge and understanding of CDC’s guidelines on PrEP [5]. However, participants often faced other barriers to PrEP delivery - lack of health insurance, cost, transportation, legal limitations – that limited their ability to provide PrEP for all patients or clients who might benefit. Addressing these barriers often dominated the case discussions, as participants from around the country offered suggestions to aid their colleagues in overcoming each obstacle.

2. **Engaging multidisciplinary teams in PrEP training is not only feasible but desirable:**

   A key task for any training program is to focus content on what is most interesting and/or compelling for learners; engaging a group of learners with diverse backgrounds, baseline knowledge, and responsibilities, as with the various role groups who participated in the learning collaborative program, poses particular challenges. However, we found that by simultaneously discussing both clinical and programmatic aspects of PrEP (e.g., how HIV prevention effectiveness varies by adherence to oral PrEP and strategies to improve adherence), participants from different role groups remained engaged, gained knowledge, and had an opportunity to offer their expertise to others. In addition, because PrEP delivery requires a multidisciplinary team, our impression is that team-based training is also optimal.

3. **Participants are interested to learn about advances in PrEP (e.g., long-acting injectable PrEP) but face obstacles in implementing basic aspects of PrEP care:**

   The third cohort of our learning collaborative program was the first after the FDA approval of long-acting cabotegravir for PrEP, and participants were curious about and interested in learning more about this medication. However, they simultaneously faced pressing logistical barriers to delivering PrEP in any form (see 1 above). Thus, while also providing training about long-acting injectable PrEP and other scientific advances in HIV prevention, we continued to focus on sharing best practices in oral PrEP implementation.

4. **Key training needs for the future include addressing patients’ or clients’ HIV risk perception and PrEP adherence and persistence:**

   In case discussions, participants often described uncertainty about how to navigate situations in which they, as health care workers, consider a patient to be at elevated risk for HIV, but the patient does not. In future PrEP educational efforts, we intend to expand the content focused on counseling and motivational interviewing. Separately, participants sought assistance promoting adherence to and persistence on PrEP; we also plan to bolster content on these topics for future HIV prevention trainings.
Conclusions

From December 2020 through April 2023, the National LGBTQIA+ Health Education Center developed and facilitated three HIV prevention learning collaborative cohorts involving 29 organizations and 79 participants. Participants represented a range of role groups within health centers and worked in diverse locations around the country. Overall, participants described a significant amount of knowledge gained from the sessions and satisfaction with the training. Two of the cohorts overlapped with the Covid-19 pandemic; the learning collaborative’s virtual format was conducive to pandemic limitations on in-person gatherings, and the program provided a strategy to continue building capacity for PrEP during and despite the pandemic. Key lessons from the learning collaborative program include the importance of training about logistical and programmatic aspects of PrEP, the feasibility and desirability of engaging multidisciplinary teams in PrEP training, balancing education about scientific advancements in PrEP with content on implementation and addressing HIV risk perception and adherence. Going forward, we aim to create new content on risk perception and adherence and institute systematic evaluations of the learning collaborative cohorts to facilitate ongoing innovation and improvement.
References


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