PrEP Chicago

A pragmatic randomized controlled trial to accelerate diffusion of pre-exposure prophylaxis for HIV prevention

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PrEP has been a game changer in HIV prevention...

... yet uptake is low in populations at greatest risk.
The Intervention Study

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PrEP Chicago is...

- a social network intervention that aims to...
- increase PrEP awareness and access in...
- the personal networks of young Black MSM and transwomen living in Chicago.
The Peer Change Agent (PCA)

- **Peer Change Agents** are members of the target population who are recruited and trained to inform and motivate their peers around PrEP.
Study Design

**Intervention Treatment**
- Group 1 (Yr1)
- Group 2 (Yr2)

**Intervention Cohort**
- Baseline intake + survey
- PCA training workshop
- Facebook Download
- HIV/STI testing
- Monthly booster calls
- 12M and 24M follow-ups

Switch occurs automatically at 12-month visitation

**Control Treatment**
- Group 1 (Yr2)
- Group 2 (Yr1)

**Control Cohort**
- Baseline intake + survey
- Sexual risk workshop
- Facebook Download
- HIV/STI testing
- 12M and 24M follow-ups
Measuring Intervention Impact

Linking study participants to PrEPline callers/clinic visitors

1. Link PrEP clients to a FB username (using Facebook’s people search function)
2. Identify which participants are FB friends with PrEP clients with a Facebook username
3. Determine eligible connections (PrEP client initiated linkage after a participant’s baseline training)
Method 2

Linking intervention events to PrEPline calls/clinic visits

Training Session

4 calls
2 calls

Boosters Conducted
1 call
0 calls

Training Session

3 calls
1 call

Boosters Conducted
2 calls
1 call

Training Session
Results of Recruitment (Yr1)

Participants scheduled for baseline (n=550)

- No-show/Cancel/Did not complete baseline (n=127, 22.8%)
- Year 1 Active Participants (n=423, 77.2%)
  - Intervention Cohort (n=209)
  - Control Cohort (n=214)
### Intervention Impact (Method 1)
Linking study participants to PrEPline callers

#### Data Descriptives
- 65 eligible ties (i.e., the PrEP client initiated linkage after a participant’s treatment)
- PrEP clients had on average 8.6 ties to study participants (median=2, range=1-58)
- 216 study participants were tied to at least one PrEP clients (median=2, range=1-10)

#### Table 1. Likelihood of a Facebook tie between PrEPline referral or first PrEP clinic appointment (n = 65) and study participant.

<table>
<thead>
<tr>
<th>Covariate</th>
<th>OR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention vs. control</td>
<td>1.50</td>
<td>(1.09, 2.06)</td>
<td>0.012</td>
</tr>
<tr>
<td>Seed vs. recruit</td>
<td>0.71</td>
<td>(0.46, 1.11)</td>
<td>0.133</td>
</tr>
<tr>
<td>No. of FB friends (thousands)</td>
<td>1.53</td>
<td>(1.38, 1.70)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
## Intervention Impact (Method 2)

Linking intervention events to PrEPline calls

<table>
<thead>
<tr>
<th></th>
<th>Daily workshops</th>
<th>Daily boosters</th>
<th>Day of week (vs. Mon-Fri)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (95% CI)</td>
<td>p-value</td>
<td>Estimate (95% CI)</td>
</tr>
<tr>
<td>Daily workshops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same day</td>
<td>0.08 (0.02, 0.13)</td>
<td>0.009</td>
<td>-0.07 (-0.14, 0.00)</td>
</tr>
<tr>
<td>1 day lag</td>
<td>0.10 (0.04, 0.15)</td>
<td>0.001</td>
<td>0.05 (-0.03, 0.13)</td>
</tr>
<tr>
<td>2 day lag</td>
<td>0.06 (0.00, 0.12)</td>
<td>0.044</td>
<td>-0.01 (-0.07, 0.05)</td>
</tr>
<tr>
<td>3 day lag</td>
<td>0.01 (-0.05, 0.08)</td>
<td>0.663</td>
<td>0.00 (-0.10, 0.11)</td>
</tr>
<tr>
<td>Daily boosters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same day</td>
<td>-1.80 (-2.55, -1.05)</td>
<td>&lt; 0.001</td>
<td>-2.50 (-3.53, -1.46)</td>
</tr>
<tr>
<td>1 day lag</td>
<td>-1.43 (-2.34, -0.52)</td>
<td>0.249</td>
<td>-1.43 (-2.34, -0.52)</td>
</tr>
<tr>
<td>2 day lag</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 day lag</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3.** Negative binomial mixed-effects regression of daily number of PrEPline calls on the number of intervention workshops and boosters, adjusting for day of week and weekly variation over study period.
Strengths

- **PrEP Chicago is pragmatic** -- it aims to leverage the naturally occurring networks of YBMSM and is designed to work within real-world constraints.

- **PrEP Chicago’s use of Facebook is novel** – we use Facebook to draw connections between study participants and peers who initiate PrEP linkage, thereby allowing us to trace the impact of the intervention.
Limitations

‣ We lack a mechanism for tracing direct interactions between study participants and specific callers and clinic visitors.

‣ Some PrEP clients were not locatable on Facebook, resulting in a small $n$ for deriving our PrEP linkage outcome.

‣ Referrals are likely to be made in social contexts not reflected on Facebook.
Looming questions and future directions

- Can we develop more reliable empirical measures of peer influence?

- What determines PCA engagement and effectiveness? Can we use these factors a priori to select more effective peer leaders in future interventions?

- What amount/type of staff interaction is most effective in keeping PCAs engaged and motivated? (i.e., dosage studies)
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