Clinical Decision Support for PrEP
Study Team and Partners

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Aims

1) Implement an automated, EHR-based software system to track PrEP-related care

2) Develop and validate an HIV prediction model to identify potential PrEP candidates

3) Explore providers’ preferences for implementing clinical decision support tools for PrEP

4) Evaluate whether a clinical decision support tool with an embedded HIV prediction model can improve PrEP prescribing

EHR = Electronic Health Records
Implementation Science Methodologies

• **RE-AIM Framework**
  - Reach the target population
  - Effectiveness or efficacy
  - Adoption by target staff, settings, or institutions
  - Implementation consistency, costs and adaptations made during delivery
  - Maintenance of intervention effects in individuals and settings over time

• **Mixed-methods**
  - **Rapid qualitative analysis**
    - Inform the development of EHR-based clinical decision support tool for PrEP
    - Health care providers at public health clinics
  - **Quantitative methods**
    - Predictive analytics to develop and validate HIV risk prediction model
    - EHR data to track PrEP prescribing and care
## Key Outcomes

<table>
<thead>
<tr>
<th>Type</th>
<th>Outcome</th>
<th>Data Source</th>
</tr>
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<tbody>
<tr>
<td>R</td>
<td>% providers prescribing PrEP to pts likely to benefit</td>
<td>EHR</td>
</tr>
<tr>
<td>R</td>
<td>% providers who prescribe PrEP for the first time</td>
<td>EHR</td>
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<tr>
<td>R</td>
<td>% providers ordering HIV/STI tests for pts likely to benefit from PrEP use</td>
<td>EHR</td>
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<tr>
<td>A</td>
<td>% pts likely to benefit from PrEP use for whom providers view alerts</td>
<td>EHR</td>
</tr>
<tr>
<td>A</td>
<td>% pts likely to benefit from PrEP use for whom providers use additional decision support tools</td>
<td>EHR</td>
</tr>
<tr>
<td>I</td>
<td>Clinic administrators’ and providers’ assessments of intervention</td>
<td>EHR</td>
</tr>
<tr>
<td>M</td>
<td>% providers sustaining CDS use over 6 months</td>
<td>Qualitative</td>
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<tr>
<td>E</td>
<td>% pts likely to benefit from PrEP use who are prescribed PrEP</td>
<td>EHR</td>
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<tr>
<td>E</td>
<td>% pts in general clinic populations who are prescribed PrEP</td>
<td>EHR</td>
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<tr>
<td>E</td>
<td>% pts likely to benefit from PrEP use who receive HIV tests (first test or repeat test)</td>
<td>EHR</td>
</tr>
<tr>
<td>E</td>
<td>% pts likely to benefit from PrEP use who receive STI tests</td>
<td>EHR</td>
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<tr>
<td>E</td>
<td>No. pts likely to benefit from PrEP use and PrEP pts with incident HIV</td>
<td>EHR</td>
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<tr>
<td>E</td>
<td>% PrEP pts with recommended testing 6M after initiation</td>
<td>EHR</td>
</tr>
<tr>
<td>E</td>
<td>% PrEP pts who persist with PrEP ≥6M</td>
<td>EHR</td>
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**Reach** the target population  
**Effectiveness or efficacy**  
**Adoption** by target staff, settings, or institutions  
**Implementation** consistency, costs and adaptations made during delivery  
**Maintenance** of intervention effects in individuals and settings over time
Discussion: Getting to the Next Level

• **What were the challenges?**
  - Time to implement new electronic public health surveillance platform at health department (during COVID-19 pandemic)
  - Unanticipated closure of clinical sites
  - Barriers in research review process

• **How did you address those challenges?**
  - Focus on qualitative work while completing implementation of platform
  - Pivot to additional jurisdiction (Mobile County Health Department)
  - Additional resources provided by health departments (in-kind effort, funding for technology)
Best Practices and Lessons Learned

- Be ready to adapt to external barriers (timeline, jurisdiction)
- Many hands make light work (help from our Hub at Yale)
- Need for federal and local research review processes to align
- Close collaboration amongst academic and health department conquers all (or most)
- Donation of resources/funds by health department critical
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