Kenya PrEP Rollout Analysis
Update
July 2019
Overview

• In 2015, the OPTIONS Consortium supported NASCOP to develop an analysis of possible oral PrEP rollout scenarios at the county level in Kenya. That analysis was based on two key sources of data – HIV incidence and prevalence estimates and estimates of key populations at the county level.

• In July 2019, the OPTIONS Consortium updated this analysis with the new 2018 Kenya HIV Estimates Report data. This updated analysis is included in the following slides.

• The analyses on the following slides include a snapshot of HIV incidence across counties, a framework to inform PrEP rollout, specific data on high priority oral PrEP client populations (serodiscordant couples and adolescents), and initial data from four counties on how current oral PrEP rollout compares to the rollout analysis.

• This analysis will be updated again later in 2019 as additional data becomes available on (1) updated key population estimates by county and (2) current PrEP rollout in additional counties.

• Please contact Jordan Kyongo at LVCT Health (Jordan.Kyongo@lvcthealth.org) with any questions.
Kenya County HIV Incidence

HIV Incidence by County, 2018

1. **High incidence cluster**
   - Incidence rates above 0.18 (national average)
   - (Homa Bay, Siaya, Kisumu, Migori, Busia, Kiambu, Nairobi, Murang’a, Vihiga, Mombasa)

2. **Medium incidence cluster**
   - Incidence rates of 0.1-0.18
   - (Kakamega, Nyandarua, Nyeri, Kitui, Taita Taveta, Kilifi, Kirinyaga, Kwale, Makueni, Kisii, Machakos, Nyamira, Bungoma, Isiolo, Lamu, Tharaka – Nithi, Embu)

3. **Low incidence cluster**
   - Incidence rates below 0.1
   - (Meru, Trans Nzoia, Kajiado, Uasin Gishu, Nakuru, Turkana, Kericho, Narok, Laikipia, Marsabit, Tana River, Bomet, Nandi, Samburu, Baringo, Elgeyo-Marakwet, West Pokot, Garissa, Mandera, Wajir)

Kenya New Adult HIV Infections

Proportion of National Adult New HIV Infections by Cluster, 2018

<table>
<thead>
<tr>
<th>Incidence Cluster</th>
<th># of Counties</th>
<th>Total Population (15+)</th>
<th># of New Infections (15+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 High incidence</td>
<td>10</td>
<td>8.7M</td>
<td>26K</td>
</tr>
<tr>
<td>2 Medium incidence</td>
<td>17</td>
<td>8.4M</td>
<td>13K</td>
</tr>
<tr>
<td>3 Low incidence</td>
<td>20</td>
<td>9.1M</td>
<td>5K</td>
</tr>
</tbody>
</table>

PrEP delivery should be prioritized in the high incidence county cluster

HIV incidence (rate and absolute number of new HIV infections) determines a county's need for investment in new HIV prevention solutions including oral PrEP and prioritizes counties for PrEP rollout. Counties with higher HIV incidence are higher priority for PrEP rollout. 


Size of key populations (FSW, MSM) determines how a county should rollout PrEP. Counties with HIV incidence driven by key populations should consider a targeted rollout to those groups while counties with low key populations but high HIV incidence should consider rollout to the general population, including serodiscordant couples, adolescent girls & young women, and bridging populations (e.g., fisherfolk).

Source: FSW, MSM, PWID estimates, MARPS, 2012

Counties are mapped to this framework in the following slides

Sources: Informed by Avenir, PrEP for Adolescent Girls and Young Women in Kenya, Preliminary Results Presentation, October 2016
County PrEP Rollout Analysis | All populations

- PrEP is a priority for counties with high HIV incidence at the top of the chart.
- PrEP rollout can be more focused on key populations for counties on the left of the chart.
- PrEP rollout to the general population (including AGYW) will be important for counties on the right of the chart.

HIV incidence

- Population-Driven HIV Incidence (Significant key population presence)
- Generalized HIV Incidence (Low key population presence)

Size of bubble indicates number of new infections (2017)

National average HIV incidence (1.8)
• With high rates of HIV prevalence, **Homa Bay, Siaya, Migori** and **Kisumu** would benefit from provision of PrEP to sero-discordant couples
• **Busia** and **Nairobi** also have relatively high rates of HIV prevalence and should ensure PrEP access for sero-discordant couples

**Size of bubble indicates number of new infections**

**Counties with over 10% HIV prevalence**

**Counties with 5 – 10% HIV prevalence**

**National average HIV incidence (1.8)**
Adolescents account for a significant portion of Kenya’s HIV incidence—particularly in the shaded counties. In these counties, PrEP access for adolescents, via adolescent-friendly delivery channels, will be important to drive progress on HIV prevention.
County PrEP Rollout Analysis | Current rollout

- Current data from three counties demonstrates that PrEP rollout has largely followed the implications of this analysis.
- Some counties with high adolescent HIV incidence should further expand PrEP access for adolescents.

SIAYA – Rollout in-line with expectations, with focus on serodiscordant couples and AGYW

New HIV infections: 3,419
Current clients on PrEP: 4,041
- 70% Serodiscordant Couples
- 18% AGYW
- 3% Key Populations
- 7% General Population

KIAMBU – Rollout may need to be expanded to populations beyond key populations (e.g., serodiscordant couples, AGYW) as Kiambu has generalized HIV incidence.*

New HIV infections: 2,783
Current clients on PrEP: 1,665
- 30% Serodiscordant Couples
- 9% AGYW
- 40% Key Populations

KAKAMEGA – Rollout may need to be further expanded to adolescents, as they account for a high proportion of new HIV infections in the county

New HIV infections: 2,197
Current clients on PrEP: 588
- 80% Serodiscordant Couples
- <1% AGYW
- 4% Key Populations
- 15% General Population

* Key population estimates were last conducted in 2012, therefore this data may be outdated of the situation has changed in Kiambu.
### Analysis data

<table>
<thead>
<tr>
<th>County</th>
<th>Adult (15+) Population (100,000s)</th>
<th>Key Populations (MSM + FSW)</th>
<th>Adult* HIV Prevalence (%)</th>
<th>Adult* HIV Incidence (# per 1,000 people)</th>
<th>Adult* HIV New Infections (#)</th>
<th>Youth** New HIV Infections (#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baringo</td>
<td>3.7</td>
<td>-</td>
<td>1.3%</td>
<td>0.3</td>
<td>102</td>
<td>44</td>
</tr>
<tr>
<td>Bomet</td>
<td>4.9</td>
<td>550</td>
<td>1.9%</td>
<td>0.4</td>
<td>184</td>
<td>80</td>
</tr>
<tr>
<td>Bungoma</td>
<td>7.9</td>
<td>4,195</td>
<td>3.2%</td>
<td>1.3</td>
<td>999</td>
<td>338</td>
</tr>
<tr>
<td>Busia</td>
<td>4.3</td>
<td>3,327</td>
<td>7.7%</td>
<td>3.1</td>
<td>1,283</td>
<td>434</td>
</tr>
<tr>
<td>Elegeyo-Marakwet</td>
<td>2.5</td>
<td>-</td>
<td>1.6%</td>
<td>0.3</td>
<td>83</td>
<td>36</td>
</tr>
<tr>
<td>Embu</td>
<td>3.5</td>
<td>1,061</td>
<td>2.8%</td>
<td>1.1</td>
<td>363</td>
<td>112</td>
</tr>
<tr>
<td>Garissa</td>
<td>2.6</td>
<td>-</td>
<td>0.8%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Homa Bay</td>
<td>5.8</td>
<td>1,334</td>
<td>20.7%</td>
<td>8.2</td>
<td>3,858</td>
<td>1,852</td>
</tr>
<tr>
<td>Isiolo</td>
<td>0.9</td>
<td>-</td>
<td>3.2%</td>
<td>1.3</td>
<td>106</td>
<td>33</td>
</tr>
<tr>
<td>Kajiado</td>
<td>5.1</td>
<td>1,590</td>
<td>3.9%</td>
<td>0.8</td>
<td>432</td>
<td>187</td>
</tr>
<tr>
<td>Kakamega</td>
<td>9.9</td>
<td>3,719</td>
<td>4.5%</td>
<td>1.8</td>
<td>1,761</td>
<td>596</td>
</tr>
<tr>
<td>Kericho</td>
<td>5.4</td>
<td>1,116</td>
<td>2.9%</td>
<td>0.6</td>
<td>304</td>
<td>132</td>
</tr>
<tr>
<td>Kiambu</td>
<td>13.0</td>
<td>4,913</td>
<td>4.0%</td>
<td>2.2</td>
<td>2,623</td>
<td>730</td>
</tr>
<tr>
<td>Kilifi</td>
<td>8.2</td>
<td>5,316</td>
<td>3.8%</td>
<td>1.6</td>
<td>1,183</td>
<td>446</td>
</tr>
<tr>
<td>Kirinyaga</td>
<td>4.2</td>
<td>759</td>
<td>3.1%</td>
<td>1.6</td>
<td>644</td>
<td>179</td>
</tr>
<tr>
<td>Kisii</td>
<td>7.4</td>
<td>4,489</td>
<td>4.4%</td>
<td>1.5</td>
<td>1,052</td>
<td>505</td>
</tr>
<tr>
<td>Kisumu</td>
<td>6.4</td>
<td>5,671</td>
<td>16.3%</td>
<td>6.3</td>
<td>3,396</td>
<td>1,630</td>
</tr>
<tr>
<td>Kitui</td>
<td>5.8</td>
<td>794</td>
<td>4.5%</td>
<td>1.7</td>
<td>970</td>
<td>299</td>
</tr>
<tr>
<td>Kwale</td>
<td>4.8</td>
<td>1,369</td>
<td>3.8%</td>
<td>1.6</td>
<td>691</td>
<td>261</td>
</tr>
<tr>
<td>Laikipia</td>
<td>2.9</td>
<td>558</td>
<td>2.7%</td>
<td>0.5</td>
<td>161</td>
<td>70</td>
</tr>
<tr>
<td>Lamu</td>
<td>0.8</td>
<td>-</td>
<td>3.0%</td>
<td>1.3</td>
<td>95</td>
<td>36</td>
</tr>
<tr>
<td>Machakos</td>
<td>7.2</td>
<td>4,002</td>
<td>3.8%</td>
<td>1.4</td>
<td>1,019</td>
<td>314</td>
</tr>
<tr>
<td>Makukeni</td>
<td>5.3</td>
<td>2,012</td>
<td>4.2%</td>
<td>1.6</td>
<td>832</td>
<td>257</td>
</tr>
<tr>
<td>Mandera</td>
<td>3.9</td>
<td>-</td>
<td>0.2%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* Adults aged 15 – 49  
** Youth aged 15 – 24  

Sources: Kenya HIV Estimates Report 2018 (Kenya Ministry of Health, October 2018); FSW, MSM, PWID estimates (MARPS, 2012)