

# Oral PrEP Introduction Planning Toolkit

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## STEP 3: ROLLOUT SCENARIOS



# About this toolkit

## WHAT IS THE PURPOSE AND CONTENTS OF THIS TOOLKIT?

- This toolkit was developed and used by the OPTIONS Consortium to support planning for the introduction of oral PrEP for HIV prevention in Kenya, Zimbabwe and South Africa.
- This toolkit is designed to help users in other countries plan for the introduction and rollout of oral PrEP

## WHO SHOULD USE THIS TOOLKIT?

This toolkit will be most relevant for:



**National governments and ministries of health/HIV agencies** to inform national and regional oral PrEP rollout and provide high-level guidance to counties/districts on what factors should be considered to ensure they are prepared to rollout oral PrEP



**Implementing organizations (e.g., NGOs)** to understand national and regional needs related to oral PrEP delivery and to support effective resource allocation



**Donors (e.g., USAID)** to initially scope country-specific needs and resource requirements

## HOW COULD THE TOOLKIT BE MORE USEFUL?

If you have thoughts, feedback, questions, requests for additional information or other resources that you would like to add to this toolkit, please contact us at [info@PrEPNetwork.org](mailto:info@PrEPNetwork.org).

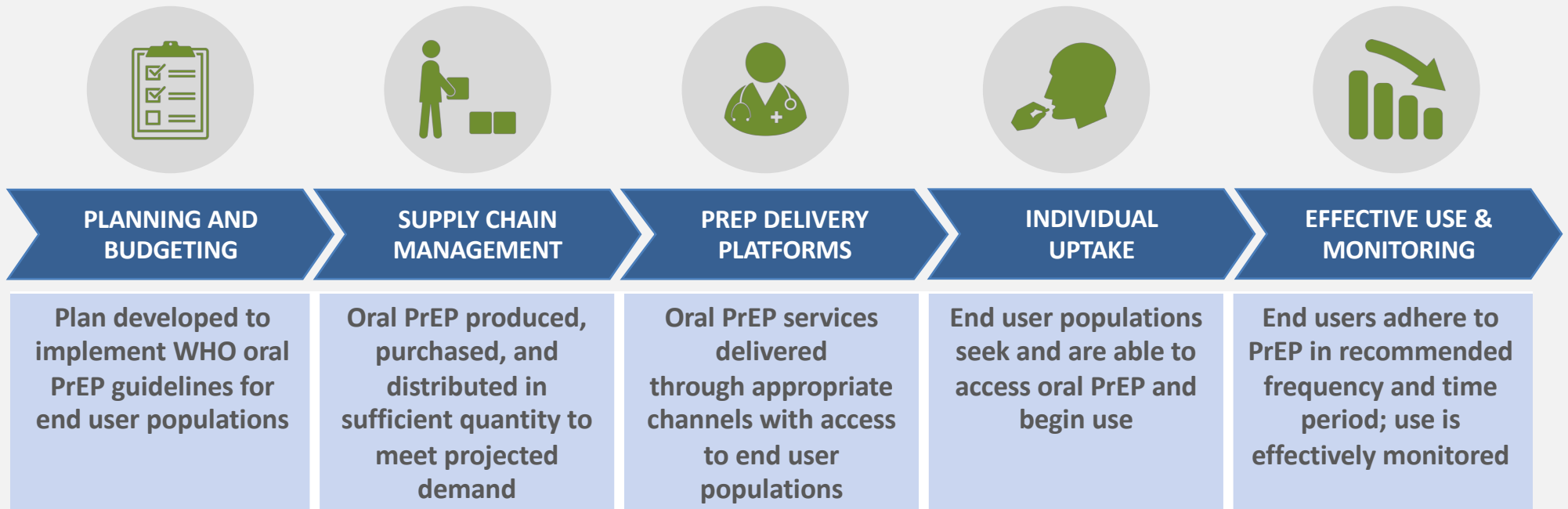
*Please acknowledge [USAID/OPTIONS](#) with use of this toolkit.*

# Value Chain for oral PrEP Introduction

The templates, frameworks and tools included in this toolkit are organized along a simplified oral PrEP “value chain” that charts what is needed for national and subnational introduction of oral PrEP through five major stages, from initial planning through to uptake and ongoing monitoring.

While this toolkit is intended to support users primarily with the first stage of the value chain: planning, it is important to analyze assets and gaps at each stage to inform a comprehensive and robust planning process. This framework can also be adapted for other HIV prevention products

## Value Chain for oral PrEP



# This is the third tool in a series of six

# 1

## SITUATION ANALYSIS

**Understand current context for oral PrEP**

- Identify existing assets, gaps, challenges, and key questions for PrEP rollout
- Develop a landscape of key stakeholders and ongoing efforts

# 2

## PROJECT LANDSCAPE

**Assess findings & gaps in projects**

- Survey current and planned studies and implementation projects
- Identify key questions to inform implementation and assess gaps

# 3

## ROLLOUT SCENARIOS

**Inform where and how to rollout PrEP**

- Define rollout scenarios that differ by counties/districts or population groups
- Highlight considerations and trade-offs between different scenarios

# 4

## DISTRICT READINESS ASSESSMENT

**Assess district readiness for oral PrEP**

- Assess district/county readiness to introduce and scale oral PrEP
- Support sub-national planning for oral PrEP rollout and scale-up

# 5

## FACILITY READINESS ASSESSMENT

**Assess facility readiness for oral PrEP**

- Assess the readiness of healthcare facilities to deliver oral PrEP
- Identify areas that require additional investment

# 6

## PRIVATE SECTOR ASSESSMENT

**Identify opportunities for oral PrEP in the private sector**

- Understand if private sector channels could expand PrEP access
- Compare across channels for ability to effectively deliver PrEP

# ROLLOUT SCENARIOS

## Overview of contents

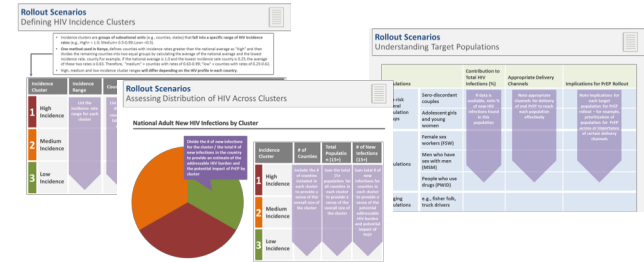
*This tool provides a structured analysis that will help frame decisions about where and to whom to rollout oral PrEP within a country. While this does not replace more rigorous cost-effectiveness modeling, it does provide general estimates that can be produced quickly with existing data.*



**Guide** data collection on HIV incidence and target populations for oral PrEP across districts / counties to inform analysis

### SLIDES 7 - 10

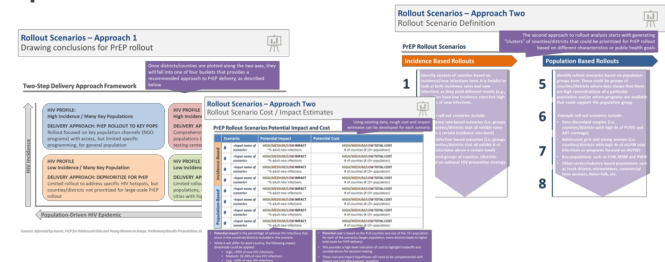
Data collection templates



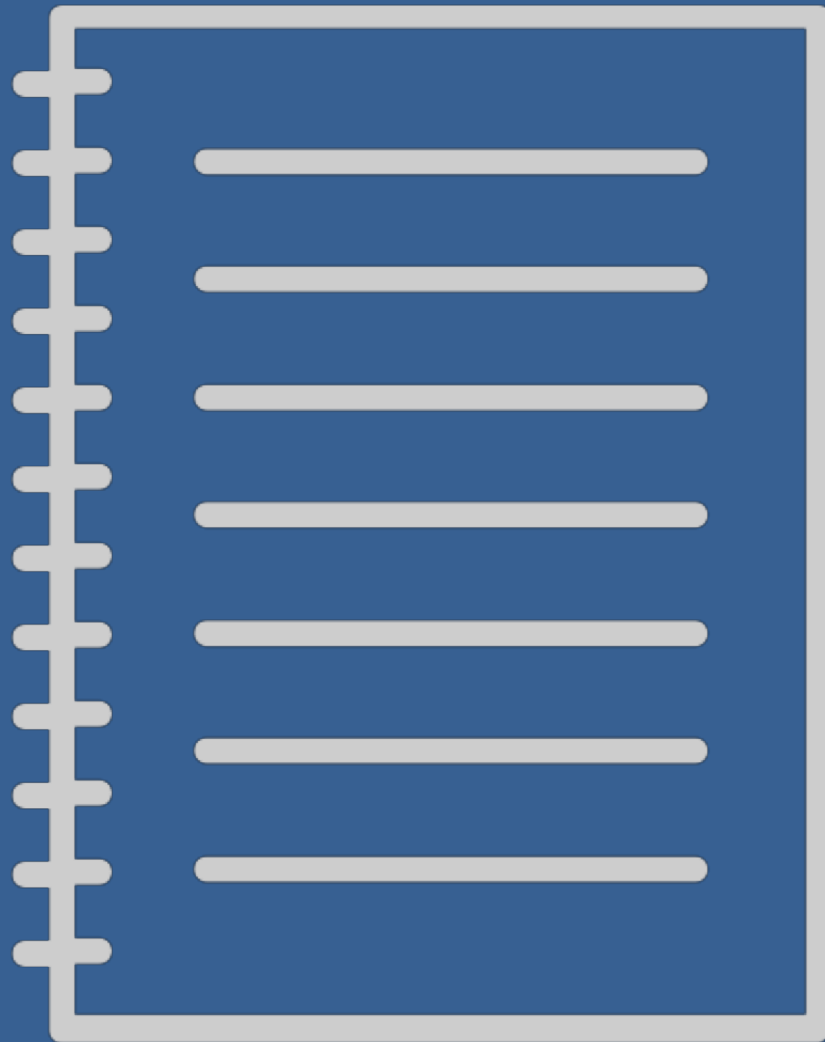
Assess **need** for oral PrEP and **develop scenarios for oral PrEP delivery** to support decision-making and implementation plan development

### SLIDES 12 - 22

Templates to synthesize and present collected data



Completed Rollout Scenarios to Reference  
[Kenya](#) | [Zimbabwe](#)



**ROLLOUT  
SCENARIOS  
DATA COLLECTION  
TEMPLATES**

# Rollout Scenarios

## Data Collection in Excel



*Collecting data in an Excel file enables easy analysis across counties/districts.*

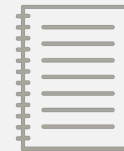
*A sample Excel template can be found here.*

**ORAL PrEP INTRODUCTION PLANNING TOOLKIT**  
**STEP THREE - ROLLOUT SCENARIOS**  
*Note: This includes a basic list of data, but additional data can be included as available*

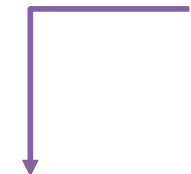
Indicator	Population				HIV Incidence				
	Total Population 15+	Population Women 15+	Population Men 15+	Population Age 15 - 24	Adult HIV Incidence (%)	Adult HIV New Infections	Adult Female New Infections	Adult Male New Infections	New Infections Age 15 - 24
<i>Data Source</i>									
<i>National Average</i>									
<i>County / District</i>									
County / District A	#	#	#	#	%	#	#	#	#
County / District B	#	#	#	#	%	#	#	#	#
County / District C	#	#	#	#	%	#	#	#	#
County / District D	#	#	#	#	%	#	#	#	#

# Rollout Scenarios

## Defining HIV Incidence Clusters



- Incidence clusters are **groups of subnational units** (e.g., counties, states) that **fall into a specific range of HIV incidence rates** (e.g., High= >0.99; Medium= 0.5-0.99; Low= <0.5).
- **One method used in Kenya**, defines counties with incidence rates greater than the national average as “high” and then divides the remaining counties into two equal groups by calculating the average of the national average and the lowest incidence rate county. For example, if the national average is 1.0 and the lowest incidence rate county is 0.25, the average of these two rates is 0.63. Therefore, “medium” = counties with rates of 0.63-0.99; “low” = counties with rates of 0.25-0.62.
- High, medium and low incidence cluster ranges **will differ depending on the HIV profile in each country.**



Incidence Cluster		Incidence Range	Counties/Districts Included
1	High Incidence	List the incidence rate range for each cluster	List names of districts/counties that fall in each cluster
2	Medium Incidence		
3	Low Incidence		

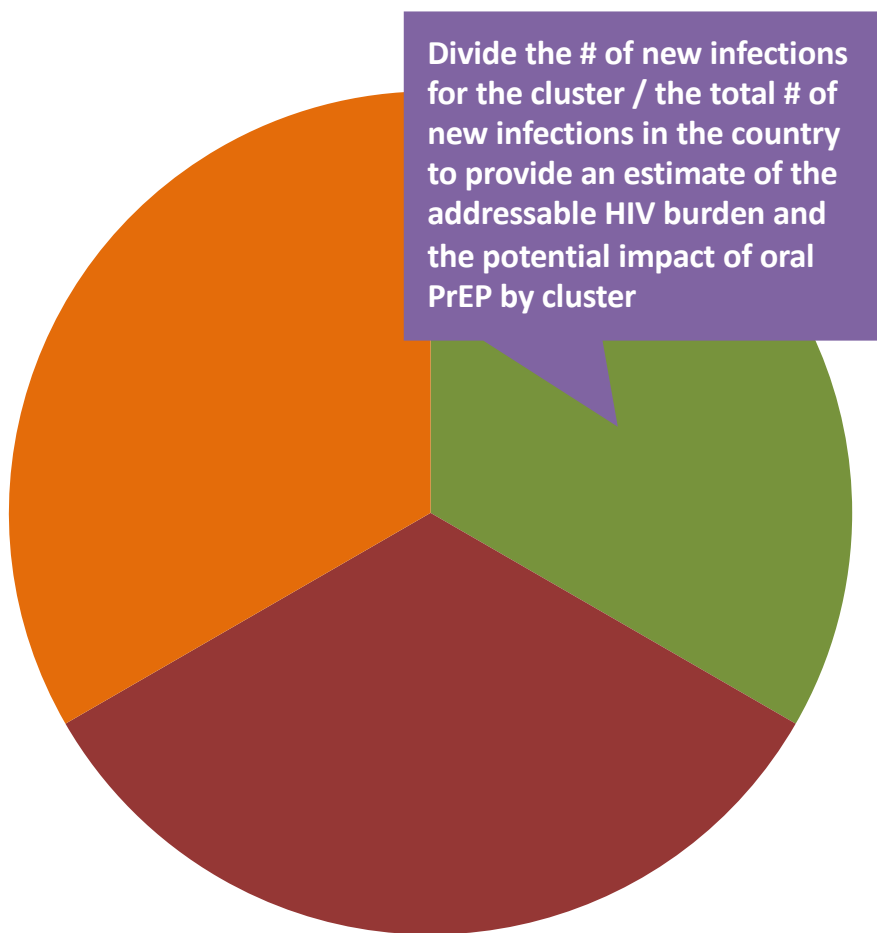


# Rollout Scenarios

## Assessing Distribution of HIV Across Clusters



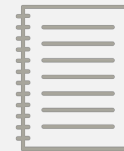
### National Adult New HIV Infections by Cluster



Incidence Cluster	# of Counties	Total Population (15+)	# of New Infections (15+)
<b>1</b> High Incidence	Include the # of counties included in each cluster to provide a sense of the overall size of the cluster	Sum the total 15+ population for all counties in each cluster to provide a sense of the overall size of the cluster	Sum total # of new infections for counties in each cluster to provide a sense of the potential addressable HIV burden and potential impact of oral PrEP
<b>2</b> Medium Incidence			
<b>3</b> Low Incidence			

# Rollout Scenarios

## Understanding Target Populations



Populations		Contribution to Total HIV Infections (%)	Appropriate Delivery Channels	Implications for Oral PrEP Rollout
High-risk general population groups	Sero-discordant couples	If data is available, note % of new HIV infections found in this population	Note appropriate channels for delivery of oral PrEP to reach each population effectively	Note implications for oral PrEP rollout, for example: <ul style="list-style-type: none"> <li>- Is population high-priority for PrEP access?</li> <li>- Will the population be easy to reach through existing delivery channels?</li> </ul>
	Adolescent girls and young women			
Key populations	Female sex workers (FSW)			
	Men who have sex with men (MSM)			
	People who use drugs (PWID)			
Bridging populations	e.g., fisher folk, truck drivers			



**ROLLOUT  
SCENARIOS**

**ANALYSIS  
TEMPLATES**



Analysis of collected data yields potential scenarios for oral PrEP rollout that have different implications for potential impact and potential cost.

The following slides provide two approaches to this analysis:

### **APPROACH 1: COUNTY/DISTRICT LEVEL ANALYSIS**

Analysis includes all counties/districts in the country and results in recommendations for PrEP rollout for all counties/districts

Slides 13 - 15

### **APPROACH 2: ROLLOUT SCENARIOS**

Analysis results in scenarios that include rollout to multiple counties based on different criteria (e.g., highest rates of HIV incidence, highest number of new infections, largest presence of key populations)

Slides 17 – 19

*Both approaches are useful and can be used together.*

# Rollout Scenarios – Approach 1

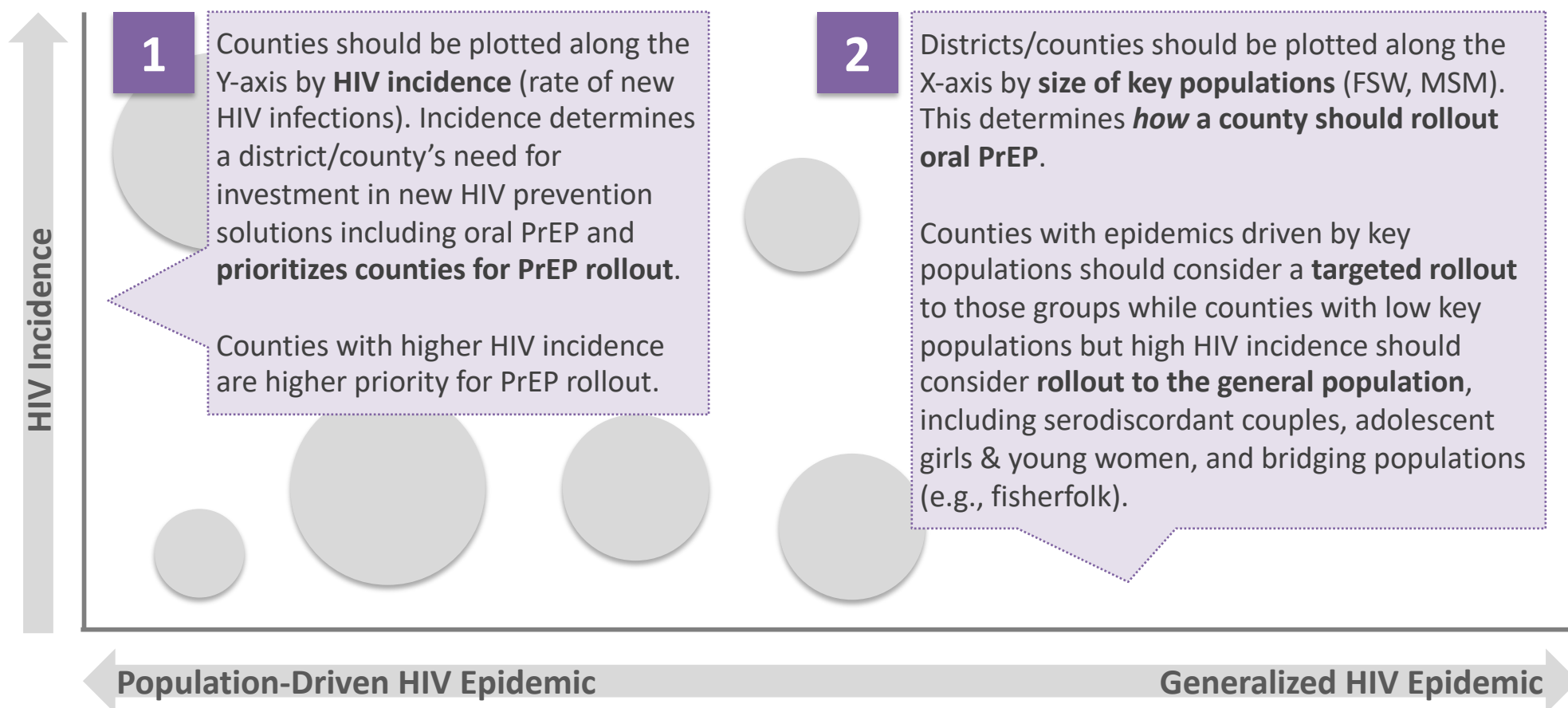
## Plotting districts / counties



Plot counties / districts along two axes: HIV incidence and size of key populations as described below.

Circle size can illustrate absolute numbers of new infections.

### Two-Step Delivery Approach Framework



Sources: Informed by Avenir, PrEP for Adolescent Girls and Young Women in Kenya, Preliminary Results Presentation, October 2016

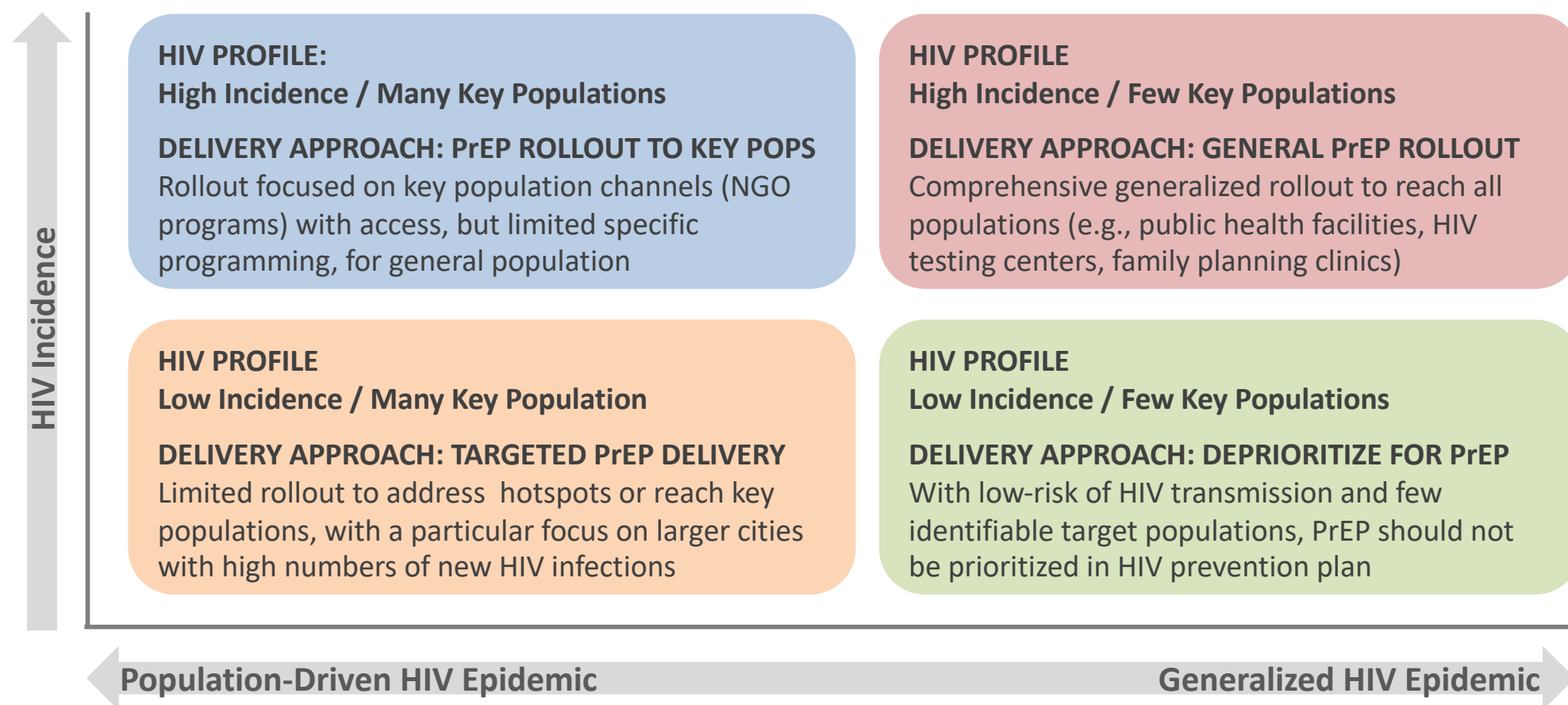
# Rollout Scenarios – Approach 1

## Drawing conclusions for oral PrEP rollout



Once districts/counties are plotted along the two axes, they will fall into one of four buckets that provides a recommended approach to oral PrEP delivery, as described below

### Two-Step Delivery Approach Framework



Sources: Informed by Avenir, PrEP for Adolescent Girls and Young Women in Kenya, Preliminary Results Presentation, October 2016

# Rollout Scenarios – Approach 1

## Completed Example of Kenya



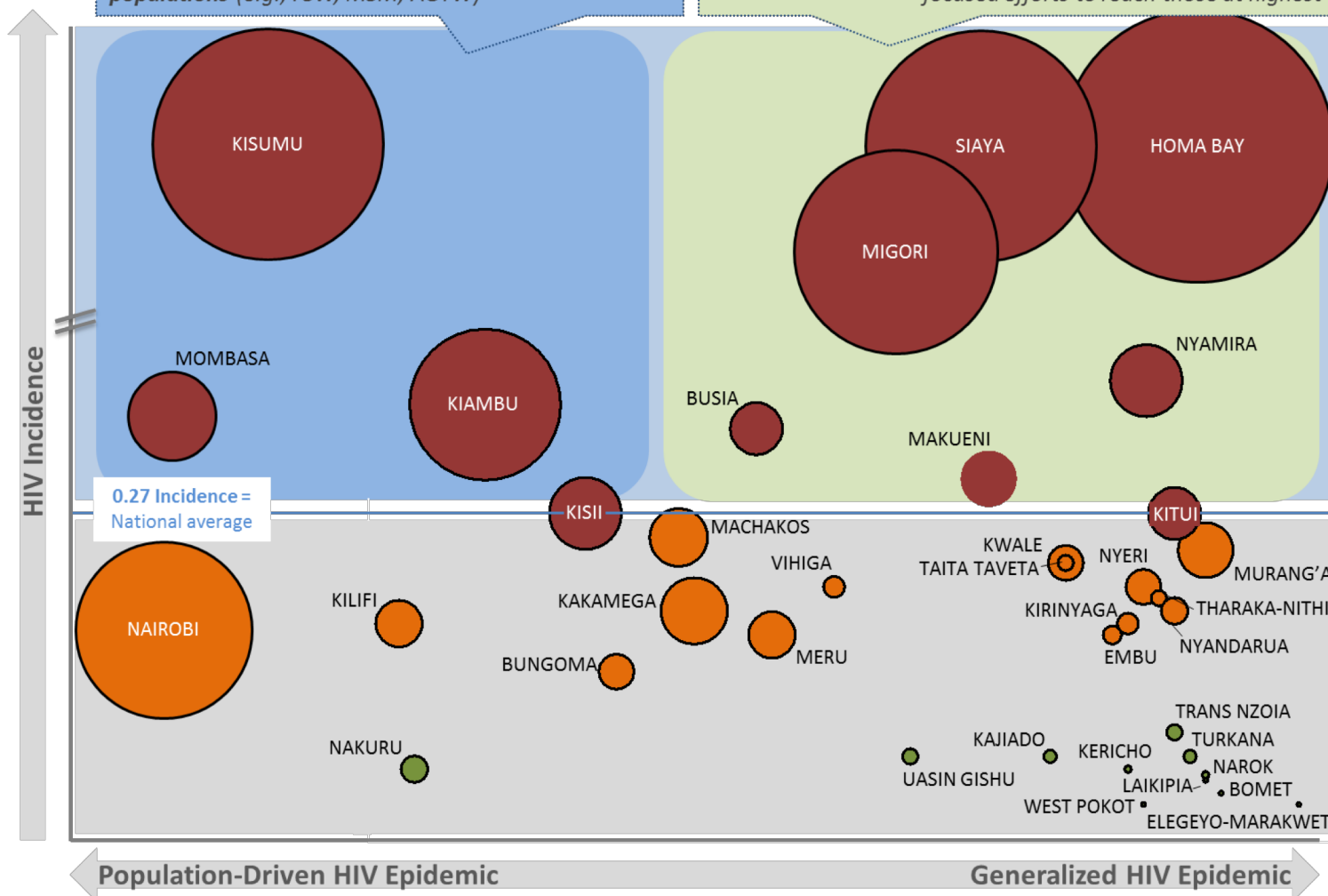
Completed example from Kenya

### Counties mapped by incidence and presence of key populations, 2015

Circle size represents number of 2015 adult new infections

High-incidence counties with significant key populations should consider **PrEP rollout targeted high-risk populations** (e.g., FSW, MSM, AGYW)

High-incidence counties with generalized HIV epidemics should consider **broad PrEP rollout to the general population** with focused efforts to reach those at highest-risk



#### Counties for “general population” rollout

- Homa Bay, Siaya, and Migori have few key populations but high rates of HIV incidence amongst *sero discordant couples, AGYW, and bridging populations*
- Nyamira, Makueni, Busia, and Kitui have similar profiles but comprise far fewer new infections

#### Counties for “targeted population” rollout

- Kisumu is a significant contributor of new infections driven by *key populations (MSM, FSW) and bridging populations (e.g., fisherfolk)*
- Mombasa, Kiambu, and Kisii have similar profiles but comprise far fewer new infections
- Nairobi has a moderate rate of incidence, but contributes significantly to new infections and may also be prioritized for targeted oral PrEP rollout

# Rollout Scenarios – Approach Two

## Rollout Scenario Definition



The second approach to rollout analysis starts with generating “clusters” of counties/districts that could be prioritized for oral PrEP rollout based on different characteristics or public health goals

### Oral PrEP Rollout Scenarios

#### Incidence Based Rollouts

1

Identify clusters of counties based on incidence/new infections here. It is helpful to look at both incidence rates and new infections as they yield different results (e.g., large cities have low incidence rates but high numbers of new infections).

2

*Example rollout scenarios include:*

- Incidence rate based scenarios (i.e. groups of counties/districts that all exhibit rates above a certain incidence rate level)
- New infection based scenarios (i.e. groups of counties/districts that all exhibit # of new infections above a certain level)
- Different groups of counties /districts based on national HIV prevention strategy

3

4

#### Population Based Rollouts

5

Identify rollout scenarios based on population groups here. These could be groups of counties/districts where data shows that there are high concentrations of a particular population and/or where programs are available that could support the population group

6

*Example rollout scenarios include:*

- Sero-discordant couples (i.e. counties/districts with high #s of PLHIV and ART coverage)
- Adolescent girls and young women (i.e. counties/districts with high #s of AGYW new infections or programs focused on AGYW)
- Key populations such as FSW, MSM and PWID
- Other sector/industry based populations such as truck drivers, mineworkers, commercial farm workers, fisher folk, etc.

7

8



# Rollout Scenarios – Approach Two

## Rollout Scenario Description (1/2)



For each scenario, note the key qualitative and quantitative data points below.

### Incidence Based Rollouts

#### 1 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach (e.g., delivery channels)

#### Target counties/districts

- List counties and districts for each scenario

#### 2 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

#### 3 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

#### 4 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

# Rollout Scenarios – Approach Two

## Rollout Scenario Description (2/2)



### Population Based Rollouts

For each scenario, note the key qualitative and quantitative data points below.

#### 1 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach (e.g., delivery channels)

#### Target counties/districts

- List counties and districts for each scenario

#### 2 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

#### 3 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

#### 4 <Input name of scenario>

**Incidence:** x%-x%

**Annual new infections:** ~% of adult new infections

**Districts and Population:** # of districts, # of 15 + population

#### Opportunity:

*What are the strengths of this scenario?*

*What are the limitations of this scenario?*

#### Delivery Approach

- Define delivery approach

#### Target counties/districts

- List counties and districts for each scenario

# Rollout Scenarios – Approach Two

## Rollout Scenario Cost / Impact Estimates



Using existing data, rough cost and impact estimates can be developed for each scenario

### Oral PrEP Rollout Scenarios Potential Impact and Cost

	Scenario	Potential Impact	Potential Cost
Incidence-Based	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
Population-Based	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)
	# <Input name of scenario>	HIGH/MEDIUM/LOW IMPACT ~% adult new infections	HIGH/MEDIUM/LOW TOTAL COST # of counties (# 15+ population)

- Potential impact is the percent of national HIV infections that occur in the counties/districts included in the scenario (e.g., new infections in scenario counties / total national new infections)
- While it will differ for each country, the following impact thresholds could be applied:
  - High: >49% of new HIV infections
  - Medium: 20-49% of new HIV infections
  - Low: <20% of new HIV infections

- Potential cost is based on the # of counties and size of the 15+ population for each of the scenarios (larger population, more districts leads to higher total costs for oral PrEP delivery)
- This provides a high-level indication of cost to highlight tradeoffs and considerations for decision-making
- These cost and impact hypotheses will need to be complemented with impact and cost effectiveness modeling

# Rollout Scenarios – Approach Two

## Completed Example of Zimbabwe



*Note: Delivery approach, potential cost and impact are directional and will need to be refined with additional research, analysis and impact/cost-effectiveness modelling*

### Oral PrEP Rollout Scenarios

#### District Rollouts

**1** Highest incidence districts

**2** ZNASP hotspot districts

**3** Districts with >1,000 annual new HIV infections

**4** Districts with >500 annual new HIV infections

#### Population Rollouts

**5** Serodiscordant couples

**6** Adolescent girls and young women

**7** Miners and commercial farmworkers

**8** FSW, MSM and truck drivers

# Rollout Scenarios – Approach Two

## Completed Example of Zimbabwe



### 1 Highest Incidence Districts

**Incidence:** 1.2% - 1.9%

**Annual new infections:** ~40% adult new infections

**Districts and Population:** 13 districts, 1.6M 15+ population

**Opportunity:** Provides significant impact with less expansive and expensive rollout in circumstances with limited resources; all districts are ZNASP hotspots

#### Delivery Approach:

Comprehensive generalized rollout

#### Target counties/districts

- All districts of Matabeleland South, Manicaland and Bulawayo

**Comprehensive generalized rollouts** to all high-risk populations via public health facilities, rural health centers, family planning and SRH clinics

**More limited tailored rollouts** based on localized drivers of HIV in each district

### 2 ZNASP Hotspot Districts

**Incidence:** 0.4% - 1.9%

**Annual new infections:** ~55% adult new infections

**Districts and Population:** 26 districts, 3.0M 15+ population

**Opportunity:** Captures over 50% of new infections, but likely requires ~2x resources than Scenario #1; all districts are ZNASP hotspots

#### Delivery Approach:

Comprehensive rollout to high-incidence districts; more limited rollout to medium and low incidence districts

#### Target counties/districts

- **High:** Mat S. Manicaland, Bulawayo, as well as Mazowe (Mash C.), Marondera (Mash E), and Bubi (Mat N.)
- **Medium:** Mat. North and Mashonaland districts, including Nkayi, Centenary, Bindura, Shamva, Mount Darwin and Makonde
- **Low:** Chegutu, Hurungwe and Kadoma

### 3 Districts with >1,000 Annual New Infections

**Incidence:** 0.5% - 1.7%

**Annual new infections:** ~55% adult new infections

**Districts and Population:** 15 districts, 3.6M 15+ population

**Opportunity:** Captures same number of new infections as Scenario #2 but less resource intensive given rollout to fewer districts; over 50% of districts are ZNASP hotspots

#### Delivery Approach

- Comprehensive rollout to More limited rollout in

#### Target counties/districts

- **High:** Kwekwe, Gweru, Mutare, Marondera, Mazowe, Murehwa, Gwanda and Bulawayo
- **Medium:** Masvingo and Mashonaland East districts, including medium incidence Masvingo and Goromonzi
- **Low:** Harare

### 4 Districts with >500 Annual New Infections

**Incidence:** 0.4% - 1.9%

**Annual new infections:** ~85% adult new infections

**Districts and Population:** 38 districts, 6.0M 15+ population

**Opportunity:** Covers districts with majority of new HIV infections but requires the greatest resource allocation of any scenario; over 50% of districts are ZNASP hotspots

#### Delivery Approach

Comprehensive rollout to high-incidence districts; more limited rollout to medium and low incidence districts

#### Target counties/districts

- **High:** See alternative sheet
- **Medium:** See alternative sheet
- **Low:** See alternative sheet

# Rollout Scenarios – Approach Two

## Completed Example of Zimbabwe



### Impact and Cost Estimates for Oral PrEP Rollout Scenarios

	Scenario	Potential Impact	Potential Cost
County Rollout	<b>4</b> High + medium new infections	<b>HIGHER IMPACT</b> ~90% adult new infections	<b>HIGHER TOTAL COST</b> 19 counties (16M 15+ population)   some demo project coverage
	<b>5</b> Extending DREAMS and B2S to full county	<b>HIGHER IMPACT</b> ~70% adult new infections	<b>HIGHER TOTAL COST</b> 12 counties (10M 15+ population)   good demo project coverage
	<b>2</b> High incidence cluster	<b>HIGHER IMPACT</b> ~65% adult new infections	<b>MODERATE TOTAL COST</b> 11 counties (7M 15+ population)   good demo project coverage
	<b>3</b> High new infections	<b>HIGHER IMPACT</b> ~60% adult new infections	<b>MODERATE TOTAL COST</b> 7 counties (7M 15+ population)   good demo project coverage
	<b>1</b> Highest incidence cluster	<b>MODERATE IMPACT</b> ~45% adult new infections	<b>LOWER TOTAL COST</b> 4 counties (2M 15+ population)   good demo project coverage
Population Rollout	<b>6</b> High PLHIV to reach discordant couples	<b>MODERATE IMPACT</b> ~30% adult new infections (based on SDC proportion)	<b>LOWER TOTAL COST</b> 12 counties   946K PLHIV (15+)   good demo project coverage
	<b>8</b> High + medium key populations	<b>LOWER IMPACT</b> ~20% adult new infections (based on key pop. proportion)	<b>LOWER TOTAL COST</b> 16 counties   101K key populations   some demo project coverage
	<b>7</b> High key populations	<b>LOWER IMPACT</b> ~10% adult new infections (based on key pop. proportion)	<b>LOWER TOTAL COST</b> 6 counties   66K key populations   good demo project coverage