

Lessons from the early HIV Epidemic

A way forward

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Our early impressions 1.

Understanding the HIV epidemic

- The HIV epidemic reflected **promiscuity**
- **Place** was an important factor in driving the epidemic in Africa

Our early impressions 2.

Main Risk Groups and factors

- **High Risk Group Females (HRGf):** located in towns
- **High Risk Group Males (HRGm):** *Index cases & mobile*
- **Low risk groups (LRGs):** mostly rural but also in towns
- **Epidemic:** mainly urban based
- **STDs:** may be a cofactor in HIV transmission

Risk Groups in the Epidemic in Africa

High risk group females (HRGfs): these included prostitutes, bar girls and girls for favours.

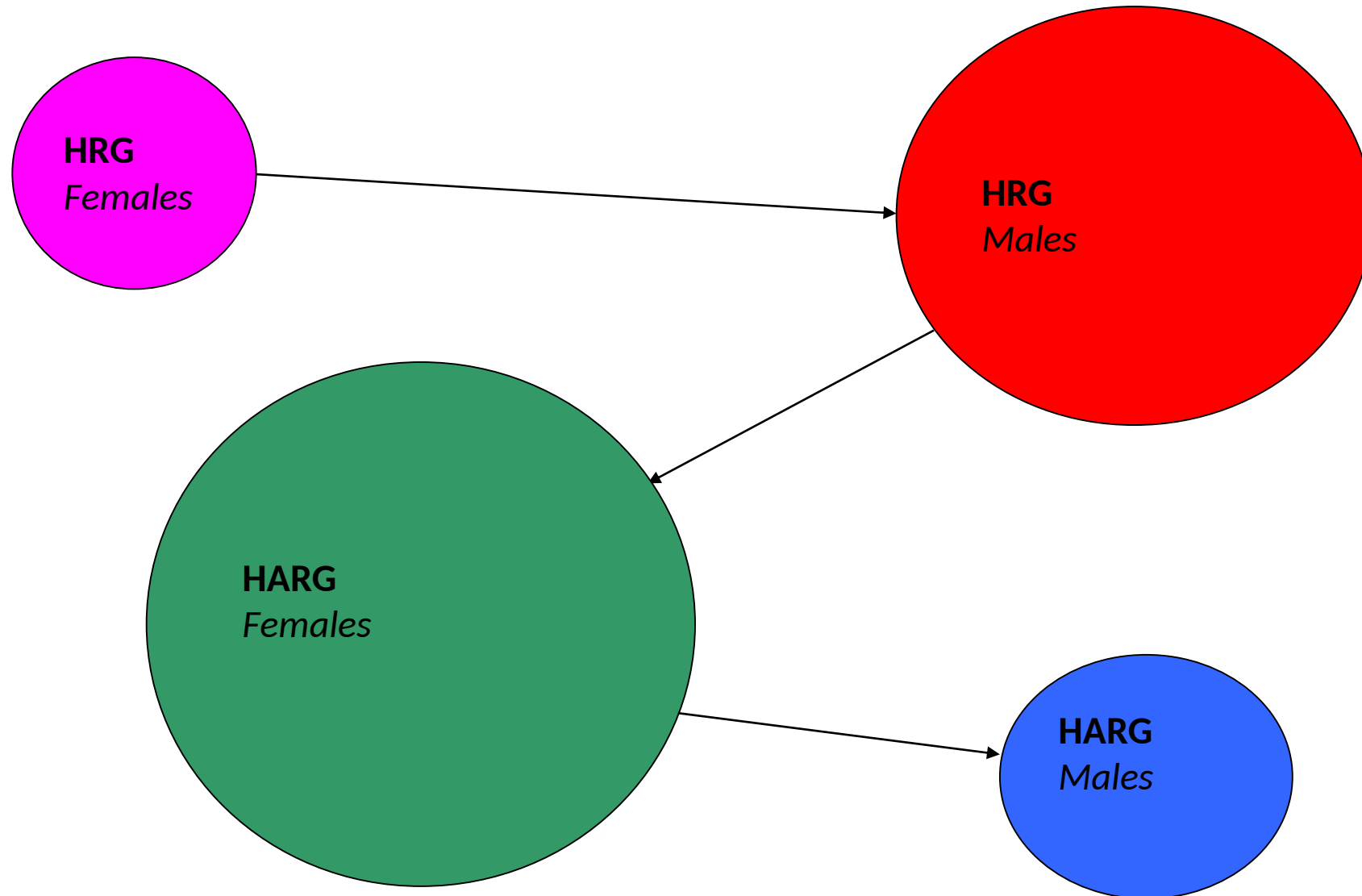
High risk group males (HRGms): who target HRGfs & (HARGfs):

High at risk group females (HARGfs): female partners of promiscuous males in particular younger females*

* *Kiwakukki (women against AIDs)* was started in Moshi Tanzania in 1990 because of this group

Risk Groups in the HIV epidemic in Africa

HRG: high risk groups, **HARG:** high at risk groups



The model for the epidemic

Interaction of 4 main variables

1. Promiscuity

greater than one stable partner for life

2. Clustering

1. HIV stage

1. PRIMARY INFECTION

2. Latent asymptomatic infection

3. Aids

2. Sexually transmitted diseases

Model for HIV disease

Promiscuity: *Concurrency*

Promiscuity: *Greater than one sexual partner in a lifetime*

Concurrency: *Greater than one sexual partner at the same time**

Same time*: *hours, days, weeks, months, years*

Model for HIV disease

“Geographic Clustering”

Definition: “to travel to a geographically defined urban or urban like setting or place to have sex”

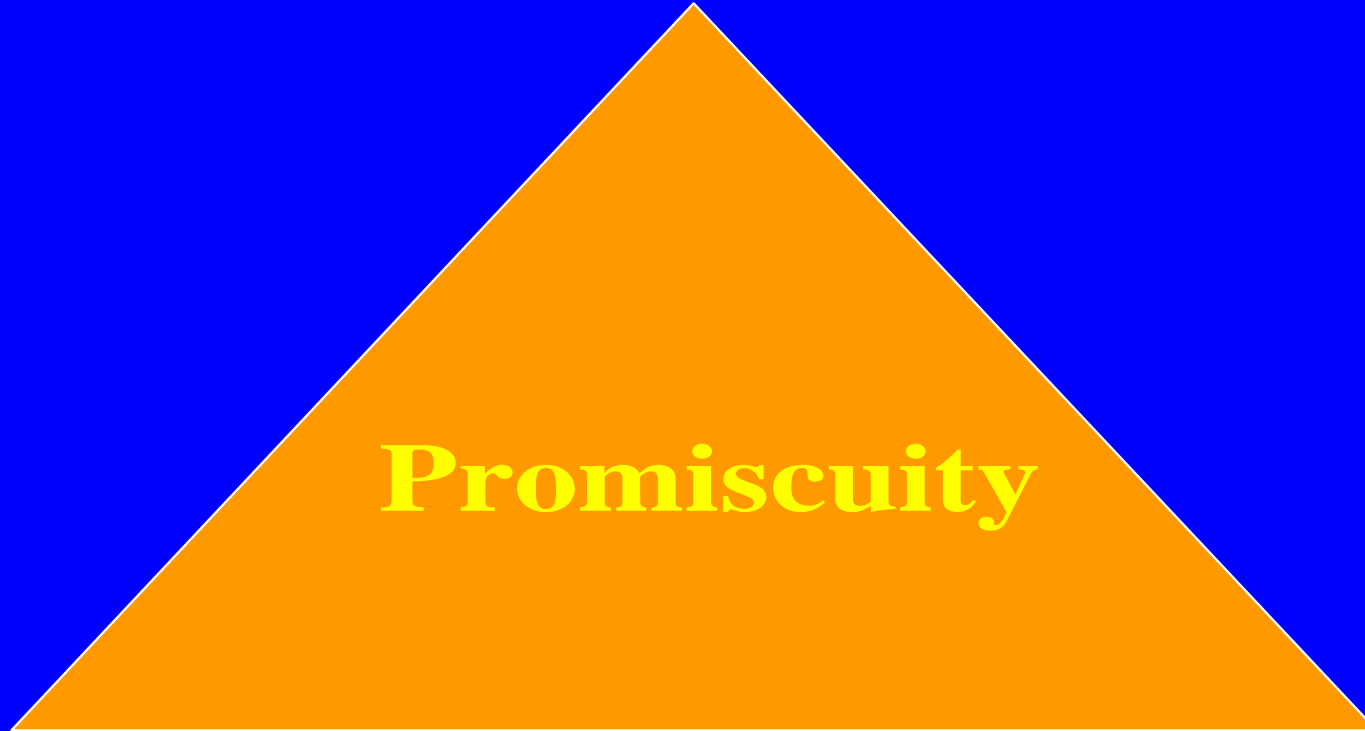
Risk Factors for HIV Transmission

STDs

Promiscuity

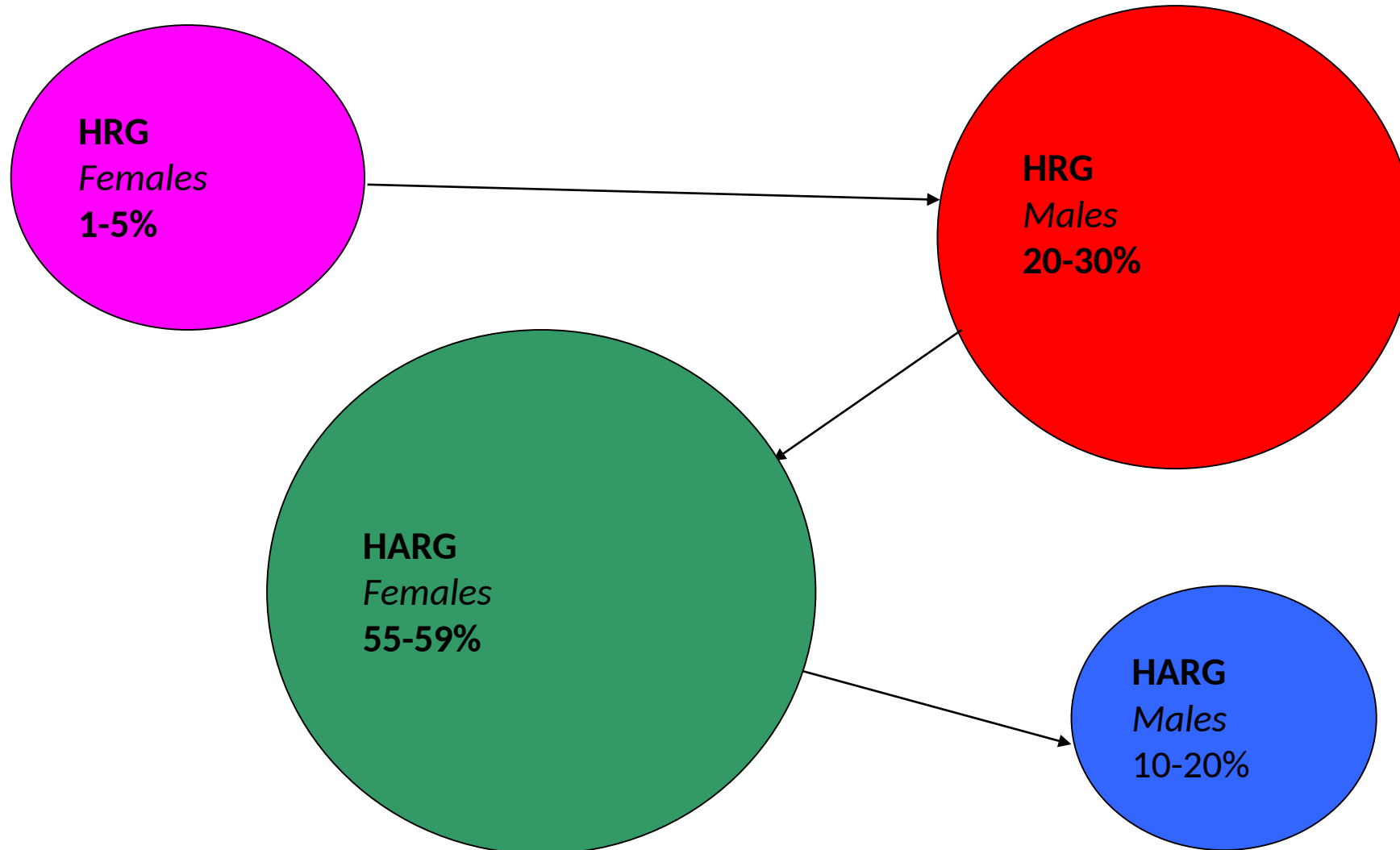
**Geographic
Clustering**

**HIV
Stage**



Estimated attributable burden of the HIV epidemic in Africa

HRG: high risk groups. **HARG:** high at risk groups



Epidemiology of HIV Epidemic: *UNAIDS** **Global: Burden of HIV in 2016**

HIV infected persons	36.7 millions (<i>adults: 34.5 millions</i>)
New HIV infections	1.8 million
AIDs related deaths	1 million

Epidemiology of HIV Epidemic: *UNAIDS**

Sub Saharan Africa: Burden of HIV *in 2016*

HIV infected persons **25.5 millions**

New HIV infections **1.16 million**

AIDs related deaths **3/4 million**

Epidemiology of HIV Epidemic: *UNAIDS** *Tanzania***: Burden of HIV in 2016

HIV infected persons **1.4 millions**

New HIV infections **55,000**

AIDs related deaths **33,000**

UNAIDS* *Data report 2017*

Population: *55 million*

A day in the HIV epidemic **UNAIDS***

Global: 2016

New HIV infected persons **5,000** (*adults >90%*)

Age group 15-24 yrs. **37%**

Females Age Group 15-24 yrs. **22%, (SSA: 26%**)**

UNAIDS* *Data report 2017*

** *make up 10% of population*

Knowledge of HIV status, ART uptake UNAIDS 2016

East and Southern Africa

People living with HIV who know their HIV status: **76%**

People living with HIV on ART: **60%**

People living with HIV who know are virally suppressed: **50%**

Main Intervention Target Groups in SSA

High Risk Group *females*

High Risk Group *males*

High at Risk Group: *females: 15-24 yrs.*

The way forward 1.

Prevention: **Education:** *Person Based*

Education: *needs a much more rigorous & targeted approach.*

The way forward 2.

Prevention: **Barrier protection:** *Person based*

The “**condom**” is to **HIV**
as the

The “**mosquito net**” is to **malaria**

The way forward 3.

Prevention: **PrEP**: *Targeted population based*

ART preexposure prophylaxis; Truvada: *High Risk Groups*

ART intermittent post exposure Rx: *High at Risk Groups*

The way forward 4.

ART: Population based

Test and treat: whole at risk populations.

This may be the best option

Immunization

Not available anywhere in the world for foreseeable future

Prevention of HIV infection

ABC

A: Abstinence

B: Be Faithful

C: Condoms

