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# Implementing and evaluating HIV self-testing in West Africa

Sophie Calmettes (Solthis)
Joseph Larmarange (IRD)

EPH preconference | Marseille | 20 November 2019

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Solidarité Thérapeutique et Initiatives pour la Santé

IRD Institut de Recherche pour le Développement FRANCE

Unitaid
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# Context

# HIV self-tests (HIVST)

- New diagnosis tool
- Recommended by WHO since 2016 as an additional testing strategy

- STAR
  - Funded by Unitaid
  - Phase 1 (2015-2017) in Malawi, Zimbabwe, Zambia
  - Diagnostic accuracy, user preferences, social harms, linkage to care
  - Market creation & Price reduction
  - Mainly primary distribution
  - Call for proposals launched by Unitaid for a project in Western Africa: an operational project with embedded evaluation/research component

HIV SELF-TESTING AFRICA INITIATIVE


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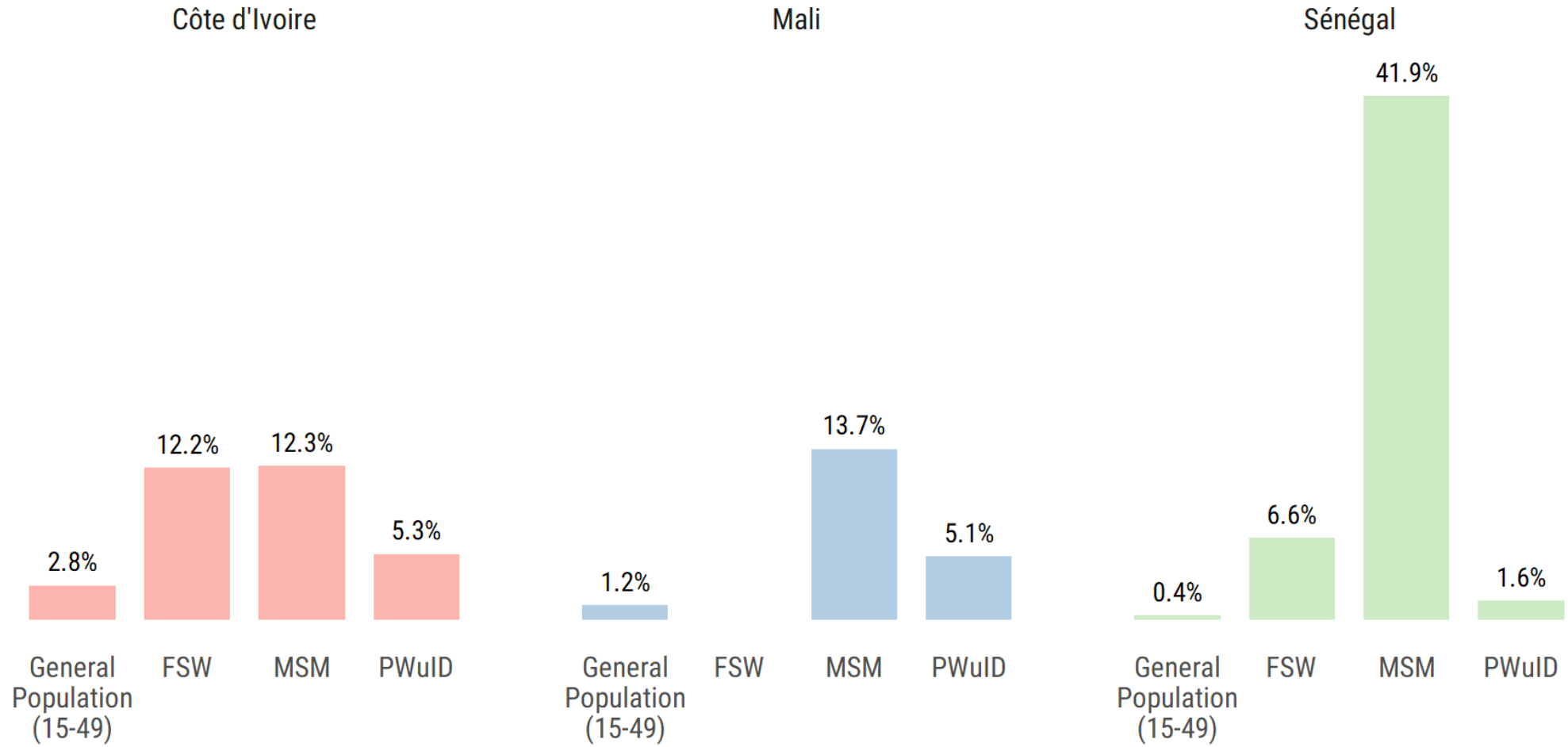
# West Africa: mixed HIV epidemics

**HIV prevalence by country and sub-population**

Source: Unaids data 2018

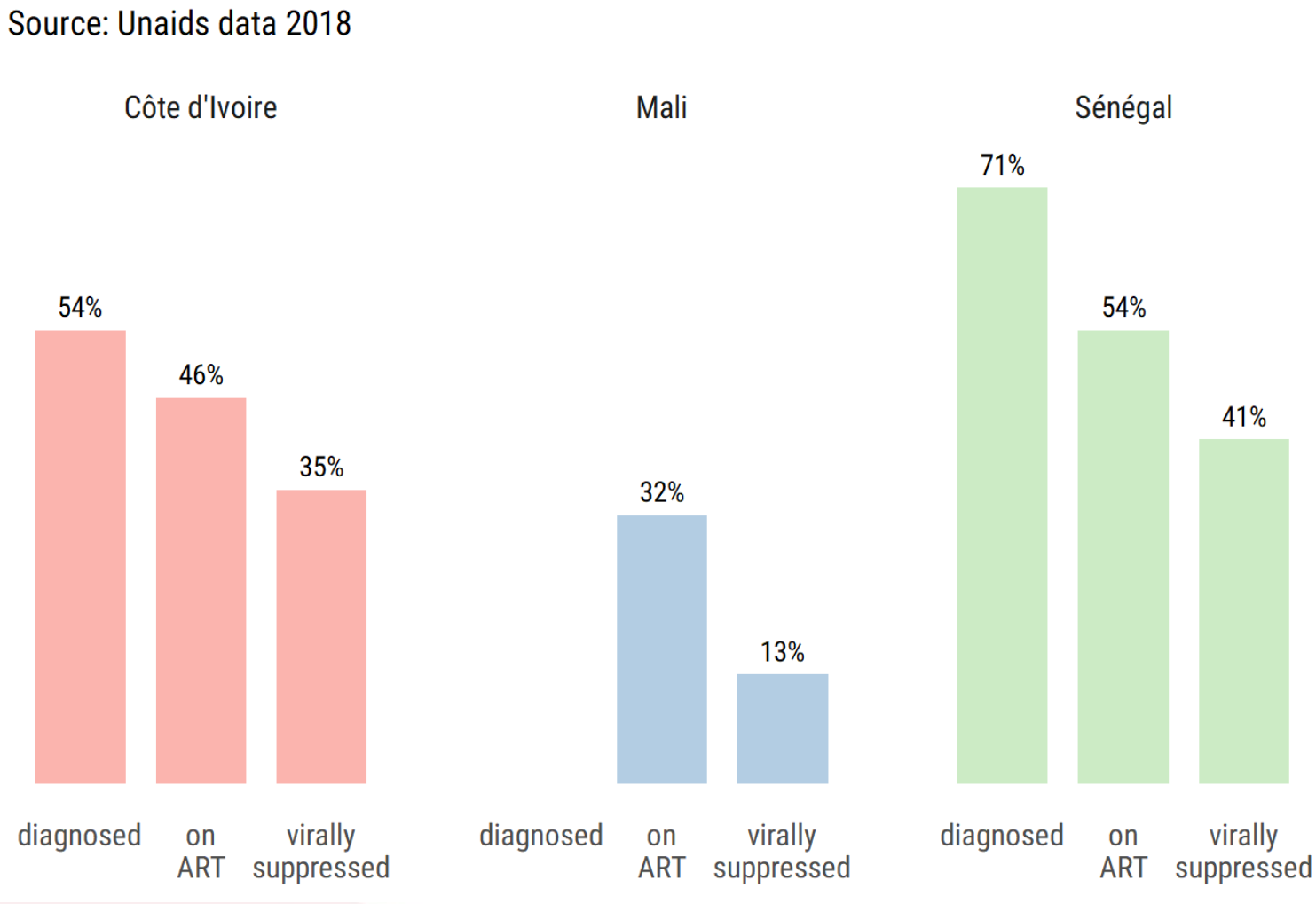


# HIV Care cascade

**Testing** constitutes the **main gap** in the cascade

› Testing is relatively high among those reached by NGOs (e.g. 70% of FSWs recently tested in PrEP-CI Study in Côte d'Ivoire)

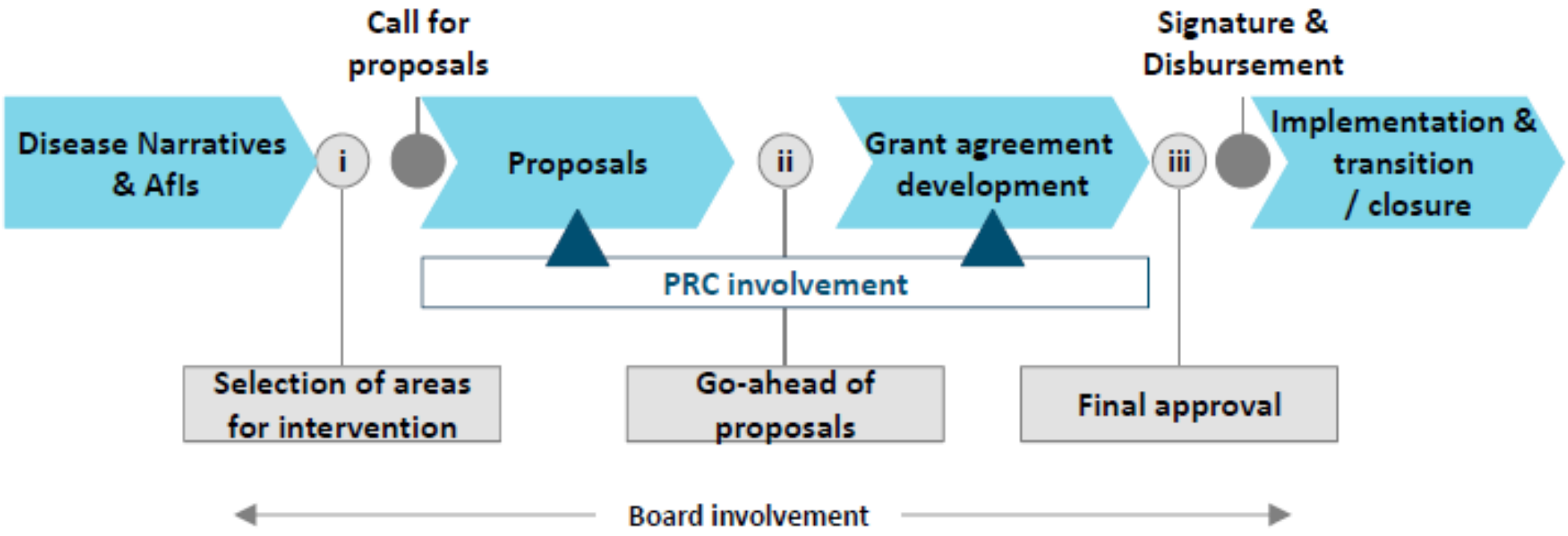
**How to reach those unreached by current strategies?**



# Building a consortium

(January – June 2017)

# UNITAID's process for proposal selection and grant making



# Writing a proposal

January 2017:
Unitaid's call for a project promoting HIVST in Western & Central Africa

Solthis interested in responding that call

Setting up a consortium

- Contact with 2 research teams from IRD (Ceped & TransVIHMI) with previous collaborations
- Contact with Sidaction for their community engagement with local NGOs in West Africa

Contacts with Ministries of Health of 7 Western and Central African countries

- Agenda too tight to allow engagement of local NGOs
- Discussion at high level only at this stage

March 2017:
proposal submission

- 38 pages
- 7 countries, ~1 million HIVST
- Support letters from the countries
- 28 millions USD

June 2017:
Consortium selected by Unitaid

- Beginning of Grant Agreement Development (GAD)

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# Developing the project

(June 2017 – May 2018)

# Grant Agreement Developement

- Unitaid's initial requests:
  - Reducing the number of countries
  - Reduction of budget and human resources accordingly
  - Activities to be implemented through local NGOs already receiving funding from Pepfar or Global Fund

- From June 2017 to May 2018
  - Continuous negotiation with Unitaid
  - 5 versions of all documents submitted and reviewed by Unitaid

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# Countries selection

- From 7 to 4, then to 3 countries
  - » Discussion regarding Cameroun (issues in terms of feasibility)
  - » Political will expressed by countries taken into account
  - » Diversity of epidemiological contexts
  - » Discussions mainly between Unitaid and the consortium
    - low involvement of countries in the final choice
- August 2017
  - » Final selection: Côte d'Ivoire, Mali & Sénégal

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# Budget for Grant Development

- Unitaid provides a small budget for GAD phase

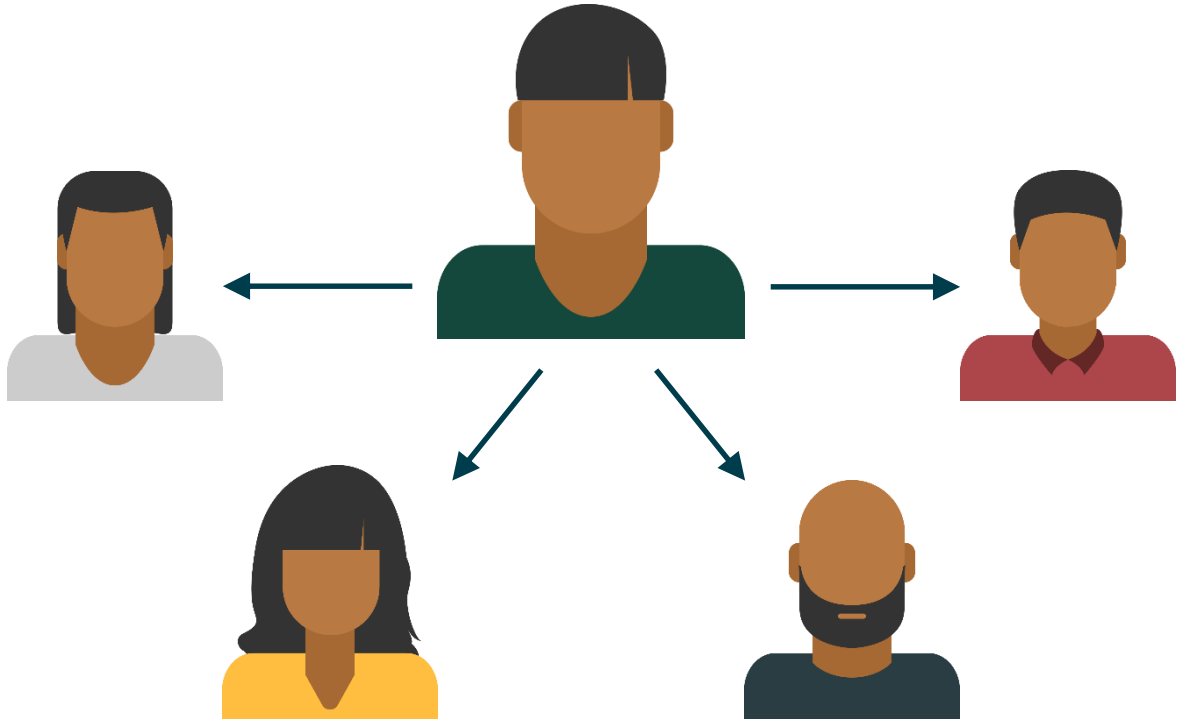
- Country visits
  - We asked for two per country to meet national authorities and local actors
  - Only one visit per country was granted
  - Country visits used to discuss and define population targets and HIVST distribution strategies
  - Strategies have been renegotiated with Unitaid after country visits

- Very short timeline
  - Initially, project plan was supposed to be finalised for February 2018

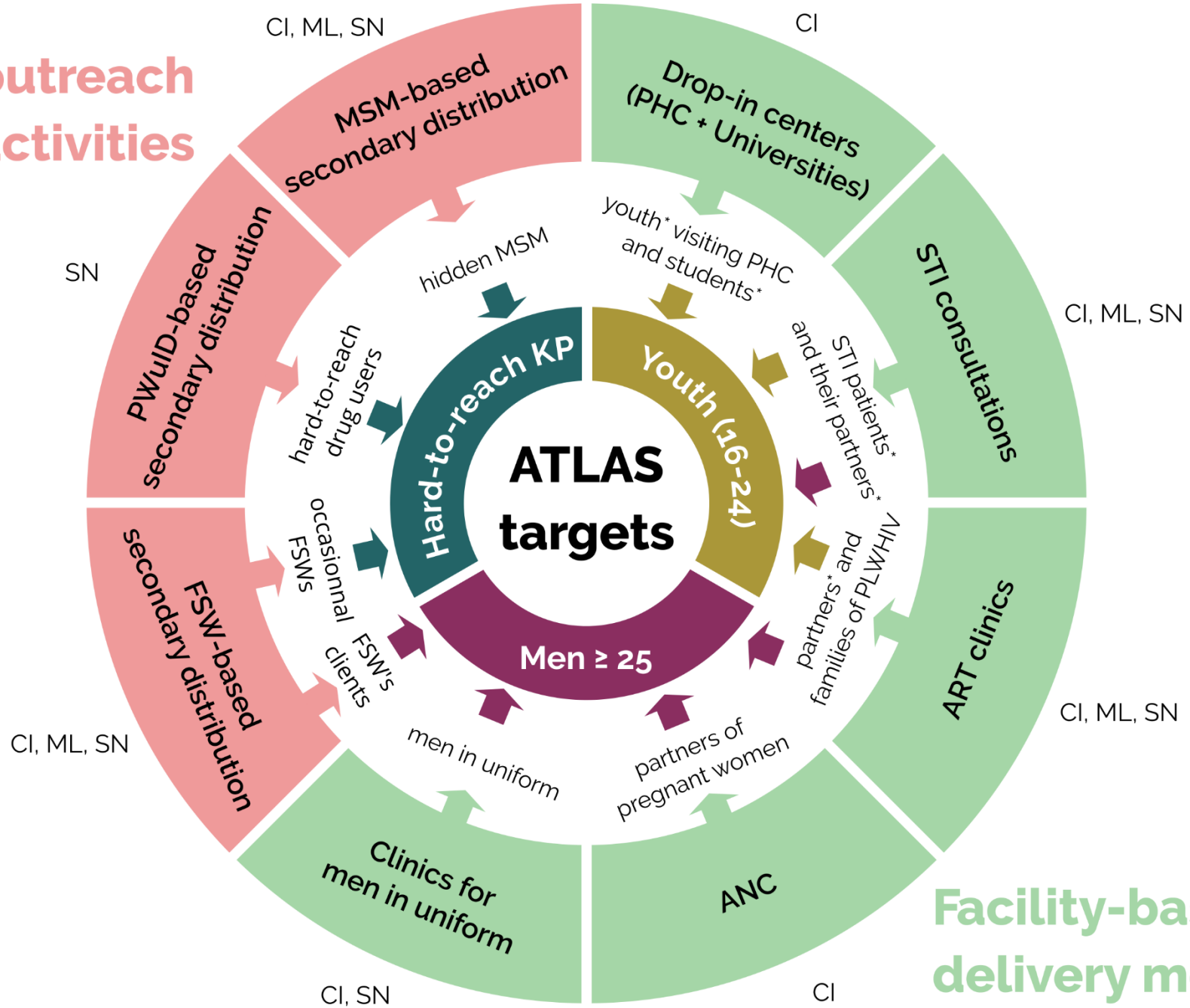
# HIV self-tests

**Primary distribution**
for personal use

**Secondary distribution**
to be redistributed to
partners and relatives

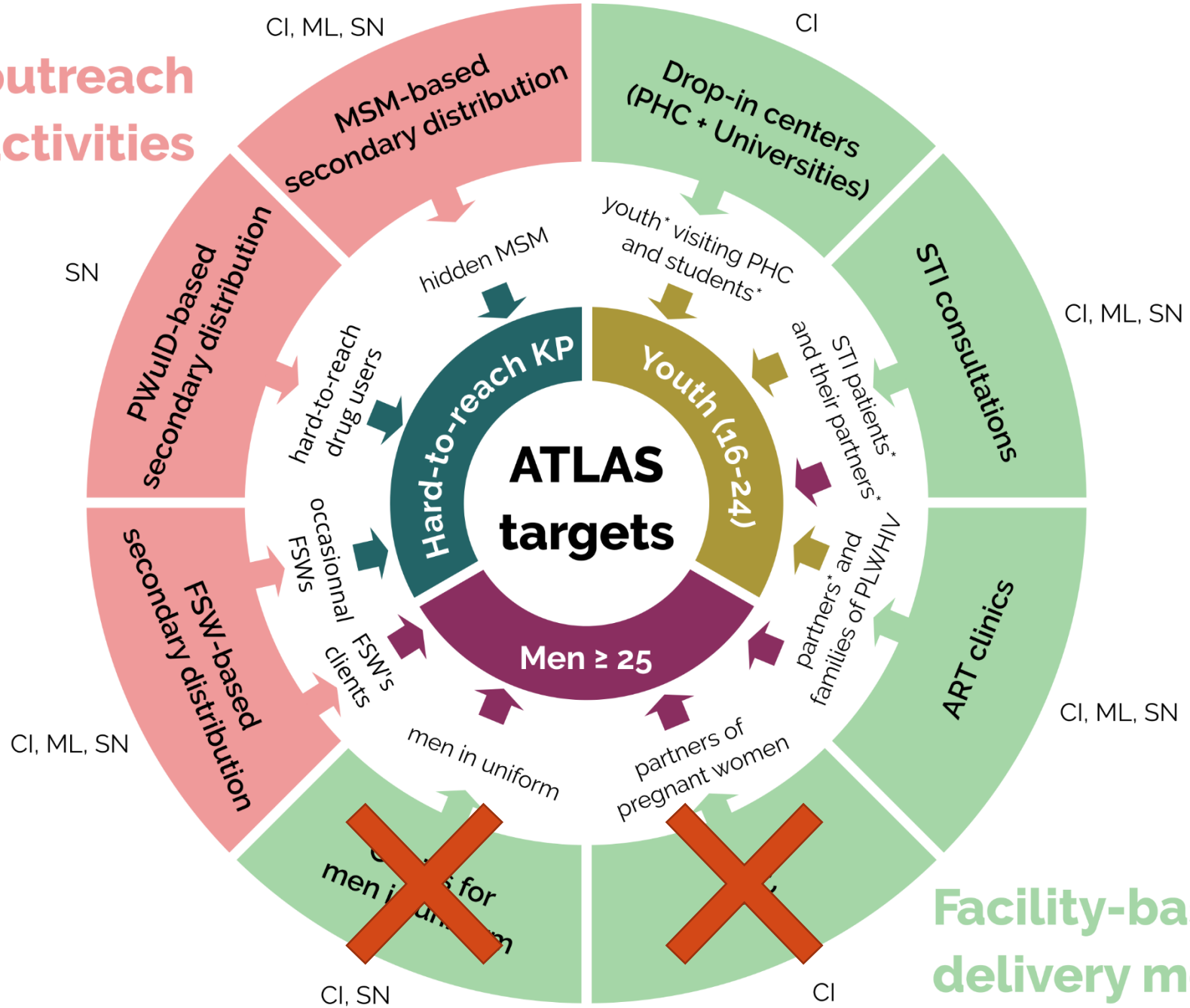


# ATLAS Strategy
(January 2018)




* some of them could also be part of key populations

# ATLAS Strategy
(March 2018)




* some of them could also be part of key populations

# Integration of HIVST in preexisting activities

- Identification of local implementers with Ministries of Health
  - Based on current programmes funded by Pepfar or Global fund

- Sidaction decided to leave the consortium
  - Their historical partners were not were not necessarily sub-recipients of Pepfar/GF grants
  - Not having local teams, low added value of their participation in the consortium

# Embedding research

- HIVST distribution strategies has been designed regardless of the ease with which they can be evaluated
  - In particular, secondary distribution without any tracking
- Research plan was developed based on the operational strategy
  - Research activities had to evolve during GAD to adapt to strategy changes
- Strong request from Unitaid to collaborate with other Unitaid-funded projects
  - STAR project in Eastern & Southern Africa
  - MTV Shuga Babi project
- Challenges for implicating local researchers in a tight agenda
  - Use of preexisting partnerships (PAC-CI, CRCF)
  - Most of recruited post-doc and PhD students are African
  - Involvement of national co-investigators, representatives of MoH, during protocol development (i.e. after GAD)

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# 6 Research Work Packages

## Social contexts

**KP**
**qualitative survey**

*leaded by*
*A Desclaux (IRD)*
*partnership with*
*CRCF Dakar*

**Partners of PLWHIV**
anthropological survey

*leaded by*
*D Pourette (IRD)*

## Evaluation of ATLAS impacts

**Coupons survey**

*leaded by*
*J Larmarange (IRD)*
*partnership with*
*PACCI Abidjan*

**Population-based survey**
(Bas-Sassandra, CI)

*leaded by*
*I Birdthistle (LSHTM)*
*in partnership with*
*MTV Shuga project*

**Costing**

*leaded by*
*F Terris-Prestholt (LSHTM)*

**Modelling**

*leaded by*
*MC Boily*
*(Imperial College)*

# Lessons learned

# Research/Implementation articulation

- A co-construction between implementers (Solthis) and researchers (IRD)
  - Mobilization of the state of scientific knowledge to design the operational strategies
  - Research questions defined to address the field actors' concerns in terms of scale-up
  - Research must feed implementation / Implementation must guide research

- A limited place for local actors during the development phase
  - Continuous negotiation with Unitaid (strong constraint)
  - Solthis maintained ongoing discussion with national authorities (MoH, HIV programmes)
    - but the latest were poorly involved in decision making
    - no joint meeting between Unitaid, Solthis/IRD and countries
  - Limited involvement of local implementing NGOs and public sites (>30) at that stage

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# How to compensate during implementation phase ?

- At operational level
  - Establishment of national technical groups
  - At project start, 6 months dedicated with local actors on the operationalization
  - Meetings once or twice a year bringing together stakeholders from the three countries (consortium meeting)
  - Adaptation of budget envelopes to each field actor according to his reality

- At the research level
  - Identification of co-investigators from ministries of health
  - Focus groups conducted at regular intervals among the 700 dispensing agents
  - Results presented and discussed during consortium meetings & country workshops
  - Development of a knowledge transfer plan: summary reports...

# LES PARTENAIRES

## Coordination

Solthis – Solidarité Thérapeutique et Initiatives pour la Santé

IRD – Institut de Recherche pour le Développement

## Bailleurs

Unitaid – Innovation in Global Health

AFD

## Partenaires de mise en œuvre

**Côte d'Ivoire**
Ministère de la Santé et de l'Hygiène Publique
PNLS

Ariel Glaser
Espace Confiance
Heartland et ses partenaires
Ruban Rouge

**Mali**
Ministère de la Santé et des Affaires sociales
HCNLS

AKS
Amprode Sahel
ARCAD Sida
Danayaso
PSI
Soutoura

**Sénégal**
Ministère de la Santé et de l'Action Sociale
CNLS

CTA
CEPIAD
Enda et ses partenaires

## Partenaire technique

World Health Organization

## Partenaires de recherche

Ceped

TransVIH MI

London School of Hygiene & Tropical Medicine

Imperial College London

INRSP

PACCI

CRCF

ENSEA

le cnam

McGill

Yale University

World Health Organization

## Projets partenaires

MTV SHUGA

HIV SELF-TESTING AFRICA INITIATIVE

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# Extra slides


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# ATLAS IMPLEMENTATION

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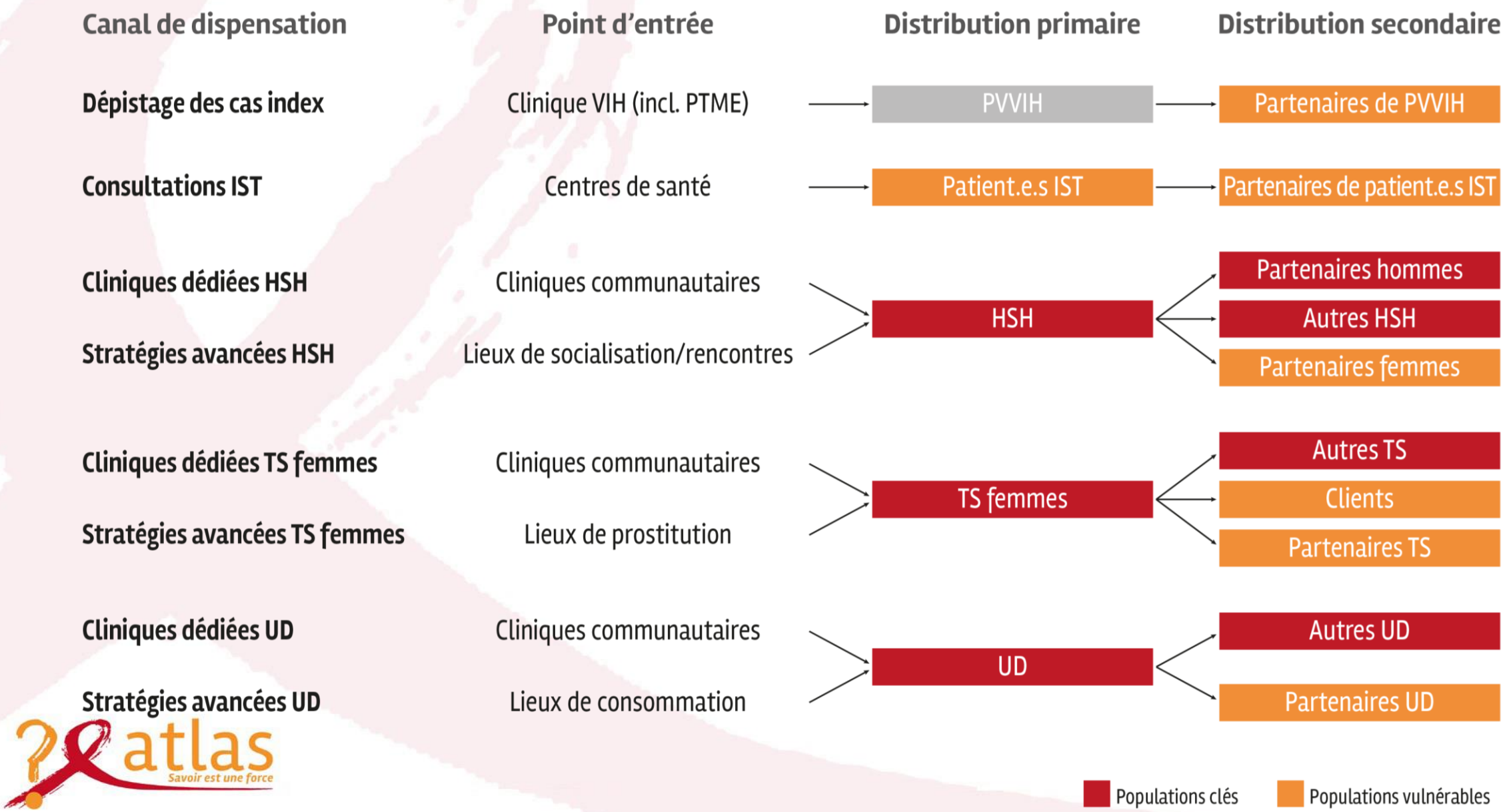
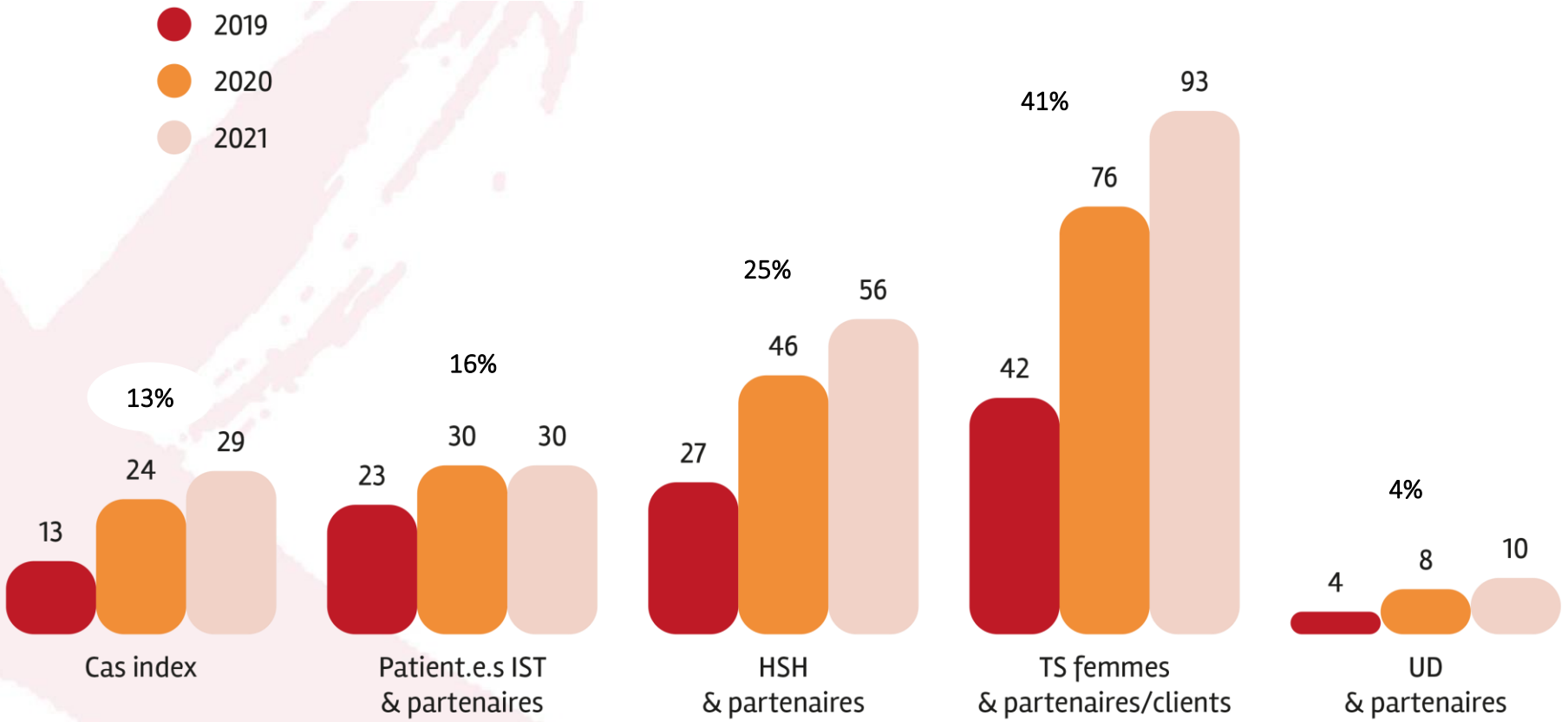
# ATLAS delivery channels

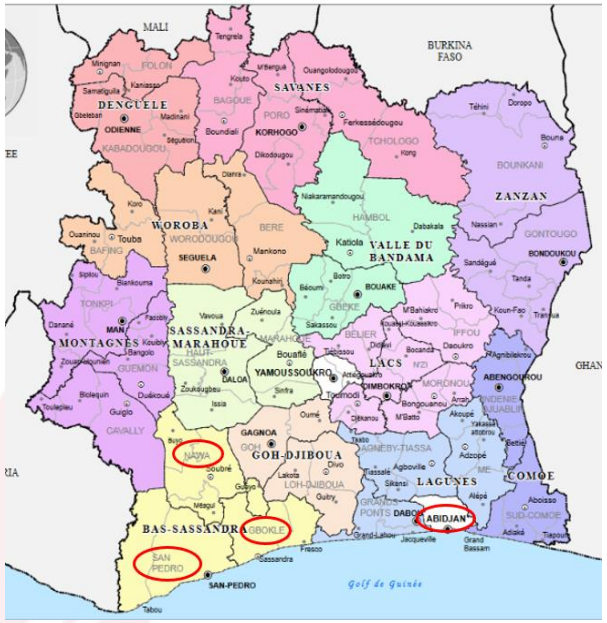


# Estimated HIVST distribution 2019-2021

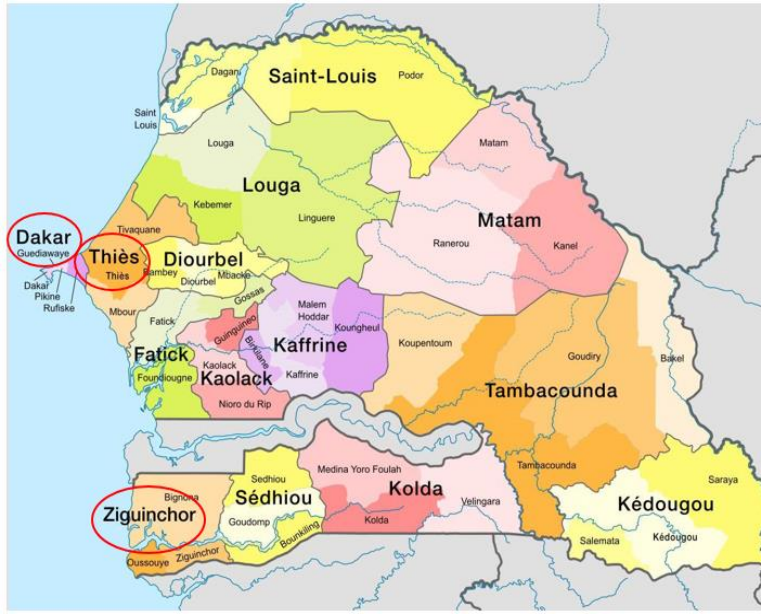
**HIVST estimated distribution per year and target population (ATLAS project)**
In thousands, estimations, June 2019



# Implementing partners and regions








**MoH (PNLS)**

**Ariel Glaser**
**Heartland Alliance**
**Espace Confiance**

**Ruban Rouge**

**MoH (CSLS)**
**HCNLS**

**AKS**
**AMPRODE SAHEL**
**ARCAD-SIDA**
**DANAYA SO**
**SOUTOURA**

**PSI Mali**

**MoH (DLSI)**
**CNLS**

**CEPIAD**
**ENDA Santé**

**CTA**

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# CONTEXT

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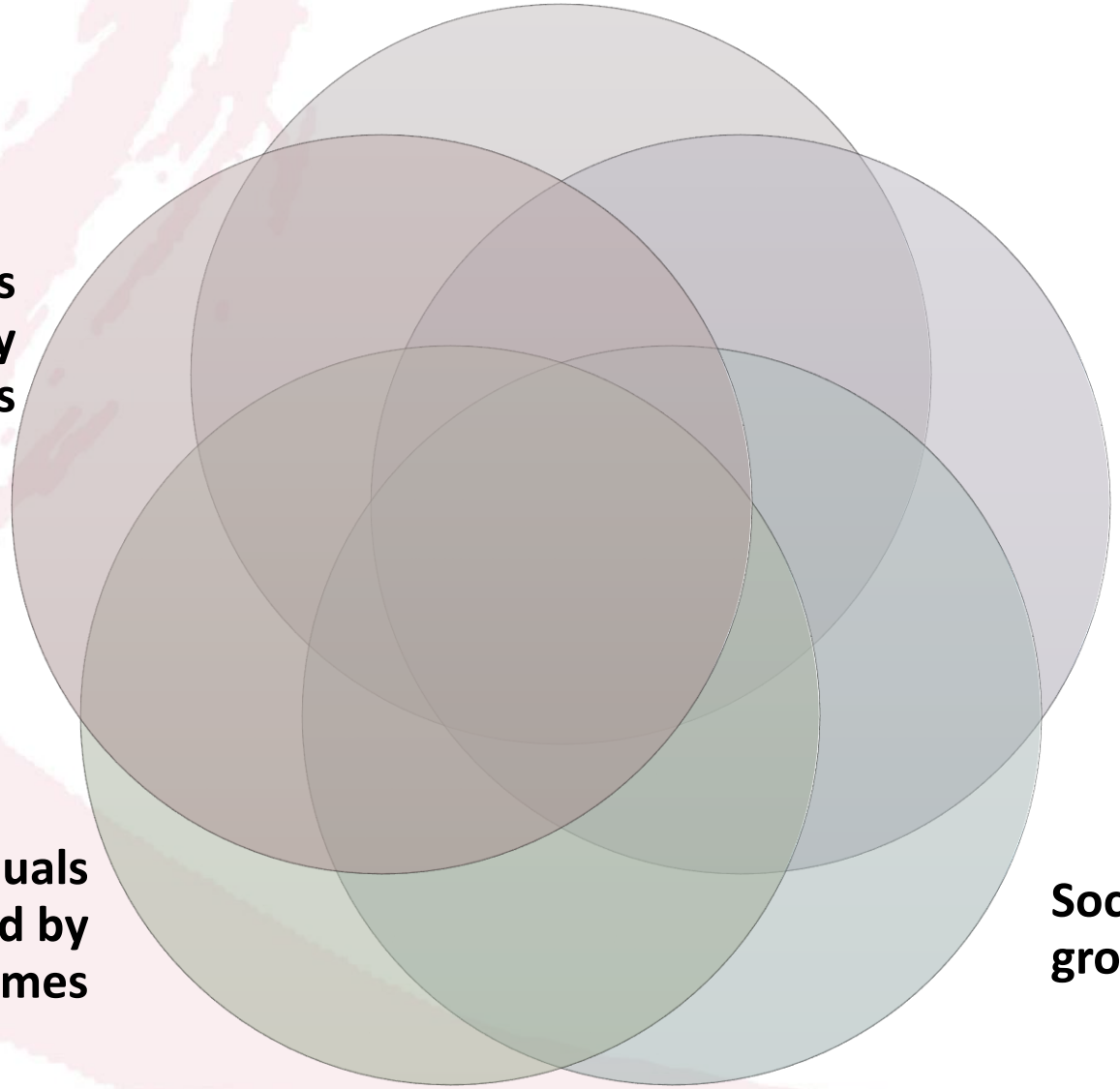
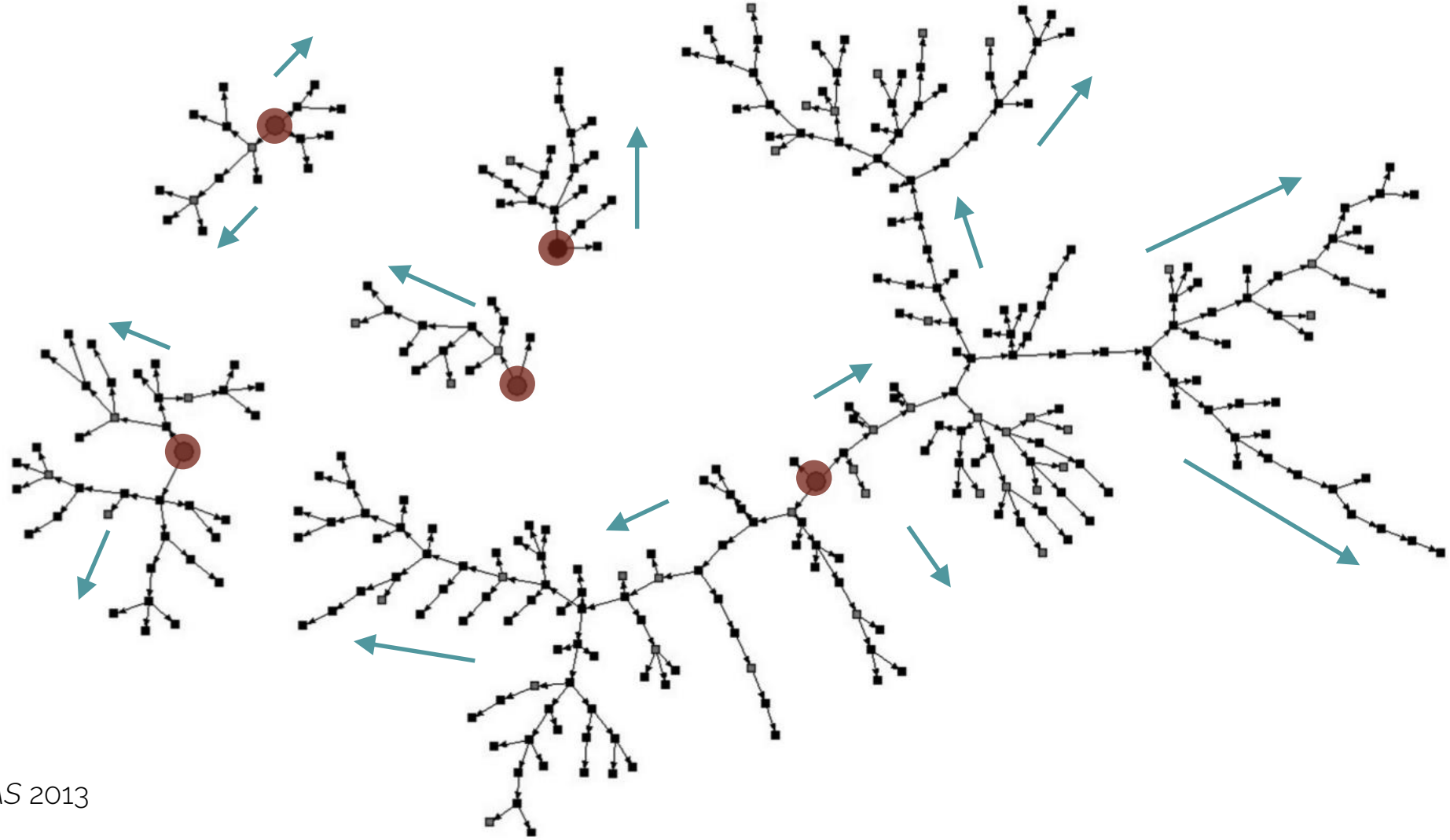

Epidemiological categories
Individuals reached by surveys
Sexual networks
Individuals reached by programmes
Social groups

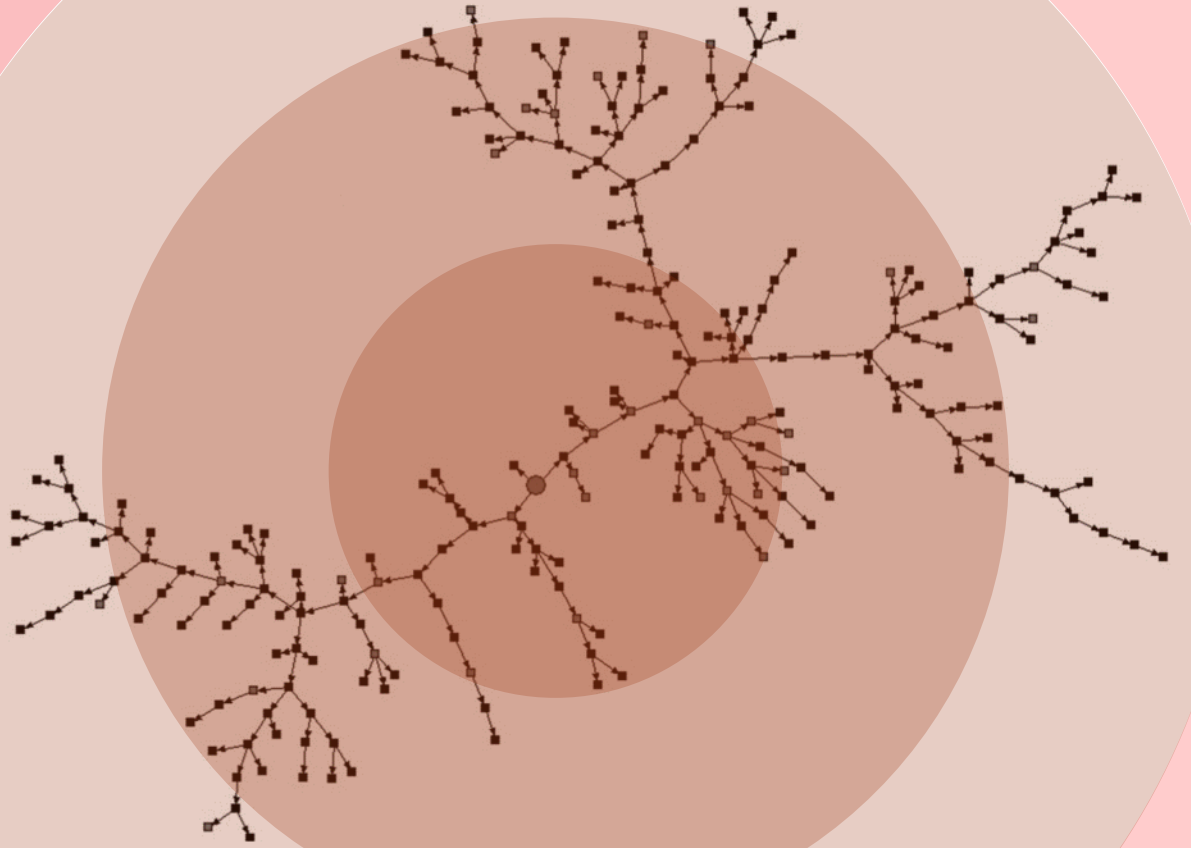
# RDS

## Respondent Driven Sampling



Malawi · Source: Wirtz et al. *JIAS* 2013

## There is a relation between exposure to HIV, access to HIV testing and position within sexual networks



RDS network ≠ sexual networks

## Self-reported orientation, HIV prevalence & status knowledge by RDS waves

**Waves 0-3**
49% self-reported to be Gay
48% infected by HIV
53% knew their HIV status

**Waves 4-7**
48% self-reported to be Gay
27% infected by HIV
37% knew their HIV status

**Waves 8-13**
27% self-reported to be Gay
15% infected by HIV
33% knew their HIV status

Lesotho, Malawi, Swaziland
Source: Stahlman et al. *STI* 2016

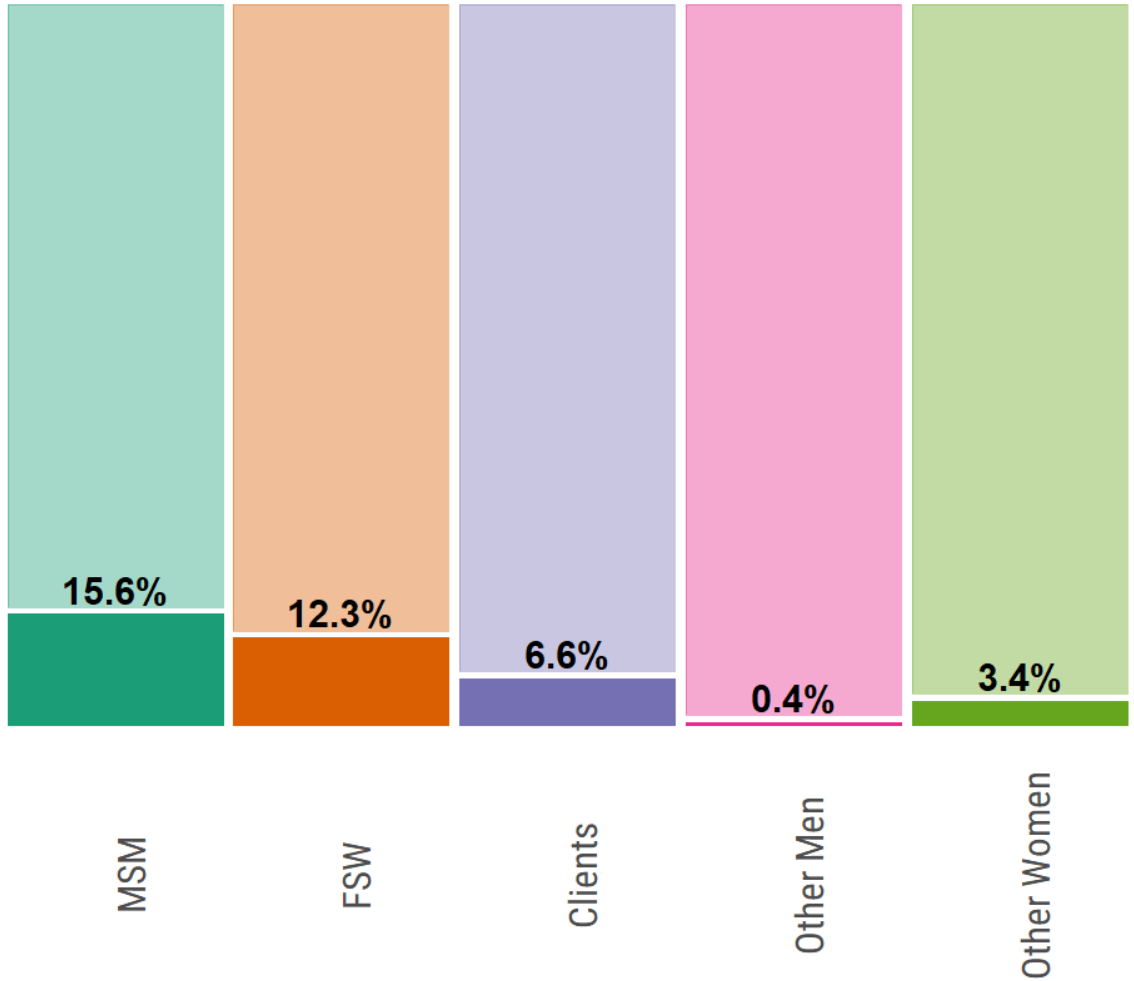
## Some MSM are not observed in the different surveys

Most participants are young (<35) and report having older sexual partners

Similar feedback from peer educators on the field
They have difficulties to reach older MSM, in particular married men

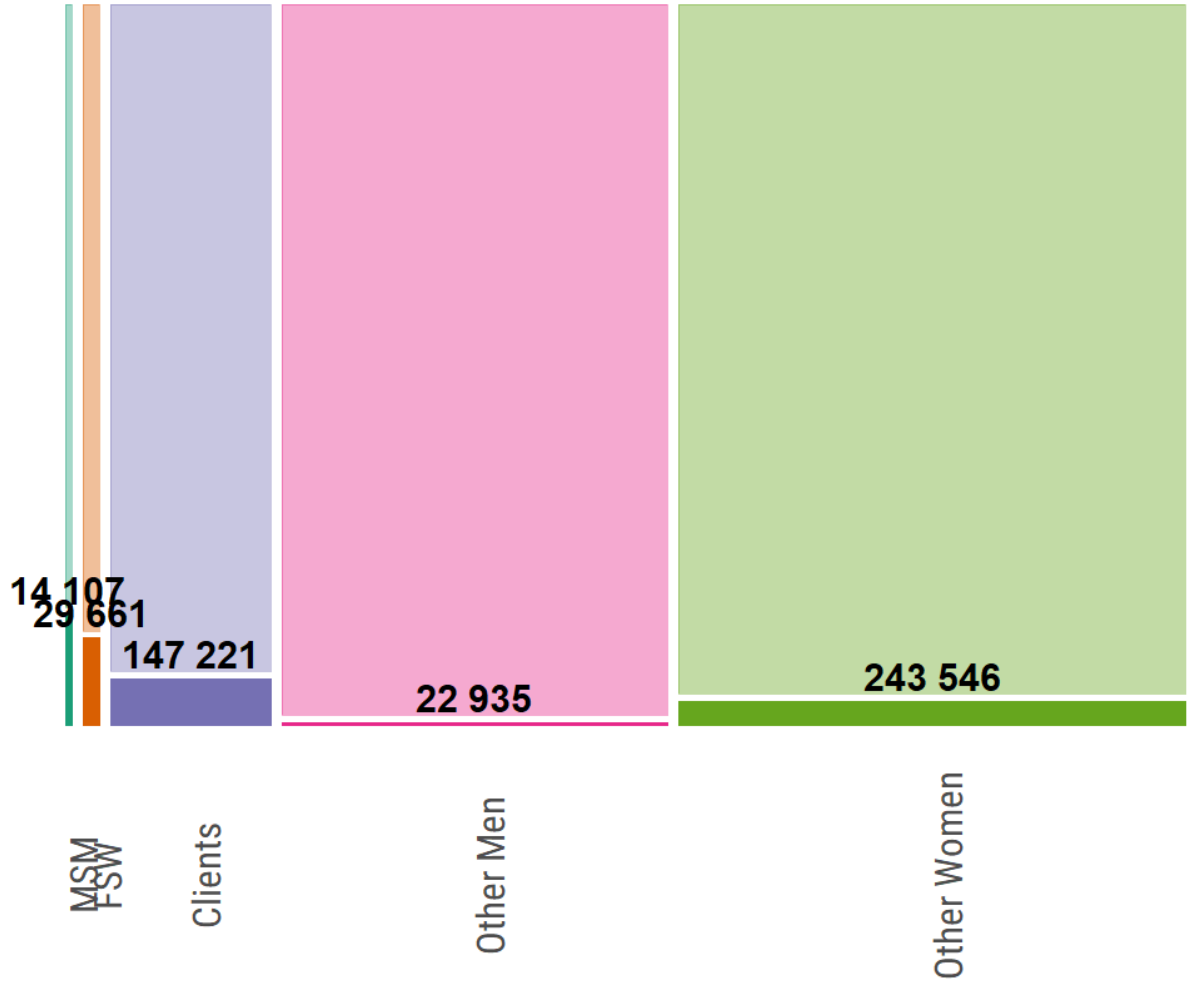
# HIV prevalence by sub-population

Côte d'Ivoire 2018, unpublished data
derived from Maheu-Giroux et al. JAIDS 2017

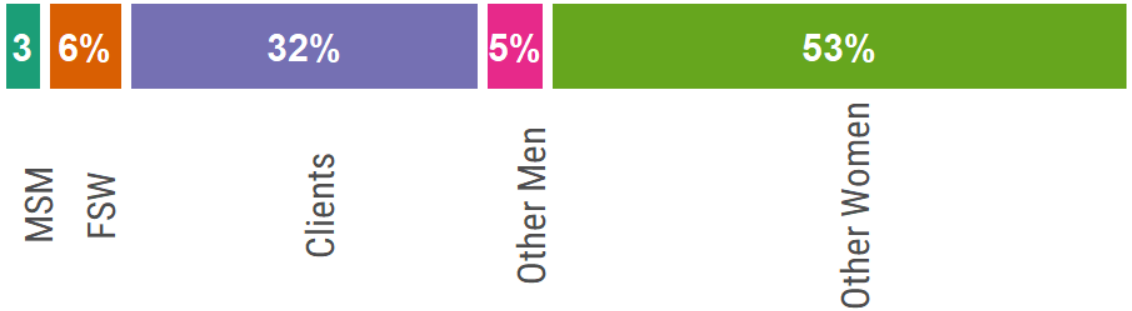



# Number of PLHIV by sub-population

Côte d'Ivoire 2018, unpublished data
derived from Maheu-Giroux et al. JAIDS 2017



# Distribution of PLHIV by sub-population

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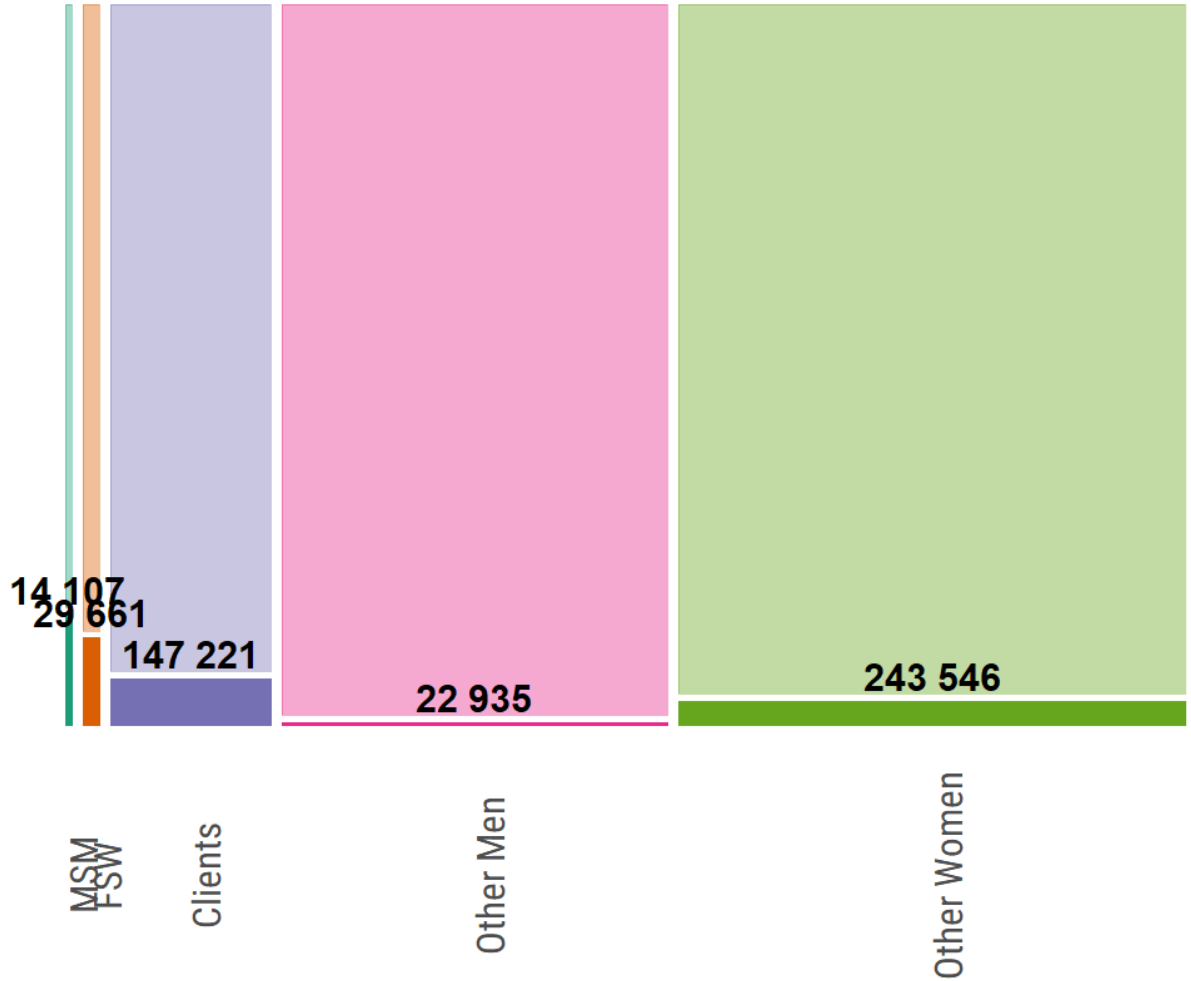
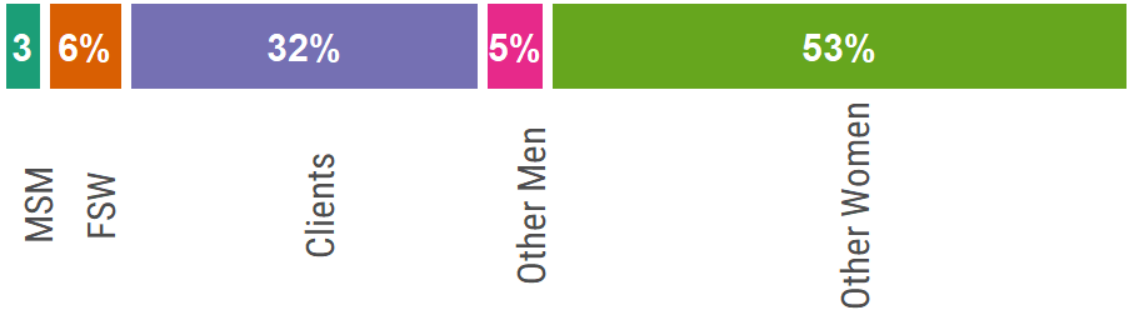
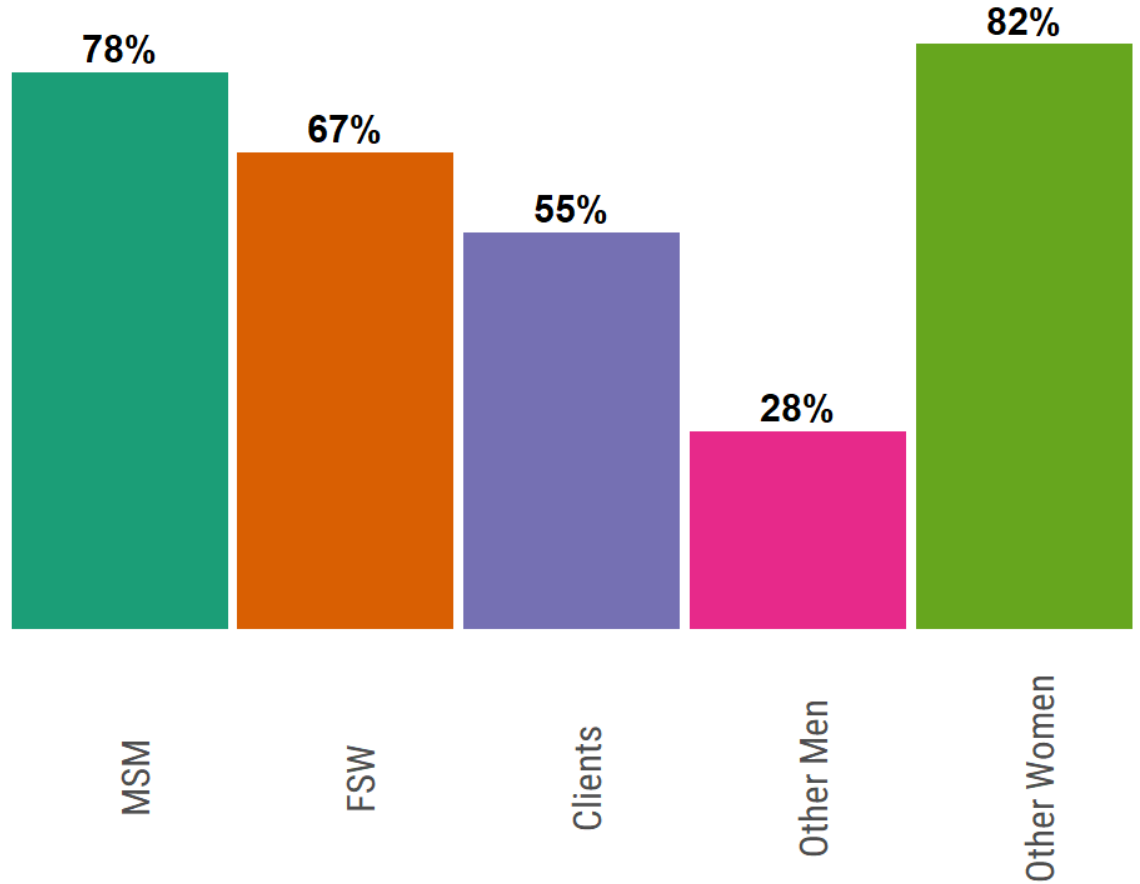


## Distribution of PLHIV by sub-population

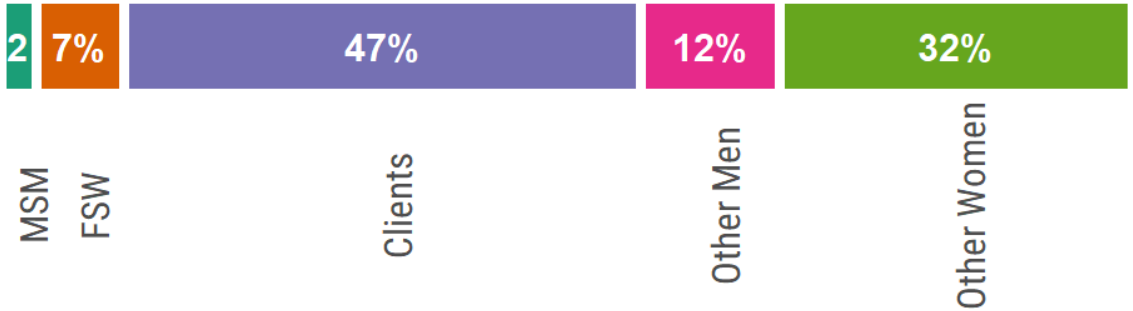



## First 90 by sub-population

Côte d'Ivoire 2018, unpublished data, courtesey of Maheu-Giroux and colleagues




## Distribution of undiagnosed PLHIV by sub-population

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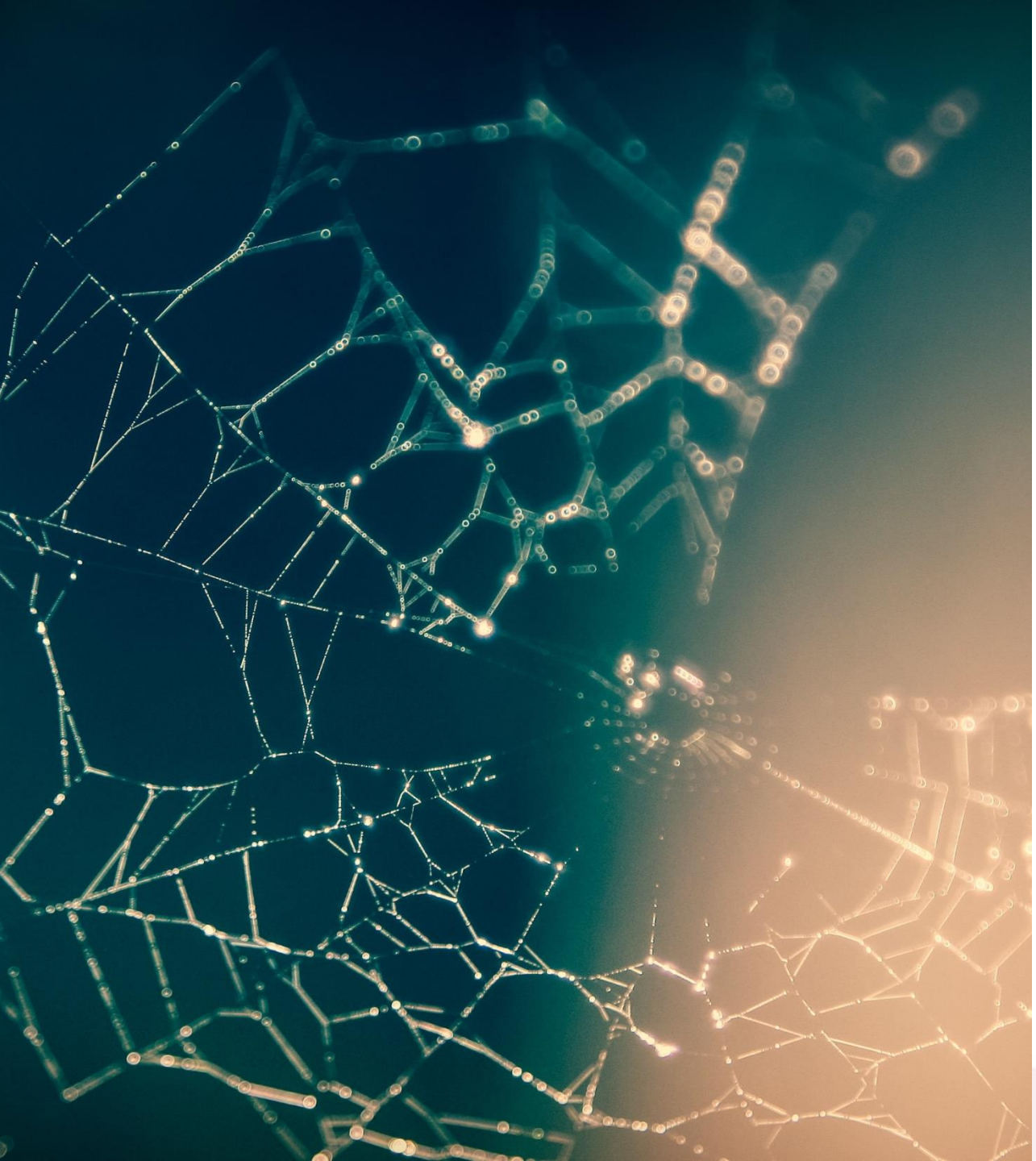


# Who transmit and who acquire HIV?

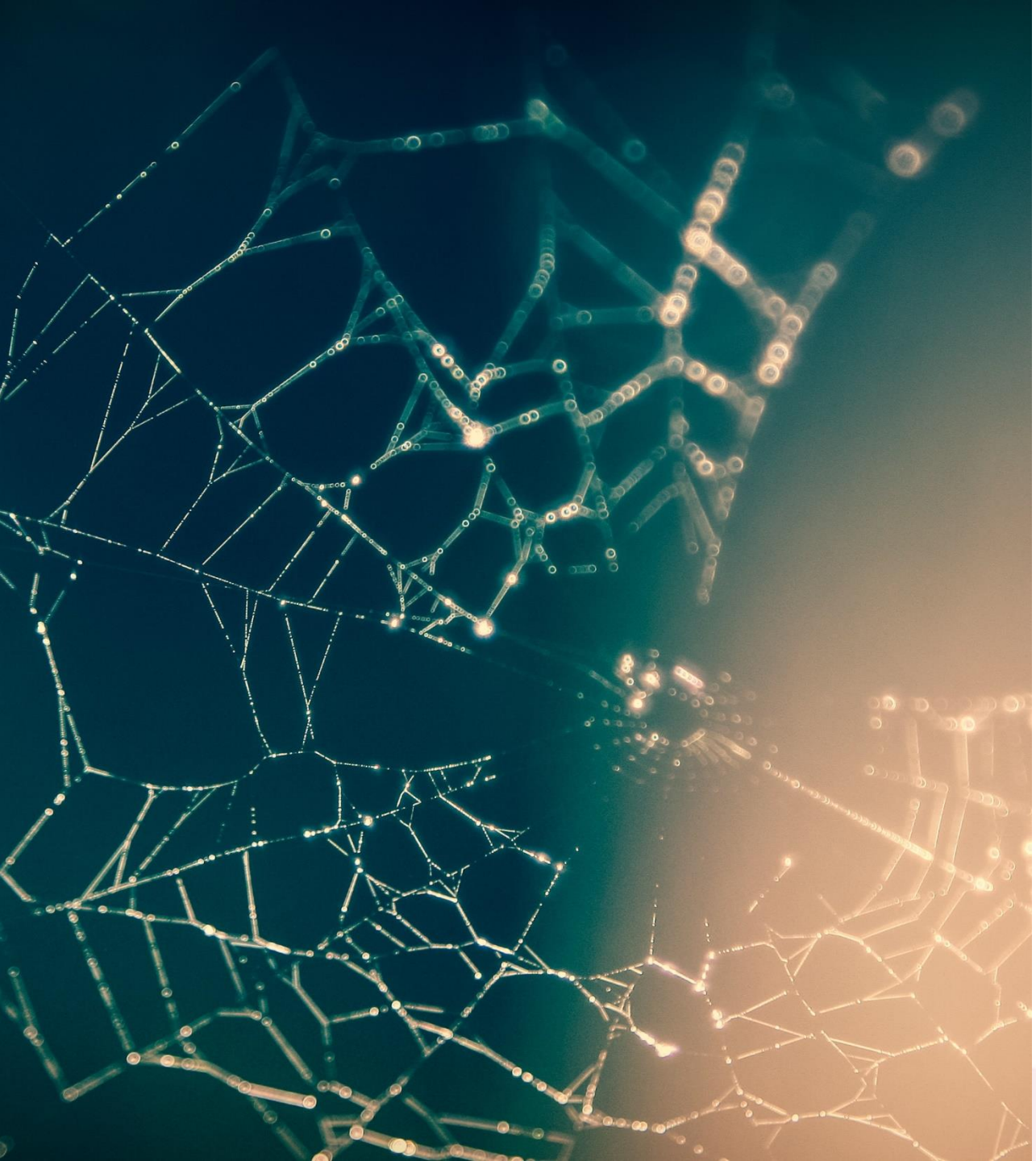
According to the same model,
in Côte d'Ivoire, between 2005 and 2015

- MSM:
  4% of those acquiring HIV
  4% of transmitters

- FSW:
  5% of those acquiring HIV
  19% of transmitters

- **44% of HIV infections occurred between a client of FSW and a no-FSW women**

Source: Mathieu Maheu-Giroux et al. *JAIDS* 2017



# Differences by countries

According to a similar model
for Dakar only in Senegal:

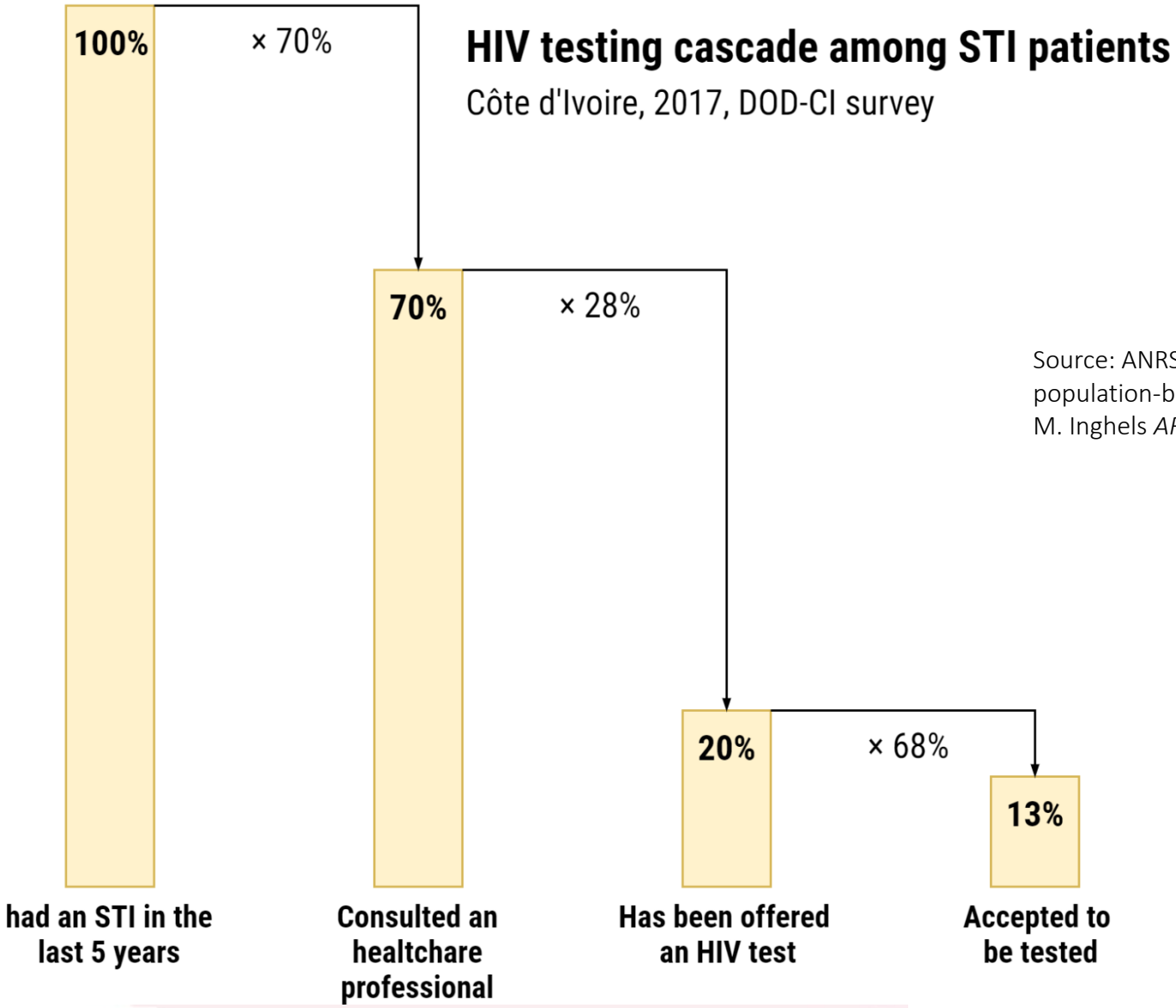
- *Sex between men* (MSM) account for around **half** of new HIV infections

- *Commercial sex* account for around **one sixth** of new HIV infections

Source: Mukandavire et al. *JIAS* 2018

# STI consultations and HIV testing

Only 28% of those who consulted a health professional for an STI in Côte d'Ivoire reported that they were offered to test for HIV.




Source: ANRS 12323 DOD-CI population-based survey 2017, M. Inghels *AFRAVIH* 2018

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# ATLAS RESEARCH

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Research embedded in ATLAS

# General objective

**Describe**, **analyse** and **understand**

the **social**, **health**, **epidemiological** and **economic effects**

of the introduction of HIV self-testing

in Côte d'Ivoire, Mali and Senegal

to improve testing offer (accessibility, effectiveness and ethics)

# Secondary objectives (1/2)

- Identify the social, cultural and organisational factors facilitating and limiting the primary and secondary distribution of HIV self-tests and their use/appropriation by the different actors concerned (program or project manager and NGO representative, delivery agents, primary contacts, secondary contacts).
- Establish the socio-behavioural profile and HIV testing history of HIV self-tests users and their care history in the event of a reactive self-test.
- Analyze the positive and negative social and health consequences of the introduction of HIV self-testing for individuals, communities and the health system.

# Secondary objectives (2/2)

- Estimate the incremental costs of dispensing HIV self-tests per delivery channel.
- Model the epidemiological impacts of the ATLAS program and different scaling scenarios on epidemic dynamics.
- Estimate the medium- and long-term cost-effectiveness and budgetary impact of different scaling up strategies.