LINCOLN INTERNATIONAL INSTITUTE FOR RURAL HEALTH SEMINAR SERIES

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Friday 26th May 2022 at 10:00 UK time.

"Beyond key populations

HIV self-testing and secondary distribution in West Africa, lessons learned from the ATLAS project in Côte d'Ivoire, Mali and Senegal"

UNIVERSITY OF LINCOLN

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https://liirh.lincoln.ac.uk/

Welcome to the session, we will begin shortly.
Please ensure your microphone & video are muted.
There will be an opportunity for Q&A at the end of the Seminar.

Beyond key populations

HIV self-testing and secondary distribution in West Africa, lessons learned from the ATLAS project in Côte d'Ivoire, Mali and Senegal

Joseph Larmarange on behalf of ATLAS Team
LIIRH seminar · 27 May 2022

The importance of peripheral populations in West Africa

› Key Populations (FSW, MSM, PWUD) are overwhelmingly infected by HIV

› In Western & Central Africa (UNAIDS data 2021), new HIV infections in 2020:
45% among KP and 27% among clients of FSW and sexual partners of KP

› Peripheral part of KP (e.g. occasional sex workers, hidden MSM…) are difficult to reach
by peer educators and have less access to HIV testing

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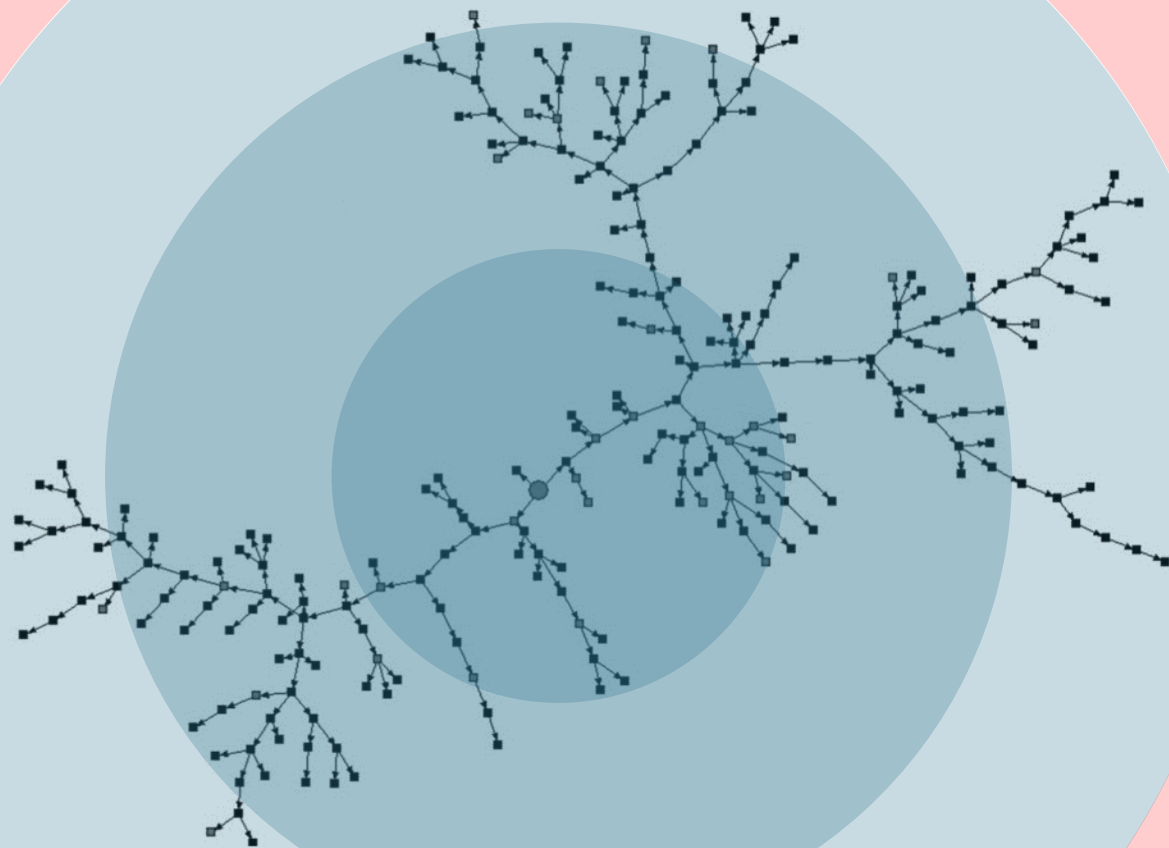
RDS network ≠ sexual networks

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Côte d'Ivoire 2018, unpublished data
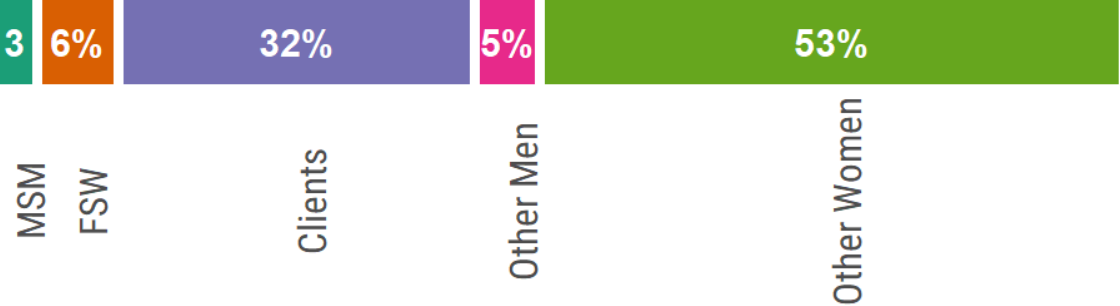derived from Maheu-Giroux et al. JAIDS 2017

- MSM: 15.6%
- FSW: 12.3%
- Clients: 6.6%
- Other Men: 0.4%
- Other Women: 3.4%

Number of PLHIV by sub-population

Côte d'Ivoire 2018, unpublished data
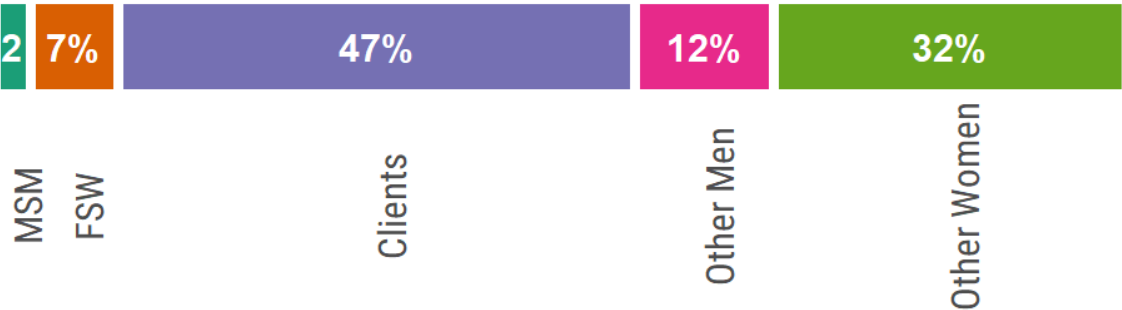derived from Maheu-Giroux et al. JAIDS 2017

- MSM: 14 107
- FSW: 29 661
- Clients: 147 221
- Other Men: 22 935
- Other Women: 243 546

Distribution of PLHIV by sub-population

MSM: 3
FSW: 6%
Clients: 32%
Other Men: 5%
Other Women: 53%

Number of PLHIV by sub-population

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

14 107
29 661
147 221
22 935
243 546

MSM
FSW
Clients
Other Men
Other Women

Distribution of PLHIV by sub-population

MSM	FSW	Clients	Other Men	Other Women
3	6%	32%	5%	53%

Distribution of undiagnosed PLHIV by sub-population

MSM	FSW	Clients	Other Men	Other Women
2	7%	47%	12%	32%
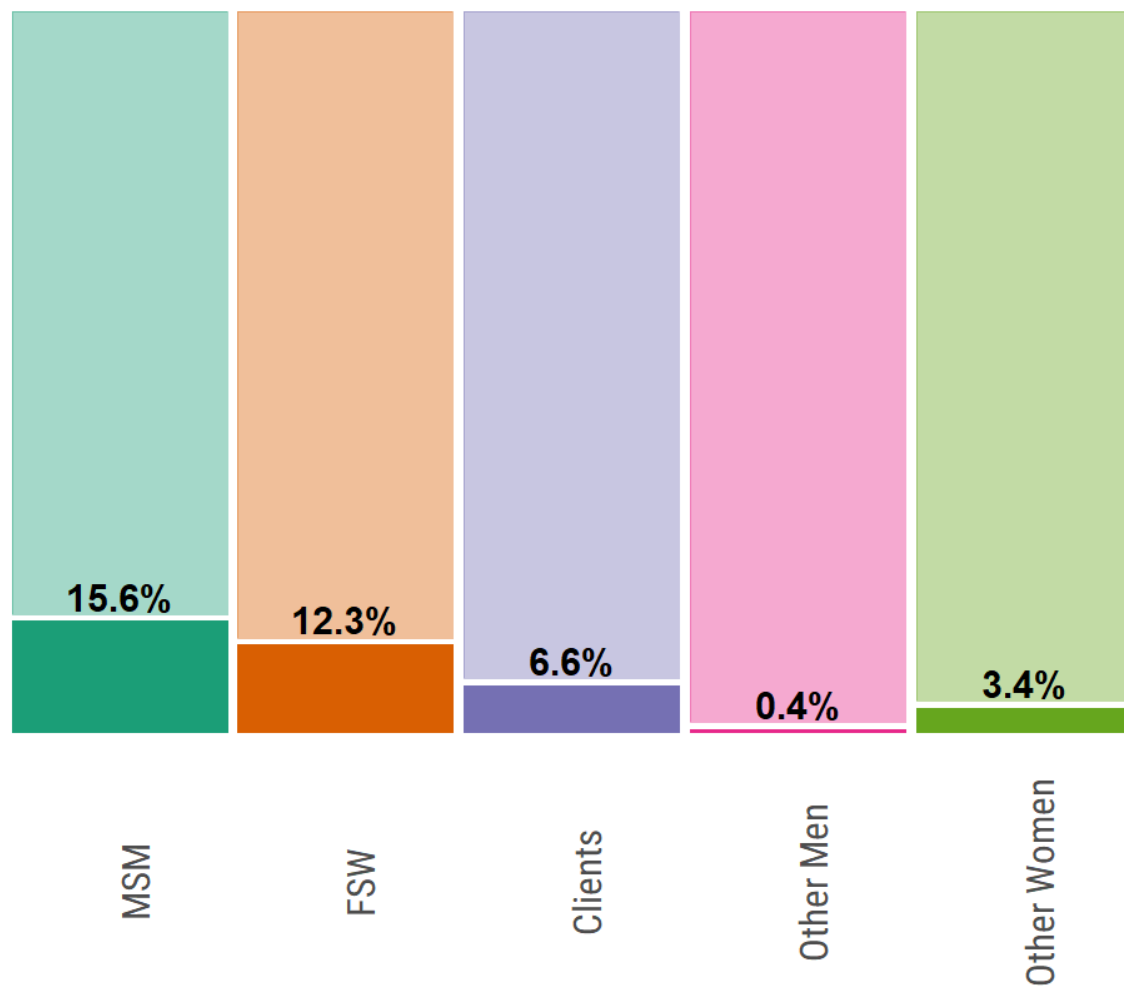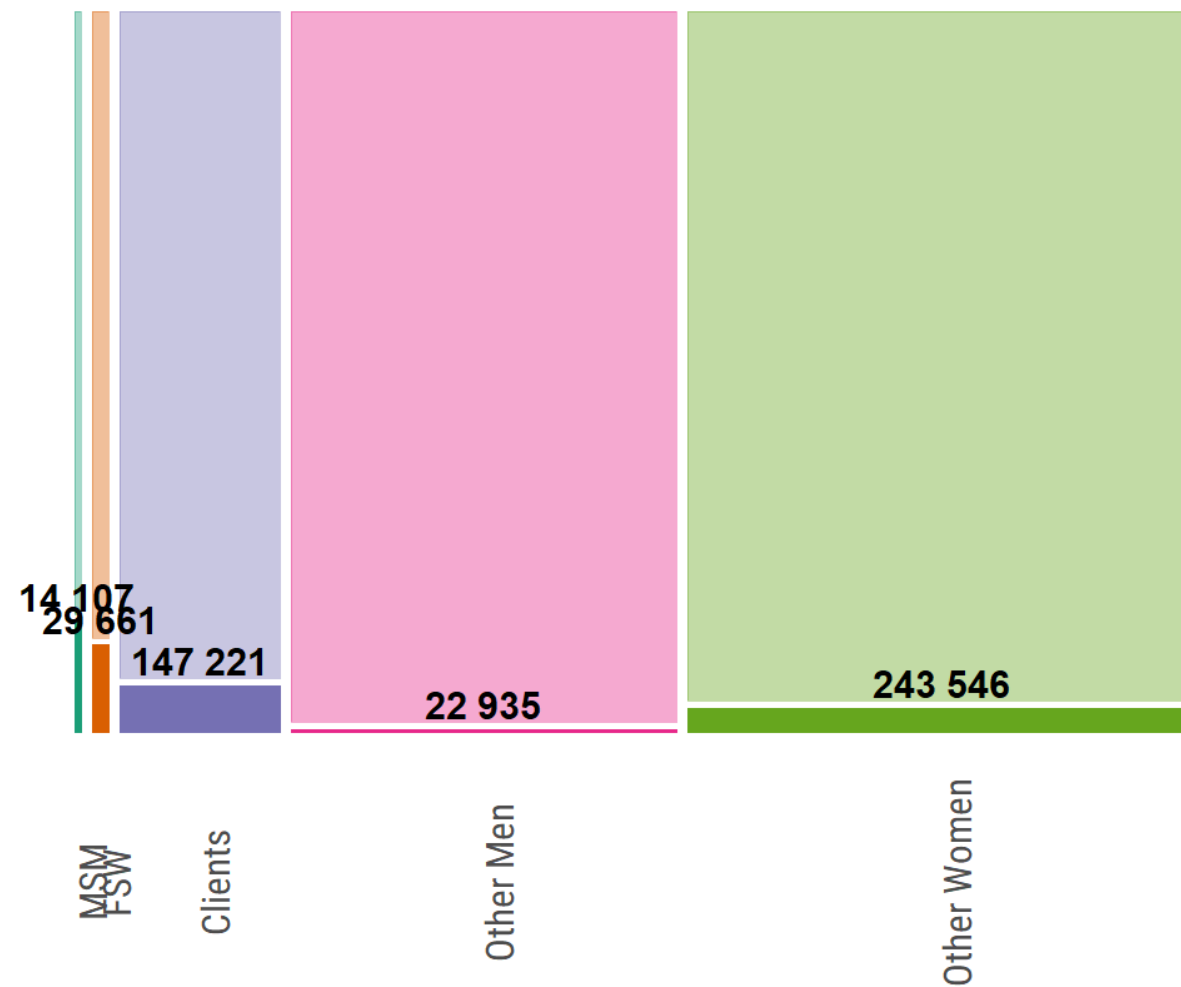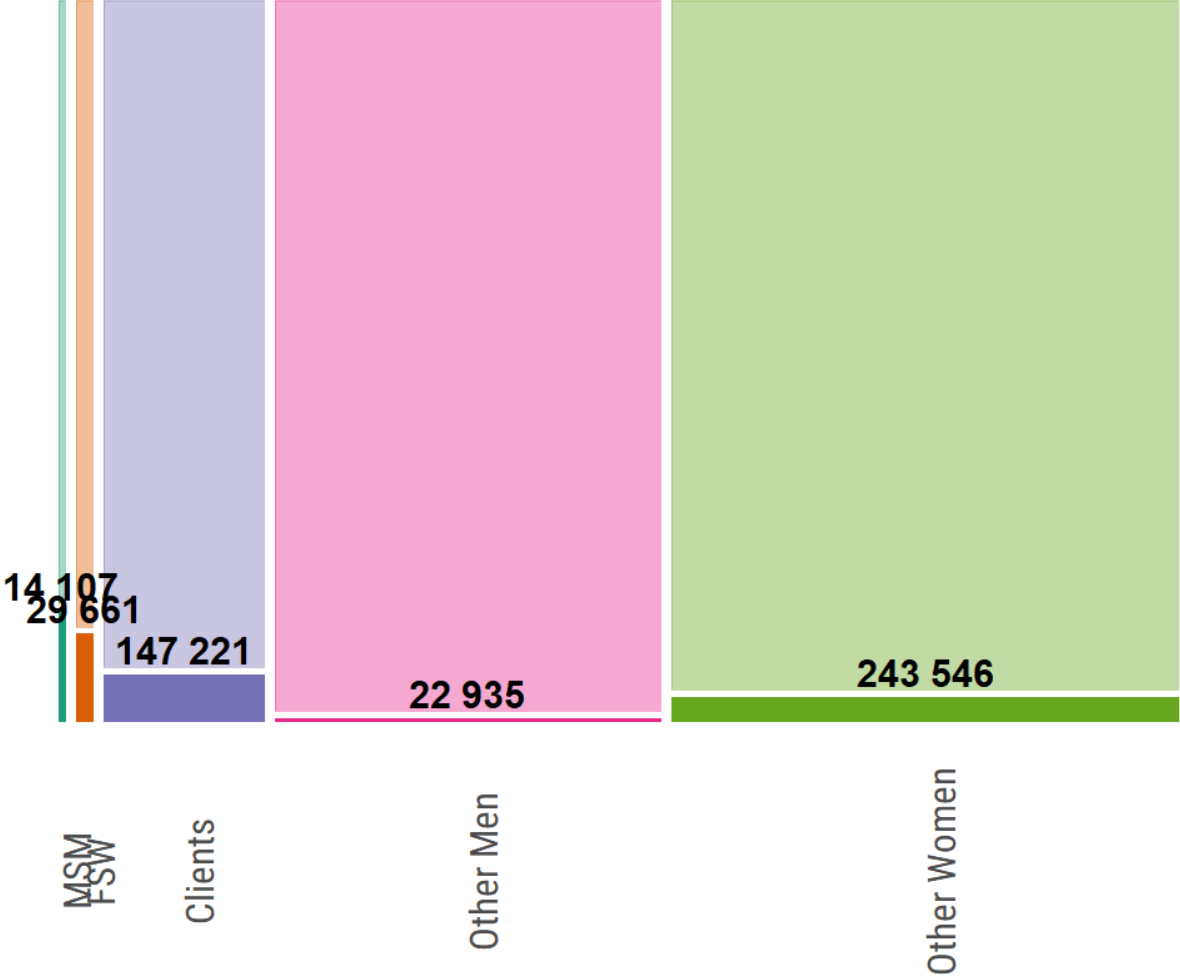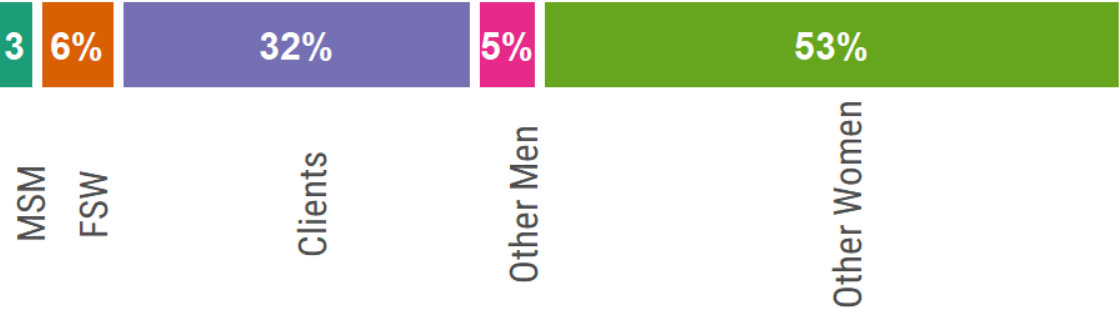
First 90 by sub-population

Côte d'Ivoire 2018, unpublished data, courtesey of Maheu-Giroux and colleagues
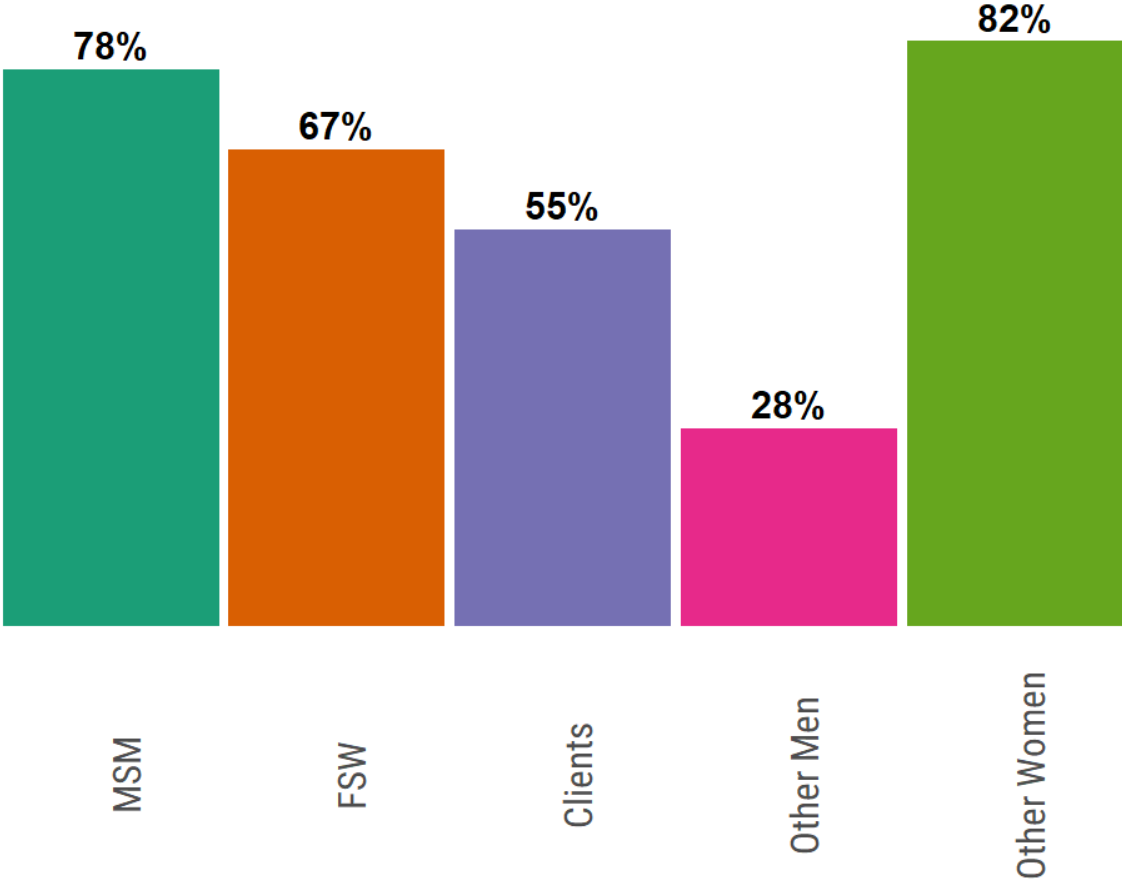
MSM	FSW	Clients	Other Men	Other Women
78%	67%	55%	28%	82%

Distribution of PLHIV by sub-population

MSM 3 | FSW 6% | Clients 32% | Other Men 5% | Other Women 53%

Distribution of undiagnosed PLHIV by sub-population

MSM 2 | FSW 7% | Clients 47% | Other Men 12% | Other Women 32%

HIV prevalence by sub-population

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

MSM 15.6% | FSW 12.3% | Clients 6.6% | Other Men 0.4% | Other Women 3.4%
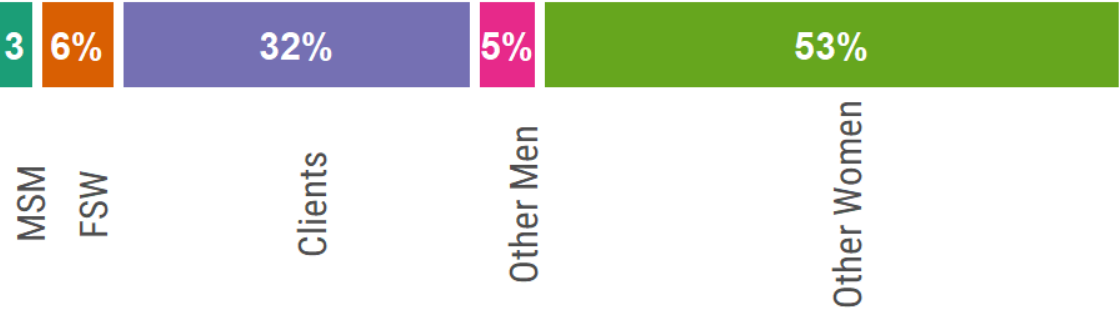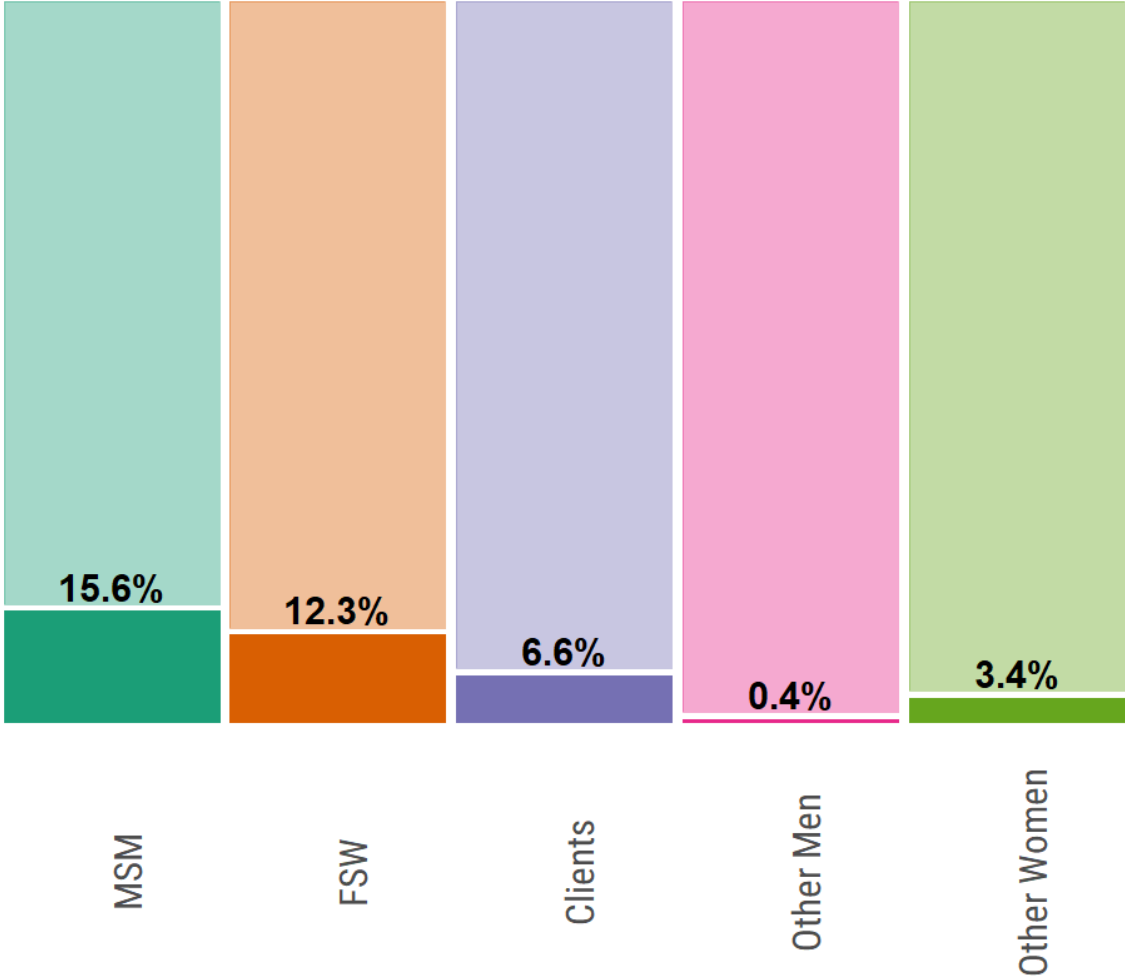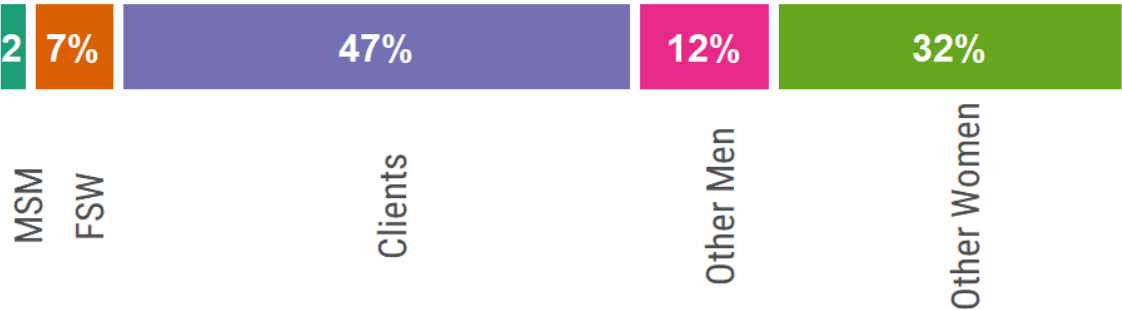
Who transmit and who acquire HIV?

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

The importance of peripheral populations in West Africa

› Key Populations (FSW, MSM, PWUD) are overwhelmingly infected by HIV

› In Western & Central Africa (UNAIDS data 2021), new HIV infections in 2020:
45% among KP and 27% among clients of FSW and sexual partners of KP

› Peripheral part of KP (e.g. occasional sex workers, hidden MSM…) are difficult to reach
by peer educators and have less access to HIV testing

› Modelling work by Maheu-Giroux *et al.* (*JAIDS* 2017), in Côte d'Ivoire, between 2005 and 2015,
44% of new HIV infections occurred between a FSW client and a non FSW partner

**It is crucial to reach peripheral and vulnerable populations
beyond key populations to achieve 95-95-95 targets.**

ATLAS project (2019-2022)

Funded by **Unitaid** (with additional funding of AFD)

Coordinated by **Solthis & IRD**

>170 distribution sites

>1400 agents trained for distributing HIVST

~400 000 HIVST kits distributed since mid 2019
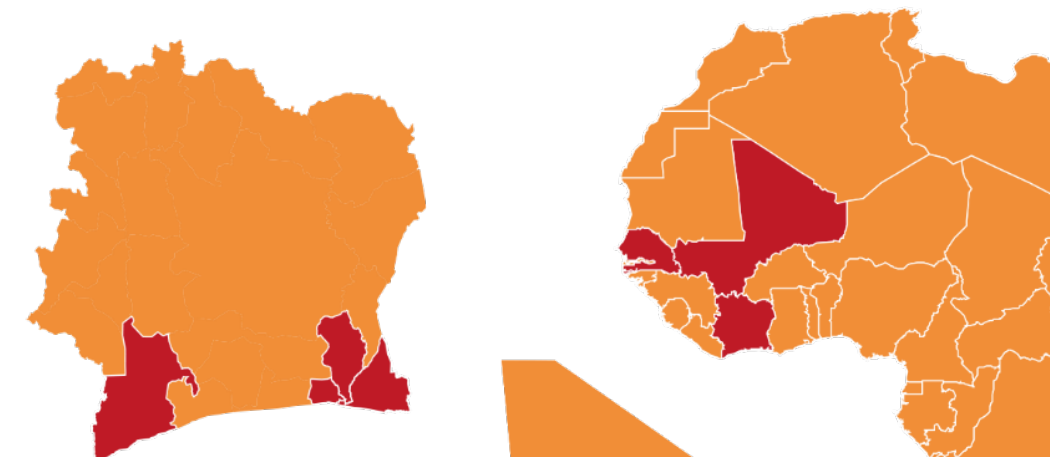
Côte d'Ivoire
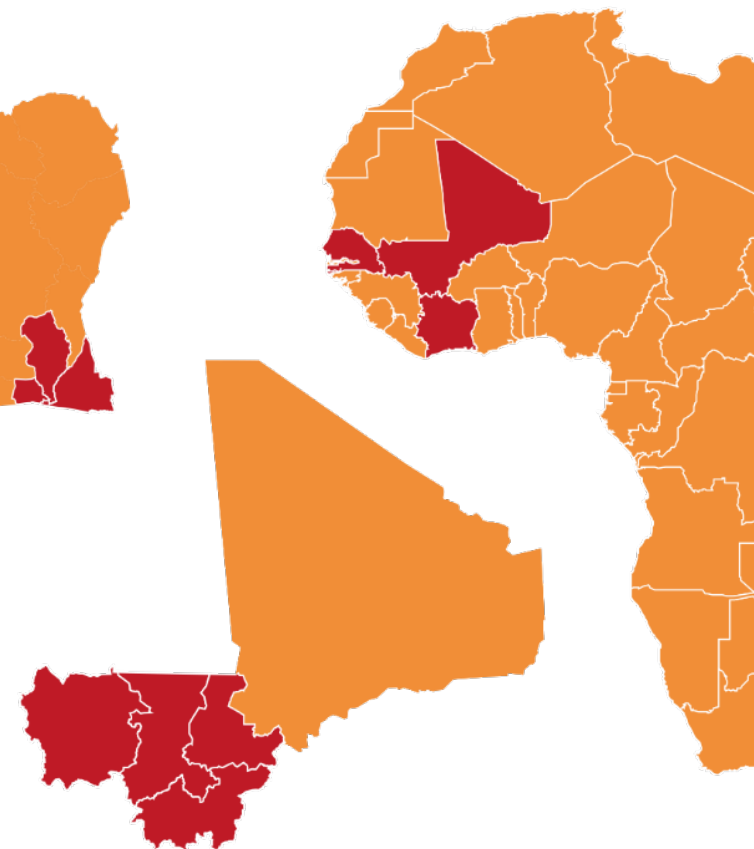
Mali

Senegal

ATLAS self-testing distribution models

Primary distribution
for personal use

Secondary distribution
to be redistributed to
partners and relatives
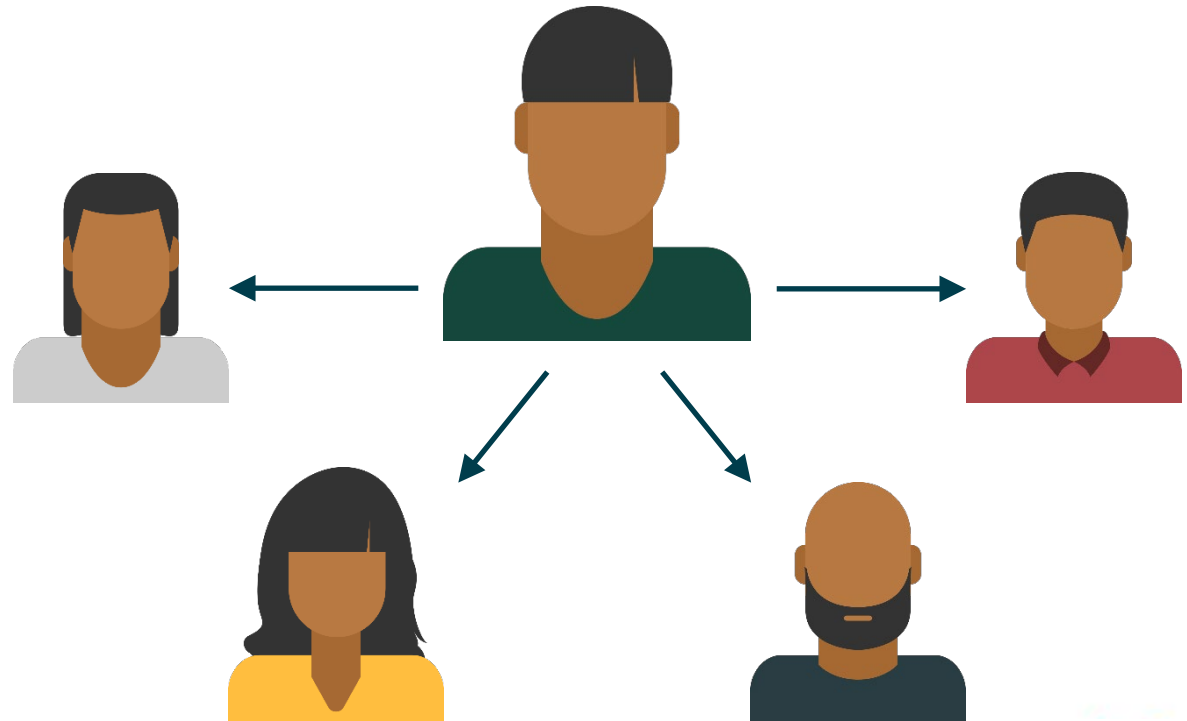
ATLAS Strategy for key populations

FSW

MSM

PWUD

Other FSW

Regular partner

Clients

Other MSM

Male partners

Female partners

Other PWUD

Sexual partners

~66% of distributed HIVST kits

~24% of distributed HIVST kits

~4% of distributed HIVST kits
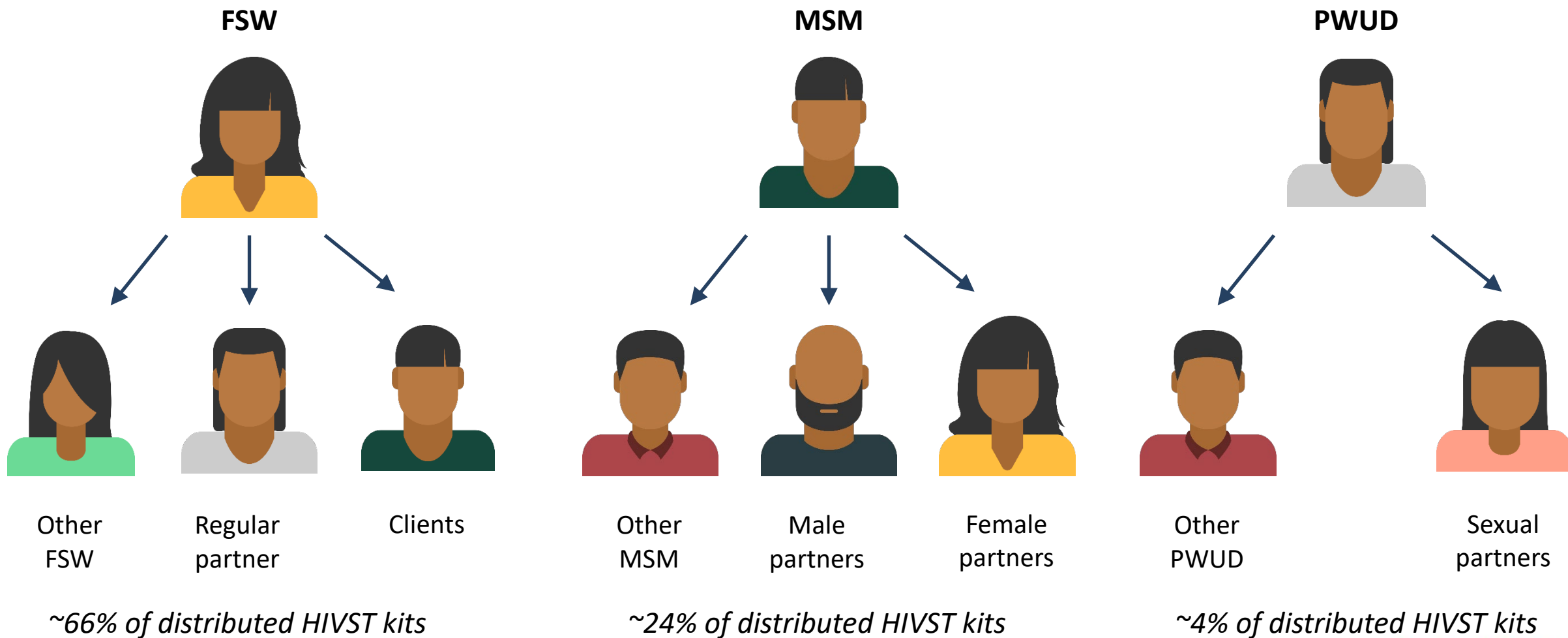
HIV self-testing is acceptable

› for policy-makers

› for health-care professionals

› for peer educators

› for beneficiaries

**Most are able to perform self-testing,
without any negative consequences or major difficulties**

Secondary distribution is feasible for KP...

MSM, Mali (in-depth qualitative interview)

« J'ai tout le temps refusé de me faire piquer avec le dépistage classique, mais à cause de l'autotest, j'ai découvert que j'étais infecté... Ensuite j'ai fait le dépistage de ma fiancée avec, mais elle a eu un non réactif. »

"I have always refused to be pricked for conventional screening. Because of the self-test, I found out I was infected... Then I tested my fiancée [girlfriend] with it, but she got a non-reactive test."

FSW, Mali (in-depth qualitative interview)

« J'ai aussi un client chez qui je me rends (...) Je lui ai donné trois kits, parce qu'il m'a montré clairement qu'il a une autre partenaire, (...) donc il voulait que celle-là aussi fasse son dépistage avec l'autotest. »

"I also have a client who I go to in his flat [...] I gave him three [HIVST] kits, because he showed me clearly that he has another partner, so I told him that there is no problem, so he wanted that one to be tested with the self-test too."

Secondary distribution is also advocated by community-based implementation NGOs

… but it depends on the type of partner

MSM, Senegal (in-depth qualitative interview)

« Je proposerais bien l'autotest VIH à mon partenaire sexuel, parce que c'est quelqu'un avec qui j'entretiens une relation amoureuse. Mais le fait de le proposer à un partenaire occasionnel risquerait de poser problème. »

"I would offer the HIV self-test to my sexual partner, because he is someone I have a romantic relationship with. But offering it to a casual partner might be a problem."

› Secondary distribution is feasible with **regular / life partners** (MSM, FSW, PWUD) and **regular clients** (FSW)

› Also feasible with **peers**

› However, it may be more difficult with **casual partners** and **occasional clients**
   › fear of negative reaction
   › not enough time to discuss that topic
   › risk of losing a client

atlas
Savoir est une force
AutoTest VIH, Libre d'Accéder à la connaissance de son Statut
SÉNÉGAL - CÔTE D'IVOIRE - MALI

Solthis
Solidarité Thérapeutique
et Initiatives pour la Santé
FRANCE

IRD
Institut de Recherche
pour le Développement
FRANCE

Increase of secondary distribution over time

Mean number of HIVST kits distributed per primary contact (outreach activities targeting KP)
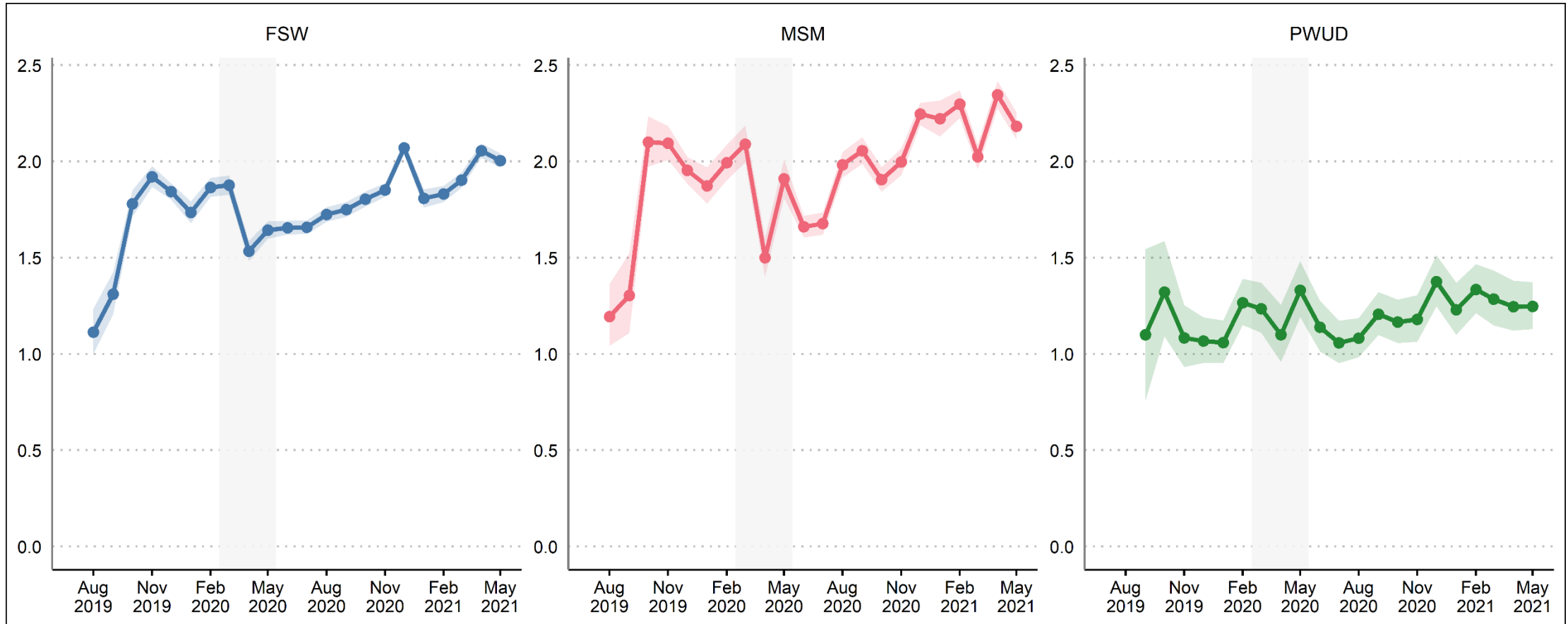
Profile of HIVST users

› Phone survey conducted between March & June 2021

› Survey flyers distributed with HIVST kits,
inviting people to call anonymously a toll free phone number

› 2615 participants

› 31% received HIVST from
friend (17%), sexual partner (7%), relative (6%) or colleague (1%)

› 50% perceived themselves as not exposed at all to HIV risk

› MSM-based channel:
  › 10% of participants were female
  › 45% of males did not report any male sexual partner (suggesting that some "hidden MSM" may also be recruited)

› FSW-based channel:
  › 1/2 of participants were male

More information @ AFRAVIH 2022 :
Arsène Kra Kouassi *et al.*,
https://joseph.larmarange.net/312
https://youtu.be/ACrzZhherkg

41% were first-time testers
(high proportion when comparing to other surveys conducted among KP)

% of first-time testers
Men from the MSM channel
compared with surveys conducted among MSM
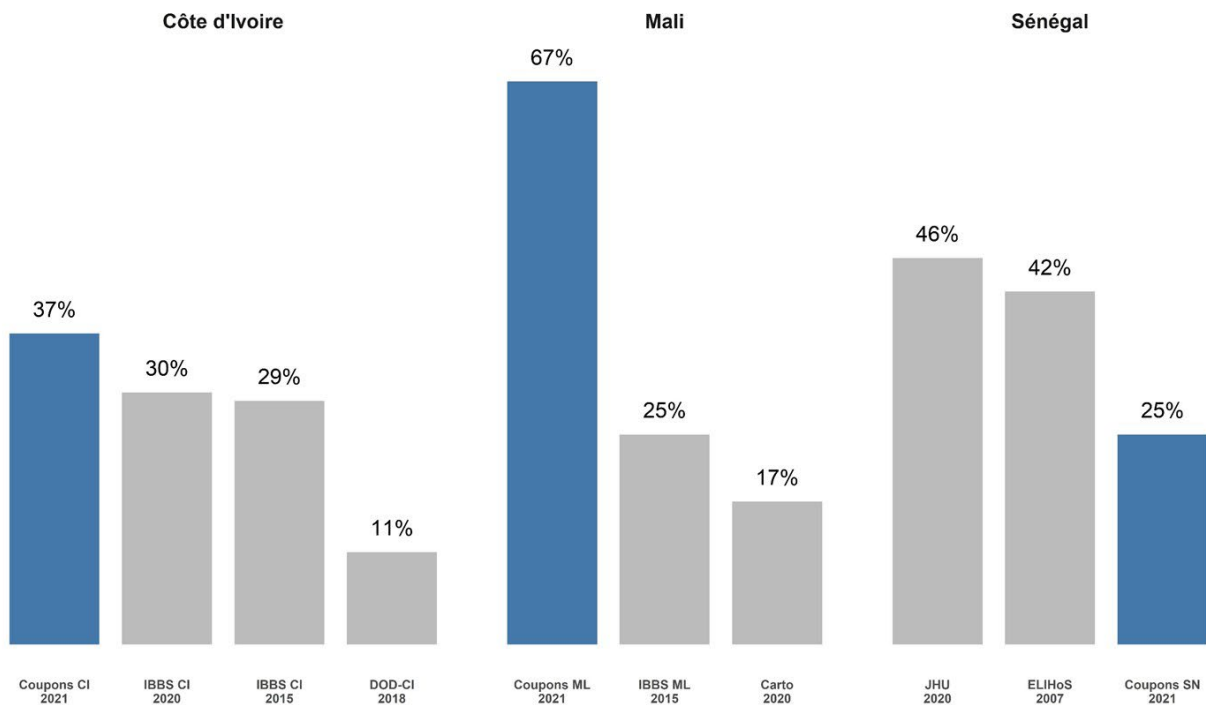
% of first-time testers
Women from the FSW channel
compared with surveys conducted among FSW
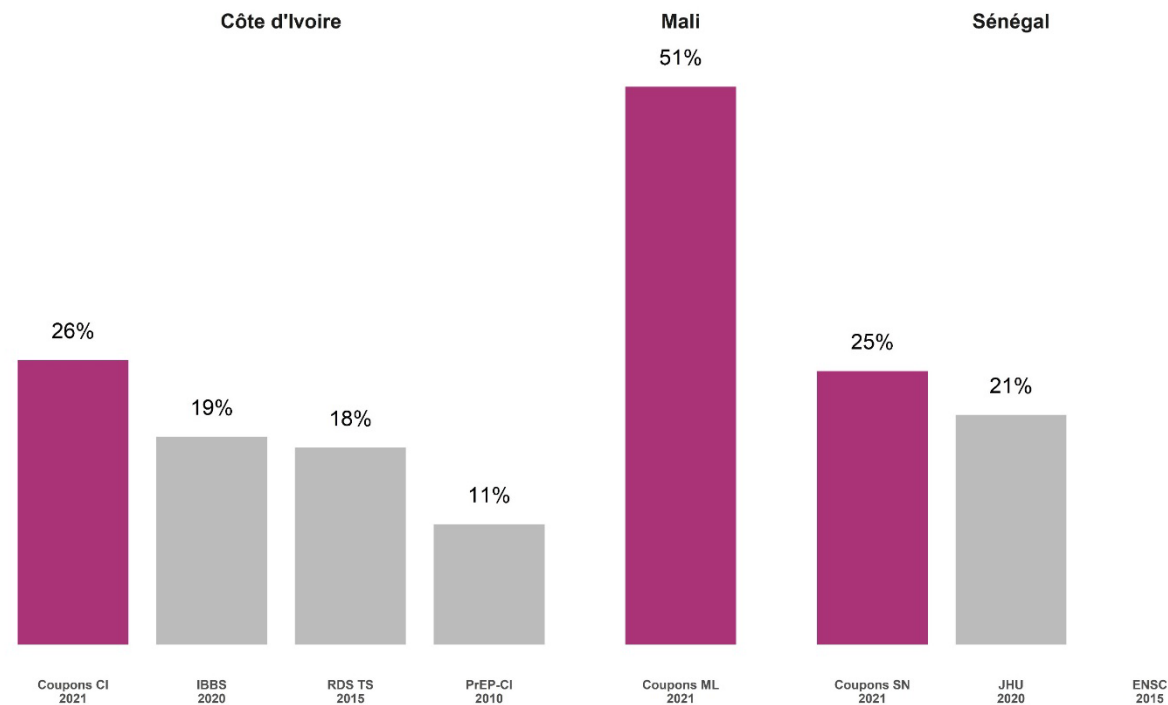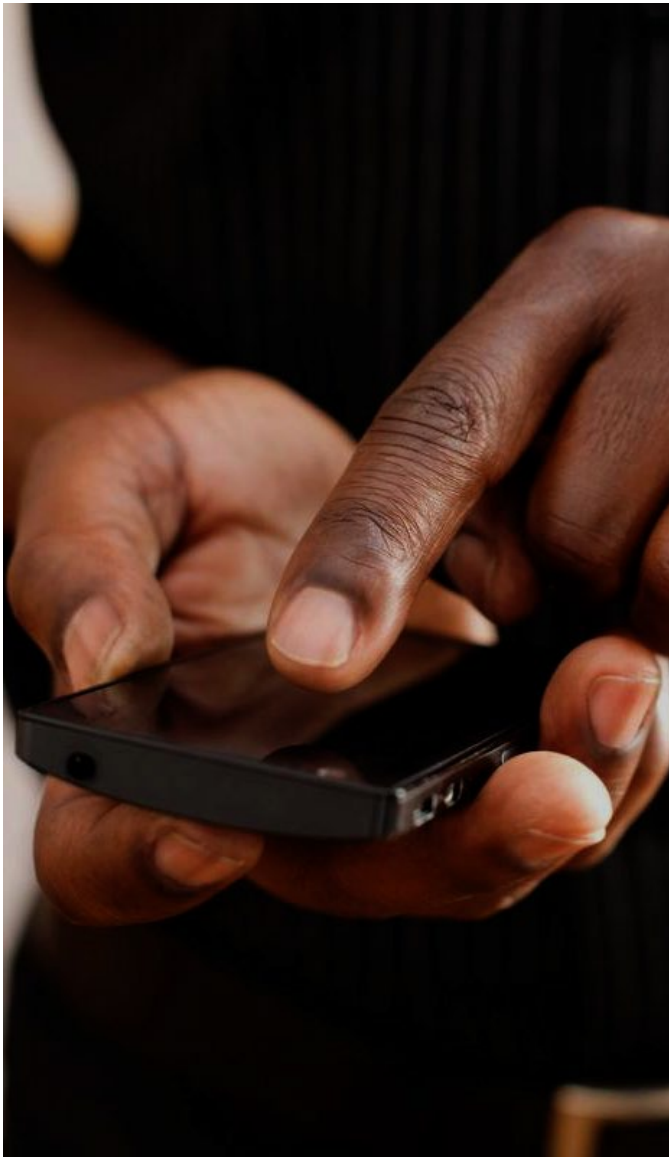
Complementary survey (preliminary results)

› Some inconsistency between reported result (*reactive / non reactive*) and reported number of lines (1 or 2) → *messages to be adapted?*

› Individuals with reactive test/2 lines called 3-6 months later

› Link to confirmatory testing around 50%
  › **BUT** large confidence intervals (between one third and two thirds)

› Around half of those who did a confirmation test linked to a general health facility (all-public)

› All those confirmed HIV positive initiated ART
  › Linkage to HIV care ++++

› Consistent with spontaneous feedbacks reported by implementing partners

Estimated impact at population level in CI

› ATLAS dispensation data (Q3 2019 – Q1 2021) triangulated with programmatic data from 79/118 health districts in CI

› Mixt linear models adjusted by quarters and regions

@ **AFRAVIH 2022**
Arlette Simo Fotso *et al.*,
https://joseph.larmarange.net/312

a. Tous les districts (n=78)

b. Districts ATLAS (n=9)
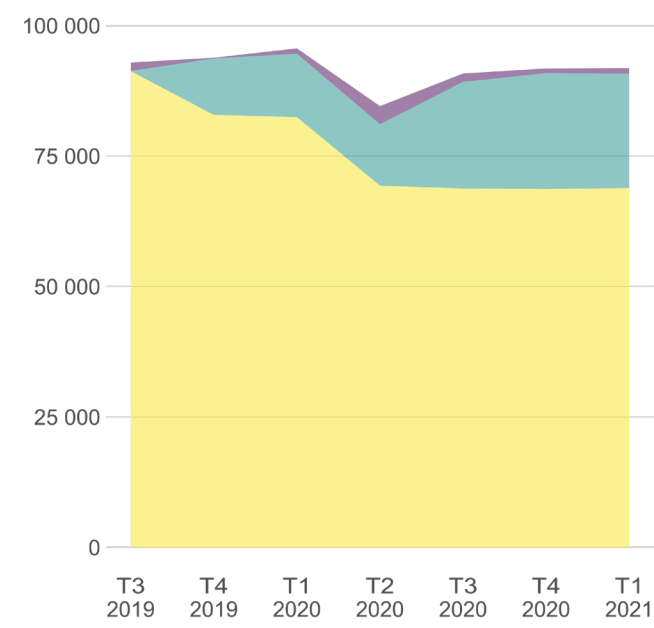
c. Districts non couverts par ATLAS (n=69)
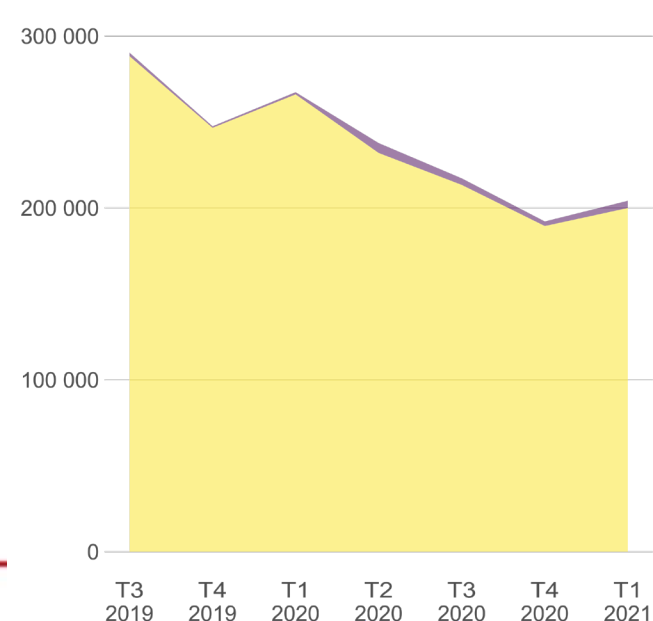
Légende :
- ADVIH distribués par le Pepfar
- ADVIH distribués par ATLAS
- Tests de dépistage conventionnel

Estimated impact at population level in CI

› ATLAS dispensation data (Q3 2019 – Q1 2021) triangulated with programmatic data from 79/118 health districts in CI

› Mixt linear models adjusted by quarters and regions

Indicator	Estimated effect for 1000 HIVST distributed through ATLAS	95% CI	p
HIV testing (utilization rate 80 %)	+589	+356 à +821	<0.001
HIV test (utilization rate 60 %)	+393	+160 à +625	<0.001
Traditional HIV testing	-195	-427 à +38	0.10
HIV diagnosis (positive HIV tests)	+8	0 à +15	0.044
ART initiations	-2	-8 à +5	0.66

@ AFRAVIH 2022
Arlette Simo Fotso *et al.*,
https://joseph.larmarange.net/312

Estimated impact at population level in Senegal

› Similar analysis in Senegal using data from national DHIS2

Indicator	Estimated effect for 1000 HIVST distributed through ATLAS	95% CI	p
HIV testing (utilization rate 80 %)	+453	-32 à +938	0,068
HIV test (utilization rate 60 %)	+253	-232 à +738	0,31
Traditional HIV testing	-347	-832 à +138	0,16
HIV diagnosis (positive HIV tests)	+53	+31 à +74	<0,001
ART initiations	+17	+9 à +25	<0,001

Modelling epidemiological impact of an ATLAS strategy at scale (preliminary)

› **Modelled scenario:** HIVST scale-up among key populations (FSW & MSM) vs no HIVST
linear progression to reach 95% coverage in 2025 (2 HIVST per contact and per year)

Time between HIV acquisition and diagnosis (in years)
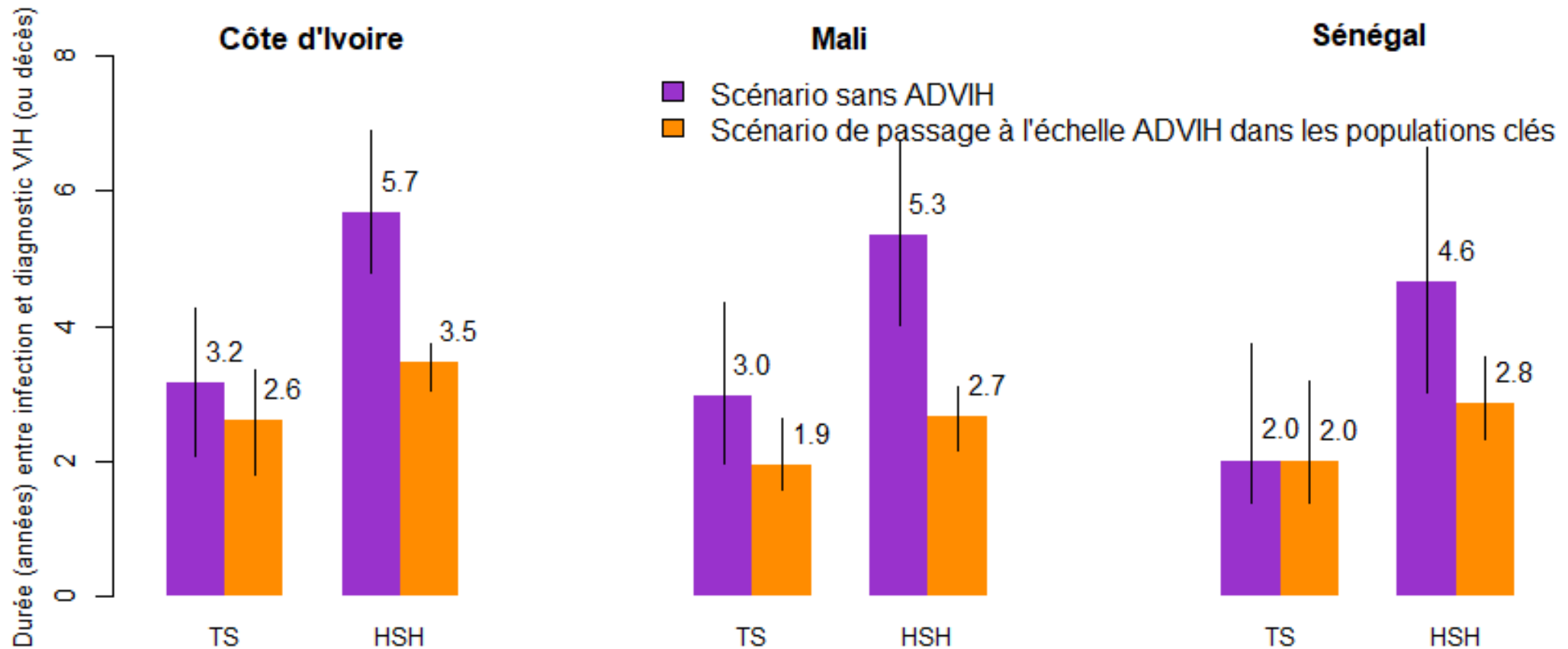
Modelling epidemiological impact of an ATLAS strategy at scale (preliminary)

› **Modelled scenario:** HIVST scale-up among key populations (FSW & MSM) vs no HIVST
linear progression to reach 95% coverage in 2025 (2 HIVST per contact and per year)

Estimated first 95 in 2030
(proportion of PLHIV knowing their status)

	Côte d'Ivoire		Mali		Senegal	
	no HIVST	HIVST scale-up	no HIVST	HIVST scale-up	no HIVST	HIVST scale-up
FSW	75%	83%	58%	72%	76%	80%
MSM	61%	92%	60%	92%	46%	86%
All PLHIV	80%	81%	59%	63%	77%	88%

An important proportion of averted new HIV infections is in the general population.

Scaling-up is sustainable

Outreach strategies
Observed costs(2019-2020) → Estimated costs at scale (2023)
(unit costs in USD per distributed kits among key populations)

	Côte d'Ivoire	Mali	Senegal
FSW	$13 → $8	$16 → $10	$17 → $12
MSM	$15 → $8	$28 → $16	$27 → $22
PWUD	$16 → $13		$144 → $48*

* Low volumes
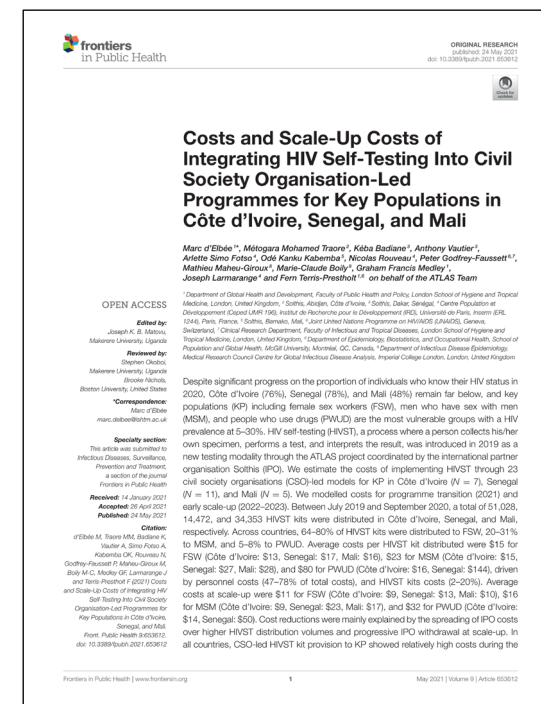
More information:
d'Elbée *et al.*, May 2021, *Frontiers in Public Health*
https://doi.org/10.3389/fpubh.2021.653612

To conclude...

HIV self-testing and secondary distribution is
feasible, appropriate, adapted and **sustainable**
among key populations in West Africa.

Our results show that HIV self-testing **is an opportunity to reach**,
beyond key populations, **vulnerable groups who never tested before**.

PARTNERS

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Solthis — Solidarité Thérapeutique et Initiatives pour la Santé

IRD — Institut de Recherche pour le Développement FRANCE

Funding

Unitaid — Innovation in Global Health

AFD

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PNLS

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Espace Confiance
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