Modelling the potential impact of PEPFAR withdrawal scenarios in Western Africa (ANRS 0792)

Preliminary results

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Pause/withdrawal of PEPFAR and USAID

Timeline

20th January
Executive order: 90-day pause of all international aid while an "evaluation" is conducted

27th January
USAID is dismantled

End of January-early February
waivers for « vital support »
(not well communicated*)

7th February
Temporary court orders reinstating USAID

21st February
Court order is overturned

5th March
US supreme court supports the temporary court orders

10th March
End of the US government-led "evaluation" :
83% of USAID programs are "terminated"

…
Other US court orders in favour of USAID

1st February 2025

1st March 2025

* https://pepfarwatch.org/wp-content/uploads/2025/02/Update-1-Deadly-Pause.pdf

https://www.kff.org/u-s-foreign-aid-freeze-dissolution-of-usaid-timeline-of-events/

Meanwhile, within PEPFAR-supported countries

Activities towards key and most vulnerable populations

- Contradictory orders (letters cancelling or reinstating programs and decisions)
- PEPFAR program expenses (including salaries) are “at risk”: their authorisation and payment/reimbursement is not guaranteed anymore
- **“All activities related to diversity, equity, inclusion and accessibility are definitively cancelled” (i.e. no restart)**

Study objectives

Epidemiological impacts of a PEPFAR withdrawal

Use a mathematical model to estimate the potential impact of different PEPFAR withdrawal scenarios in Côte d'Ivoire, Mali et Sénégal

1. **Short-term**:
   - Simplified analysis using scenarios based on aggregated funding data
2. **Mid-term**:
   - Improved analysis still using scenarios, but this time relying on more detailed data and additional input from collaborators (e.g. National AIDS control programs or NGOs operating in the countries)

Impact measured as:

- New HIV infections and HIV-related deaths over the next 10 years due to the PEPFAR withdrawal
- The cost ($) of preventing the loss of one (disability-adjusted) year of life in case of a pause and progressive recovery of PEPFAR funding (DALY, GBD 2019)

Methods

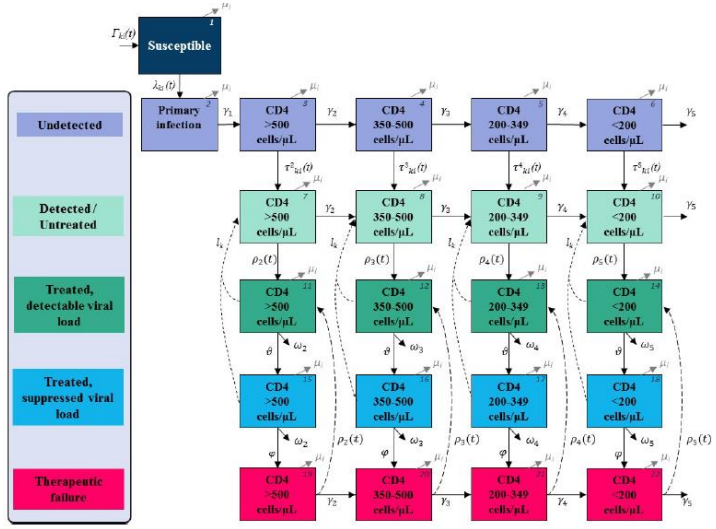
Mathematical model

Model already calibrated to the populations and HIV epidemic in the three countries (ATLAS program funded by Unitaid / Solthis)*

- **Structure**: stratified by age and risk group, HIV natural history, prevention and treatment cascade
- **Calibration**: simultaneously on key population size data, HIV prevalence, HIV diagnosis and treatment each country, etc.
- **Data sources**: systematic reviews of demographic data, sexual behaviours, HIV epidemiological and interventions in each country, in collaboration with countries

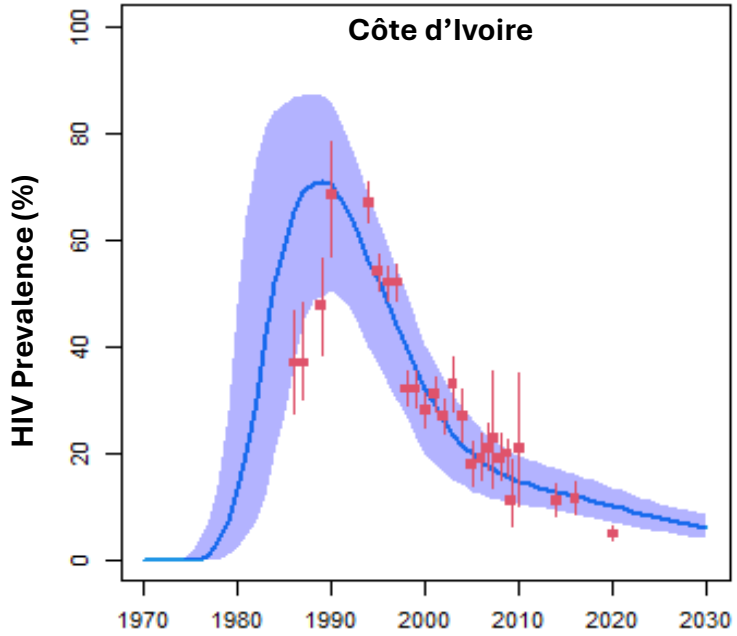
**Silhol et al, Lancet HIV 2024*

Structure: HIV treatment cascade



Example of model calibration

HIV prevalence among female sex workers



Points: data

Curved: model projections

Epidemiological contexts

Three countries: Côte d'Ivoire, Mali, and Senegal

Model estimates (January 2025)	Côte d'Ivoire	Mali	Senegal
HIV prevalence			
All adults	1.7%	0.5%	0.3%
Female sex workers (FSW)	9%	7%	3%
Men who have sex with men (HSH)	6%	11%	24%
HIV viral load suppression among PLHIV			
All adults	62%	38%	58%
Female sex workers (FSW)	60%	40%	44%
Men who have sex with men (HSH)	53%	42%	27%

Côte d'Ivoire
-High HIV prevalence among adults
-Interventions have reduced the prevalence among key populations

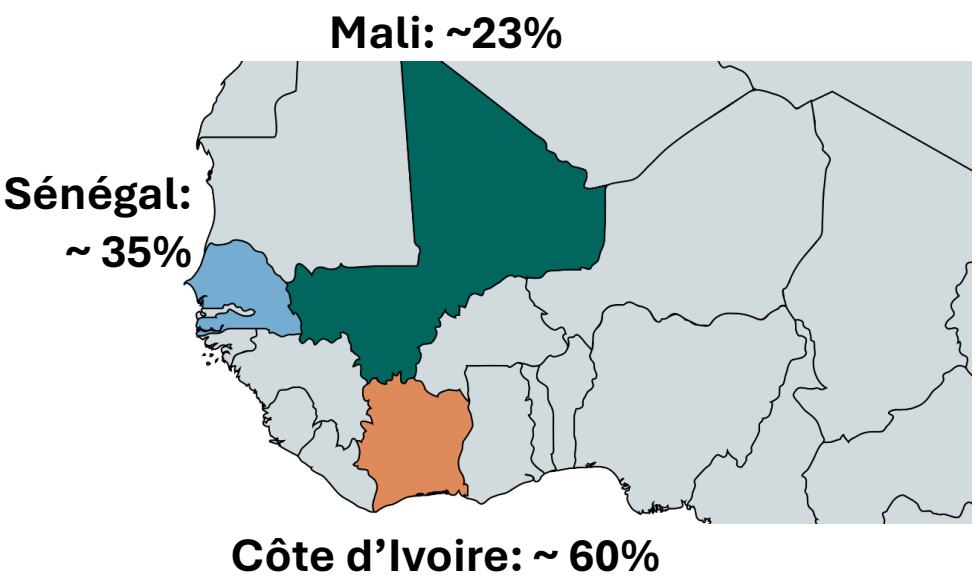
Mali
-Relatively high HIV prevalence among key populations (vs all adults)
-Low coverage of HIV viral suppression

Senegal
-Low prevalence among adults
-High prevalence among MSM

PEPFAR contribution to national AIDS control programs

Proportions of total budgets (preliminary estimates)

PEPFAR relative contribution to total national AIDS control budget (2022)



PEPFAR relative contribution	Côte d'Ivoire	Mali	Senegal
HIV prevention (condom distribution)	Large (60%)	Average (30%)	Average (30%)
HIV testing	Very large (90%)	High (70%)	High (70%)
Care and treatment	Average (37%)	Very small (10%)	Small (20%)

Prevention:

- **Côte d'Ivoire:** large contribution from PEPFAR
- **Mali et Sénégal:** average contribution

HIV testing:

- **3 pays**: very large contribution

Care and treatment:

- **3 pays:** contributions ranges between very small (Senegal) to average (Côte d'Ivoire)(large support from the Global Fund in Mali and Senegal)

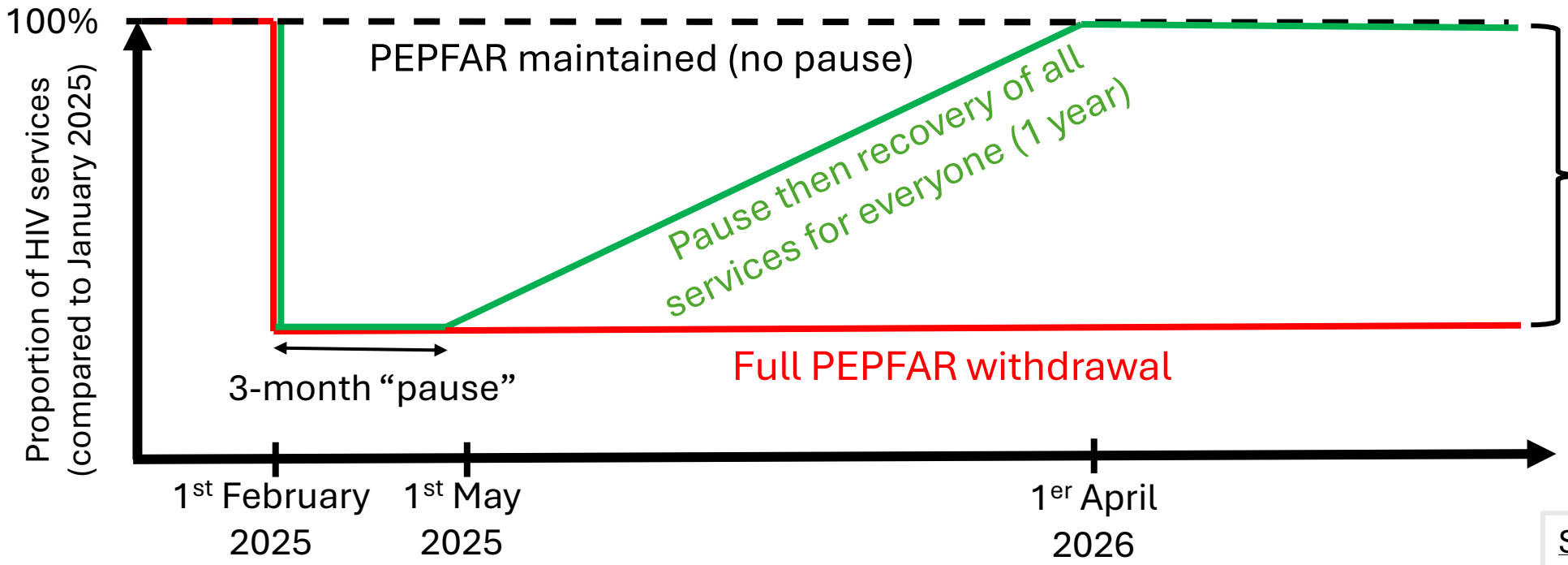
Key Populations: no specific data from domestic government (yet)

Data is still uncertain: large variations across sources and years

UNAIDS sustainability planning data:
https://sustainability.unaids.org/country-profiles/
PEPFAR & Global Fund Support for HIV Programs
https://www.dataetc.org/projects/pepfar/
PEPFAR Country Operational Plans
Rapports des CNLS

PEPFAR withdrawal scenarios

Pause or total withdrawal



% service reduction
=
Fraction of national budget allocated to the service that was funded by PEPFAR

Main scenarios:

1. **PEPFAR maintained** (no pause): all services are maintained ➔ scenario only used for comparison
2. **Full** PEPFAR withdrawal from February 2025 (no recovery)
3. **Pause** (3 months) followed by a progressive recovery – ***all services for everyone*** (1 year)

Additional scenarios:

4. Pause followed by a progressive recovery of specific services - ***treatment only*** (1 year)
5. Pause followed by a progressive recovery of all services – ***except for FSW and MSM*** (1 year)

Services considered:

Prevention*:

- condom distribution
- HIV testing and diagnosis

Treatment:

- Initiation of PLHIV diagnosed
- retention
- re-initiations

(*PrEP is not included)

Results – Côte d'Ivoire

PEPFAR contribution ≅ 60%

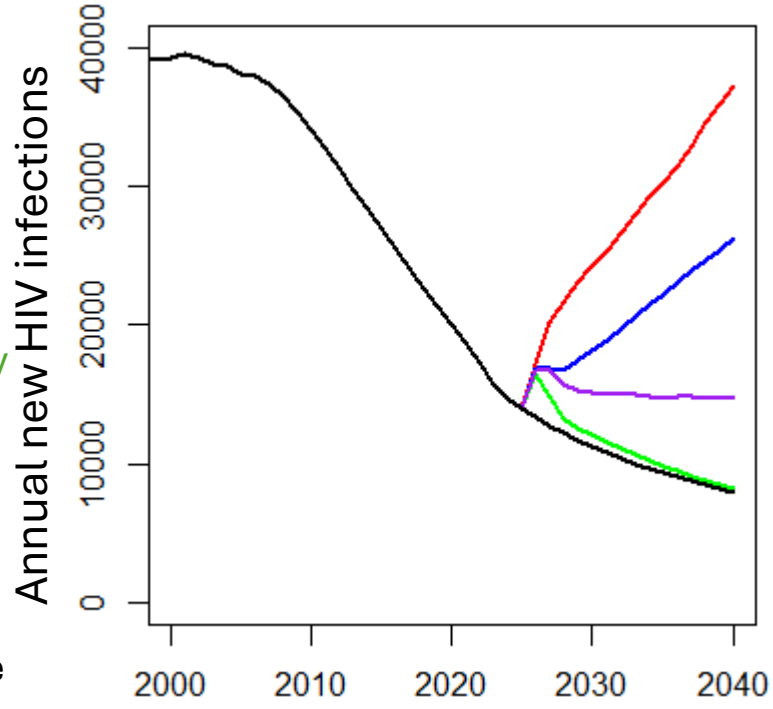
Full PEPFAR withdrawal

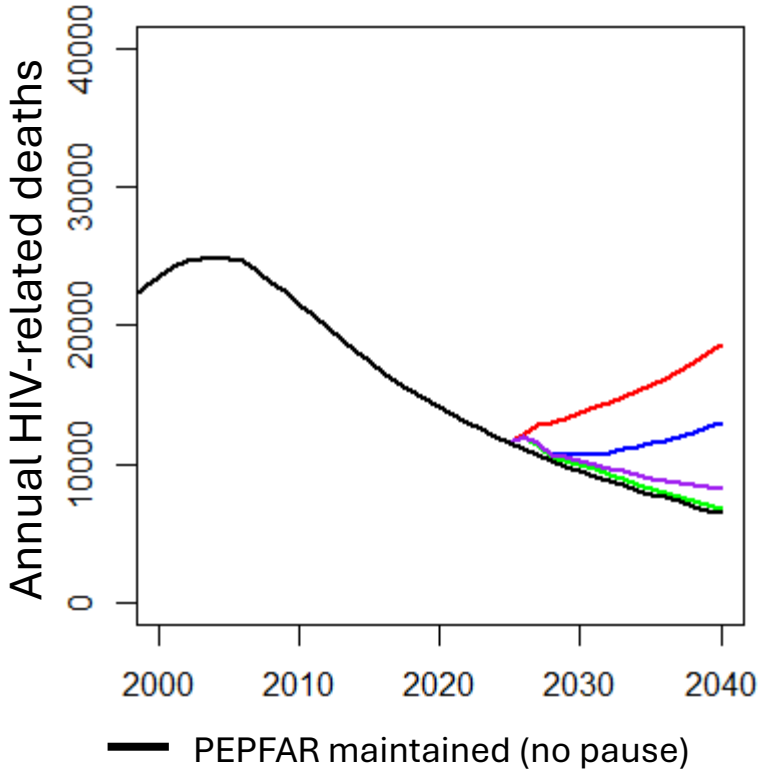
- Epidemic surge
- +140 000 new infections (+126%)
- +50 000 (+50%) HIV-related deaths over 2025-2034 (vs PEPFAR maintained)

Pause (3 months) followed by a progressive recovery – ***all services for everyone*** (1 an)

- +11 000 new infections (+10%) et
- +5 000 deaths (+5%) over 2025-2034
- ~160 000 years of disability-adjusted life lost

- **The loss of one year of (disability-adjusted) life could be prevented with ~$400**





Pause (3 months) followed by a progressive recovery of specific services - ***treatment only*** (1 year)

- Epidemic surge because 1) prevention matter and 2) diagnosis of new infections take longer than pre-pause

Pause (3 months) followed by a progressive recovery of all services – ***except for FSW and MSM*** (1 year)

- Incidence increases then plateaus
- +40 000 (+40%) new infections over 2025-2034

Results – Mali

PEPFAR contribution ≅ 23%

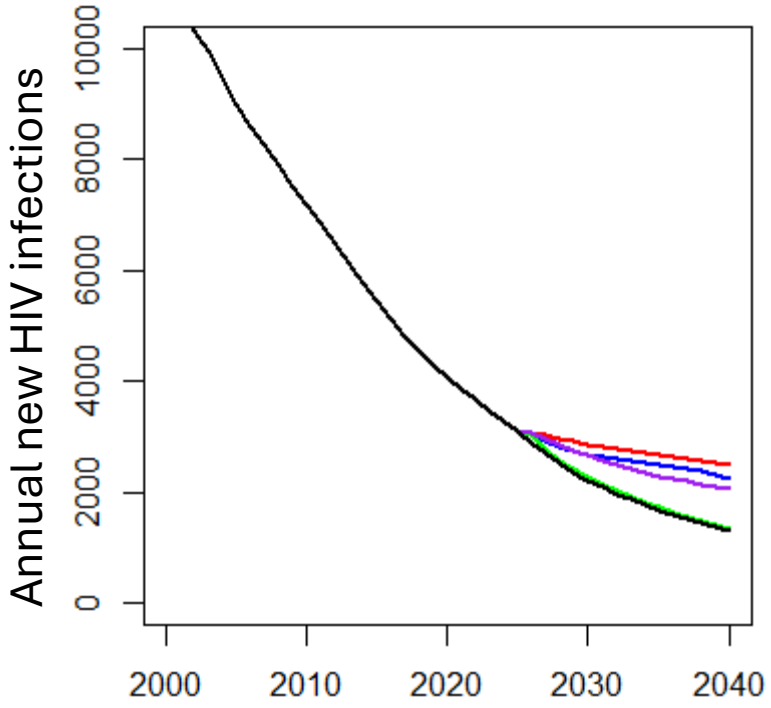
Full PEPFAR withdrawal

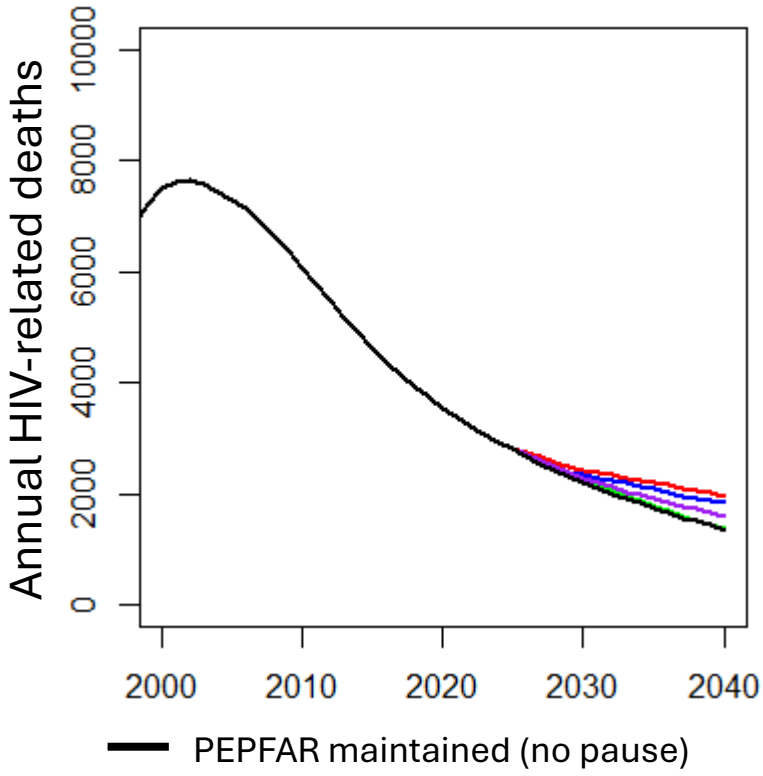
- HIV incidence decline is stopped:
- +6 000 new infections (+27%)
- +3 000 HIV-related deaths (+12%) over 2025-2034 (vs PEPFAR maintained)

Pause (3 months) followed by a progressive recovery – ***all services for everyone*** (1 an)

- +1 000 new infections (+3%)
- +400 deaths (+2%) over 2025-2034
- ~13 000 years of disability-adjusted life lost

- **The loss of one year of (disability-adjusted) life could be prevented with ~$450**





Pause (3 months) followed by a progressive recovery of specific services - ***treatment only*** (1 year)

- Impact similar to the full withdrawal scenario

Pause (3 months) followed by a progressive recovery of all services – ***except for FSW and MSM*** (1 year)

- +4 000 new infections (+18%) over 2025-2034

Results – Senegal

PEPFAR contribution ≅ 35%

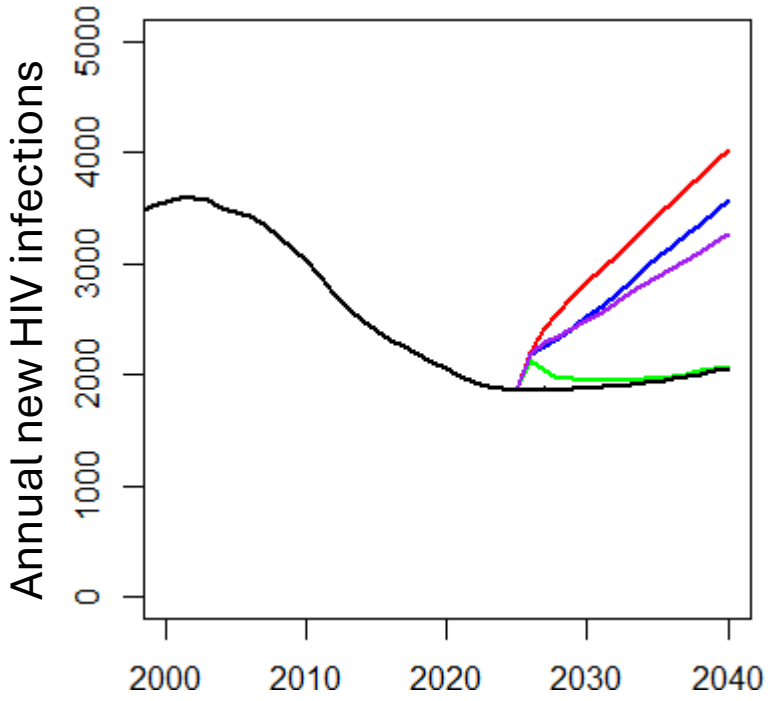
Full PEPFAR withdrawal

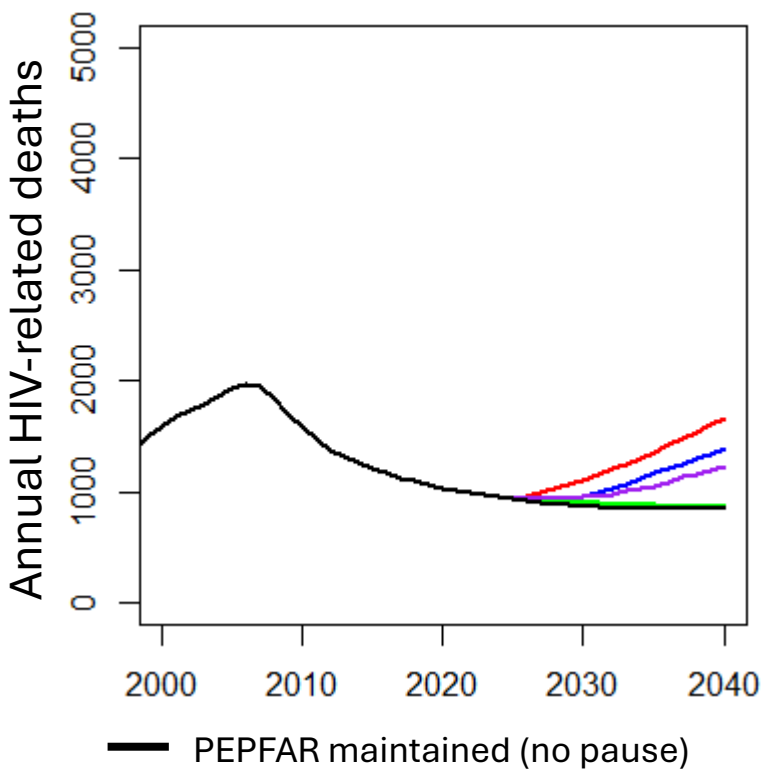
- Rapid epidemic surge :
- +10 000 new infections (+56%)
- +3 000 HIV-related deaths (+31%) over 2025-2034 (vs PEPFAR maintained)

Pause (3 months) followed by a progressive recovery – ***all services for everyone*** (1 an)

- +1 000 new infections (+5%)
- +300 HIV-related deaths (+3%) over 2025-2034
- ~ 11 000 years of disability-adjusted life lost

- **The loss of one year of (disability-adjusted) life could be prevented with ~$450**





Pause (3 months) followed by a progressive recovery of specific services - ***treatment only*** (1 year)

- Long-term impact similar to full PEPFAR withdrawal impact

Pause (3 months) followed by a progressive recovery of all services – ***except for FSW and MSM*** (1 year)

- +7 000 new infections (+39%)
- +1000 HIV-related deaths (+12%) over 2025-2034

Study limitations

Preliminary modelling

Main limitations

- scenarios relying on aggregated funding data
- early feedback from collaborators in the countries modelled

Model assumptions needs to be altered and validated, in particular:

- levels of HIV testing among PLHIV with symptoms of HIV opportunistic infections or AIDS symptoms (CD4 <200) are maintained
- PEPFAR funding cuts only affect the proportion of condoms that is not bought privately by the different populations
- impact on mother-to-child transmission and PrEP are not modelled
- reduction in services are proportional to funding reductions
    - Example: Mali could face ART drug shortages (source = WHO)

- USA also main funders of the Global Fund, is it next?

Take-home messages

Potentially severe impact of a PEPFAR withdrawal in Western Africa

Potential increases in incidence in Côte d'Ivoire and Senegal

- even if recovery of HIV treatment services
- important to not overlook HIV prevention and testing

Maintaining services towards key populations is essential

Even a short pause could have important long-term effects on incidence

- The loss of one year of (disability-adjusted) life could be prevented with ~$500

Acknowledgments

Collaborators, partners, and funding

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- CEPED (UMR 196)
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Projects partners and future partners

ANRS

CHANGE community (Whatsapp)