PrEP coverage and targets in the WHO European Region

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Declaration of interest

I do not have any affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organisation.

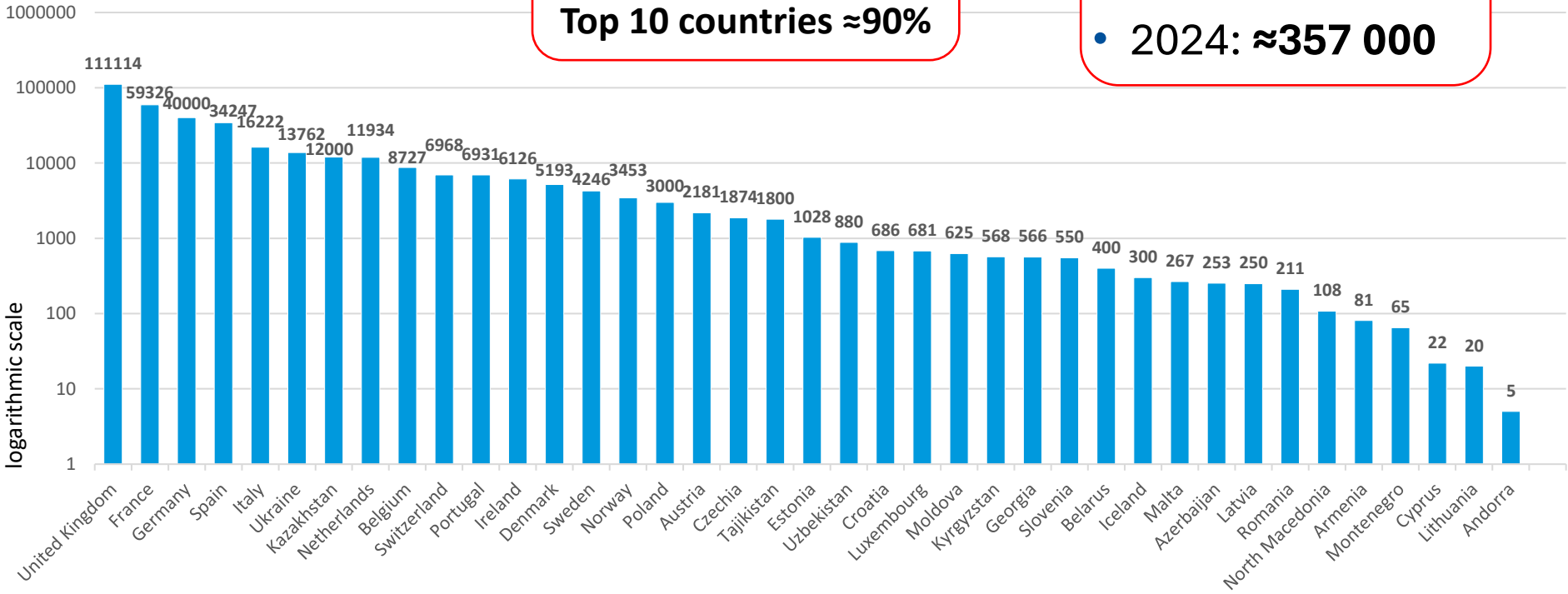
The views expressed in this presentation are solely my own and they do not necessarily represent the views, decisions or policies of the organizations I have been affiliated with.

PrEP uptake in Europe

(ECDC, 2025; UNAIDS dataset, 2025; own analysis, latest data available from 2024, 2023 or 2022)

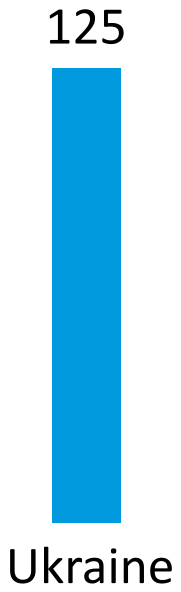
39 countries
Top 5 countries ≈73%
Top 10 countries ≈90%

- 2022: ≈210 000
- 2023: ≈260 000
- 2024: **≈357 000**



People who received oral PrEP at least once, 2024

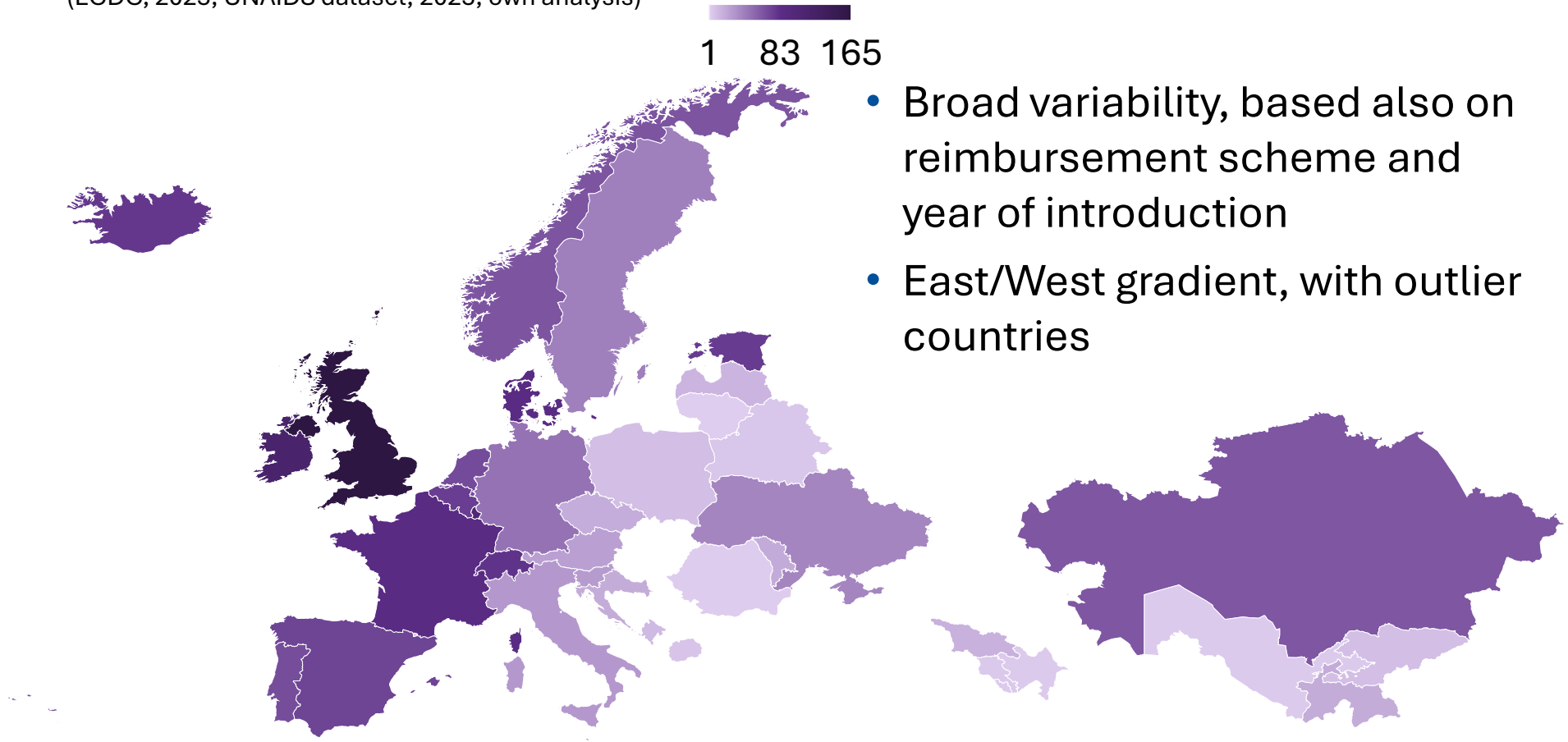
(UNAIDS dataset, 2025)



- Only 1 country had seen programmatic rollout of long-acting injectable cabotegravir for PrEP

People who received long-acting PrEP at least once, 2024

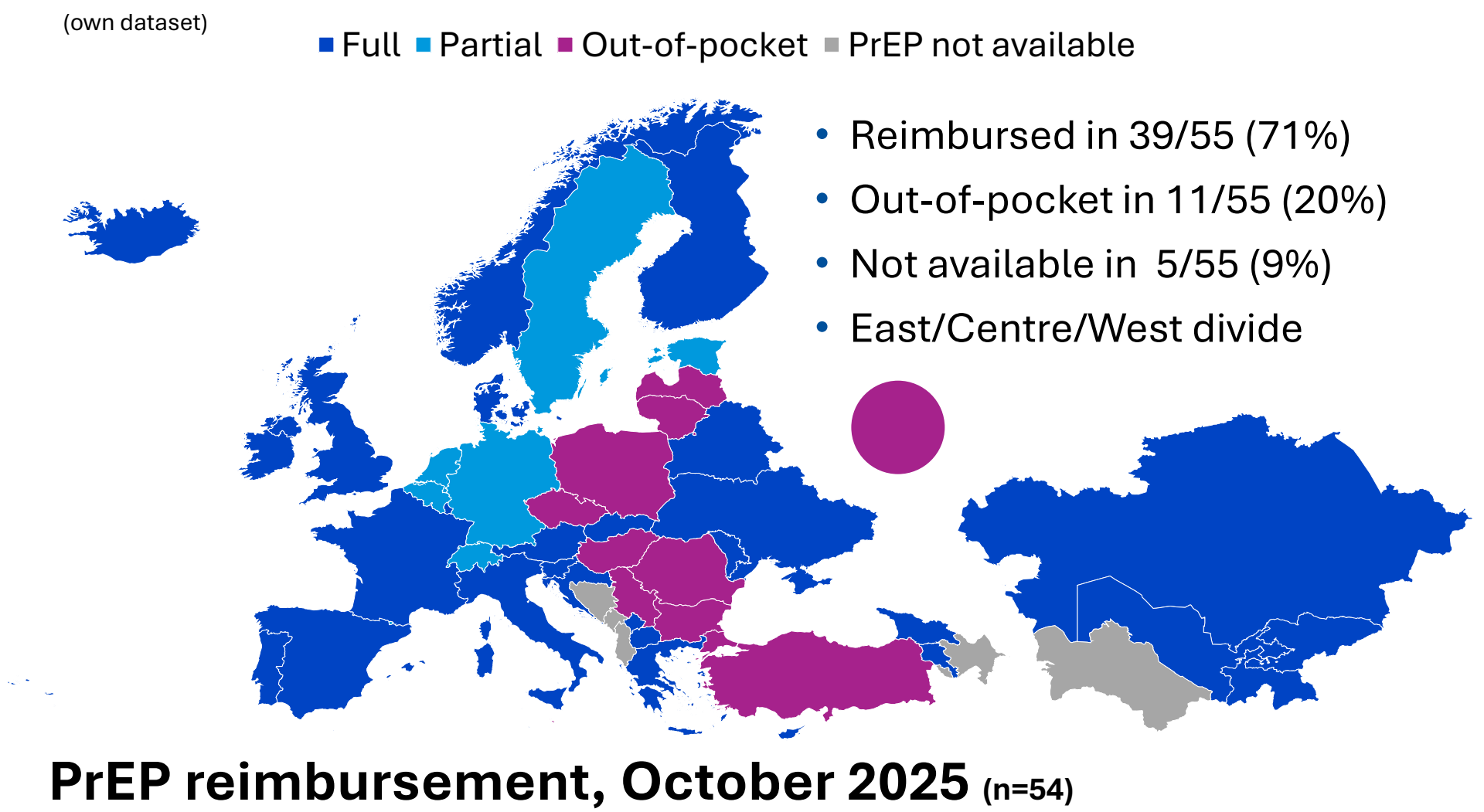
(ECDC, 2025; UNAIDS dataset, 2025; own analysis)



- Broad variability, based also on reimbursement scheme and year of introduction
- East/West gradient, with outlier countries

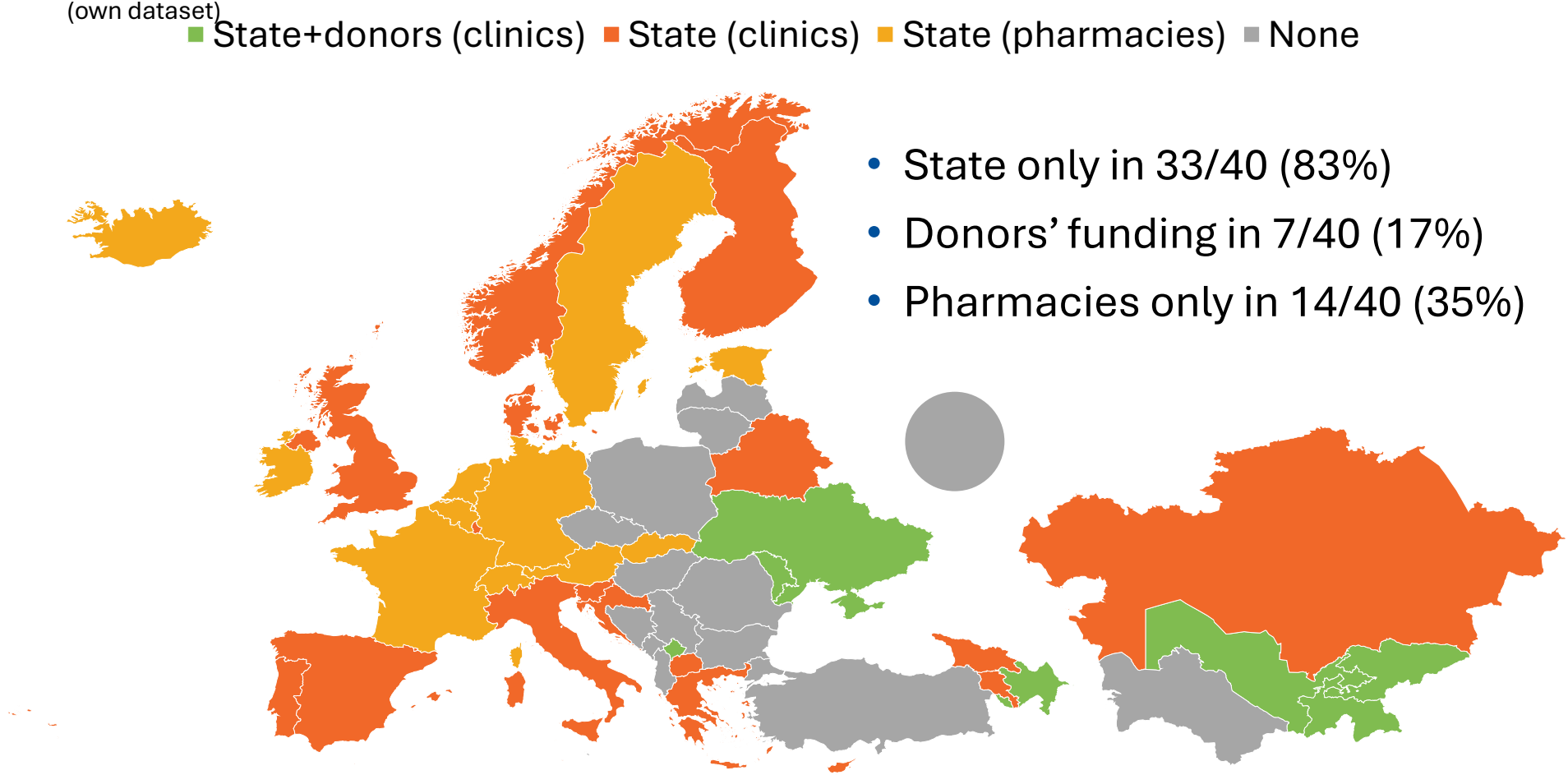
Oral PrEP users per 100 000 population, 2024 (n=39)

(own dataset)

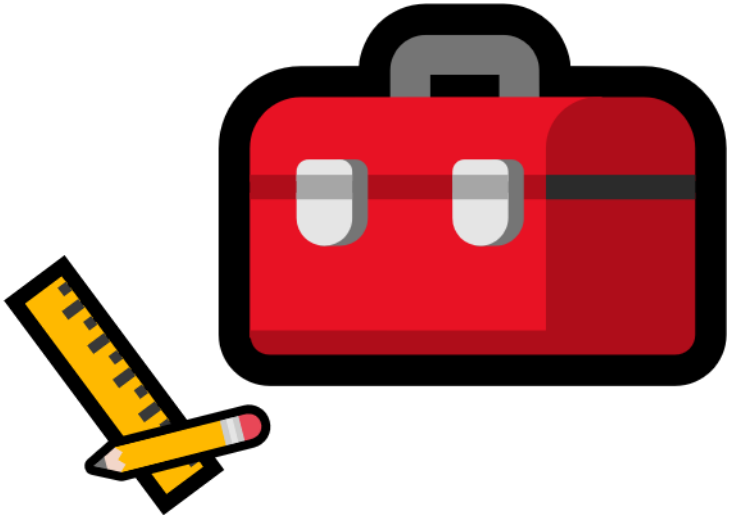


PrEP reimbursement, October 2025 (n=54)

(own dataset)



Payers and dispensation sites, 2025 (n=54)



How to assess PrEP need and progress?

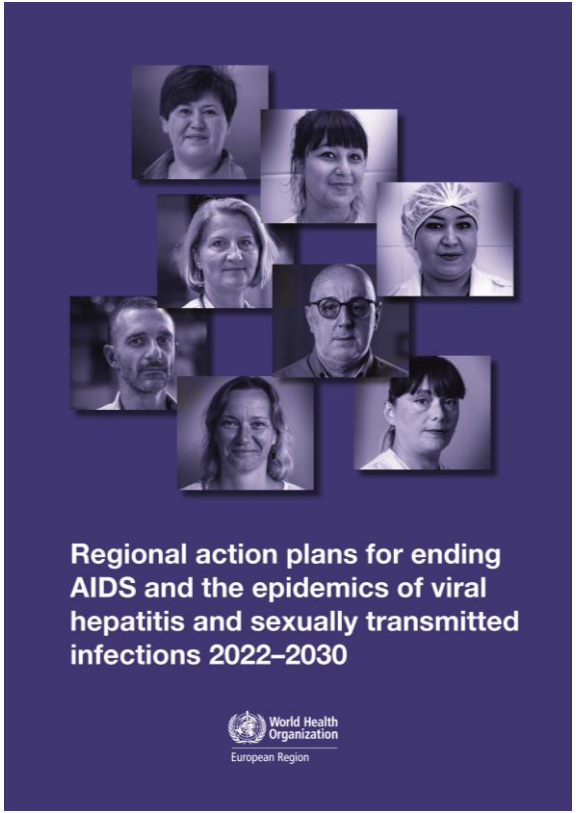
WHO regional targets for Europe for 2025 and 2030

- New HIV infections per year:
  - **32 000** by 2025 (0.04 per 1 000 incidence)
  - **13 000** by 2030 (0.02 per 1 000 incidence)
- Number of people who received PrEP at least once during the year:
  - **500 000** by 2025
  - **1 100 000** by 2030

→ PrEP users/new HIV infections:

- **15.6** in 2025
- **84.6** in 2030

(WHO Europe, 2023)



PrEP-to-need ratio (PnR)

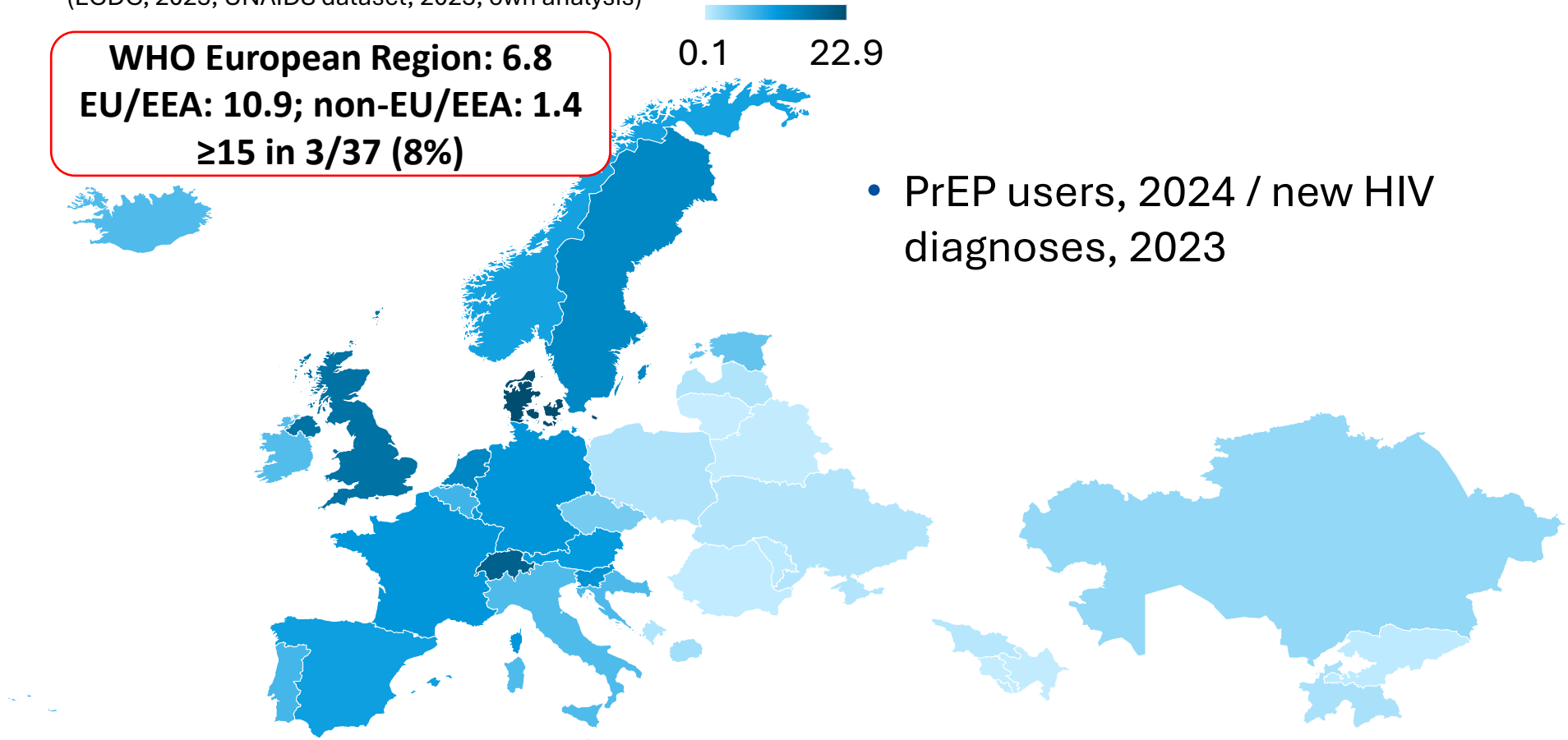
- People who used PrEP / people newly diagnosed with HIV
- Recommended by ECDC to assess coverage
- Compare locations, timepoints and populations
- Ideal ratio not identified
- Does not account for incidence

→ Useful to assess progress, not ideal to set targets

(Coukan, 2024; Doherty, 2022; ECDC, 2022; Mukherjee, 2024)

(ECDC, 2025; UNAIDS dataset, 2025; own analysis)

WHO European Region: 6.8
EU/EEA: 10.9; non-EU/EEA: 1.4
≥15 in 3/37 (8%)

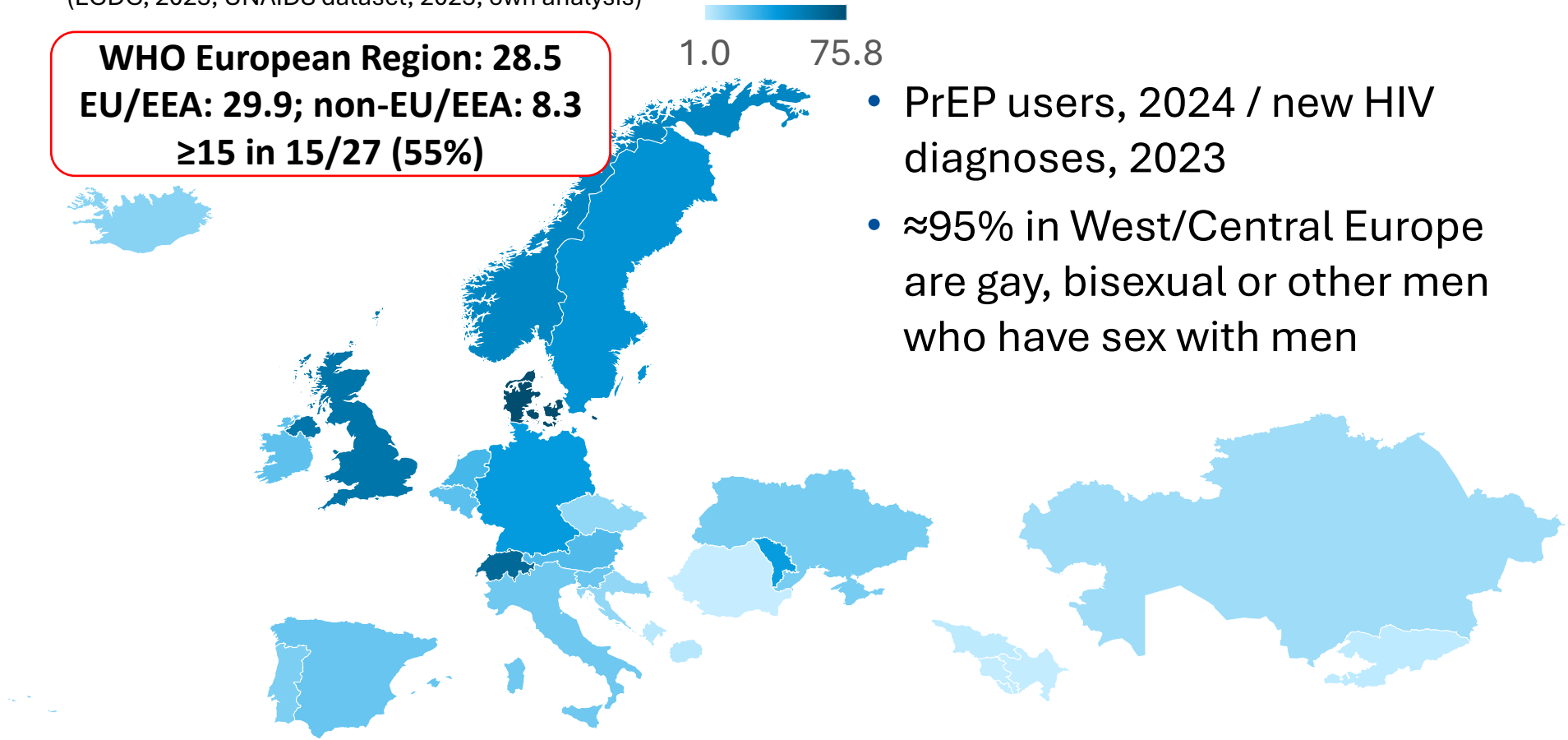


- PrEP users, 2024 / new HIV diagnoses, 2023

PrEP-to-need ratios, 2024 (n=37)

(ECDC, 2025; UNAIDS dataset, 2025; own analysis)

WHO European Region: 28.5
EU/EEA: 29.9; non-EU/EEA: 8.3
≥15 in 15/27 (55%)

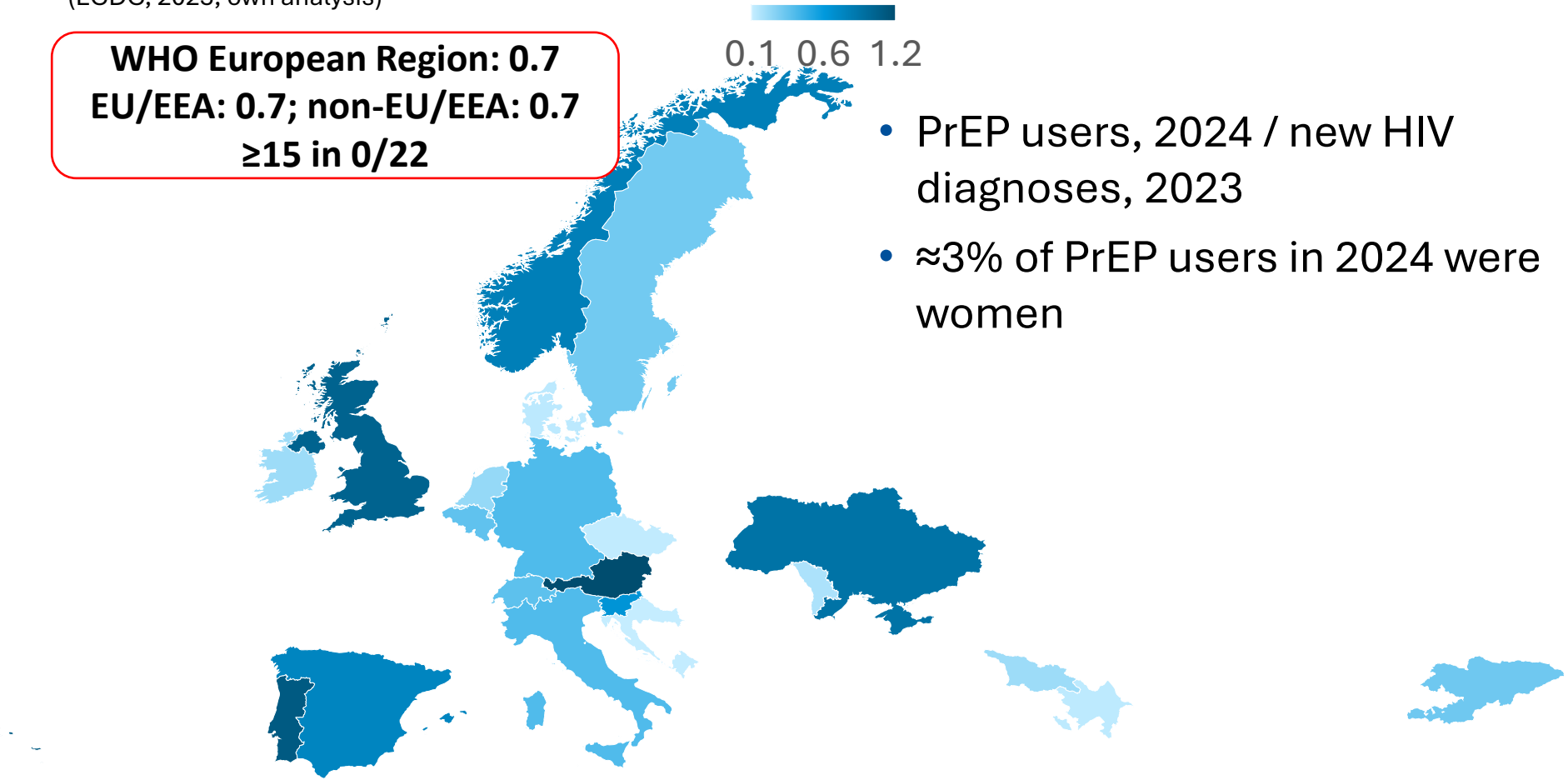


- PrEP users, 2024 / new HIV diagnoses, 2023
- ≈95% in West/Central Europe are gay, bisexual or other men who have sex with men

PrEP-to-need ratios, 2024 (men who have sex with men; n=27)

(ECDC, 2025; own analysis)

WHO European Region: 0.7
EU/EEA: 0.7; non-EU/EEA: 0.7
≥15 in 0/22



- PrEP users, 2024 / new HIV diagnoses, 2023
- ≈3% of PrEP users in 2024 were women

PrEP-to-need ratios, 2024 (women; n=22)

UNAIDS PrEP targets for 2030

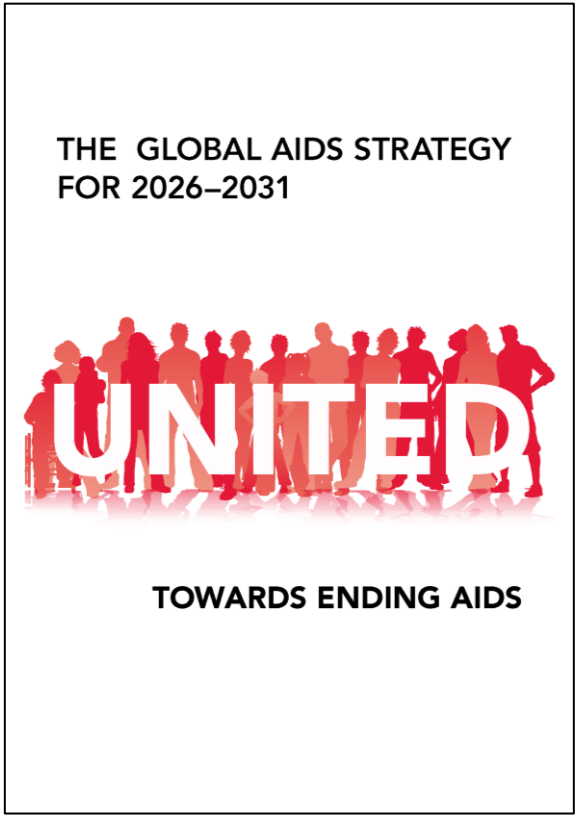
UNAIDS, Global AIDS Strategy 2026-2031:

- **90%** of people **in need of prevention** use prevention options (PrEP, PEP, condoms, needle-syringe programmes, OAMT)
- **40 mln people** accessing ARV-based HIV prevention options by 2030

PAHO and UNAIDS target-setting tools:

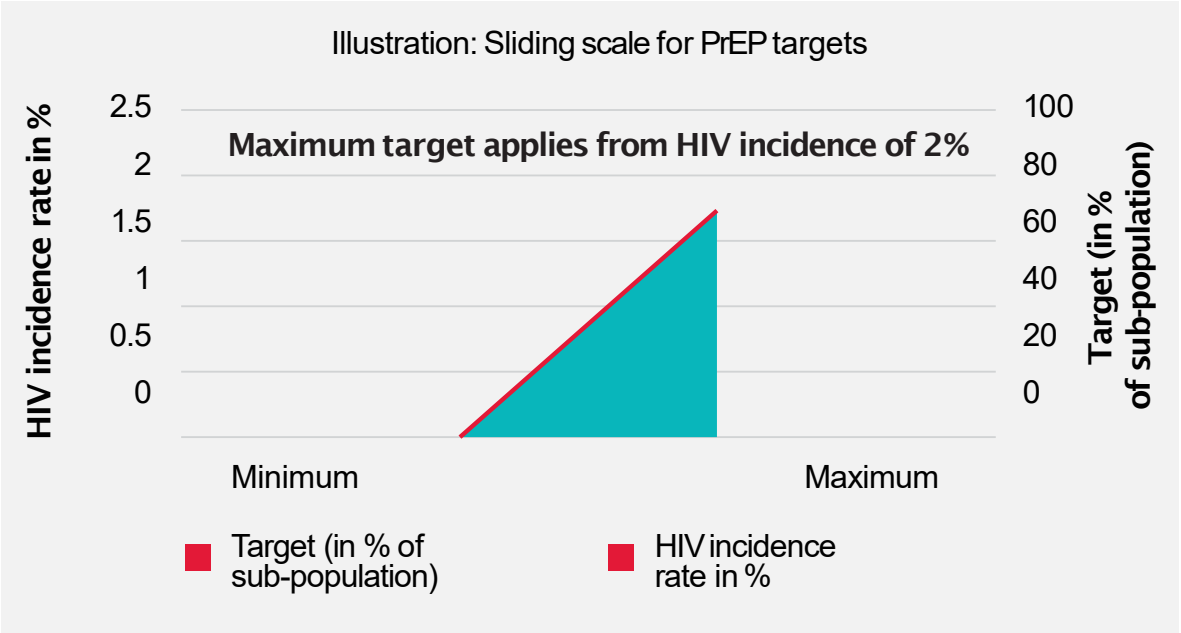
- Mathematical modelling to set targets based on data from **behavioural surveys** among key populations and **population size estimates**

(PAHO, 2021; UNAIDS, 2026a; UNAIDS, 2021)



UNAIDS HIV Prevention 2030 Global Access Framework

- **HIV incidence** in specific sub-populations and their **population sizes** predict **need for PrEP**



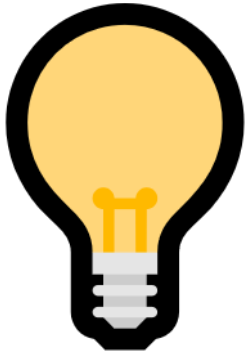
(UNAIDS, 2026b)

UNAIDS HIV Prevention 2030 Global Access Framework

Description		Young people and adults in settings with elevated HIV	Key populations		
			Female sex workers	Men who have sex with men, transgender women	People who inject drugs, prisoners
Maximum target		80%	80%	80%	50%
HIV incidence rate thresholds (apply 2024 HIV baseline incidence rate up to 2030)	**Maximum target applies from**	2%			
	Sliding scale for targets starts at	0.2%	0%		
Other considerations for specific populations		Recommended to apply target based on HIV incidence rates in sub-categories of the sexually active population (people with non-regular and regular partners)		Apply minimum target of 20% of population size (including for male and transgender sex workers)	In most countries more than half of people who inject drugs use safe injecting equipment, therefore a maximum target of 50% in most settings
Overall minimum threshold*		5 persons on PrEP per estimated new HIV infection in a country			

Number needed to treat (NNT)

- **NNT**: number of people on PrEP needed to prevent 1 HIV infection
- Used to assess **population-level efficiency**
- Suggested for estimating **PrEP need**:
    1. **NNT = 1 / (annual HIV incidence * PrEP efficacy)**
    2. **PrEP need = NNT * annual number of new HIV diagnoses**



Oral PrEP has showed effectiveness only in **concentrated epidemics**

→ NNT in **general population** is unrealistically and unsustainably high

→ NNT useful for **(key) populations** with high likelihood of HIV exposure

(Beyrer, 2024; Beyrer, 2022; Kourtis, 2025; Sharma, 2024)

Number needed to treat (NNT)

Pro: no need for **population size estimates**

Con: need for **granular data** on HIV incidence and diagnoses

Incidence per 100 PY among men who have sex (and trans* women) who can benefit from PrEP is **highly variable**

- non-PrEP cohorts of PrEP trials: IPERGAY **6.6** (Molina, 2015); PROUD **9.0** (McCormack, 2016); DISCOVER **3.4** (Glidden, 2021); PrEP Impact Trial **0.95** (Sullivan, 2023); PURPOSE 2 **2.37** (Kelley, 2025)
- global systematic review: **2.62** (Sharma, 2024)
- Mosaico HIV vaccine trial (including PrEP users): **3.9** (Buchbinder, 2024)

→ NNT can help **prioritize (sub)populations** with higher HIV exposure and incidence, who may benefit from PrEP the most

The way forward

- **Know your epidemic**

Collect granular individual-level data

- **Data-driven strategy**

Invest where impact is higher (lower NNT)

- **Human rights-based approach**

PrEP available to all people at substantial risk

- **Combination prevention**

PrEP alone will not end HIV

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Thank you !

Stay in touch

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