

Estimating the number of individuals who need to receive PrEP to meet England's 2030 HIV transmission elimination goals

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Executive summary

- Existing evidence suggests increased investment in prevention interventions is needed for England to reach the 2030 goal.
- Our modelling estimates **~3,100 infections need to be averted** between 2026 and 2030 to meet the HIV commission goals by population group.
- To avert these infections through increased PrEP alone, **we estimate 60,500 additional people need PrEP**.
- This does not present the complete population that could benefit from PrEP. Recent evidence estimated **~389,000 individuals have an unmet PrEP need** in England. Unmet need was highest among heterosexual women and men [1].
- Improved access for heterosexuals at risk of HIV acquisition** is necessary to meet the transmission elimination goal, and **expanding outreach outside of sexual health services** is vital to reach those with an unmet need [2].
- While our analyses focus on PrEP, investment in **a combination of prevention strategies is essential** to reach the goal.
- The transmission **elimination goal is currently under review** by the UKHSA, which may lower the number needing PrEP to achieve the goal, and our assumptions rely on improved adherence from long-acting injectables.

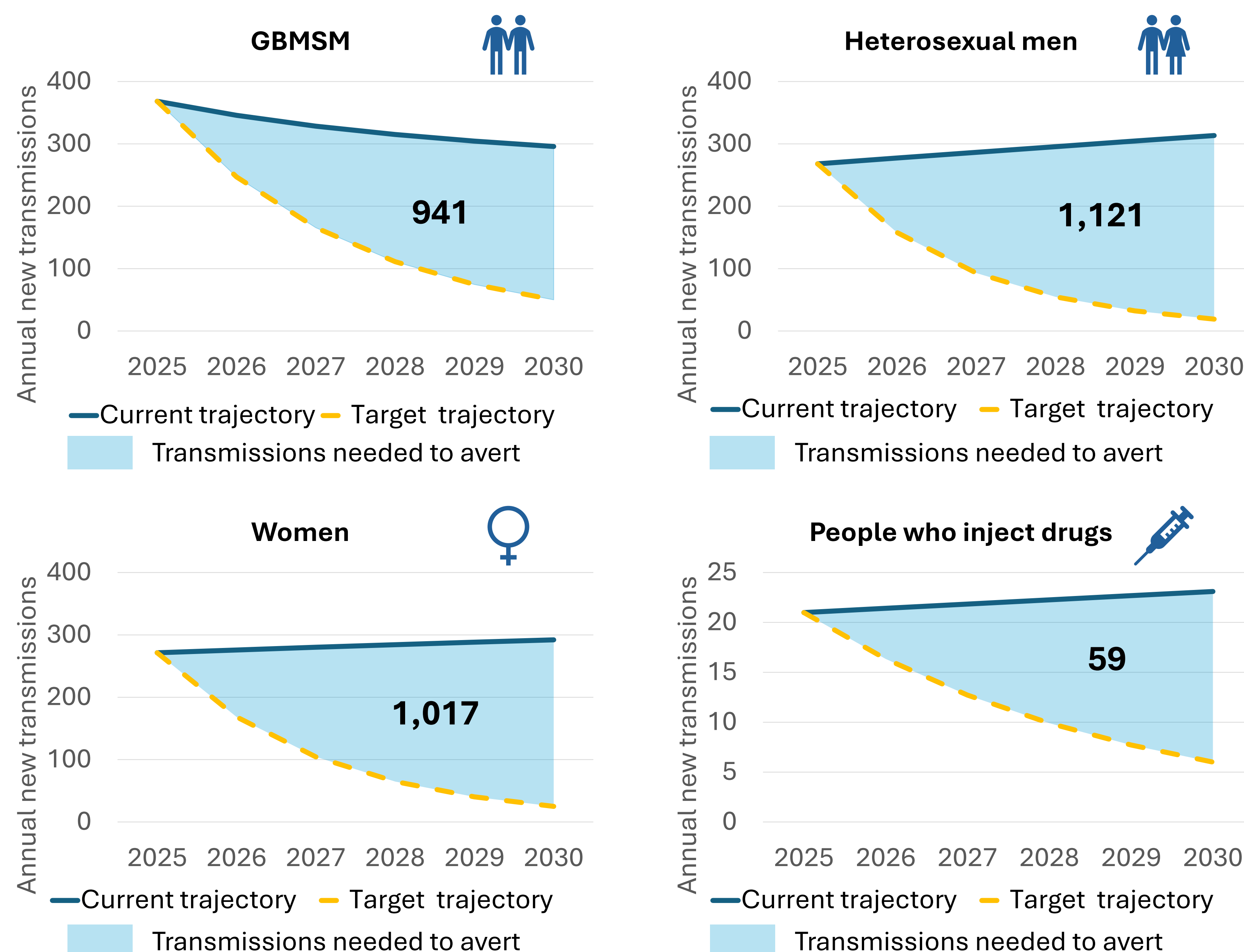
Background

- England has committed to **reaching HIV transmission elimination by 2030** [3].
- Current data indicate that **increased levels of intervention** will be required to reach this goal, particularly as the annual **number of diagnoses has continued to rise** among the **heterosexual** population [4, 5].
- In 2024, **111,000 individuals accessed PrEP in sexual health services (SHS)**, the majority of whom are gay, bisexual and other men who have sex with men (**GBMSM**) [5].
- It has not been estimated **how many additional individuals at risk** of acquiring HIV, by population group, would **need to receive PrEP** to meet the HIV Commission's population group-level **elimination goals** (Table 1) [6].

Results

- The total number of new HIV transmissions **needed to avert** between 2026 and 2030 to **reach the goal is ~3,100**.
 - This is highest for **heterosexual men and women** (~1,100 and ~1,000, respectively), due to the predicted **increase in transmissions** over time among these groups (Figure 1).
- To meet the HIV transmission elimination goals for all population groups by 2030, **60,500 additional people would require PrEP** (Table 1).
 - The number is highest for **heterosexual men and women** (29,400 and 26,700, respectively), followed by **GBMSM** (2,400) and **people who inject drugs** (2,000).

Figure 1. Comparison of current predicted annual transmission trajectory and the estimated trajectory needed to reach the 2030 goal



Note: The shaded area is the difference between the two trajectories and represents the number of transmissions that need to be averted to meet the 2030 goal.

Table 1. HIV Commission targets and the additional number of people that need PrEP each year between 2026 -2030 to reach the 2030 target for all population groups in England

Population group	HIV Commission elimination goal (number of annual new transmissions)	Additional PrEP need to reach target
Total population	<100	60,500
GBMSM	<50	2,400
Heterosexual men	<19	29,400
Women	<25	26,700
People who inject drugs	<6	2,000

Methods

Model

A validated **cohort model** for **four population groups** (GBMSM, heterosexual men, women, and people who inject drugs) to predict annual new transmissions (2026-2030) [4,7].

Three-step estimation by population group

Step 1: Estimate two trajectories

Current expected trajectory (if intervention levels remain at baseline levels, as of 2023) and **target trajectory** (required to meet the 2030 goal).

Step 2: Calculate the transmissions needed to avert to meet the goal

This is the **difference** between the two trajectories.

Step 3: Estimate additional individuals who need PrEP

Person-years on PrEP to avert one infection were estimated utilising:

- Baseline incidence** per person-years within the population group [8,9], and
- Relative risk reduction** by population group for individuals on PrEP, by PrEP modality*, to account for adherence variations [10-12]. Total person-years were divided by the time horizon to approximate persons on PrEP over the 5-year period.

*Assuming 70% of new users receive **daily oral** and 30% **long-acting injectables**.

The other prevention interventions (e.g., HIV testing) were held constant at baseline levels.

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REFERENCES: References can be accessed by scanning the QR code.

