



Technical Report: Sri Lankan HIV Estimation Working Group Proceedings-April 2026

SIM unit/National STD/AIDS control programme

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1. Overview

The Sri Lankan Technical Working Group (TWG) on HIV estimation convened to review the current national HIV estimates and to update AEM file, to update Spectrum file and to Discuss and come to a consensus of new HIV estimates. Dr. Wiwat, International Consultant, provided technical support to this three day working session. Findings were disseminated to key stakeholders on the third day and discussed further actions. **Preliminary updated AEM and Spectrum files prepared during this workshop have been shared with UNAIDS, Geneva and awaiting their concurrence before finalizing HIV estimations.**

Objectives of HIV estimation

- For strategic planning of prevention and care services
- For advocacy purposes: numbers infected, numbers dying
- For impact assessment e.g. Expansion of ART programme
- For global reporting/comparing country scenarios

2. Methodology

Following tools were used to calculate HIV estimations.

- AIDS epidemic Model (v5.2) for adult (15+ yrs) HIV estimations
- Spectrum (v6.43) for PMTCT and Children estimations

Data source and key inputs

- Population data from UN population database
- HIV case report data
- IBBS and other survey data
- ART programme monitoring data
- STD clinic data on PMTCT data
- HIV testing data among Key populations
- Maternal and child health data from FHB

TWG conducted a review of the current AEM model. It was noted that no new behavioral or prevalence survey data were available for the current year. Consequently, the model was updated using:

- Current Antiretroviral Therapy (ART) data.

- Updated population data based on UN population database.

3. Comparative Analysis: Model vs. Case Reports

The primary focus of the workshop was reconciling the AEM model's projections with real-world case report data. The TWG identified several discrepancies:

- **MSM Epidemic Trends:** While previous data suggested a low-level epidemic among Men who have sex with men (MSM), recent case reports indicate a significant rising trend in MSM incident HIV cases.
- **Curve Alignment:** The case report curves for new infections (total, male, and female) were significantly steeper than the previous year's AEM projections.
- **Diagnosis Realism:** The previous AEM file projected that 100% of the MSM population would be diagnosed by 2025. Given that only ~17,000 MSM HIV tests were conducted last year against an estimated population of over 100,000, the TWG deemed this projection unrealistic.

4. Model Adjustments and Calibration

To achieve a more realistic representation of the epidemic and align the model with observed case report trends, the following technical adjustments were implemented in the AEM:

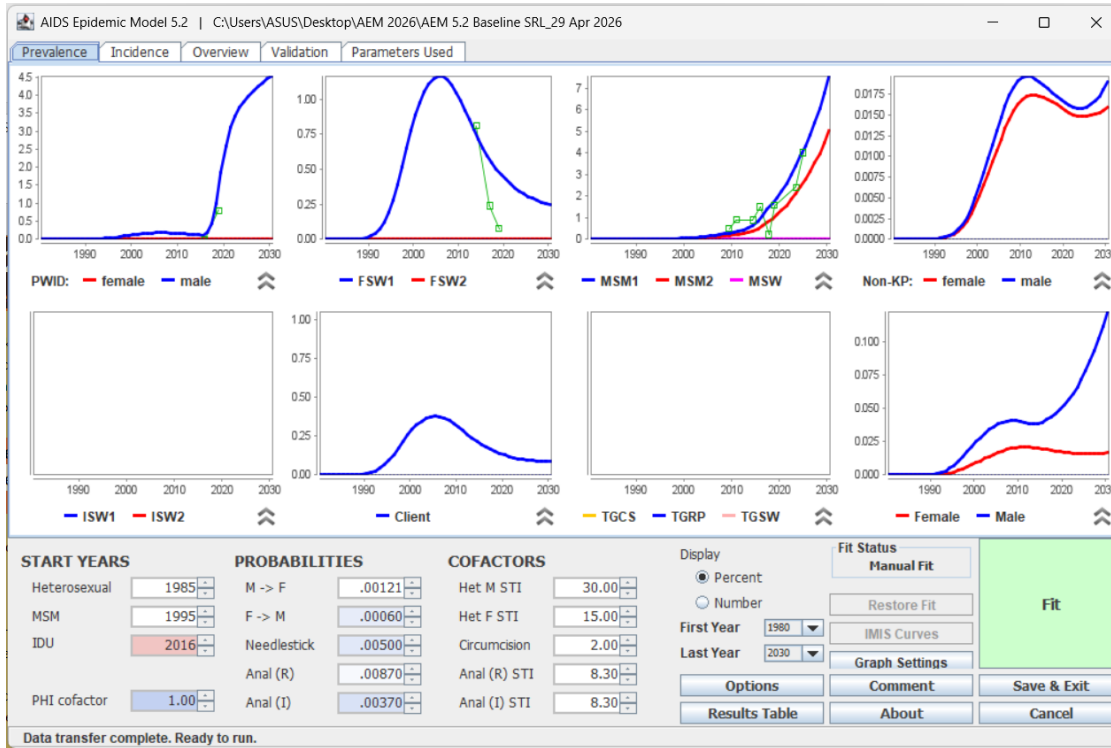
4.1 Population Size and Prevalence

- **MSM Population Size:** Increased from 2.0% to 2.5% of the adult male population.
- **MSM Sub-grouping:** Increased the proportion of the MSM-1 population from 27% to 50% of the total MSM population.
- **Prevalence Projections:** HIV prevalence for MSM was set at 4% for 2025, which projects a rise to 6% by 2030 based on current trends.

4.2 Transmission Dynamics

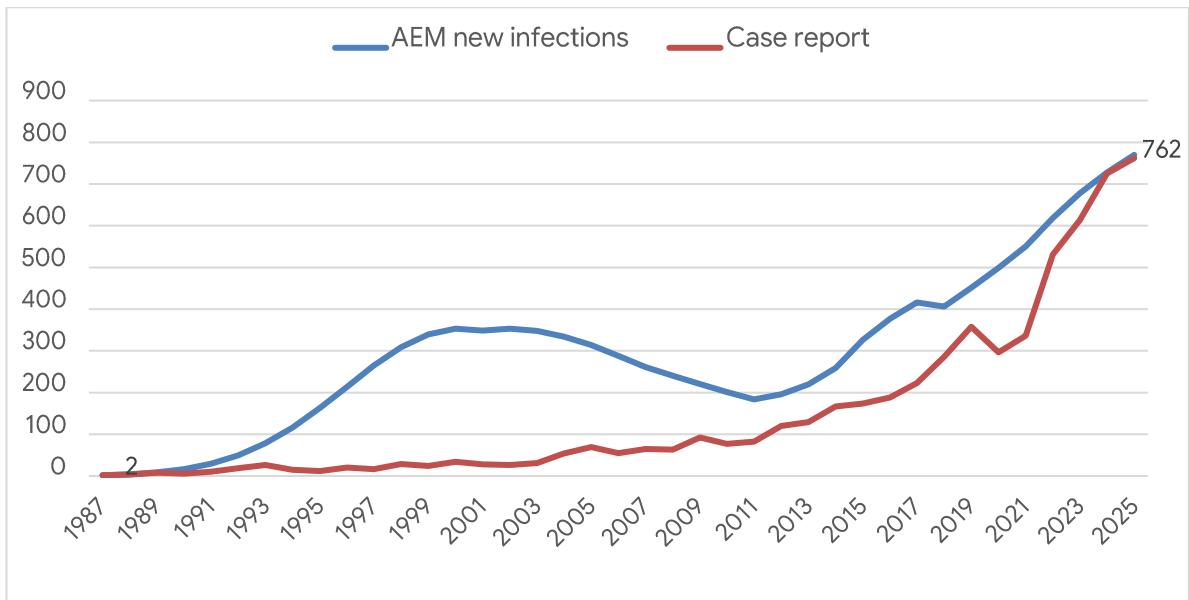
- **Bisexual Behavior:** Increased the estimated bisexual behavior among the MSM-1 group from 34% to 41% to account for increased transmission to female partners.
- **Spousal Contact:** Adjusted the frequency of sexual acts between husbands and wives from 0.5 to 1.0 sexual act per week.

Curve fitting to represent available data



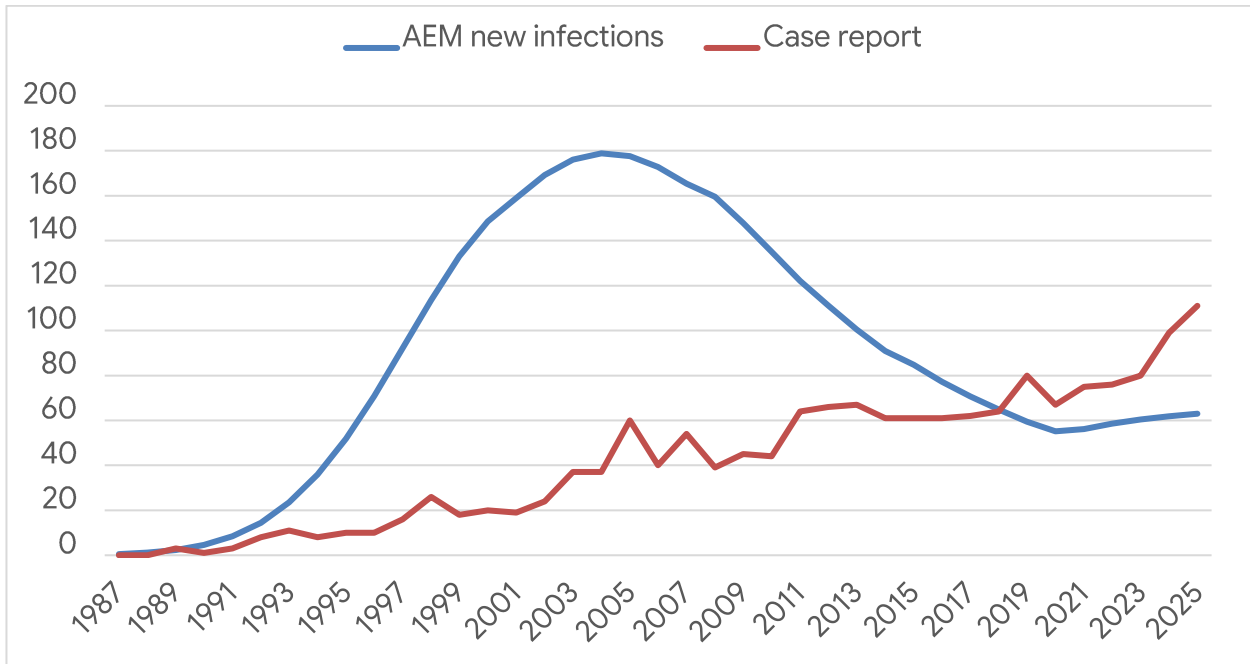
Above diagram shows the curve fitting according to available data.

AEM New infections vs Case report- Male



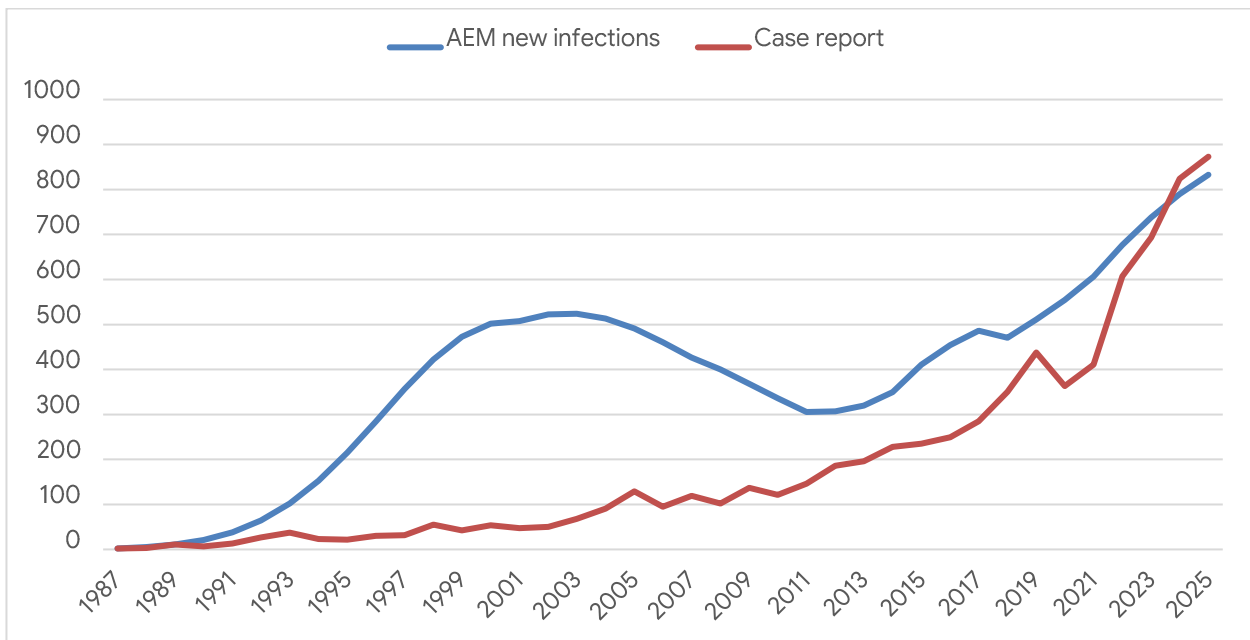
Age 15+ male AEM new infections and case reporting trends are aligned after adjusting male parameters of AEM.

New infections vs Case report - Female



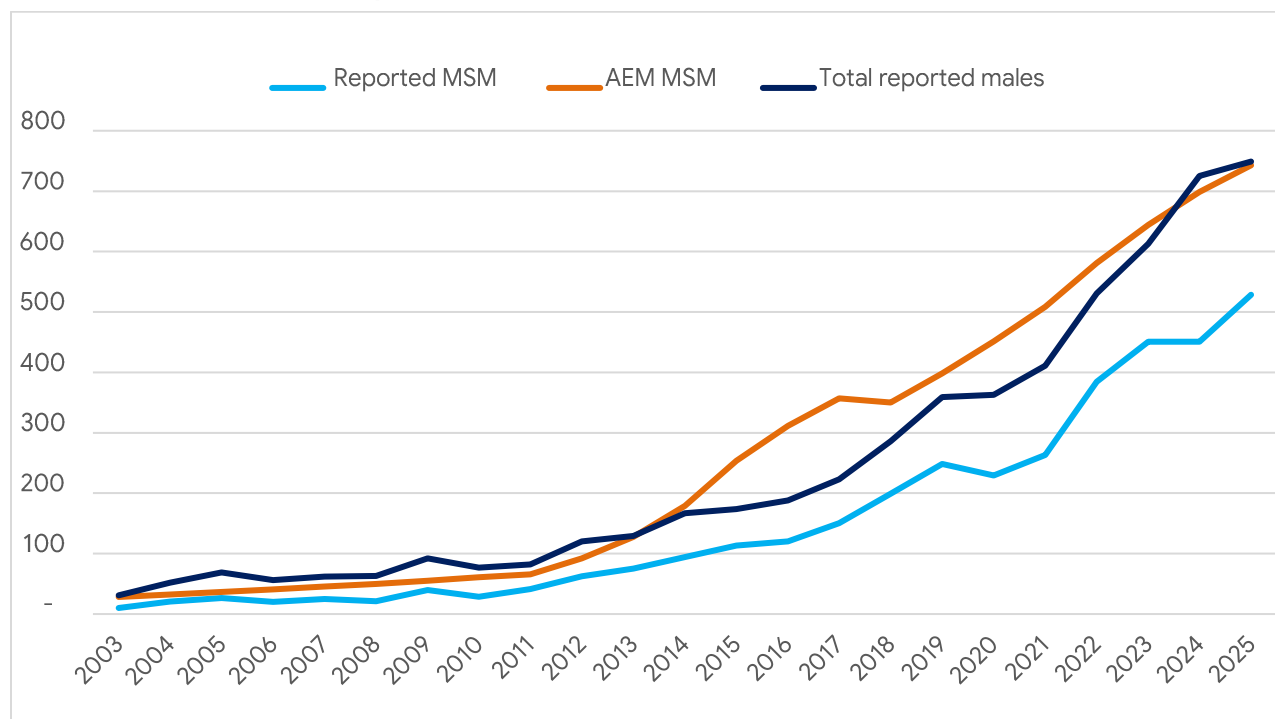
AEM adult female transmission parameters were also updated but still AEM numbers are lower since 2017 compared to female case report numbers.

New infections vs Case report - Total



Total adult AEM new infection trend and cases report trend is now more aligned with each other.

New infections vs Case report - MSM

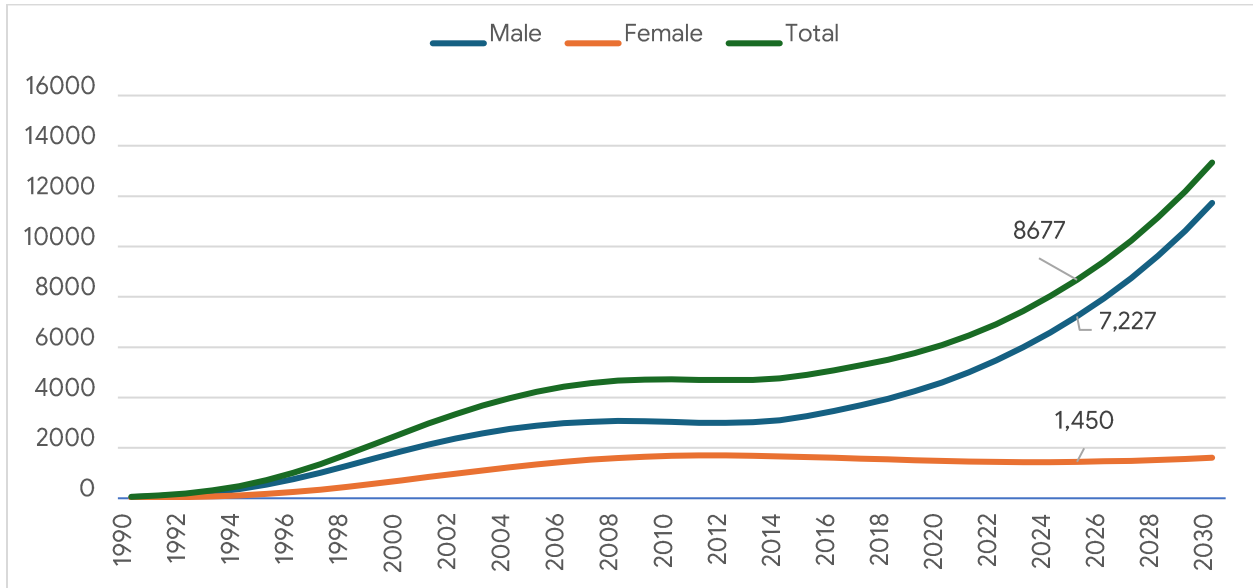


Following these adjustments, the AEM new infection of MSM trend became more parallel to the actual case report data. The revised model provides a more credible picture of the epidemic—reducing the unrealistic 100% diagnosis projection to approximately 50% for 2025—thereby reflecting the actual testing coverage and incident trends observed in Sri Lanka.

5. Summary results

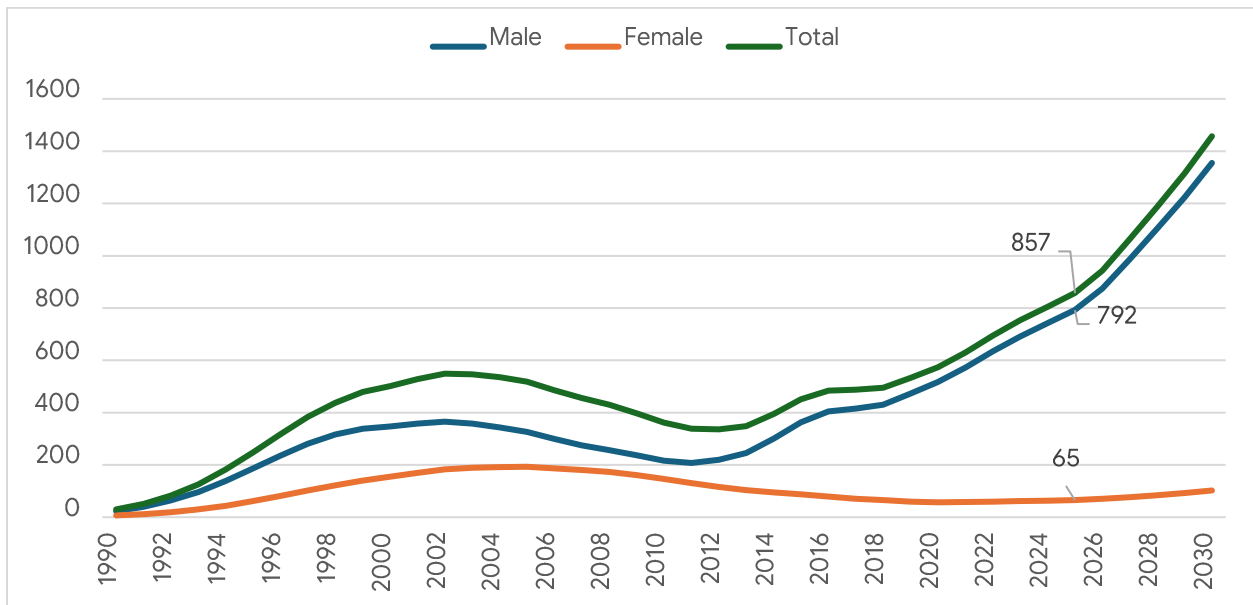
Indicators	Adult (15+)			Children (0-14)	Grand Total
	Male	Female	Total		
PLHIV	7,204	1,428	8,632	46	8,678
New Infections	790	64	854	3	857
AIDS deaths	109	45	154	2	156
On ART (<i>Prog. data</i>)	3,654	849	4,503	32	4,535
ART Coverage	51%	59%	52%	70%	52%
HIV Prevalence	0.08%	0.01%	0.05%	0.00%	0.04%
HIV incidence per 1000	0.091	0.007	0.047	0.001	0.037

Trend of PLHIV



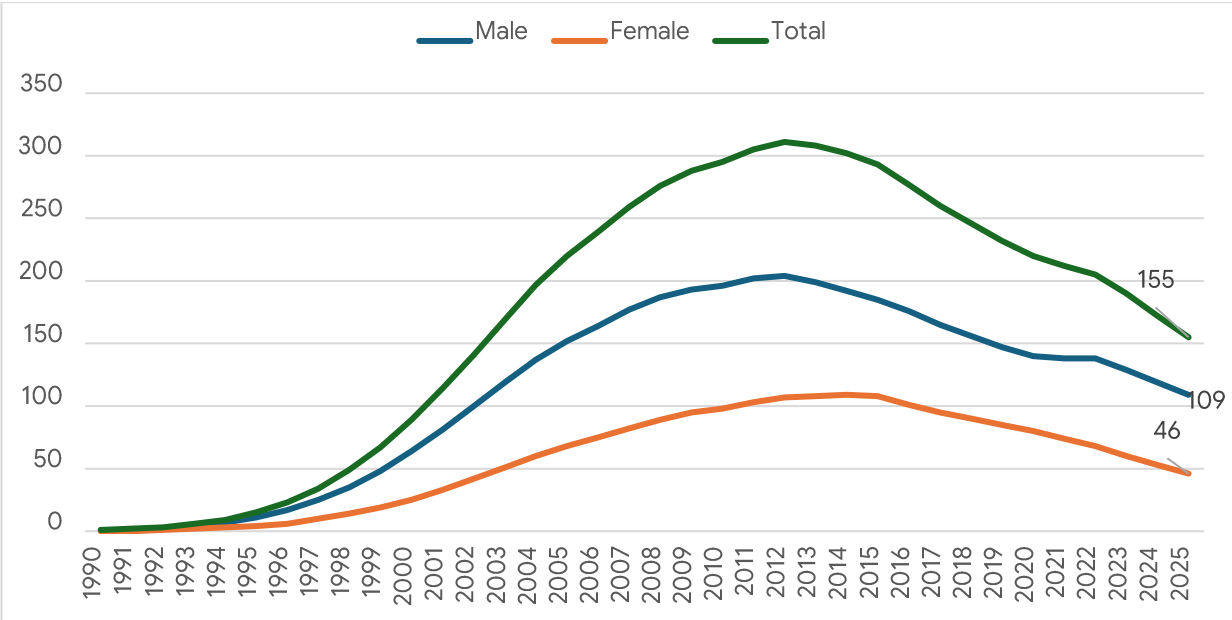
Above graph shows the new preliminary PLHIV estimates (total 8,677, male 7,227 and 1,450 female)

Trend of New infections



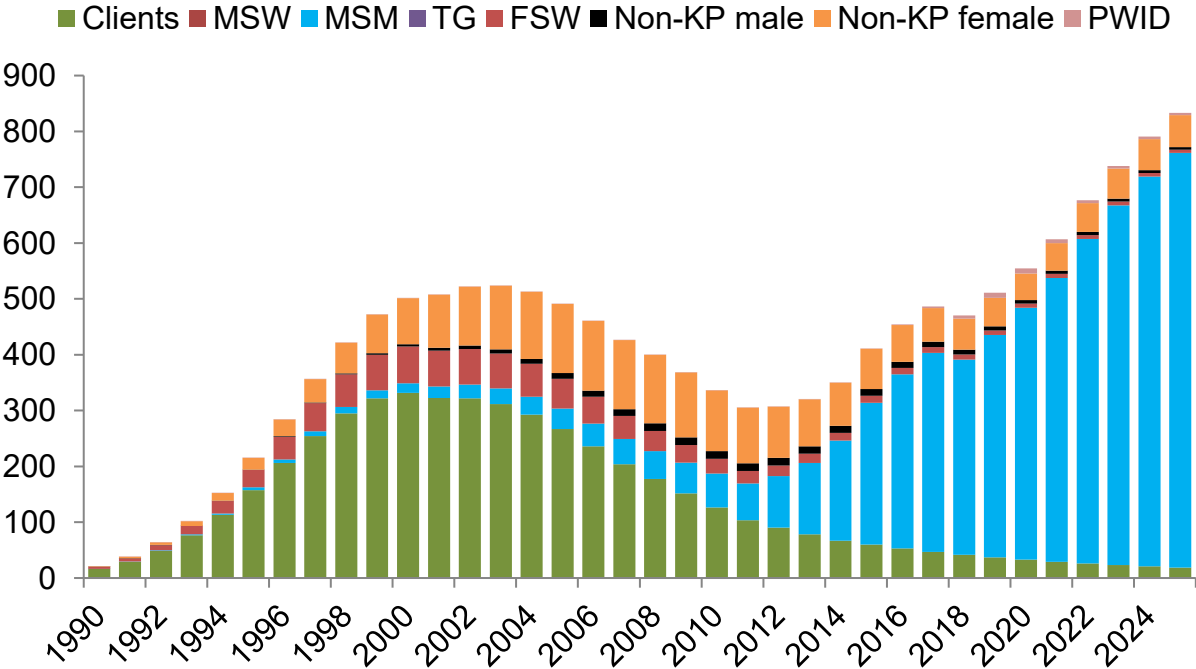
Above graph shows that estimated new HIV infections among males is increasing exponentially since 2012.

Trend of AIDS Death



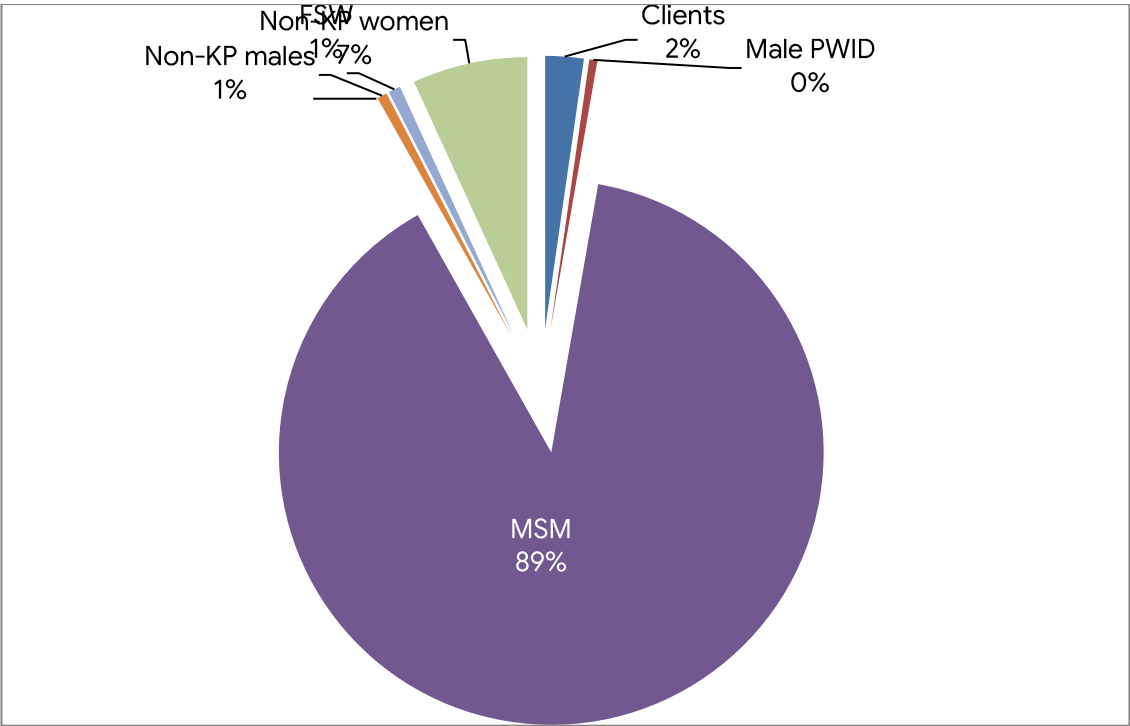
The trend of AIDS-related deaths demonstrates a downward trend since 2012.

Trend of Mode of Transmission



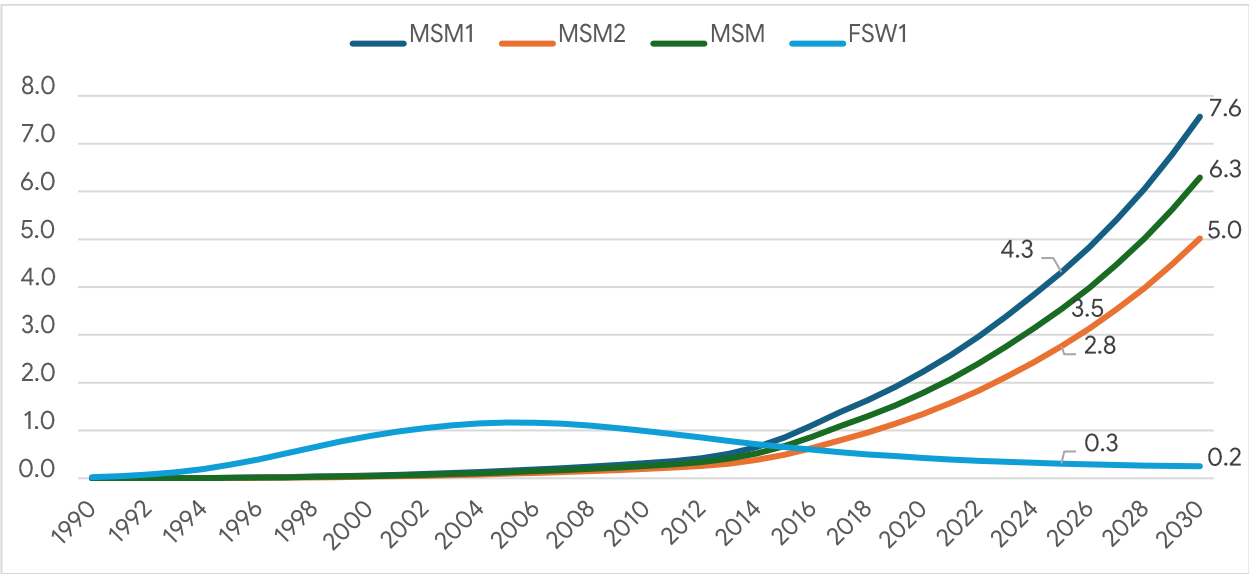
The above graph shows a significant increasing trend in the mode of transmission among MSM population, while other key populations (KPs) exhibit a decreasing or controlled trend

New HIV infections by subpopulation in 2025 Total 833 infections



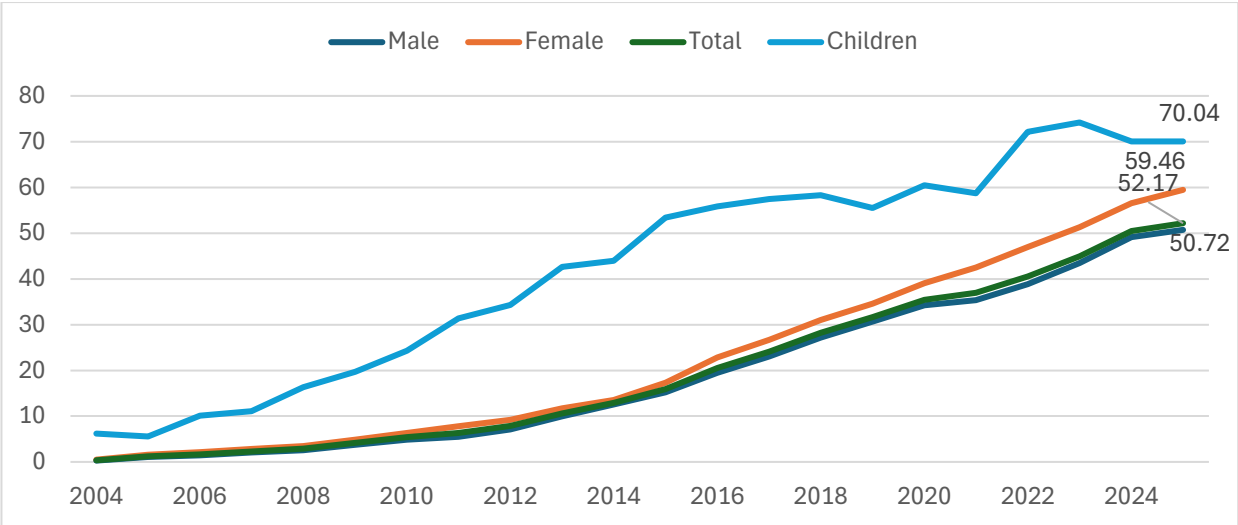
Among the 833 new infections in 2025, majority (89%) comprise of MSM followed by non-KP women (7%).

HIV Prevalence among key populations 1990-2030



MSM, who are the most vulnerable KP group has the highest HIV prevalence trend rather than the FSW KP group which are mostly controlled and non-increasing over the years.

ART Coverage

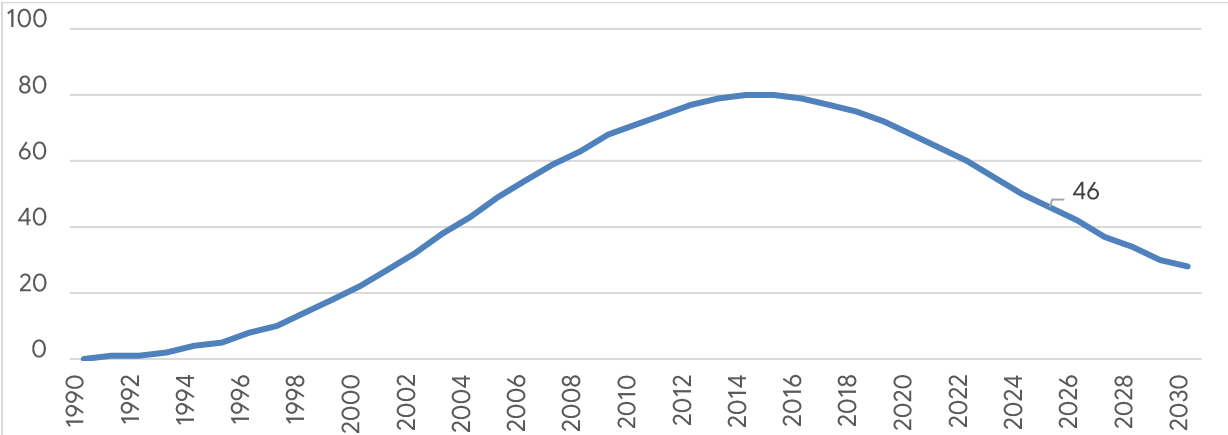


The graph on ART coverage depicts that all categories have an increasing trend of ART coverage among males, females and children.

PMTCT Coverage

Description	2025
Mothers needing PMTCT	19
Mothers receiving PMTCT	16
PMTCT coverage of more efficacious regimens	83.38
MTCI rate at 6 weeks	7.78
Final transmission rate including breastfeeding period	15.72

Trend of Child PLHIV



The graph on child PLHIV shows that there are an estimated forty-six children living with HIV in 2025, and the trend has been decreasing since 2015.

Gaps and limitations

- No recent IBBS / HSS survey data.
- Unreported cases of mode of transmission
- Limited PrEP data to analyze
- Limited coverage of HIV testing among KP (especially among MSM).
- Limited time to analyze the country response to epidemic especially the rapid increase of MSM epidemic.

6. Recommendations and Next Steps

- Urgently advocate and address the MSM epidemic.
- Prepare a policy brief for advocacy purpose to address the MSM epidemic urgently
- Disseminate results to all stakeholders
- Do more in-depth analysis of HIV epidemic and response among MSM
 - Geographic analysis and prioritization
 - Subgroup analysis and prioritization of MSM
- Once new IBBS results are available, update AEM and do Policy and impact analysis to analyze the best options for containing MSM epidemic
 - Do resource allocation analysis

Details of the workshop

Dates: 28th, 29th and 30th April 2026

Venue

Day one and two : SIM unit, Room 147, Ministry of Health
Day three : Hotel Mandarina Colombo, Colombo 03

Participants

1st Day (30.04.2026) & 2nd Day (30.04.2026)

Core Working group members	
1	Dr. Wiwat Peerapatanapokin
2	Dr. K.A.M. Ariyaratne
3	Dr. Janaka Weragoda
4	Dr. S. Muraliharan
5	Dr. P.S. Premadasa
6	Dr. Gayan Ariyadasa
7	Dr. M. Gunathilaka
8	Dr. Sithmi Koswatta
9	Dr. S.D.A.R. Subasinghe
10	Amal Bandara
11	L.S. Fernando
12	T. Rashika

3rd Day (30.04.2026)

De-briefing meeting on PLHIV estimation 2026	
1	Dr. Wiwat Peerapatanapokin
2	Dr. J.C.M. Tennakoon
3	Dr. K.A.M. Ariyaratne
4	Dr. Janaka Weragoda
5	Dr. S. Samarakoon
6	Dr. P.S. Premadasa
7	Dr. Gayan Ariyadasa
8	Dr. M. Gunathilaka
9	Dr. U. N. Jayasinghe
10	Dr. Nimali Jayasundara
11	Dr. Waruni Pannala
12	Dr. D. I. Rajapaksha
13	Dr. S.D.A.R. Subasinghe
14	Dr. S. Muraliharan
15	M.S.S. Suranga
16	Nadika Fernandopulle
17	Chandana Senavirathna
18	Princi Mangalika
19	Roshan De Silva
20	W.A.P. Hemal
21	Dr. Sithmi Koswatta
22	L.S. Fernando
23	S.H.I. Chalani Chandrasiri
24	Amal Bandara
25	T. Rashika