

A BRIEFER ON THE PHILIPPINE HIV ESTIMATES 2020

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The Philippines has the fastest growing HIV epidemic in the Asia and Pacific Region

The Philippines has the fastest growing HIV epidemic in the Asia and Pacific Region with a 237% increase in annual new HIV infections from 2010 to 2020 (Figure 1). Parallel to it, AIDS-related deaths have increased by 315% during the same period (Figure 2). Though the total HIV prevalence in the Philippines is less than 1%, the total estimated number of people living with HIV in 2020 still reached 115,100. Further, if the rapid increase in new infections is sustained, the estimated number of people living with HIV will triple by 2030 and reach over 330,000 (Figure 3).

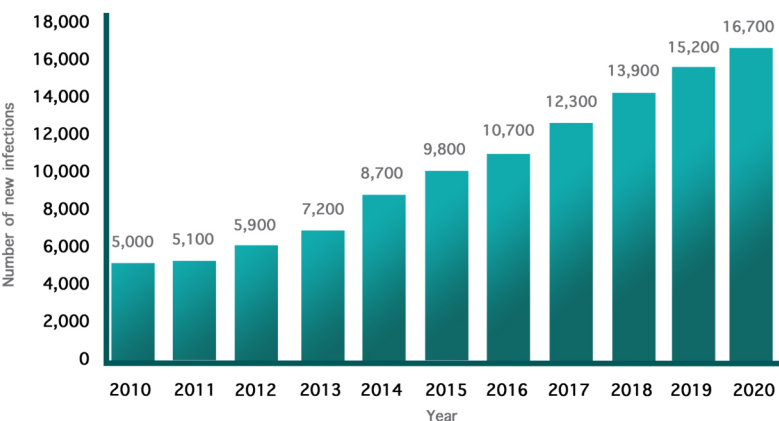


Figure 1. Annual new HIV infections, 2010-2020

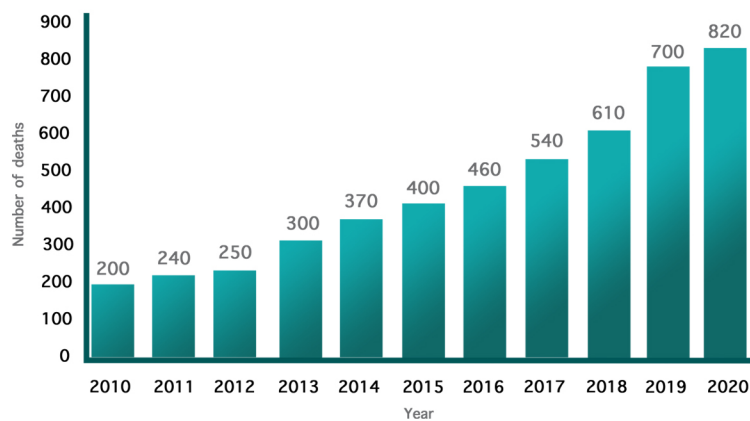


Figure 2. Annual AIDS deaths, 2010-2020

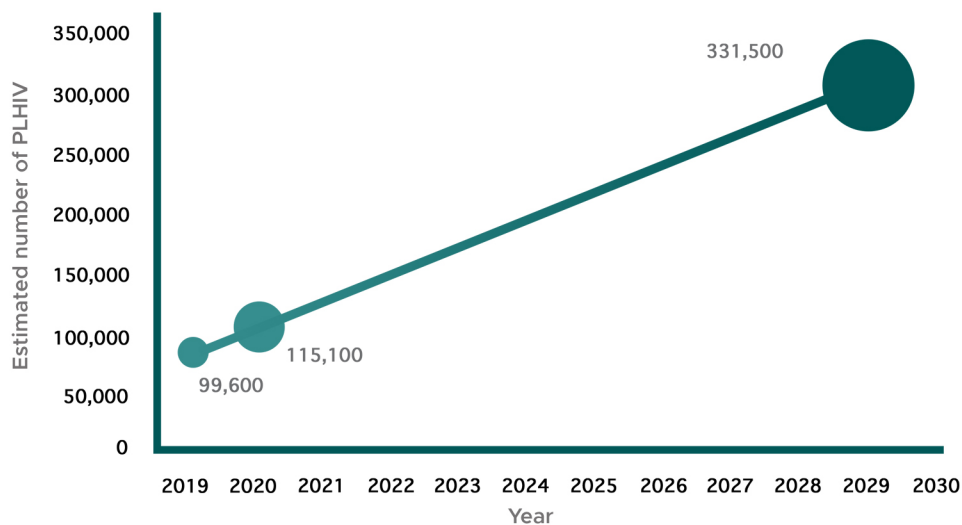


Figure 3. Estimated number of people living with HIV, 2019-2030

Majority of new infections are among young MSM and TGW

In the early years of the epidemic (1984-2006), cases were mostly transmitted through sex between males and females. However, in 2007, the trend shifted, and more cases were detected among males who have sex with males (MSM).¹ In 2020, 90% of new infections were among MSM.²

Findings from the Integrated HIV behavioral and Serologic Surveillance (HBSS) show that MSM and transgender women (TGW) were exposed early to risks for HIV but practice protective behavior later. Further, condom use among MSM and TGW is very low (38%), especially among younger age groups.³

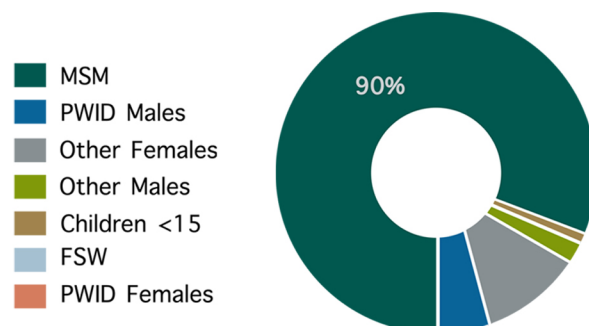


Figure 4. Proportion of new HIV infections by key and vulnerable group, 2020

1 - HIV, AIDS, and ART Registry of the Philippines, December 2020

2 - AIDS Epidemic Model (AEM) - Spectrum, May 2021

3 - Weighted 2018 Integrated HIV Behavioral and Serologic Surveillance

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Summary of HIV estimation process in the country

The Philippines has been using HIV estimates to aid programmatic response since 2007. Results of the modeling and estimation have been used to determine the state and trend of the Philippine HIV epidemic, to set targets for the Health Sector Plan for HIV, forecast ARV stock requirements, and measure the accomplishment in the national HIV care cascade, among others.

AIDS Epidemic Model (AEM) and Spectrum are the tools used by the Philippines to model HIV estimates and projections. The Department of Health-Epidemiology Bureau National HIV/AIDS and STI Surveillance and Strategic Information Unit (DOH-EB NHSSS Unit) leads the modeling and projection process together with technical experts from the EastWest Center, UNAIDS, WHO, and national and local stakeholders. The HIV estimates are developed through a series of workshops involving experts, program implementors and members of key populations. Data sources used in the process include the different surveillance systems of the DOH-EB NHSSS Unit (i.e. HIV/AIDS & ART Registry of the Philippines, Integrated HIV Behavioral & Serologic Surveillance, and Laboratory and Blood Bank Surveillance), as well as other data sources from program implementers (e.g. facility logs/reports). Resulting estimates are validated with modeling experts and the HIV Technical Working Group.

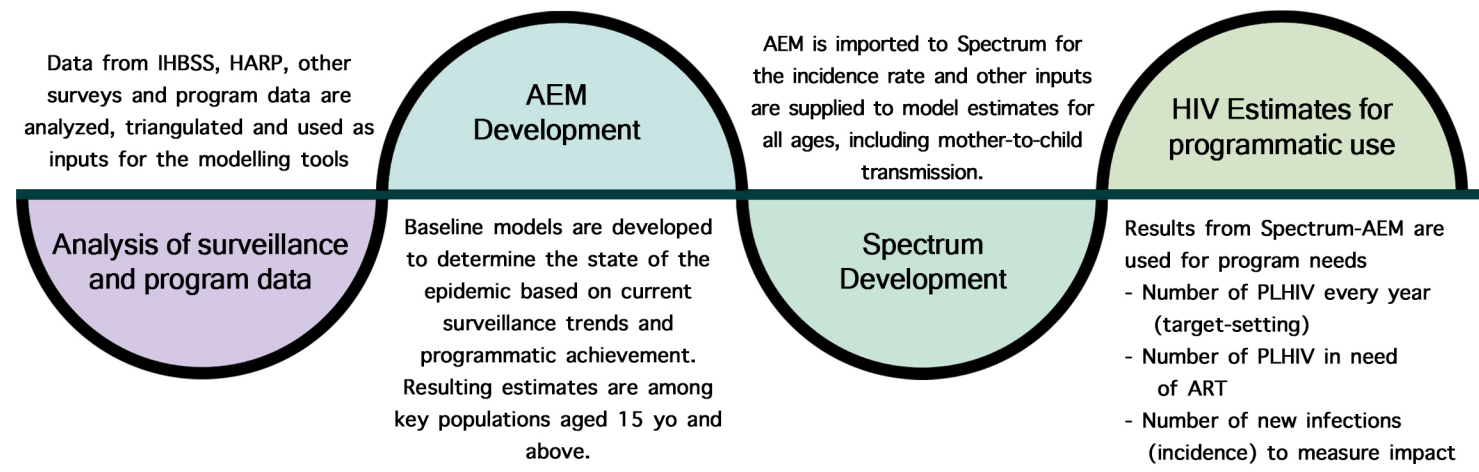
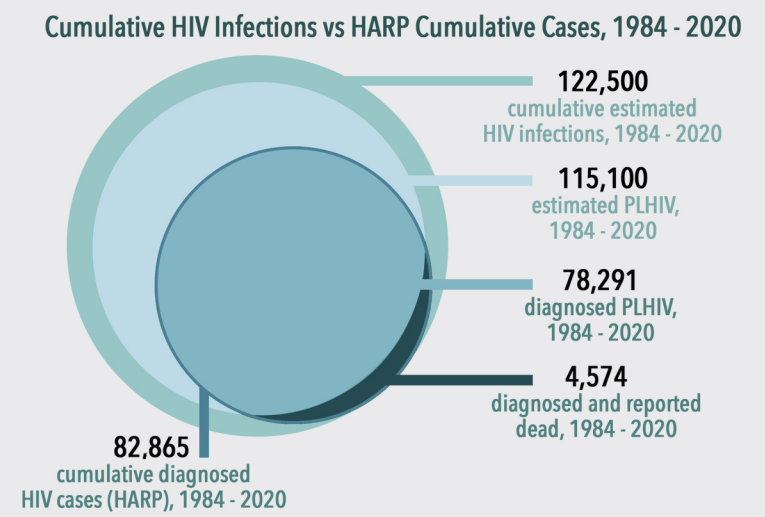


Figure 5. Process of developing HIV estimates in the Philippines

DEFINITION OF TERMS

Since it is impossible to count the exact number of people living with HIV, people who are newly infected with HIV or people who have died from AIDS-related causes, estimates are modeled in their place. The diagram below shows the difference between the modeled estimates and reported data in HIV/AIDS & ART Registry of the Philippines (HARP).



NEW HIV INFECTIONS refer to the estimated number of people newly infected with HIV for the specified year. Annual new HIV infections are different from newly diagnosed cases reported in the HARP because **NEWLY DIAGNOSED CASES** are not necessarily new infections.

Analysis of CD4 counts of newly diagnosed people in 2020 revealed very low CD4 counts with a median of 170 cells/mm³, indicating that most people diagnosed with HIV in the country have been infected for a long period before they were diagnosed. Late diagnosis is in fact one key obstacle which the country's HIV response is trying to address.

ESTIMATED PEOPLE LIVING WITH HIV refer to the estimated number of people who have HIV and are currently alive for the specified year. It is different from the number of reported cases in the HARP because those are 1) diagnosed cases and 2) cumulative counts of reported cases since the start of the HIV registry in 1984. Since there are PLHIV who have not yet been diagnosed and enrolled to treatment, the estimated number of PLHIV will not yet equal to the reported number of diagnosed cases. For example, in 2020, there were an estimated 115,100 people living with HIV in the Philippines, but the HARP reports only 82,865 diagnosed cases, of which 4,574 were reported deaths. So in total, only 68% of the estimated people living with HIV are diagnosed as of 2020.

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Subnational Estimates

In order to simulate the different magnitude of the HIV epidemic across different areas in the Philippines, the country models its national HIV epidemic by first creating separate subnational AEMs and combining them for the national AEM.

All cities and municipalities in the Philippines are distributed to three main categories depending on the magnitude of their local HIV epidemics:

Table 1. Subnational Model Categories

CATEGORY	DEFINITION
A	<p>A total of 118 local government units were categorized into high burden areas which have a median HIV case-population ratio of 10.5 per 10,000, including all cities and municipalities in the National Capital Region (NCR) and Cebu Province (See List of 118 High Burden LGUs in Annex).</p> <p>In AEM, NCR and Cebu Province are modeled separately from the rest of Category A given the unique characteristics of the region and province respectively.</p>
B	<p>Middle burden areas with a median HIV case-population ratio of 4.8 per 10,000 or around half the magnitude of the Category A HIV epidemic.</p>
C	<p>Low burden areas with a median HIV case-population ratio of 2.0 per 10,000 or a fifth of Category A's HIV epidemic.</p>

Figure 6 shows the proportion of estimated PLHIV among 15 years old and above by subnational model category. NCR comprise 33% (38,300), other high burden areas (other Cat. A areas) comprise 39% (44,100), Middle burden areas (Cat. B) make up 17% (19,200), and Low burden areas (Cat. C) make up 11% (12,200).

Local AEMs are also produced for Angeles, Cagayan de Oro, Cebu, Davao, Iloilo and Quezon City.

Meanwhile, the Regional estimates are computed using the proportion of diagnosed HIV cases per city and municipality in HARP, results of subnational and local AEMs, and the national estimates. Figure 7 shows the estimated number of PLHIV per region for 2020.

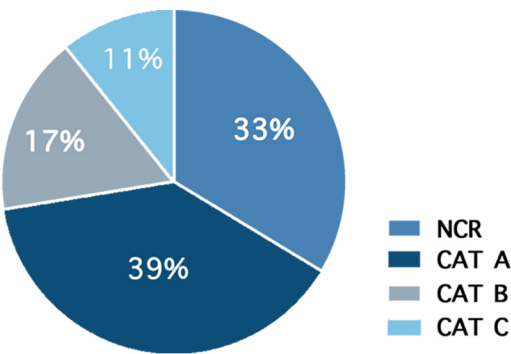


Figure 6. 2020 Estimated PLHIV among 15 years old and above

National	115,100
NCR	38,700
4A	19,300
3	11,900
7	11,400
11	6,900
6	6,600
12	3,200
10	2,800
1	2,800
5	2,200
9	1,700
8	1,700
2	1,700
4B	1,600
CARAGA	1,300
CAR	1,000
BARM	300

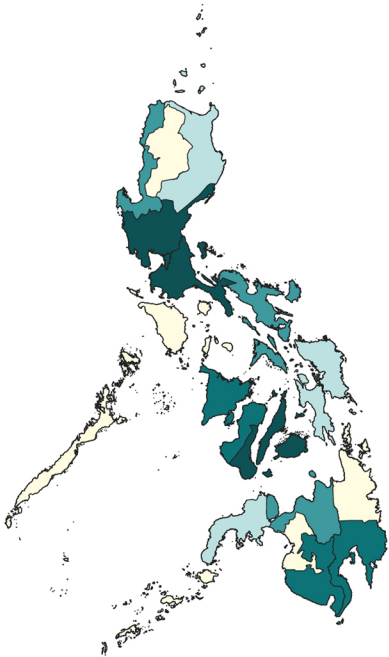


Figure 7. Heat map of estimated number of PLHIV per region for 2020, all ages

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Historical Impact: No intervention vs. Current National Projections

Modelling shows that a total of 152,300 HIV infections were averted by the Philippines because of the interventions established in the HIV response since 2005. If no interventions were put in place between 2005 and 2020, the total cumulative HIV infections for 2020 would have reached 274,800, double the amount projected for the current estimates which is at 122,500 as seen in Figure 8. This shows the impact of the HIV response in the Philippines in the past 15 years. With continuous improvement in the country's HIV response, more HIV infections could be averted and more lives saved from HIV and AIDS.

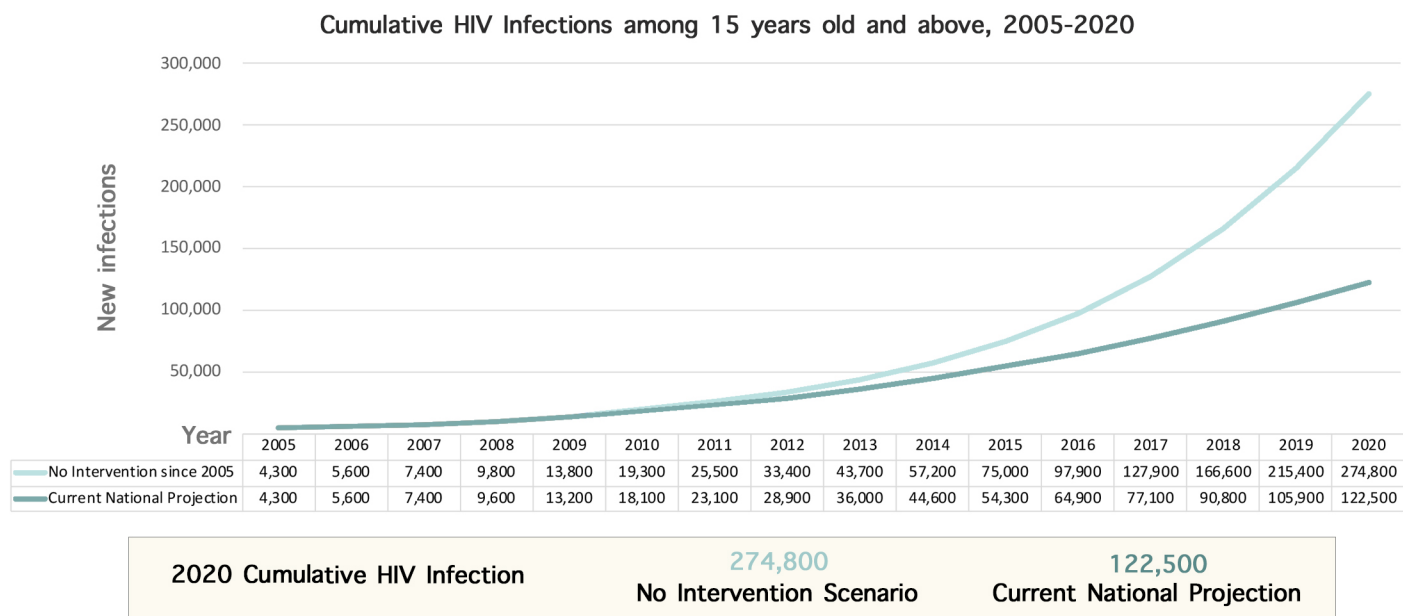
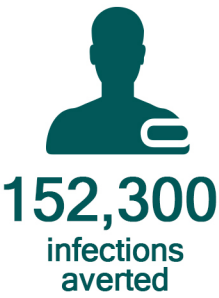


Figure 8. HIV infections averted, 2005-2020

Progress towards Ending AIDS: 95-95-95

Having HIV estimates allows the country to assess its progress towards the accomplishment along the HIV Care Cascade or what is commonly known as the 95-95-95 targets. The estimates provide a denominator or first pillar to the cascade allowing the measurement of the First 95 or the diagnosis coverage.

As of December 2020, a total of 78,291 PLHIV out of the 115,100 total estimated number of PLHIV for 2020 have been diagnosed based on HARP data. This means that the diagnosis coverage for the Philippines as of December 2020 is at 68%. Among them, 59,933 were enrolled to treatment and 47,977 are currently on Antiretroviral Treatment (ART). From the first pillar to the last, a total of 67,123 PLHIV were lost along the cascade of care, and were, therefore, not given access to life-saving treatment. Moreover, since these PLHIV are not on ART, they are not virally suppressed and may transmit HIV to other people through unprotected penetrative sex, sharing of infected needles or mother-to-child transmission.

Though the estimated 980,000 members of the key population are at highest risk of getting infected with HIV, there are also a number of non-key population (KP) males, females, and children who are at risk for HIV if they engage in risk behavior which exposes them to the virus. The graph (figure 9) depicts a crucial message about the HIV epidemic in the country. It shows the never-ending cycle of HIV infection that the Philippines is currently experiencing. If the prevailing HIV transmission is not prevented, an estimated 20,200 new infections will be added to the existing pool of PLHIV by 2021. A combination of prevention and treatment strategies are needed in order to break this vicious cycle, and prevent more people from getting HIV or dying from AIDS (Figure 9).

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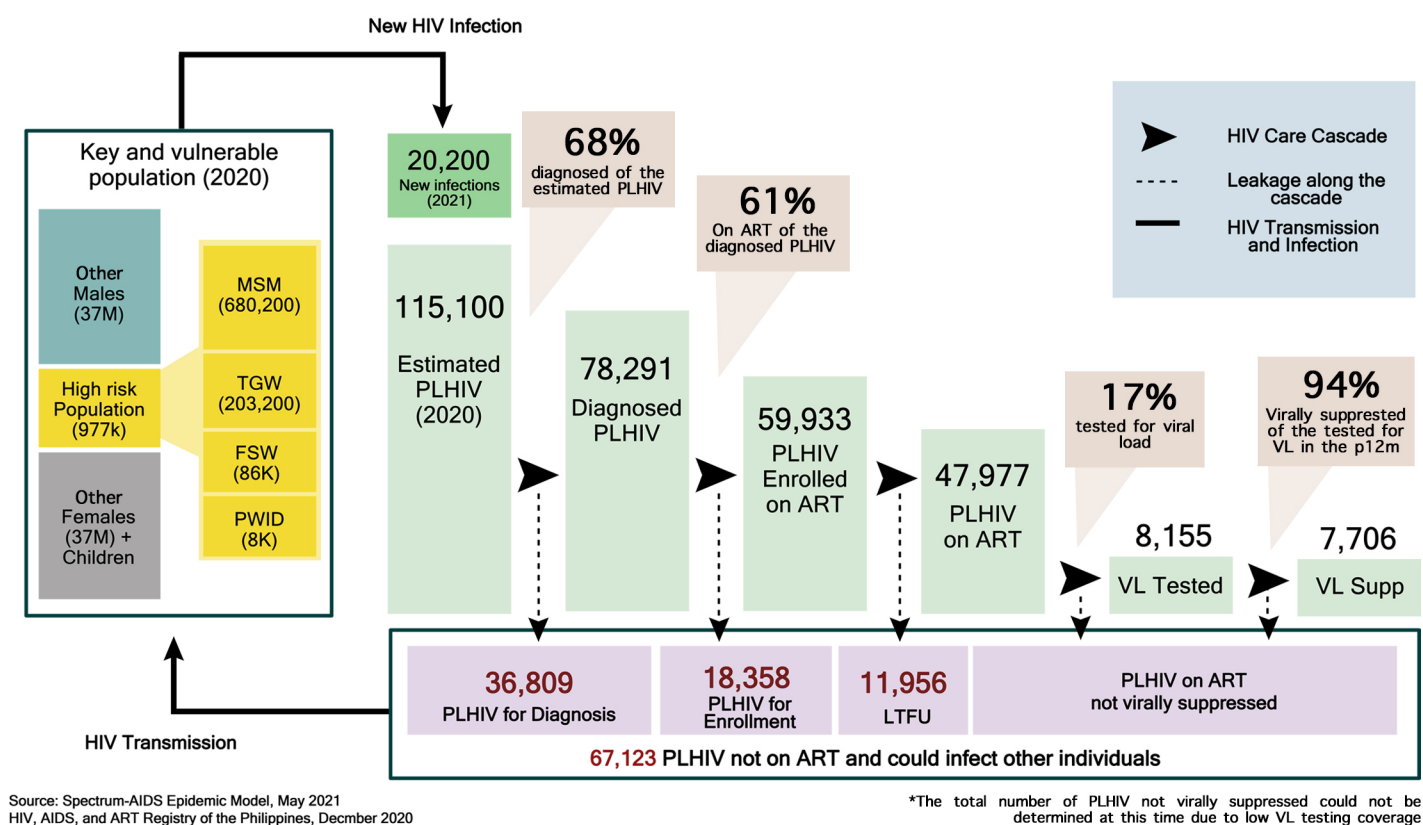


Figure 9. National HIV Care Cascade

Future Impact: National projection vs Health Sector Plan (HSP) Projection

Aside from historical impact and current accomplishments, future impact can also be projected using modeling and estimation. Figure 10 shows three different trajectories of the Philippine HIV epidemic depending on the response the country will take for years to come.

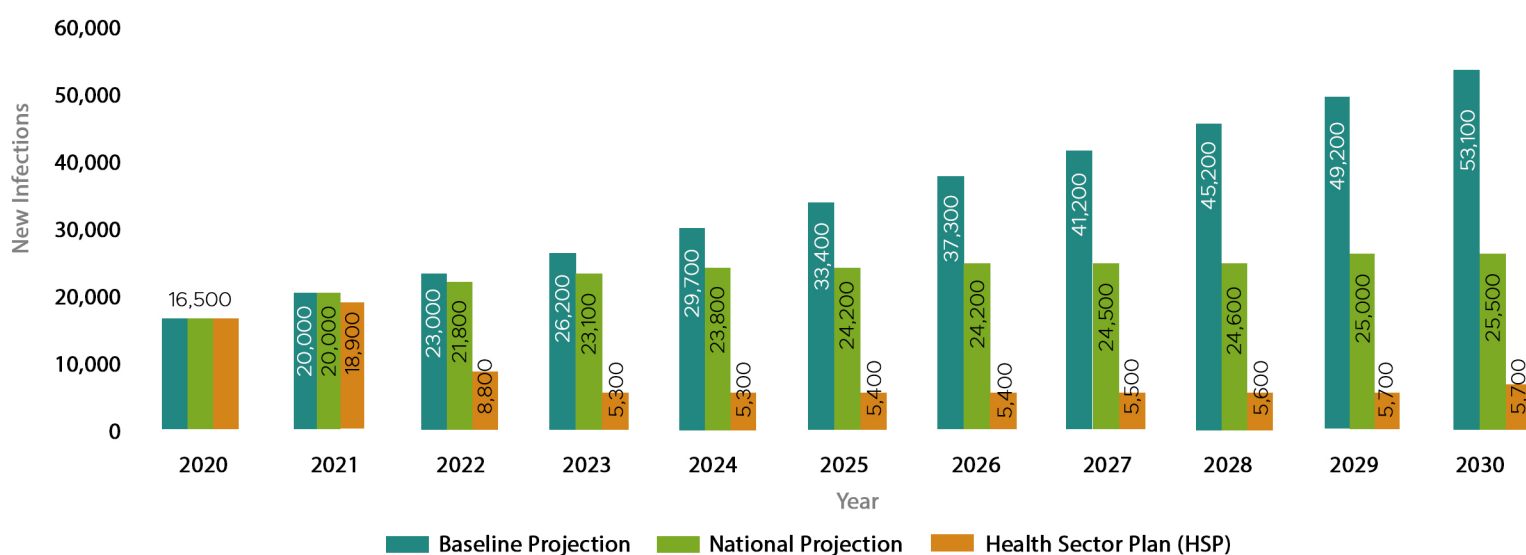


Figure 10. Annual Number of New HIV Infections Among 15 years old and above, 2020-2030

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The **Baseline projection (blue)** shows the trajectory of the country's HIV epidemic in terms of estimated annual new HIV infections if current efforts are simply maintained. It can be seen that if prevention and treatment coverages are not scaled up, estimated annual new infections can reach 23,000 by 2022 and 53,100 by 2030.

On the other hand, the **HSP (green)** shows how the country can flatten the curve of its estimated annual new HIV infections if the HSP for HIV for 2020-2022 is implemented successfully. This means that by 2022 and onward, prevention coverage among key population, especially MSM, reach 90%, diagnosis coverage among estimated PLHIV reach 95%, and treatment coverage among diagnosed PLHIV reach 95%. Estimated new infections would drop to less than 9,000 by 2022 and remain so until 2030.

However, to get to the HSP scenario, huge leaps in HIV response must be attained. The **current national projection (orange)** shows that at its current pace, the country can only reduce its annual HIV infections to around 23,000 by 2022 and 25,500 by 2030. If only treatment coverage will improve following the rate the country has done historically (an average of 5% to 6% per year), annual new infections would continue to increase.

These modelling comparisons show that with the successful implementation of the High Impact Prevention, Testing, Treatment and Adherence (HIPTTrea) strategies of the HSP, the Philippines stands a chance at slowing down and controlling one of the fastest growing HIV epidemics in the world.

List of High Burden LGUs (n=118)

NCR	CENTRAL LUZON	CALABARZON	CEBU PROVINCE	OTHER REGIONS
Caloocan	(Pampanga)	(Batangas)	Argao	(CAR)
Las Piñas	Angeles	Batangas	Balamban	Baguio
Makati	Mabalacat	Lipa	Bantayan	
Malabon	San Fernando		Bogo	(MIMAROPA)
Mandaluyong		(Cavite)	Carcar	Puerto Princesa
Manila	(Bulacan)	Bacoor	Cebu	
Marikina	Bulacan	Cavite	Consolacion	(Bicol Region)
Muntinlupa	Malolos	Dasmariñas	Daan Bantayan	Naga
Navotas	Marilao	General Trias	Dalaguete	
Parañaque	Meycauayan	Imus	Danao	(Western Visayas)
Pasay	San Jose Del Monte	Kawit	Lapu-Lapu	Iloilo
Pasig	Santa Maria	Silang	Liloan	Bacolod
Pateros		Tanza	Mandaue	
Quezon City	(Nueva Ecija)		Minglanilla	(Eastern Visayas)
San Juan	Cabanatuan	(Laguna)	Naga	Tacloban
Taguig		Biñan	Talisay	
Valenzuela	(Tarlac)	Cabuyao	Toledo	(Zamboanga
	Tarlac	Calamba	Alegria	Peninsula)
		San Pedro	Alcantara	Zamboanga
	(Zambales)	Sta. Rosa	Alcoy	
	Olongapo		Aloguinsan	(Northern
		(Quezon)	Asturias	Mindanao)
		Lucena	Badian	Cagayan de Oro
			Barili	Iligan
		(Rizal)	Boljoon	
		Antipolo	Borbon	(Davao Region)
		Binangonan	Carmen	Davao
		Cainta	Catmon	Tagum
		Rodriguez	Compostela	
		San Mateo	Cordova	(SOCCSKSARGEN)
		Taytay	Dumanjug	General Santos
			Ginatilan	Koronadal
			Madridejos	
			Malabuyoc	(Caraga)
			Medellin	Butuan
			Moalboal	
			Oslob	
			Pilar	
			Pinamungahan	
			Porong	
			Ronda	
			Samboan	
			San Fernando	
			San Francisco	
			San Remigio	
			Santander	
			Santa Fe	
			Sibonga	
			Sogod	
			Tabogon	
			Tabuelan	
			Tuburan	
			Tudela	