Defining a global disease budget for HIV in Greece

Theodoratou D. [1], Paraskevis D. [2], Lazanas M. [3], Souliotis K[4].

[1] Gilead Sciences Hellas, P. Faliro, Greece, [2] Department of Hygiene, Epidemiology, and Medical Statistics, Medical School, National and Kapodistrian University of Athens, Athens, Greece, [3] Internal Medicine and Infectious Diseases Department of IASO General Clinic, President of the Hellenic Society for the Study and Control of AIDS (EEMAA), Athens, Greece, [4] Faculty of Social & Political Science, University of Peloponnese, Corinth, Greece

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Introduction

- A global, dynamic, closed budget for HIV has long been considered a pathway to efficiency and sustainability in funding a chronic infectious disease that remains a public health priority.

Objective

- To explore for the first time a methodological approach to facilitate the definition of such a budget in Greece.

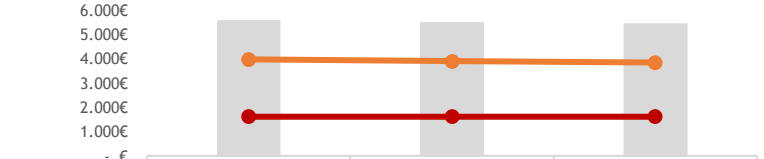
Methods

- We built a custom disease global budget calculator for the year 2020 as our base.
- We modelled HIV clinical management, which includes diagnostic and laboratory tests and antiretroviral treatment (ART).
- Diagnostic tests' type was modelled according the official HIV Diagnostic Guidelines[1] of the Hellenic Society for the Study and Control of AIDS (EEMAA).
- Diagnostic tests' frequency was derived from the HIV Standards of Care (SoC)[2] of EEMAA.
- Actual sales of ART were derived after processing data from an HIV panel survey from IQVIA (2020 – 2022)[3].
- Epidemiological surveillance data were derived from the National Public Health Organization for 2020 and 2021[4], while projections were made for 2022 based on averages of 5-year historic data.
- Diagnostic and laboratory tests' costs were based on the National Organization for Healthcare Services Provision (EOPYY) tariff.
- ART costs (invoice prices) were calculated from prices published on the Official Price Bulletins of the respective year (2019-2022)[5].
- Both cost categories (diagnostic and laboratory tests and ART) exclude any voluntary discounts and mandatory paybacks, and this may overrepresent actual HIV expenditure in Greece.
- Hospitalizations were not modelled, as they constitute a negligible part of HIV-related expenditure in Greece[6].

Results

- Our model calculations for 2020 indicate that HIV patients on treatment increase by 533 people, or 84% of newly diagnosed patients for the year.
- Mean annual per patient costs for Treatment Naïve (TN) decline from €5,578 in 2020 to €5,447 in 2022, a 2.3% decline (Figure 1). Diagnostic and laboratory tests account for 29.5% of total costs with the remaining referring to ART.

Figure 1. Mean annual per patient costs, Treatment Naïve (TN)

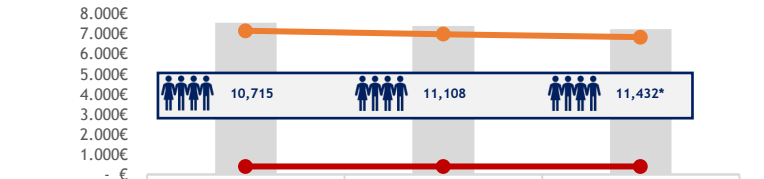


	2020	2021	2022
mean total costs	5.578€	5.499€	5.447€
mean diagnostic costs	1.610€	1.610€	1.610€
mean pharmaceutical costs	3.967€	3.889€	3.837€

TN includes TN-with HIV, TN-with AIDS and TN- late presenters (defined as patients diagnosed with a CD4 cell count <350/mm^3), split according to the averages of 5-year historic data (2017-2021).

- Mean annual per patient costs for Treatment Experienced (TE) decline from €7,522 in 2020 to €7,205 in 2022, a 4.2% decline (Figure 2). Diagnostic and laboratory tests account for 5.5% of total costs.

Figure 2. Mean annual per patient costs, Treatment Experienced (TE)



	2020	2021	2022
mean total costs	7.522€	7.349€	7.205€
mean diagnostic costs	396€	396€	396€
mean pharmaceutical costs	7.126€	6.953€	6.808€

*projections based on averages of 5-year historic data (2017-2021)

- Mean annual per patient costs for both TN and TE (weighted) decline from €6,064 in 2020 to €5,887 in 2022, a 2.9% decline. Diagnostic and laboratory tests account for 22% of total costs. The decline in mean annual per patient costs is driven by the decline in ART costs.
- Our findings on declining mean annual per patient ART expenditure in Greece are in line with those of a previous 10-year retrospective study[6].

Conclusion

Our study provides a methodology and a tool to support the definition of global, dynamic budgets for health conditions that are well managed, i.e.:

- monitored through a comprehensive patient registry
- managed through diagnostic and treatment protocols &
- regulated by SoC to allow predictability in spending

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Disclosures

DT participated in the collection and modelling of data used in the study.

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Email: dorina.theodoratou@gilead.com