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INTRODUCTION

- Human immunodeficiency virus (HIV) destroys humans’ immune system, causes opportunistic infections and other comorbidities threatening lives of people living with HIV (PLHIV).
- Though different highly active anti-retroviral therapies (HAARTs) are available, PLHIV still face with significant disease and economic burden.
- Currently, there is limited evidence towards the economic impact of HIV infection and AIDS in China.

OBJECTIVE

- This study aims to analyze the direct medical costs, medical resource utilizations among PLHIV in China.

METHOD

- Data were retrospectively collected from a registered medical database from January 2018 to December 2020
- Patients with HIV infected diagnosis in 2018 and continuous medical records for at least 1 year were included
- Baseline demographic characteristics, clinical information and costs were collected and analyzed
- The annual medical costs, medical costs per hospitalization and per outpatient visit were estimated for 2019 and 2020
- Missing cost data were imputed using the means costs from PLHIV with missing data

RESULTS

- A total of **3,839 PLHIV** were included from **10 tertiary hospitals**, most patients (94.8%) were recruited from Beijing
- Mean age of PLHIV was 35.8
- Males accounted for 94%
- 91.5% of PLHIV were Han Chinese
- The **mean CD4(+) T cell count** was 471.8/uL (SD:235.6) at baseline, CD4(+) T cell counts in 80.3% PLHIV ranged from 201 to 800/uL.
- The hospitalization rates were 2.45% and 1.31% in 2019 and 2020.

Type of costs	Sample size	Mean (USD*)	SD (USD)	Median (USD)	Lower quartile	Upper quartile
Total annual medical costs in 2019	3,839	\$ 597.8	\$ 3,085.3	\$ 200.5	\$ 131.25	\$ 243.13
Total annual medical costs in 2020	1,978	\$ 378.5	\$ 1100.4	\$ 122.7	\$ 96.3	\$ 272.0
Annual hospitalization costs in 2019	3,839	\$ 230.1	\$ 2812.6	\$ 0	\$ 0	\$ 0
Annual hospitalization costs in 2020	1,978	\$ 51.6	\$ 662.7	\$ 0	\$ 0	\$ 0
Annual outpatient costs in 2019	3,839	\$ 367.7	\$ 832.1	\$ 200.5	\$ 237.0	\$ 130.9
Annual outpatient costs in 2020	1,978	\$ 326.8	\$ 766.4	\$ 121.5	\$ 265.7	\$ 94.9
Medical costs per hospitalization in 2019	94	\$ 4,439.5	\$ 8,794.0	\$ 2,130.8	\$ 839.2	\$ 4,378.3
Medical costs per hospitalization in 2020	26	\$ 2,516.0	\$ 2,554.8	\$ 1,644.7	\$ 843.6	\$ 3,127.7
Medical costs per outpatient visit in 2019	3821	\$ 103.1	\$ 185.0	\$ 26.3	\$26.2	\$ 141.6
Medical costs per outpatient visit in 2019	1971	\$ 76.7	\$ 181.7	\$ 28.4	\$28.0	\$ 36.0

* Costs were transfer to USD according to the transfer rate at the end of 2019 and 2020

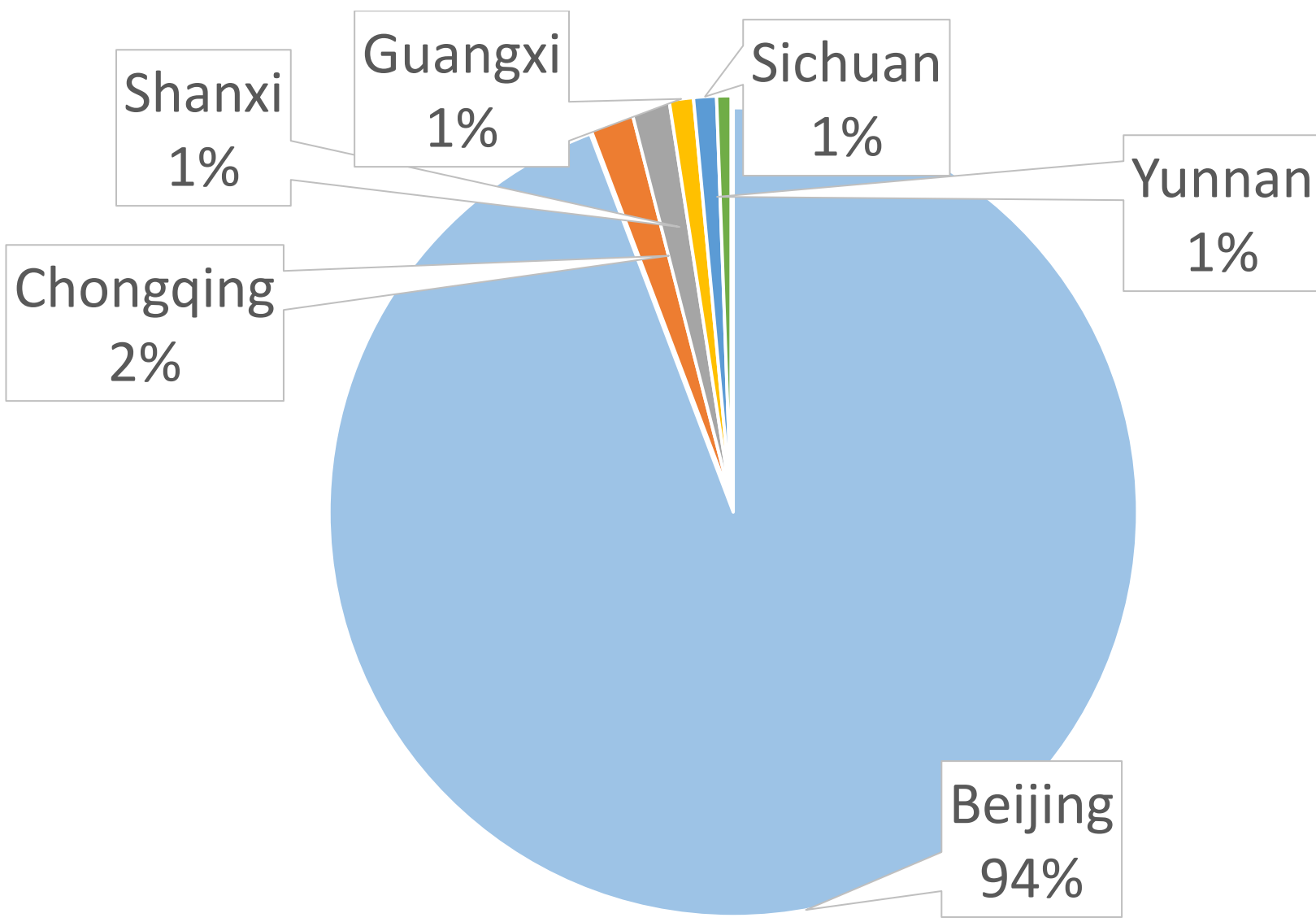


Figure 1 Patients origin by city

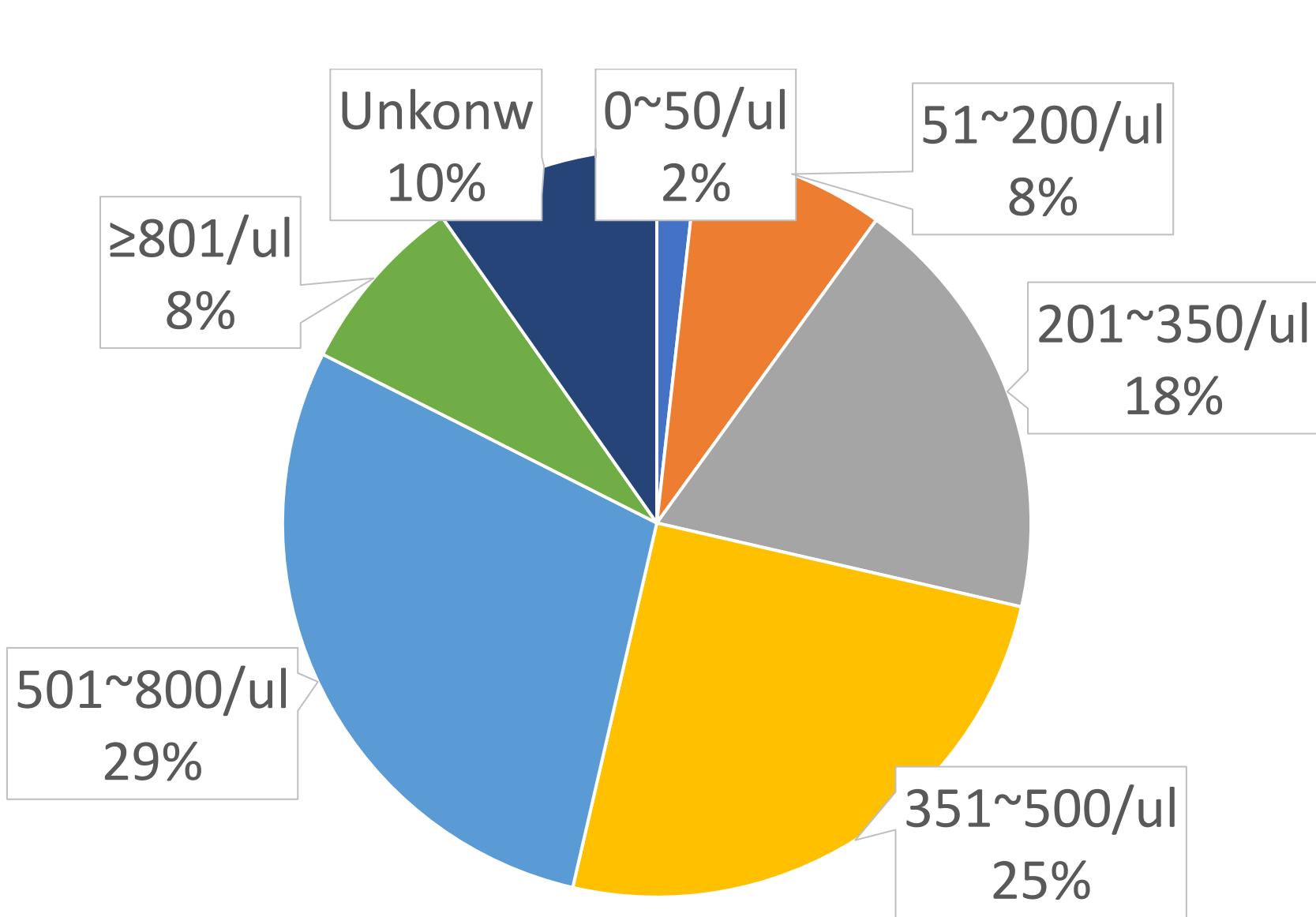


Figure 2 CD4(+) T cell count at baseline

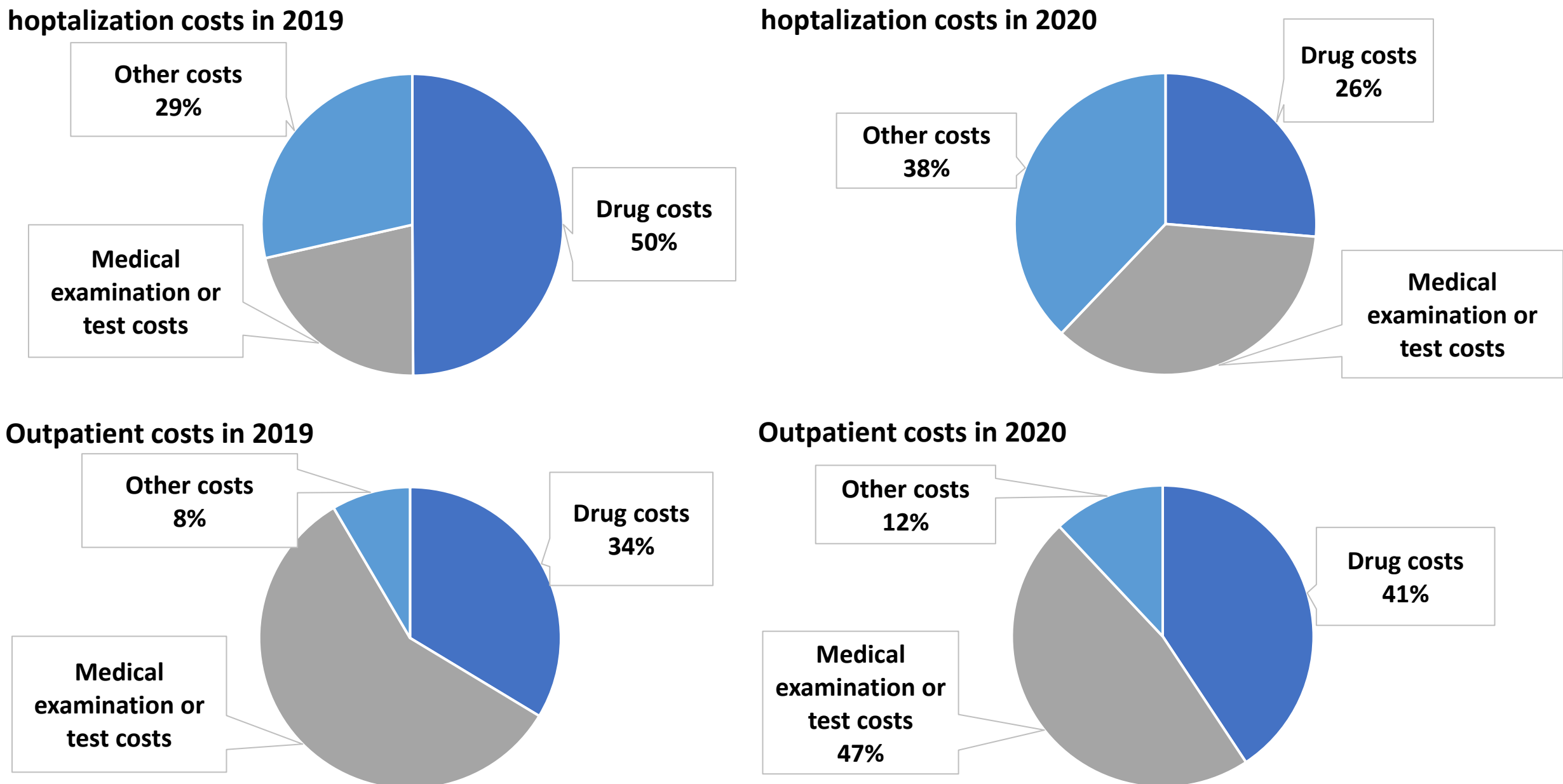


Figure 3 Costs break down

CONCLUSIONS

- Patients living with HIV in China face with certain economic burden, especially for the hospitalization
- The medical costs dispersed among PLHIV indicating the health policy should be tailored to meet individual needs.
- Medical costs generated in 2019 are higher than those in 2020 and this may be related to the COVID-19 pandemic.
- Subgroup analysis will be done to further investigate the economic burden.

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