

Catch Knowledge!

A data-driven exploration of

HIV+

in the Philippines

Team Sausages

John Patrick Laurel

Raymart Perillo

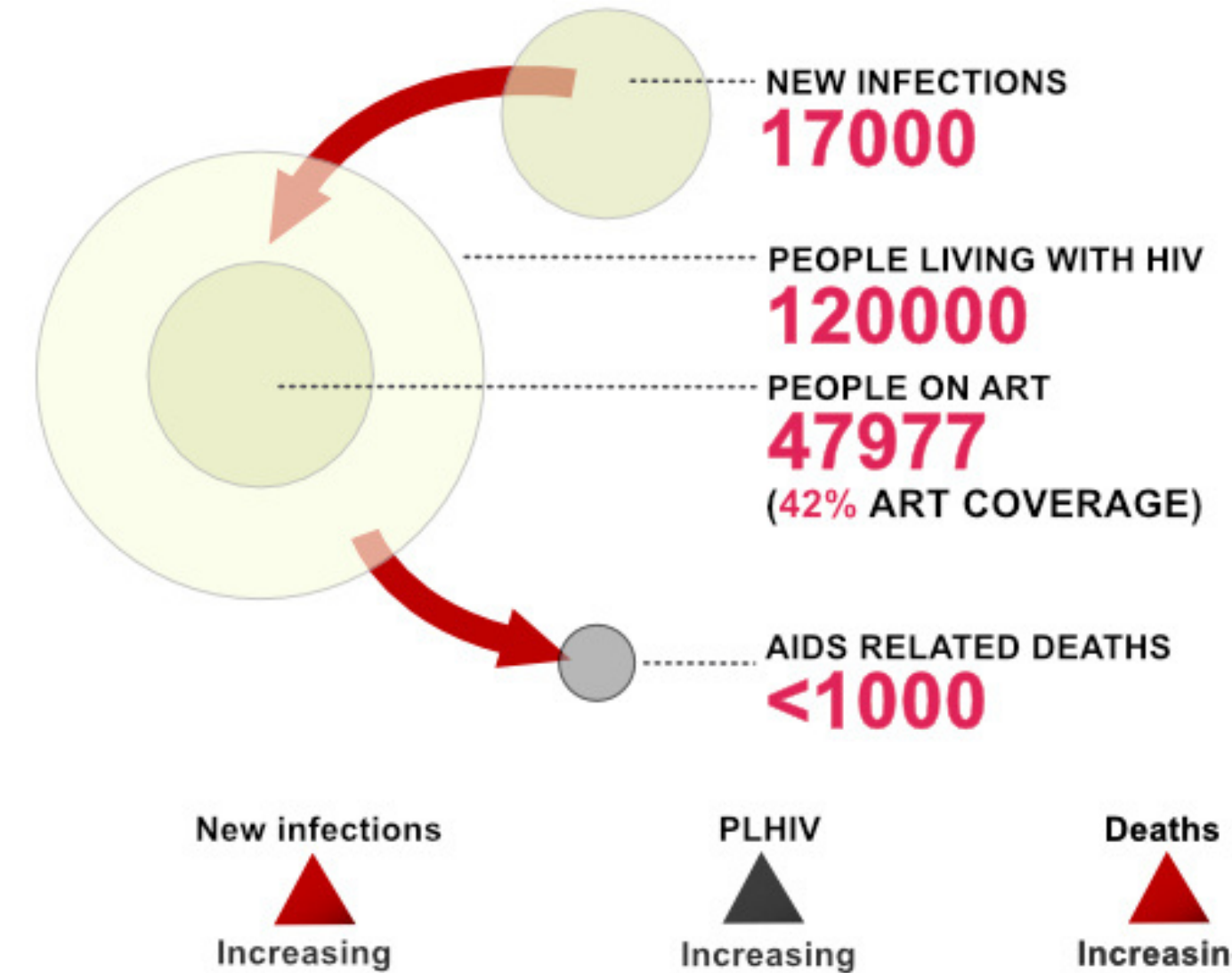
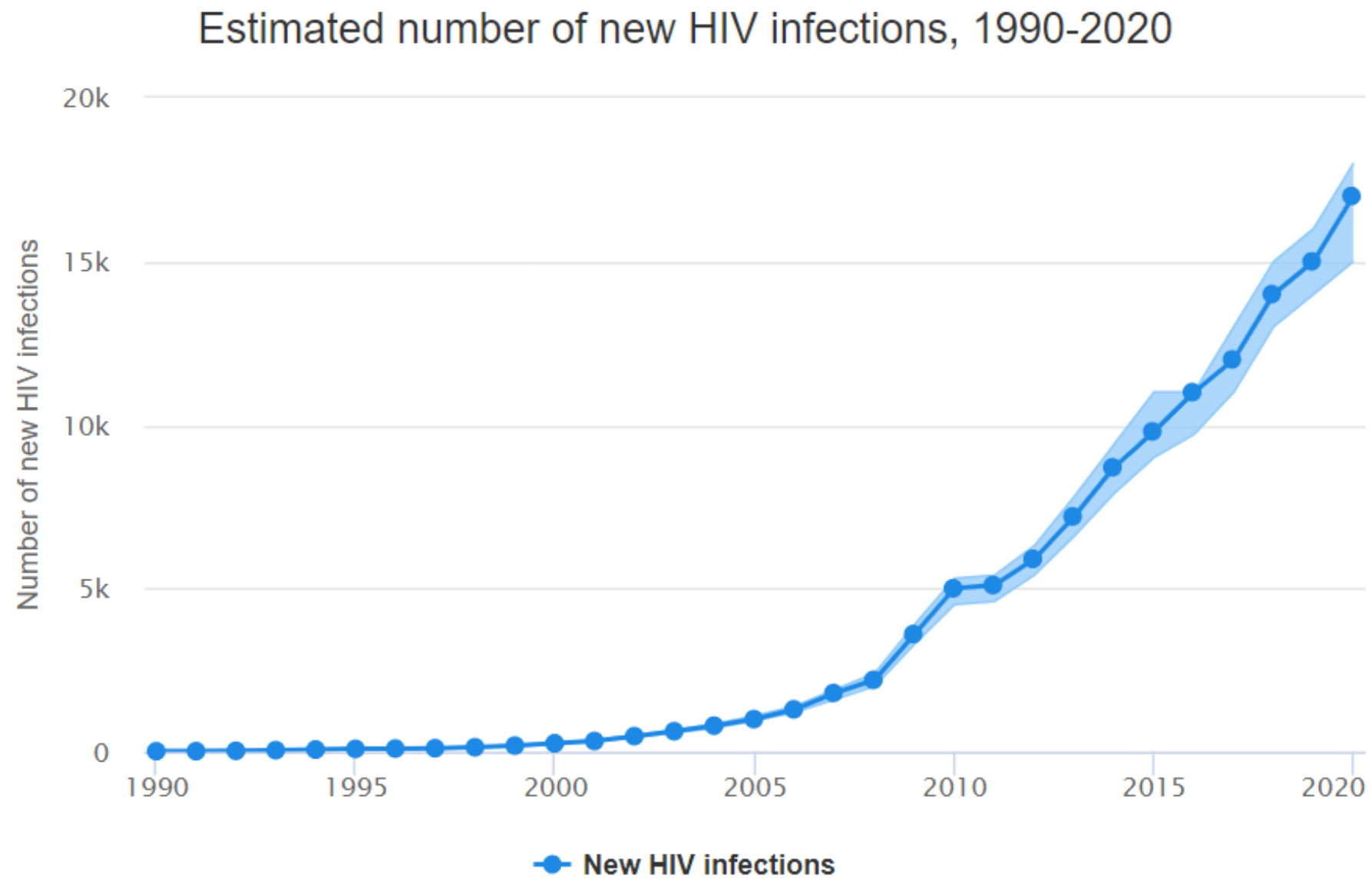
Ericson Tulda

What is Human Immunodeficiency Virus (HIV)?

- Virus that attacks cells that help the body fight infection
- If not treated, can lead to Acquired Immunodeficiency Syndrome (AIDS)
- 37.7 million infected people globally
- 36.3 million death related to HIV infection



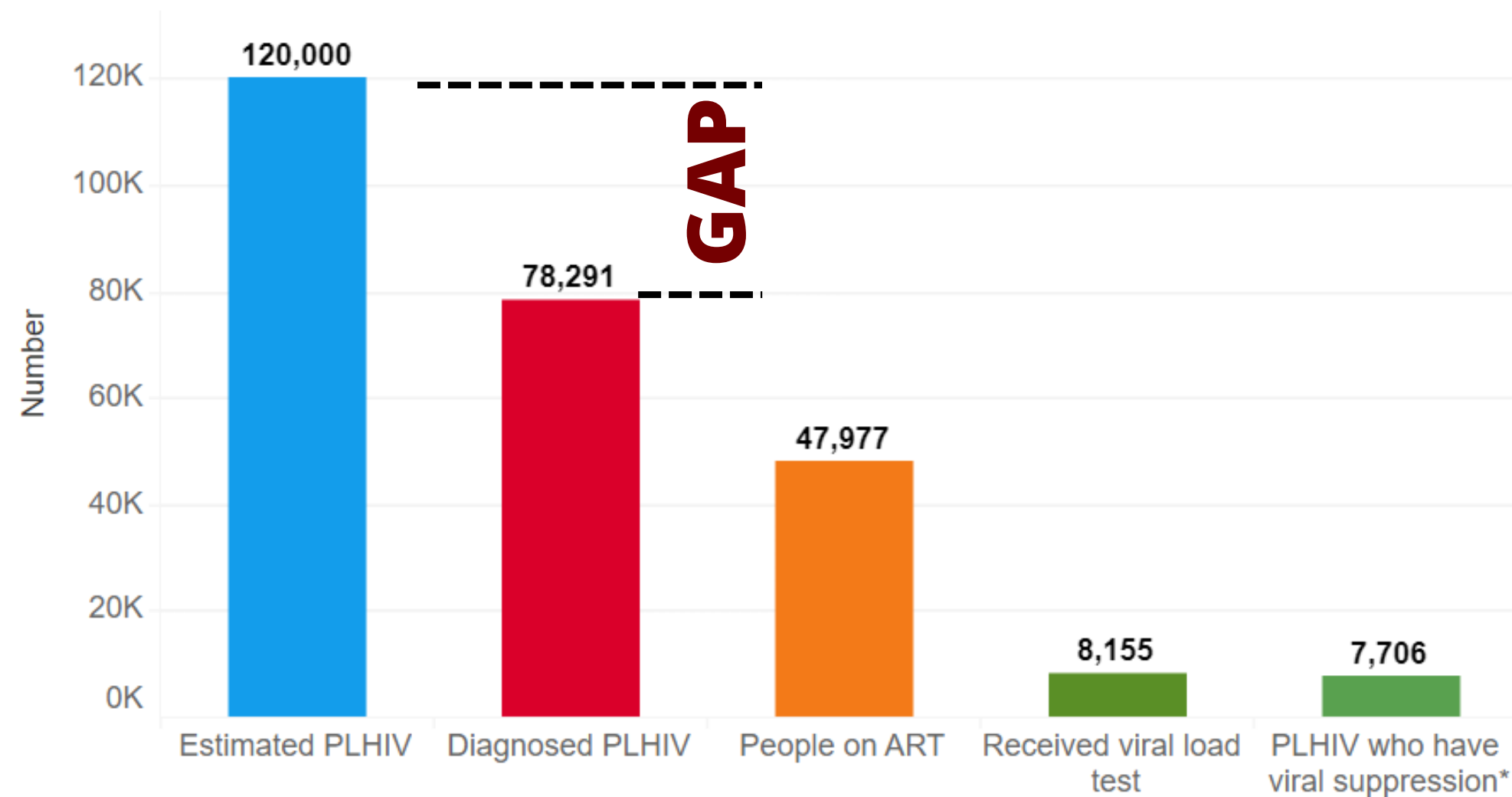
What's Happening?



Problem Statement

Assessing the need of sex education per province in the Philippines

Cumulative cross-sectional cascade for HIV treatment and care, Philippines, 2020



* Number of patients on ART who received a viral load test in the past 12 months and have VL of <1000 copies/ml

***~41000 GAP** between the number of People diagnosed with HIV and the estimated number of PLHIV*

This exploratory data analysis aims to provide feasible insights and recommendations to address the rapid increase of HIV transmission in the Philippines.

Methodology.



**Desk
Research**



Data cleaning



**Exploratory
data analysis**



Clustering



**Interpretation
of results**

Data Sources and Tools

2017 Demographic and Health Survey

-~25,000 respondents

-832 questions

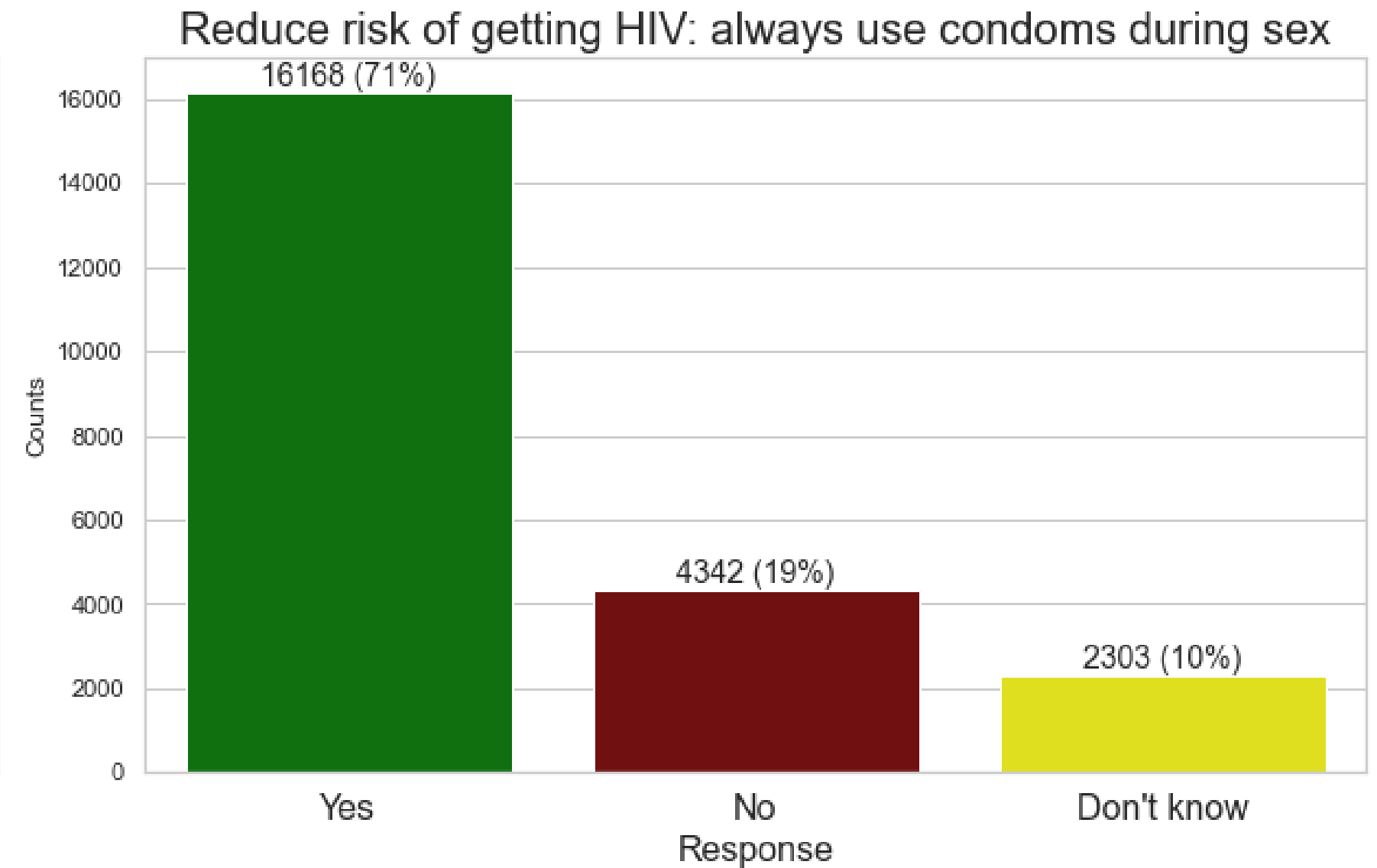
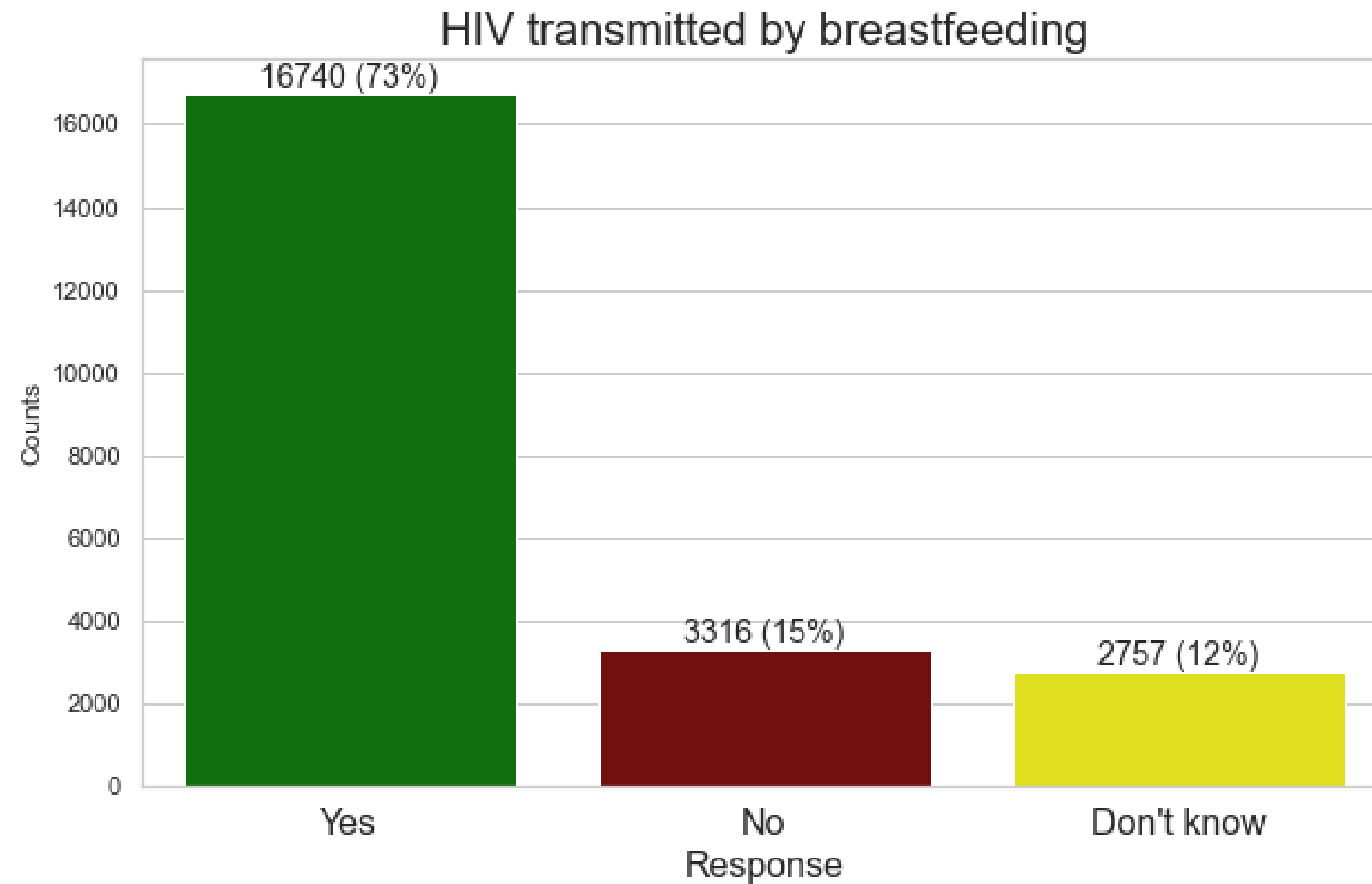




Identifying the gaps

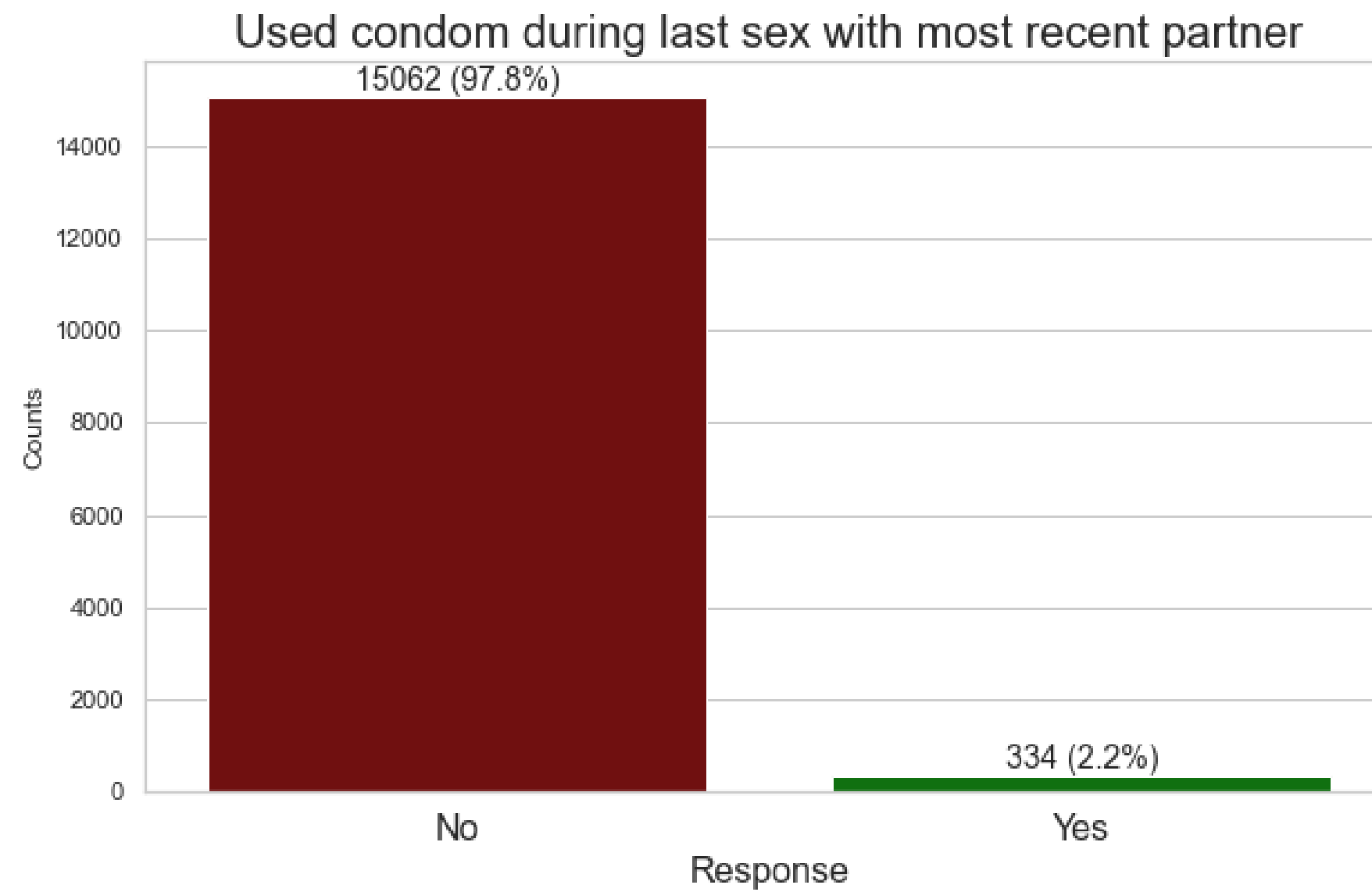
- Respondent's knowledge about HIV
- Respondent's behavior
- Awareness of LGU Programs related to HIV
- Stigma towards HIV

Respondent's knowledge about HIV



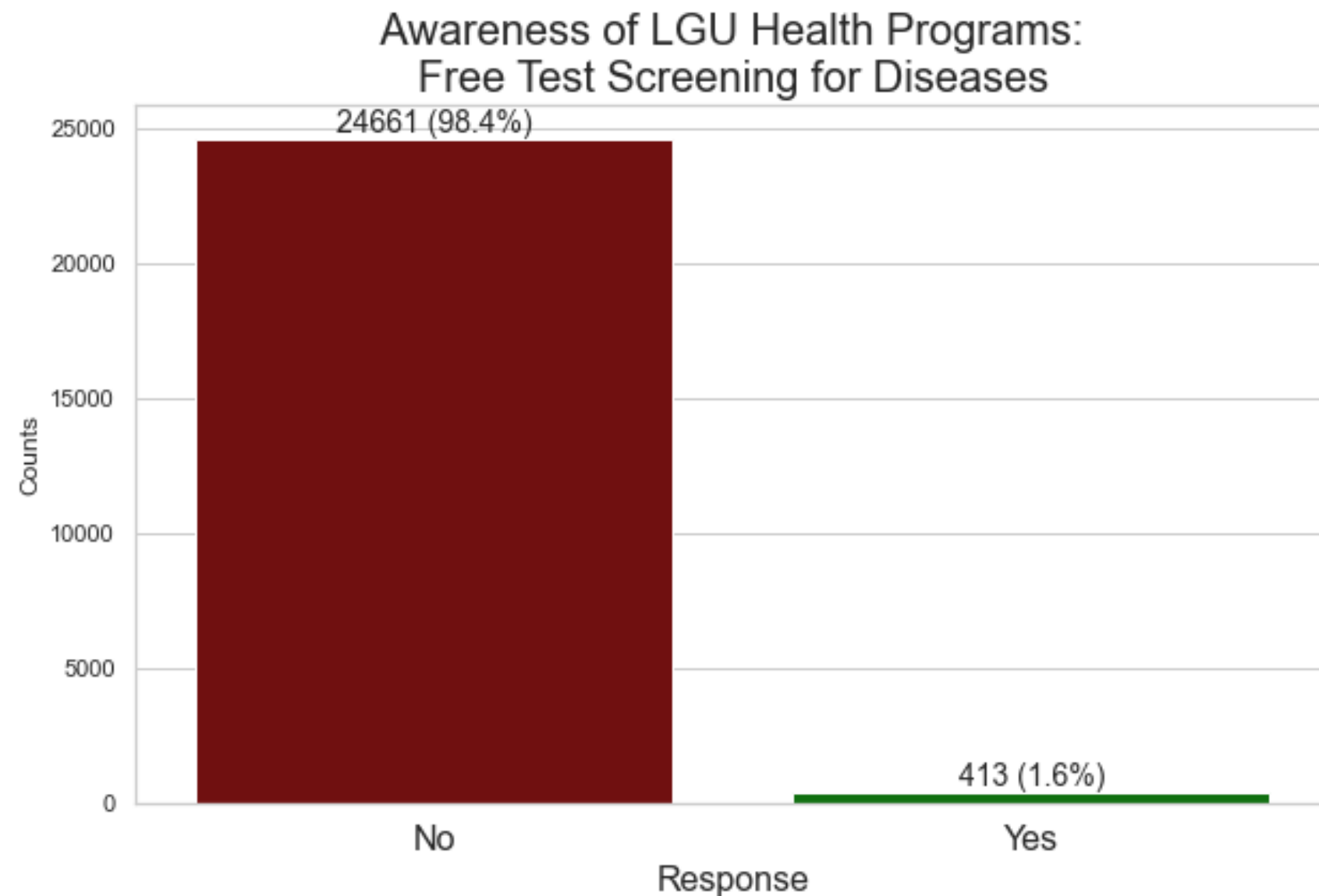
Evidently, majority of the respondents have knowledge on how HIV is transmitted and how to reduce the risk of transmission.

Respondent's behavior



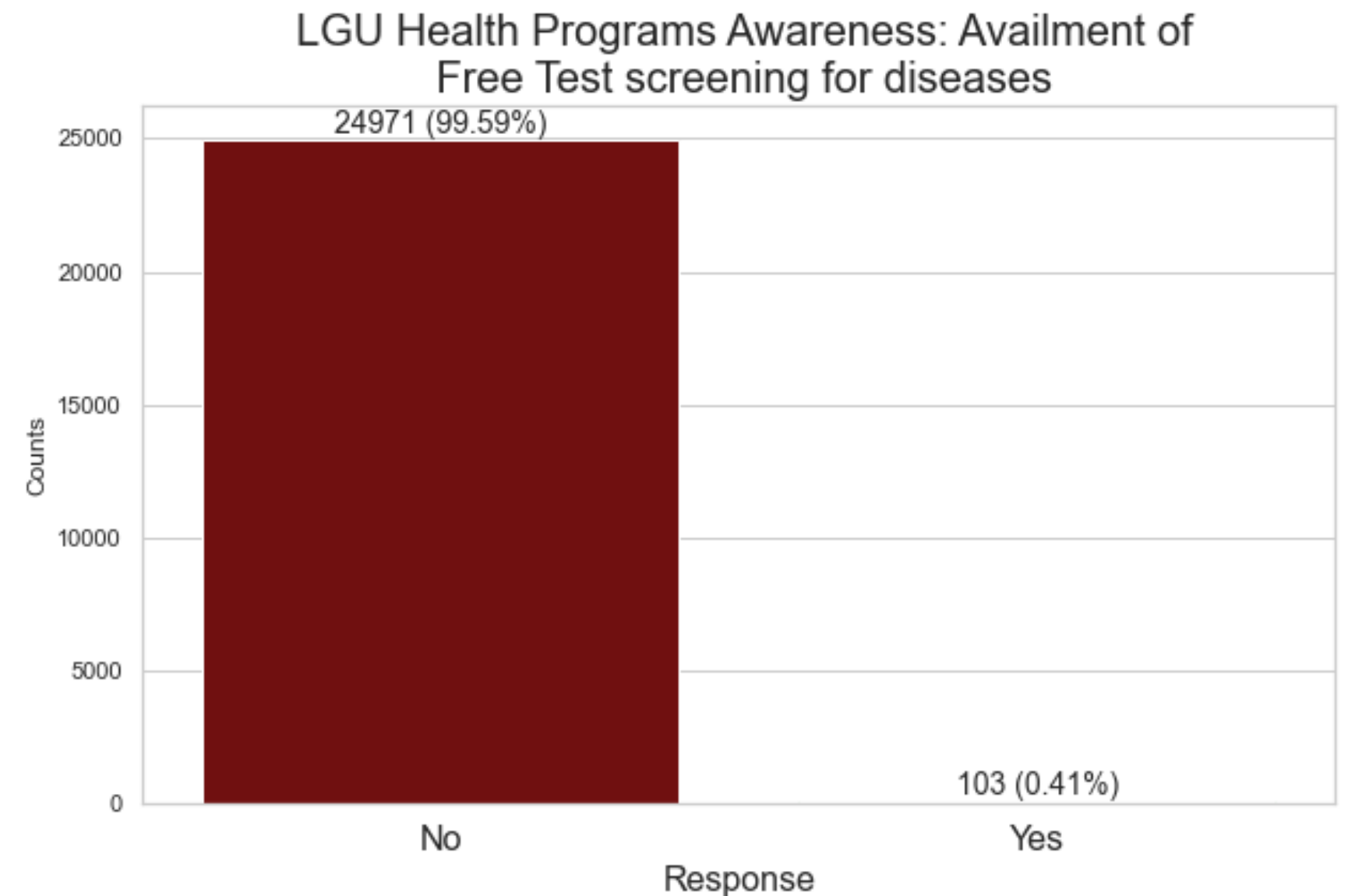
97.8% of the respondents are not using condom when having sex with most recent partner.

Awareness of LGU Programs related to HIV



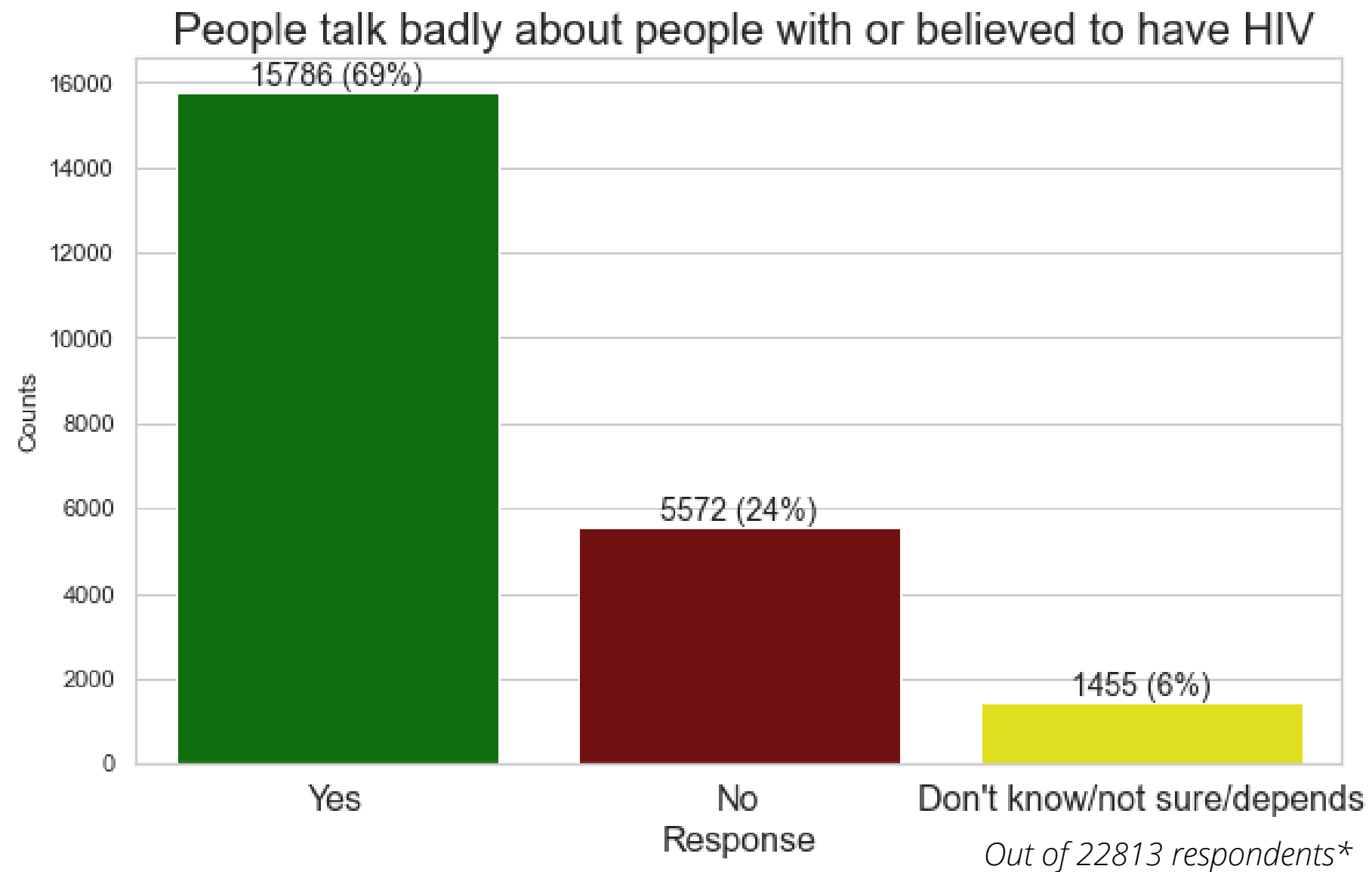
99.6% of the respondents confirmed they did not avail any LGU Health programs related to free screening of diseases for the past 30 days

98.4 % of the respondents confirmed they are not aware of LGU Health Programs for free test screening for diseases specifically for HIV.

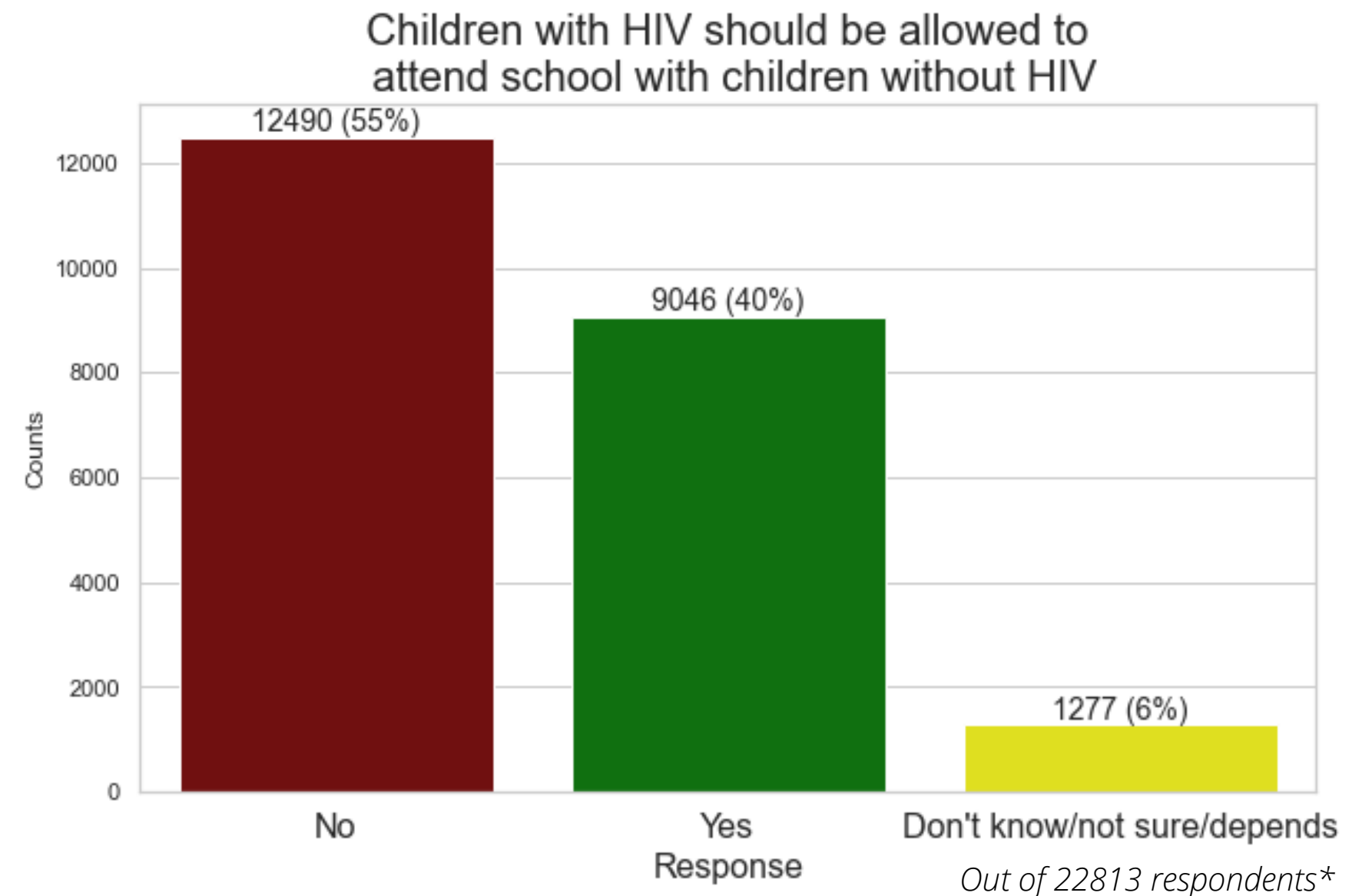


Out of 25074 respondents*

Stigma towards HIV

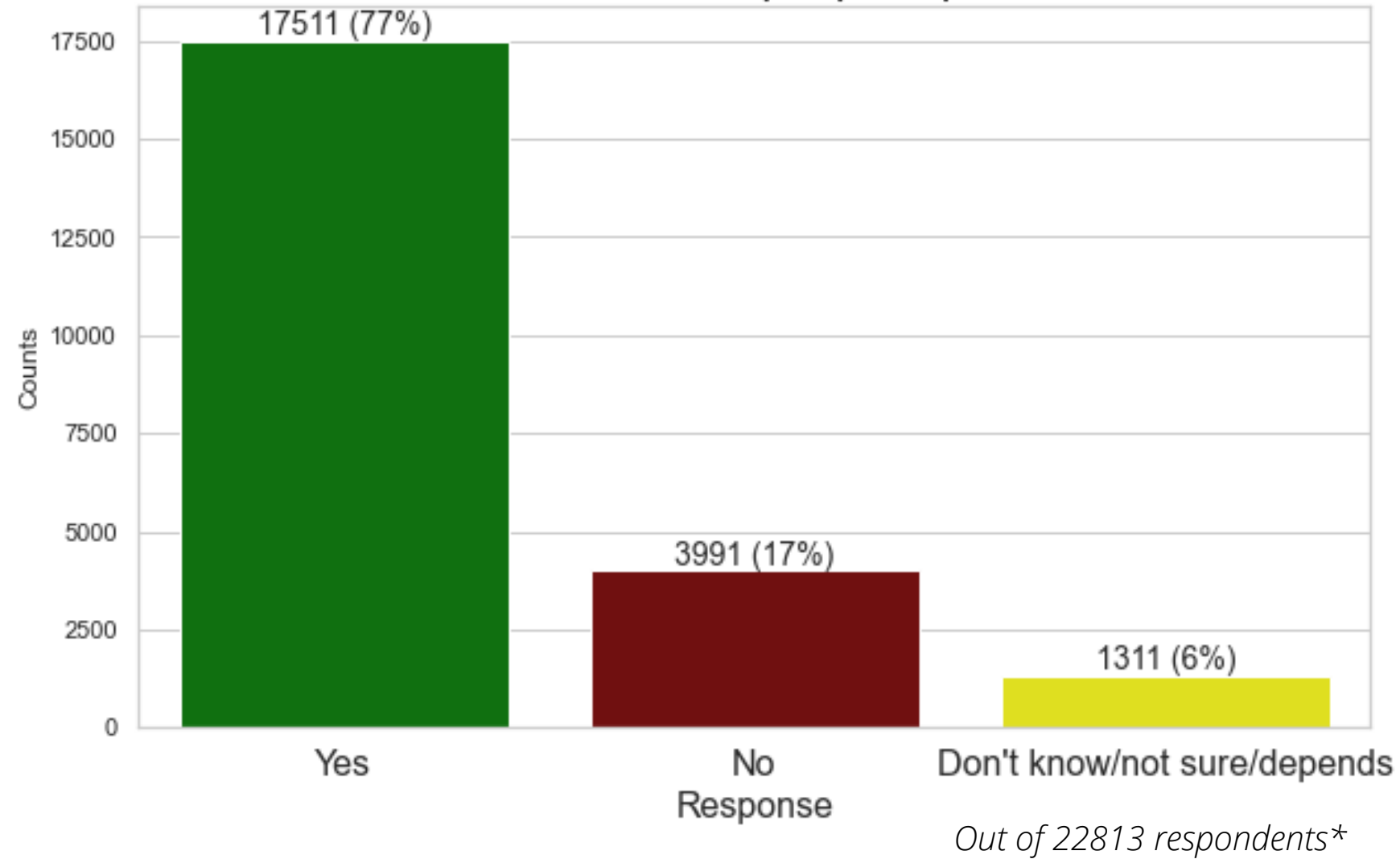


Majority of the respondents show stigma towards people with or might be HIV positive.

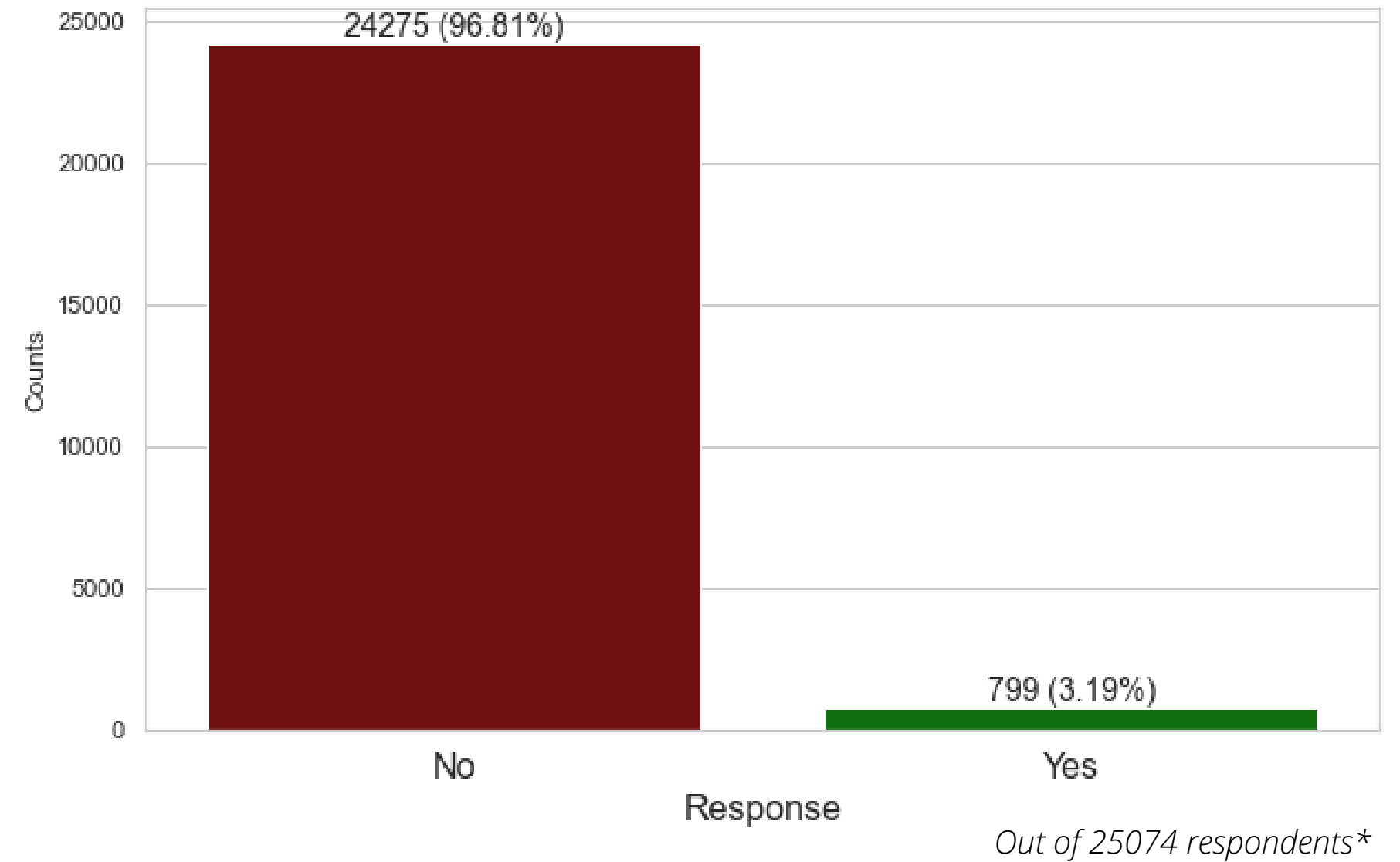


Stigma towards HIV

People hesitate to take HIV test because reaction of other people if positive

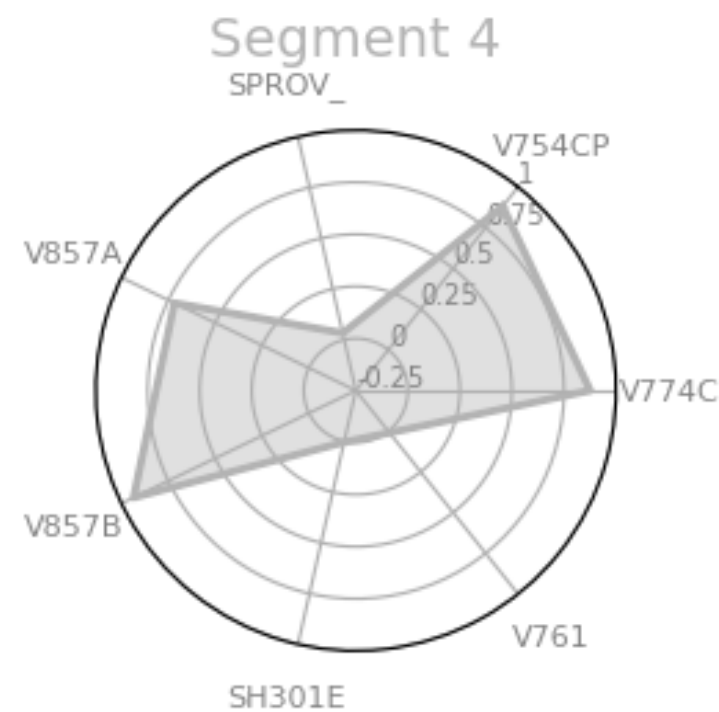
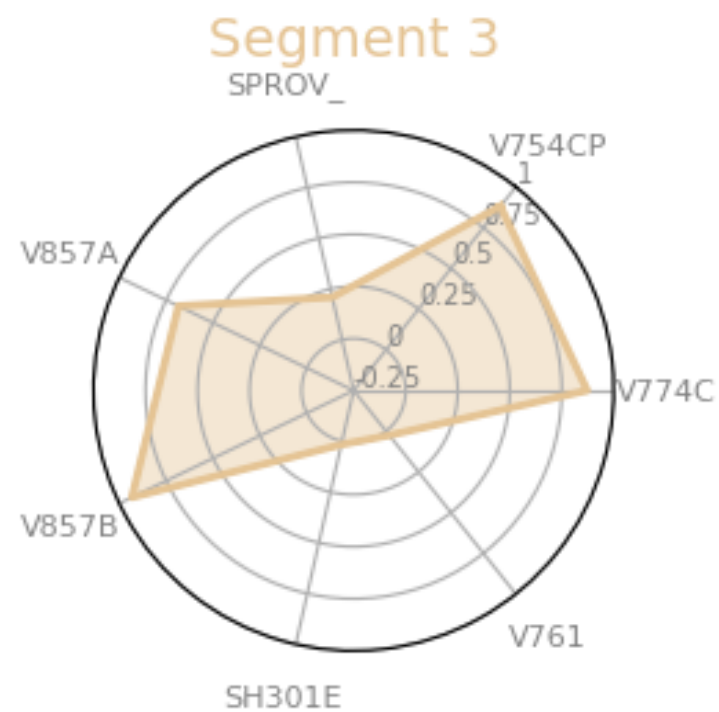
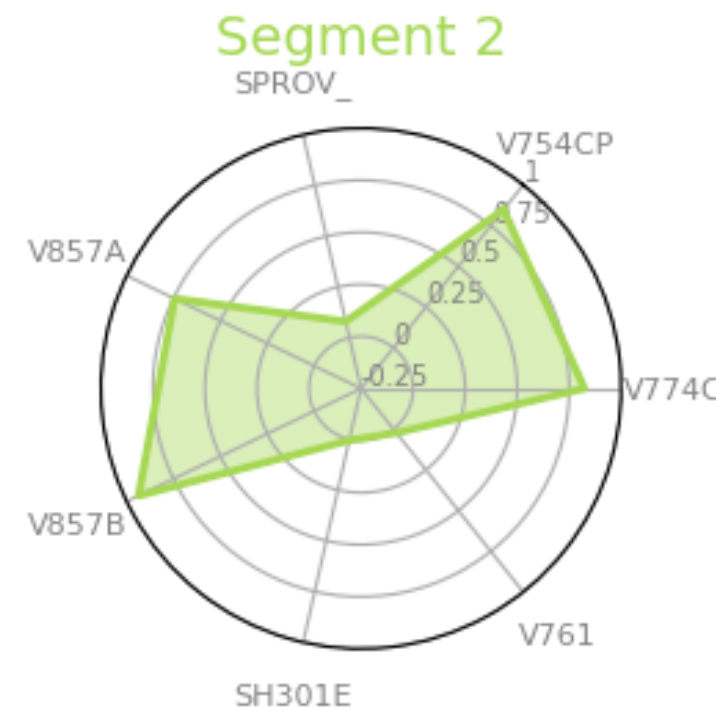
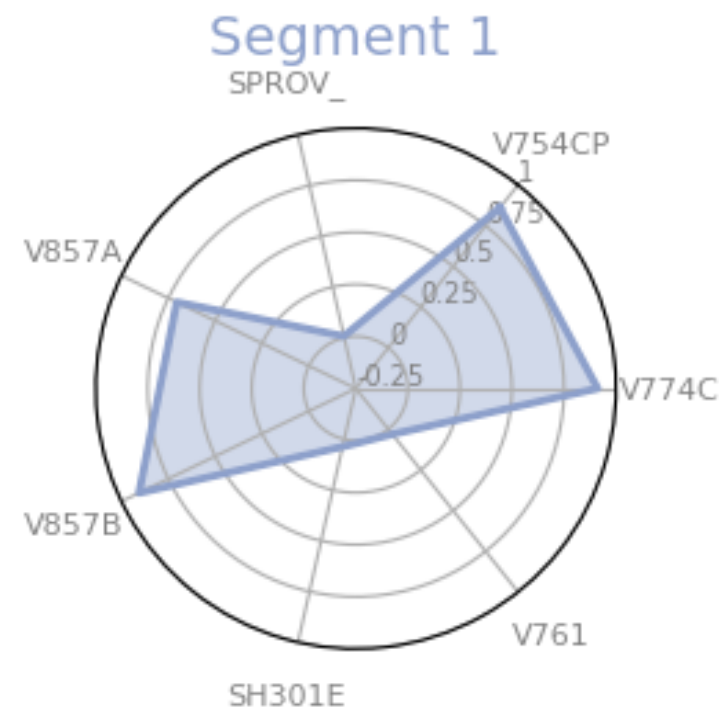
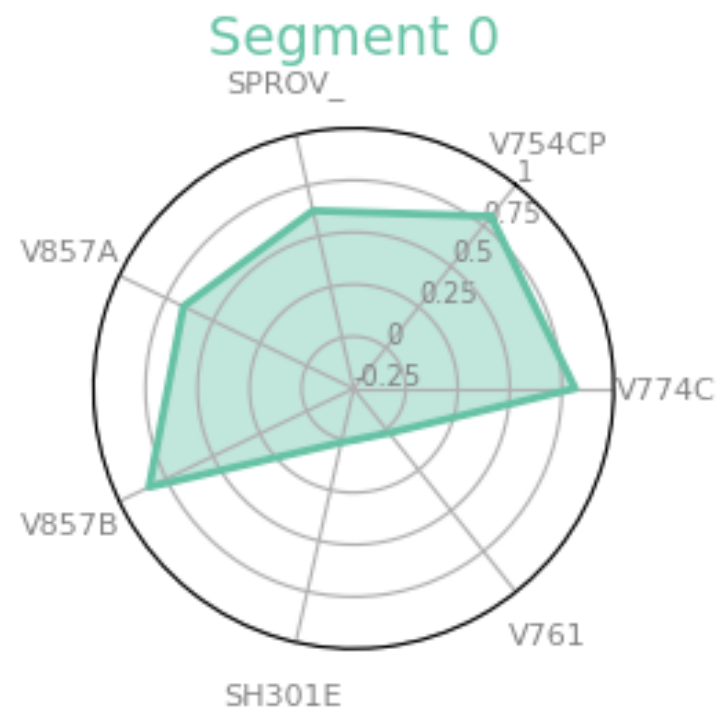


HIV Awareness: Ever been tested for HIV



Majority of the respondents are hesitant to take HIV test because of the Stigma towards HIV.

K-Means Clustering



V754CP: "Always using condoms during sex reduces chances of AIDS"

V774C: "HIV transmitted by breastfeeding"

V761: Used a condom during last sex with most recent partner

SH301E: Aware of LGU free test screening for diseases

V857B: "People hesitate to take HIV test because of the reaction of other people if positive"

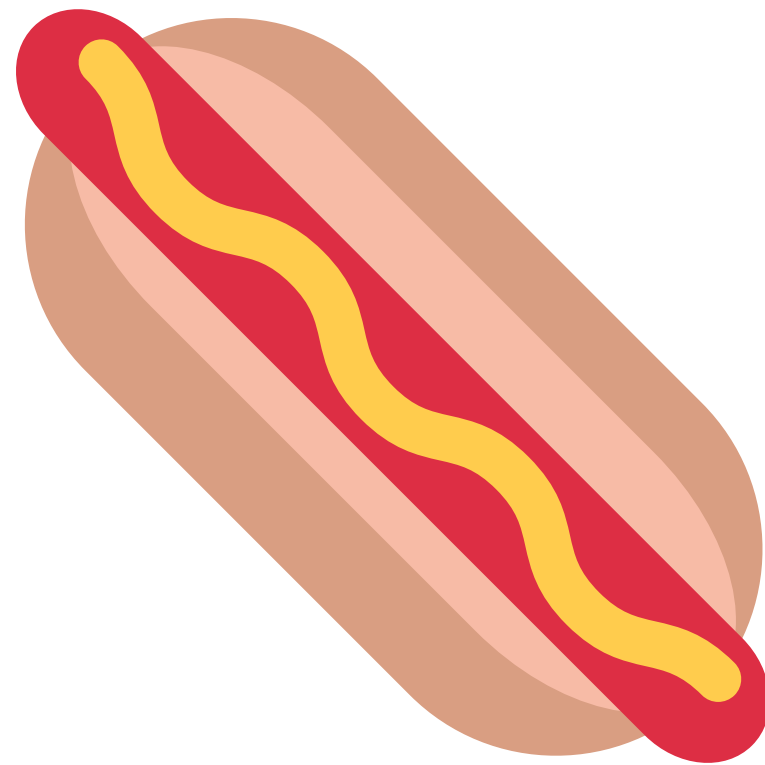
V857A: "Children with HIV should be allowed to attend school with children without HIV"

SPROV: Provinces

| CLUSTER | "Always using condoms during sex reduces chances of AIDS" | "HIV transmitted by breastfeeding" | Used a condom during last sex with most recent partner | Aware of LGU free test screening for diseases | "People hesitate to take HIV test because reaction of other people if positive" | "Children with HIV should be allowed to attend school with children without HIV" |
|-----------|---|--|--|---|---|--|
| Segment 0 | Yes: 70.9% No: 19.9% Don't know: 9.3% | Yes: 74.2% No: 14.3% Don't know: 11.5% | No: 97.7% Yes: 2.3% | No: 98.4% Yes: 1.6% | Yes: 73.5% No: 21% Don't know: 5.5% | Yes: 36.5% No: 58.5% Don't know: 5% |
| Segment 1 | Yes: 76.4% No: 19.4% Don't know: 4.3% | Yes: 85.2% No: 12.0% Don't know: 2.9% | No: 96.9% Yes: 3.1% | No: 96.3% Yes: 3.7% | Yes: 83.2% No: 14.8% Don't know: 2% | Yes: 43.9% No: 53.3% Don't know: 2.8% |
| Segment 2 | Yes: 75.% No: 19.6% Don't know: 5.4% | Yes: 72.1% No: 20.3% Don't know: 7.5% | No: 97.7% Yes: 2.3% | No: 99.4% Yes: 0.6% | Yes: 89.2% No: 8.9% Don't know: 1.9% | Yes: 52.3% No 44.4% Don't know: 3.3% |
| Segment 3 | Yes: 80.7% No: 14.9% Don't know: 4.4% | Yes: 80.3% No: 13.7% Don't know: 5.9% | No: 97.5% Yes: 2.5% | No: 98.3% Yes: 1.7% | Yes: 88.8% No: 8.8% Don't know: 2.4% | Yes: 41.7% No: 53.5% Don't know: 4.8% |
| Segment 4 | Yes: 80.3% No: 15.5% Don't know: 4.2% | Yes: 80.1% No: 15.0% Don't know: 4.9% | No: 99% Yes: 1% | No: 99.5% Yes: 0.5% | Yes: 88.9% No: 9.1% Don't know: 2% | Yes: 45.9% No: 51.6% Don't know: 2.5% |

Conclusions and Recommendations

- K-Means clustering was inconclusive
 - Apply K-Modes instead
- Explore other features
- Use machines with high computing power



Thank you for listening!