

User profiles, regimen choices and types of exposure in HIV post-exposure prophylaxis before and after the implementation of guidelines in Brazil

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Background

Post-exposure prophylaxis (PEP) is one of the tools to prevent HIV infection, based on the use of antiretrovirals (ART), which should be started within 72 hours of possible exposure to the virus and maintained over 28 days.

Available in health services in Brazil since 1999, in 2010 it was implemented for sexual exposure and in 2015 the first PEP guideline was launched. In September 2017, Dolutegravir containing (DTG-C) regimen was included as preferred regimen for PEP.

As a continental-sized country, Brazil has municipalities with very different characteristics, including social vulnerability, which must be considered to identify priority areas for PEP implementation.

Objectives

- Describe the profile of PEP users in Brazil since its implementation;
- Describe the differences between users profile, regimen choices and types of exposure in HIV PEP before and after the Guidelines Implementation in Brazil.

Methods

Programmatic data from PEP dispensation were analyzed for people aged 10+ from 2009–2017 and described using proportions to investigate associations.

Type of exposure is divided in:

- Occupational exposure;
- Sexual assault;
- Consensual sexual exposure;
- Others (reproductive planning and syringe sharing).

Social Vulnerability Index (SVI) is a combination of 16 indicators related to urban infrastructure, human capital, income and work.

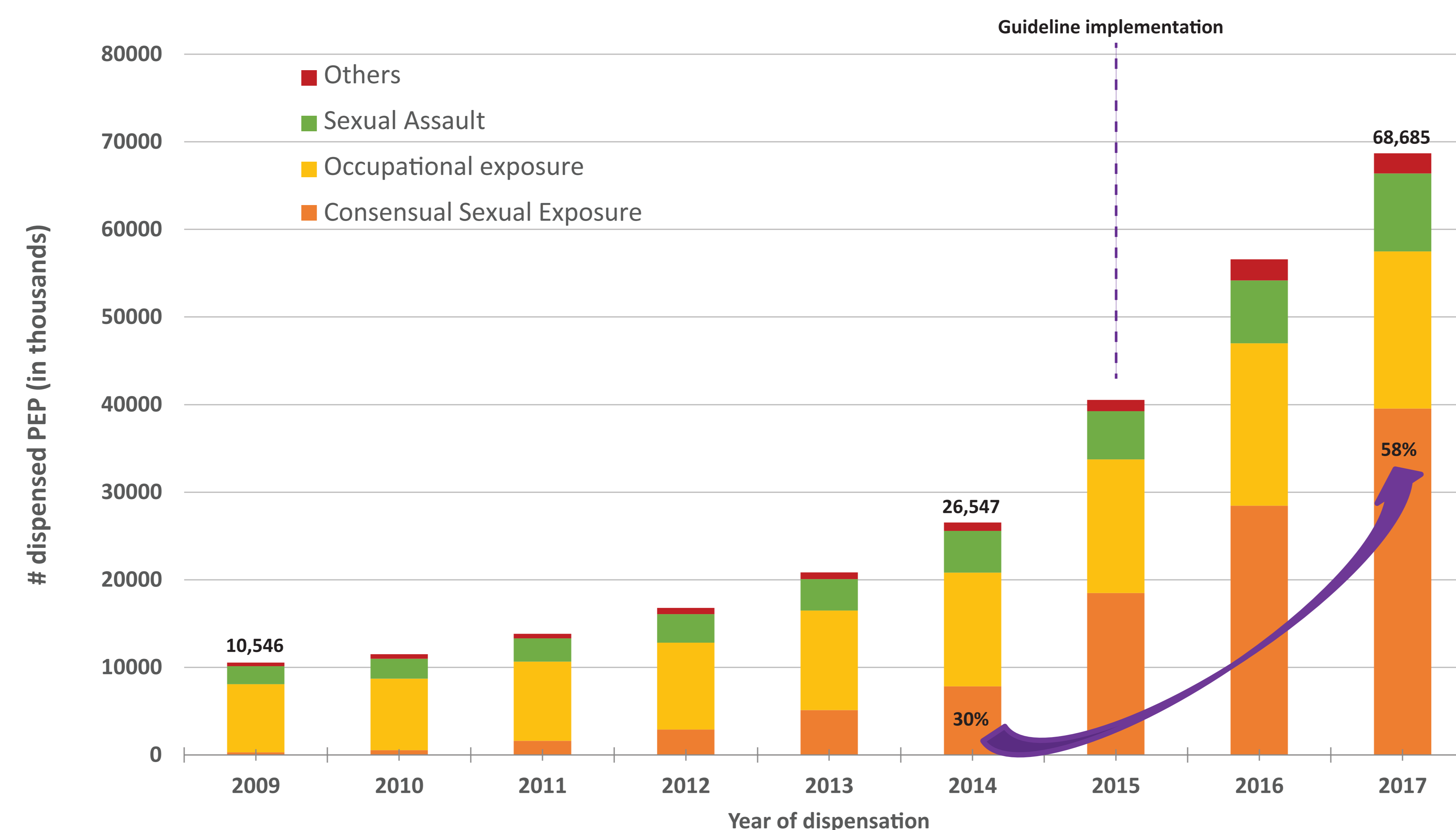
Results

A total of 265,996 PEP regimen were delivered in Brazil between 2009 and 2017, 68,685 (26%) of them, only in 2017. Non-occupational exposure dispensations increased significantly, approximately 274% between 2014 and 2017 (figure 1). 39,541 people (58%) had PEP prescribed because consensual sexual exposure in 2017 (compared to 30% in 2014 – 7,839 dispensations), reflecting an increase in all age ranges (figures 2 and 3).

Median age changed from 30 years old in 2014 to 29 years old in 2017, being higher on the 20 to 24 and 25 to 29 years old ranges. The median municipalities' IVS increased from 0.276 to 0.288, comparing the same years.

Also in 2017, 8,912 (13% of total) people sought for PEP because of sexual assault, among those 10% were 10–14yo. Furthermore, in the same year, sexual assault represents 76% of the reasons people 10–14yo received PEP. Approximately 23% of PEP dispensations because of sexual assault were in municipalities with median, high or very high SVI. DTG-containing regimen represented 11% of those dispensed in that year.

Figure 1 – PEP dispensation according to type of exposure. Brazil, 2009–2017



Type of exposure per age range before and after guidelines' implementation

Figure 2 – PEP dispensation according to type of exposure and age range, Brazil, 2014

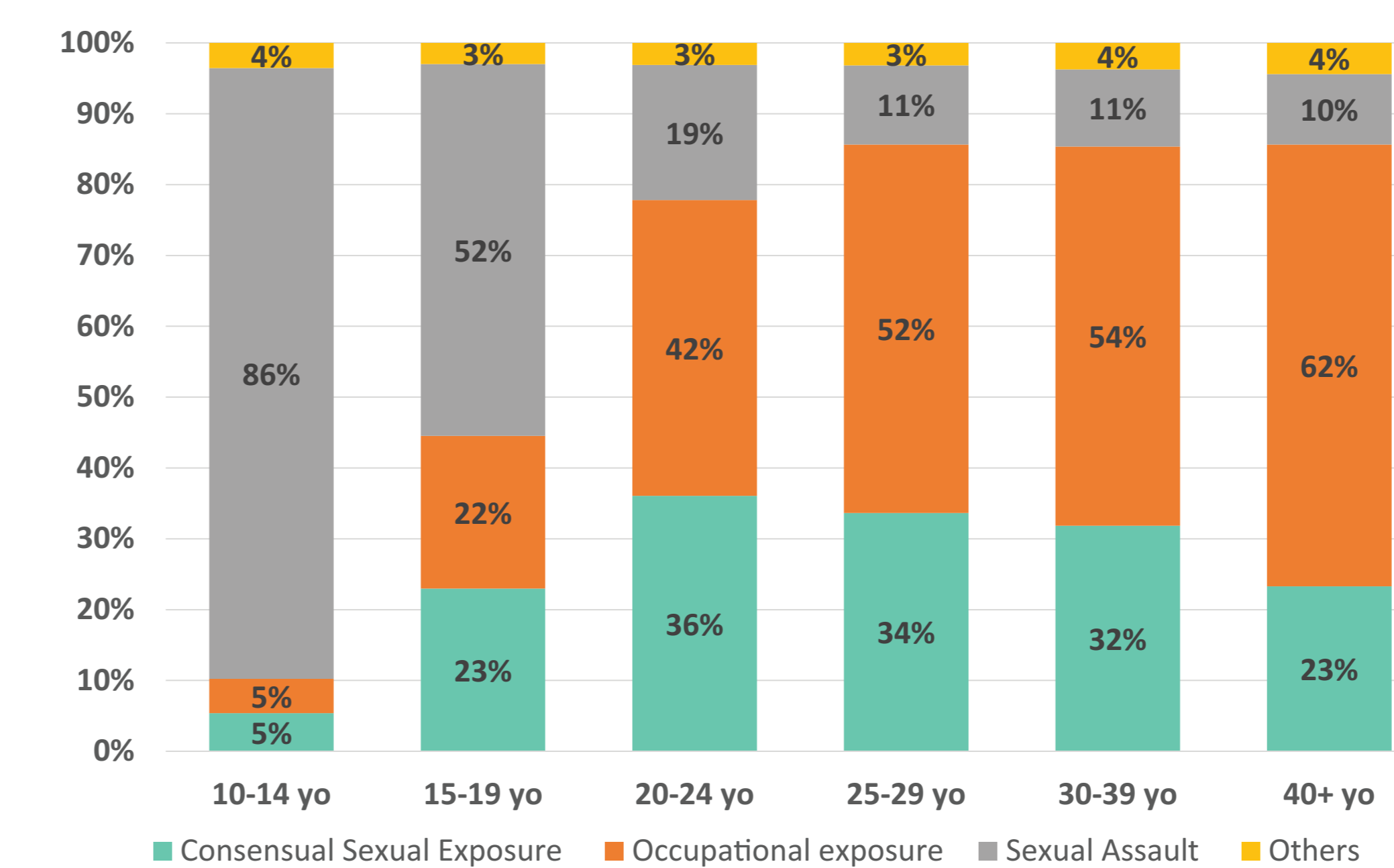
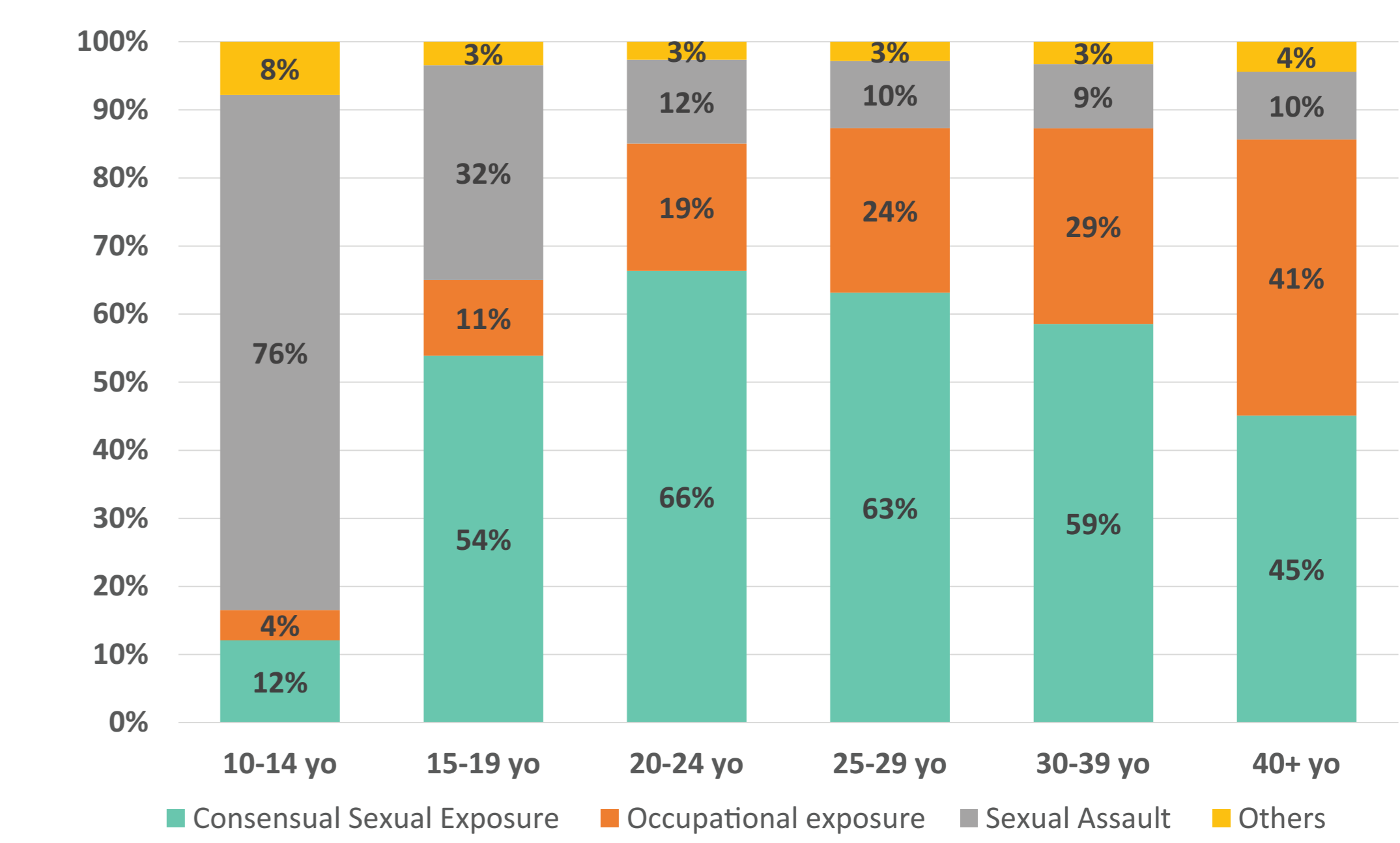


Figure 3 – PEP dispensation according to type of exposure and age range, Brazil, 2017



Conclusions

This study shows a change in the profile for PEP users, initially the main reason was occupational exposure and currently is sexual one. These results determine the importance of implementation of guideline for public health policies improvements. Since September of 2017, the number of dispensations DTG-containing regimens raised, reflecting the changes proposed by the current guidelines. This choice of regimen offers more virological power, greater genetic barrier, greater tolerance and greater security for users. Despite these advances, remains the challenge of making PEP available in the recommended 'window of opportunity' for those presenting higher SVI (more than 0.400), which is an important tool to identify priority areas for PEP implementation.

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