

Earlier HIV diagnosis through HIV testing conducted at key-population-led health services in Thailand

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BACKGROUND

Late HIV diagnosis and delayed antiretroviral therapy (ART) initiation can significantly increase mortality rates of people living with HIV. In a study using the national AIDS database within eight provinces in Thailand, the median CD4 count at diagnosis for those initiating ART at public hospitals from 2014 through 2018 was 162 (IQR 44-353 cells/mm³).¹

The impact on mortality at diagnosis was striking; within five years, patients with CD4 counts below 200 were four times as likely to die when compared to those with CD4 counts above 200.

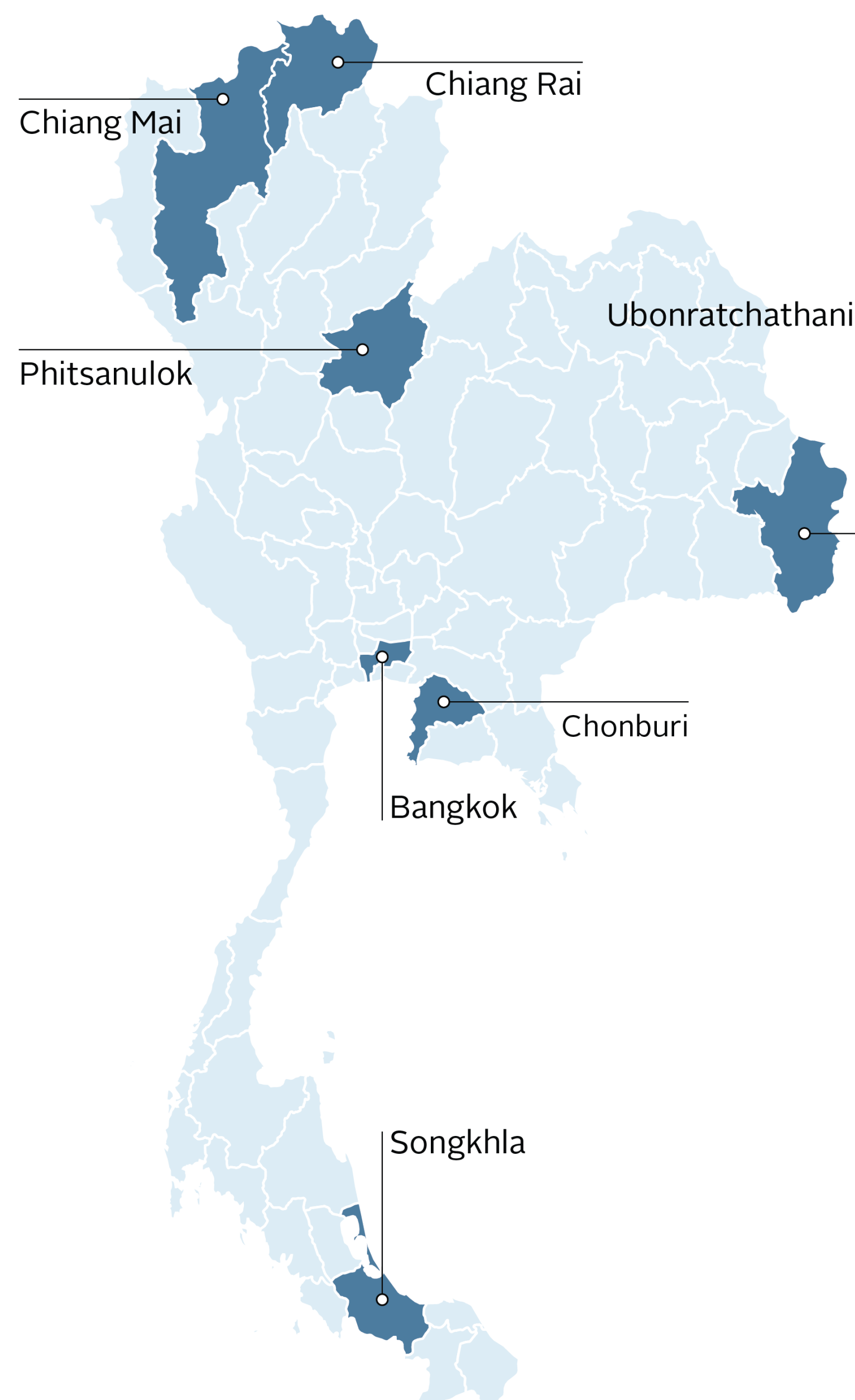
METHODS

The USAID/PEPFAR-supported EpiC project supports key population (KP)-led HIV testing and treatment for men who have sex with men (MSM), transgender women, and sex workers (SWs) at 13 sites in provinces with high HIV prevalence throughout Thailand (Figure 1).

HIV counseling and testing are conducted according to national guidelines, and point-of-care CD4 testing is conducted after HIV diagnosis is confirmed. We evaluated CD4 at the time of diagnosis and factors significantly associated with being diagnosed at higher CD4 counts.

CD4 was treated as a categorical variable, and Pearson chi-squared tests were conducted to explore factors associated with being diagnosed at CD4 > 200.

FIGURE 1. Locations of PEPFAR/USAID supported community HIV services in Thailand



RESULTS

From October 2016 through September 2021, 6,119 clients were diagnosed with HIV. A total of 6,077 received CD4 testing, 98% (n=5,955) of whom were male at birth. **Mean CD4 at time of diagnosis was 397.1 with a standard deviation of 226.4.** CD4 was >200 among 81.9% (n=4,796). Factors significantly associated with higher CD4 at diagnosis included younger age, method of being reached for HIV testing, and KP group (Figures 2-4). As seen in Figure 3, walk-in clients had lowest percentage of high CD4 at HIV diagnosis [78.9%] compared to clients reached via peer referral [85.7%] or trained community outreach workers [86.6%] [$X^2=39.42$, $p<0.0001$]. As seen in Figure 4, KP group was also associated with high CD4; all SWs [87.3%] and MSM [81.5%] more likely to have higher CD4 compared to transgender women [79.6%] and non-KPs [73.2%], [$X^2=19.63$, $p<0.0001$].

FIGURE 2. CD4≥200 at time of HIV diagnosis by Age Group

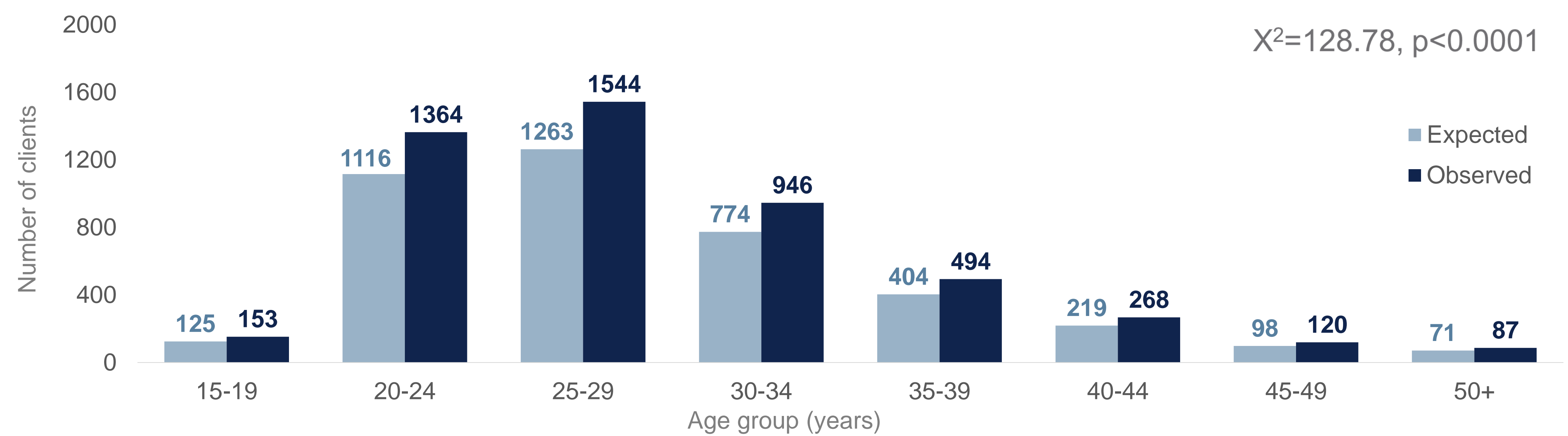


FIGURE 3. CD4≥200 at time of HIV diagnosis by Outreach Method

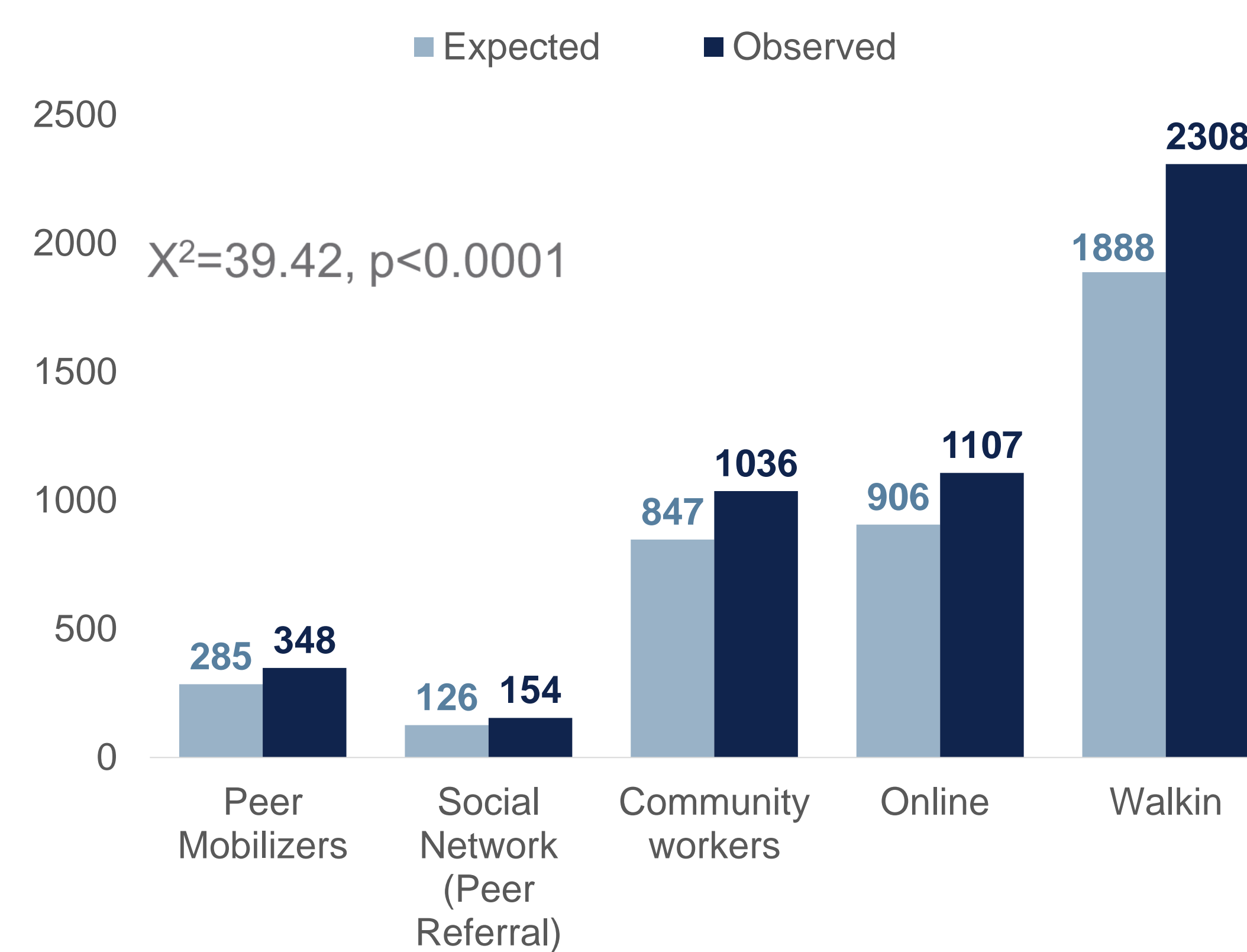
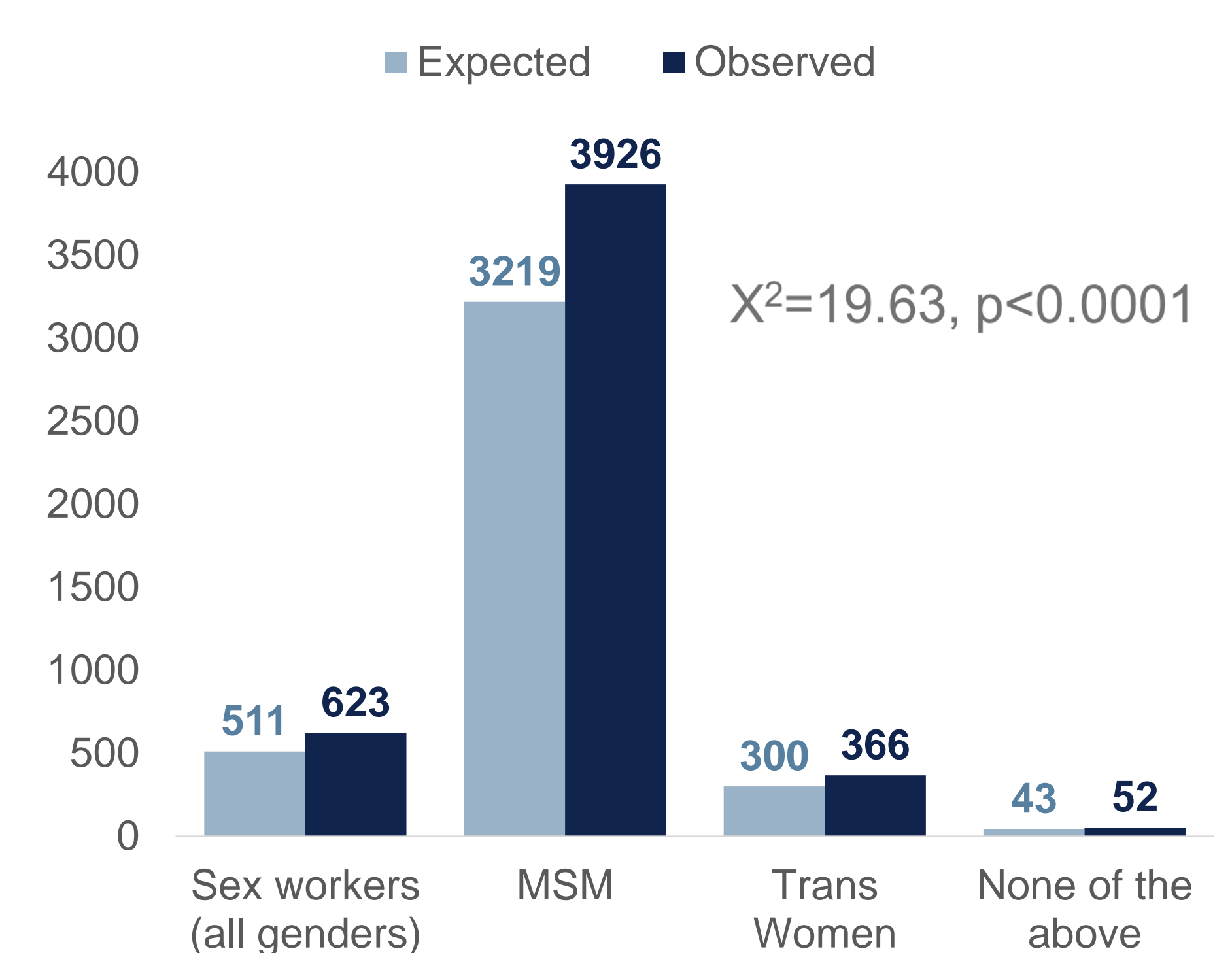


FIGURE 4. CD4≥200 at time of HIV diagnosis by Key Population Group



CONCLUSIONS

Community-led HIV testing diagnosed clients earlier than testing at public hospitals. Those reached by trained community outreach workers or peer referral were more likely to be diagnosed at a higher CD4 count than walk-in clients; however, all HIV testing at KP-led health services diagnosed clients at higher CD4 counts.

National programs should support expansion and reimbursement of community-led HIV testing to promote sustainability of community-led HIV services.



Medical technician collecting blood from a client at Rainbow Sky Association of Thailand, a KP led health clinic.

REFERENCES

¹ Manosuthi W et al. [A retrospective study of survival and risk factors for mortality among people living with HIV who received antiretroviral treatment in a resource-limited setting.](#) AIDS Research and Therapy 18: 71, 2021.

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