Mapping Recent HIV Infections among MSM in Thailand: Data-Driven Insights for Targeted Prevention

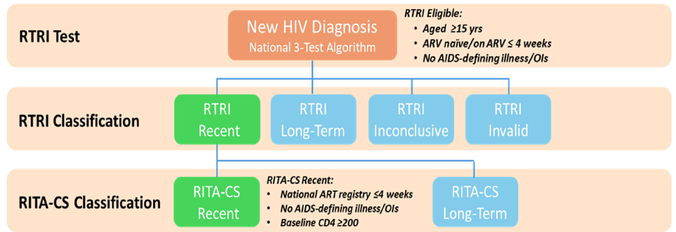
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BACKGROUND

- Thailand has introduced an innovative surveillance model that integrates a rapid test for recent HIV infection (RTRI) with HIV case surveillance (CS) data within routine testing services, using a recent infection testing algorithm (RITA) to identify people likely infected in the past 12 months
- Men who have sex with men (MSM) remain at high risk of acquiring HIV in Thailand. Monitoring infections acquired in the past 12 months helps identify transmission hot spots and supports timely, targeted prevention.
- We assessed recent infection among newly diagnosed MSM and analyzed demographic and regional patterns to guide these prevention efforts.

Figure 1: RTRI Testing & Case Surveillance Algorithm



METHODS

- Individuals aged ≥15 years with a new HIV diagnosis who were treatment-naïve or on therapy for ≤4 weeks and had no AIDS-defining illness were offered HIV-1 RTRI recency testing, with RTRI-recent cases and baseline CD4 >200 cells/mm³ classified as RITA-CS recent.
- Routine HIV testing and RITA-CS recent infection data were collected from 124 health facilities in 9 provinces between September 2022 and March 2024.
- Self-identified MSM were included in the analysis, and the proportion of recent HIV infections among newly diagnosed MSM was calculated.
- Risk differences by age, sex, and population group were evaluated using demographic and behavioral data from surveillance questionnaires, and factors associated with recent HIV infection were examined using univariate and multivariable logistic regression.

Figure 2. New HIV Diagnoses and RITA-CS Recent among MSM in 9 Provinces in Thailand, September 2022 – March 2024

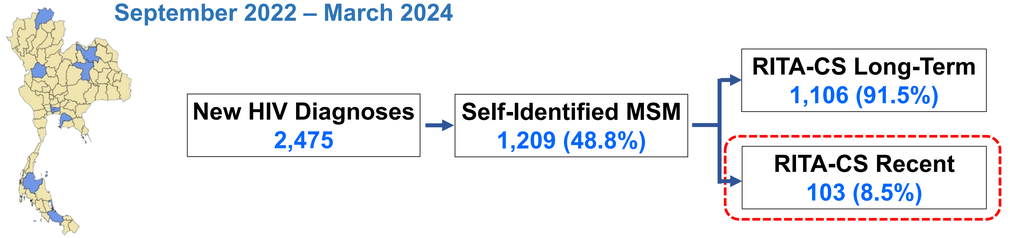


Table 1. RITA-CS Recent HIV infection Associated Factors among MSM in 9 provinces, Thailand, September 2022 - March 2024, (N = 2,475)

Characteristics		RITA-CS Recent							
		n	N	Univariate			Multivariate		
				OR	95%CI	p-value	AOR	95%CI	p-value
Age Group:	15-24	54	467	2.93	1.39, 7.19	0.009	2.28	1.02, 5.73	0.058
	25-34	40	532	1.82	0.85, 4.52	0.152	1.69	0.79, 4.15	0.208
	35-44	7	164	—	—		—	—	
	45+	2	46	1.02	0.15, 4.40	0.981	0.65	0.04, 3.73	0.688
Nationality:	Non-Thai	13	240	—	—		—	—	
	Thai	90	969	1.79	1.02, 3.41	0.058	1.07	0.55, 2.19	0.853
Marital Status:	Married	15	216	—	—		—	—	
	Single/Widow/Separate	88	985	1.31	0.77, 2.41	0.346	1.07	0.60, 1.99	0.825
Employment:	Laborer	37	571	—	—		—	—	
	Unemployed	4	72	0.85	0.25, 2.20	0.763	0.67	0.20, 1.77	0.467
	Student	28	180	2.66	1.57, 4.47	<0.001	1.72	0.93, 3.22	0.086
	Office worker	30	343	1.38	0.83, 2.28	0.205	1.23	0.72, 2.10	0.453
Geographic:	Central	3	135	—	—		—	—	
	North	7	64	5.4	1.45, 25.8	0.017	6.3	1.68, 29.5	0.009
	Northeast	23	157	7.55	2.55, 32.4	0.001	6.89	2.28, 29.0	0.002
	South	15	159	4.58	1.47, 20.1	0.018	5.32	1.71, 22.7	0.009
	Bangkok	55	694	3.79	1.37, 15.7	0.027	3.84	1.39, 15.4	0.024

RESULTS

- Among 2,475 individuals with newly diagnosed HIV infection, 1,209 (48.8%) self-identified as MSM, the remaining 1,263 were from other populations at risk for HIV acquisition.
- Of these newly diagnosed HIV cases in MSM, 103 individuals (8.5%) were classified as RITA-CS recent.
- Over half of MSM with recent infection were aged 15–24 years (52.4%), most were Thai (87.4%), single (85.4%), laborers (37.4%), and residing in Bangkok (53.4%).
- In multivariable analysis, MSM aged 15–24 years had more than twice the odds of recent infection compared with those aged 35–44 years (AOR 2.28, 95% CI 1.02–5.73).
- Living in the Northern, Northeastern, Southern, or Bangkok metropolitan areas was significantly linked to increased adjusted odds of recent infection relative to the Central region (AOR 3.84–6.89; all p < 0.001).

CONCLUSIONS

- Analysis restricted to MSM indicates that recent HIV infections are more common among younger individuals and are concentrated in Bangkok and other high-burden regions outside the Central area. These results highlight age and location specific patterns within the MSM population and support the need for geographically tailored prevention and testing approaches.
- Tailoring resources to these priority populations at risk of HIV acquisition and geographical areas may enhance early diagnosis and help interrupt ongoing transmission.

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DISCLAIMER

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