

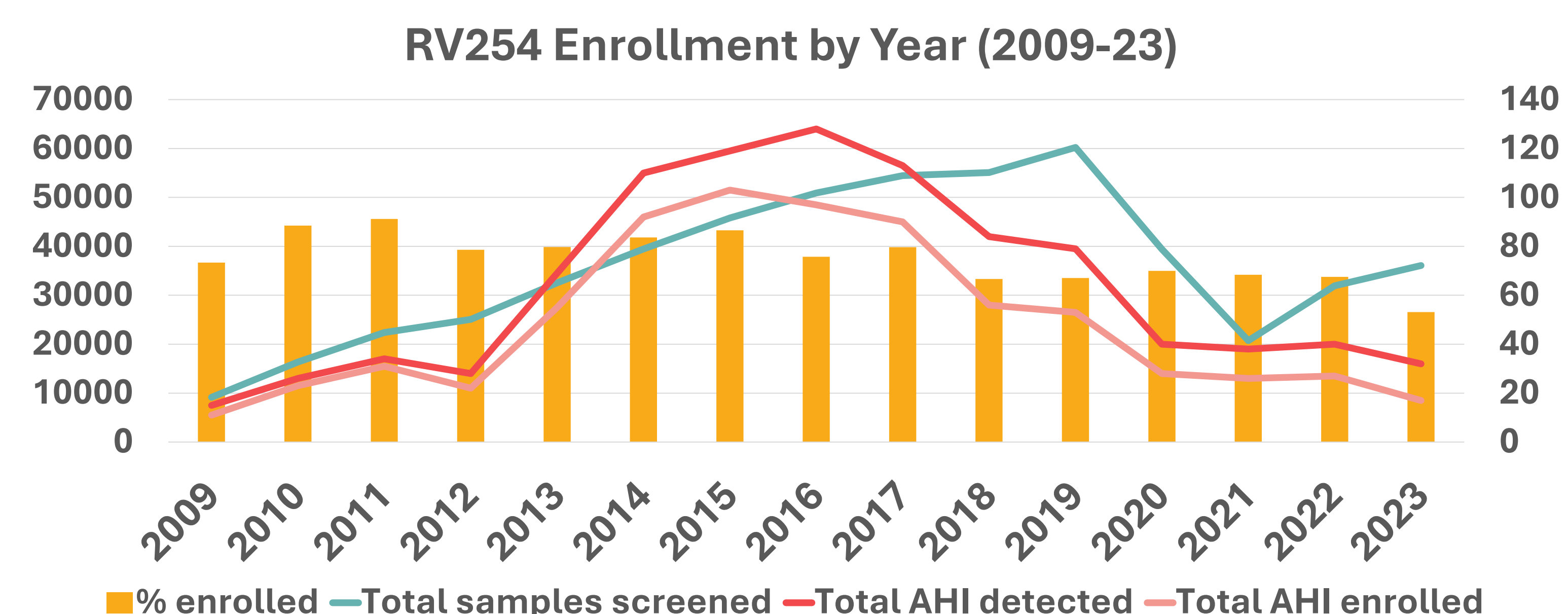
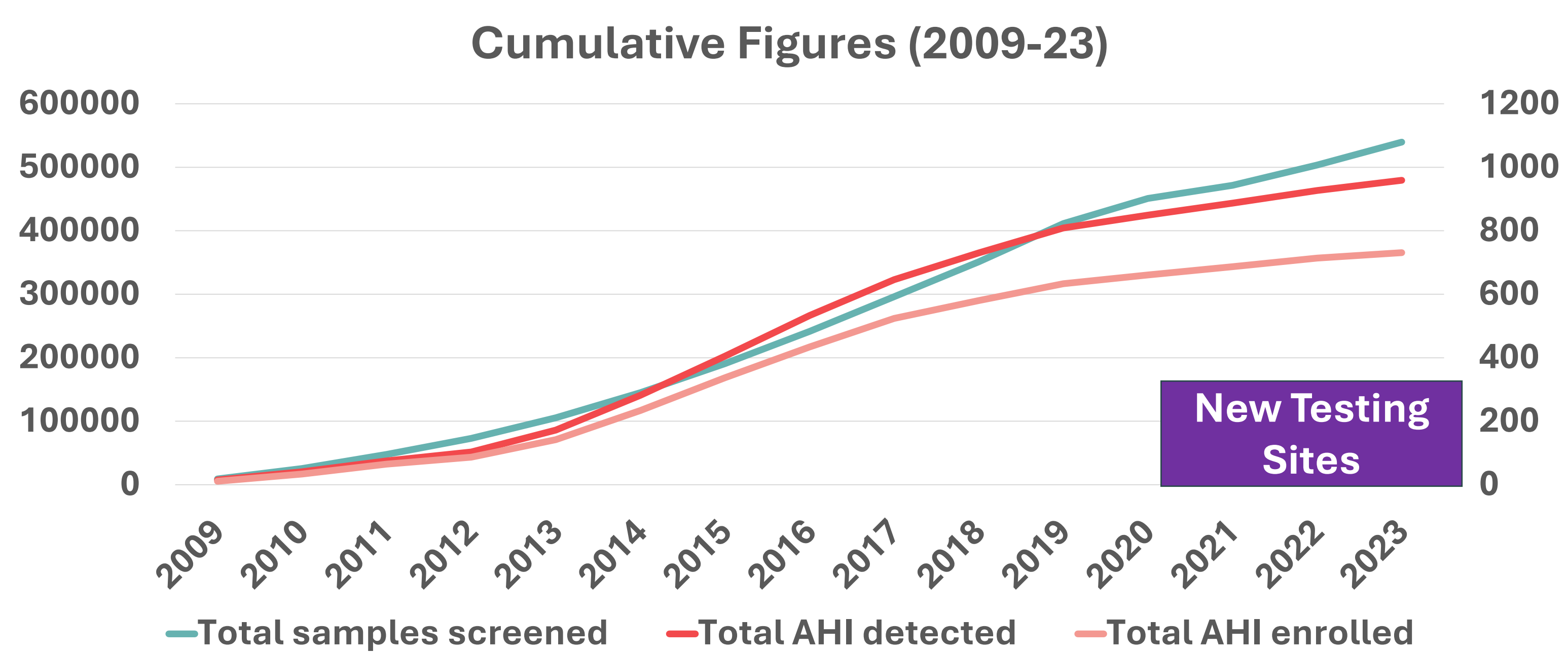
Abstract # 1144

BACKGROUND

- Clinical data from acute HIV infection (AHI) can provide valuable perspectives on factors associated with ongoing HIV transmission.
- This analysis examines participant characteristics in the RV254 AHI cohort in Bangkok, Thailand.

METHODS

- From 2009 to 2023, 539,616 blood samples from HIV test seekers were screened for AHI using a combined immunoassay & nucleic acid test approach.
- Of the 955 AHI events (0.18%) identified, 726 individuals (76%) were enrolled into RV254 cohort.
- They were grouped into three 5-year intervals based on year of enrollment:
 - Group 1 (2009–13)
 - Group 2 (2014–18)
 - Group 3 (2019–23)
- Demographic, clinical, mood, & behavioral measures were compared using Chi-square test & non-parametric tests accordingly, with **Group 1** as the reference.
- A subgroup analysis was conducted on 234 Groups 2 & 3 participants who completed a standardized questionnaire on risk behaviors introduced in Sep 2017.



In the last 15 years, young, highly educated MSM predominated new AHI cases detected in Bangkok, Thailand.

There was increasing detection of concurrent syphilis & hepatitis C, particularly among meth users, half of whom reported group sex, highlighting the need for integrated service for substance use, HIV & sexually transmitted infections.

RESULTS

Table 1. RV254 Participants' Demographics at Enrollment (Acute HIV Infection)

	Group 1 (Ref) (n=140)	Group 2 (n=435)	Group 3 (n=151)	P-value	
				Grp 1 vs. 2	Grp 1 vs. 3
Age, year	28 (23, 32)	26 (22, 31)	28 (23, 32)	0.122	0.553
Male, n (%)	131 (94)	429 (99)	148 (98)	0.003	0.077
Higher education, n(%)	85 (61)	247 (57)	88 (58)	0.413	0.672
BMI	20.6 (19.1, 22.7)	21.0 (19.0, 22.8)	21.6 (19.6, 24.3)	0.550	0.014

HIV-related Parameters

	Group 1 (Ref) (n=140)	Group 2 (n=435)	Group 3 (n=151)	P-value	
				Grp 1 vs. 2	Grp 1 vs. 3
Plasma VL, log ₁₀ cps/ml	5.63 (4.92, 6.58)	6.01 (5.28, 6.76)	6.06 (4.98, 6.66)	0.033	0.186
CD4+ T-cell	376 (269, 502)	354 (259, 495)	365 (269, 493)	0.565	0.759
CD8+ T-cell	448 (280, 721)	528 (346, 919)	567 (567, 840)	0.008	0.089
CD4/CD8 ratio	0.84 (0.52, 1.21)	0.682 (0.40, 1.00)	0.71 (0.44, 1.08)	0.002	0.050

Fiebig, n (%)

	Group 1 (Ref) (n=140)	Group 2 (n=435)	Group 3 (n=151)	P-value	
I-II	70 (50)	143 (33)	59 (39)	<0.001	0.061
III-V	70 (50)	292 (67)	92 (61)		
Acute Retroviral Syndrome, n (%)	104 (74)	342 (79)	109 (72)	0.285	0.686

Mood Parameters

	Group 1 (Ref) (n=140)	Group 2 (n=435)	Group 3 (n=151)	P-value	
Patient Health Questionnaire-9 (PHQ9)	9 (6, 14)	8 (5, 13)	8 (5, 12)	0.087	0.121
Distress Thermometer	5.5 (3, 7.5)	4 (2, 6.7)	4.6 (2.7, 6.0)	<0.001	0.003

Median (Interquartile range) is reported unless specified. Fisher's Exact & Mann-whitney U tests were used for statistical comparison.

ACKNOWLEDGMENTS

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Table 2. Sexually Transmitted Infections and Risk Behaviours cs during Acute HIV Infection

	Group 1 (Ref) (n=140)	Group 2 (n=435)	Group 3 (n=151)	P-value	
				Grp 1 vs. 2	Grp 1 vs. 3
Syphilis, n (%)					
TPHA (+)	14 (10)	96 (22)	43 (29)	0.001	<0.001
VDRL/RPR (+)	9 (6)	73 (17)	35 (23)	0.002	<0.001
Hepatitis C (anti-HCV Ab), n (%)	1 (1)	9 (2)	9 (6)	0.464	0.021
Any PREP usage, n(%)	0 (0)	7 (2)	15 (10)	0.204	<0.001
*Meth use, n (%)	-	21/83 (25)	32/151 (21)	-	-
*Group sex, n (%)	-	18/83 (22)	36/130 (28)	-	-

* Based on the risky behaviour questionnaire introduced in Sep 2017.

Abbreviations: Ab=Antibody; PREP=pre-exposure prophylaxis; RPR=Rapid Plasma Reagin; TPHA=Treponema Pallidum Hemagglutination Assay; VDRL= Venereal Disease Research Laboratory.

Table 3. Clinical Characteristics by Meth Use

	Non-users (n=181)	Meth Users (n=53)	P-value
Meth Use Freq, n (%)			
≤ Once a month	N.A.	32 (67)	
2-4x/month		13 (27)	
Few times/week		1 (2)	
≥4x/week		2 (4)	
Age	26 (23, 33)	29 (24, 35)	0.056
Male	179 (99)	52 (98)	0.656
Higher education, n (%)	104 (58)	35 (66)	0.263
Syphilis, n (%)			
TPHA +	42 (23)	20 (38)	0.035
VDRL /RPR +	34 (19)	16 (30)	0.075
Anti-HCV, n (%)	8 (4)	3 (6)	0.707
PREP Usage, n (%)	11 (6)	9 (17)	0.013
Group Sex, n (%)	28/162 (17)	26/51 (51)	<0.001

SUMMARY OF KEY FINDINGS

- Compared to group 1, group 2 & 3 exhibited higher rates of past & recent syphilis (p<0.01).
- Group 3 also had higher frequencies of hepatitis C infection (p=0.021) and any pre-exposure prophylaxis (PrEP) use (p<0.001), as PrEP was introduced at the Thai Red Cross in Dec 2014 and in community-led services in 2016.
- Over a fifth in Groups 2 and 3 reported methamphetamine use & group sex prior to AHI. Compared to non-users, meth users had higher frequencies of group sex (51% vs. 17%, p<0.001), past syphilis (38% vs. 23%, p=0.035) & any PrEP usage (17% vs. 6%, p=0.022).

DISCLAIMER

The views expressed are those of the authors and should not be construed to represent the positions of the U.S. Army, the Department of Defense, the National Institutes of Health, the Department of Health and Human Services, or the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. The investigators have adhered to the policies for protection of human subjects as prescribed in AR-70-25

