Community and Provider Attitudes Towards Treatment Interruptions in HIV Cure Trials

Lau JSY[1], Smith MZ[2], Allan B[3], Martinez C[4], Power J[5], Lewin SR[1,2], McMahon JH[1]

[1] Department of Infectious Diseases, Alfred Hospital and Monash University, Melbourne, Australia, [2] The Peter Doherty Institute for Infection and Immunity, University of Melbourne and Royal Melbourne Hospital, Melbourne, Australia, [3] International Council of AIDS Service Organizations, [4]National Association of People Living with HIV Australia, [5]Australian Research Centre for Sex Health and Society, La Trobe University, Melbourne, Australia

Background

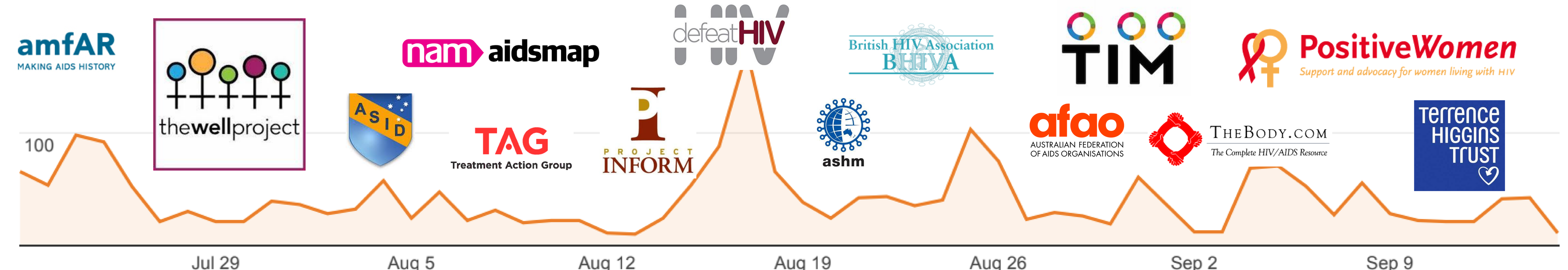
- Analytical treatment interruptions (ATI) are important endpoints in trials to determine whether an intervention can lead to virological control off antiretroviral therapy (ART).
- Understanding of ATI acceptability and how it should be conducted amongst people living with HIV (PLHIV) and their HIV healthcare providers (Providers) is limited.

Methods

- 2 online surveys for were designed in collaboration with the Australian HIV Cure Community Partnership; one for PLHIV, and one for Providers, and were hosted online at HIVcure.com.au, an online hub developed to engage community in the field of HIV cure research.
- Survey links were disseminated to community based organisations, research groups, professional societies and other groups conducting advocacy for PLHIV via social media platforms and newsletters .
- Responses were collected from July 2017-January 2018.
- Surveys assessed understanding and acceptability of different monitoring strategies during ATI (frequency of CD4, viral load (VL) and clinical assessment), potential risks of TI and prospect for HIV cure.
- A descriptive analysis of survey results was performed and comparable responses between PLHIV and Providers were analysed using chi^2 test.

Participant demographics

PLHIV (n=442)	n (%)	Providers (n=140)	n (%)
Gender		**Practice location**	
Male	273 (78)	Metropolitan GP	29 (21)
		Rural GP	4 (3)
Female	75 (22)	Tertiary teaching hospital	72 (51)
		Regional hospital	5 (3)
		Sexual health clinic	21 (15)
		Other	10 (7)
Country of Residence		**Country of Practice**	
South America	10 (3)	South America	2 (1)
North America/Canada	108 (31)	North America/Canada	0 (0)
Western Europe	92 (27)	Eastern Europe	0 (0)
Eastern Europe	3 (1)	Western Europe	8 (6)
Australasia	69 (20)	Australasia	107 (76)
Asia	26 (8)	Asia	22 (16)
Africa	33 (10)	Africa	1 (1)



Traffic flow to HIVcure.com.au in the first 2 months of response collection

Results

PLHIV

- 442 PLHIV completed the survey: 78% male, 64% identified as gay/homosexual, reflecting the epidemic in high income countries. 95% reported receiving ART and 86% had undetectable VL.
- 46% heard of ATI and 55% thought HIV cure achievable within 10 years.
- Preferred frequency of CD4, VL and clinical monitoring during ATI was monthly (31%, 35%, and 39% respectively) (Fig. 1)
- 35% would not accept a sustained period with viremia during TI, even if well, and would want ART recommenced when VL became detectable (Fig. 2)

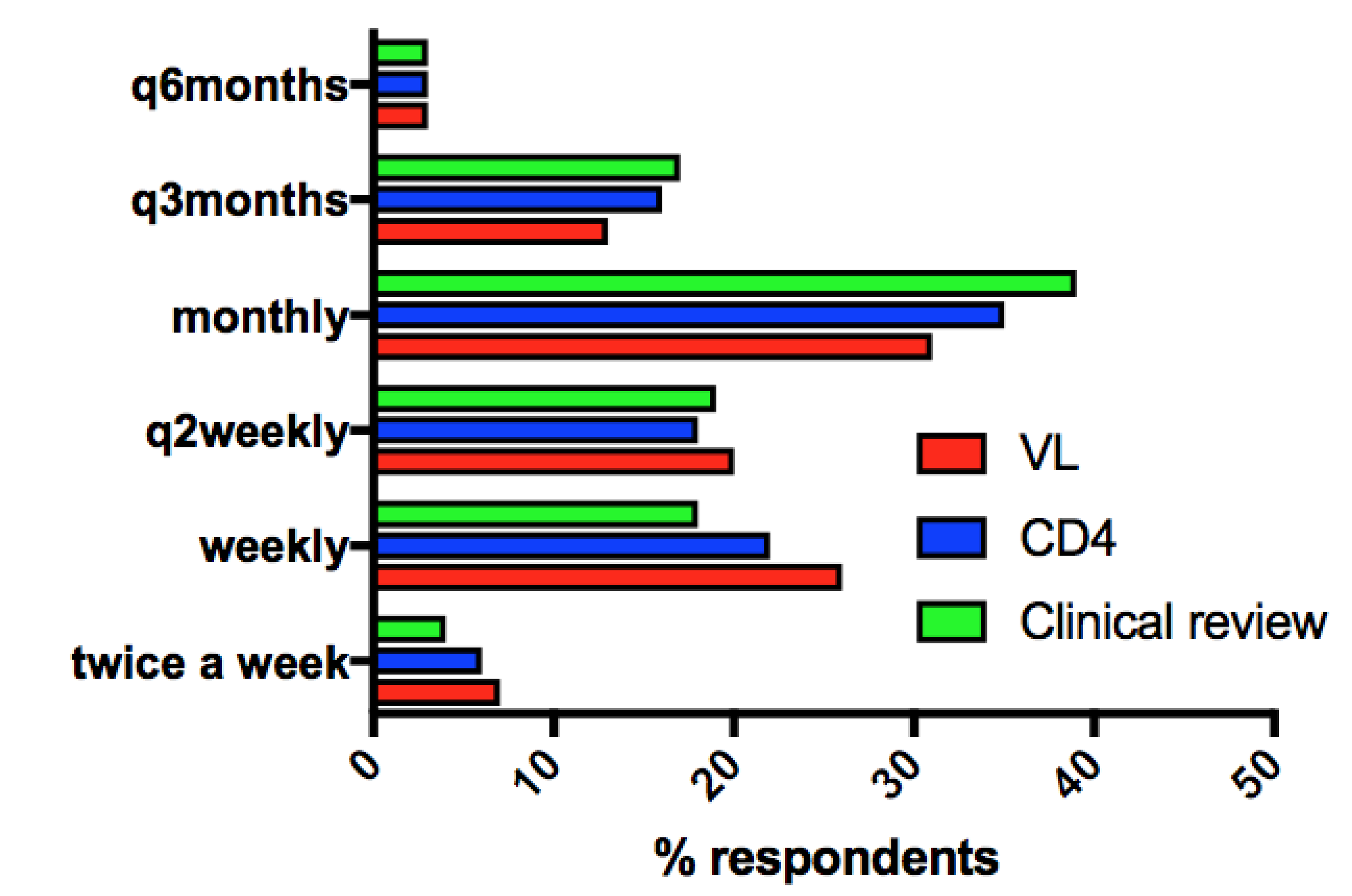


Fig.1: PLHIV preferred monthly monitoring

- Factors that made PLHIV more willing to undergo ATI:
  - 59% if home based VL testing was available
  - 51% if nurses could perform home visits
  - 54% if pre-exposure prophylaxis (PrEP) was offered for HIV-partners

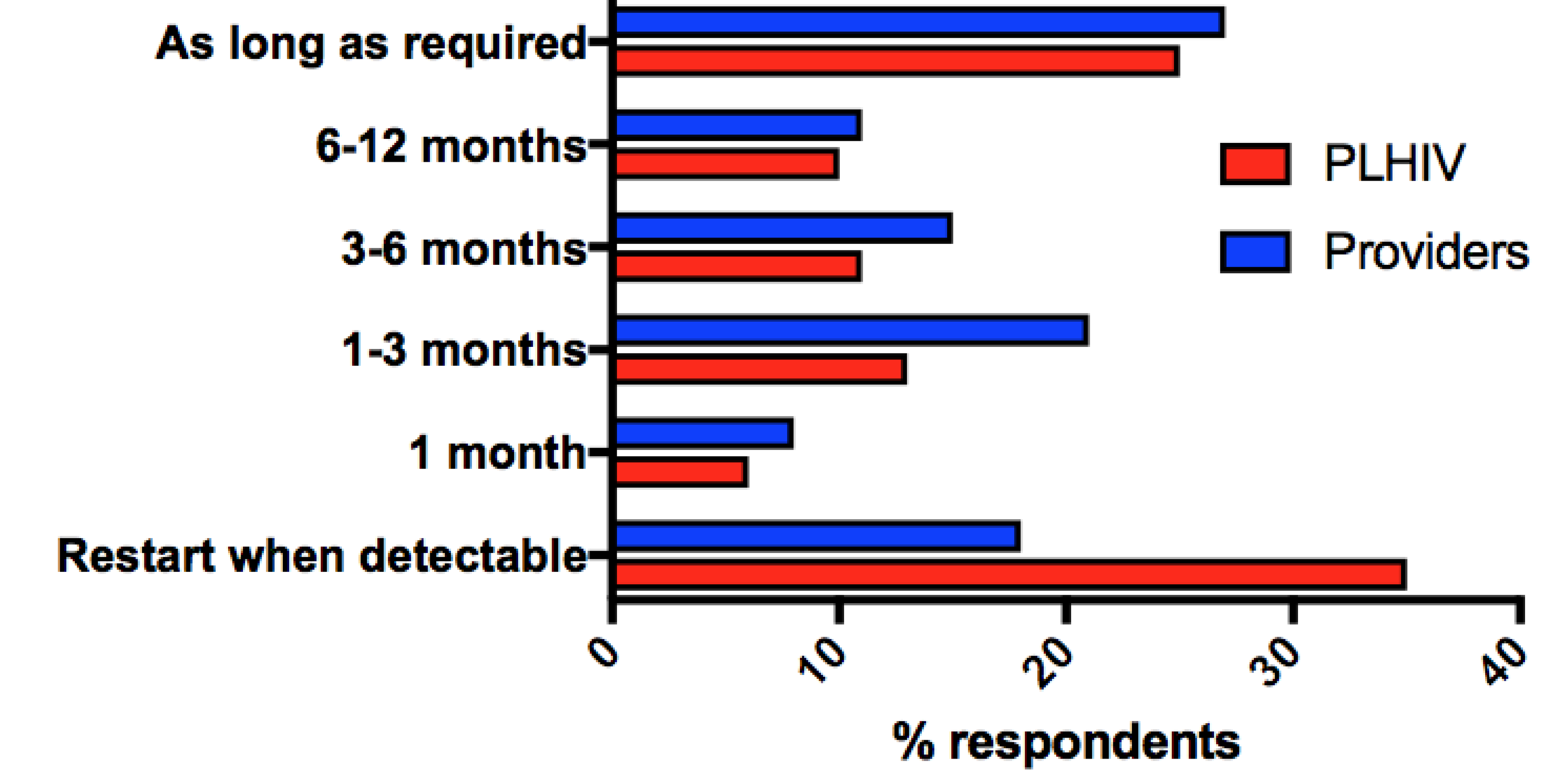


Fig. 2: Acceptable period of time off ART during ATI for PLHIV and Providers

Providers

- 140 Providers completed the survey: 76% practiced in Australasia (Table 1). 61% were "very interested" in HIV cure research, and 18% had enrolled a patient in a HIV cure trial. 62% were aware of ATI.
- 19% believed HIV cure achievable within 10 years.
- 18% wanted ART recommenced once VL was detectable during an ATI trial (Fig. 2)

Comparable responses

- Higher optimism for HIV cure and decreased acceptability of sustained viremia during ATI in PLHIV compared to Providers.
- Providers were more aware of ATI .
- Transmission of HIV to a negative partner during ATI was a concern to both groups (44% of PLHIV and 42% of Providers responded that they were "very concerned" about this scenario during ATI.

	PLHIV (n=442)	Providers (n=140)	P-value
Believe HIV cure achievable in next 10 years	55%, 226/410	19%, 26/140	< 0.001
Believe HIV cure not achievable in lifetime	14%, 56/410	16%, 23/140	0.4
Aware of ATI	46%, 182/399	62%, 86/138	< 0.001
Ever participated/enrolled a patient in HIV cure-focused trial	5%, 21/412	18%, 25/140	<0.001
Would not allow a sustained period with a detectable VL during TI	35%, 135/387	18%, 24/136	< 0.001
Would allow ATI for long as necessary to test trial intervention if remained well	26%, 99/387	27%, 37/136	0.7

Conclusions

- There is a disconnect in expectations of ATI in PLHIV to how cure trials are currently conducted in regards to duration of TI and frequency of monitoring.
- PrEP and home based monitoring are incentives for community participation in HIV cure trials involving ATI.
- Clear education messages in relation to ATIs should be developed for both PLHIV and providers.

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jillian.lau@monash.edu

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