

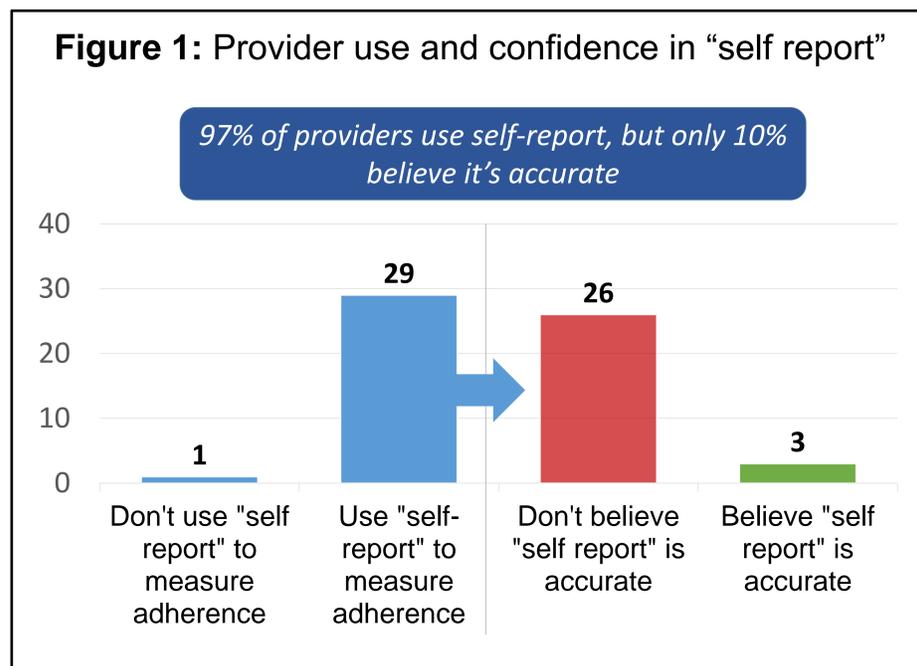
Discrepancies between self-reported adherence and a biomarker of adherence in real-world settings

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Background

- Pre-Exposure Prophylaxis (PrEP) is only effective in preventing HIV infections when taken consistently.
- Asking patients about their adherence (“self-report”) is the most common means of assessing PrEP adherence.
- Though inexpensive and noninvasive, “self-report” is subject to social desirability and recall biases.
- Several clinical trials demonstrate a discrepancy between self-reported adherence and actual adherence. (Table 1)
- A recent survey of PrEP providers in the US suggests the 97% of providers rely on “self-report” to assess adherence, despite only 10% believing this method is accurate. (Figure 1)
- Less is known about the accuracy of self-report in real-world clinical settings.



Methods

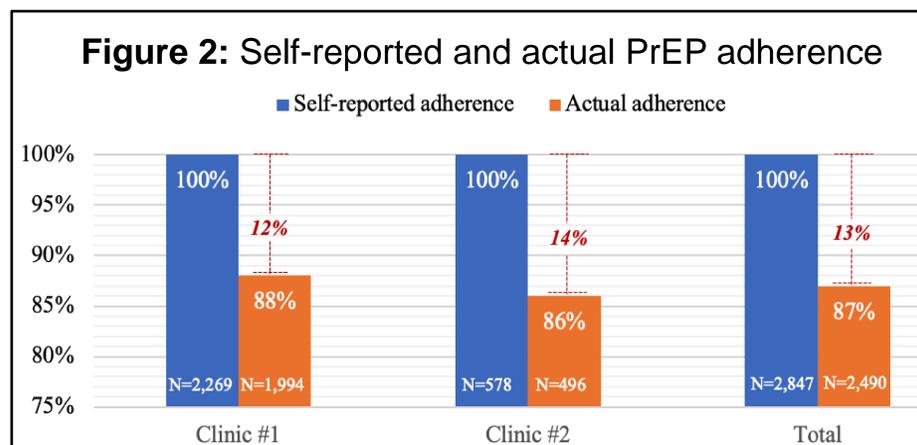
- The two clinics only use adherence testing for patients who self-report consistent adherence.
- Adherence data from these two clinics were analyzed to assess the concordance of self-reported adherence to biomarker-based adherence.

Results

- Overall, 2,847 tests were conducted from patients self-reporting as “adherent”, and 357 (13% (95% CI: 11%-14%)) demonstrated recent non-adherence with the LC-MS/MS test (Figure 2).
- At Clinic #1 in Florida, 2,269 tests were conducted, and 275 (12% (95% CI: 11%-14%)) demonstrated recent non-adherence.
- At Clinic #2 in Texas, 578 tests were conducted, and 82 (14% (95% CI: 11%-17%)) demonstrated recent non-adherence.

Methods

- A Liquid Chromatography-Mass Spectrometry (LC-MS/MS) urine test for Tenofovir was used clinically to detect recent non-adherence (no dose in ≥ 48 hours).



Methods section continued in next column

Table 1: PrEP studies that measured both self-reported and plasma-based adherence¹

Year	Study name	% with detectable TDF or FTC in plasma	Self-report (%)
2010	iPrEx	51	95
2012	TDF2	80	94
2012	FEM-PrEP	24	95
2013	Bangkok tenofovir study	67	94
2013	ATN 082 (Project PrEPARE)	20	62
2015	VOICE	30	87-90

¹Adapted from Sidebottom et al, “A systematic review of adherence to oral pre-exposure prophylaxis for HIV – how can we improve uptake and adherence?”

Conclusions

- Biomarker-based adherence monitoring at these clinics resulted in 357 additional patients receiving enhanced adherence support who otherwise would not have.
- Objective adherence monitoring methods can enable providers to identify non-adherent patients and allocate support services accordingly.