Patient reported outcomes in routine care: advancing data capture for HIV cohort research.

INTRODUCTION: Computerized collection of standardized measures of patient reported outcomes (PROs) provides a novel paradigm for data capture at the point of clinical care. Comparisons between data from PROs and Electronic Health Records (EHR) are lacking. We compare EHR and PRO for capture of depression and substance abuse and their relationship to adherence to antiretroviral therapy (ART).

METHODS: This retrospective study includes HIV-positive patients at an HIV clinic who completed an initial PRO assessment April 2008-July 2009. The questionnaire includes measures of depression (PHQ-9) and substance abuse (ASSIST). Self-reported ART adherence was modeled using separate logistic regression analyses (EHR vs PRO).

RESULTS: The study included 782 participants. EHR vs PRO diagnosis of current substance abuse was 13% (n = 99) vs 6% (n = 45) (P < .0001), and current depression was 41% (n = 317) vs 12% (n = 97) (P < .0001). In the EHR model, neither substance abuse (OR = 1.25; 95% CI = 0.70-2.21) nor depression (OR = 0.93; 95% CI = 0.62-1.40) was significantly associated with poor ART adherence. Conversely, in the PRO model, current substance abuse (OR = 2.78; 95% CI = 1.33-5.81) and current depression (OR = 1.93; 95% CI = 1.12-3.33) were associated with poor
ART adherence.

**DISCUSSIONS:** The explanatory characteristics of the PRO model correlated best with factors known to be associated with poor ART adherence (substance abuse; depression). The computerized capture of PROs as a part of routine clinical care may prove to be a complementary and potentially transformative health informatics technology for research and patient care.

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