Linkage and Retention in Care for Vulnerable Populations

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Measuring Retention in Care

Measure	Missed visit data needed?	Ease of calculating	Observation time
Missed visit	Yes	Easy	~1 day
Visit adherence	Yes	Moderate	~1 year
No-show rate	Yes	Moderate	~1 year
Constancy: Visit per interval	No	Moderate	~1 year
Gap in care	No	Easy	~1 year
HRSA/HAB	No	Moderate-to-difficult	1 year
DHHS	No	Moderate-to-difficult	2 years

Adapted from: Giordano TP (2012) Measuring retention in HIV care. www.medscape.com.

Implications of Missed HIV Care Visits

PLWH initiating outpatient HIV medical care at UAB Clinic, 2000 – 2005 (N=543)

Characteristic	HR (95%CI)[a]
"No show" visit in 1st year	**2.90 (1.28- 6.56)**
Age (HR per 10 years)	**1.58 (1.12-2.22)**
CD4 count <200 cells/mL	**2.70 (1.00-7.30)**
Log_{10} plasma HIV RNA	1.02 (0.75-1.39)
ART started in 1st year	0.64 (0.25-1.62)

[a] Cox proportional hazards (PH) analysis also adjusts for sex, race/ethnicity, insurance, affective mental health disorder, alcohol abuse, and substance abuse.

Mugavero et al. *Clin Infect Dis* 2009;48

* Missed HIV medical care visits associated with:

- Delayed ART initiation
- Poor retention in care
- Longer time to VS
- Greater cumulative VL burden (viremia copy-years)
- Disparities in VS among AA
- Inpatient hospitalization
- Mortality

* Vulnerable populations more likely to miss visits

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Missed Visits & Mortality Systematic Review

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Study	Year(s)	Location	Population	N	Missed visits	Association of missed visits with mortality
Park, 20						
Mugaver						HR **2.9**
Brennan						1.11 **2.06** R **4.74**
Colubi, 2						OR **6.35**
Zhang, 2						R 1.3 R 1.7
Horberg,						
Mugaver			after initiating ART		29% missed >2 visits	>2 missed visits: aHR **3.2**
Kimeu, 2016	2011-2010	Kenya	Patients in the year after enrolling in care	582	31% missed 1 visit 10% missed ≥2 visits	1-2 missed visits: crude HR 6.74 ≥2 missed visits: crude HR **3.21**

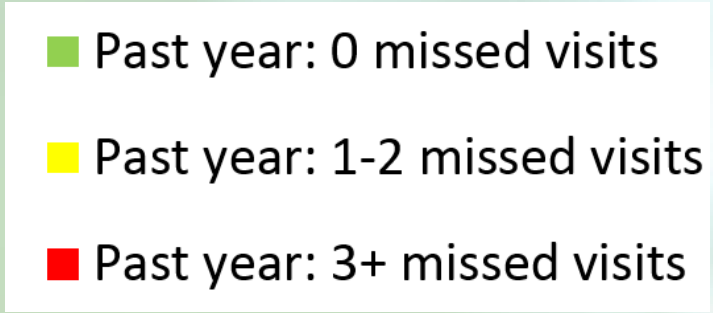
Take home point:

Missed clinic visits are pervasive among PLWH and consistently associated with increased mortality risk

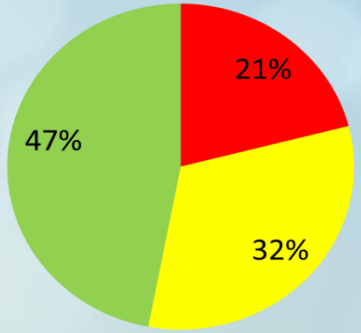
Predicting Missed HIV Medical Care Visits

Study of 6 CNICS clinics, 2002-2014

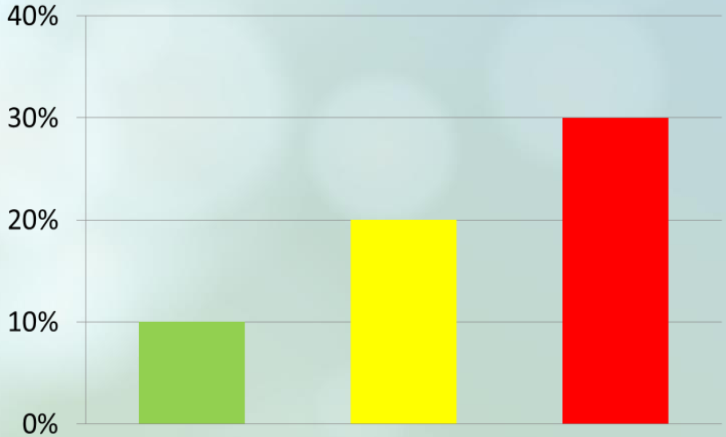
- N=10,347 contributing 105,628 HIV visits
- Past-year missed visits strongest predictor of future missed visits (AUC=0.65)



- Potential for risk stratification with proactive resource allocation & tailored intervention delivery



A. Proportion of clinic population

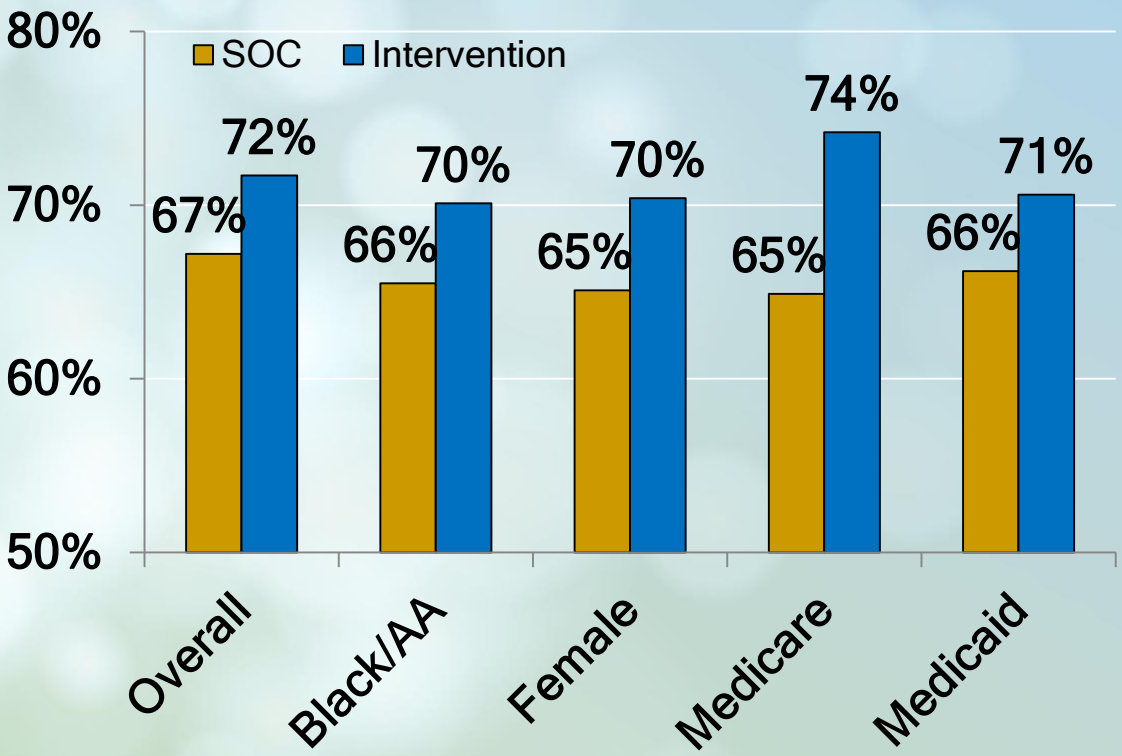


B. No-show risk

Pence et al. *AIDS Behav* 2018 (under review)

CDC/HRSA REPC Efficacious for RiC

- RCT at 6 HIV clinics
- N=1838
- Enhanced Personal Contact
  * 7- and 2-day reminder calls
  * 24-48-hr missed visit calls
- Outcomes @ 12-months:
  * Visit adherence
  * 4-month visit constancy
- EPC superior to SOC
- Efficacy in subgroups
- Not efficacious with youth, substance use, unmet needs



Gardner LI et al. *Clin Infect Dis* 2014;59; Shrestha RK et al. *JAIDS* 2015; 68

Data for Care (D4C) Approach

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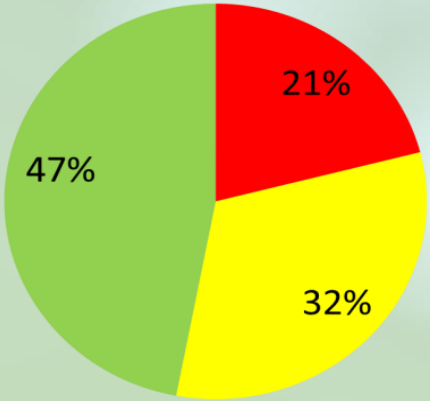
- Risk stratification: Clinic-wide risk stratification: missed visits prior 12 months
- Resource allocation: (R)EPC intervention for **intermediate risk** & **high risk** patients (+ best available existing RiC resources for **high risk**)
- Continuous quality improvement: Iterative clinic-wide (and individual) monitoring, risk stratification, and targeted RiC service delivery



A. Proportion of clinic population

1917 LRCs (L to R): Dominique Hector, Shyla Campbell, Tommy Williams and Harriette Pickens