Poster 1064

Unplanned Care Interruptions in HIV Care in Nigeria: Rates and Implications

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Supported by National Institutes of Health/National Institute of Allergy and Infectious Disease K23 AI106406-02

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BACKGROUND

- Unplanned care interruption describes non-adherence to clinical, laboratory, or pharmacy visits, and poses a challenge to effective treatment.
- Unplanned care interruption is associated with increased morbidity and mortality.
- Little is known about the frequency and risk factors for unplanned care interruption, particularly in resource-limited settings.
- Nigeria, the largest African country, has an national HIV prevalence of 3.1% and the second largest population of people living with HIV and AIDS worldwide (3.4 million).

OBJECTIVE

- To determine the frequency and risk factors for unplanned care interruption among patients initiated on ART in Nigeria.

SETTING

- Ahmadu Bello University Teaching Hospital, Kaduna Nigeria
  - PEPFAR-supported program administered by AIDS Prevention Initiative in Nigeria (APIN)
  - Tertiary facility providing free ART to eligible patients since 2006
  - > 4000 patients in care
  - Semi-urban community with local HIV prevalence 5.1%

METHODS

STUDY DESIGN

- Retrospective cohort study
- Adults ≥14 years eligible for ART on enrollment & initiated ART
- Patients enrolled in ABUTH clinic between January 2009 and December 2011
- Study censored December 2012, all patients with at least 1 year of observation
- Patients categorized into 3 mutually-exclusive groups at study censor – in care, ≥1 unplanned care interruption, inactive (see Figure 1)
- Primary outcome: first unplanned care interruption in first year on ART
- Secondary outcomes: rate of any unplanned care interruption by year on ART, change in CD4 count during unplanned care interruption

DATA ELEMENTS

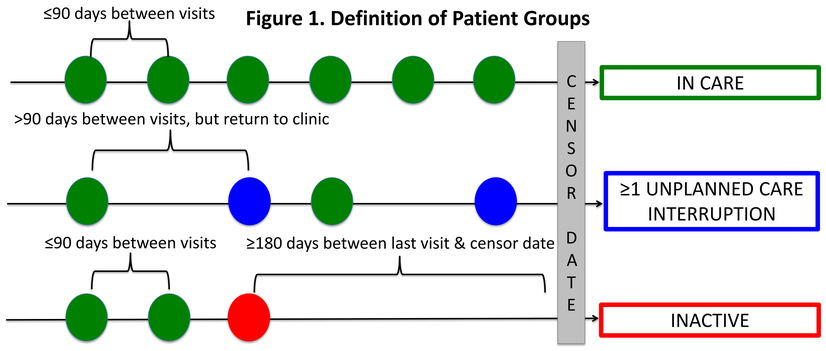
- APIN's comprehensive central electronic database
  - *Demographic data:* sex, age, marital status, education level, employment status
  - *Clinical data*: TB diagnosis, baseline WHO stage and CD4; follow-up CD4 and viral load according to national protocol, history of hospitalization
  - *Visit data*: clinical, laboratory, and pharmacy drug pick-up visits

ANALYSIS

- Determined proportion of patients in care, with ≥1 unplanned care interruption, or inactive from clinic at censor date
- Calculated rates of unplanned care interruption by year on ART and evaluated for trend using Mantel-Haenszel test
- Reported proportion of patients with viremia (>1000 copies/mL) within 3 months of return from first unplanned care interruption
- Assessed change in CD4 count before first unplanned care interruption and within 3 months of return to care using Wilcoxon matched-pairs signed rank test
- Evaluated baseline demographic and clinical predictors of first unplanned care interruption in the first year on ART using Poisson regression

METHODS

Figure 1. Definition of Patient Groups



RESULTS

Figure 3. Rate of Unplanned Care Interruption by Year on ART

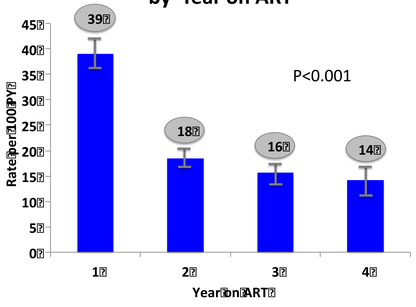


Table 2. Predictors of UCI in First Year on ART

	aIRR*	p
Age (decade)	0.94	0.181
Marital Status		
Married	1.00	
Widowed	0.93	0.525
Single	**1.24**	**0.012**
Employment		
Unemployed	1.00	
Employed	1.07	0.810
Student	**1.34**	**0.025**
Baseline CD4		
<50	1.00	
50-100	0.84	0.257
101-200	0.78	0.071
200-350	0.83	0.154
>350	**1.92**	**<0.001**

Multivariate Poisson Regression Model adjusted for listed variables and enrollment year
* aIRR: Adjusted incidence rate ratio

RESULTS

Table 1. Baseline Demographics

	In Care		Unplanned Care Interruption		Inactive	
Variable	**no**	**%**	**no**	**%**	**no**	**%**
Sex						
Male	289	31%	289	31%	204	38%
Female	737	69%	643	69%	334	62%
Age in Yrs (median)	*[27, 39]	32	*[27, 39]	32	*[26, 40]	32
Marital Status						
Married	663	65%	552	59%	291	54%
Widowed	150	15%	120	13%	79	15%
Single	213	21%	260	28%	168	31%
Employment						
Employed	303	30%	264	29%	146	28%
Unemployed	657	64%	561	61%	333	64%
Student	60	6%	97	10%	44	8%
Baseline CD4						
(median)	*[102, 315]	221	*[141, 433]	204	*[74, 302]	181
<50	106	12%	87	10%	81	17%
50-100	110	12%	78	9%	72	15%
101-200	219	25%	149	18%	108	22%
200-350	292	33%	207	24%	118	25%
>350	157	18%	330	39%	99	21%

*Interquartile Range

Figure 2. Summary of Outcomes

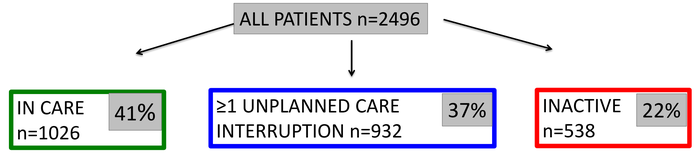
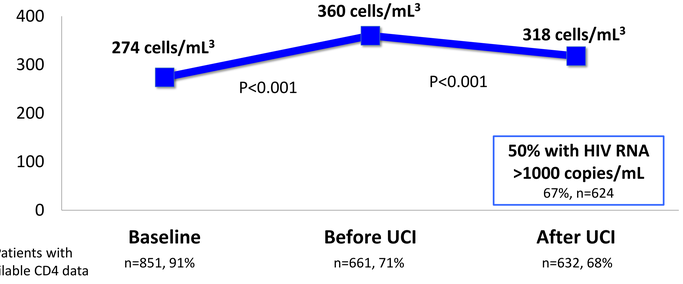


Figure 3. CD4 Count and Viral Load after UCI



LIMITATIONS

- Results are based on one university-affiliated clinic and may not be generalizable to other settings.
- We were unable to assess reasons for unplanned care interruption in this retrospective study.
- Follow-up CD4 and viral load data were available for a subset of patients with unplanned care interruption.

CONCLUSIONS

- 37% of patients in our cohort had unplanned care interruption after ART initiation.
- Of the patients with available viral load data, 50% returned to care with substantial viremia.
- The rate of unplanned care interruption was greatest in the first year on ART.
- Single patients, students, and those with high baseline CD4 count had the increased risk for unplanned care interruption.
- Targeted interventions in the first year on ART are critical to improve retention and patient outcomes.