902

Contact:
Christopher Hoffmann MD, MPH
choffmann@jhmi.edu

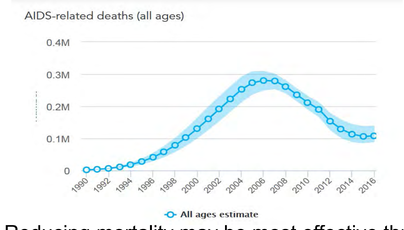
Post-Hospital Mortality & Readmission among HIV-Infected Adults in South Africa

Hoffmann CJ[1], Milovanovic M[2], Kerrigan D[1], Martinson NA[2], Variava E[3]

[1]Johns Hopkins University, USA, [2]Perinatal HIV Research Unit, Gauteng, South Africa [3]Department of Medicine, Tshepong Hospital, Klerksdorp, South Africa

Background

- HIV-related mortality remains high in South Africa despite substantial declines since the introduction of ART (Figure)



- Reducing mortality may be most effective through specific biomedical or structural services aimed at those at highest risk of death
- The hospitalized and recently hospitalized population generally has more advanced HIV and risk of death that may be a good target population for such services
- There are few data on HIV and hospitalization in the current era of ART availability

Objectives

- Characterize care utilization following hospital discharge
- Determine readmission rates in the 6 months following discharge
- Determine mortality rates in the 6 months following discharge

Methods

- Prospective convenience sample cohort recruited in 2016 among HIV-infected adults during admission to a medicine ward at a single tertiary care hospital in South Africa
- Inclusion criteria: HIV-positive, Able to provide informed consent or a LAR available for in person informed consent
- Participants were followed with phone calls and clinic record review to 6 months post-discharge.
- Log-binomial regression was used to estimate relative risk between participant factors and death or readmission.

Results: Participant Characteristics

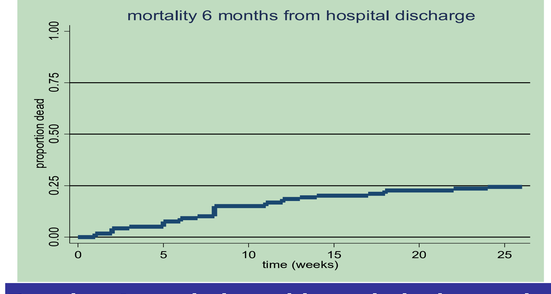
Characteristics of participants	median (IQR) or n(%)
Total n	121
Age, median	40 (31, 50)
Women	67 (55%)
CD4, median	260 (113, 464)
Length of stay, median days	6 (3, 9)
HIV diagnosed during index admit	21 (18%)
Prior to hospital discharge reported "skipping going to clinic because hard to get to"	43 (35%)
Timing of follow-up referral	
≤2 weeks	54 (51%)
3-4 weeks	25 (24%)
>4 weeks	26 (24%)
Location of follow-up referral	
Local clinic	9 (8%)
Tertiary hospital clinic	96 (92%)



Results: Six month outcomes

Outcome	Median (IQR) or n (%)
Participant (or next of kin) follow-up	100%
Visited clinic	89 (74%)
Time for clinic visit, hours (include travel)	4.3 (3.5, 6.3)
Visited scheduled clinic within scheduled time	19 (16%)
Readmission	**64 (53%)**
Median time to readmission, weeks	9 (3, 21)
Mortality*	**31 (26%)**
Median time to death, weeks	8 (3, 12)

* Inpatient mortality during this period: 16%



Results: Association with readmission or death

		Univariable relative risk	Multivariable relative risk
Sex	Women	Referent	
	Men	1.2 (0.94, 1.6)	
Age	17-30	Referent	
	31-45	1.2 (0.78, 1.8)	
	>45	1.3 (0.87, 2.0)	
Reported skipping going to clinic because hard to get to	No	Referent	Referent, p=0.03
	Yes	1.4 (1.1, 1.9)	1.3 (1.0, 1.7)
Clinic visit on time & at referred clinic	Yes	Referent	Referent, p=0.001
	No	1.9 (0.95, 3.8)	1.8 (0.89, 3.6)
	No visit	2.6 (1.3, 5.1)	2.4 (1.2, 4.8)

Conclusions

- People with HIV are at high risk for mortality after leaving the hospital in South Africa
- Clinic follow-up was low with only 16% of participants attending within scheduled time
- Failure to attend clinic at all or failure to attend as scheduled were both associated with mortality
- No specific discharge diagnosis was associated with mortality.
- Overcoming post-discharge mortality is likely to require dedicated approaches to improving the transition from inpatient care to community care

Limitations

- Study was not a representative sample, likely biased toward healthier individuals who were more readily able to be consented (2% of enrolled participants died in hospital compared to 16% overall mortality)
- Small sample size and single center study may also diminish representativeness

References

Peck et al. JAIDS 2017
Murphy et al. IJTLD 2010
Feller et al. JAIDS 2015
Berry et al. HIV Medicine 2015
Meintjes et al. Medicine 2015
Coelho et al. JAIDS 2017
Leppin et al. JAMA Intern Med 2014

Funding

JHU CFAR Faculty Development Grant; from the JHU CFAR (P30AI094189)