POOR LINKAGE TO CARE AMONG HIV+ PERSONS IN EMERGENCY DEPARTMENTS IN SOUTH AFRICA

Poster 1121

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Background

- In South Africa, Emergency Departments (ED) provide care to large volumes of trauma patients and young men.
- ED have been shown to successfully implement HIV testing and identify large volumes of patients with undiagnosed HIV infection.
- The ED does not routinely provide linkage to care (LTC) support and often refers patients to return to their local ARV clinic.
- HIV testing is the first stage of the care cascade, and it is unclear what proportion of ED patients can successfully link to care.
- Furthermore given that ED provide care to patients from a large catchment area (over 150 miles), it is unclear where they link to care.

Methods

- This is a prospective cohort study across four EDs in the Eastern Cape province of South Africa
- All patients attending one of four EDs during the 6-week study period aged ≥18 years, critically stable and able to consent were eligible for enrollment.
- Trained HIV counselors systematically approached ED patients and offered point of care HIV counselling and HIV testing.
- All HIV+ patients were further consented to participate in a follow up study to ascertain their linkage to care (LTC) status via; 1) Telephone follow-up and/or; 2) Tracking in the National Health Laboratory System (NHLS) database. For this purpose study staff collected the patients telephone number, Date of Birth (DOB) and Medical Record number (MRN).
- Study staff then contacted all patients by telephone at 6 and 12 months, to ascertain whether they had linked to care, where they had linked to care, and were they compliant with antiretrovirals?
- Study staff also tracked all patients in the NHLS database using DOB and MRN, to ascertain if patients had received follow-up care since the index visit and if they had blood testing that could indicate possible LTC, such as a CD4 count and/or Viral Load (VL).

Outcome Measures

The primary outcome measure was to identify what proportion of HIV positive (new and known) were able to successfully LTC. 'Definitive LTC" was defined as confirmation of LTC at either 6 or 12 months by both phone and NHLS; 'Possible LTC' was defined as evidence of LTC either by phone or NHLS; and 'No LTC' was defined as no evidence of LTC via phone call or NHLS. The secondary outcome measure sought to see how if distance from the index site (testing site) to LTC site had an impact on LTC.

- The HIV prevalence in the Emergency Department was 24.5%
- A third of patients in this study (33.3%) had a new diagnosis of HIV
- However, only a third of these patients were able to link to care
- The catchment area across sites varied greatly
- Patients that travelled from far distances seem less likely to LTC

Results

- Over the study period 5900 patients were enrolled, of which 4846 (82.1%) accepted testing, of which 1172 (24.2%) were HIV positive.
- Of these 949 consented to participate in a follow-up study, 633 (66.7%) had a known diagnosis of HIV and 316 (33.3%) had a new diagnosis of HIV.
- Of those in the follow up study, we were able to trace 145 (45.9%) of the 316 patients with a new diagnosis of HIV in NHLS, and only 73 (23%) of them via telephonic follow up. Other were not identifiable due to incorrect names, MRNs or date of births in NHLS, or provided incorrect or since disconnected telephone numbers.
- Among the newly diagnosed patients, 27.6% (40/145) had evidence of LTC in the NHLS database, and 38.4% confirmed via phone (28/73).
- Patients travelled from long distances to the ED especially in Mthatha (median range 80.2 -178.7 miles).

Table 1: Demographics across all four sites

Variable	Frere Hospital n=263 (%)	Nelson Mandela Academic Hospital n=134 (%)	Mthatha Regional Hospital n=334 (%)	Livingstone Hospital n=218 (%)
Age				
18-30	92 (34.98)	37 (27.61)	129 (38.62)	58 (26.61)
31-50	134 (50.95)	76 (56.72)	157 (47.01)	122 (55.96)
51-70	32 (12.17)	21 (15.67)	42 (12.57)	36 (16.51)
71+	5 (1.90)	0 (0.0)	6 (1.80)	2 (0.92)
Sex				
Male	110 (42.64)	59 (44.03)	112 (33.84)	90 (41.28)
Female	153 (58.17)	75 (55.97)	219 (66.16)	128 (58.72)
Presenting complaint				
Medical	114 (44.88)	94 (70.15)	272 (82.18)	128 (58.72)
Trauma	140 (55.12)	40 (29.85)	59 (17.82)	90 (41.28)
Visit time				
9am-5pm	121 (46.01)	57 (42.54)	153 (45.81)	98 (44.95)
Out of hours	142 (53.99)	77 (57.46)	181 (54.19)	120 (55.05)
Known HIV+ patients	156 (59.77)	100 (74.63)	222 (66.47)	155 (71.10)
Newly diagnosed HIV+ patients	107 (40.68)	34 (25.37)	112 (33.53)	63 (28.90)

Table 2a: NHLS F/U Results (across 4 sites)
(patients who consented to the follow up study *and* had blood tests in the past 6 and 12 months)

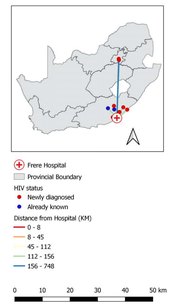
Variable	New HIV Positive		Known HIV Positive	
	6-month F/U	12-month F/U	6-month F/U	12-month F/U
NHLS Results	n=61	n=55	n=131	n=125
CD4 Count				
≤ 200	26 (42.62)	24 (43.64)	33 (25.19)	30 (24.00)
> 200	35 (57.38)	31 (56.36)	98 (74.81)	95 (76.00)
Viral Load				
≤ 1000	10 (16.39)	8 (14.55)	53 (40.46)	49 (39.20)
> 1000	51 (83.61)	47 (85.45)	78 (59.54)	76 (60.80)
Other Tests				
Hepatitis B +	4 (6.56)	2 (3.64)	1 (0.76)	1 (0.80)
Hepatitis C +	1 (1.64)	0 (0.00)	4 (3.05)	5 (4.00)
TB +	4 (6.56)	4 (7.27)	2 (1.53)	2 (1.60)

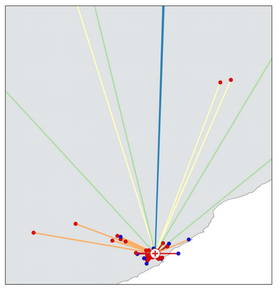
Table 2b: Phone call F/U Results (across 4 sites)
(patients who consented to the follow up study *and* reported follow up care in the past 6 and 12 months)

Variable	New HIV Positive		Known HIV Positive	
	6-month F/U	12-month F/U	6-month F/U	12-month F/U
Phone call Results	n=29	n=13	n=72	n=37
Reported compliance to ARVs	26 (89.66)	12 (92.31)	67 (93.06)	30 (81.08)
Reported AIDS	0 (0.00)	0 (0.00)	12 (16.67)	9 (24.32)
Reported Viral Suppression	1 (3.45)	0 (0.00)	25 (34.72)	13 (35.14)

Summary & Conclusions

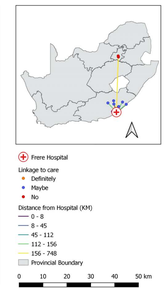
ED-based HIV testing in South Africa identified individuals with new HIV diagnoses and those out of HIV care. Overall, LTC in this population was extremely poor. Since patients in Mthatha came from a large catchment area (median >150 miles), innovative strategies for LTC must be sought. While the ED is a critical venue to identify HIV individuals not on ART, there is a need to deploy novel, targeted LTC interventions in the ED.

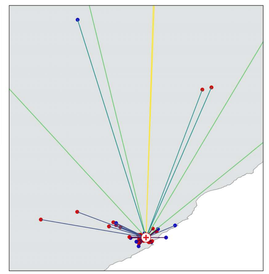




HIV status locations from Frere Hospital

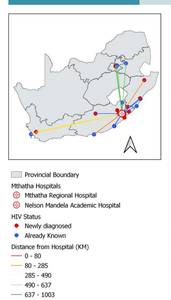
East London - Distance from Hospital (KM)	Mean	SD	Median	IQR	Min	Max
HIV status (Newly Diagnosed)	38.1	129.5	2.7	6.8	0.003	748.1
HIV status (Known)	9.9	29.9	2.6	5.3	0.003	156.1

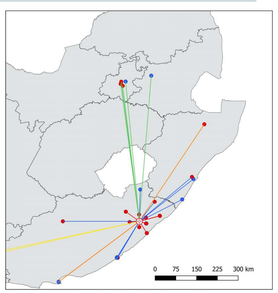




Linkage to care from Frere Hospital

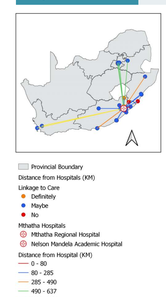
East London - Distance from Hospital (KM)	No of patients	Mean	SD	Median	IQR	Min	Max
Linkage to care (Definitely)	18	11.7	26.4	2.8	2.9	0.01	112.4
Linkage to care (Maybe)	84	14.9	36.8	2.6	5.4	0.0003	156.1
Linkage to care (No)	102	298.2	404.2	6.5	731.3	0.2	748.1

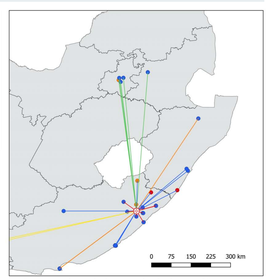




Locations of HIV status from Mthatha Regional and Nelson Mandela Academic Hospitals

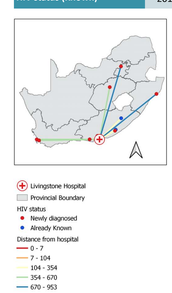
Mthatha - Distance from Hospital (KM)	Mean	SD	Median	IQR	Min	Max
HIV status (Newly Diagnosed)	170.5	227.7	80.2	176.3	0.02	945.5
HIV status (Known)	201.8	231.0	178.7	179.8	0.02	1002.7

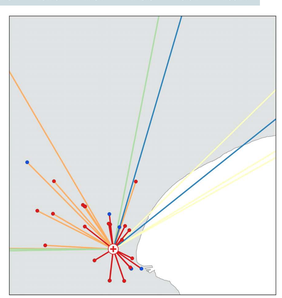




Linkage to care from Mthatha Regional and Nelson Mandela Academic Hospitals

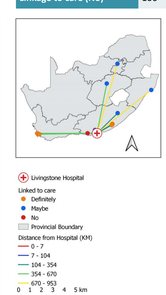
Mthatha- Distance from Hospital (KM)	No of patients	Mean	SD	Median	IQR	Min	Max
Linkage to care (Definitely)	10	150.8	214.6	29.7	176.3	2.3	603.3
Linkage to care (Maybe)	127	189.5	235.7	178.7	176.3	0.02	1002.7
Linkage to care (No)	106	76.0	68.6	80.1	99.3	3.5	186.7

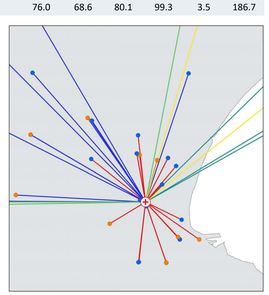




HIV status locations from Livingstone Hospital

Port Elizabeth - Distance from Hospital (KM)	Mean	SD	Median	IQR	Min	Max
HIV status (Newly Diagnosed)	57.7	195.5	0.5	6.6	0.004	952.8
HIV status (Known)	26.0	8.2	2.4	6.6	0.004	354.1





Linkage to care from Livingstone Hospital

Port Elizabeth - Distance from Hospital (KM)	No of patients	Mean	SD	Median	IQR	Min	Max
Linkage to care (Definitely)	23	79.4	188.5	6.7	7.7	0.1	660.6
Linkage to care (Maybe)	78	40.7	167.4	0.1	5.0	0.04	952.8
Linkage to care (No)	88	52.2	73.1	52.2	103.3	0.5	103.8