



# The Impact of Opt-Out HIV Screening and Patient Navigator-Assisted Linkage to Care of Newly Diagnosed Persons with HIV in a High-Prevalence Emergency Department

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## Introduction

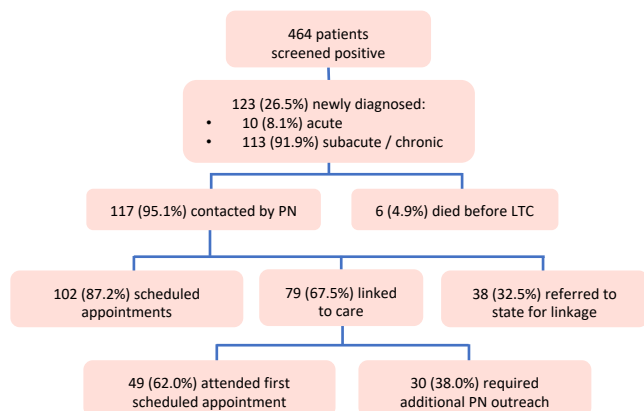
- Newark is the epicenter of the HIV epidemic in New Jersey<sup>1</sup>. University Hospital (UH), the state's only public safety-net hospital, plays a critical role in identifying and linking newly diagnosed persons with HIV (PWH) to care.
- We previously showed that the emergency department (ED) is the most common setting for missed testing opportunities at UH<sup>2</sup>.
- Therefore, in 2015 we implemented a routine, opt-out HIV screening and patient navigator (PN)-assisted linkage to care (LTC) protocol in the ED.

## Methods

- We conducted an IRB-approved retrospective chart review of patients who tested positive for HIV in the ED between 2015 and 2018.
- PNs contacted newly diagnosed PWH to schedule a visit at the Infectious Disease Practice and followed up with a minimum of three phone calls, two letters, and one outreach attempt to facilitate LTC. If LTC remained unsuccessful, patients were referred to the state for linkage.
- Descriptive statistics were used to summarize demographic and clinical data.
- Univariate and multivariate regression were used to identify demographic and clinical factors associated with LTC. Age, sex, and factors with  $p \leq 0.10$  in the univariate analysis were included in the multivariate model. Patients who died were excluded from statistical analysis.

## Results

**Figure 1.** Linkage outcomes of newly diagnosed patients in the UH ED.



## Results (cont.)

**Table 1.** Demographic characteristics of newly diagnosed HIV patients in the UH ED (overall and stratified by LTC outcome) and univariate regression analysis.

	New diagnoses, n = 123 (%)	LTC, n = 79 (%)	Referred to state, n = 38 (%)	OR	95% CI	P value
Mean age	41	39	38	F (1, 115) = 3.31		0.072
Sex						
Male	82 (67)	54 (66)	25 (30)	Reference		
Female	41 (33)	25 (61)	13 (32)	0.89	0.39 – 2.02	0.781
Race						
Black	74 (60)	48 (61)	22 (58)	1.12	0.51 – 2.47	0.767
Hispanic	26 (21)	17 (22)	9 (24)	0.88	0.35 – 2.22	0.792
Caucasian	7 (5)	4 (5)	2 (5)	0.96	0.17 – 5.49	0.963
Other	16 (13)	10 (13)	5 (13)	0.96	0.30 – 3.02	0.940
HIV risk factor						
Heterosexual	55 (61)	44 (56)	10 (26)	3.52	1.51 – 8.22	<b>0.004</b>
MSM	28 (31)	25 (32)	2 (5)	8.33	1.86 – 37.38	<b>0.006</b>
Injection drug use	14 (15)	5 (6)	8 (21)	0.25	0.08 – 0.84	<b>0.024</b>
Other	8 (9)	5 (6)	3 (8)	0.79	0.17 – 3.49	0.754
Other factors						
Unstable housing	16 (27)	9 (11)	7 (18)	0.57	0.19 – 1.66	0.304
Substance use	47 (78)	27 (34)	19 (50)	0.52	0.24 – 1.14	0.103
Mental health disorder	34 (57)	23 (29)	9 (24)	1.32	0.54 – 3.23	0.538
Prior HIV test	21 (17)	16 (76)	5 (24)	1.68	0.56 – 4.99	0.350
Insurance						
Commercial	21 (17)	18 (23)	3 (8)	4.22	1.09 – 16.38	<b>0.037</b>
Medicaid	42 (34)	29 (37)	12 (32)	1.70	0.70 – 4.15	0.244
Medicare	10 (8)	5 (6)	4 (11)	0.88	0.79 – 2.56	0.861
None	50 (41)	27 (34)	19 (50)	Reference		

MSM = men who have sex with men, OR = odds ratio, CI = confidence interval.

**Table 2.** Clinical characteristics of newly diagnosed HIV patients in the UH ED.

	Laboratory test results (%)	N with laboratory testing
Median CD4 count (cells/ $\mu$ L)	241.5	84
HCV positive	8 (10)	79
STI		
NG positive	8 (13)	61
CT positive	7 (11)	61
RPR positive	17 (22)	78

HCV = hepatitis C virus, STI = sexually transmitted infection, NG = Neisseria gonorrhoeae, CT = Chlamydia trachomatis, RPR = rapid plasma reagin.

## Results (cont.)

- In the multivariate regression model, only men who have sex with men (MSM) (OR = 17.2,  $p = 0.002$ ) and heterosexual contact (OR = 6.3,  $p < 0.001$ ) remained predictive of LTC.

## Conclusions

- Our routine, opt-out HIV screening protocol in the ED resulted in LTC for the majority (67.5%) of newly diagnosed PWH.
- Over a third of patients who were linked to care required additional PN outreach after missing their first appointment, highlighting the importance of PN follow-up.
- MSM and heterosexual contact are the two greatest risk factors for HIV in New Jersey<sup>3</sup>. Both were predictive of LTC. Their successful LTC may be explained, in part, by the fact that PNs were demographically similar and lessened perceived stigma associated with entry into care.
- Having a multidisciplinary team of experts in HIV and substance use disorder and combining treatment plans for these two conditions may improve LTC for HIV-infected injection drug users<sup>4</sup>.
- Emphasis on UH's charity care program, which provides financial assistance for the cost of hospital services, may improve LTC for patients without insurance.

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## References

- AIDSvu. Newark - Aidsvu. Available at: <https://aidsvu.org/local-data/united-states/northeast/new-jersey/newark/>
- DeRose, J., Zucker, J., Cennimo, D. and Swaminathan, S., 2017. Missed Testing Opportunities for HIV Screening and Early Diagnosis in an Urban Tertiary Care Center. *AIDS Research and Treatment*, 2017, pp.1-6.
- AIDSvu. 2020. *New Jersey - Aidsvu*. Available at: <https://aidsvu.org/local-data/united-states/northeast/new-jersey/>
- Bruce, R. and Altice, F., 2007. Clinical Care of the HIV-Infected Drug User. *Infectious Disease Clinics of North America*, 21(1), pp.149-179.