

# Linkage to Care Outcomes among Known HIV-Positive Patients at a High Prevalence Urban Hospital Emergency Department

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## Introduction

Retention in care of persons with HIV (PWH) is essential for achieving viral suppression and decreasing community transmission. CDC estimates that the 23% of known PWH not retained in care account for 43% of all new transmissions.<sup>1</sup> This study seeks to describe the impact of an opt-out ED screening with navigator-assisted linkage to care (LTC) protocol for out of care PWH.

## Methods

An IRB-approved retrospective chart review was conducted among PWH (prior positive) inadvertently retested in the ED between 2015 and 2018. Univariate and multivariate logistic regression was used to identify factors associated with LTC with patient navigator (PN) support. Factors with  $p \leq 0.1$  were included in the multivariate analysis as were age and sex at birth. Patients who died were excluded from statistical analyses.

## Results

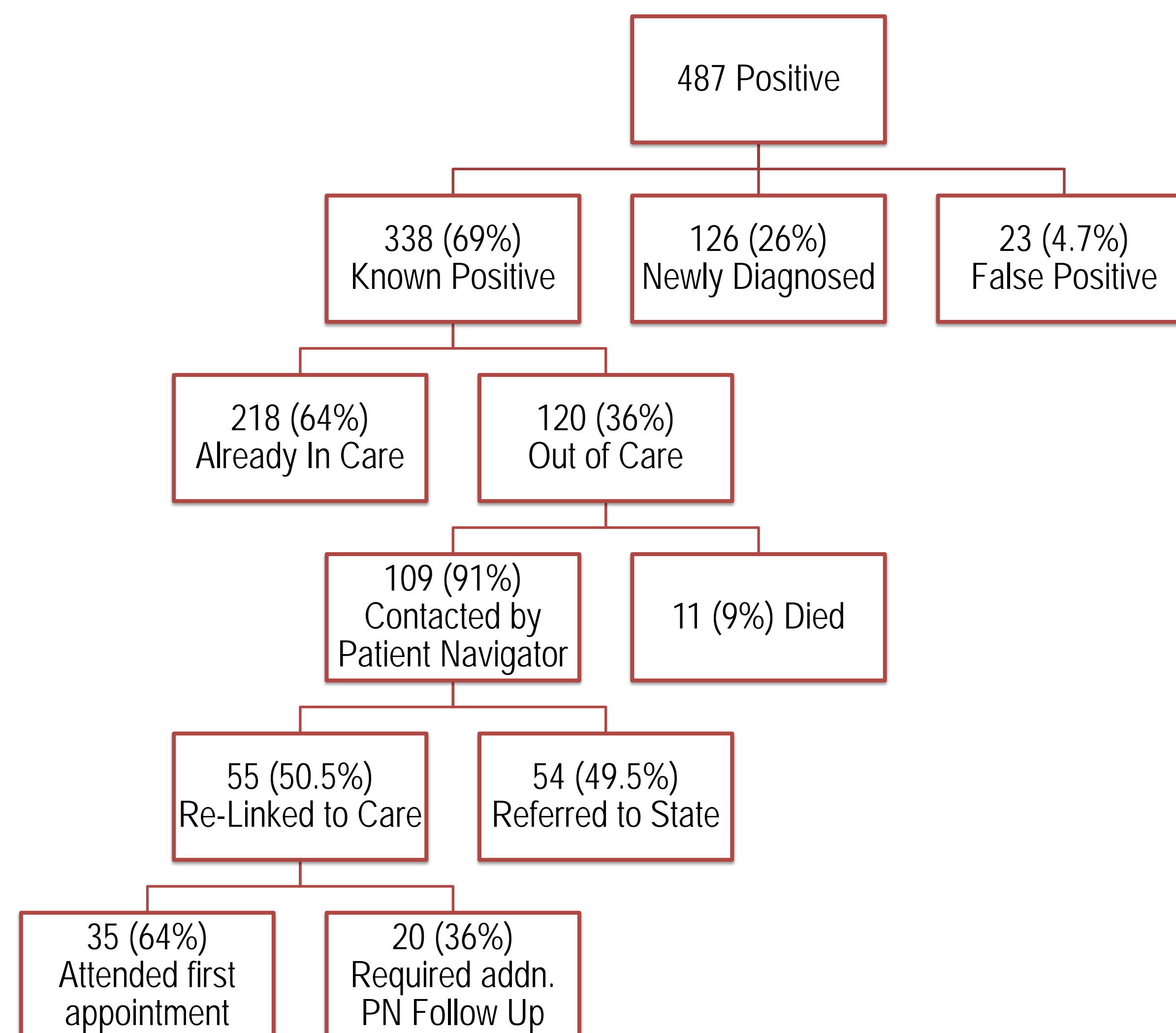


Figure 1. LTC Outcomes for Previously Positive PWH in the UH ED.

## Results

Table 1. Patient Demographics, Risk Factors, and Association with Successful Linkage to Care

Characteristics	Total <i>n</i> = 120 (%)	Linked to Care <i>n</i> = 55 (%)	Referred to State <i>n</i> = 54 (%)	Died <i>n</i> = 11 (%)	Odds Ratio	95% Conf. Interval	<i>p</i> Value <sup>2</sup>
Age							
Mean age [SD]	46.9 [11.9]	47.7 [11.3]	45.4 [12.7]	50.9 [10.5]	F(1, 107) = 0.98, <i>p</i> = 0.324		
Sex at Birth							
Male	68 (56.7)	30 (54.5)	34 (63.0)	4 (36.4)	1.42	0.66 - 3.05	0.373
Female	52 (43.3)	25 (45.5)	20 (37.0)	7 (63.6)			
Race							
Non-Hispanic White	7 (5.8)	2 (3.6)	2 (3.7)	3 (27.3)	0.98	0.13 - 7.23	0.985
Non-Hispanic Black	97 (80.8)	43 (78.2)	46 (85.2)	8 (72.7)	0.63	0.23 - 1.67	0.347
Hispanic	12 (10.0)	9 (16.4)	3 (5.6)	0 (0)	3.33	0.85 - 13.04	0.085
Other	4 (3.3)	1 (1.8)	3 (5.6)	0 (0)	0.31	0.03 - 3.13	0.324
Insurance Type							
Commercial	8 (6.7)	5 (9.1)	3 (5.6)	0 (0)	1.67	0.33 - 8.46	0.538
Medicare	15 (12.5)	6 (10.9)	7 (13.0)	2 (18.2)	0.857	0.22 - 3.25	0.821
Medicaid	70 (58.3)	31 (56.4)	31 (57.4)	8 (72.7)	1.00	0.40 - 2.49	1
Self or Charity Care	27 (22.5)	13 (23.6)	13 (24.1)	1 (9.1)	reference		
HIV Risk Factors							
Heterosexual	63 (52.5)	36 (65.4)	22 (40.7)	5 (45.5)	2.76	1.27 - 5.99	<b>0.011</b>
MSM	11 (9.2)	6 (10.9)	5 (9.2)	0 (0)	1.20	0.34 - 4.19	0.775
Injection Drug Use	40 (33.3)	13 (23.6)	21 (38.9)	6 (54.5)	0.49	0.21 - 1.11	0.088
Other	10 (8.3)	5 (9.1)	5 (9.2)	0 (0)	0.98	0.27 - 3.60	0.976
Social Risk Factors							
Unstable Housing	40 (33.3)	18 (32.7)	20 (37.0)	2 (18.2)	0.83	0.38 - 1.82	0.637
Substance Abuse	77 (64.2)	30 (54.5)	40 (74.1)	7 (63.6)	0.42	0.19 - 0.94	<b>0.035</b>
Mental Health	39 (32.5)	17 (30.9)	20 (37.0)	2 (18.2)	0.76	0.34 - 1.68	0.5

2. Significance values for univariate logistic regression.

## Conclusions

- Opt-out ED screening revealed >30% of known positive PWH were out of care at the time of testing; of whom nearly 50% were LTC with PN support.
- In the final multivariate model, only heterosexual HIV risk (OR = 3.01 [95% CI 1.23, 7.32],  $p = 0.015$ ) maintained significance with patients roughly three times more likely to be successfully linked to care.
- It is possible that persons reporting heterosexual HIV risk may feel less stigmatized and therefore are more likely to LTC.
- Similarly, the association with SUD, albeit non-significant in the multivariate analysis, may reflect underrepresentation of individuals with SUD in remission among patient navigators.
- Future opt-out ED screening protocols should build upon diverse care teams to further engage patients with SUD and those at risk for non-heterosexual HIV transmission.

## References

1. Zihao Li, et. al. 2019. Vital Signs: HIV Transmission Along the Continuum of Care – United States, 2016. *MMWR*, 68(11);267-272.

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## Contact

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