

DIFFERENTIATING OUT-OF-CARE HIV PATIENTS BASED ON ON-GOING LAB MONITORING: CAN WE IDENTIFY “VIRTUAL” PATIENTS AT LOWER RISK FOR POOR OUTCOMES?

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ABSTRACT

Background: Engagement-in-care is a key component of the HIV care cascade. The CDC reports an engagement-in-care rate for people living with HIV (PLWH) of only 58%. Given the resource intense nature of care re-engagement efforts, it may be useful to identify sub-groups of lost-to-care (LTC) patients at lower risk for poor outcomes. We report on a group of patients whom have had no medical visit, but whom have had lab monitoring in the last year, and who may not require as intense re-engagement interventions.

Methods: At the Ruth M. Rothstein CORE Center, a large, Chicago-area, safety-net HIV clinic which cares for nearly 5000 Chicago area PLWH, between 4/1/17 and 2/1/18 we identified patients who had no medical visit within the prior 12 months, but at least one visit in the prior 36 months. Such LTC patients that had no lab monitoring at outside clinics, as determined via collaboration with Chicago Department of Public Health, are included in our analysis. We defined LTC patients as either “true”, if they had no visits or lab monitoring at our center or “virtual” if they had lab monitoring at the CORE Center, but no medical visits. We report on clinical and demographic differences for these “true” vs. “virtual” LTC patients, and perform logistic regression, assessing for correlation with whether patients subsequently returned-to-care.

Results: Five hundred patients met our LTC definition; 55 “virtual” and 445 “true”. “Virtual” vs. “true” LTC patients more likely had private insurance (18% vs. 9%) or coverage by the state’s ADAP program (13% vs. 2%; p < 0.001 for insurance differences); “true” vs. “virtual” LTC patients more often received Ryan White case management services (69% vs. 15%, p < 0.001). More “virtual” vs. “true” LTC patients have subsequently returned to care (47% vs. 33%, p = 0.03). Active insurance most strongly associated with subsequent return to care on logistic regression.

Conclusion: We found that LTC patients whom had ongoing lab monitoring during their gap in medical visits were more likely to have private insurance or ADAP coverage, while being less likely to have receive Ryan White case management services. Prospectively identifying LTC patients more likely to have favorable outcomes may free up re-engagement resources for use with higher need patients.

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BACKGROUND

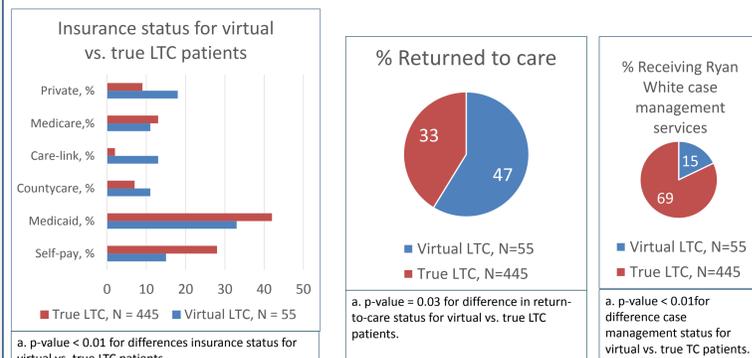
- Engagement in care is a key component of the HIV Care Continuum.
- The CDC reports only 49% of all people living with HIV are retained in care. ¹
- Engagement in care requires intensive outreach inclusive of efforts to address financial and structural barriers. ²
- Identifying lost-to-care (LTC) patients at lower risk for poor outcomes may facilitate directing of re-engagement related resources toward higher risk patients.

METHODS

- At the Ruth M. Rothstein CORE Center, between 4/1/17 and 2/1/18, we identified LTC HIV positive patients who had no medical visit within the prior 12 months, but at least one visit in the prior 36 months.
- Data was collected for such LTC patients that had no lab monitoring at outside clinics, as determined via collaboration with Chicago Department of Public Health.
- Patients were categorized as either “True” LTC, if they had no visits or lab monitoring at the CORE Center (N = 445) or Virtual, if they had lab monitoring at the CORE Center, but no medical visits (N = 55) during the time period noted above.
- Clinical and demographic differences for these True vs. Virtual LTC patients were collected and logistic regression, assessing for correlation with whether patients subsequently returned-to-care between, was performed.

RESULTS

Key characteristics for “virtual” vs. “true” lost-to-care (LTC) patients^a



RESULTS

Table 1: Lost-to-care patient characteristics, by return-to-care status

	Total, N=500	Returned to care, N=172 (34%)	Did not return to care, N=328 (66%)	p-value ^a
Age, Median (IQR)	42 (31-52)	43 (31-52.5)	40 (32-52)	0.592
<25	46 (9) ^b	17 (37) ^c	29 (63) ^c	0.702
≥25	454 (91)	155 (34)	299 (66)	
Gender				
Male	384 (77)	130 (34)	254 (66)	0.640
Female	116 (23)	42 (36)	74 (64)	
Race/ethnicity				
White NH	34 (7)	7 (21)	27 (79)	0.104
Black NH	382 (77)	142 (37)	240 (63)	
Hispanic/Latino	77 (15)	22 (29)	55 (71)	
Other	6 (1)	1 (17)	5 (83)	
HIV risk factor				
MSM	157 (31)	51 (32)	106 (68)	0.957
MSM/IDU	6 (1)	2 (33)	4 (67)	
Heterosexual risk	209 (42)	75 (36)	134 (64)	
IDU	31 (6)	10 (32)	21 (68)	
Other	19 (4)	8 (42)	11 (58)	
Unknown	78 (16)	26 (33)	52 (67)	
Insurance status				<0.001
Self-pay	131 (26)	26 (20)	105 (80)	
Medicaid	204 (41)	66 (32)	138 (68)	
County Care	39 (8)	22 (56)	17 (44)	
Care Link	14 (3)	9 (64)	5 (36)	
Medicare	64 (13)	24 (38)	40 (62)	
Private insurance	48 (10)	25 (52)	23 (48)	
Virtual patient				
Yes	55 (11)	26 (47)	29 (53)	0.033
No	445 (89)	146 (33)	299 (67)	
Time (months) between last CORE PCP date and RTC, Median (IQR)	n/a	17.3 (14.5-20.6)	n/a	
Last CD4, Median, IQR [n] ^d	436 (274-619) [458]	479 (304-637) [163]	412 (261-616) [295]	0.189
Viral suppression prior to loss to care				
Undetectable (≤200)	343 (75)	108 (31)	235 (69)	0.025
Detectable (>200)	114 (25)	49 (43)	65 (57)	

a. P-value by Pearson Chi-square test (categorical variables) or Wilcoxon rank-sum test (continuous variables)
b. Column percentages reported in this column
c. Row percentages reported in for these columns
d. CD4 count from CDPH, most recent (no time restriction)
e. Among those who returned to care

Table 2: Logistic regression results: factors associated with returning to care

	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Virtual patient	1.84 (1.04-3.23)	0.035	1.54 (0.83-2.86)	0.170
Age	1.01 (0.99-1.02)	0.625	--	--
Male gender	0.90 (0.58-1.39)	0.640	--	--
Race/ethnicity (ref=White/Other NH ^a)				
Black NH	2.37 (1.06-5.28)	0.035	2.05 (0.89-4.73)	0.093
Hispanic/Latino	1.60 (0.64-4.01)	0.316	1.46 (0.56-3.84)	0.441
HIV risk factor (ref=MSM ^b)				
Heterosexual risk	1.16 (0.75-1.79)	0.497	--	--
IDU	0.99 (0.44-2.25)	0.978	--	--
Other or unknown	1.12 (0.66-1.90)	0.675	--	--
Insurance status (ref=self-pay)				
Medicaid/County Care/Care Link	2.45 (1.49-4.03)	<0.001	2.37 (1.37-4.09)	0.002
Medicare	2.42 (1.25-4.71)	0.009	2.31 (1.13-4.72)	0.022
Private insurance	4.39 (2.16-8.93)	<0.001	4.54 (2.08-9.92)	<0.001
Viral suppression prior to loss to care ^{a, b}	0.61 (0.40-0.94)	0.026	0.61 (0.39-0.95)	0.030

a. Viral suppression defined as VL <200 copies/ml; b. N =43 missing viral load prior to LTC (from CDPH records)

RESULTS

- 500 HIV positive patients met our lost-to-care (LTC) definition
 - Of whom 34% subsequently returned to care during the observation period.
- LTC patients with active insurance were more likely than self-pay patients to return to care.
- More Virtual vs True LTC patients have subsequently returned to care (47% vs 33%) – though this was not statistically significant on multivariable analysis.
- Patients with undetectable viral load prior to being lost-to-care were less likely to return-to-care.

CONCLUSION

- Virtual vs. true LTC patients had marginally better return-to-care rates and may require less intense effort to re-engage in care.
- Insurance status represents a key predictor of re-engagement-in-care.
- Surprisingly, lost-to-care patients with undetectable HIV VL’s at time of being lost-to-care were less likely to return to care.
- Regulatory changes that facilitate more continuous insurance coverage may improve engagement-in-care.

REFERENCES

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