

Demographics and Characteristics of Undiagnosed HIV in an Urban Emergency Department, Abstract W-176



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BACKGROUND

The CDC (Centers for Disease Control and Prevention) recommends offering routine HIV testing to all emergency room (ED) patients¹. Some EDs, including our own, have found a seroprevalence of approximately 1% when rapid testing is offered². The true seropositivity rate is unknown.

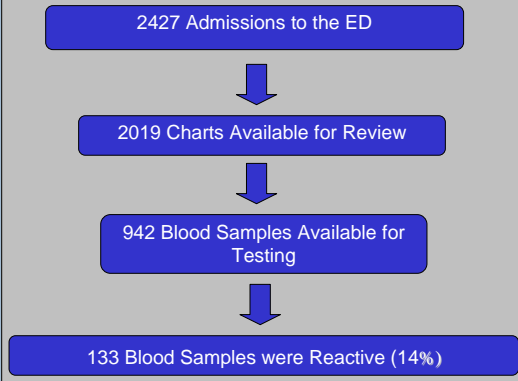
Temple University Hospital (TUH) is a 607 bed quaternary care hospital located in North Philadelphia. There were 985 discharges with the HIV/AIDS diagnostic codes 042 or V08 in 2005. The Emergency Department (ED) at TUH sees over 50,000 patients per year. In 2006, Philadelphia HIV incidence was 114 persons per 100,000 population³. Zip Code 19140, where TUH is located, had an estimated 570-1,000 cases of AIDS (excluding non-AIDS cases of HIV) per 100,000 population³ in 2007.

MATERIALS AND METHODS

For two weeks in the fall of 2007, demographic and clinical data was extracted from the charts of all ED patients the day after care was provided. Race information was self-reported. Any remaining blood drawn from these patients for routine care was linked to the extracted data by a seven digit random number and all identifying information was destroyed. HIV testing was performed with the OraQuick Advance Rapid HIV-1/2 Antibody Test (OraSure Technologies, Bethlehem, PA) on the de-identified blood samples. All researchers were certified OraQuick testers by the OraSure company. This study was approved by both the Temple University and the Commonwealth of Pennsylvania Institutional Review Boards.

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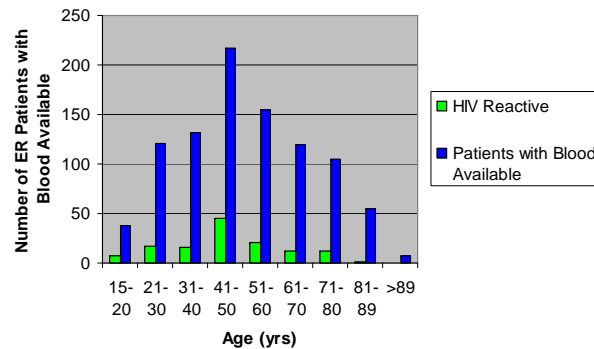
Figure 1: Methods and Results



RESULTS

- During a two week period in the fall of 2007, there were 2427 admissions to the ED. 2019 charts were available for review. 942 blood samples were available for testing. 133 (14%) were reactive by the OraQuick. Figure 1
- 515 samples were from women, 64 (12%) were reactive; 69/427 (16%) of men were reactive
- Age distribution, Figure 2, was bell shaped (median age of HIV reactive was 48, median age of HIV nonreactive was 50, P<0.05)
- Hospital admissions [82 of the 610 (13%)] and discharges to home [48 of 321 (15%)] were equally likely to be reactive, Table 1.
- 9/96 (9%) of Caucasians were reactive, 95/649 (22%) African-American, 15/119 (13%) Latino/a, and 11/26 (24%) of unknown race were reactive
- 5/23 (22%) of pregnant patients were reactive.
- 28 patients reported a history of HIV, but only 25 were reactive
- Most common chief complaints associated with reactivity were seizures 16/71 (22%), cardiac pain 25/180 (14%), and GI complaints 20/147 (14%). Fever [20/82 (24%)] and sore throat [6/20 (30%)] were the symptoms most associated with reactivity.

Figure 2: HIV Reactivity with Respect to Age



Age (yrs)	15-20	21-30	31-40	41-50	51-60	61-70	71-80	81-89	>89
HIV Reactive	7	17	16	45	21	12	12	1	0
Number Tested	38	121	132	217	155	120	105	55	7
% Reactive	18	14	12	21	14	10	11	2	0

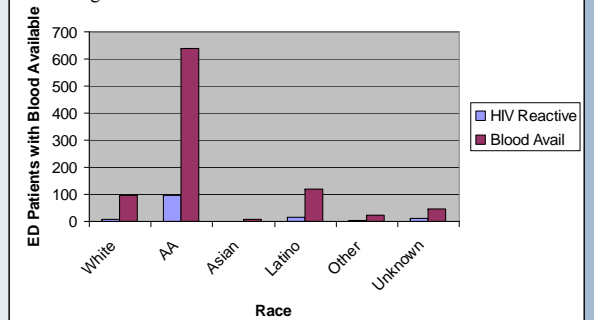
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Table 1: Patient Disposition

Dispo	# Reactive	Total #	% Reactive
Admit	79	572	14
ICU Admit	3	38	8
Discharge	48	321	15

Figure 3: HIV Reactivity with Respect to Race



Race	White	AA	Asian	Latino	Other	Unknown
HIV Reactive	9	95	0	15	3	11
Blood Avail	96	640	6	119	24	46
% Reactive	9	15	0	13	13	24

LIMITATIONS

- Samples have not been verified by Western blot analysis
- It is unknown how many persons were aware of their HIV diagnosis and did not reveal it to the ED physician
- Persons coming to the ED for an "STD check" had only urine for GC/chlamydia testing; no blood was available for HIV testing
- Pregnant women beyond 20 wks gestation were often admitted directly to Labor and Delivery and had no blood available to us for testing

CONCLUSIONS

- HIV reactivity in our urban ED appears to be high. American EDs (including our own) have found seropositivity rates from 0.8 to 1.5% when the rapid testing is offered directly to patients². Thus, although offering HIV testing to ED patients may uncover many infections, only a fraction of such cases might be effectively discovered. More resources may need to be devoted to diagnosing HIV positive persons in the ED.

BIBLIOGRAPHY

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- ³AIDS Activities Coordinating Office, Philadelphia, 2007