

HIV Testing in the Emergency Room - Making the “Routine” a Reality

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Background

- In 2006, CDC updated HIV testing guidelines to recommend routine HIV testing in medical care settings.
- New York City introduced initiatives to expand HIV testing (e.g., “the Bronx Knows” campaign).
- In response, a Bronx hospital emergency department expanded their rapid testing (RT) program using video-based pretest counseling.
- Over 22% of persons newly diagnosed with HIV in NYC are concurrently diagnosed with AIDS (e.g., diagnosed late in the course of infection).
 - Surveillance data show that late diagnosis is more prevalent among older persons.
- Timely diagnosis of HIV infection can delay or prevent progression to AIDS, early mortality and secondary transmission.

Study Questions:

- Do ED patients accepting HIV rapid testing (RT) differ from patients getting blood drawn for routine non-HIV related purposes?
- If every patient with a blood draw in the ED accepted voluntary testing how many more people would be reached?

Methods

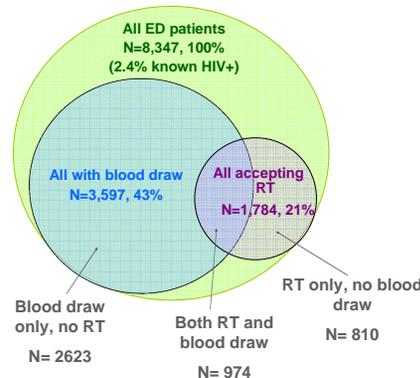
- Analysis included all patients 13+ years old presenting to the adult ED from 12/1/09-1/20/10.
- Compared three groups:
 - Patients accepting RT only
 - Patients with RT and a routine blood draw
 - Patients with routine blood draw and no RT.
- Used standard bivariate methods (e.g., X²) to compare groups.
- Matched ED patients to the NYC HIV/AIDS registry to ascertain prior diagnosis.



Results

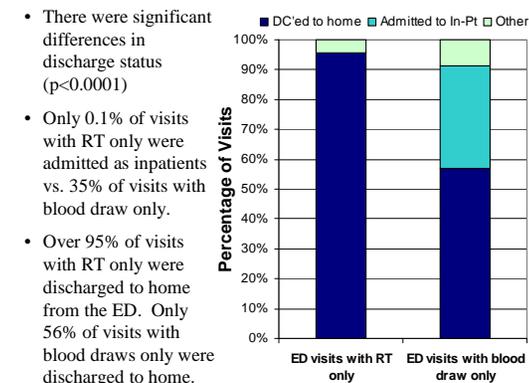
- During the study period, 8,347 individual patients made 9,674 visits to the adult ED (Figure 1).
 - 2.4% of all ED patients matched to the HIV/AIDS registry, i.e., were known to be HIV positive.
 - 43% (N= 3,597) of all patients had blood drawn for a routine, non-HIV related purpose.
 - 21% (N=1,784) of all patients accepted RT.
 - RT newly diagnosed 5 ED patients with HIV. These 5 patients are included in the 2.4% that matched to the registry.
 - 3.2 times more patients had only blood drawn (no RT) than accepted RT alone (no blood draw).
 - 27% (N=974) of patients with blood draw also accepted RT.
- Patients with blood draws only were more likely to be white (p<0.0001) and over 44 years old (p<0.0001) than patients with RT only (Table 1).
 - 56% of patients with blood draws only were >44 years old and 11% were white.
- There were significant differences (p<0.0001) in the distribution of chief complaints (Figure 2).
 - Patients with RT only were more likely to have a chief complaint of pain (27% vs. 12%), injury (19% vs. 10%), and allergy (2% vs. 0.5%) than patients with blood draws only.
 - Phlebotomized patients were more likely to have a chief complaints that were neurological and psychological (33% vs. 17%), cardiac (9% vs. 4%) and metabolic (2% vs. 0%) than patients with RT only.

Figure 1. Hospital ED Patient Populations



Results, continued

Figure 3. Discharge status of ED visits with RT only vs. those with blood draw only



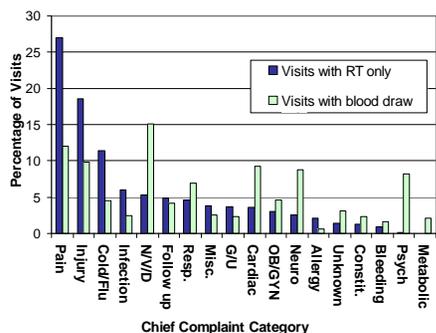
Conclusions

- The voluntary, video-enhanced RT program tested a substantial proportion of patients.
- To be eligible for RT, patients must be clinically stable and able to provide consent. Sicker, older, and emergent patients may be ineligible for RT at the time of ED admission. Patients not receiving RT are more likely to be non-Hispanic, non-black, and older.
- The known HIV/AIDS prevalence of ED entrants was 2.4% compared with 1.2% in the surrounding community.
- Since a large proportion of patients with blood draws are admitted as inpatients, hospital staff may be able to obtain consent for testing once patients have stabilized.
- Using video-enhanced RT as well as voluntary testing of remnant blood from routine, non-HIV related blood draws could potentially triple voluntary testing in this setting, reaching previously untested patients.

Table 1. Demographics of patients accepting RT only, those with blood draw only, and those with both RT and blood draw in the ED

	ED Pts. with RT only		ED Pts. with blood draw only		ED Pts. with RT and blood draw	
	N	Col%	N	Col%	N	Col%
TOTAL	810	100.0	2,623	100.0	974	100.0
Sex						
Male	442	54.6	1,228	46.8	413	42.4
Female	368	45.4	1,395	53.2	561	57.6
Age						
13-24	283	34.9	294	11.2	230	23.6
25-34	251	31.0	431	16.4	246	25.3
35-44	147	18.1	411	15.7	171	17.6
45-54	93	11.5	496	18.9	150	15.4
55-64	26	3.2	394	15.0	90	9.2
65+	10	1.2	597	22.8	87	8.9
Race/Eth.						
Black	253	31.2	776	29.6	303	31.1
Hispanic	437	54.0	1,115	42.5	496	50.9
White	58	7.2	303	11.6	62	6.4
Other	62	7.7	429	16.4	113	11.6

Figure 2. Chief complaints of ED visits with RT only vs. those with blood draw only



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