

## ABSTRACT

**Background:** In anticipation of the revised CDC HIV screening recommendations, Bellevue Hospital initiated a multi-disciplinary pilot project early in January 2006 to test all inpatients for HIV in the Department of Medicine service, regardless of risk.

**Methods:** Rapid HIV testing (RHT) using the whole blood Ora-Quick® method was implemented in 3 separate testing areas: ambulatory care for general medicine (AMCARE), inpatient medicine (MED) and in the Emergency Room (ER). Point of care testing via fingerstick was used in AMCARE and ER, whereas blood by venipuncture was obtained on MED. Initial data showed that testing all patients, regardless of risk, was more difficult than originally thought. As a result, we designed a short questionnaire for house staff to assess the barriers to consenting patients on the inpatient wards. The questionnaire contained three sections. The first section included questions that obtained demographic information. The second section specifically asked housestaff to evaluate the following potential barriers to consenting their patients: time, patient knowledge, housestaff knowledge, patient's language, patient's cultural background, fear of inadequate follow up, not knowing the protocol of the new rapid testing system. The third section included twelve true or false knowledge based questions.

**Results:** From Jan-Aug 2006, a total of 300, 837 and 588 unique patients had RHT in MED, ER and AMCARE respectively. In MED, 23 (7.7%) were positive, of which 11 (3.7%) were new HIV diagnoses. In ER, 24 (2.8%) were positive, of which 18 (1.8%) were new diagnoses. In AMCARE, 2 (<1%) were positive, both new diagnoses. The self-assessment revealed that housestaff believe the biggest barrier to consent is time.

It also showed that physicians are not trained to routinely ask about a patient's HIV status nor are they prepared to ask questions about behaviors that may place a person at risk for contracting HIV.

**Conclusion:** Our results support the universal testing of all patients in MED and ER. One of the unexpected outcomes was re-identifying HIV positive patients who were lost to follow up and reintegrating them into care. The change in CDC recommendations will not be easy to implement. Routine testing has the potential to destigmatize the disease while at the same time identifying a larger number of patients who will benefit from the treatment.

**NOTE:** All testing data has been updated to reflect the most recent numbers through December 2006.

## BACKGROUND

Recent CDC recommendations call for routine HIV testing of all patients regardless of risk. The New York City Health and Hospital's Corporation (HHC) initiated a major HIV testing expansion initiative to: 1) increase the number of patients who know their HIV status; 2) bring people who test positive into care at an earlier point in their disease; and, 3) once in care, retain patients in care.

Given the low response to this initiative at Bellevue, a multi-disciplinary, pilot program was initiated to increase the number of inpatients and outpatients receiving HIV testing. Literature suggests that providers themselves may create barriers to testing. A resident survey was administered to assess MD barriers to offering routine HIV testing.

## METHODS

A pilot routine, rapid HIV-testing program was implemented using the whole blood Ora-Quick® method in the general medical clinic (AMCARE), teaching medical wards (MED) and urgent care of the emergency room (ER). Data regarding testing and seropositivity rates were obtained through monitoring reports generated from the RHT program. The resident questionnaire was answered by residents completing rotations on the inpatient medicine wards. IRB and HHC approval was obtained. The Chi-squared test for trend as well as ANOVA was applied to the data was analyzed using Microsoft Excel and SPSS.

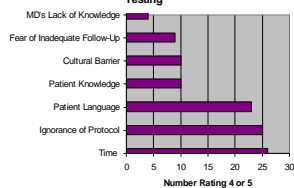
## RESULTS

### House Staff Demographics (n=54)

Mean PGY Year	1.55
Gender	17 M, 37 F
Mean Age	30
Number With Prior Experience as Rape/STD Counselor	7
Number With Prior Training as HIV Counselor	2
Number With Public Health Background	9

House staff responded on a Likert scale (1=not at all, 5=always), with respect to which the following variables presented a barrier to providing HIV testing to inpatients on the medical service: their own lack of knowledge regarding HIV testing, fear of inadequate follow up after testing, patient/doctor language barrier, patient/doctor cultural barrier, ignorance of the protocol required for performing testing, and time required to obtain consent and perform testing. Of these variables, patient/doctor language barrier, ignorance of the protocol, and time were rated 4 or 5 on the Likert scale by more residents (number rating 4 or 5) than the remainder of the variables. This difference was statistically significant ( $p < 0.001$ ). No demographic data was significantly associated with any response on the questionnaire.

### House Staff Self-Identification of Barriers to HIV Testing



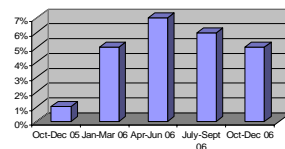
# Implementing Routine Rapid HIV Testing in a Large Public Healthcare Facility

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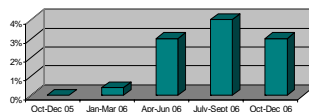
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## RESULTS

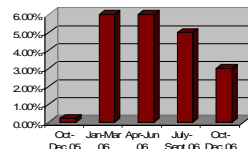
### Med Rapid Testing Rates



### ER Rapid Testing Rates



### AMCARE Rapid Testing Rates



Rapid HIV Testing (RHT) increased throughout the institution after initiation of the pilot project in Jan 2006. On the inpatient medical services (Med), the total number of patients receiving RHT was 394, of which 27 were positive and 16 were new diagnoses. In AMCARE, 1392 tests were performed, of which 25 were positive and 15 were new diagnoses. In the ER, 1368 tests were performed, of which 35 were positive and 20 were new diagnoses. The testing rate, defined as the number of patients tested with previously unknown HIV status/total number of patients seen, increased in all three areas of the hospital after initiation of the pilot project. This increase in testing was statistically significant ( $p < 0.001$ ).

### 2006 Rapid Testing Totals

	Number Tested	Number Positive (% of All Patients Tested)	Number New Positives (% of All Patients Tested)	Percent of Positives Which Are New
Med	380	27 (7%)	16 (4%)	59%
AMCARE	1392	25 (2%)	15 (1%)	60%
ER	1368	35 (3%)	20 (1%)	57%

In 2006, a total of 7363 patient were tested for HIV at BHC compared with 4057 patients tested in 2005 (54% increase) reflecting the efforts of our pilot program to offer routine testing. Not only did we identify more HIV infected persons, the number of patients with a new diagnosis increased from 16% in 2005 to 38% in 2006. In addition, offering routine HIV testing identified persons known to be HIV infected but not in care. More than 50% returned for a clinical care visit at BHC within 30 days. Reasons for not having appointments within 30 days included prolonged hospitalizations, transfer to chronic care facility or linkage to care with non-BHC provider.

## CONCLUSIONS

The RHT pilot program achieved modest success with regards to increasing the rate of testing in those testing venues.

A significant proportion of positive tests were new diagnoses, reflecting the absolute necessity of increasing routine testing to identify individuals who are otherwise not aware of their HIV status and receiving care.

House staff attitudes regarding barriers to testing may have a significant negative impact on routine testing done, particularly in the inpatient testing. Streamlining of the consent and testing process may help to reduce these barriers, as time and ignorance of the testing protocol remain significant factors impeding house staff-initiated testing. Further educational strategies are in development.

Greater outreach efforts to both patients and healthcare providers are still needed to universally implement routine, rapid HIV testing