Implementation of a Collaborative HIV Testing Model Between an Emergency Department and Infectious Disease Clinic in North Carolina

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Objectives

- To create an acceptable and sustainable HIV testing program in the University of North Carolina (UNC) Emergency Department (ED) with post-test counseling and linkage to care provided by the UNC Infectious Disease (ID) Clinic.
- To prospectively characterize the patients targeted by ED providers for HIV testing and determine the proportion testing positive and successfully linked into HIV care.

Background

- HIV in North Carolina (NC)[1]:
  - ~31,000 living with HIV (1,700 new cases per year)
  - ~18,000 aware of HIV infection (30-40% unaware of HIV status)
  - ~12,000-13,000 in care
- In NC, approximately 17.9% of people were uninsured in 2004. Uninsured rates were highest among Hispanics, blacks, and female heads of household--the groups most affected by HIV in NC.
- Among those living with HIV/AIDS in NC, 62% are black, 8% are Hispanic, and 29% are female.
- Review of 37 individuals diagnosed with acute HIV infection in NC (*unpublished data*):
  - 28 (76%) initially presented to an ED or urgent care clinic with symptoms.
  - Only 7 (19%) were diagnosed with HIV on initial presentation to care.
  - If they had not presented again for medical care, acute HIV diagnosis would likely have been missed.
- In a study of patients initiating HIV care at the UNC ID Clinic,[2] the median CD4 count was 202 cells/mm^3
  - 68% initiated care within one year of AIDS diagnosis

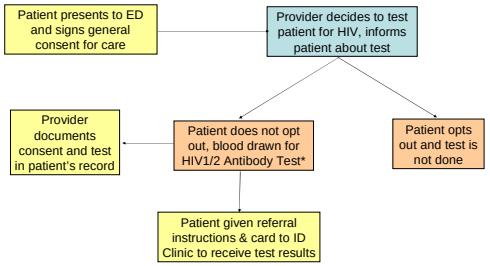
[1]DHHS NC. North Carolina 2005 HIV/STD surveillance report. 2006. Available at: www.epi.state.nc.us/epi/hiv.
[2]Gay et al. AIDS 2006

Eliminating Barriers to Testing

1. Separate written consent for HIV testing
   - On November 1, 2007, NC passed rule eliminating pre-test counseling and written consent requirement, allowing HIV testing to be included in a general consent for care
   - UNC Hospitals modified general consent to include HIV testing and removed pre-test counseling requirement
   - Verbal notification and consent still mandatory
2. Concern for adequate follow-up by ED providers
   - UNC ID Clinic assumes full responsibility for follow-up of patients tested for HIV in the ED
3. Lack of privacy and space for HIV counseling
   - NC rule change removed requirement for pre-test counseling and post-test counseling of negatives
   - ID Clinic provides post-test counseling of positives

HIV Testing Program

Figure 1. HIV Testing Process in the UNC Emergency Department



*HIV antibody-negative specimens are pooled for RNA testing by the UNC Hospitals lab

Figure 2. Minimal HIV testing recommendations for ED providers (as seen on laminated cards created for lanyard with ED badge)

Front of card:

REMEMBER SAASS
ORDER HIV TEST WHEN
≥18 years old & any signs of
STD
AIDS
Acute Infection
Substance Abuse (every 6m)
Sexual Risk Behavior (every 6m)

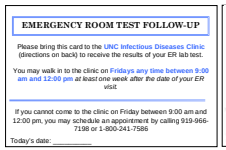
Back of card:

Think about Acute HIV with:

- Mono-like illness (fever, LAD, pharyngitis)
- Gastrointestinal illness (n/v, fever, diarrhea)
- Aseptic meningitis
- Fever, rash
- Above with any of the following: oral ulcers, fatigue, myalgias/ arthralgias, wt loss

Figure 3. Referral card given to patients tested for HIV in ED

Front of card:


EMERGENCY ROOM TEST FOLLOW-UP

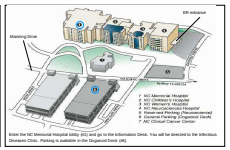
Please bring this card to the UNC Infectious Diseases Clinic (directions on back) to receive the results of your ER lab test.

You may walk in to the clinic on Fridays any time between 9:00 am and 12:00 pm at least one week after the date of your ER visit.

If you cannot come to the clinic on Friday between 9:00 am and 12:00 pm, you may schedule an appointment by calling 919-966-7198 or 1-800-241-7586

Today's date: _____

Back of card:



Patient Follow-Up

- Automated report of all HIV results from the ED is sent to a printer in the ID Clinic twice a week.
- Report is reviewed by program staff.
- HIV-positive results are flagged and given to clinic staff for follow-up.
- Post-test Counseling:
  - Clients with negative results who come to the ID Clinic receive full post-test counseling.
  - HIV-positive patients are seen by counselor and medical provider and are offered on-site new patient assessment, access to a financial counselor and social work assistance, and follow-up in the ID Clinic within 7-14 days.

Loss to Follow-Up

- No follow-up of HIV-negative patients who do not present to the ID Clinic for their test results.
- For HIV-positive patients:
  - If they do not present the first available clinic day, an ID Clinic provider contacts the patient and schedules an appointment to provide the test results.
  - If the clinic provider is unable to reach the patient or if the patient declines to present to clinic for results, regional Disease Intervention Specialists are notified.
  - In NC, all newly diagnosed HIV cases are contacted by Disease Intervention Specialists to allow partner notification and explain control measures.

Results

Table 1. HIV tests in the UNC ED from May 11 to November 6, 2008

Characteristic	N (%)
Total number of HIV tests	411
Mean age of testers	42.2 (1-95)
Gender	
Female	162 (39.4%)
Male	249 (60.6%)
Race/Ethnicity	
White	196 (47.7%)
Black	160 (38.9%)
Hispanic	32 (7.8%)
Asian	6 (1.5%)
Other/Unknown	17 (4.1%)
Total number of positive tests	11 (2.7%)
New positives	5 (1.2%)
Previously known positives*	6 (1.5%)

*All were out-of-care at the time of testing and were linked back into care.

Table 2. Characteristics of newly diagnosed HIV-positive patients

Age	Gender/ Race*	Chief Complaint	CD4 Count
26	M/ B	Acute fever, cough, nausea, diarrhea	340‡
20	M/ W	Acute fever, thrush	ACUTE†‡
19	F/ B	Abdominal pain, UTI, pregnancy	881
50	M/ W	Bacterial pneumonia	65‡
33	M/ A	Fever, chills, muscle aches	535

*M=Male, F=Female, B=Black, W=White, A=Asian
†Acute HIV infection, VL>10,000,000 copies/mL
‡Started on antiretroviral therapy

Future Directions

- Encourage ED personnel to expand testing to all patients meeting risk-based criteria.
- Routine screening of all patients during a particular shift.
- Consider rapid testing during particular shifts, with all preliminary positives referred to the ID Clinic.

Acknowledgments

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