

# Health Education/Risk Reduction referrals to HIV testing in non-clinical settings: outcomes and implications for program planning

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# Background

- Health Education/Risk Reduction (HE/RR) and Counseling and Testing (C&T) programs are interconnected.
- HE/RR interventions routinely document client's testing history and HIV status.
- Successful referral from HE/RR to C&T is a key function within HE/RR interventions.

# HIV “Unaware”

- It is estimated that 20% of HIV-infected individuals are not aware of their infection. (Campsmith, *J Acquir Immune Defic Syndr.* 2010 Apr;53(5):619-24)
- Repeat testers are known to have a higher sero-positivity rate than first-time testers. (Pinkerton, *AIDS.* 2007 July 31;21(12):1625-1629)
- Intermittent testers (those who have had an HIV test, but more than one year ago) have a higher sero-positivity rate than those who routinely test (test at least annually). (MMWR. June 24, 2005/54(24);597-601)

# Responding to Testing Guidance with Scarce Resources

- CDC recommends everyone should take an HIV test and know their status. (MMWR, September 22, 2006 / 55(RR14);1-17)
- CDC also recommends those at-risk need to test routinely. (MMWR, September 22, 2006 / 55(RR14);1-17)
- As routine testing in clinical settings increases, HIV prevention programs can focus on high-risk individuals who benefit from ongoing, routine testing in non-clinical settings.

# METHODS

- Analyzed California Project Area HE/RR and C&T Process Monitoring Data from July 2008 through June 2011. LA and SF were not included.
- HE/RR clients' testing referrals were matched to their C&T testing outcomes.
- The match was possible because of data collection practices.
  - Client level data is collected in both HE/RR and C&T activities.
  - Collection of common client data elements including matching variables.
  - Use of Local Evaluation On-line (LEO), an on-line process evaluation monitoring database.

# LEO documents previous testing history & testing referrals in HE/RR encounters

Self-reported Testing History

Self-reported Test Date

Number of prior HIV tests:   Decline/Refused

Date of last HIV test result received:  (mm/yy)

If you have tested before, what was the last result you received:

If positive, in medical care?

If positive, reason for new HIV test, specify:

- 1-Negative
- 2-Positive
- 3-Preliminary positive
- 4-Inconclusive, discordant, invalid
- 5-Never received result/Don't Know

HE/RR Testing Referral Information

Self-reported HIV status

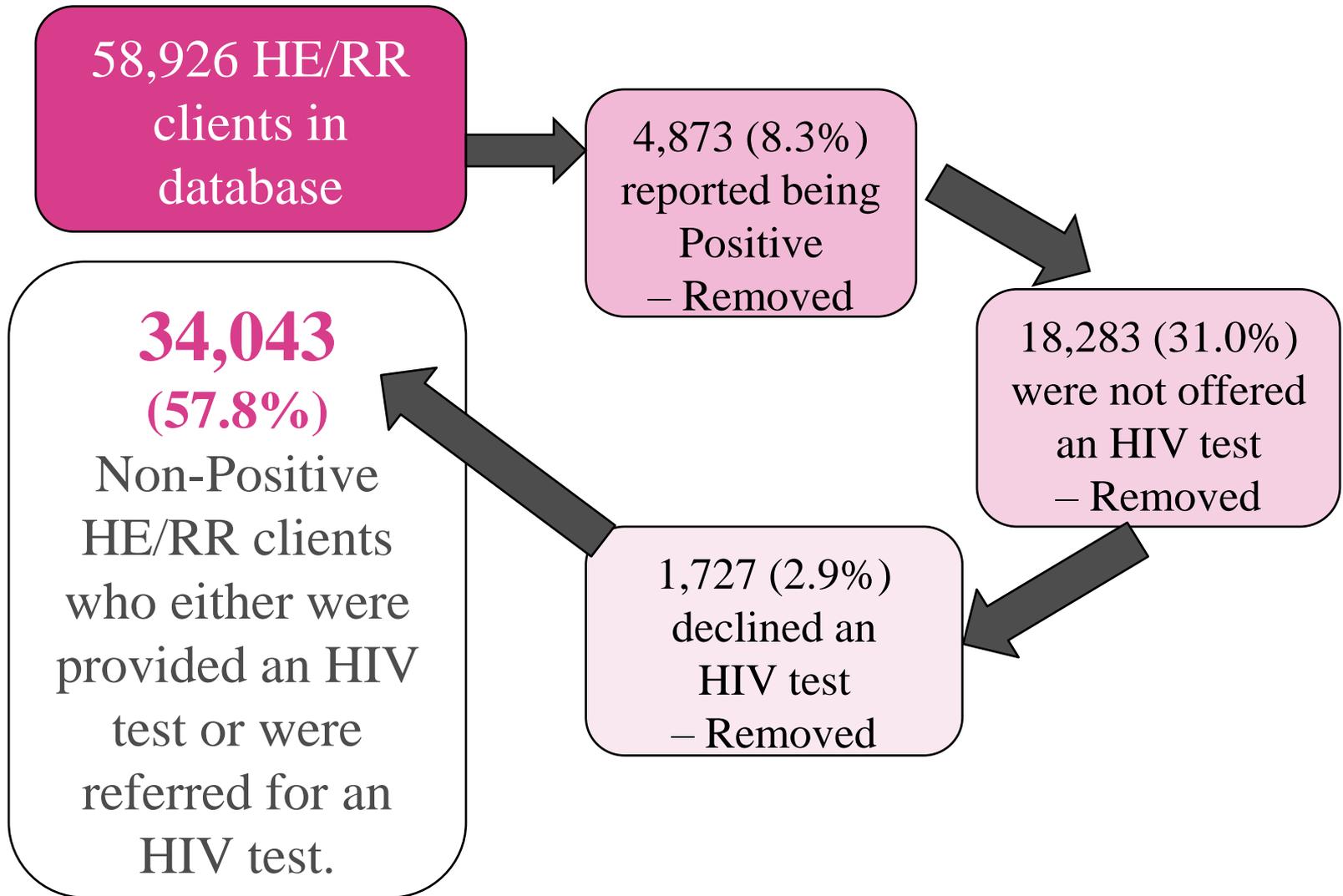
Testing referral type:

- 1-Tested at Encounter
- 1-Tested at Encounter
- 2-Referred for Testing
- \*-Declined/refused testing
- 0-No Testing Referral

OAID/Computer client number:

(XXX-XXXX-X or XXXXXXXXX)

# Selection Criteria



# Matching HE/RR and C&T Records

- A hierarchical deterministic match was conducted using two methods:
  - 1.) Lab Slip Number - OAID.
    - Each HIV test performed with CA funds is given a unique ID for tracking. This number can be stored in two places in LEO.
      - C&T client information.
      - HE/RR testing referral type.
  - 2.) Matching Criteria
    - We have identified a set of four variables that allow for successfully matching clients (Sensitivity >96% when all four are available):
      - Race,
      - Gender,
      - Date of Birth, and
      - First Initial of Last Name

# C&T OA ID can be entered in HE/RR Record

(Matching Method 1)

C&T:

OA ID:	<input type="text"/>	(XXX-XXXX-X or XXXXXXXXX)
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HE/RR:

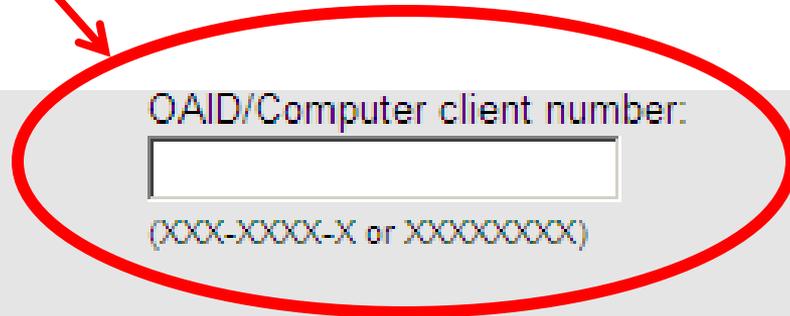
Testing referral type:

1-Tested at Encounter	▼
1-Tested at Encounter	
2-Referred for Testing	
*-Declined/refused testing	
0-No Testing Referral	

OAID/Computer client number:

<input type="text"/>
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(XXX-XXXX-X or XXXXXXXXX)



# Common Matching Variables are Reported in Both HE/RR and C&T (Matching Method 2)

## Gender/Race

Gender identity:

Other identity, specify:

Biological gender at birth:

### Race/ethnicity:

- Black/African American
- American Indian/Alaska Native
- Asian
- Native Hawaiian/Pacific Islander
- Hispanic/Latino(a)
- White
- Other race

Specify:

Client declined/refused

## Other Demographics

Date of birth:  (mm/dd/yyyy)

First letter last name:   D/R

Residence ZIP code:   client lives outside CA

Residence county:

Homeless:

Sexual orientation:

Specify:

### Health insurance coverage:

- No coverage
- Private
- Medi-Cal (Medicaid)
- Medicare
- Military
- Indian Health Service
- Other insurance

Specify:

# Additional Criteria to Limit the Number of False Matches

- Successfully matched C&T test occurred within two days of the HE/RR encounter for clients who tested at encounter.
- Successfully matched C&T test occurred within six months of the HE/RR encounter for clients who were referred to HIV testing.
- Successfully matched HE/RR services and C&T tests were within 150 miles of each other.

# Results

**12,472 of the 34,043 (37%)**

Non-positive HE/RR clients were successfully matched with a C&T test either by OAID or matching criteria.

Of the successfully matched clients, 12,030 (96.5%) of them were tested at the site as part of their HE/RR encounter.

95.2% of the clients were successfully matched via OAID and by the matching criteria, illustrating the matching criteria effectiveness.

# Positivity Yield by Self-Reported Risk Status

Self-reported Risk Status	Matched Clients		Positivity Yield	
	#	%	#	%
<b>High Risk</b>	<b>4,004</b>	<b>32.1%</b>	<b>48</b>	<b>1.20%</b>
MSM	2,223	55.5%*	44	1.98%
IDU	1,650	41.2%*	0	0.0%
HIV-positive Partners	131	3.3%*	4	3.05%
Transgender Persons	0	0%*	--	--
<b>Low Risk</b>	<b>8,468</b>	<b>67.9%</b>	<b>17</b>	<b>0.20%</b>
<b>TOTAL</b>	<b>12,472</b>	<b>100%</b>	<b>65</b>	<b>0.52%</b>

\*Percentage of risk status within High Risk Category

# Positivity Yield by Date of Last Reported Test

Last Reported Test	Matched Clients		Positivity Yield	
	n	%	Positive	%
Clients with no prior test information	1,280	10.3%	3	0.23%
Self-reported first time testers	2,896	23.2%	12	0.41%
Routine testers (tested within last year)	2,572	20.6%	14	0.54%
Intermittent testers (tested more than a year ago)	4,408	35.3%	17	0.39%
Previous testers not reporting last test date	1,316	10.6%	19	1.44%
<b>Overall Positivity Yield</b>	<b>12,472</b>	<b>100%</b>	<b>65</b>	<b>0.52%</b>

# Linkage to Care for Positives

We compared linkage to care activity and outcomes of positive HE/RR-C&T clients to those of positive C&T-only clients.

	Matched HIV-Positive HE/RR – C&T Clients	HIV-Positive Clients who utilized C&T Services only
Referred to Care	66%	77%
Attended First Medical Visit	40%	43%

# Program Implications

- Assessing HIV status and testing history are critical in all HE/RR activities.
- Referring high-risk clients, especially those with HIV-positive partners or uncertainty about their last HIV test, reduces the number of HIV-unaware individuals by informing them of their status.
- Successful matching of HE/RR clients to their C&T testing outcomes occurs more often when HE/RR and C&T services are co-located.
  - 96% successful matching rate of clients tested at the site as part of their HE/RR encounter.
- Improvement is needed in linking HE/RR clients testing positive to care.

# Lessons Learned

- State-supported HE/RR and C&T programmatic data can be successfully matched and evaluated.
  - Using and recording a unique testing identifier greatly increases the likelihood of matching HE/RR clients to their C&T testing outcome.
  - Successful matching of clients is more effective when HE/RR and C&T programs are co-located.
- Higher positivity rates among high-risk clients, especially persons with positive partners and MSM.
- HE/RR clients who previously tested but did not report their last test had a higher positivity rate.

# Thank You

*Especially:*

The clients and community-based organizations  
who shared their information and  
entered it into LEO.

My co-authors