

Improving HIV Counseling and Testing, Referrals, and Testing Quality Assurance Through a Web-Based System

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Setting

- The California Department of Public Health, Center for Infectious Diseases, Office of AIDS (CDPH/OA) supports
 - HIV Counseling and Testing (C&T)
 - Health Education/ Risk Reduction (HE/RR)
 - Partner Services (PS)
- More than 700 provider locations statewide have provided these activities.
- In 2007, data were collected from approximately 500,000 client contacts using multiple forms.

Setting

- California has diverse client populations and venues.
 - Venue settings (outreach, mobile, STD, etc.)
 - Client characteristics and populations
- Clinic size and volume
 - Single staff community-based organizations to largest HIV testing organization in US
 - Integrated services and specialized

Stakeholders

- CDPH/OA
 - policy decision makers, researchers, program monitors and evaluators
 - CDPH programming staff
- Local health jurisdiction (LHJ)
 - HIV program administrators, data entry staff and epidemiologists
- HIV prevention providers throughout California

Issue

- California legacy systems had been used for monitoring and evaluating services.
 - Multiple separate systems created a fragmented and redundant process
- Time consuming
 - Data processing and quality assurance (QA)
 - Delay in providing uniform and pertinent data to researchers, program monitors and program improvement needs

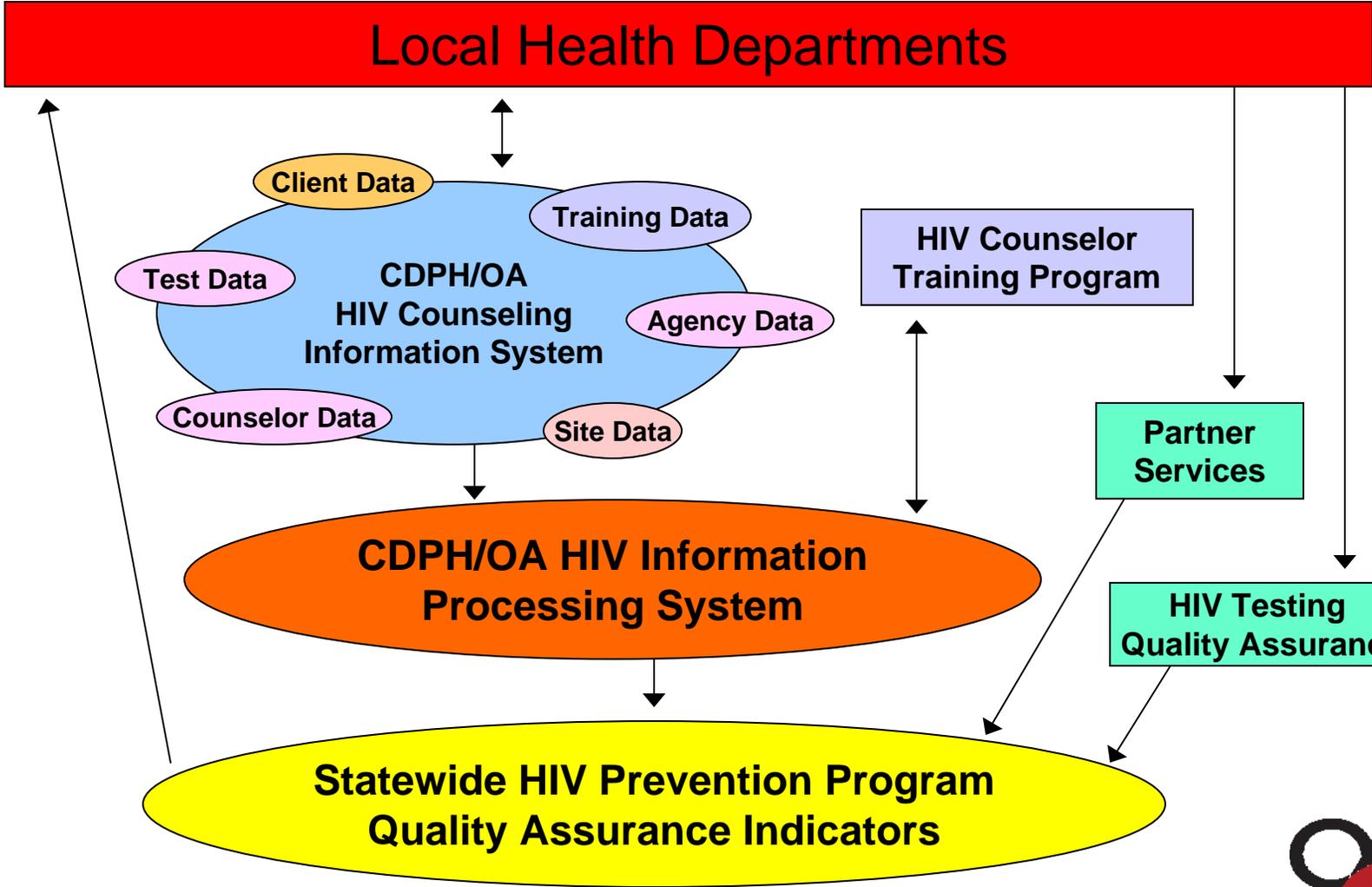
Key Questions

- How can a Web-based system improve the flow of information?
- How can we best reach high-risk clients?
- Can we improve the quality of testing and our response to potential problems?
- How do we track HIV medical referrals?
- Can monitoring and evaluation of partner services be improved?
- How do we complete the loop in quality assurance?

How do we improve?

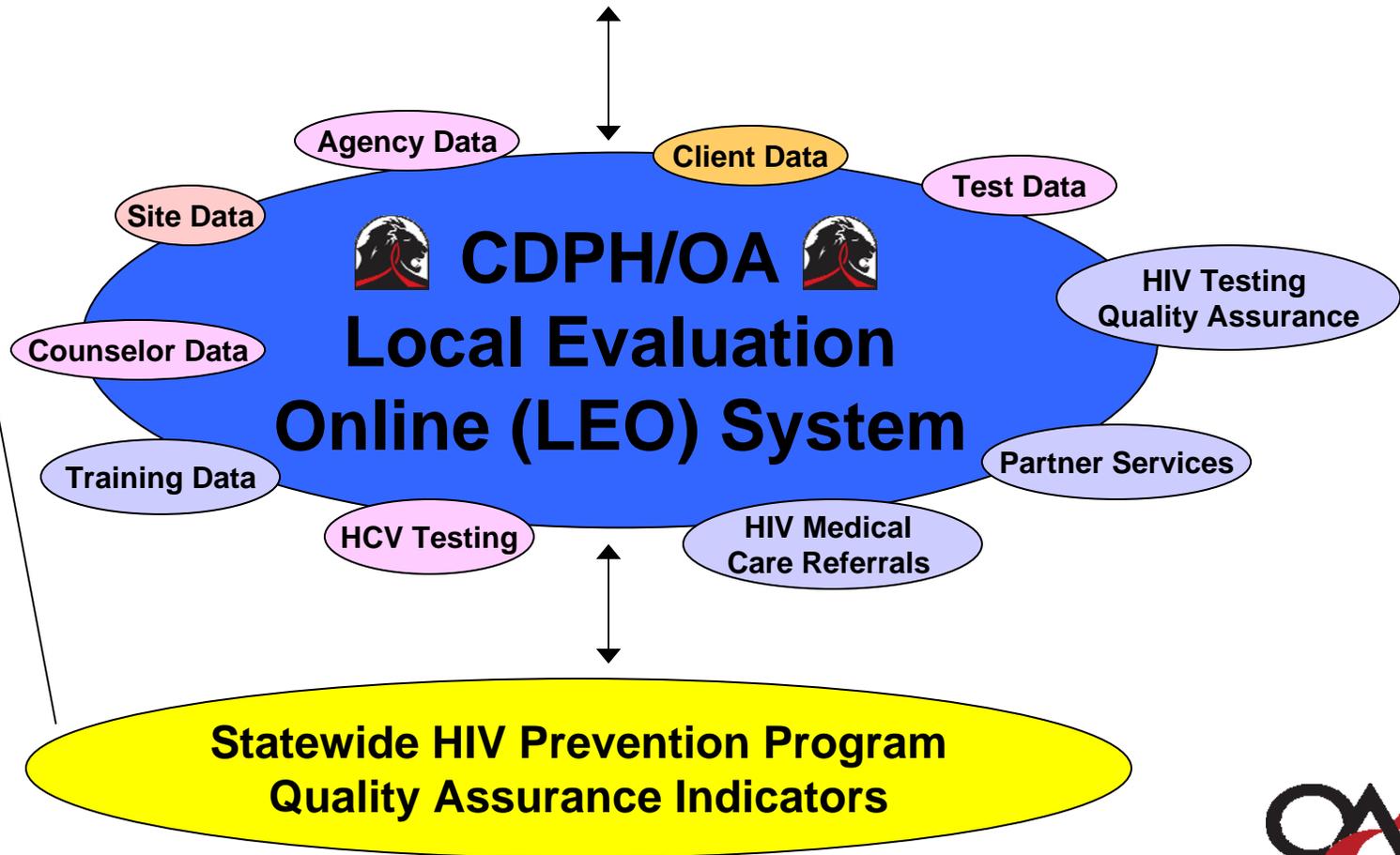
- HIV counseling, testing, and referral (CTR) prevention programs
 - Identifying HIV positive persons
 - Linking clients to medical care, partner services, and other HIV prevention services.
- Advances in HIV rapid testing technologies
 - Adherence to testing procedures
 - Maintenance of test kits

CTR Legacy System



Local Evaluation Online (LEO)

Local Health Departments



Local Evaluation Online (LEO)

- LEO is a Web-based data information system
- Collects HE/RR data
- Collects required state and federal HIV counseling, testing, and referral (CTR) data
 - Records HIV test results
 - Rapid and conventional testing quality assurance
 - Monitors service provider trainings
 - Verifies HIV medical care referrals
 - Tracks linkages to partner services
 - Real time reports and feedback on services rendered
- Multi-use system for LHJs, CBOs, CDPH/OA program monitors, administrators, and researchers



Completing the Loop

- A Web-based system makes modifications easier in response to changes
- Real time feedback is necessary to respond in a timely manor
 - Dynamic validation prompts
 - Quality assurance and locally relevant reports assist in improving services
- Testing quality and adherence to standards and ensuring linkages to care
 - LEO tracks and flags records that require follow-up testing, verification of HIV medical care linkages, and partner services.



Testing Quality Assurance

- Track counselor training and certification
- Electronic External Quality Control (EQC) log
 - Verifies that control testing is conducted at appropriate intervals
 - Alerts administrators and supervisors in the event of a quality control failure
- Lab slip results are entered directly into LEO
- HIV Testing Incident Report



Rapid Testing Training

Latest Certificate Summary				
Skill	Expiration Date	Grace Period		
Rapid Test Kit Operator	5/6/2005	N/A		

Add New Education					
Education List					
	Course Name	Course Date	Skill	Months	Authorized By
Edit	Annual Rapid Test Competency Assessment	3/1/2004	Rapid Test Kit Operator	12	Wright, Philip
Edit	Initial Rapid Test Competency Assessment	11/6/2003	(Intro) Rapid Test Kit Operator	6	Wright, Philip
Edit	Rapid Test Training	11/5/2003	(Intro) Rapid Test Kit Operator	0	Wright, Philip

Test Competency

Initial training



External Quality Control Log

Who? & Where?

Tracks expiration

Warns if temp. and time is out of range

External Quality Control Log					
Control Result:					
Control Date:	<input type="text" value=""/> <small>(mm/dd/yyyy)</small>	Tester:	<input type="text" value=""/>	<input type="button" value="Search"/>	
Location:	<input type="text" value=""/>				
<input type="checkbox"/> Show All Locations					
QC Code:	<input type="text" value=""/>				
Test Kit					
Lot#:	<input type="text" value=""/>	Expiration Date:	<input type="text" value=""/>	<small>(mm/yyyy)</small>	
Control Kit					
Lot#:	<input type="text" value=""/>	Closed vial Expiration Date:	<input type="text" value=""/>	Open vial Expiration Date:	<input type="text" value=""/>
			<small>(mm/yyyy)</small>		<small>(mm/dd/yyyy)</small>
Control Tests					
Test Name	Start Time (hh:mm am or hh:mm pm)	Start Temperature	End Time (hh:mm am or hh:mm pm)	End Temperature	Result
Negative Control	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>
HIV-1 Positive Control	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>
HIV-2 Positive Control	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>



HIV Testing Lab Slips

Warns if temp. and time is out of range

Section: Rapid Test

Encounter ID: 4

Unique Office of AIDS Client Number: (XXX-XXXX-X or XXXXXXXX)

Lab Slip Sequence Number:

Specimen Date: (mm/dd/yyyy)

Lot Number:

Expiration Date: (mm/yyyy)

Counselor/Tech ID:

Specimen:

Begin Test Time: (hh:mm): Enter in Military Time, For Example 6:00PM Is 18:00

Begin Test Temperature:

End Test Time: (hh:mm): Enter in Military Time, For Example 6:00PM Is 18:00

End Test Temperature:

Result:

Confirmatory Specimen Given:

Mark if client ever in an HIV vaccine trial:

- LEO dynamically responds to HIV testing anomalies automatically through prompts.



HIV Testing Lab Slips

Triggering Event

Tests Requested

Section: Conventional Test	
Encounter ID:	3
Unique Office of AIDS Client Number:	858-8186-2 (XXX-XXXX-X or XXXXXXXXX)
Lab Slip Sequence Number:	2
Specimen Date:	4/1/2008 (mm/dd/yyyy)
Return Appointment Date:	4/8/2008 (mm/dd/yyyy)
Tests Requested & Lab Specimen	
Triggering Event:	<input type="checkbox"/> No Triggering Event <input checked="" type="checkbox"/> Rapid Preliminary Positive <input type="checkbox"/> Discordant Confirmatory <input type="checkbox"/> Inconclusive Result <input type="checkbox"/> Suspected HIV-2 <input type="checkbox"/> Reactive HIV-2 Screen <input type="checkbox"/> Other Other, specify: <input type="text"/>
Lab Tests Requested:	<input type="checkbox"/> Standard HIV-Antibody <input checked="" type="checkbox"/> HIV Confirmatory <input type="checkbox"/> HIV-2 Screening <input type="checkbox"/> HIV-2 Confirmatory <input type="checkbox"/> Other Other, specify: <input type="text"/>
Lab Specimen:	1-Oral
Mark if client ever in an HIV vaccine trial:	<input type="checkbox"/>



HIV Testing Lab Slips



Laboratory Use Only																			
Tests Performed:																			
	<table border="1"> <thead> <tr> <th>Test Method Name</th> <th>Test Result</th> </tr> </thead> <tbody> <tr> <td>EIA (HIV-1)</td> <td><input type="text"/></td> </tr> <tr> <td>EIA (HIV-2)</td> <td><input type="text"/></td> </tr> <tr> <td>EIA (HIV-1/HIV-2)</td> <td><input type="text"/></td> </tr> <tr> <td>IFA (HIV-1)</td> <td><input type="text"/></td> </tr> <tr> <td>WB (HIV-1)</td> <td>2-Non-Reactive <input type="text"/></td> </tr> <tr> <td>WB (HIV-2)</td> <td><input type="text"/></td> </tr> <tr> <td>Multispot (HIV-1/HIV-2)</td> <td><input type="text"/></td> </tr> <tr> <td>Other</td> <td><input type="text"/></td> </tr> </tbody> </table>	Test Method Name	Test Result	EIA (HIV-1)	<input type="text"/>	EIA (HIV-2)	<input type="text"/>	EIA (HIV-1/HIV-2)	<input type="text"/>	IFA (HIV-1)	<input type="text"/>	WB (HIV-1)	2-Non-Reactive <input type="text"/>	WB (HIV-2)	<input type="text"/>	Multispot (HIV-1/HIV-2)	<input type="text"/>	Other	<input type="text"/>
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Multispot (HIV-1/HIV-2)	<input type="text"/>																		
Other	<input type="text"/>																		
Other Test Name Performed:	<input type="text"/> *																		
Other Test Results Specify:	<input type="text"/> *																		
Summary Interpretation:	3-No HIV Antibody Detected <input type="text"/>																		



HIV Testing Incident Report

- Validation and documentation are required
 - Testing events that are unusual or out of compliance
- Required for certain test results:
 - Discordant or inconclusive results
 - Disclosure message
 - Additional testing recommended
 - Invalid rapid tests
- Required for certain circumstances:
 - Rapid test result not disclosed
 - Rapid confirmatory sample not submitted
 - Confirmatory test result not disclosed
 - Other unusual outcomes



HIV Testing Incident Report

HIV C&T Testing Incident Report	
Encounter ID: 3	
Test Results	
<input checked="" type="checkbox"/>	Discordant Result (Complete section A) <i>Rapid test result was preliminary positive, and any subsequent test result is negative or inconclusive</i>
<input type="checkbox"/>	Inconclusive Result (Complete section A) <i>Conventional test result is inconclusive</i>
<input type="checkbox"/>	Invalid Rapid Test Result (Complete section B) <i>Any invalid rapid test result, regardless of subsequent testing outcomes</i>
Rapid Test Disclosure & Confirmatory Sample	
<input type="checkbox"/>	Rapid test result not disclosed (Complete section C) <i>Client did not receive the result from a rapid test</i>
<input type="checkbox"/>	Confirmatory sample not submitted (Complete section D) <i>Client received preliminary positive rapid test result, but did not submit a confirmatory sample</i>
<input type="checkbox"/>	Confirmatory test result not disclosed (Complete section E) <i>Client submitted a confirmatory sample for a preliminary positive rapid test, but did not receive the confirmatory result</i>
Other	
<input type="checkbox"/>	Other (Complete section F) <i>Any other unusual testing or disclosure outcome</i>



HIV Testing Incident Report

Disclosure Message

Recommendations

Clients action & Notes

Section A: Discordant or Inconclusive Results			
Lab Slip #	Specimen Date	Specimen Type	Tests Performed
1	4/1/2008	Oral	OraQuick : Preliminary Positive
OA ID: 856-5259-4			
Disclosure Date: 4/1/2008 OR <input type="checkbox"/> (NOT IMPLEMENTED) No Disclosure occurred for these results.			
Disclosure Message: 3-It is possible client has HIV			
Testing: 2-Recommend further testing immediately			
Client Action: 1-Yes			
Notes (max char 2000): Client provided confirmatory specimen that was sent to the lab with results available on 4/8/08. Given the original kit was due to expire this month, a second rapid test from a different lot number and			
2	4/1/2008	Oral	WB (HIV-1) : Non-Reactive
OA ID: 858-8186-2			
Disclosure Date: 4/8/2008 OR <input type="checkbox"/> (NOT IMPLEMENTED) No Disclosure occurred for these results.			
Disclosure Message: 5-Client does NOT have HIV			
Testing: 3-Recommend returning for follow-up testing after specified time period			
Client Action: 8-Don't know (explain below)			
Notes (max char 2000): Client will follow-up in 3 months.			



Services for HIV+ Clients

- Services to HIV+ clients are critical to meeting prevention goals
- At a minimum, all clients should be given a referral to medical care and other appropriate support and social services, including partner counseling and referral services (PCRS)

Verified Medical Visit

- CDPH/OA emphasizes linkages to medical care and treatment for individuals who test HIV positive
- Important to verify that all HIV positive clients get linked to an HIV care provider and actually get into medical care.

Verified Medical Visit

- For clients that do not already have a medical provider
 - provide a medical referral to a primary care physician, medical provider specializing in HIV or infectious diseases, or a care program
- Verify that the client entered medical care or saw a medical doctor, nurse practitioner or physician's assistant

Medical Referrals

Section: HIV Positive

HIV positive medical referrals: No medical referrals

HIV case management

Early Intervention Program (EIP)

Prenatal care

HIV medical services (care, evaluation, treatment)

Client plans to use their own physician/health plan

Referrals provided but client declined referrals

Other medical referral

Other medical referral, specify:

Medical Visit Verified By Client:

Medical Visit Verified By Data:

Medical Visit Verified By Provider:

Medical Visit Date:

- Records remain open until referrals are verified.

Lessons Learned

- A web-based system streamlines HIV CTR processes and eliminates redundancies
 - Improved data quality and perceived relevance
 - Improves feedback mechanisms
 - Assists in service linkages
- Allows program practitioners access to local data to target and improve HIV prevention programs.
- A close collaboration is required to create an intuitive, user-friendly system that meets the needs of all stakeholders
 - administrators, program monitors, researchers, providers, and end users

Contact Information

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LHJ administrators and front line staff

Community Based Organizations that provide services to clients

