

# Examining a Technology Framework for Statewide Electronic Data Collection: A Conceptual Diagram from California

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# Outline

- Purpose
- Overarching requirements
- Client flow
- Counselor flow
- Data flow
- Conceptual diagram
- Possible directions

# Develop an electronic data collection system that will make everyone's job easier and comply to policies

- Clients
  - Protect clients' privacy
  - Provide needed services and referrals
  - Increase convenience
- Counselors
  - Reduce paperwork
  - Organize the data better to understand the epidemic
  - Ease reporting to funders
- State of California Office of AIDS
  - Easier to gather data into our data system (LEO)
  - Link with other services (e.g., Care and Surveillance)
  - Plan for low literacy and multi-lingual populations



# Technology Summit

- Documented overarching requirements
  - Identify client at point of contact (POC)
  - Collecting required data while allowing for local flexibility
- All systems that collect sensitive data need the proper level of Security

# Overarching Requirement #1: Linking ID

- Link to
  - Previous client services in education and prevention (E&P)
  - Care (ARIES)
  - Surveillance (EHARS)
- Keep Local Evaluation Online (LEO)  
HIPAA compliant
  - LEO does not store personal information, except for date of birth and first letter of last name

# Linking ID remedy

- A one-way hash code with follow-up questions.
  - A hash code is a series of numbers which represents a unique client based on provided information.
  - The codes themselves are meaningless and can not be used to determine any information about the client.

## Linking ID remedy (cont.)

- Personal information might be used to generate hash codes (realizing this information is not stored)
  - First Name, Last Name, Gender, Race, DOB
- Possible Follow-up Question(s)
  - Middle initial
  - Name of grade school
  - Agency or location and month of last service

# Overarching requirement #2: Data collection

Collecting the required core variables while allowing for local flexibility

- Various local devices
- Supplemental form requirements
  - Ease of creating
  - Ease of linking to core forms
- Download the forms to any device
- Download and install the validation rules

# Data collection remedy

- Multi-tiered architecture
  - 1<sup>st</sup> level => Local device
    - Hash code algorithm
    - Core and supplemental data
    - Validation rules
  - 2<sup>nd</sup> level => 3<sup>rd</sup> party HIPAA agent
    - Core data
    - Hash codes and follow-up questions
  - 3<sup>rd</sup> level => LEO
    - Core data
    - Hash codes
    - Linking IDs with other systems (e.g. ARIES and EHARS)

# Client flow

## Client uses Device

Client  PDA & SD Cards



### 3rd Party HIPAA

#### Agent

- Hashed IDs (■)
- Follow-up Questions

## Client answers follow-up questions

Client  PDA & SD Cards



### 3rd Party HIPAA

#### Agent

- Hashed IDs (■)
- Follow-up Questions

## Client completes forms

Client  PDA & SD Cards

# Client flow

**Client uses Device**

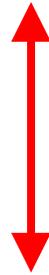


**3rd Party HIPAA**

**Agent**

- Hashed IDs (■)
- Follow-up Questions

**Client answers follow-up questions**



**3rd Party HIPAA**

**Agent**

- Hashed IDs (■)
- Follow-up Questions

**Client completes forms**



## Client uses Device

Client



Tablet PC  
- Wireless



3rd Party HIPAA

Agent

- Hashed IDs (■)
- Follow-up Questions

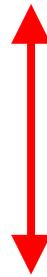
# Client flow

Client answers  
follow-up questions

Client



Tablet PC  
- Wireless



3rd Party HIPAA

Agent

- Hashed IDs (■)
- Follow-up Questions

Client completes  
forms

Client



Tablet PC  
- Wireless

# Client flow

## Client uses Device

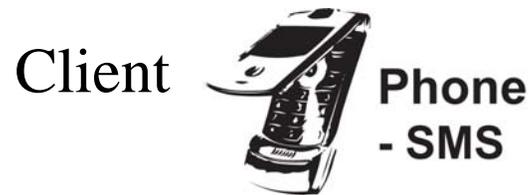


### 3rd Party HIPAA

#### Agent

- Hashed IDs (■)
- Follow-up Questions

## Client answers follow-up questions



### 3rd Party HIPAA

#### Agent

- Hashed IDs (■)
- Follow-up Questions

## Client completes forms



# Counselor flow

 PDA  
&  
SD  
Cards



3rd Party HIPAA Agent  
- Hashed IDs (■)  
- Follow-up Questions

S  
E  
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S  
I  
O  
N

 PDA  
&  
SD  
Cards



Local Database  
- Primary Desktop,  
- Local Server,  
- LHJ Server,  
- Or a Combination

# Data flow

- Material from this slide is not currently available

# Conceptual Diagram

- Material from this slide is not currently available

# Possible Directions

- Write the business and system requirements.
- Cost/benefit analyses on the system
- Meeting with the stakeholders to receive feedback
  - Nothing is carved in stone

# Thank You

- Especially
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  - Deanna Sykes

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