

# Building Virtual Bridges across the HIV Care Continuum

Novel Methods to Match Patient Records Securely  
& Confidentially through Health Information  
Technology

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HIV/AIDS Bureau: Special Projects of National Significance

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# Disclosures

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**Presenter(s) has no financial interest to disclose.**

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# **HIV/AIDS Bureau Vision and Mission**

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## **Vision**

**Optimal HIV/AIDS care and treatment for all.**

## **Mission**

**Provide leadership and resources to assure access to and retention in high quality, integrated care, and treatment services for vulnerable people living with HIV/AIDS and their families.**



# HIV/AIDS Bureau Priorities

- **NHAS 2020/PEPFAR 3.0** - Maximize HRSA HAB expertise and resources to operationalize NHAS 2020 and PEPFAR 3.0
- **Leadership** - Enhance and lead national and international HIV care and treatment through evidence-informed innovations, policy development, health workforce development, and program implementation
- **Partnerships** - Enhance and develop strategic domestic and international partnerships internally and externally
- **Integration** - Integrate HIV prevention, care, and treatment in an evolving healthcare environment
- **Data Utilization** - Use data from program reporting systems, surveillance, modeling, and other programs, as well as results from evaluation and special projects efforts to target, prioritize, and improve policies, programs, and service delivery
- **Operations** - Strengthen HAB administrative and programmatic processes through Bureau-wide knowledge management, innovation, and collaboration

# Overview

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- **Program Background of HRSA HAB Special Projects of National Significance (SPNS)**
- **Health IT portfolio of SPNS**
- **Lessons:**
  - How health information technology can bring improvements along the HIV care continuum
  - Major challenges to exchanging health information at the state and city levels across multiple health care settings and data sources

# Ryan White HIV/AIDS Treatment Modernization Act of 2006: SPNS Authority and Purpose

## **TITLE VI—DEMONSTRATION AND TRAINING SEC. 601. DEMONSTRATION AND TRAINING.**

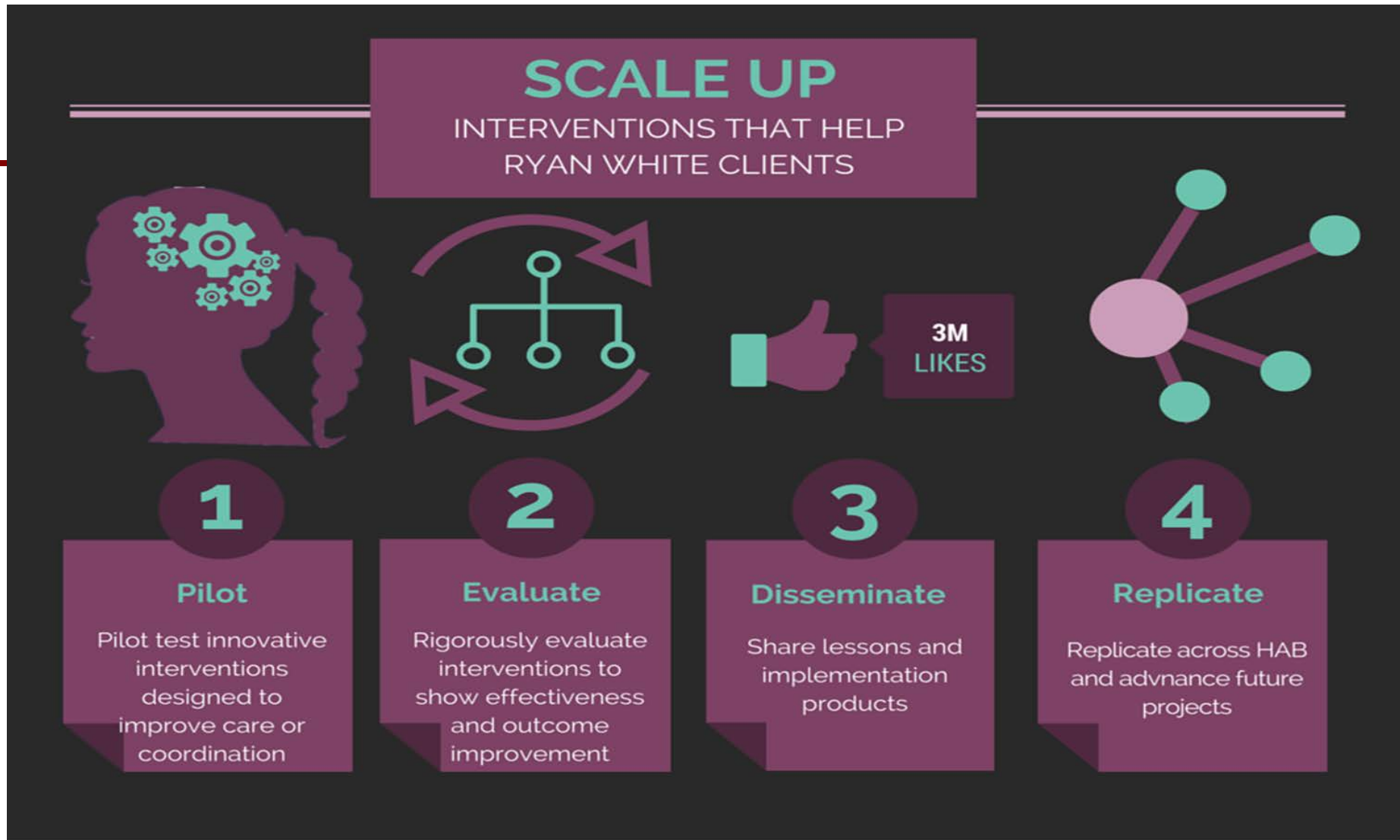
**Subpart I of part F of title XXVI of the Public Health Service Act (42 U.S.C. 300ff–101 et seq.) is amended to read as follows:**

**“Subpart I—Special Projects of National Significance “SEC. 2691. SPECIAL PROJECTS OF NATIONAL SIGNIFICANCE. “(a) IN GENERAL.—Of the amount appropriated under each of parts A, B, C, and D for each fiscal year, the Secretary shall use the greater of \$20,000,000 or an amount equal to 3 percent of such amount appropriated under each such part, but not to exceed \$25,000,000, to administer special projects of national significance to—**

**“(1) quickly respond to emerging needs of individuals receiving assistance under this title; and**

**“(2) to fund special programs to develop a standard electronic client information data system to improve the ability of grantees under this title to report client-level data to the Secretary.**

# SPNS Mission



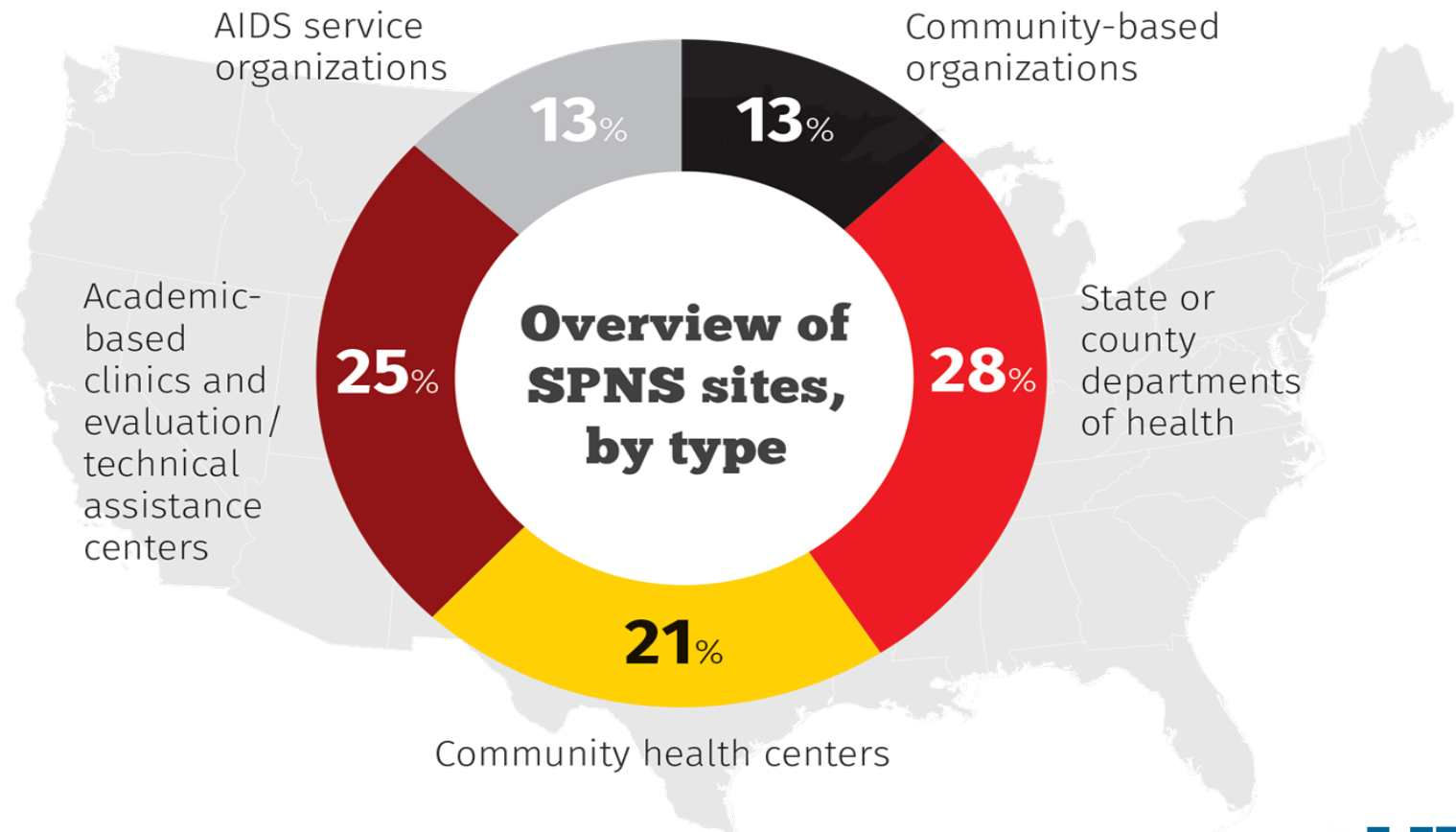
# SPNS

## SPNS grantees

are located across the country and touch the hardest-to-reach populations:

Homeless Latinos  
Incarcerated American Indians/  
Alaska Natives  
Substance Users **YMSM** Women of Color Adolescents  
Transgender Women  
Caribbean-Americans

# Types of SPNS Grantees



# SPNS Investments in Health IT



2002

2004

2006

2008

2010

2012

2014

2016

2018

Evaluate Impact of HIT on Care

e Networks of Care

Capacity building grants:

Parts A & B

Parts C & D

All Parts

HIT for HIV Care Continuum

SMAIF HIEs for Care Engagement

SMAIF HIV Care & Housing Data Integration

Direct clinic IT investments:

Medical Home for HIV+ Homeless

Practice Transformation HIV Primary Care

2002 2004 2006 2008 2010 2012 2014 2016 2018

## Evaluate Impact of HIT on Care

### e Networks of Care

#### Capacity building grants:



Parts A & B



Parts C & D



All Parts

### HIT for HIV Care Continuum



### SMAIF HIEs for Care Engagement



### SMAIF HIV Care & Housing Data Integration



### Direct clinic IT investments:



### Medical Home for HIV+ Homeless



### Practice Transformation HIV Primary Care



2002 – 2006

6 grants

\$11.8M

\$400k per grant

# Evaluation of a Patient-Centered Electronic Medical Record in a Medicaid Special Needs Program (Cornell University) (2002-2006)

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- Evaluation of implementing audio-computer-assisted self-interview as part of routine medical care at two community hospital-based HIV clinics in NYC.
  - Identified inadequate medication adherence and depression symptoms for targeted psychosocial services
- Patients were comfortable as an additional communication tool
- Providers acceptability if communication is passed in a timely manner
- Feasible to integrate ACASI screening tools

2002

2004

2006

2008

2010

2012

2014

2016

2018

Evaluate Impact of HIT on Care

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Capacity building grants:

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Direct clinic IT investments:

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Practice Transformation HIV Primary Care

2007 – 2011

6 grants

1 evaluation center

\$11.7M

# Lessons Learned from the Electronic Networks of Care Initiative (2007–2011)

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- Health information exchanges (HIEs) were effective in **improving the delivery, continuity, and quality of care** to people living with HIV/AIDS who receive services in publicly-funded settings.
- The systems were able to better **integrate a fragmented HIV health and social service care system** and share client health information available across a network of providers.
- Electronic information exchange offers the promise of **improved coordination of care**.

# Lessons Learned from the Electronic Networks of Care Initiative (2007–2011)

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- However, implementation of HIEs goes beyond programing and hardware installation challenges, and requires close attention to the needs of the HIEs end-users.
- Providers need to discern value from a HIE because their active participation is essential to ensuring that clinic and agency practices and procedures are reconfigured to incorporate new systems into daily work processes

# The Louisiana Public Health Information Exchange (LaPHIE) (2007-2011)

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- **First of its kind in the nation in achieving integration of HIV surveillance data with care and treatment**
- **Advanced real-time health information exchange with EMR-integrated alerting system**
- **Interface system between the LSU Public Hospital System-OPH**
- **Of 488 alerts**
  - 85% were shown to providers within 2 hours
  - 93% of providers took action if alert seen within 2 hrs
  - 345 people were identified
- **Provider ease of use, acceptable**
- **Success in linking and retaining hardest to reach population**

2002

2004

2006

2008

2010

2012

2014

2016

2018

## Evaluate Impact of HIT on Care

## e Networks of Care

### Capacity building grants:



Parts A &amp; B



Parts C &amp; D



All Parts

**2008 – 2009**

**17 grants to Part A  
and B recipients  
\$2.48M**

### HIT for HIV Care Continuum



### SMAIF HIEs for Care Engagement



### SMAIF HIV Care & Housing Data Integration



### Direct clinic IT investments:

#### Medical Home for HIV+ Homeless



#### Practice Transformation HIV Primary Care



2002

2004

2006

2008

2010

2012

2014

2016

2018

Evaluate Impact of HIT on Care

e Networks of Care

Capacity building grants:

Parts A & B

Parts C & D

All Parts

2009 – 2010

58 grants to Part C  
and D recipients  
\$4.4M

HIT for HIV Care Continuum

SMAIF HIEs for Care Engagement

SMAIF HIV Care & Housing Data Integration

Direct clinic IT investments:

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Practice Transformation HIV Primary Care

2002

2004

2006

2008

2010

2012

2014

2016

2018

## Evaluate Impact of HIT on Care

## e Networks of Care

### Capacity building grants:

Parts A &amp; B

Parts C &amp; D

All Parts

**2010 – 2011****27 grants to recipients****from all Parts****\$2.5M**

## HIT for HIV Care Continuum

## SMAIF HIEs for Care Engagement

## SMAIF HIV Care & Housing Data Integration

## Direct clinic IT investments:

## Medical Home for HIV+ Homeless

## Practice Transformation HIV Primary Care



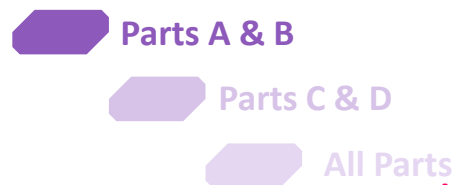
Evaluate Impact of HIT on Care



e Networks of Care



Capacity building grants:

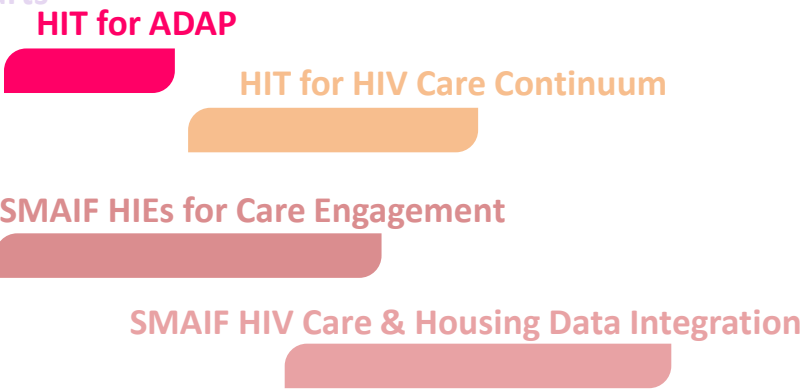


2013 – 2014

9 grants

\$900K

\$100K per grant



Direct clinic IT investments:





Evaluate Impact of HIT on Care



e Networks of Care



Capacity building grants:



Parts A & B



Parts C & D



All Parts

HIT for ADAP



HIT for HIV Care Continuum



2014 – 2017

4 grants

\$6M

\$500K per grant per year

SMAIF HIEs for Care Engagement



SMAIF HIV Care & Housing Data Integration



Direct clinic IT investments:

Medical Home for HIV+ Homeless



Practice Transformation HIV Primary Care





Evaluate Impact of HIT on Care



e Networks of Care



Capacity building grants:



Parts A & B



Parts C & D



All Parts

HIT for ADAP



HIT for HIV Care Continuum



SMAIF HIEs for Care Engagement



SMAIF HIV Care & Housing Data Integration



Direct clinic IT investments:



Medical Home for HIV+ Homeless



Practice Transformation HIV Primary Care



2012 – 2016  
1 grant  
\$1.5 M  
\$500K per year



Evaluate Impact of HIT on Care



e Networks of Care



Capacity building grants:



Parts A & B



Parts C & D



All Parts

HIT for ADAP



HIT for HIV Care Continuum



SMAIF HIEs for Care Engagement



SMAIF HIV Care & Housing Data Integration



Direct clinic IT investments:



Medical Home for HIV+ Homeless



Practice Transformation HIV Primary Care



2012 - 2017  
Modifying clinic IT systems to support care coordination and better assessment of health risks and outcomes

5 demonstration sites



Evaluate Impact of HIT on Care



e Networks of Care



Capacity building grants:



HIT for ADAP



HIT for HIV Care Continuum



SMAIF HIEs for Care Engagement



SMAIF HIV Care & Housing Data Integration



Direct clinic IT investments:



Medical Home for HIV+ Homeless



Practice Transformation HIV Primary Care



2014 - 2018

Modifying clinic IT systems to support new practice models as clinics transition, enable better monitoring of outcomes

16 demonstration sites



## HIV Care and Housing Coordination through Data Integration to Improve Health Outcomes along the HIV Care Continuum

SPNS and SMAIF are funding the RAND Corporation to award up to 4 performance sites to integrate client-level data systems between care and housing providers to better coordinate services

Laboratory (v2.5 HL7 messages)

Surveillance (eHARS)

Client-level outcomes (RSR xml, EHR system, HIE)



Point-of-care, Health systems

Investigation, Coordination

Patients, Community



# Virginia Department of Health

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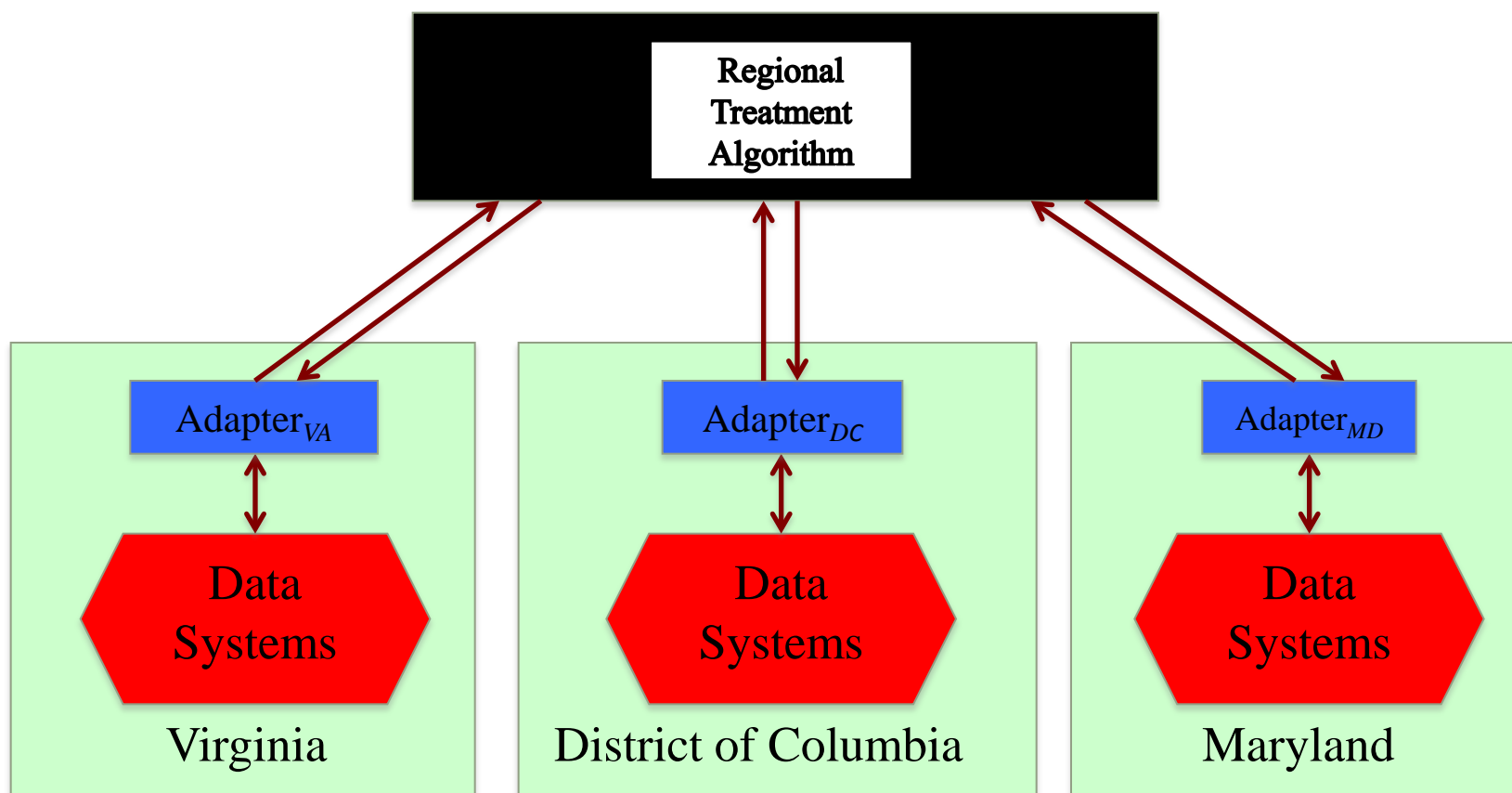
- In collaboration with Georgetown University, District of Columbia Department of Health, HIV/AIDS, Hepatitis, STD, and TB Administration, and Maryland Department of Health and Mental Hygiene, Infectious Diseases Bureau
- Originally developed from supplemental funding for innovative solutions to securely matching patient-level data from NIAID DAIDS (5U01A1034994)
- The **Black Box** approach

Ocampo JMF, et. al., Improving HIV Surveillance Data for Public Health Action in Washington, DC: A Novel Multiorganizational Data-Sharing Method. JMIR Public Health Surveill 2016;2(1):e3. DOI: [10.2196/publichealth.5317](https://doi.org/10.2196/publichealth.5317)

# “Black Box” device



# Examination of HIV care “churn effect” across DC metropolitan region



# Pilot system “churn effect” summary

Output of person-matching across DC, MD, and VA eHARS databases:

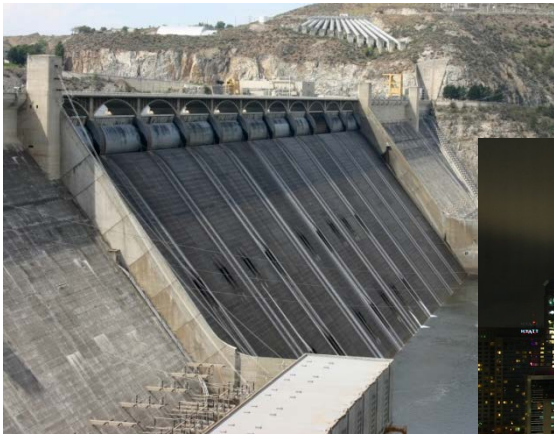
Person matches across jurisdictions:	Exact	Very High	High	Medium High	Medium	Very Low	Total
DC-MD*	4013	5907	53	268	645	482	11 368
MD-VA*	856	2343	11	117	377	865	4569
VA-DC*	1064	3340	15	149	438	529	5535
Total	5933	11 590	79	534	1460	1876	21 472

\*Bidirectional reporting results (i.e., DC-reported MD matches were equal to MD-reported DC-matches; etc.)

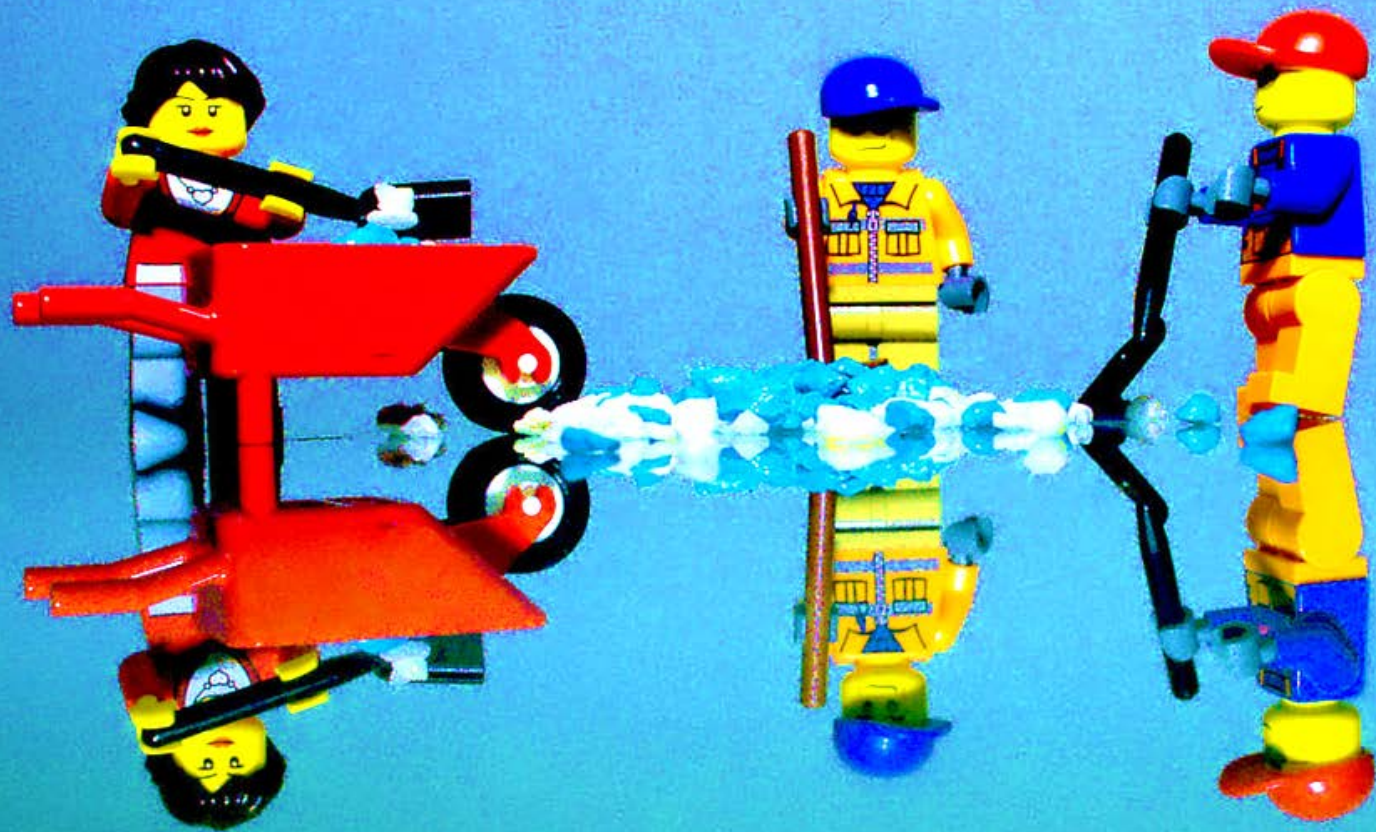
**82%** of persons have vital clinical and surveillance data  
across jurisdictions

# IT = infrastructure

**Even the non-HIT projects require IT investment.  
It is embedded in modern service delivery and  
health care today!**



# System-level Workforce Capacity Building for Integrating HIV Primary Care in Community Health Care Settings



# Most demonstration sites have required modifications to their EHR and other IT systems to support practice transformation

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Access Community Health Network, Chicago, IL

Centro de Salud de la Comunidad De San  
Ysidro, Inc., San Diego, CA

Coastal Bend Wellness Foundation, Inc.,  
Corpus Christi, TX

Family Health Centers of San Diego, Inc.,  
San Diego, CA

Florida Department of Health, Kissimmee, FL

FoundCare Inc., West Palm Beach, FL

Hektoen Institute for Medical Research  
(CORE Center), Chicago, IL

HELP/PSI Services Corp., Bronx, NY

La Clínica del Pueblo, Washington, DC

The MetroHealth System, Cleveland, OH

New York and Presbyterian Hospital, New York, NY

New York City Department of Health and Mental  
Hygiene, Rikers Island, NY

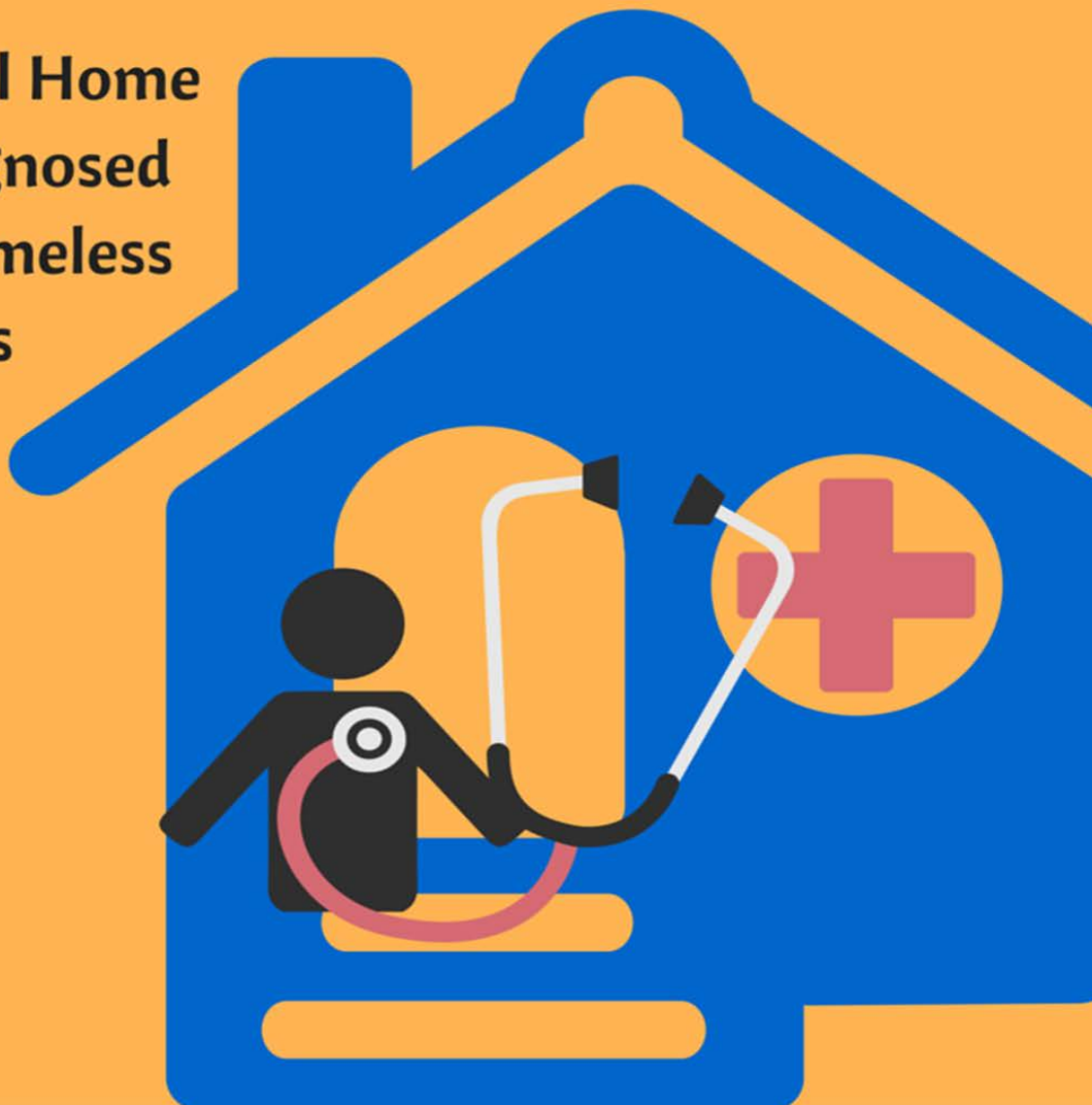
Special Health Resources for Texas, Inc.,  
Longview, TX

University of Miami, Coral Gables, FL

UPMC Presbyterian Shadyside, Pittsburgh, PA

University of California at San Francisco, San  
Francisco, CA (ETAC)

# Building a Medical Home for Multiply Diagnosed HIV-positive Homeless Populations



# Lessons

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- Plant a seed first: inventory IT capacity in the Ryan White HIV/AIDS Program (RWHAP) community
- Seize opportunities to innovate and improve quality of care
- Promote systems thinking
- Improve IT infrastructure and capacity: State, Local, and Clinic levels

# Contacts

<http://hab.hrsa.gov/abouthab/partfspns.html>

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