

Syphilis Screening in the Community



A NJ DOH DHSTS Pilot Project

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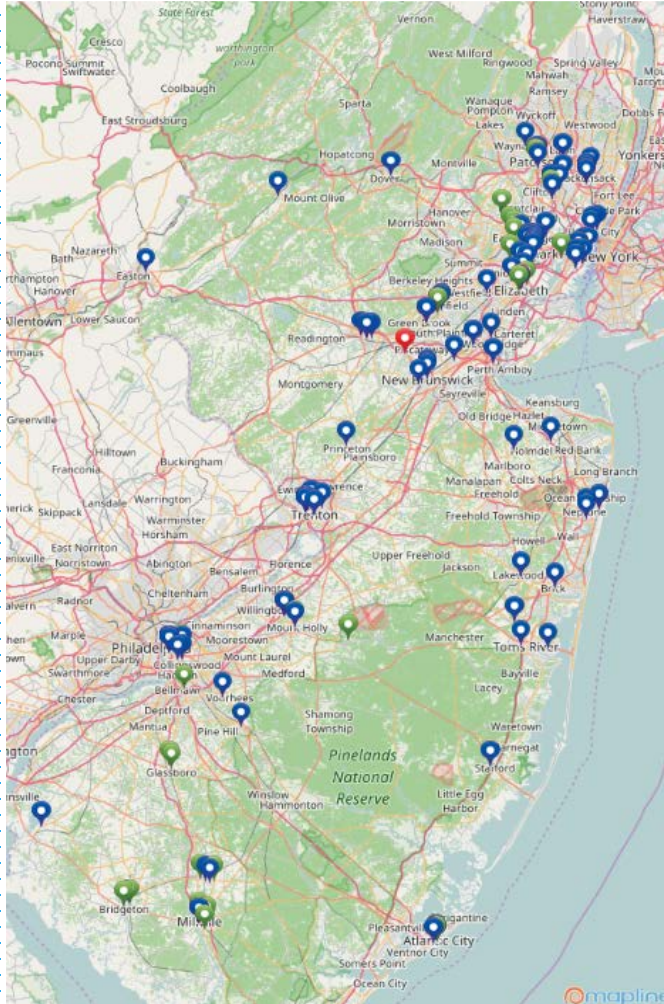
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A Thirteen Year Partnership

- Rutgers – Robert Wood Johnson Medical School has been working with the Department of Health on rapid HIV screening since 2004
- Original goal: Assist sites to insure the HIV testing was performed properly, but we are also responsible for evaluating new procedures, acquiring and distributing supplies, providing a QA framework for testing and a training resource for the state.
- In 2004, NJ required a NJ clinical laboratory license for many CLIA-waived tests – including HIV, HCV, & Syphilis
- Today, DHSTS is expanding the testing initiative to include pilot programs in other sexually transmitted diseases such as HCV & Syphilis

NJ HIV: Rapid DHSTS HIV Testing Sites

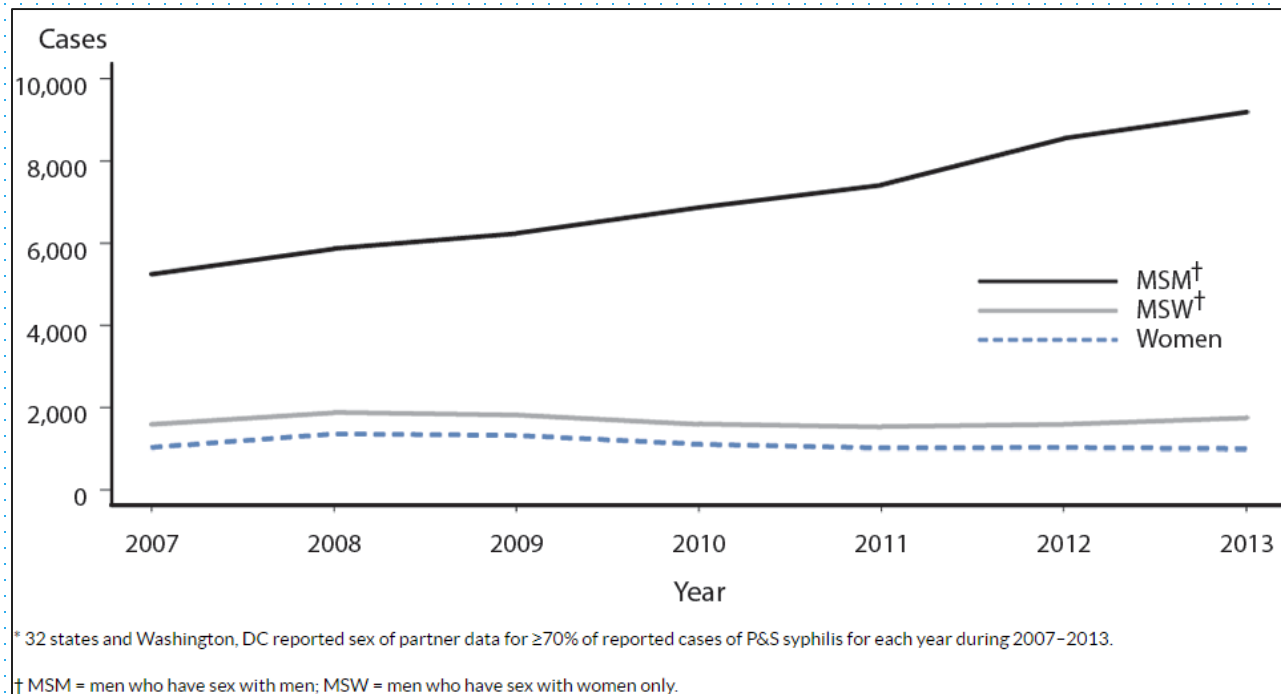


RWJMS	Venue	Stationary	Mobile Vans	Totals
	CBO	24	13	37
	CLINICS	6		6
	CORRECTIONS	5		5
	FQHC	21	2	23
	HEALTH DEPT	20	3	23
	HOSPITALS	2		2
	HIGH SCHOOLS	1		1
	UNIVERSITIES	3		3
	SUBSTANCE ABUSE	3		3
		85	18	103
NON-RWJMS				
	CBO	1	1	2
	CORRECTIONS	1		1
	FQHC	15	1	16
	HEALTH DEPT	3		3
	HOSPITALS	14	2	16
	HIGH SCHOOLS	0		0
	UNIVERSITIES	2		2
	SUBSTANCE ABUSE	0		0
	FAMILY PLANNING	4	0	4
		40	4	44
<i>4/28/2017</i>	NEW JERSEY (ALL SITES)	125	22	147

OBJECTIVES OF THE SYPHILIS PILOT PROGRAM

- ❑ Syphilis: An STD epidemic that is re-emerging particularly among young MSM
- ❑ Limited funds are being used to *pilot* a community based syphilis screening program to identify newly infected individuals from those at high risk and to link them to care & treatment
- ❑ A QUICK REVIEW: Syphilis and Syphilis Screening
- ❑ Why we need to worry about it? What we've learned about linkage, and why Rapid Syphilis Screening by a so-called reverse algorithm could be important.
- ❑ Lastly, what is the 'reverse algorithm'?

P&S Syphilis Increasing Among MSM



23,872 cases of P&S Syphilis reported in 2015

Rate: 8/100,000

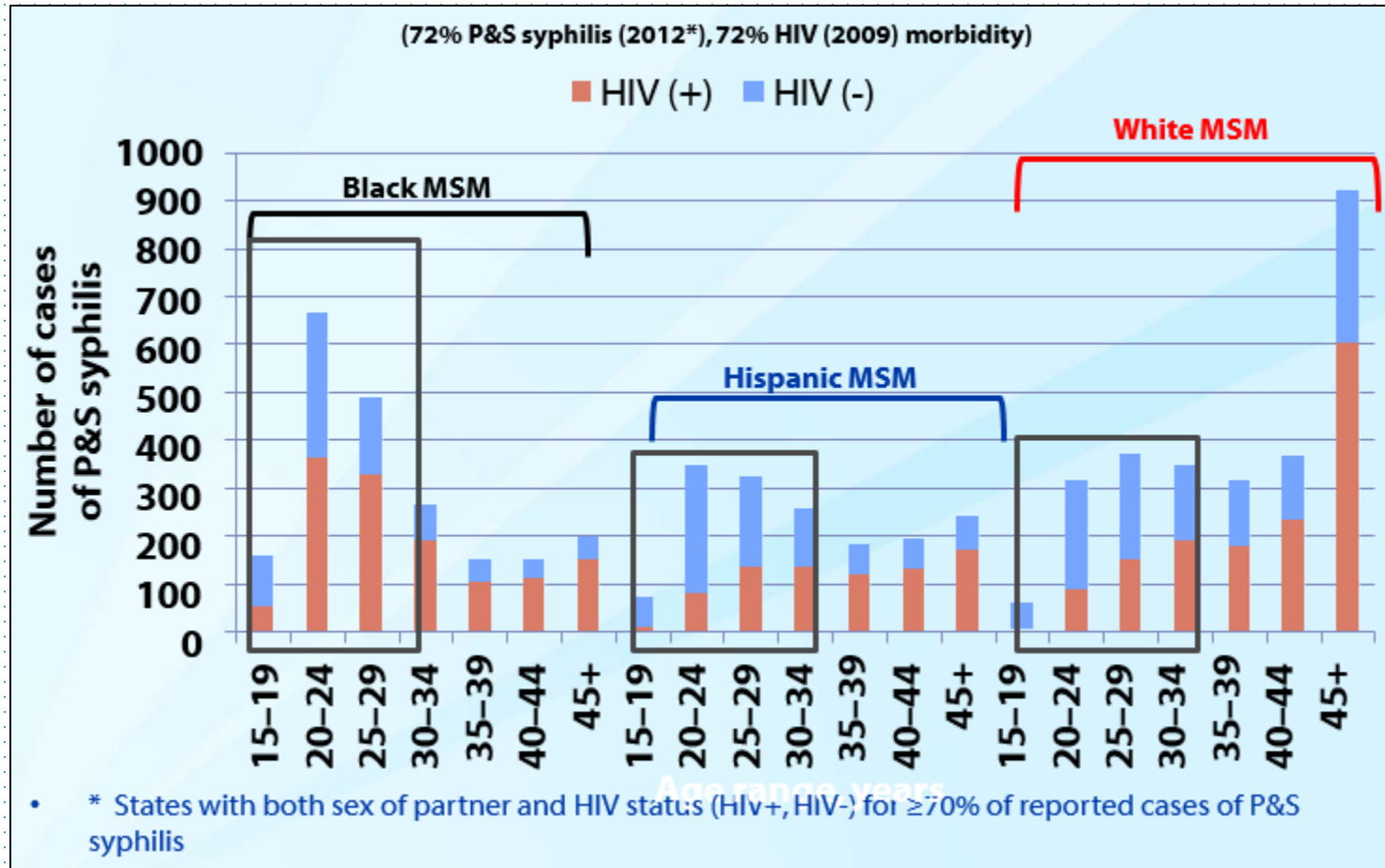
19% increase between 2014 & 2015!

Why are we doing this?

LINKAGE BETWEEN HIV AND STDs

- Persons infected with STDs (such as syphilis) are at least two to five times more likely than uninfected persons **to acquire HIV** infection if they are exposed to the virus through sexual contact.
- Persons infected with HIV who have an STD are also more likely **to transmit HIV** through sexual contact than other HIV-infected persons.
- Thus: testing AND treating STDs such as syphilis could be an effective means of preventing the spread of HIV.

Cases of syphilis among MSM with known HIV status, 29 states — 2012*





The Pilot: Community Screening for Syphilis

Rapid Screening Program

DHSTS: SYPHILIS PILOT PROGRAM

TARGET POPULATIONS

- 1) Young men-who-have-sex-with-men (YMSM)
- 2) Men-who-have-sex-with-men (MSM)
- 3) Adolescents and Young Adults

HIV Screening

RTA: Determine
& Unigold

Syphilis
Screening

Syphilis Health Check

FOLLOW-UP:

On-site Clinics/
STD Clinic/
Physician

EXCLUDED FROM Syphilis Screening:
Those previously infected!!

7 SITES: Syphilis Screening PILOT Program

African American Office of Gay Concerns - Newark

Camden AHEC - Camden

Hyacinth Foundation - Jersey City

Hyacinth Foundation - Trenton

NJCRI - Newark

Oasis Drop In Center/SJAA - Atlantic City

Visiting Nurse Association of Central NJ - Asbury Park

Syphilis Screening PILOT PROGRAM

Who Qualifies for On-Site Rapid Screening?

- Primarily High Risk MSM
- **NEVER** treated for Syphilis

Rapid Screen: Syphilis Health Check

- CLIA waived
- **SCREEN ONLY** → All positive screens **NEED** additional testing before a confirmed infection can be reported or treated!!

Follow-up: Linkage & Treatment

- STD Clinic
- On Site Clinics
- ADDITIONAL TESTING:**
 - RPR/VDRL (NON-TREP)
 - TP-PA/FTA-Abs (TREP):
- Private Physician (?)

Reporting:

- **NJ Syphilis Positive Tracking Form** (Non-HIPPA data) → DHSTS
- **DHSTS Syphilis Positive Form**
- **NJ STD11:**

The role of NJ HIV

Validation/Procedures/Development of Training Module/Trained NJ HIV

- Franchesca Jackson, BS
- Latasha Adams BS, MT
- Joanne Corbo, MT, MBA

Site Training: Syphilis Health Check

- NJ HIV Staff
- 1 WFD, Somerset, NJ
- All 7 sites have been trained, had hands-on testing experience and passed competency exams
- Proficiency testing

Inventory/Troubleshooting

- Purchase Inventory
- Validate lots
- Distribute inventory
- Review logs
- Technical Support

QA Support

- Review Testing Logs
- Collect linkage data
- Collect QA data:
- Screen + ---> Definitive Dx
- Received treatment
- Reported



Limitations of the Pilot Program

- Syphilis Screening IS NOT Diagnostic Testing. There is more to it than a single test.
- Syphilis Screen POS clients need to receive:
 - Additional testing to differentiate long ago exposure from untreated syphilis;
 - Or, the decision of a physician to treat on the basis of a potential, untreated infection.
- Goal of the pilot project is to:
 - Identify and treat individuals who are potentially able to infect others; AND/OR
 - Link individuals into a care continuum to complete the evaluation and receive treatment
- Why? Untreated syphilis is very easily spread and diagnosis during the latent phase is common
 - Primary syphilis is **often painless and can easily be missed**
 - Secondary syphilis often has more obvious symptoms: **upper body rash, rashes visible on hands and/or soles of the feet, warts** which usually lasts for 2-4 weeks but often disappears without treatment leading to → Latent syphilis
 - Latent syphilis is often only diagnosed by laboratory testing

Syphilis Testing

TWO TYPES OF TESTS INVOLVED IN DIAGNOSING SYPHILIS

NONTREPONEMAL TESTS: → INDIRECT screen for a syphilis infection. Detect biomarkers released during *CELLULAR INJURY* that occurs from the syphilis spirochete. All nontreponemal tests measure anti-lipid antibodies (IgG & IgM) formed in response to lipoidal material released from damaged host cells early in infection and to lipid from the cell surfaces of the treponeme itself.

- False-positive reactions ARE COMMON usually due to other infections: viral or bacterial
- False-negative results CAN ALSO occur when the antibody titer is very high
- Traditionally, confirmation is necessary with a Treponemal specific test
- **Decreased sensitivity in early primary and late syphilis**, when a large number of untreated patients will be negative
- **REACTIVITY DECLINES WITH TIME**

TREPONEMAL TESTS: → DIRECT screen for syphilis infection.

Treponemal tests look for antibodies against *Treponema pallidum* IgG, IgM.

- IgM antibodies are found in recent (primary) infection, as well as in the active phase of secondary and tertiary syphilis.
- T.pallidum IgG appears during primary infection and remain detectable for life
- **REACTIVITY PERSISTS OVER LIFETIME**

Syphilis Screening Paradigms



TRADITIONAL

Non-treponemal tests (RPR, VDRL)

- NON-SPECIFIC ANTIBODY AGAINST LIPOIDAL ANTIGENS
- QUANTITATIVE
- **REACTIVITY DECLINES WITH TIME**



Treponemal tests (TP-PA, FTA-Abs)

- SPECIFIC ANTIBODY AGAINST *T pallidum*
- QUALITATIVE
- REACTIVITY PERSISTS OVER LIFETIME

Syphilis Screening Paradigm

EMERGING / NEW...

The REVERSE ALGORITHM

Treponemal tests (Rapid HIV Test)

- SPECIFIC ANTIBODY TO *T pallidum*
- QUALITATIVE
- **REACTIVITY PERSISTS OVER LIFETIME**

reflex to

Non-treponemal tests (RPR, VDRL)

- NON-SPECIFIC ANTIBODY AGAINST LIPOIDAL ANTIGENS
 - QUANTITATIVE
 - **REACTIVITY DECLINES WITH TIME**
- AND FTA!**

A reactive result DOES NOT distinguish between recent or past infection

Not useful for those previously infected... SO WE DON'T SCREEN!

TREATMENT

- Presently, there is no clear consensus regarding immediate treatment following a Rapid Syphilis Screen POS
 - **It is an individual physicians' medical decision how to proceed following a positive rapid screening test**
 - We are collecting definitive laboratory results to better assess the meaning of a positive rapid screen.
- Current *CDC [syphilis treatment guidelines – 2015](#)*
- Additional CDC syphilis information is: www.cdc.gov/std/tg2015/syphilis.htm

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