

Product Type: Meeting and Conference Presentation

Presenter Name(s): Britney Johnson, MPH

Presenter Affiliations: New York State Department of Health

Title of Presentation: New York State PBRN: Delivery and Cost Study Award; Optimizing the Use of HIV/STD Partner Services Strategies

Meeting: Public Health PBRN DACS Methods Development Workshop

Sponsor Organization: National Coordinating Center for PHSSR

Date: September 27, 2013

Location: Lexington, Kentucky

New York State PBRN: Delivery and Cost Study Award



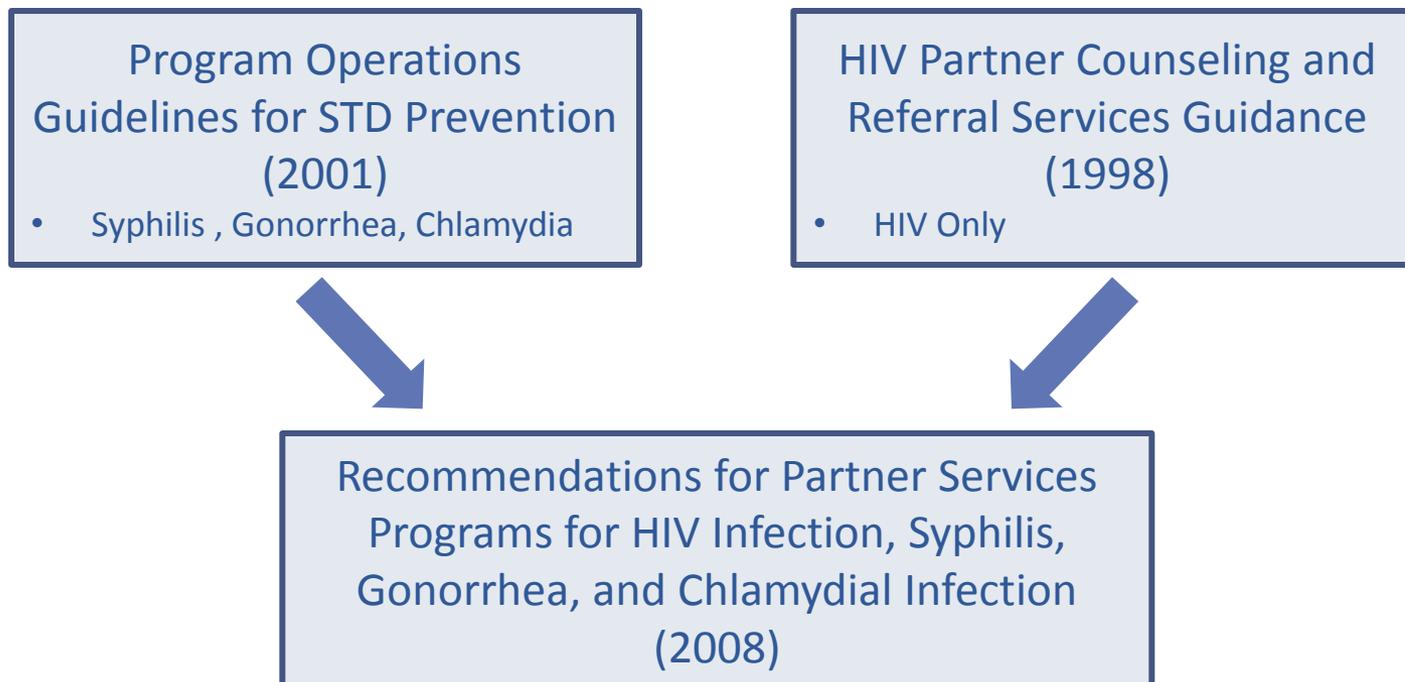
OPTIMIZING THE USE OF HIV/STD
PARTNER SERVICES STRATEGIES

Britney Johnson, MPH
New York State Department of Health
blj01@health.state.ny.us



Partner Services

PARTNER SERVICES are a broad array of services that should be offered to persons with HIV or other sexually transmitted diseases (STDs) and their sexual or needle-sharing partners. By identifying infected persons, confidentially notifying their partners of their possible exposure, and providing infected persons and their partners a range of medical, prevention, and psychosocial services, partner services can improve the health not only of individuals, but of communities as well.



NYS DACS GOALS

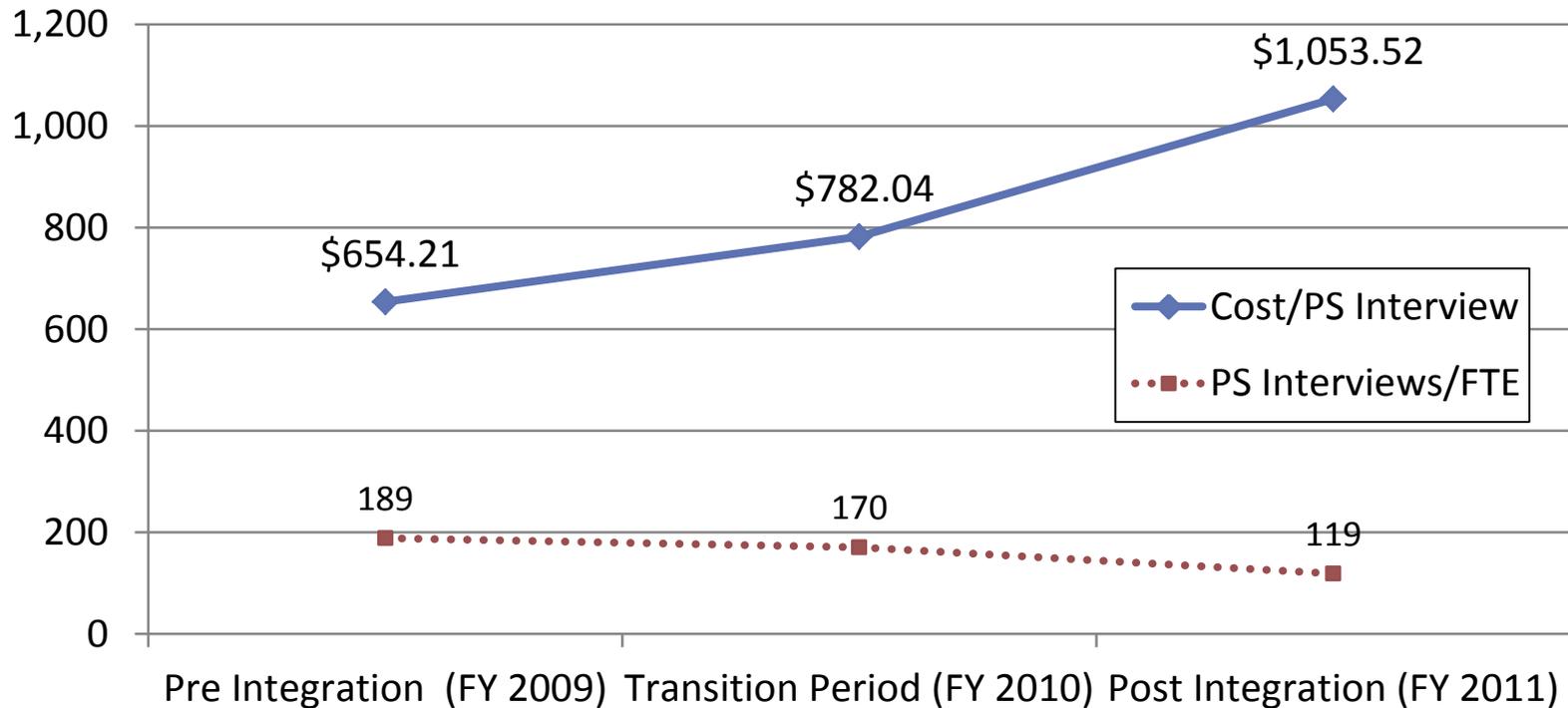
1. Build off existing PBRN research on HIV/STD Partner Services (PS) to examine variation between county- and state-delivered PS programs.
2. Examine how current and new strategies for HIV/STD PS impact staff effort and program costs.
3. Use existing and new data collected through this project to model the impact of different HIV/STD PS strategies on costs and cost-effectiveness of PS programs.
4. Make recommendations on the conditions under which reallocating resources will improve efficiency.

MOTIVATIONS FOR RESEARCH

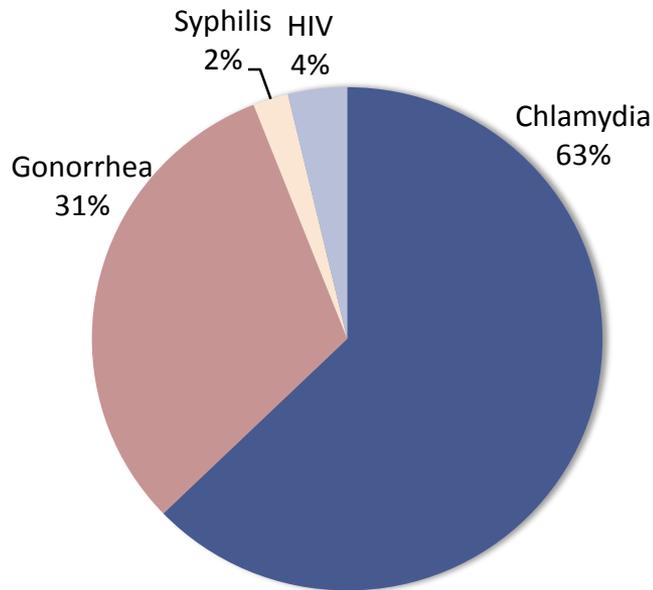
- **Changes in CDC Priorities and Funding**
 - Program Collaboration and Service Integration (PCSI)
 - High-Impact HIV Prevention
- **Previous PBRN research on HIV/STD program integration at the state level**
 - Cost accounting of HIV/STD PS activities = new questions
 - Is PS cost-effective for STDs like chlamydia and gonorrhea?
 - Is there variation among state- and county-administered PS programs?
 - How do we allocate resources (time, staff effort) efficiently?

COSTS PER OUTCOME....INCREASED

HIV/STD Partner Services Costs (All Infections)



ON WHAT KINDS OF CASES?



NYSDOH Regional HIV/STD PS Case Assignments (Jan-Jun 2013)

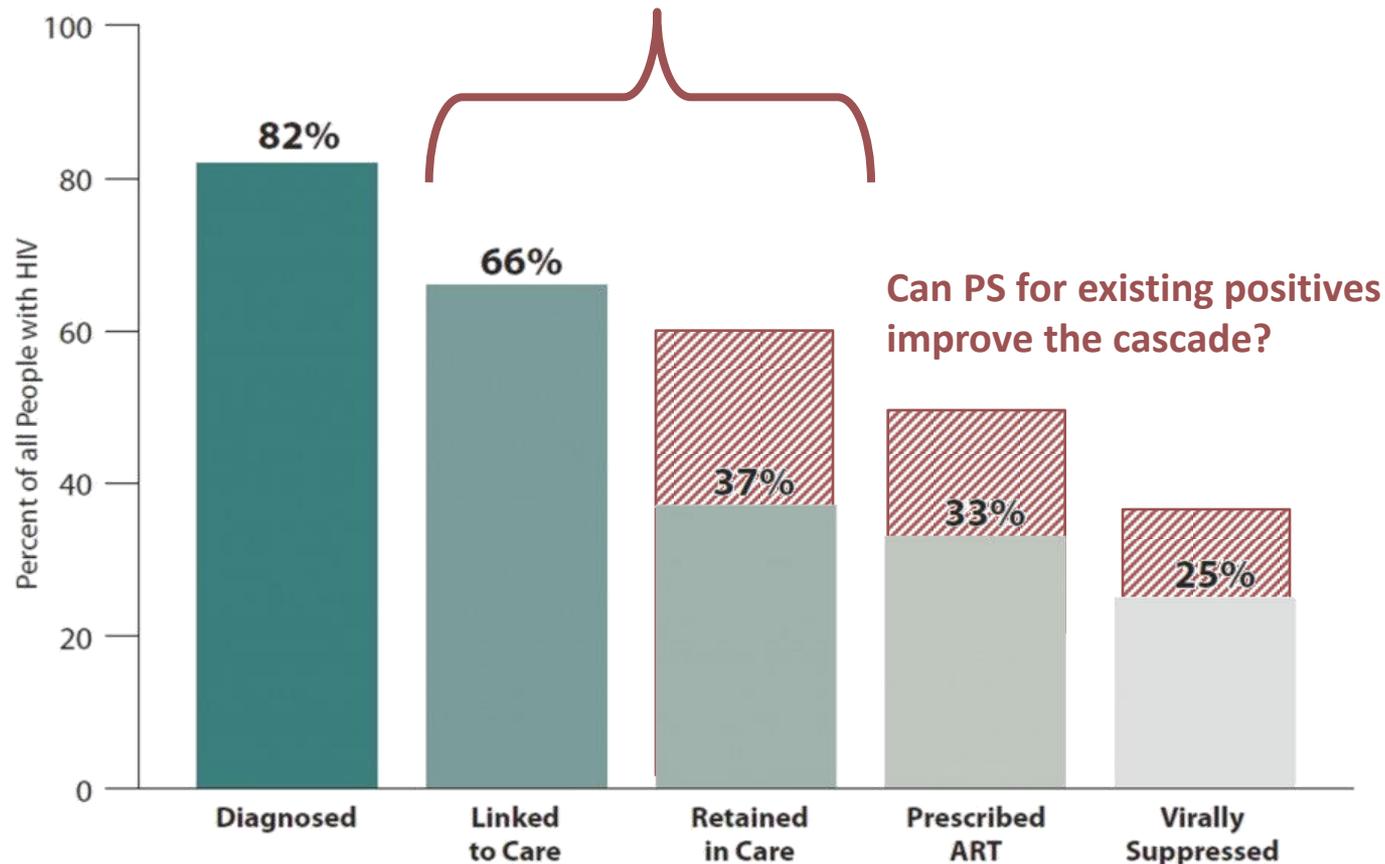
Gonorrhea and Chlamydial Infection

Most health departments reported concentrating PN services for gonorrhea and chlamydial infection on patients seen in STD clinics (Table 2). Although the overwhelming majority of all PN interviews for the four STDs (80%) involved gonorrhea or chlamydial infection, PN was offered to only very small minorities of patients with these infections. Twenty-two health departments (37%) provided no routine PN services for gonorrhea and 27 (45%) provided no such services to patients with chlamydial infections. Among those health departments providing PN services, a median of 43% of patients with gonorrhea and 14% of patients with chlamydial infection were interviewed. Among all persons reported to have these STDs in jurisdictions served by responding health departments, only 17% of persons with gonorrhea and 12% of persons with chlamydial infection were interviewed for PN.

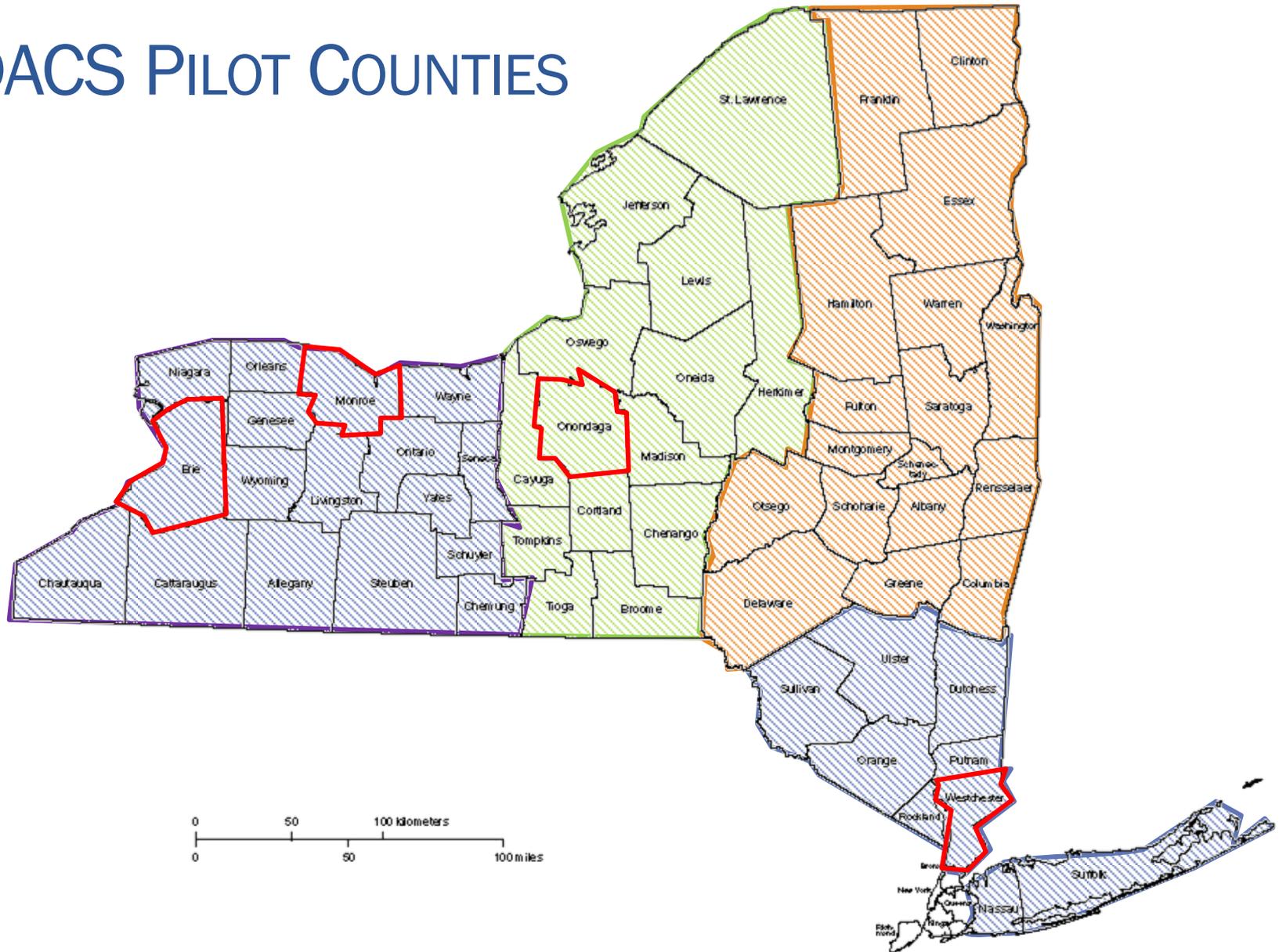
- Despite a high percentage of newly diagnosed HIV / syphilis cases receiving PS, they make up a minority of FTE time
 - **Majority of PS assignments are for Chlamydia and Gonorrhea**

USING PS TO IMPROVE THE CASCADE OF CARE (AKA, HIGH-IMPACT HIV PS)

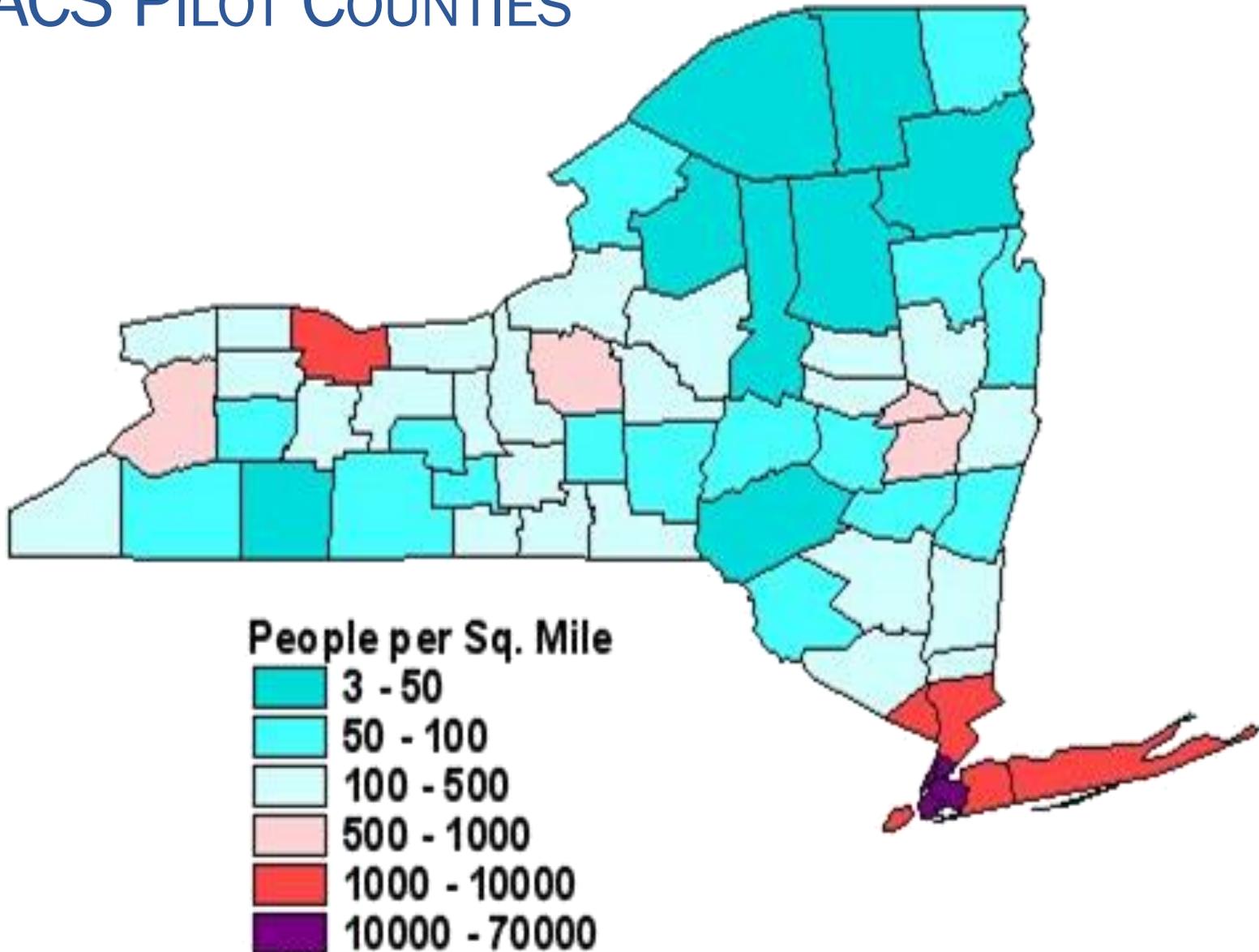
OVERALL: Of the 1.1 million Americans living with HIV, only 25 percent are virally suppressed.



DACS PILOT COUNTIES



DACS PILOT COUNTIES



COLLECTING COSTS (FOUR PILOT COUNTIES)

- **Time Study of county HIV/STD PS staff**
 - How does time/effort differ between chlamydia, gonorrhea, syphilis, new HIV and existing HIV investigations?
 - Quantify effort spent on PS with more precision
 - Compare to state-run DIS cost data
- **Accomplished via time logs, interviews with staff, program managers, comparison with outcomes**

COLLECTING COSTS (FOUR PILOT COUNTIES)

- **Review County Contracts for Fiscal Data**
 - FTEs
 - Fringe and Indirect rates
 - Travel costs
 - Test kit costs (for rapid HIV tests)
 - Supplies (cell phones, office equipment, etc)
 - Space and building costs
- **Costing “out from the middle”**
 - Start with staff allocation method of costing
 - Use microcosting to improve accuracy for key variables of interest



	% Overall Cases Assigned	# Cases Diagnosed for Potential Investigation	# Assigned to Field Staff	# Interviewed	# with ≥1 Partner	# Partners Elicited	# Partners Notified	HIV Rapid Field Tests	Rapid Field Positives	Program \$ Spent on each disease
HIV	5.6%	194	187	98	70	129	100	81	5	\$ 117,993
Chlamydia	62.4%	15363	2076	2059	1645	2002	1488			\$1,309,912
Gonorrhea	29.4%	3976	978	966	711	884	715	0	0	\$ 617,097
Syphilis	2.6%	133	87	87	69	183	157			\$ 54,895
All Regions, All	100.0%	19666	3328	3210	2495	3198	2460	81	5	\$2,099,898
HIV	4.8%	191	176	97	65	193	142	98	8	\$ 134,300
Chlamydia	64.4%	22717	2363	2358	1739	2026	1574			\$1,803,136
Gonorrhea	28.4%	4174	1041	1037	673	788	630	24	0	\$ 794,357
Syphilis	2.5%	152	90	89	61	107	90			\$ 68,676
All Regions, All	100.0%	27234	3670	3581	2538	3098	2430			\$2,800,469
HIV	3.9%	168	159	104	66	158	114	74	6	\$ 145,516
Chlamydia	58.1%	12663	2349	2079	1450	1657	1233			\$ 1,149,800
Gonorrhea	35.1%	4092	1419	1217	782	1008	819			\$ 714,800
Syphilis	2.9%	174	116	112	79	246	200			\$ 149,800
All Regions, All	100.0%	17097	4043	3512	2377	3069	2366			\$ 2,149,926

2010 Cost		2011 Cost	
Test	Positives	Total tests	Positives
11283	30	8476	18
24.25	50%		
15.5	3.5%	37	15%
264.00		\$ 67,808.00	
392.00	\$ 6.36	\$ 1,796.91	\$ 3.82
181.38		\$ 1,638.69	
263.27	\$ 0.70	\$ 197.77	\$ 0.42
466.36	\$ 1.24	\$ 350.34	\$ 0.74
131.64		\$ 98.89	
146.68	\$ 0.39	\$ 110.19	\$ 0.23
537.31	\$ 4.09	\$ 1,154.86	\$ 2.45
755.25		\$ 703.00	
506.70		\$ 222.00	
178.08		\$ 516.15	
464.00			
368.00			

Inflation-Adjusted Cost (2009\$)

Disease Specific Cost/IP	Disease Specific Cost/Interview	Disease Specific Cost/Partner Notified	Disease Specific Cost/Positive	HIV Rapid Field Testing Cost/Test	HIV Rapid Field Testing Cost/Positive
\$ 630.98	\$ 1,206.23	\$ 1,179.93	\$ 25,368.51	\$ 1,456.70	\$ 23,598.62
\$ 630.98	\$ 636.19	\$ 880.32	\$ 1,666.56	#DIV/0!	
\$ 630.98	\$ 638.82	\$ 863.07	\$ 1,881.39		
\$ 630.98	\$ 630.98	\$ 349.65	\$ 623.81		
\$ 763.07	\$ 1,384.54	\$ 945.78	\$ 11,408.44	\$ 1,370.41	\$ 16,787.55
\$ 763.07	\$ 764.69	\$ 1,145.58	\$ 2,220.61	\$ 111,090.37	
\$ 763.07	\$ 766.01	\$ 1,260.88	\$ 2,847.16		
\$ 763.07	\$ 771.64	\$ 763.07	\$ 1,346.60		
\$ 915.20	\$ 1,397.05	\$ 1,276.46	\$ 28,811.53	\$ 1,966.44	\$ 24,252.74
\$ 915.20	\$ 1,034.05	\$ 1,743.55	\$ 3,798.23	\$ 22,078.44	
\$ 915.20	\$ 1,067.10	\$ 1,585.67	\$ 3,995.89		
\$ 915.20	\$ 947.88	\$ 530.81	\$ 1,030.71		

9,431
on-
Cost
(\$)

1,038

HIV/STD PS PROCESS AND OUTCOME MEASURES

Indicator		Integration Project	DACS Project
Index Cases Assigned	(PROCESS)	✓	✓
Index Cases Interviewed	(PROCESS)	✓	✓
Partners Elicited	(PROCESS)	✓	✓
Partners Notified	(PROCESS)	✓	✓
Case Effort, by Disease	(PROCESS)		✓
Partners Tested	(OUTCOME)	✓	✓
New Positives Identified	(OUTCOME)	✓	✓
Infections Averted	(OUTCOME)		✓

New measures allow cost accounting → cost effectiveness

Formulas for estimating the costs averted by sexually transmitted infection (STI) prevention programs in the United States

Harrell W Chesson*, Dayne Collins and Kathryn Koski

Updates of Lifetime Costs of Care and Quality-of-Life Estimates for HIV-Infected Persons in the United States:

Entry Into Care

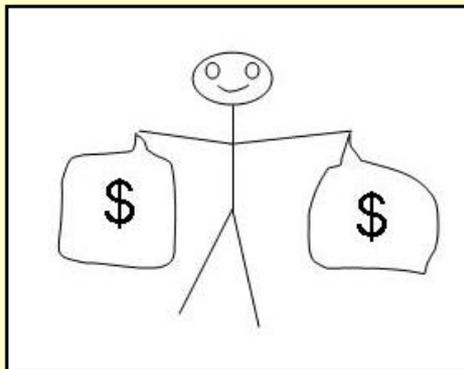
Stephanie L. Sansom, PhD,*

Paul J. Weidle, PharmD,*

Camden, MD†‡

STIC Figure 1.1

Sexually Transmitted Infection Costs saved



[Click to begin](#)

This spreadsheet provides estimates of the medical costs and indirect costs (lost productivity) saved by STD program activities.

The methods applied in, and the results produced by, this spreadsheet reflect the views of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

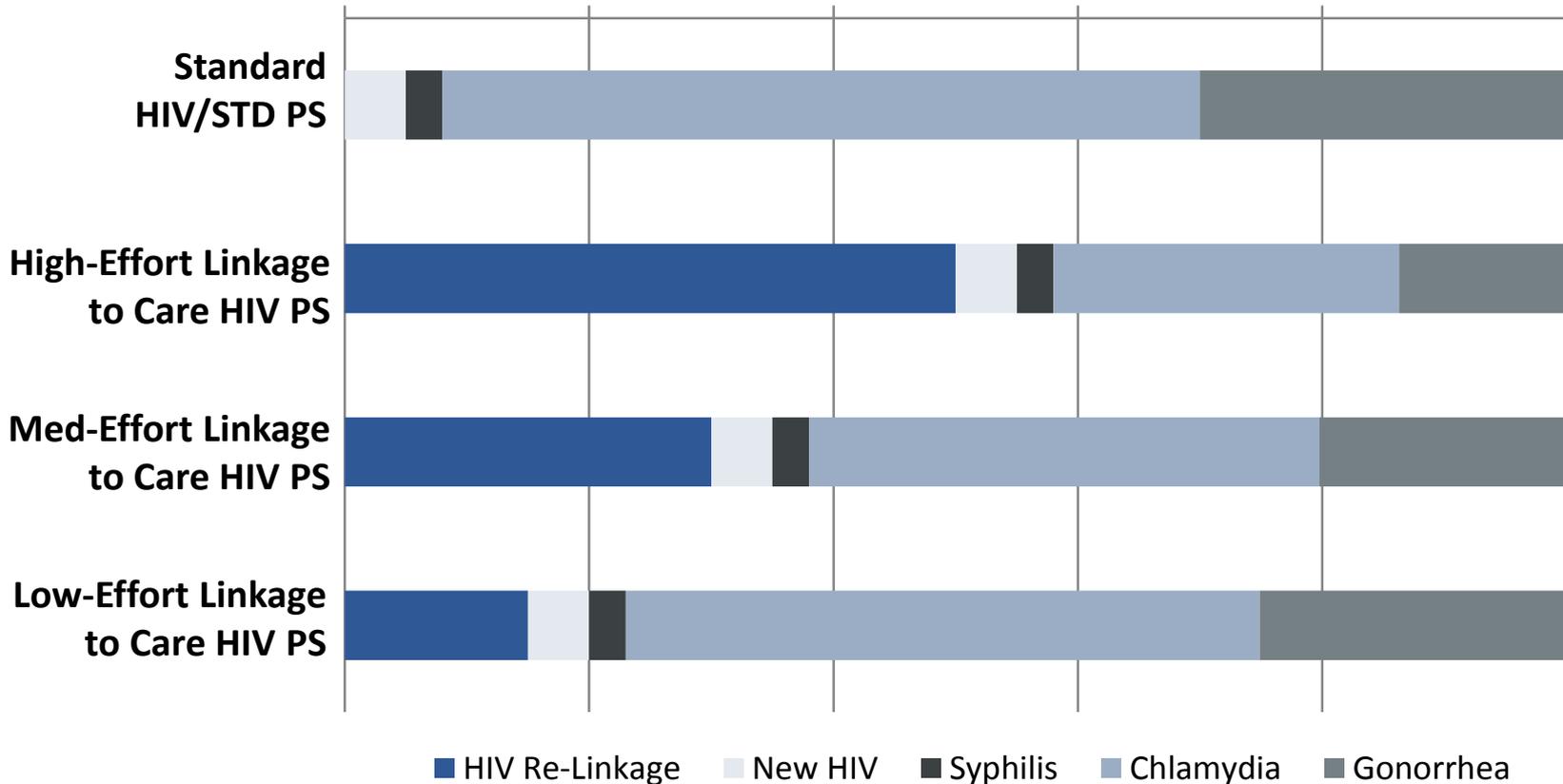
ANALYZING OUTCOMES

- **Where our academic partnerships come in!**
 - TreeAge (decision-tree modeling) software
 - Use collected cost and outcome data to model comparative effectiveness of different HIV/STD PS strategies (\$/cases averted)
 - Offer recommendations and identify key factors that impact cost-effectiveness of HIV/STD PS programs

MODELING HIV/STD PS STRATEGIES

Staff Effort Allocation (% FTE)

0% 20% 40% 60% 80% 100%



APPLYING THE MODEL

- **Stratify PS approaches by key geographic and demographic variables**
 - HIV / STD morbidity
 - Population density
 - PS staff size
 - Proportion of out-of-care HIV positive individuals

ACKNOWLEDGEMENTS

New York State Department of Health

- James Tesoriero, PhD
- Mara San Antonio-Gaddy, MSN
- Sylvia Pirani, MPH, MS
- Megan Johnson, MPH



State University of New York

- Erika Martin, PhD
- Feng (Johnson) Qian, PhD



Robert Wood Johnson Foundation

PBRN National Coordinating Center

Questions, Comments, Suggestions?



Britney Johnson, MPH
New York State Department of Health
blj01@health.state.ny.us

