

Partner Services for STI Overview

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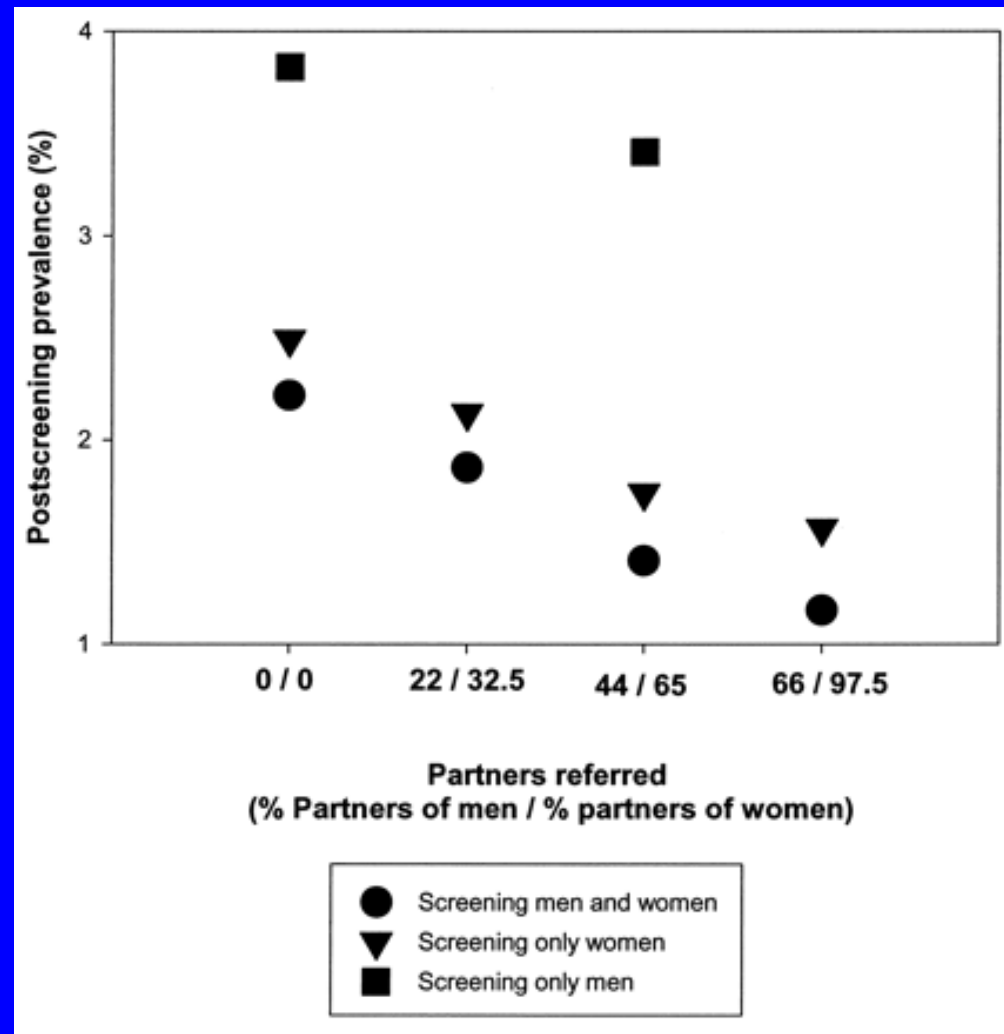
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Overview

- Background on Partner Services (PS)
- Data evaluating PS
 - Gonorrhea and chlamydial infection
 - HIV
- Thinking about a new system

Effect of Screening and Partner Treatment on Chlamydial Prevalence



Background: Types of PS

- 1) **Provider referral** – HD attempts to contact all or almost all patients & to contact all partners
- 2) **Contract referral** – HD attempts to interview all or almost all patients and to contact only partners that are not examined within a specified period of time
- 3) **Patient referral** - No routine public health assistance with PN provided.
 - 1) Simple referral – no assistance offered
 - 2) Supported patient referral – may involve interview, counseling, offer of assistance, referral cards, etc.

Gonorrhea & Chlamydia PS: RCTs

- Population: 1898 Dade Co. Florida STD clinic pt (94% men) - ? dates
- Design & Intervention: RCT 3 arms: patient referral, pamphlet self-interview, conditional referral
- Outcomes: new cases treated, reinfection 4 weeks

<u>Measure</u>	<u>Pt referral</u>	<u>Pamphlet SR</u>	<u>Conditional R</u>
No. partners examine/index	0.37	0.37	0.62
No. new cases treated	154	161	233
% index cases infected at f/u*	7.6	6.3	7.7

* 54% returned for f/u testing

Source: Cleveland, unpublished

Gonorrhea & Chlamydia PS: RCTs

- Population: Men in Indianapolis STD clinic with NGU
- Intervention: 3 arms: nurse counseling without f/u, DIS interview only, DIS field follow-up (pt. referral)

<u>Measure</u>	<u>Nursing referral</u>	<u>DIS Interview</u>	<u>DIS field f/u</u>
No. men enrolled	217	240	221
No. partner elicited/index*	1.16	0.75	0.8
No. partners treated/index+	0.22	0.18	0.72
No. new cases treated	7	8	20

*p<.01 nursing vs. DIS interview or field f/u +*p<.001 field f/u vs. DIS interview or nursing

Gonorrhea & Chlamydia PS: RCTs

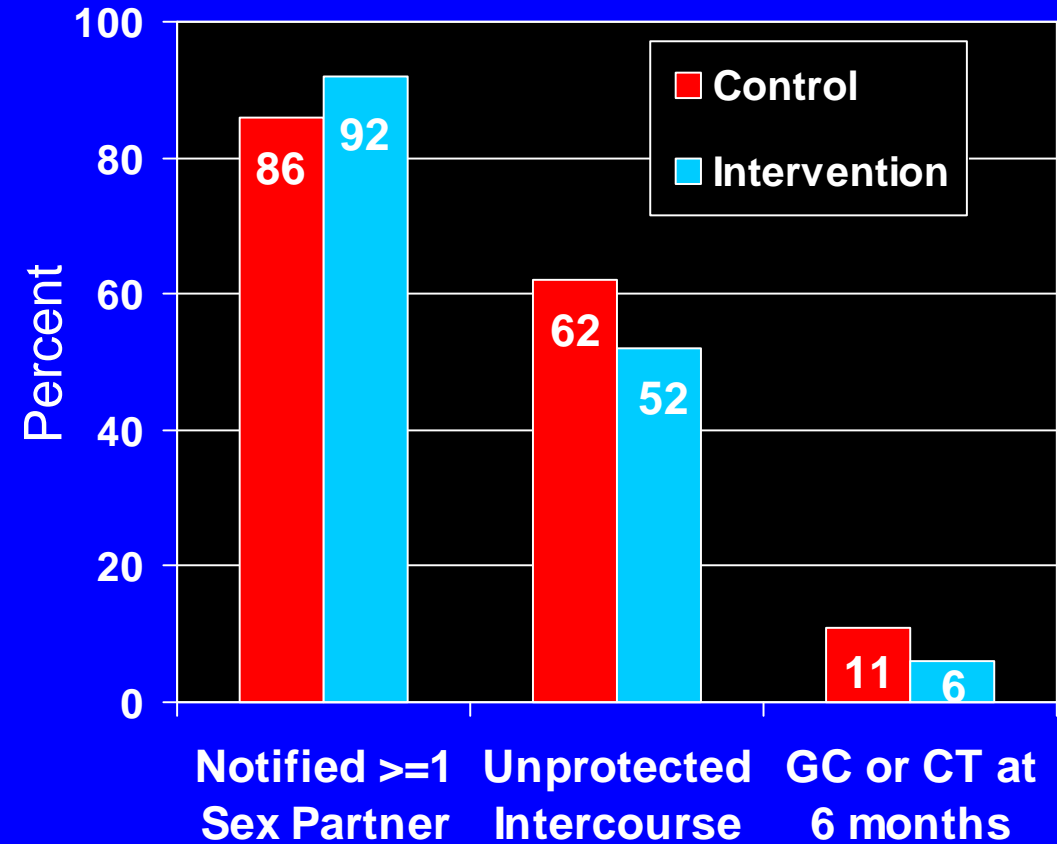
Population: 783 STD clinic pts with GC or CT in Brooklyn (59% men)

Intervention Group:

- Counseling with plan, role playing & behavioral contract
- Pamphlet & referral slips
- F/u counseling 14 days

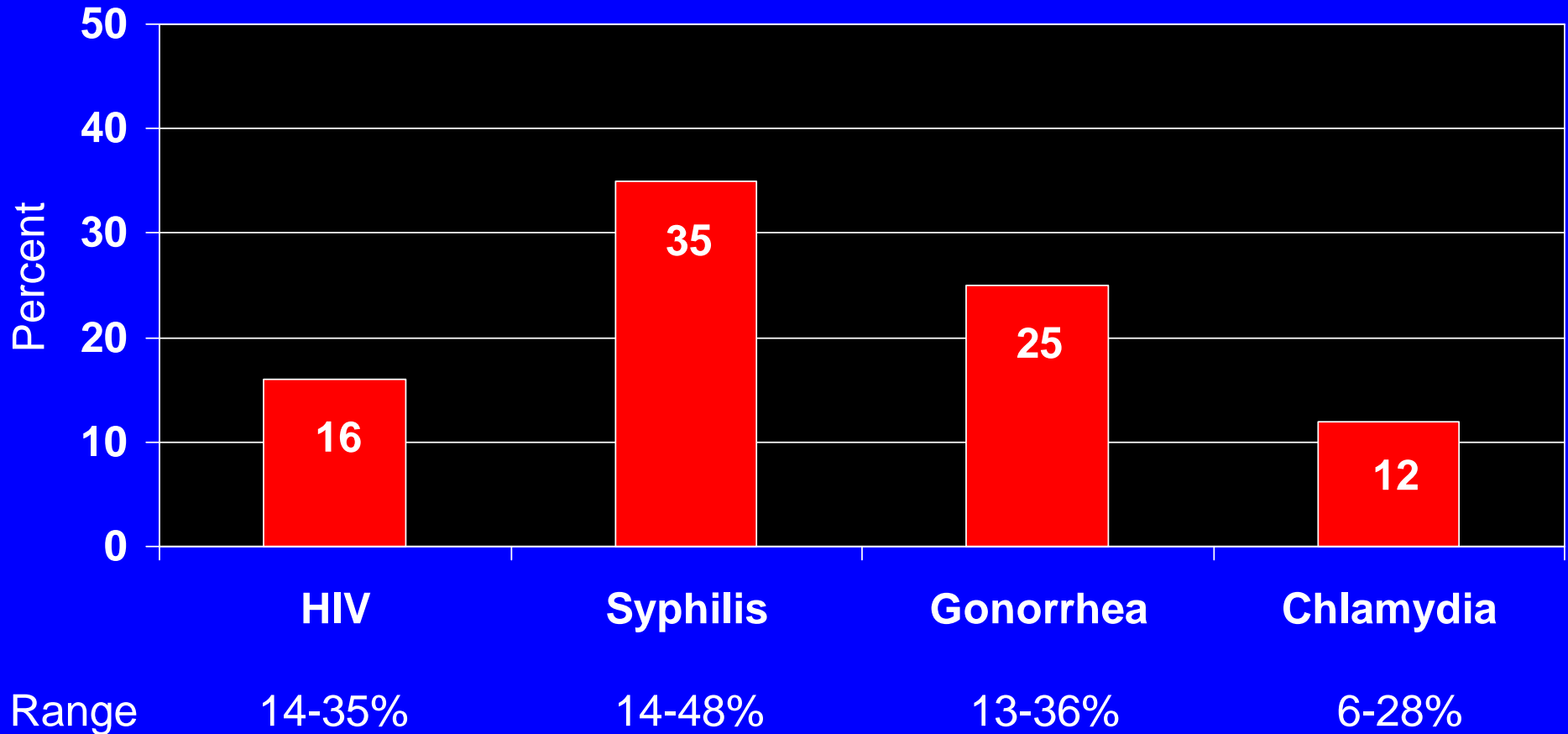
Control Group – brief session with health educator + referral slips

Outcomes: # partners notified per 1 month interview, STI at 6 months



Effect on Recurrent STI only observed for male index cases

Percentage of STIs Diagnosed in STD Clinics in 10 U.S. Cities



Cities: King Co, WA; San Francisco; LA, Denver; Chicago; Baltimore; San Diego; Maricopa & Pima Co., AZ; NYC; St Louis, MO

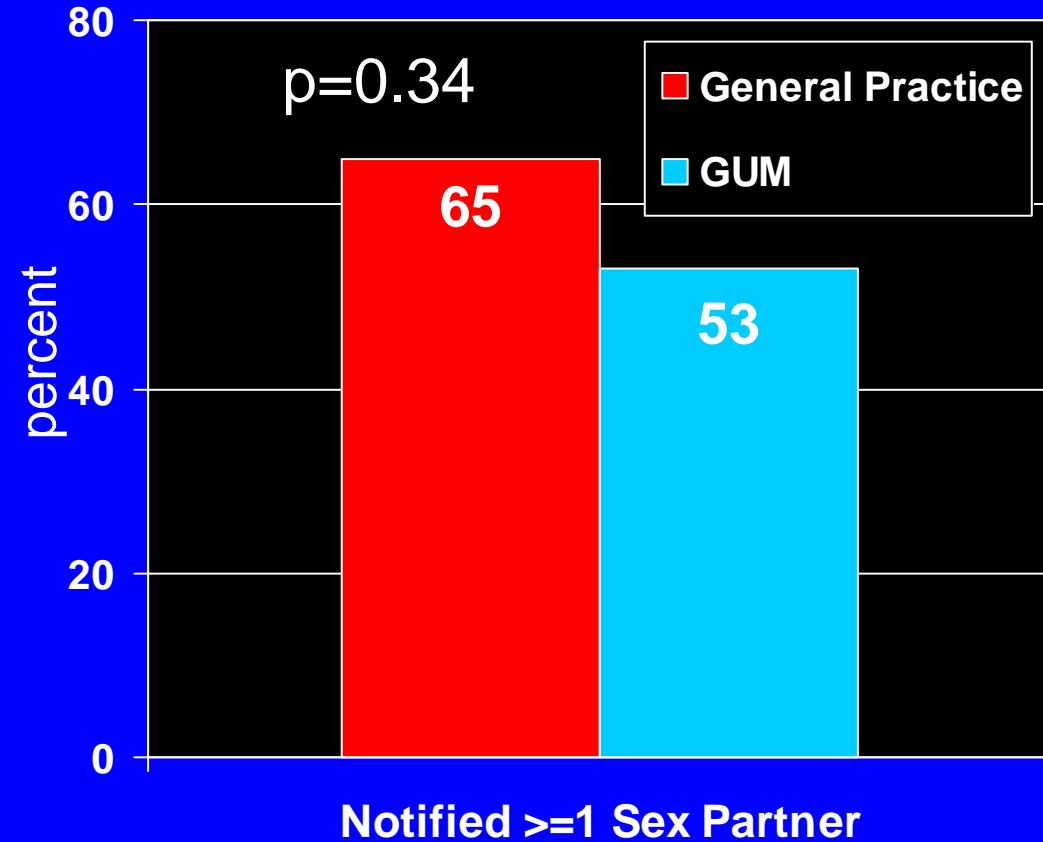
Gonorrhoea & Chlamydia PS: RCTs

Population: 140 persons diagnosed with CT in U.K. via home self-collection

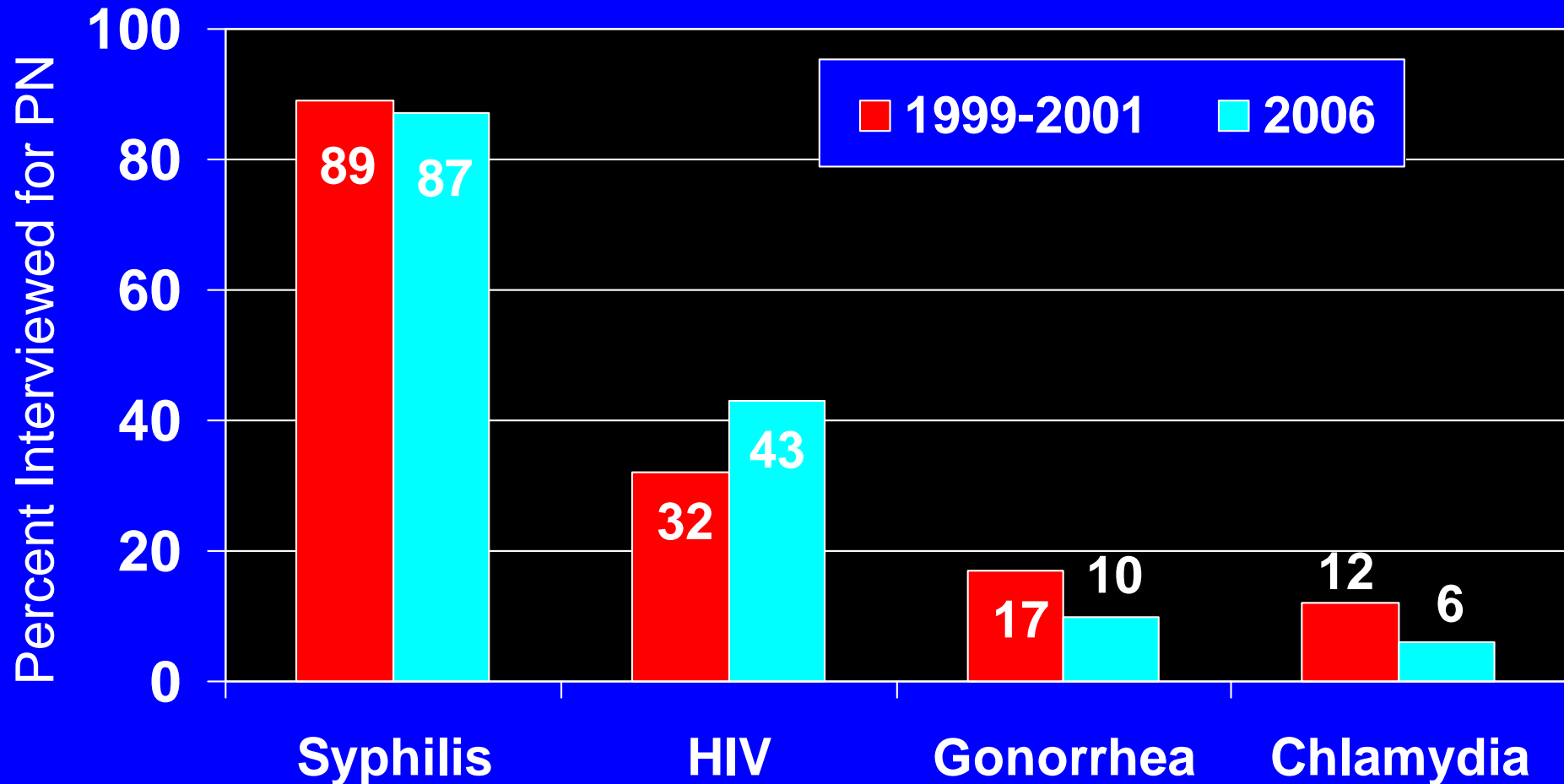
Intervention:

- 1) Counseling by general practice trained nurse with health advisor f/u – contact slips
- 2) Referral to GUM

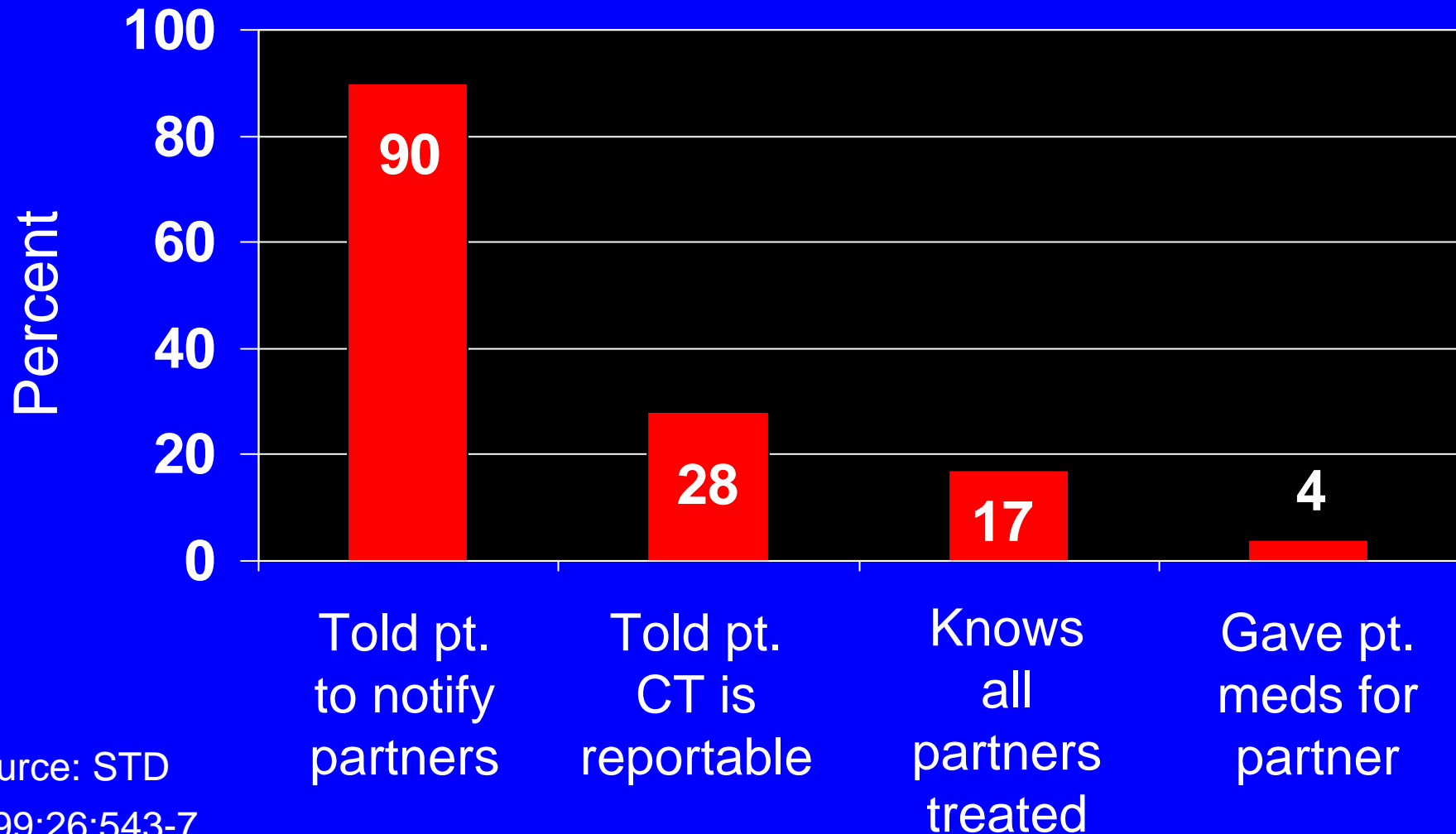
Outcomes: # ≥ 1 treated partner verified or by index case report



Percentage of Cases of STD/HIV Interviewed for PN in High STD/HIV Morbidity Areas of U.S., 1999-01 & 2006



Chlamydia partner notification practices among private sector providers in King County (n=150)



Source: STD
1999;26:543-7.

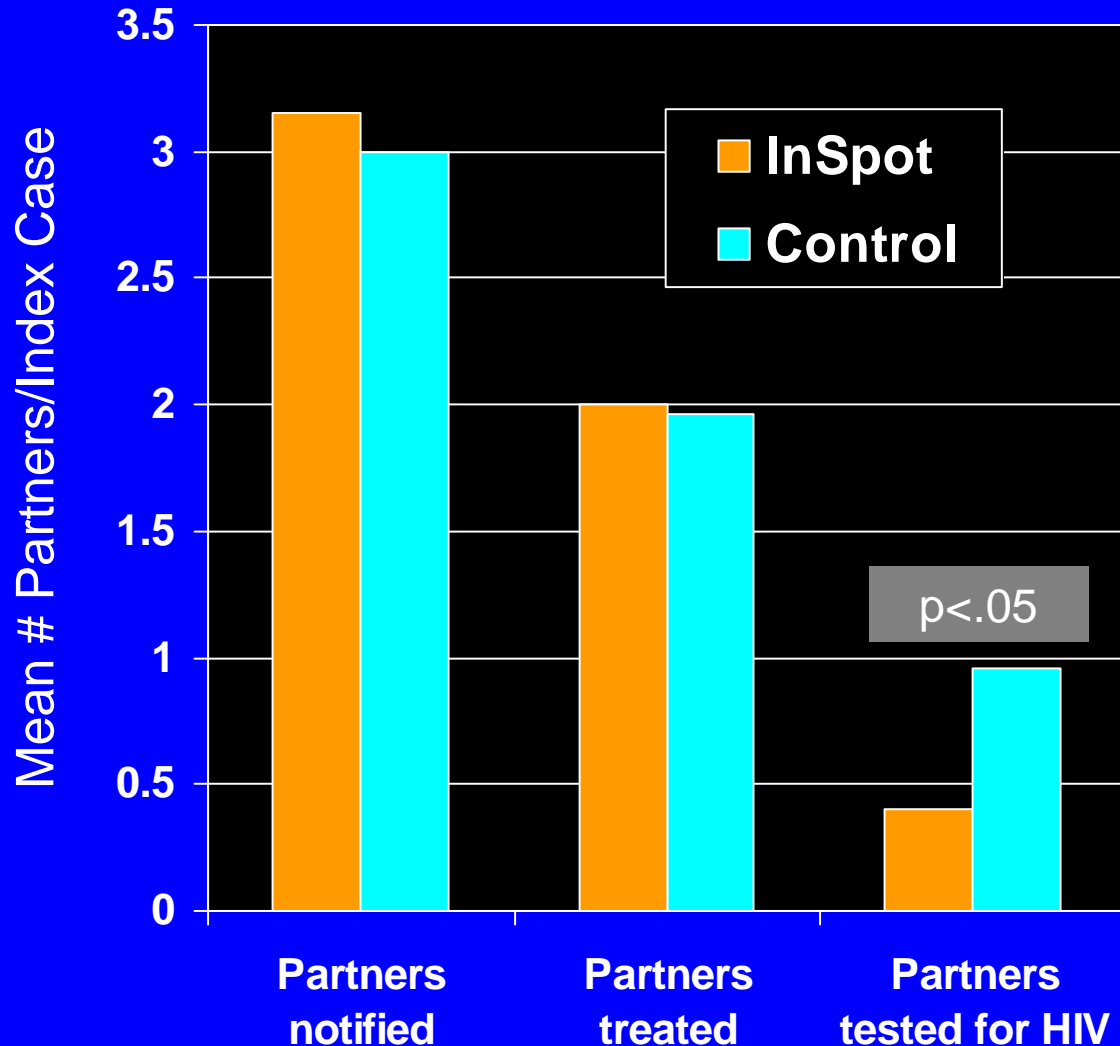
Outcomes of partner notification for gonorrhea and chlamydial infection by patient referral

<u>City (yr)</u>	<u>Number</u>	<u>STD</u>	<u>% partners evaluated</u>	<u>Comment</u>
Colorado 1977	93	GC	51%	Routine f/u call
Colorado 1985	3368	GC	62%	50% GC+ self-referred
Canada 1992	37	CT	68%	Per index pt. report
London 1994	254	CT	53%	Index pts. had ocular CT
Amsterdam 1997	440	GC/CT	40%	Referral card
Seattle 2001	698	GC/CT	51%	Per index pt. report
Indianapolis 2002	241	GC/CT/NGU/TV	65%	“
France 2002	145	Any STD	49%	“

Partner notification for gonorrhea & chlamydial infection: conclusions about the existing system

- Limited data support the superiority of provider referral to patient referral
 - Based almost entirely on male STD clinic patients
- While the theoretic basis for believing that PN can reduce the burden of GC/CT is relatively strong, little empiric data supports the efficacy of existing approaches.
- The current scope of public health PS in the U.S. is too narrow to affect the prevalence of GC or CT
- We need lower cost, scalable approaches to PS

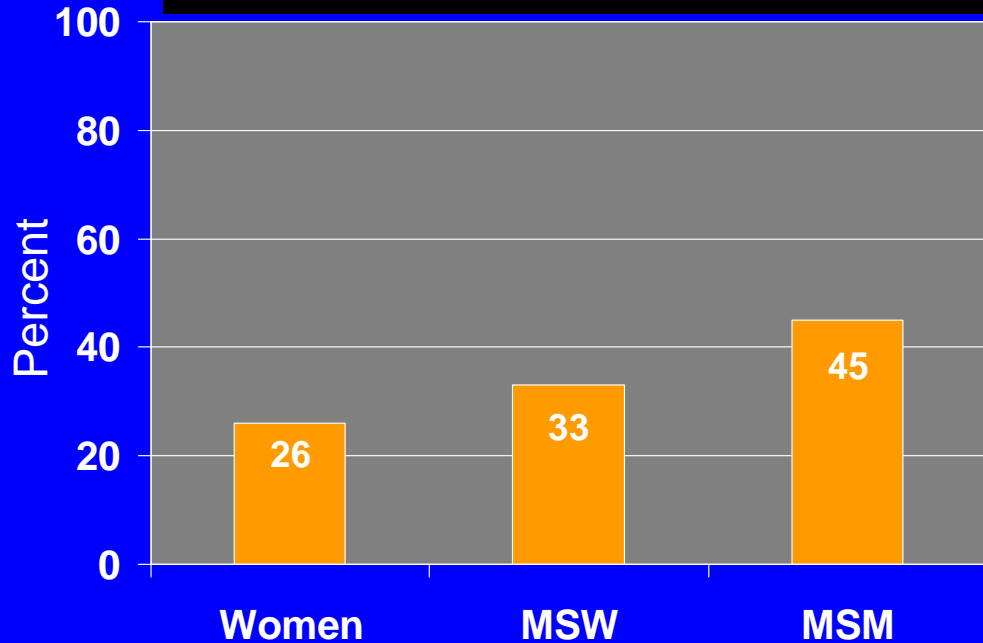
A Randomized Trial of InSpot in MSM



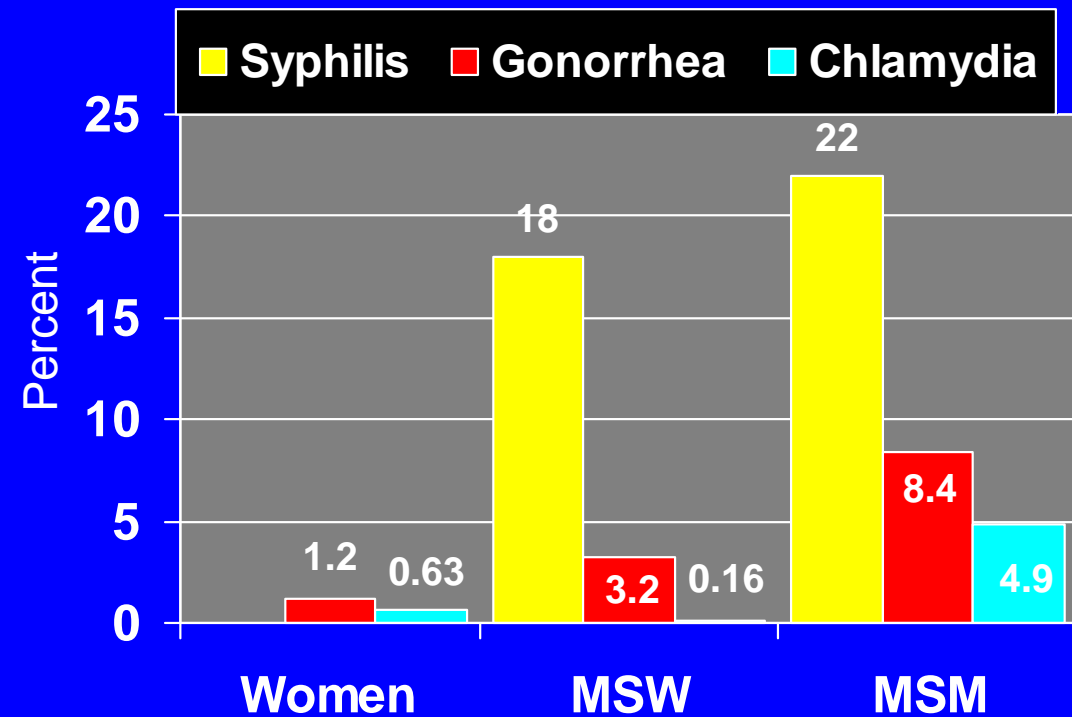
- Population: MSM with GC or CT receiving PS in Seattle
- 4 arm study: PDPT, InSpot, PDPT+ InSpot, Control
- Poor enrollment 75/393 MSM enrolled
- 53 men completed study
- **Only one man assigned to InSpot used it**

HIV Testing & New Diagnoses in Persons Receiving PS for Bacterial STD in WA State

Percentage of Persons HIV Tested

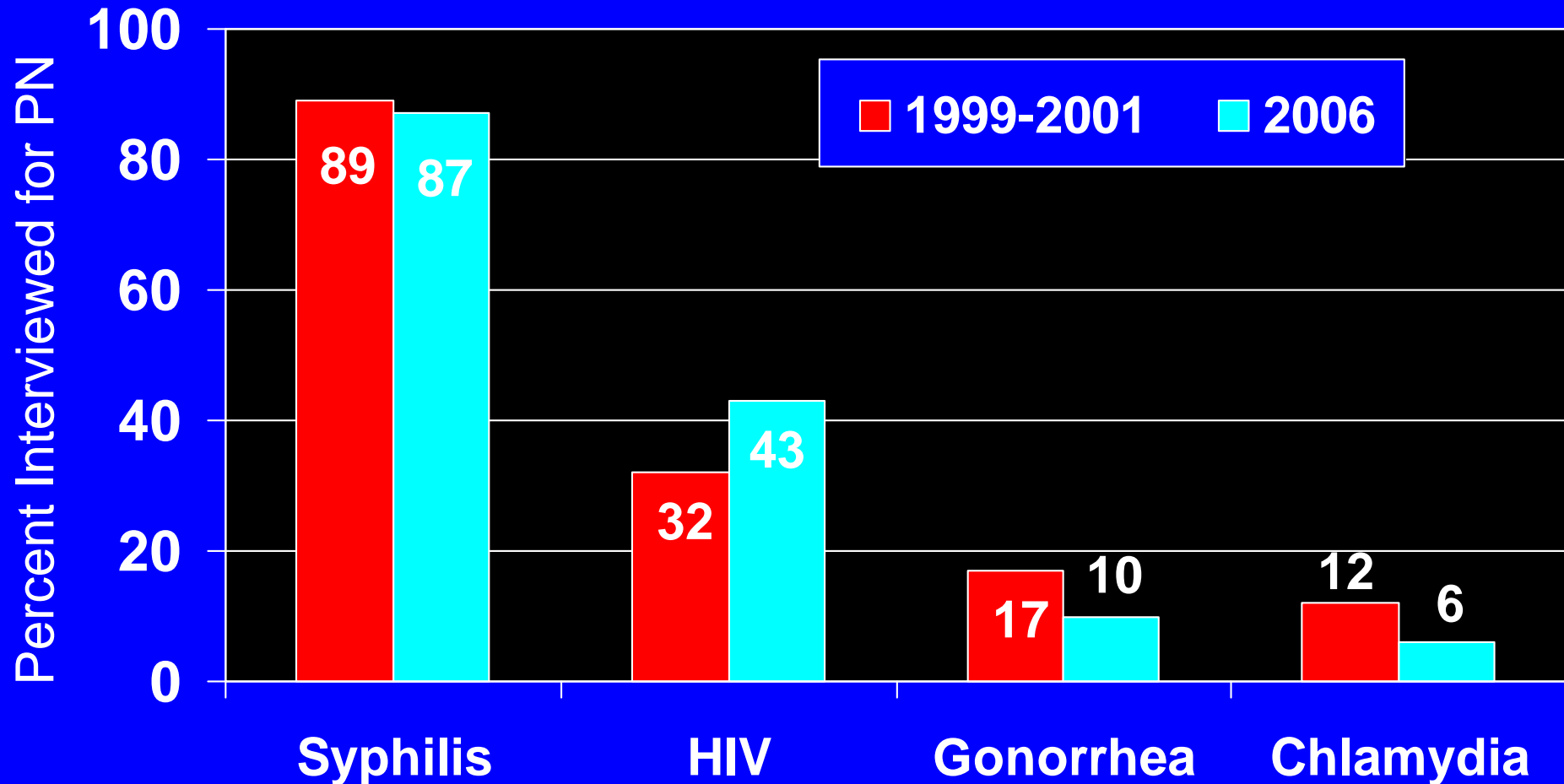


Percentage of Testing HIV+



84% of persons with syphilis HIV tested

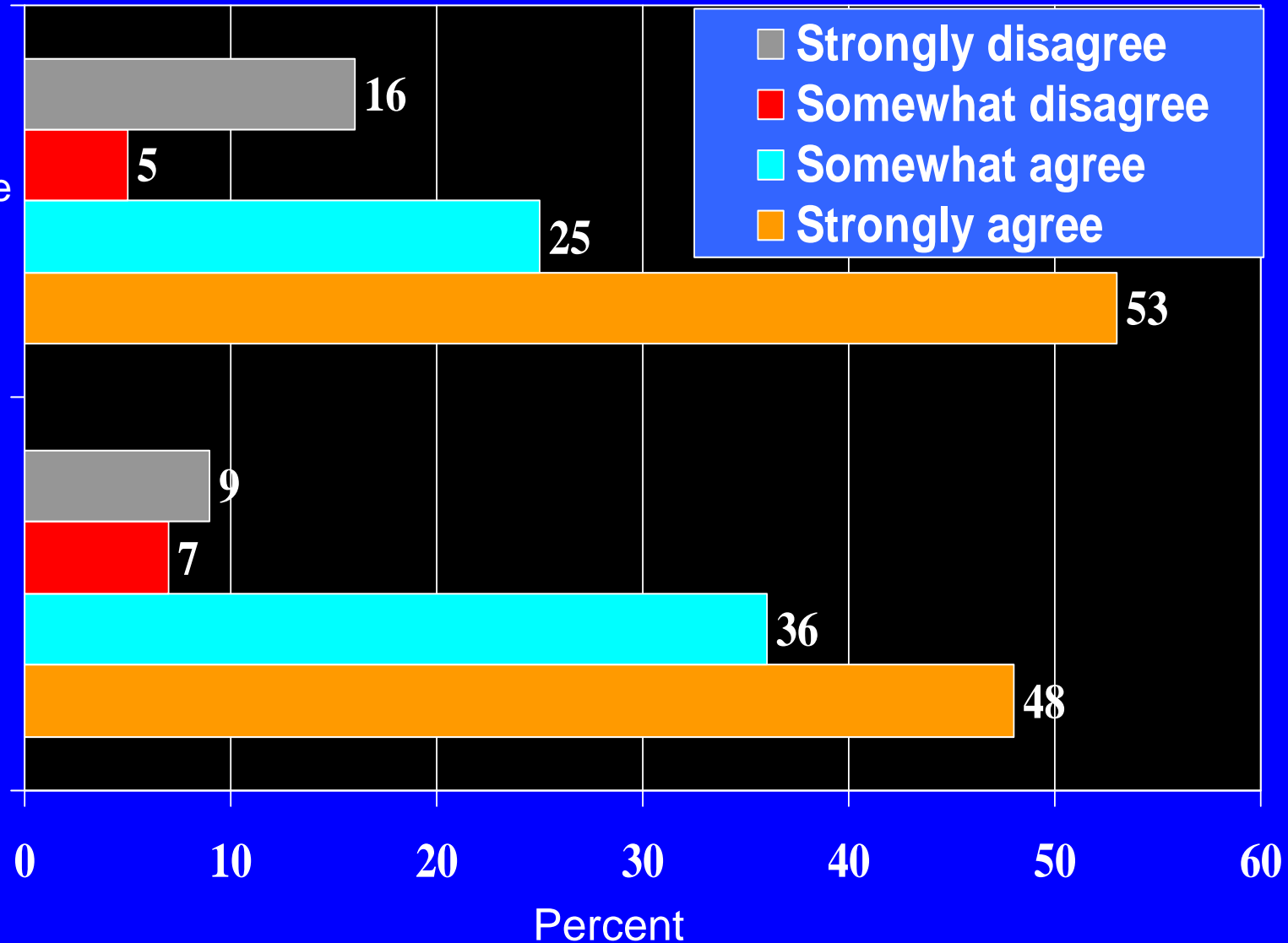
Percentage of Cases of STD/HIV Interviewed for PN in High STD/HIV Morbidity Areas of U.S., 1999-01 & 2006



HIV Partner Notification – Acceptability

The HD should contact everyone after they are dx'd with HIV to make sure they know how to get medical care & social services

The HD should offer everyone with HIV help notifying their partners as long as it is completely voluntary and confidential.



RCT: Conditional vs. patient referral among HIV 74 patients with HIV

	<u>Conditional Referral (n=157)</u>	<u>Patient Referral (n=153)</u>
Partners notified		
By subject	8	10
By DIS	70	*
Total	78	10
Percent notified (95% CI)*	50 (41-60)	6 (3.5-12)
Partners testing HIV+	9/36 (25)	5/25 (20)+

*p<.001

+ 20/25 partners in pt. referral group located by DIS >1 month after enrollment

Source: Landis, NEJM
1992;326:101

National Studies HIV PN Outcomes

	2001	2006
Population	38 health departments reporting ≥ 200 cases AIDS	71 health departments reporting high numbers of cases of HIV or STD
Response rate	60%	73%
HIV PN Coverage		
Total	32%	43%
Median	55%	66%
Number needed to interview to find 1 new case of HIV	13.4	13.8

Limitations to Process Outcome Evaluations

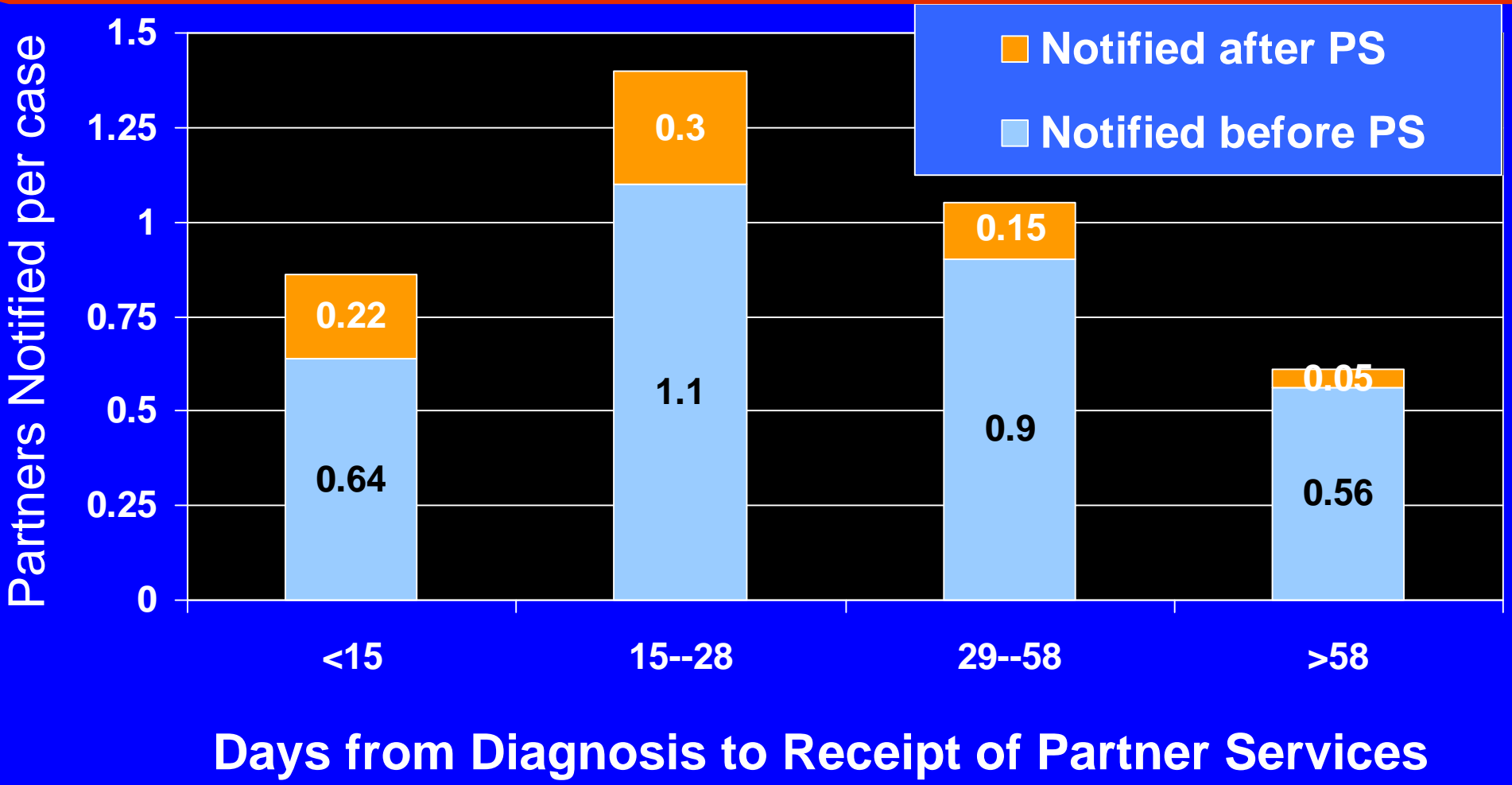
- No control group
 - What would people have done without any intervention?
- What level of certainty is required to define a partner as notified, tested, diagnosed or treated?
 - If someone says their partner was tested, is that an outcome we should record?
 - Do PS increase partner notification or do they increase the ascertainment of verified outcomes?

HIV PS: Observational data on patient referral

<u>Author (yr)</u>	<u>Location</u>	<u>Year</u>	<u>Number</u>	Percent <u>MSM</u>	Percent notified any past sex <u>partner</u>
Marks 1992	LA	1988-89	111	93%	27%
Schnell 1992	4 cities	1987-90	44	100%	89%*
Golden 2008	Seattle	2007	176	74%	58%
MacKellar 2009	Chicago & LA	2003-4	506	74%	70%
Landis 1992	North Carolina	1988-90	74	50%	16%

* Main partner only

Number of Partners Notified by PHSKC Disease Investigators by Time from Patient HIV Diagnosis to Receipt of Partner Services

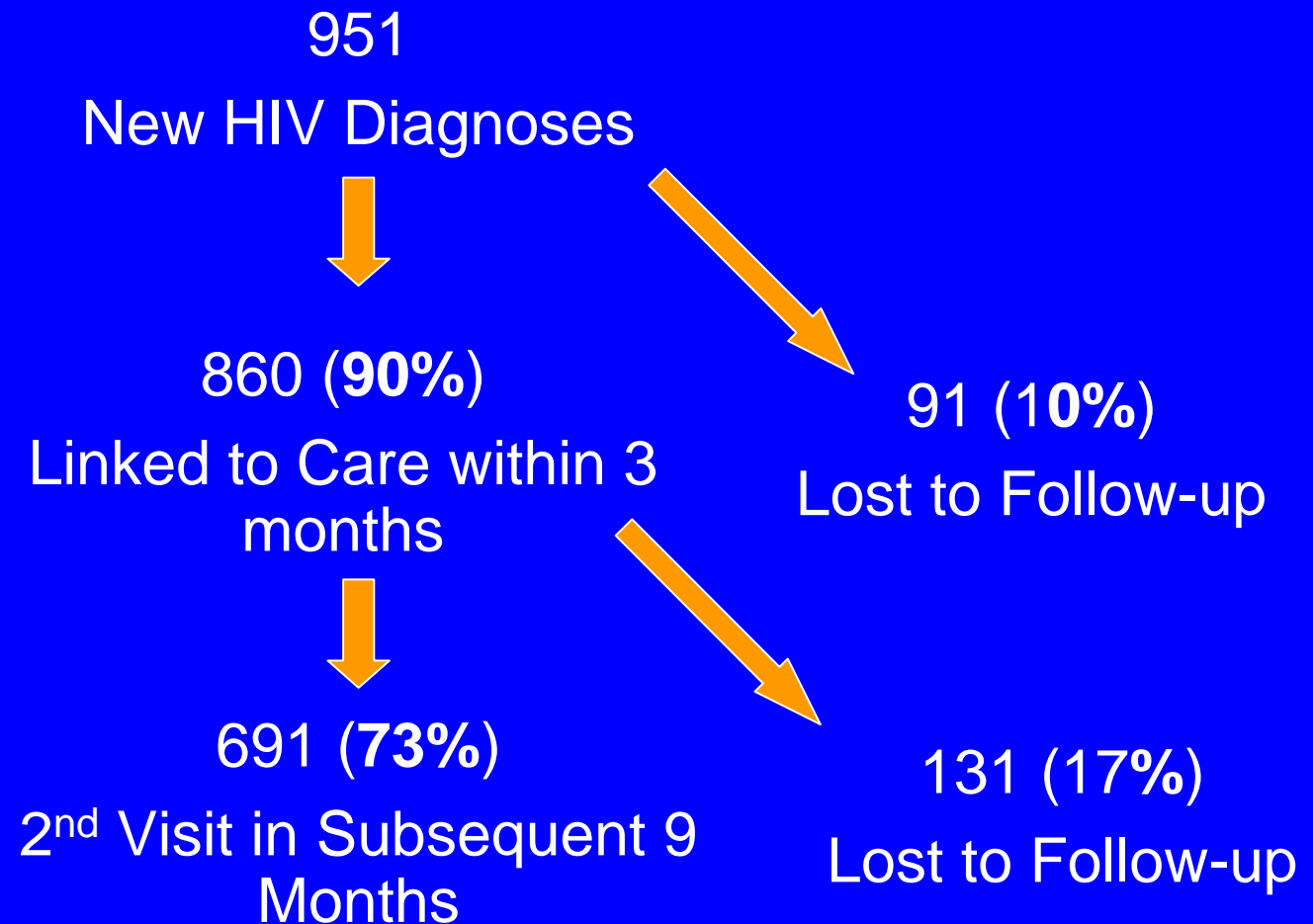


Source: Golden, Sex Transm Dis 2008

Cost-Effectiveness of HIV PN

- Estimates highly variable - ~\$5000->20,000 per case detected
 - Public Health – Seattle & King County usually spends ~\$10,000 per case detected
- Significant limitations
 - All assume to essentially no one gets a partner treated in the absence of PS
 - Outcomes based on verified outcomes only
 - Incomplete counting of costs
- Cost-effectiveness is uncertain – dependent on perspective

Linkage to Care Among Persons with Newly Diagnosed HIV in King County, WA 2007-09



Could the U.S. Provide DIS Services To Everyone with a Reportable STD?

- ~ 1.6 million cases of HIV, syphilis, gonorrhea, and chlamydia reported annually in U.S.
- ~3000 Disease Intervention Specialists (DIS) to provide services to 75% of cases
- ~ \$210 million annually for DIS
- CDC STD budget = \$147 million in 2010

A Variable Approach to PS

1) Higher cost and intensity PS

HIV

- Effectiveness as a case-finding tool in higher income nations is uncertain
- Primary goal may be linkage to care

Syphilis

- Based on tradition
- HIV case-finding may be the primary goal

GC and CT in MSM

- Primary goal may be HIV case-finding – needs data

2) Lower cost and intensity PS

- a) Dominant approach to PS for heterosexual gonorrhea and chlamydial infection