

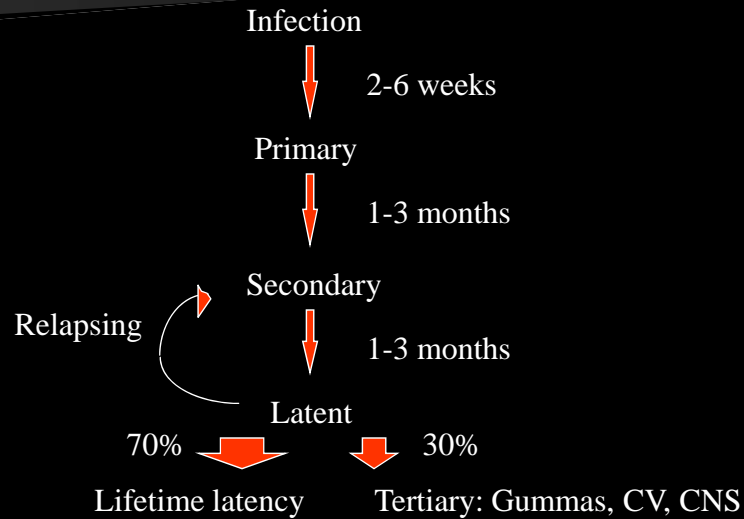
Syphilis



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Syphilis: Clinical Disease Rule of 3s



Syphilis: Primary Stage



- 10-60 day incubation
- Painless chancre
 - resolves in 1-6 weeks
- May go undetected
- Heals in 4-8 weeks
- Anogenital skin and mucous membranes
 - lips, tongue, buccal mucosa, tonsils, fingers

Secondary syphilis



Secondary syphilis



Secondary syphilis - condyloma lata



Syphilis and HIV Co-infection: A win, win, lose relationship

Syphilis effects HIV

- Transiently increases serum viral load
- Decreases CD4 cell counts
- Facilitates HIV transmission/acquisition

HIV effects syphilis

- Early neurological manifestations
- Increased risk of serological failure

HIV-infected individuals and their partners lose!

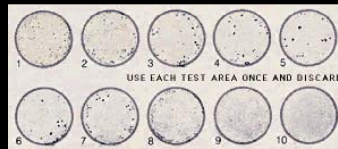
Clinical Manifestations

- Among 309 pts with early syphilis, HIV + were more likely to present with secondary syphilis and 43% of those were more likely to present with chancres
Rompalo et al. *Ann Int Med* 1994; 121:94-99
- Among 541 pts with primary syphilis, HIV + were more likely to present with multiple ulcers
Rompalo et al. *STD* 2001; 28:158-165
- Meningovascular syphilis developed within four months after a primary infection
Johns et al. *NEJM* 1987; 316:600-601
- 1% prevalence of neurosyphilis among HIV+ patients
Holtom PD et al. *Am J Med* 1992; 93: 9-12

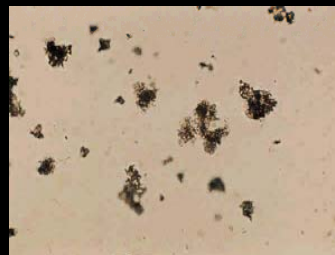
Screening Tests for Syphilis

Nontreponemal tests

- RPR Card Test: read directly



- VDRL Test: read via microscope



Serologic Tests for Syphilis

Test	Sensitivity by stage of untreated syphilis				Specificity
	Primary	Secondary	Latent	Late	
VDRL	74-87%	100%	88-100%	37-94%	96-99%
RPR	77-100%	100%	95-100%	73%	93-99%
TRUST	77-86%	100%	95-100%		98-99%
MHA-TP	69-90%	100%	97-100%	94%	98-100%
FTA-ABS	70-100%	100%	97-100%		98-100%

Lab Tests for Syphilis

Treponemal serologic tests

- TP-PA and FTA-ABS
- Use to **confirm** positive nontreponemal tests
- Positive or negative only (titers not useful)
- Generally stay positive for life
- Seroreversion in 15% of patients treated for early primary syphilis

Syphilis Treatment

Primary, Secondary, Early Latent

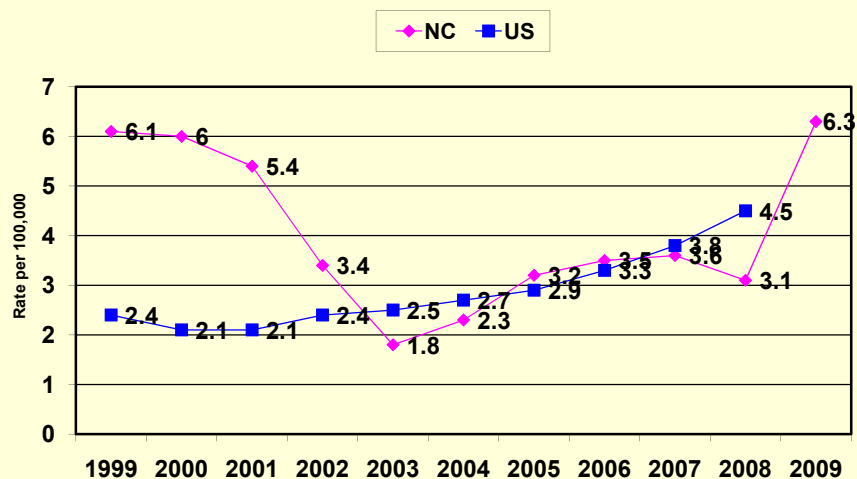
Recommended regimen

Benzathine Penicillin G, 2.4 million units IM

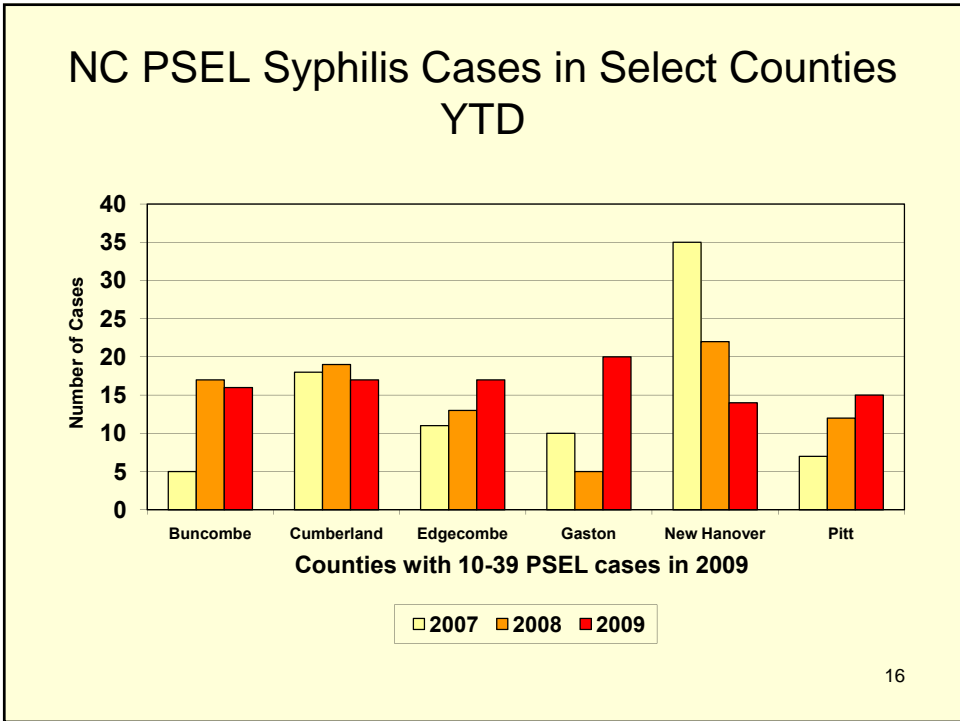
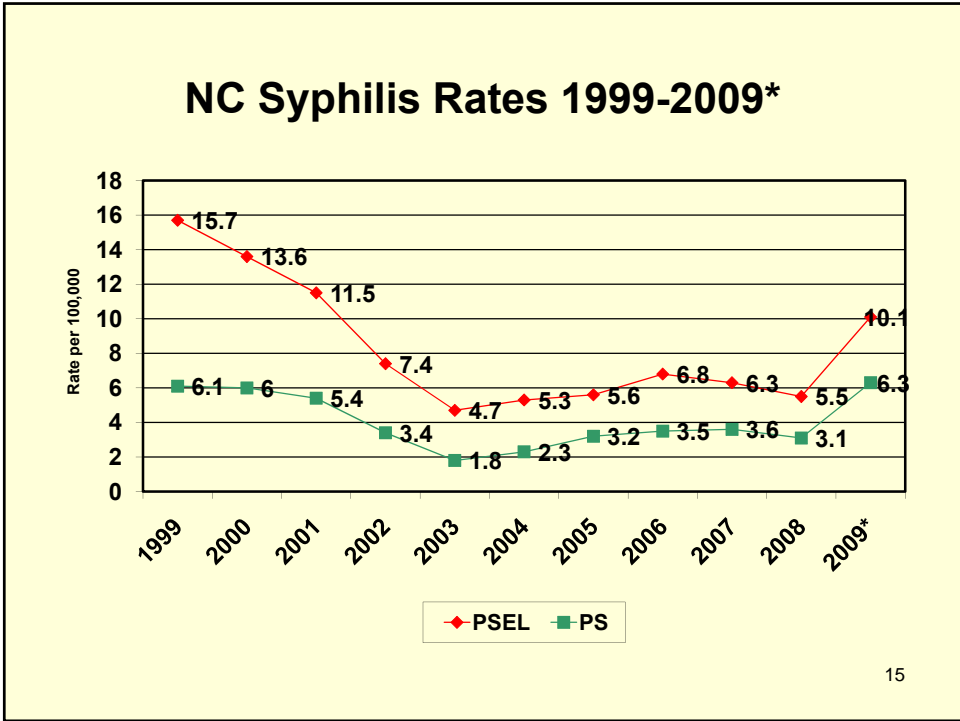
Penicillin Allergy*

Doxycycline 100 mg twice daily x 14 days

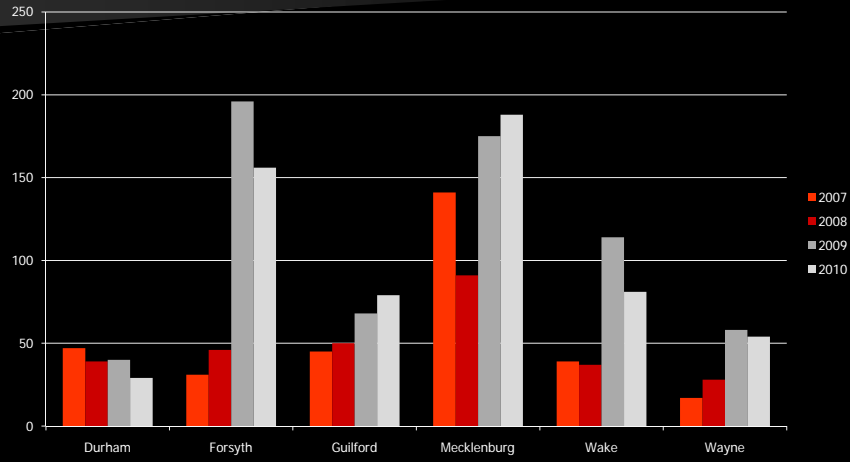
PS Syphilis Rates 1999-2008



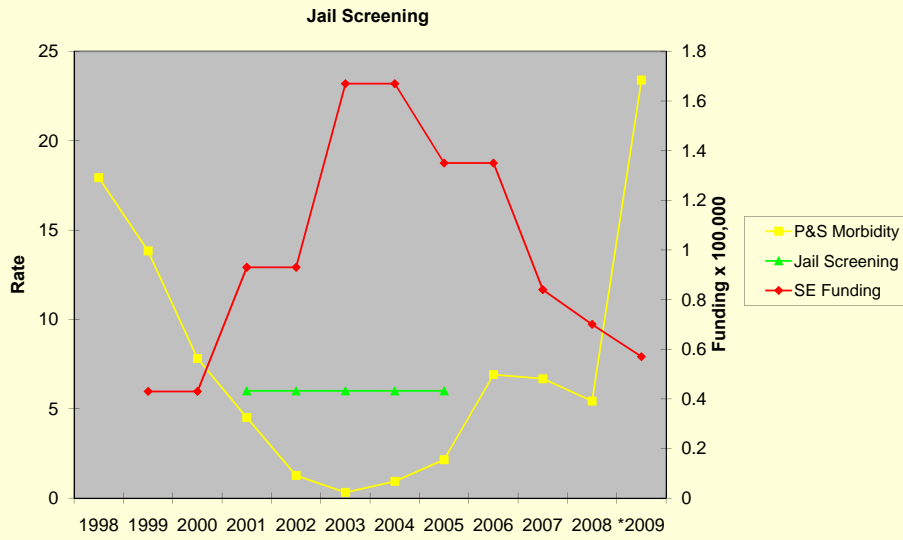
Source: CDC published surveillance reports / NC surveillance data₁₄



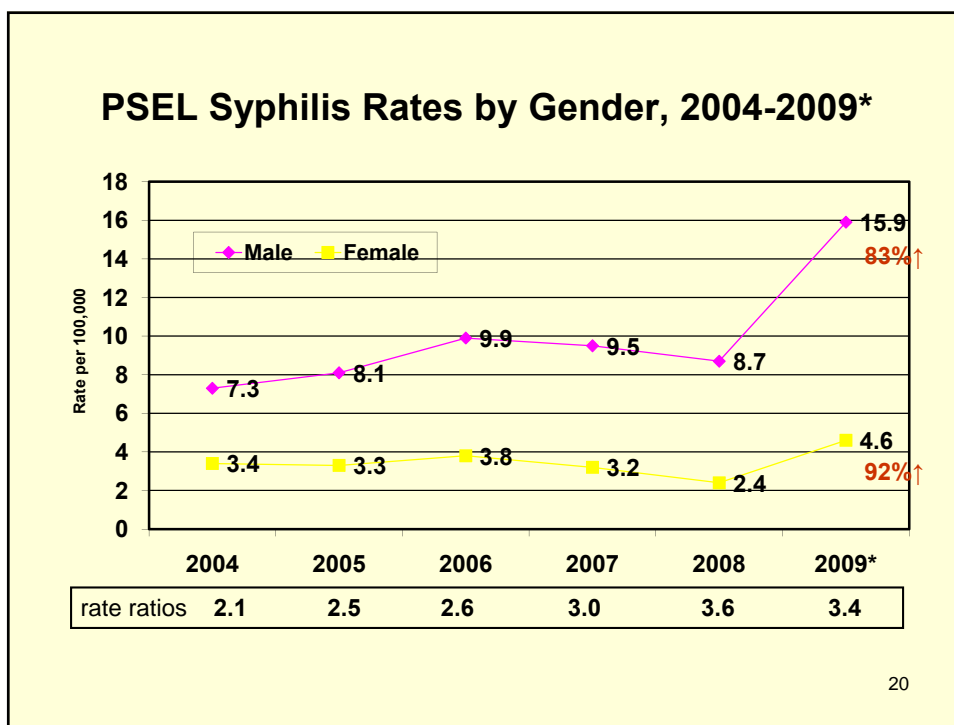
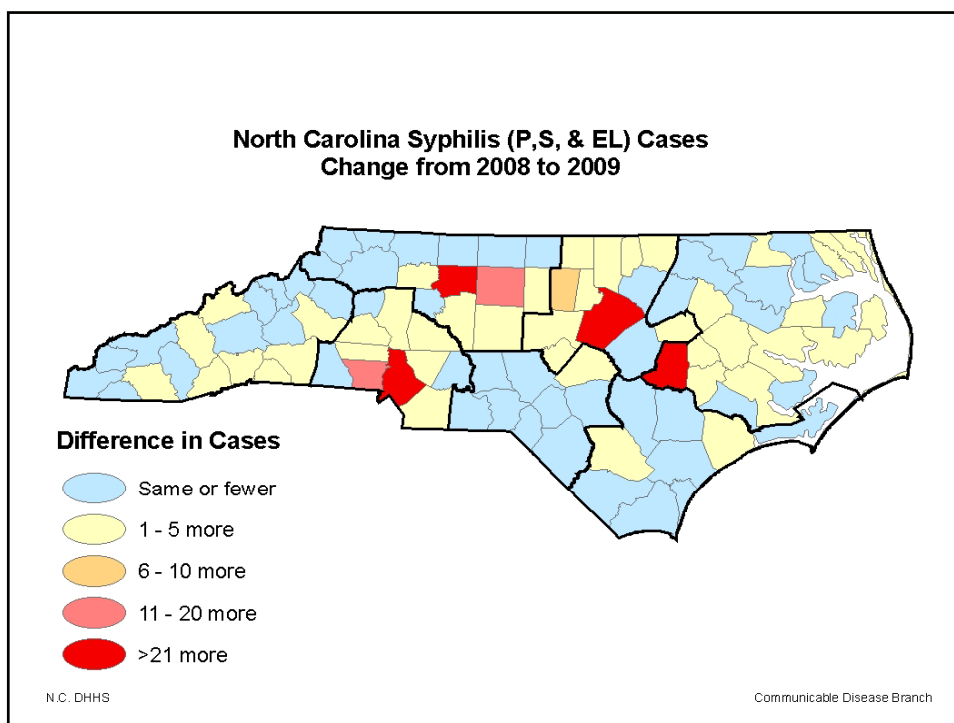
NC PSEL Syphilis Cases Adjusted for 2010 (July9th)

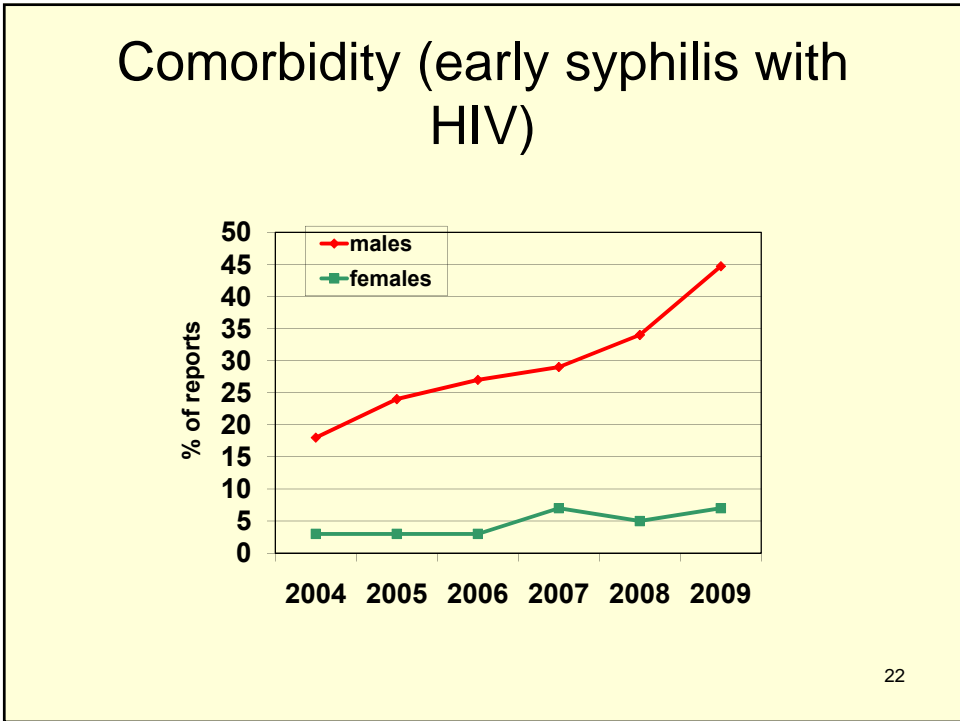
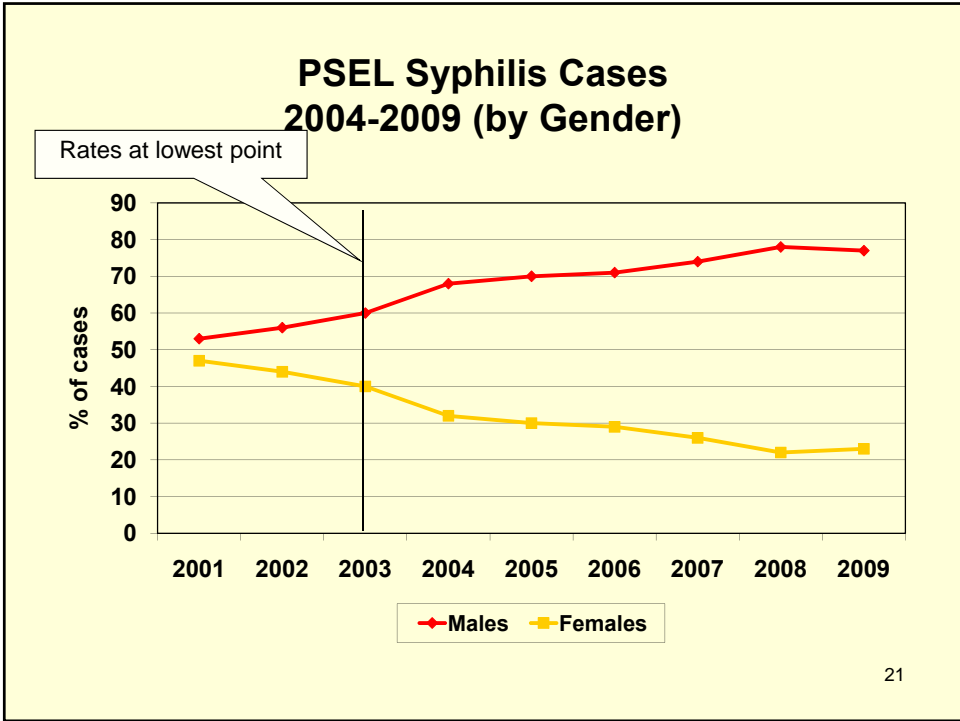


Forsyth County P&S Rates and Funding Levels: 1998-*2009



*2009 projected based on 2007 census data





HIV(+) Patients in ED, June 2008-May 2009

Characteristics of Positives		
	N	%
New Positive		
Yes	6	33.3
No	12	66.7
Gender		
Male	13	72.2
Female	5	27.8
Race		
White	1	5.9
Black	4	23.5
American Indian	0	0.0
Hispanic	7	41.2
Asian	4	23.5
Other	1	5.9
Missing	0	0.0
In Care at Test Date*		
Yes	2	20.0
No	10	80.0
In Care Post-ED Test		
Yes	18	100.0
No	0	0.0
Febrile at Triage^		
Yes	4	22.2
No	14	77.8

* Among previously known positives
^ Febrile defined as $\geq 38^{\circ}\text{C}$

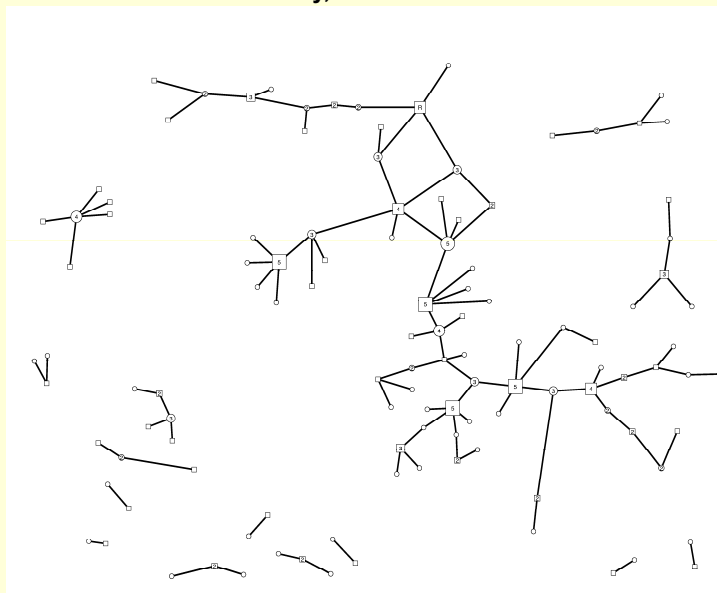
- The average age = 41 years
- CD4 count (average): 231
 - Acute HIV Infection Diagnosis: 445
 - New Diagnoses: 207
 - Previous Diagnoses: 221
- Viral load (average): 977,724
 - Acute HIV Infection Diagnosis: >10,000,000
 - New Diagnoses: 309,744
 - Previous Diagnoses: 409,487

HIV & STD Testing, June 2008-May 2009

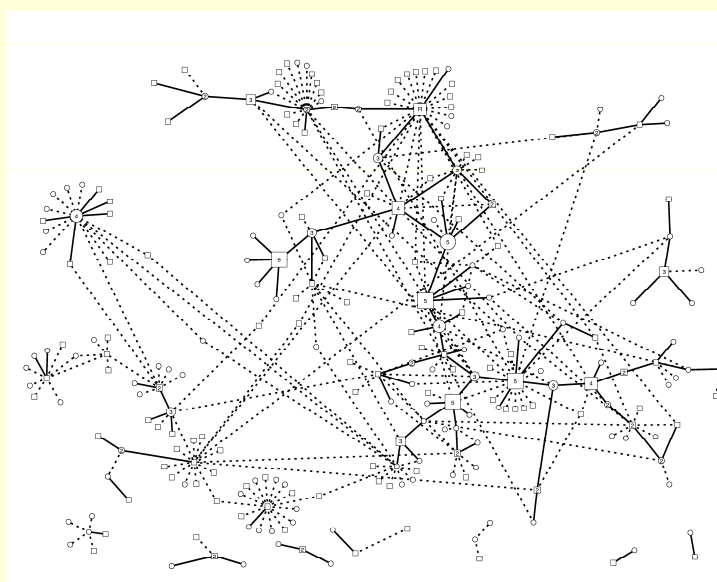
	Patients Tested	Also Tested for HIV*, % (n)
All STDs	2699	9.56% (258)
Syphilis	1117	18.35% (205)
Gonorrhea	1864	6.65% (124)
Chlamydia	1866	6.59% (123)
HSV	41	21.95% (9)

* Based 667 HIV tests performed, excluding organ transplant patients

Sexual contact tracing network (N=116) during the early syphilis outbreak in Columbus County, 2001-Feb 2002



Same network (N=250), showing additional social contacts elicited through cluster interviewing, Columbus County, 2001-Feb 2002.



What to do

- All syphilis cases must have an HIV test
- All HIV infected individuals must have syphilis testing and continue to be tested every 3-6 months
- Treat all suspected cases
- Treat all contacts who are within a 90 day window from early syphilis cases
- Work associates

What to do

- Notify local EDs of Syphilis epidemic and assure they have BZN PCN
- Look for opportunities to integrate HIV and Syphilis testing
- Treat, treat, treat