

The background features abstract, overlapping green geometric shapes in various shades, creating a modern and professional look. The shapes are primarily triangles and polygons, some with thin white outlines, set against a white background.

Reducing Missed Opportunities: Reconnecting HIV & STI Screening

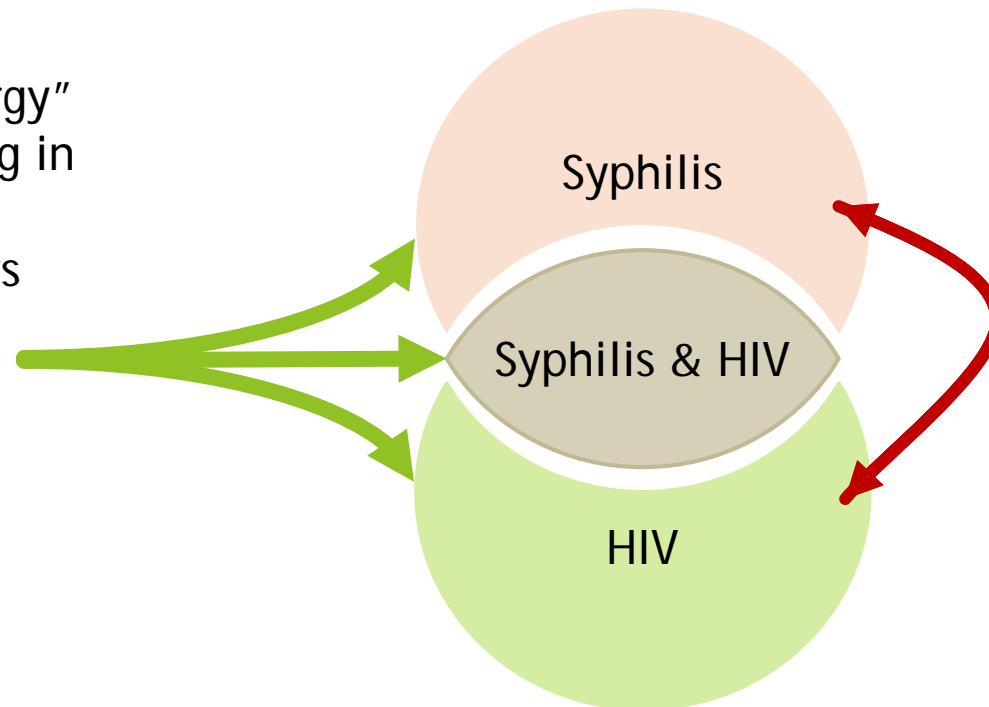
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Disclosures

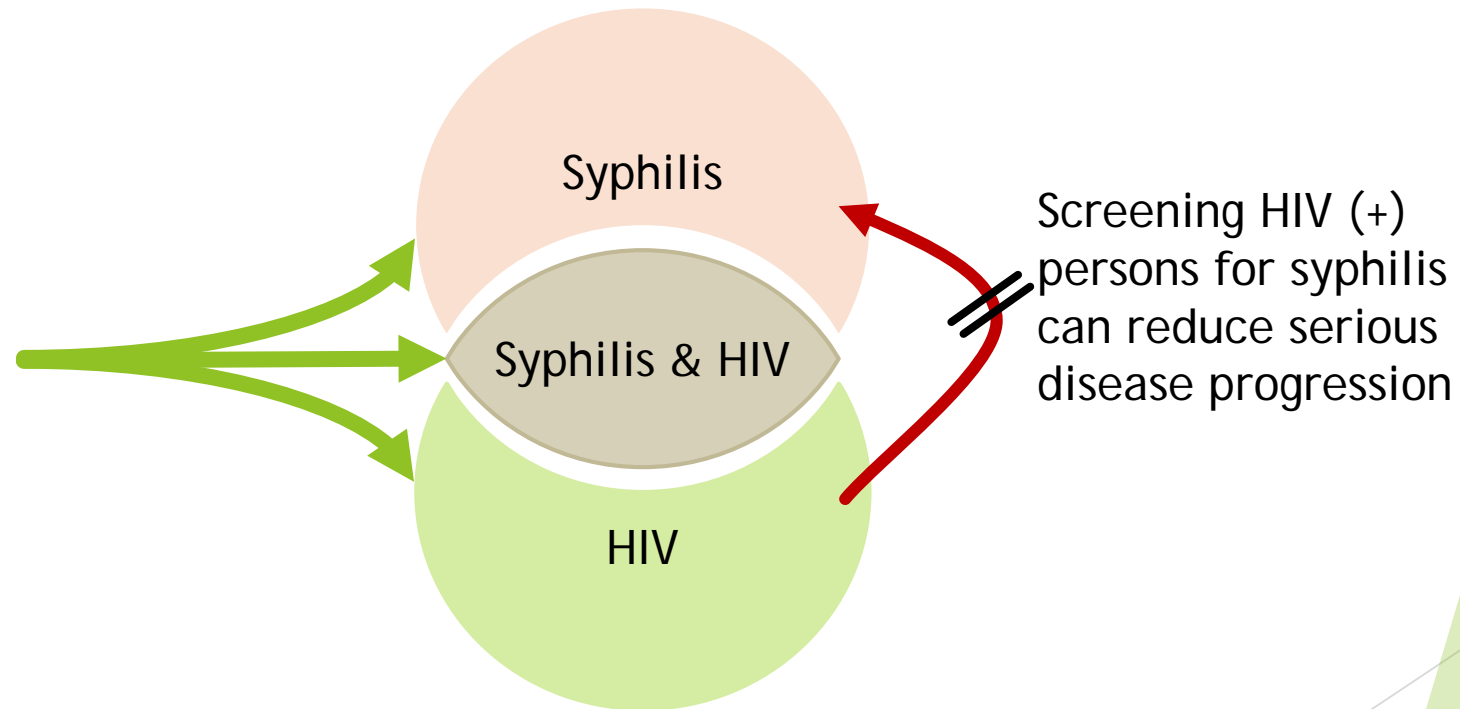
- ▶ Honorarium, Speaking Fees or Research Support
 - ▶ Atlas Genetics
 - ▶ BD Diagnostics
 - ▶ Beckman Coulter
 - ▶ Cepheid
 - ▶ Great Basin Scientific
 - ▶ Hologic
 - ▶ Rheonix
 - ▶ Roche Molecular Diagnostics

What you already know...

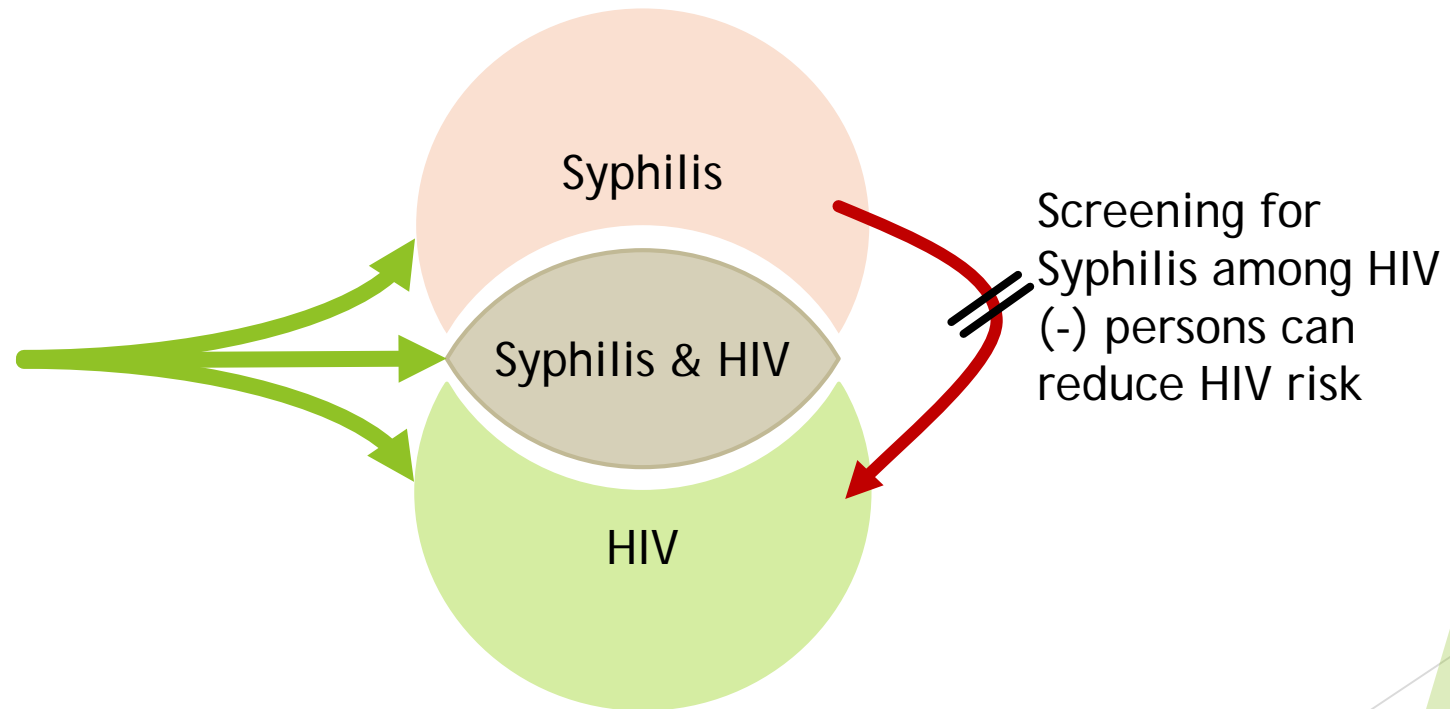
“Epidemiologic Synergy”
widely used beginning in
the early 1990’s by
Wasserheit and others



What you already know...



What you already know...



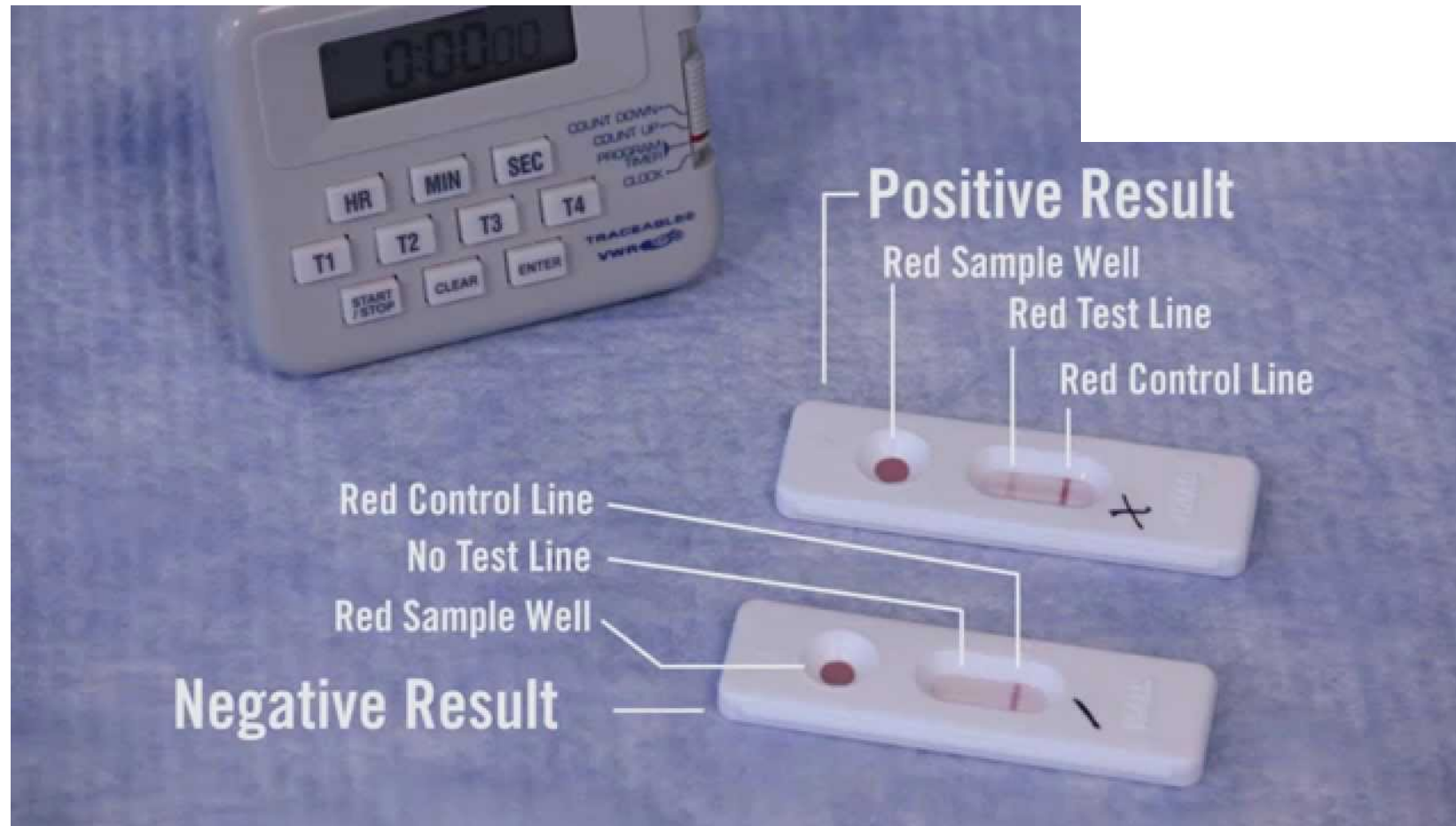
STI and HIV services are often separated by the realities of funding streams

- ▶ CDC National Center for HIV, Hepatitis, STD & TB
 - ▶ Division of Adolescent & School Health
 - ▶ Division of HIV/AIDS Prevention
 - ▶ Division of STD Prevention
 - ▶ Division of Tuberculosis Elimination
 - ▶ Division of Viral Hepatitis
- ▶ NIH National Institute of Allergy & Infectious Diseases
 - ▶ Division of AIDS
 - ▶ Division of Microbiology & Infectious Diseases
 - ▶ Division of Allergy, Immunology & Transplantation

Diagnostic Development in the US

- ▶ HIV described in 1983
 - ▶ First rapid test for field use: 1998 (15 years)
- ▶ *T. pallidum* first described in 1905
 - ▶ First rapid test for field use: 2011 (106 years)
- ▶ *Speaks to the need for political will*

Currently the only FDA Approved Syphilis Rapid Test (Treponemal Antibody Specific)



CLIA-Waived

- ▶ Uses a finger stick
- ▶ 2-step process
- ▶ 10 minute wait
- ▶ Performance correlates well to lab-based treponemal antibody tests

- ▶ This assay can be run at the same time as an HIV rapid while a client waits

Ways to take advantage of this technology

- ▶ Using a single finger-stick to drop blood on both syphilis & HIV test devices
- ▶ Counseling while waiting for test results
 - ▶ Do not be hesitant because there is no titre and you may identify old, perhaps treated infections
- ▶ Referral to local public health services if positive
 - ▶ Relationships between health agencies and CBOs is critical!
 - ▶ Use of community health navigators has been shown to be effective

But at the same time...

- ▶ Samples for CT/GC/TV screening can often be ***self-collected***
 - ▶ CBO's
 - ▶ Outreach vans
 - ▶ Health fairs
 - ▶ School-based clinics or screening events
 - ▶ Detention centers
- ▶ The days of specimen quality/transport concerns are behind us
- ▶ ***If we are doing screening for HIV, let's not forget STI!!!***

A collaboration in Birmingham, AL

- ▶ CDC funded CBO providing HIV screening
- ▶ Added rapid syphilis and CT/GC/TV testing for men (urine & rectal samples) and women (vaginal & rectal) in October 2015
- ▶ To date:
 - ▶ 144 STI tests
 - ▶ 11 (7.6%) CT (+) (7 ano-rectal +)
 - ▶ 7 (4.9%) GC (+) (3 ano-rectal +)
 - ▶ 2 (1.4%) TV (+)
 - ▶ 1 (0.7%) Syphilis (+) (was also diagnosed with HIV at this visit)
 - ▶ 6 (4.2%) HIV (+)

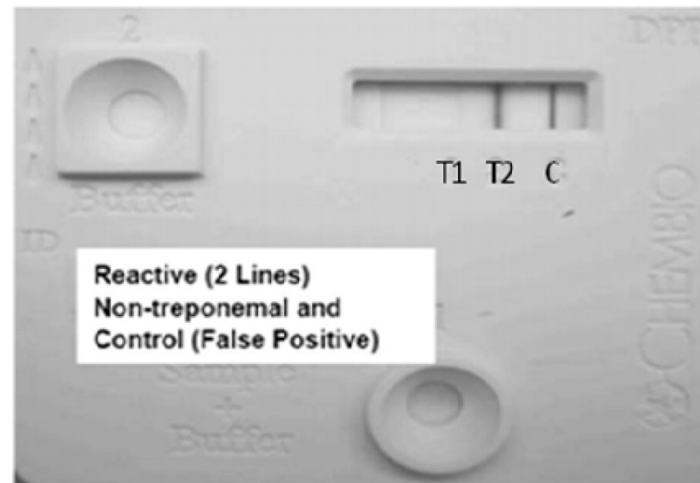
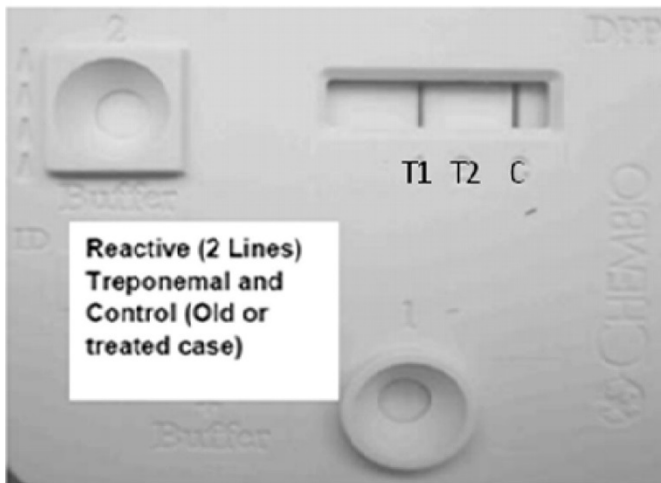
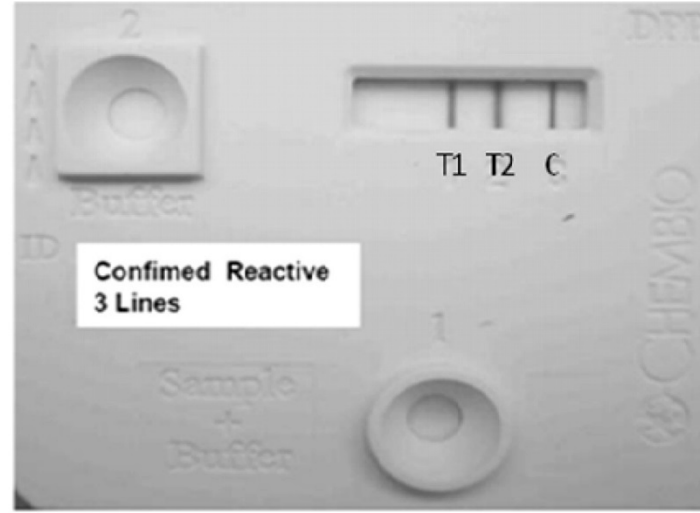
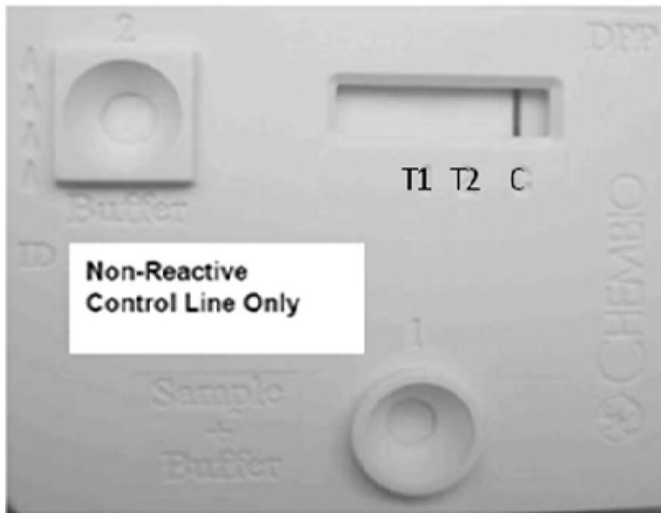
Opportunities the Horizon

The background features a series of overlapping, semi-transparent green triangles and polygons of various shades, ranging from light lime green to dark forest green. These shapes are primarily located on the right side of the frame, creating a dynamic, layered effect. The rest of the background is plain white.

Even More Options

- ▶ Syphilis & HIV dual tests are available ex-US
- ▶ Point-of-Care assays for STI that can be used to Test & Treat are available ex-US
 - ▶ Chlamydia is a major focus
 - ▶ GC and TV close behind
- ▶ The non-clinical access to care and short wait for results can substantially improve provision of services

Dual treponemal & Non-Treponemal Antibody Test



Arnold R. Castro et al.
J. Clin. Microbiol.
2010;48:4615-4619

Syphilis & HIV in a Single Test



Three dual tests with excellent performance

	DPP	SD Bioline	Multiplo
Sample type	Whole blood, serum, plasma		
Assay time	25'	20'	3'
Equipment	Timer	Timer	None
Shelf life	24 mo ambient	24 mo ambient	18 mo ambient
HIV Target	HIV1 & HIV2 Ag	HIV1 gp41, sub-O Ag HIV2 gp36 Ag	HIV1 gp41, gp120 and group O peptides HIV2 gp36 peptide
Antibody class	IgM & IgG	<i>IgM, IgG & IgA</i>	IgM & IgG
Chemistry	Solid phase immunochromatographic assay	Solid phase immunochromatographic assay	<i>Vertical Flow immunoassay</i>

Adapted from Humphries, et al. JCM 2014

HIV Performance Estimates from 150 stored samples

	Sensitivity (95% CI)	Specificity (95% CI)
DPP	98.9% (88.6-99.9%)	98.1% (88.6-99.9%)
SD Bioline	97.9% (92.0-99.6%)	100% (91.5-100%)
Multiplo	97.9% (92.0-99.6%)	94.2% (83.1-98.5%)

35 HIV-only (+), 62 dual (+) and 53 HIV(-) by Siemens EIA & HIV-1 WB $\kappa=.95$

Adapted from Humphries, et al. JCM 2014

Syphilis Performance Estimates from 150 stored samples

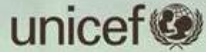
	Sensitivity (95% CI)	Specificity (95% CI)
DPP	95.3% (87.9-98.5%)	100% (92.9-100%)
SD Bioline	93.0% (84.8-97.1%)	100% (92.9-100%)
Multiplo	94.1% (86.3-97.8%)	96.9% (88.2-99.5%)

24 Syphilis-only (+), 62 dual (+) and 64 Syphilis(-) by Serodia TPPA $\kappa=.93$

Summary

- ▶ By reintegrating STI screening with current HIV screening efforts, we can have a large impact on reducing the epidemiologic synergy between these infections
- ▶ Political will is essential to both reintegration and to improving access to newer diagnostic methods in the US
- ▶ We CAN do better

Cuba Eliminates Mother-to-Child Transmission of Syphilis & HIV



NACER SIN VIH



Dr. Margaret Chan

Director-General
World Health Organization