

Ethics of Universal HIV Testing 2009



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Key Points

- Current practice is needs improvement
- Earlier diagnosis benefits both the individual and public health
- Can routine testing be an effective way to obtain earlier diagnoses?
- What are the risks to routine testing?

Current Practice

- 25% of all newly diagnosed persons were given a diagnosis of AIDS within 1 month and 33-41% within 1 year of HIV diagnosis¹
- Studies in industrialized nations have shown the proportion of AIDS diagnosis shortly after initial HIV diagnosis has increased by 20% since the early 1990's²

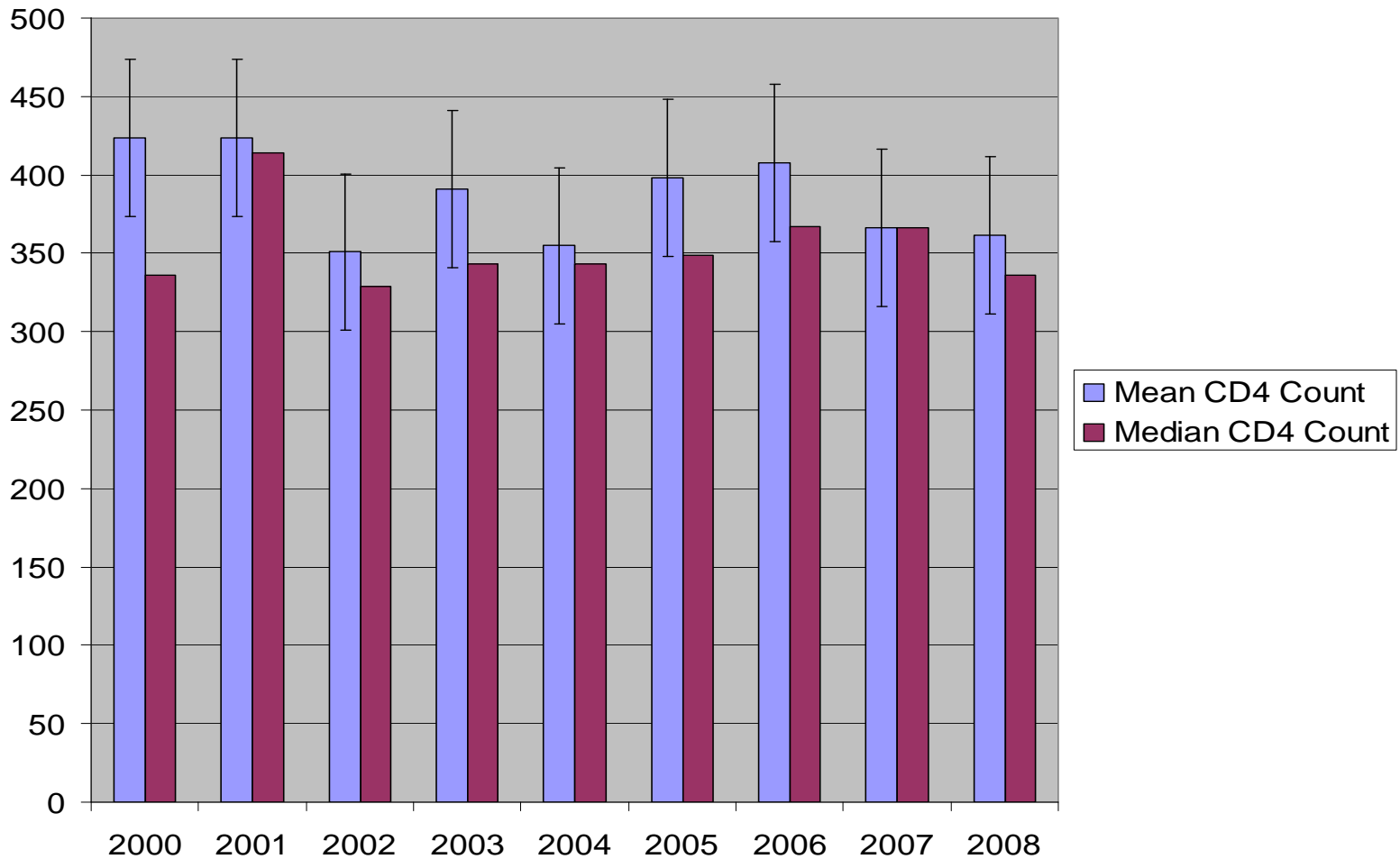
1. Qaseem A, Snow V, Shekelle P, et al. Ann Intern Med. 2009; 150: 125-31.
2. Girardi E, Sabin C, Monteforte A. J Acquir Immune Defic Syndr. 2007; 46: S3-S8.

Current HIV testing

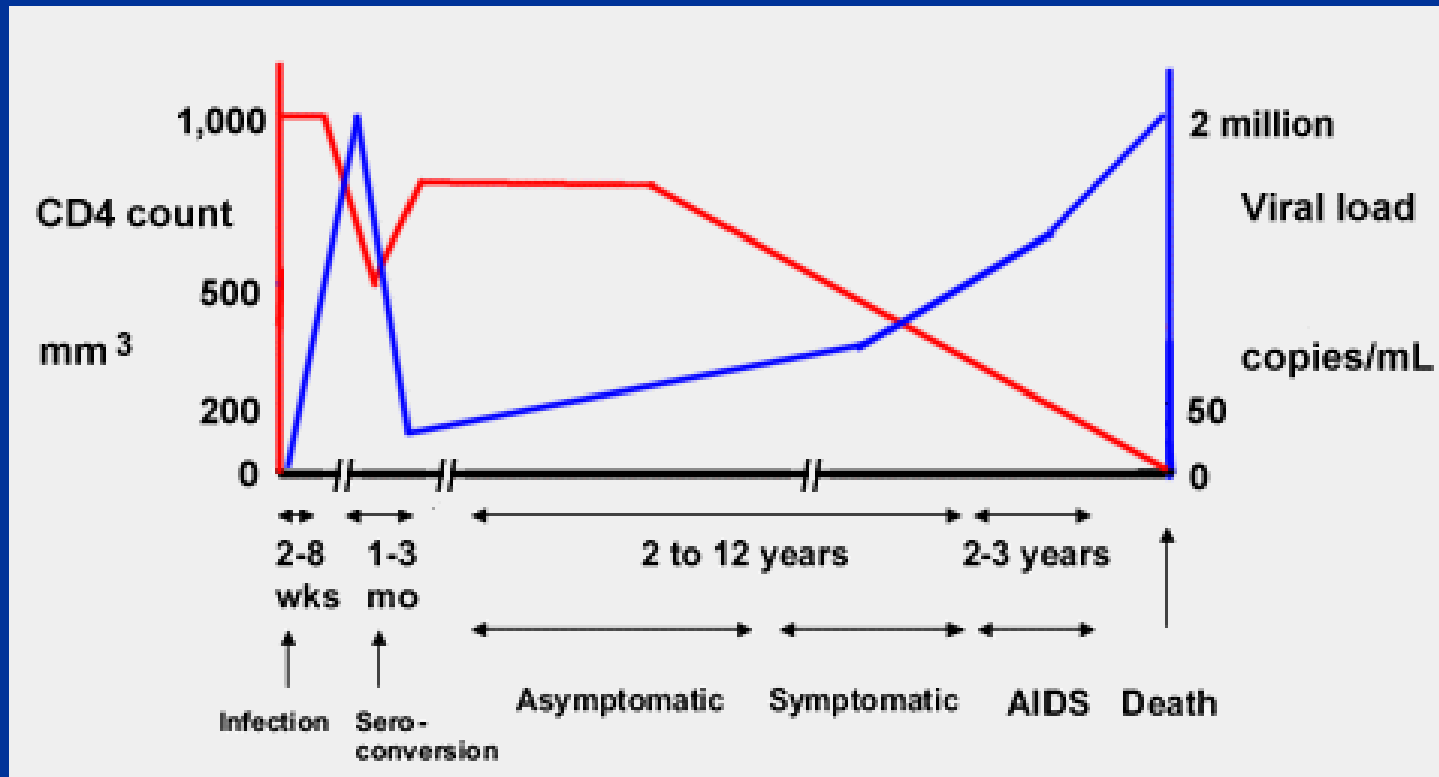
- Despite higher awareness, late diagnosis rates have been unchanged
- 24-27% are not aware of their infection

Glynn M, Rhodes P. National HIV Prevention Conference. Atlanta, GA. June 2005. [T1-B11-13]

DCHHS Early Intervention Patients, 2000-2008



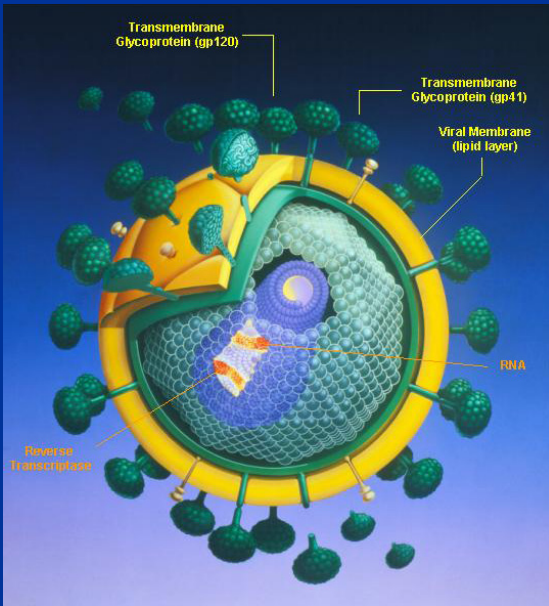
Natural Progression of HIV Disease



CD4 counts decrease by a rate of 60-100/uL each year

Current practice

We know what causes HIV infections



Failures of Risk Based Testing

- Limited time for provider/patient interaction
- Age-old taboos prevent frank discussions of risk factors
- Early infections are asymptomatic
- High risk groups have limited access to patient care

Review of Medical Encounters in the 5 Years Before a Diagnosis of HIV-1 Infection: Implications for Early Detection

*Daniel Klein, †Leo B. Hurley, ‡Deanna Merrill, and †Charles P. Quesenberry, Jr., for CHAIR
(Consortium for HIV/AIDS Interregional Research)

**Kaiser Permanente Medical Center, Hayward, and †Kaiser Foundation Research Institute, Division of Research, Oakland, California; and ‡The Kaiser Permanente, Consortium for HIV/AIDS Interregional Research, Denver, Colorado, U.S.A.*

- 86% of newly diagnosed HIV patients were from major risk groups, but only 26% had risk factors diagnosed in the chart prior to diagnosis
- Access to care did not influence early detection rate



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Weekly

December 1, 2006 / 55(47);1269-1272

Missed Opportunities for Earlier Diagnosis of HIV Infection --- South Carolina, 1997--2005

- 73% (1,302) of late testers had at least 1 health-care facility visit
 - 78.9% Emergency Departments
 - 12.3% Inpatient settings
- Average of 4 visits 3 years before HIV diagnosis

Benefit to early diagnosis– Patient

- Late diagnosis has a higher risk of clinical events and death
- More likely to have a poorer response when HAART is begun¹
- Cost of treating late diagnosis patients is more than 2 times higher²
- Initiating therapy at higher CD4 counts have better prognosis³

1. Skowron G, Street J, Obee E. J Acquir Immune Defic Syndr. 2001; 28: 313-9.
2. Krentz HB, Auld MC, Gill MJ. HIV Med. 2004; 5: 93-8.
3. Klein D, Hurley L, Merrill D, et al. JAIDS. 2003; 32(3): 143-52.

Benefits to early diagnosis– Public Health

- More likely to adopt risk reduction behaviors
 - Undiagnosed individuals account for 54-70% of all new infections in the U.S¹.
 - Most sexually active MSM engage in relatively safer behaviors²
- HAART lowers chances of infecting others by lowering plasma HIV-RNA levels³

1. Marks G, Crepaz N, Janssen R. AIDS. 2006; 20: 1447-50.

2. MMWR. 2004; 53(38): 891-4

3. Gupta P, Mellors J, Kingsley L, et al. J Virol. 1997; 71: 6271-75.

Meta-Analysis of High-Risk Sexual Behavior in Persons Aware and Unaware They are Infected With HIV in the United States

Implications for HIV Prevention Programs

Gary Marks, Nicole Crepaz, PhD, J. Walton Senterfitt, PhD, and Robert S. Janssen, MD

- 53% reduction in recalled unprotected sex in HIV+ persons aware of their status

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January 31, 2008 - 8:49 AM



Patients with HIV could have sex without condoms



The finding offers hope to couples affected by HIV (Keystone)

HIV patients who take effective retroviral drugs "do not pass on the virus through unprotected sex", the Swiss National Aids Commission says.

Couples where one partner is HIV positive do not need to use a condom to prevent transmitting the disease - as long as retroviral therapy is followed regularly and has suppressed the virus in the blood for at least six months, it said on Wednesday.

The patient must also be free of any other sexually transmitted disease.

"These findings come from four different studies," said Bernard Hirschel, co-author of

- Serodiscordant couples¹
- The test/treat models²

1. Quinn TC, Wawer MJ, Sewankambo N, et al. N Engl J Med. 2000; 342(13): 921-9.
2. Dieffenbach CW, Fauci AS. JAMA. 2009; 301(22): 2380.

Could widespread use of combination antiretroviral therapy eradicate HIV epidemics?

J X Velasco-Hernandez, H B Gershengorn, and S M Blower

Articles



Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model

Reuben M Granich, Charles F Gilks, Christopher Dye, Kevin M De Cock, Brian G Williams

Summary

Background Roughly 3 million people worldwide were receiving antiretroviral therapy (ART) at the end of 2007, but an estimated 6·7 million were still in need of treatment and a further 2·7 million became infected with HIV in 2007. Prevention efforts might reduce HIV incidence but are unlikely to eliminate this disease. We investigated a theoretical strategy of universal voluntary HIV testing and immediate treatment with ART, and examined the conditions under which the HIV epidemic could be driven towards elimination.

Lancet 2009; 373: 48–57

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6736(08)61697-9

See Comment pages 7 and 9

Testing for HIV during Pregnancy

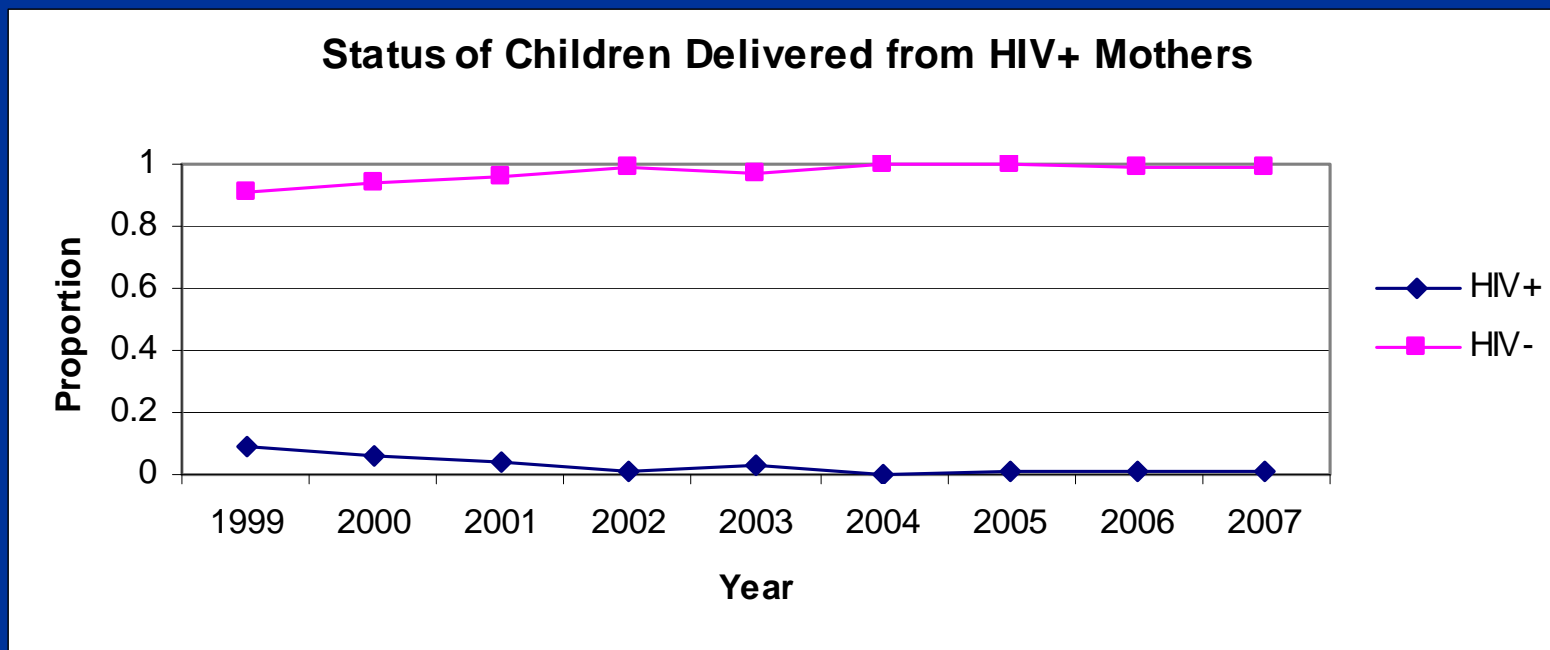
- Rule 97.135: Specifies a pregnant women shall be tested for HIV at the first prenatal visit and when admitted for delivery
- 8-57% of pregnant women tested + identified a risk factor¹
- Probability that an HIV+ mother vertically infects her baby during delivery is 28%
- When effectively treated and managed, this rate is reduced to 1% or less.
- Only 1/2 of pregnant women in the U.S. are tested for HIV².

1. Chou R, Smits AK, Huffman LH, et al. Ann Intern Med. 2005; 143: 38-54.

2. Lansky A, Jones J, Frey R, et al. Am J Public Health. 2000; 9: 1291-3

Peri-natal Transmission of HIV and AIDS

Transmission of HIV and AIDS from mother to child is nearly 100% preventable



Connection between pregnancy screening and testing

- Risk assessment is not performed
- Testing is completed as a matter of routine
- 31% of women of childbearing age are uninsured
- 44,367 babies were born in 2007 in Dallas County (88,734 HIV tests)
- 1 baby seroconverted in 2007

Universal testing

- How would the public respond to the change from client motivated testing to provider or government motivated testing?
- Is it mandatory?
- Would it infringe on patient autonomy?
- Would patients no longer seek care?
- Could “routine” testing become too routine and thus erode pre-test counseling?

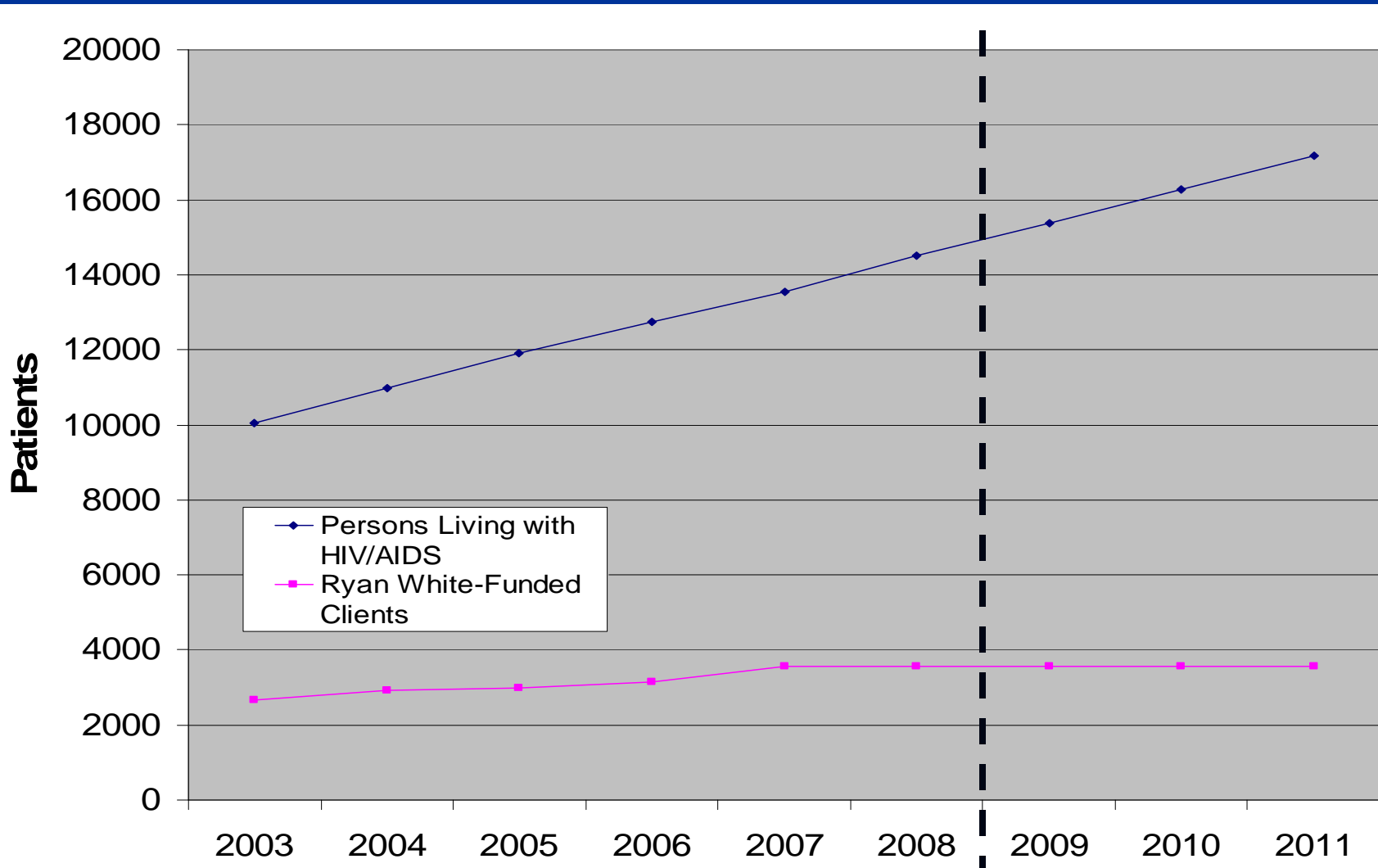
False Positive Results

- Existing prevalence:
 - *Using a prevalence of 1.2%, the positive predictive value would be 88%*
 - *Using a prevalence of 0.6%, the positive predictive value would be 75%*
- 13% more false positive results would occur if testing lower risk settings

Universal testing

- Does having more testing done equate to having more services available?
- Will newly diagnosed individuals have access to care?
- What about DOT?
- What about cost?

Medical Care Availability, Dallas EMA



What about cost?

■ Who should pay for the HIV test?

	Cost Range ¹	Private Insurance Pays ²	Medicaid Rate ²	Medicare Rate ²	Retail Charge ²
Rapid HIV Test	\$5-8.00	\$12-14	\$18.96	0	Not Offered
HIV Elisa	\$1.75-7.00	\$12-14	\$18.96	0	\$124.50
Western blot/ confirmation	\$32-80.00	\$15-20	\$27.05	\$27.05	\$225.50

1. Sanders G, Bayoumi A, Sundaram V, et al. N Engl J Med. 2005;352(6):570-85.
2. Informal survey of local physician offices and resources.

Who presents late?

- Marginalized groups
- Those who are not perceived or do not perceive themselves at risk

Would universal screening benefit this population?

Stigma

- It will not happen to me
- It often prevents people from getting the treatment
- HIV is a gay disease
- It's God's judgment

