

Integrating Hepatitis Prevention Services in HIV/STD Testing and Treatment Settings

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Hepatitis B Virus Infection and Immunization Among Young Men Who Have Sex With Men

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Background

Hepatitis B Virus (HBV) infection remains a serious public health problem in the U.S.

- ~ 80,000 persons infected in 1999
- ~ 1,000,000 persons chronically infected
- ~ 5,000 annual deaths from liver disease among those with chronic infection
- ~ 1982 vaccine became available in the U.S.

Background (Cont.)

Prior to vaccine license, up to 70% of adult MSM had serologic markers of HBV infection.

Few recent studies have investigated the extent of HBV infection and vaccine-acquired immunity among young MSM.

Presentation Objectives

Among young MSM,

1. Describe the extent of HBV infection and vaccine-associated immunity.
2. Identify plausible missed opportunities for hepatitis B vaccination.

Reference: *Am J Public Health.* 2001;91:965-71

YMS Method

Venue-based survey of young MSM, ages 15-22 (PI) & 23-29 (PII), conducted in 7 U.S. cities from 1994-2001

Constructed monthly sampling frames of gay-identified venues and day-time periods

Randomly selected venues and time periods

At sampled venues, counted all men who appeared to be age eligible

Consecutively approached and screened counted men for eligibility

Interviewed, counseled, and tested participants in a nearby van

Methods (Cont.)

HBV Outcomes

Infected: anti-HBc or HBsAg

Immunized: anti-HBs alone among MSM who reported having received one or more doses of vaccine

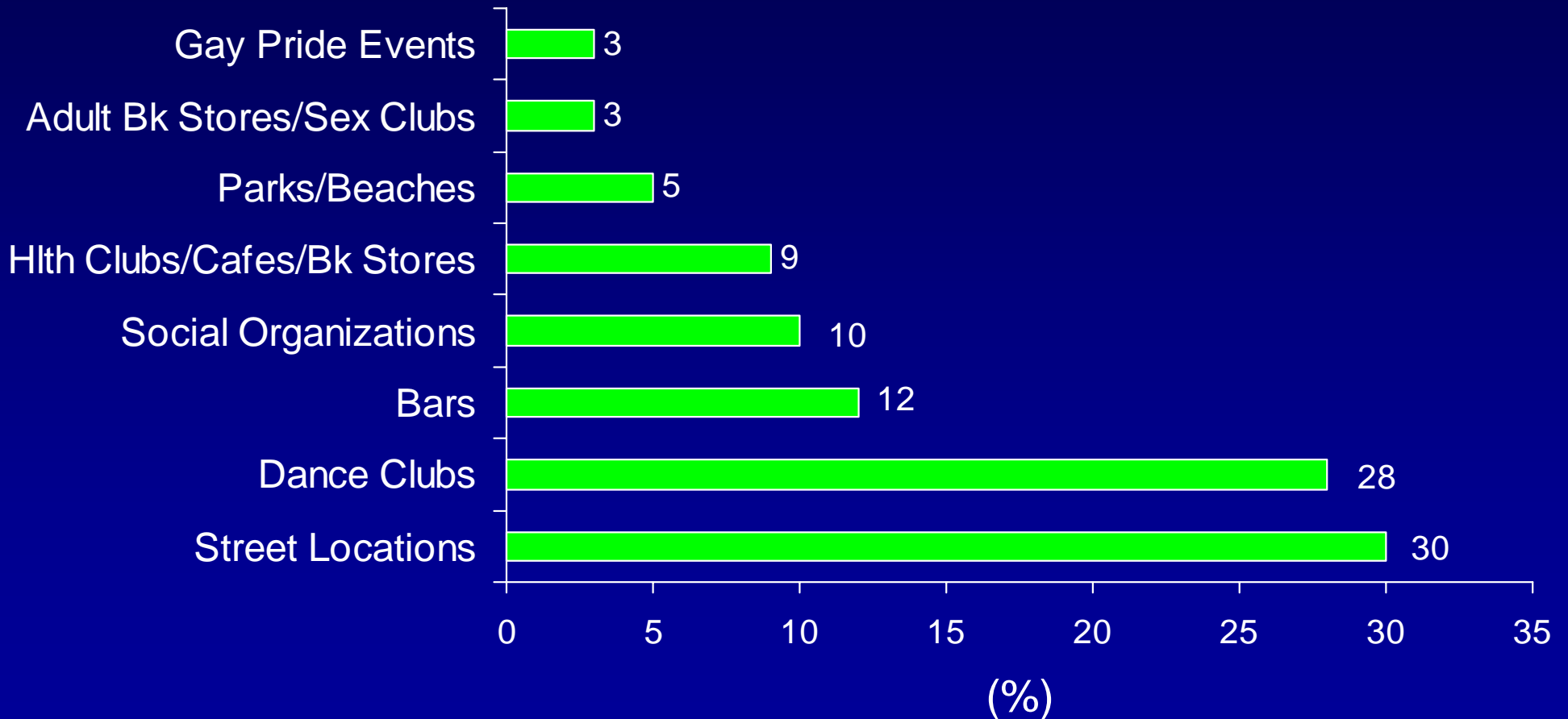
Susceptible: no serologic markers

Unknown: anti-HBs alone among MSM who reported not having received one or more doses of vaccine

Sampling Outcomes (Phase I)

Metropolitan Areas	7	
Venues	194	
Sampling Events	1,592	
Counted	38,622	
Approached	23,881	(62%)
Accepted approach	21,096	(89%)
Eligible	6,866	
Enrolled	4,274	(62%)
MSM Enrolled	3,432	

Participant Characteristics Recruitment Venue



YMS Phase I: n=3432 MSM aged 15-22 years, 7 U.S. metro areas, 1994-1998

Participant Characteristics

Demographics

Race/Ethnicity

Asian	6%
Black	17%
Hispanic	30%
White	35%
Mixed	9%
Other/Unknown	3%

Age Group

15-18	29%
19-22	71%

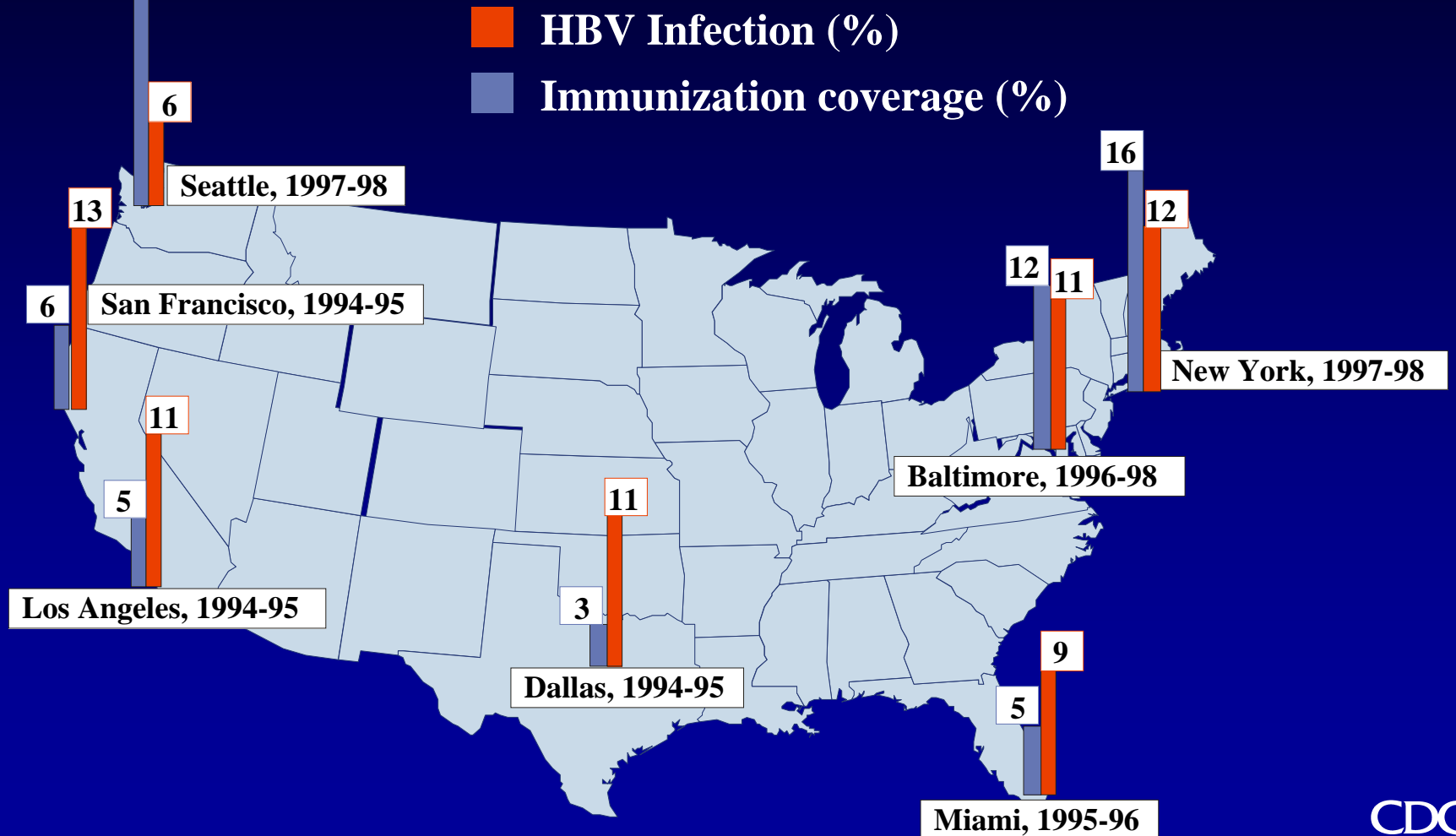
Expectation?

What level of hepatitis B immunization coverage would you expect in a very young and very high risk population that accesses the U.S. health care and HIV/STD prevention systems...nearly two decades after the introduction of a safe and effective vaccine?

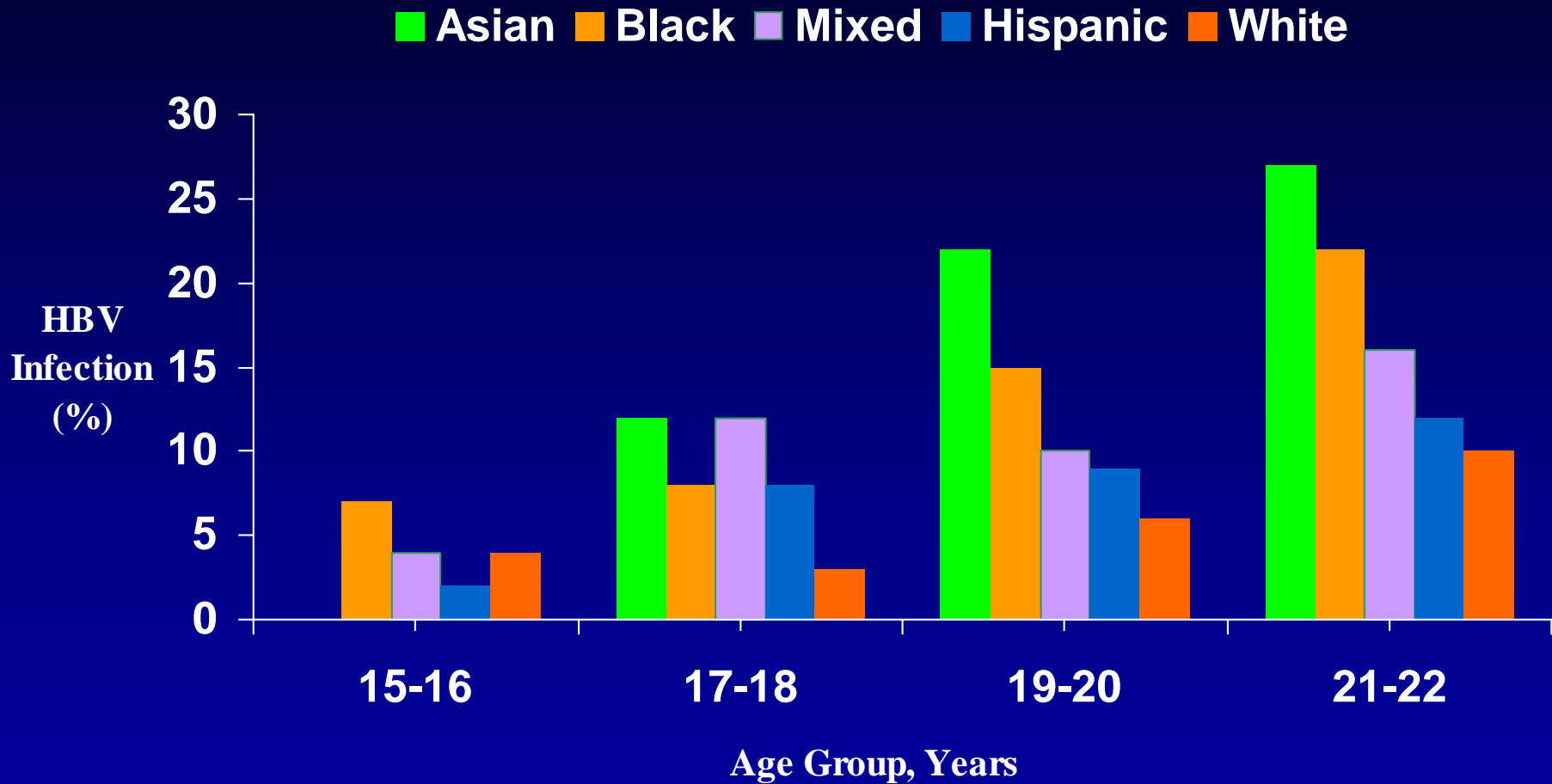
HBV Outcomes

Immunized	9%
Infected	11%
Susceptible	77%
Unknown	3%

HBV Infection and Immunization Coverage, by Site (YMS Phase I)

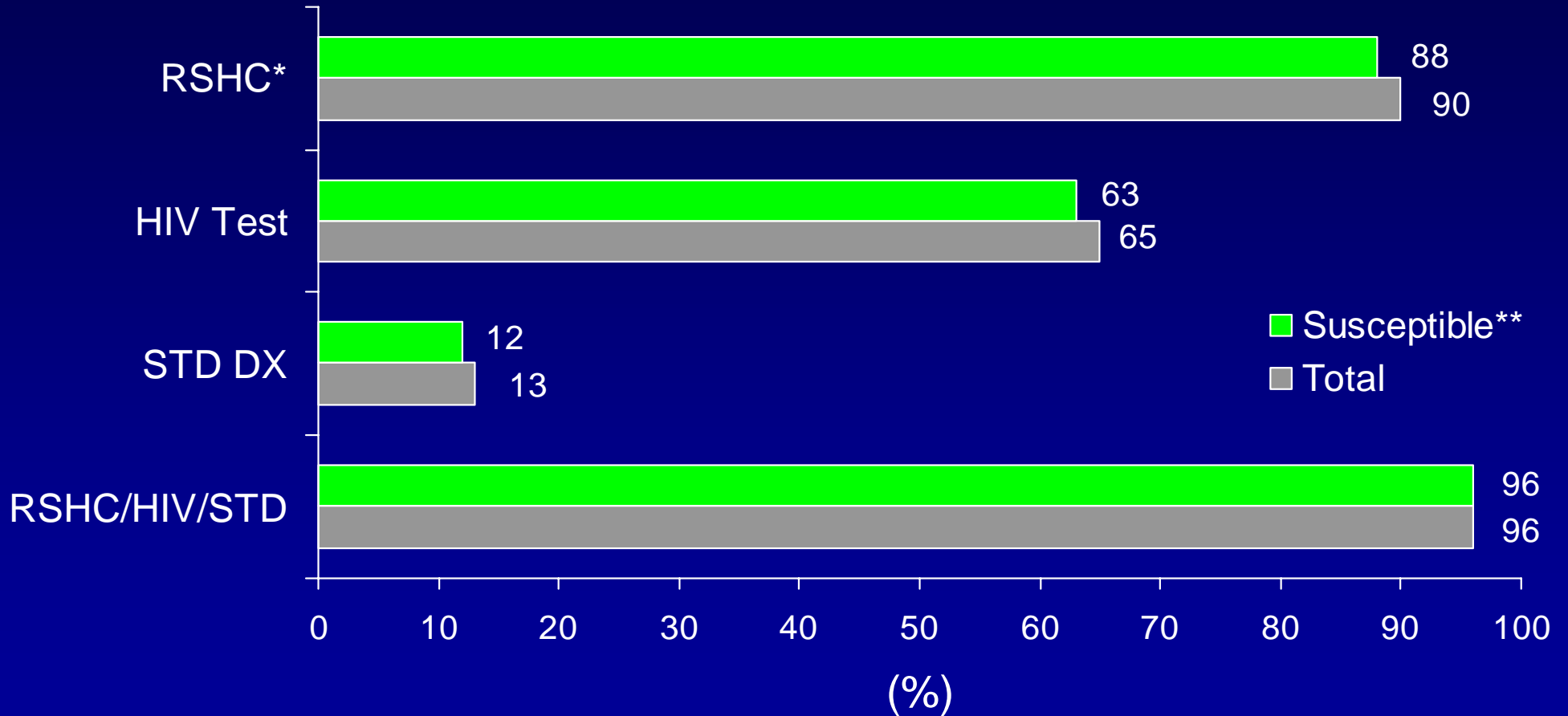


HBV Infection by Age Group and Race



YMS Phase I: n=3432 MSM aged 15-22 years, 7 U.S. metro areas, 1994-1998

Missed Opportunities for Hepatitis B Vaccination (YMS Phase I)



* Regular source of health care

** N=2639 MSM aged 15-22 years

Preliminary YMS Phase II Outcomes

Recruitment

Metropolitan areas (1998-2000)	6
MSM aged 23-29 years	2,838

HBV

Immunized	13%
Infected	21%
Susceptible	62%
Unknown	4%

Conclusions

Despite the availability of a safe and effective vaccine for nearly two decades, few young MSM are adequately vaccinated against hepatitis B in the U.S.

As a consequence, many MSM acquire HBV infection; nearly 1 in 5 by age 22 and nearly 1 in 3 by age 29.

Health care providers and HIV/STD prevention programs miss considerable opportunities to inform and vaccinate young MSM against hepatitis B.

Limitations

Reported immunization coverage is a minimum estimate:

1. Presence of anti-HBs alone without a vaccination HX may represent vaccine-associated immunity

Changing the case definition would increase coverage from 9% to 12% (PI) and from 13% to 17% (PII)

2. Among those with a vaccination HX, vaccine-induced anti-HBs may have waned below detectable levels

Changing the case definition would increase “coverage” from 12% to 19% (PI) and from 17% to 30% (PII)

Limitations (Cont.)

YMS sample is not representative of all young MSM

1. Less than optimal enrollment rate
2. YMS conducted in only a few metropolitan areas
3. Sampled only MSM who attend gay-identified venues

Recommendations

Integrate, Integrate, Integrate...