Sexual Health for Men who have Sex with Men

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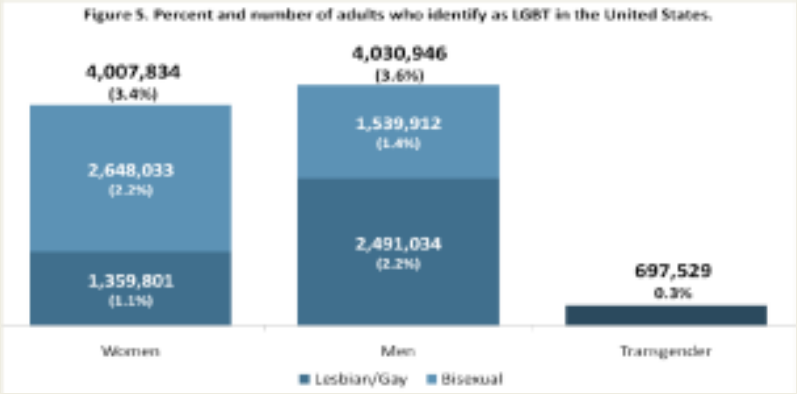
Objectives

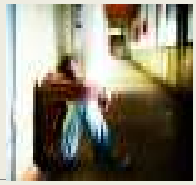
- Discuss issues contributing to increased STI risk among lesbian, gay, bisexual, transgender (LGBT) community
- Review STI and HIV epidemiology among men who have with men (MSM)
- Discuss guidelines for STI screening and most common STIs among MSM
- Discuss HIV pre-exposure prophylaxis (PrEP)

LGBT Population



https://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People-LGBT-Apr-2011.pdf

Life course perspective: Growing up and coming out



- **Sexual expression is happening earlier**
- Same sex behavior and gender non-conformity remains stigmatized in most societies
- Societal messages remind LGBT Youth they are not accepted (marriage pressure, exclusion from military)
- LGBT Youth may encounter loss of friends, lack of family support, religious abandonment, and verbal or physical abuse, resulting in adverse health outcomes
- External stigma may → internalized homophobia → depression, substance use

(Harrison, J Sch Health, 2003; Drasin, J Homosex, 2008; D'Augelli, Clin Child Pysch, 2002; Grov, J Sex Res, 2006)

"Men who have sex with men" is an epidemiological term
Reality is more complex

ONE SIZE DOES NOT FIT ALL

Mental Health Issues

- 40% of MSM become depressed,
  2X the lifetime rate of heterosexuals
- Predictors of major depression are: not having a partner, experiencing anti-gay threats or violence, non-identification as gay
- Panic disorder, social phobia, generalized anxiety disorder are more common among MSM (20% lifetime incidence)
- Culturally-tailored treatment may involve groups that enhance community identification

(Sandfort, Arch Gen Psych, 2001; Gilman, AJPH, 2001; Lewis, Health Place, 2010; Safren, Health Psychology, 2012)

Substance Use and MSM

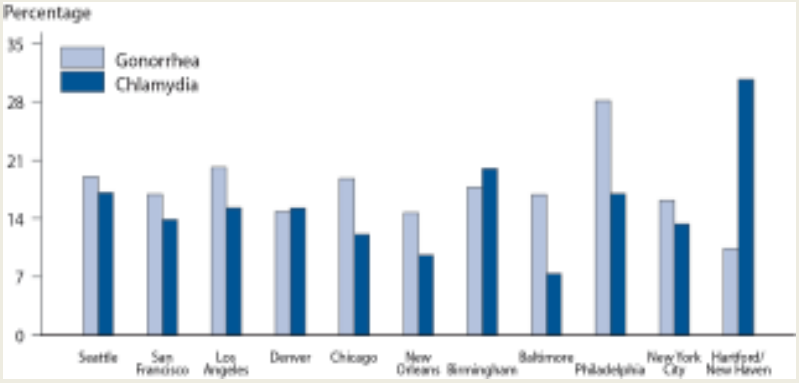
- Substance use during sex is often associated with HIV and STD in MSM in many countries
- Common drug combinations associated with risk include: meth, cocaine, poppers
- May ↑ libido, sensation, sense of invulnerability, but impairs negotiation, associated with ↑ risky networks
- ↓ pain threshold → traumatic sex
- For HIV+ pts, SU may decrease medication adherence

(Colfax, Lancet, 2010; van Griensven, J Int AIDS Soc, 2010; Johnston, Int J Drug Pol, 2010; Bautista, STI, 2004; Parry, Drug Alcohol Dep, 2008; Koblin, AIDS, 2006; Cochran, Sub Use Misuse, 2007; Shoptaw, J Sub Abuse Treat, 2008; Mausbach, Drug Alcohol Depend, 2007; Mansergh, PL0S Med, 2010)

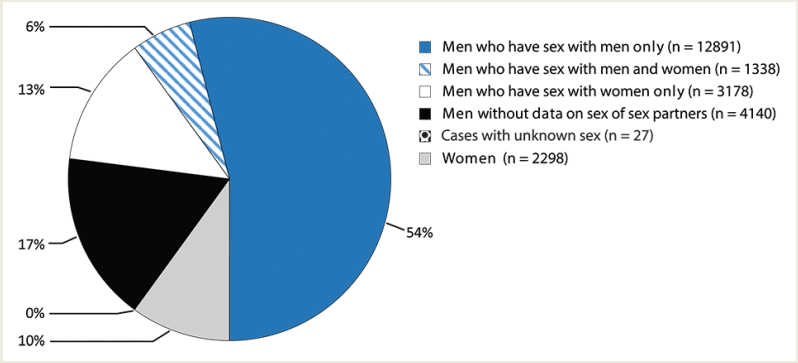
Multifactorial Nature of STD Risk

- **Individual behavior**: number of partners/time
- **Biology**
  - Specific sex acts associated with different STD
  - Particularly, anal intercourse ↑susceptibility to HIV, other STD
  - Role versatility: receptive can be insertive
- **Networks**
  - HIV/STD per contact risk ↑in high prevalence settings
  - Assortative mixing in sub-groups, e.g. racial/ethnic minorities
  - Sexualized venues, e.g. bathhouses, social media, sex work
- **Structural/Societal**
  - Homophobia, bullying leads to early developmental stress, depression, lack of self-efficacy and subsequent risk
  - Criminalization and discrimination in health care settings impede disclosure and receipt of timely health services

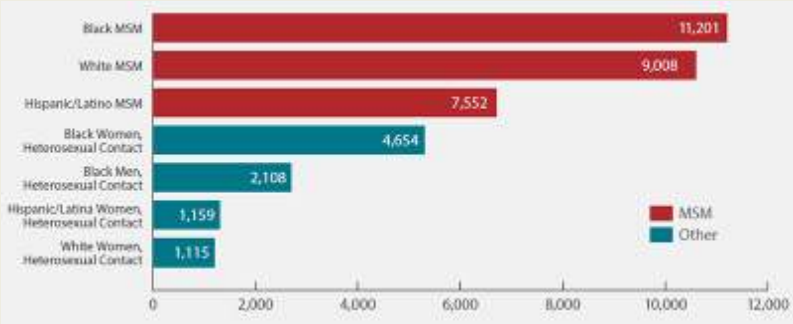
STI Rates among MSM



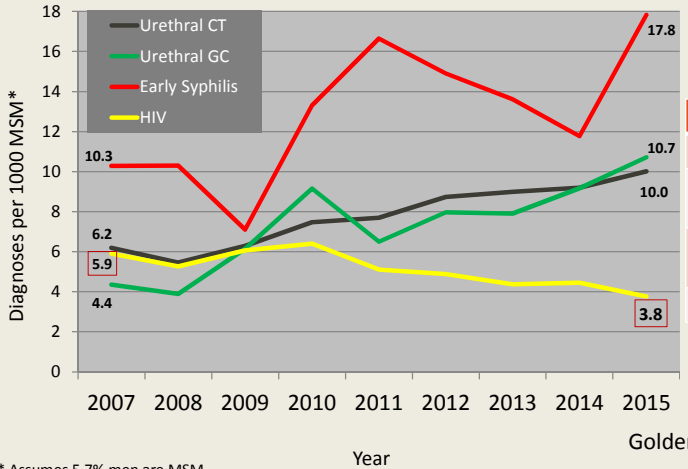
Primary and Secondary Syphilis — Distribution of Cases by Sex and Sexual Behavior, 2015



Estimated New HIV Diagnoses Among the Most-Affected Subpopulations, 2014—United States



Incidence of Bacterial STIs and HIV Among MSM in King County, WA 2007-2015



STI	Trend
Syphilis	↑74%
Urethral GC	↑146%
Urethral CT	↑61%
HIV	↓36%

Golden M, CROI 2017

* Assumes 5.7% men are MSM

Resilience in the Face of Stress?

Majority of MSM and other LGBT people are not infected or at increased risk

	No. of Psychosocial Health Problems			
	0 (*n* = 1,392)	1 (*n* = 812)	2 (*n* = 341)	3 or 4 (*n* = 129)
Recent high risk sex	7%	11%	16%	23%
HIV prevalence	13%	21%	27%	22%

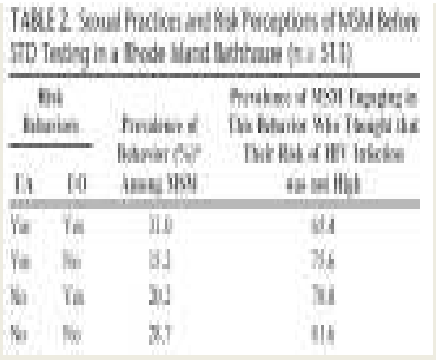
All associations have *p*'s < 0.001.
All *p* values are two-tailed.

From Stall et al., 2003

Unprotected Sex, Underestimated Risk, Undiagnosed HIV and Sexually Transmitted Diseases Among Men Who Have Sex With Men Accessing Testing Services in a New England Bathhouse

Kenneth H. Mayer, MD,*†‡ Robert Ducharme, BA,† Nicholas D. Zaller, PhD,† Philip A. Chan, MD,† Patricia Case, ScD, MPH,* David Abbott, BS,§ Irma I. Rodriguez, MS,† and Timothy Cavanaugh, MD‖

Prevalence	
HIV	2.3%
HCV	2.2%
Syphilis	2.0%
GU CT	1.0%
GU GC	0.1%



J Acquir Immune Defic Syndr • Volume 59, Number 2, February 1, 2012

STI Testing Guidelines for MSM

STD Treatment Guidelines, 2015

The following screening tests should be performed AT LEAST ANNUALLY for sexually active MSM, including those with HIV infection.

- **HIV serology**, if HIV status is unknown or negative and the patient himself or his sex partner(s) has had more than one sex partner since most recent HIV test.
- **Syphilis serology** to establish whether persons with reactive tests have untreated syphilis, have partially treated syphilis, are manifesting a slow serologic response to appropriate prior therapy, or are serofast.

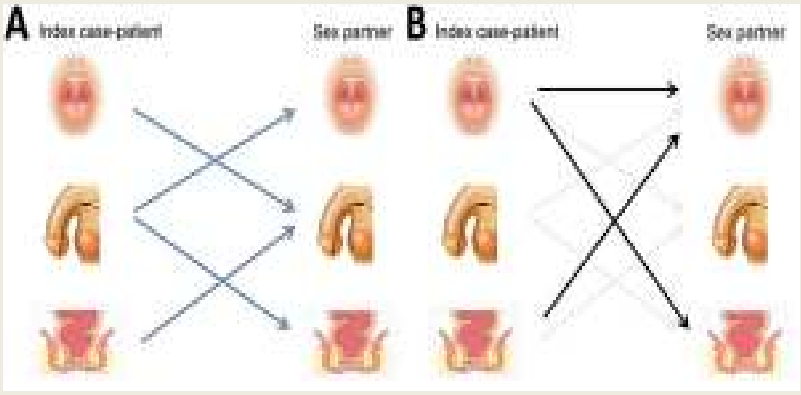
STD Treatment Guidelines, 2015

- ***A test for urethral infection† with N. gonorrhoeae and C. trachomatis*** in MSM with history of insertive sex in the past year (testing of the urine using NAAT† is the preferred approach).

- **A test for rectal infection with *N. gonorrhoeae* and *C. trachomatis*** in MSM with history of receptive anal sex in the past year year (NAAT of a rectal specimen is the preferred approach).

- **A test for pharyngeal infection† with *N. gonorrhoeae*** in MSM with history of receptive oral sex in the past year (NAAT of a pharyngeal specimen is the preferred approach). Testing for *C. trachomatis* pharyngeal infection is not recommended.

Gonorrhea Transmission in MSM



Fairley CK, et al. Emerging Infectious Diseases **Volume 23, January 2017**

Gonorrhea among MSM

In MSM, 3 sites are commonly infected:

- pharynx, rectum, and urethra
- In a Seattle clinic, the proportion of MSM with pharyngeal gonorrhea was 6.5%, rectal gonorrhea 9.7%, and urethral gonorrhea 5.5% .
- Almost all urethral infections were symptomatic (96%), but most pharyngeal and rectal infections were asymptomatic.
- Most pharyngeal or rectal infections (58%) were not associated with urethral infection
- Treatment: **Ceftriaxone** 250 mg IM in a single dose
  PLUS **Azithromycin** 1 g orally in a single dose

Lymphogranuloma venereum (LGV):

- Caused by *C. trachomatis* serovars L1, L2, L3
  - Primary stage – small, painless papule which may ulcerate; ulcer is transient
  - Secondary stage – occurs weeks after lesion; unilateral inguinal and/or femoral lymphadenopathy; “groove sign” in 10-20%;
- Rectal exposure in MSM can result in proctocolitis mimicking inflammatory bowel disease, with mucoid and/or hemorrhagic rectal discharge, anal pain, constipation, fever, and/or tenesmus.
- Outbreaks of LGV proctocolitis reported among MSM.

LGV Diagnosis and Treatment

- Patients presenting with proctocolitis should be tested with rectal NAATs (chlamydia). Additional molecular testing (PCR based genotyping) can be performed.

Criteria used in LGV diagnosis
- Complement fixation titers >1:64 can support diagnosis in the appropriate clinical context.
- Serologic test interpretation for LGV is not standardized.

- Clinical syndrome consistent with proctocolitis should receive presumptive treatment. In addition, if painful perianal ulcers or mucosal ulcers (anoscopy), give presumptive therapy for herpes.

- Treat with doxycycline or erythromycin for 21 days. Evaluate and treat sexual partners within 60 days.

HIV Pre-exposure Prophylaxis

What is pre-exposure prophylaxis?

Use of antiretroviral medications **before** an exposure, to reduce the risk of becoming infected

Tenofovir (TDF) is the most studied agent for PrEP

- Once-daily dosing
- Few drug-drug interactions
- Safe and well tolerated

FDA approved in 2012
USPHS guidelines in 2014
(emtricitabine / tenofovir DF = **Truvada**)

When taken consistently, oral PrEP reduces risk of HIV infection by

90-100%

among cisgender MSM, heterosexual men & women, and transgender women.

(**84%** among PWID)

Grant RM, et al. *NEJM*. Dec 2010;363(27):2587-99
Baeten JM, et al. *NEJM*. Aug 2012;367(5):399-410
Grant RM, et al. *Lancet Inf Dis*. Sep 2014;14(9):820-9
Martin M, et al. *AIDS*. Apr 2015;29(7):819-24

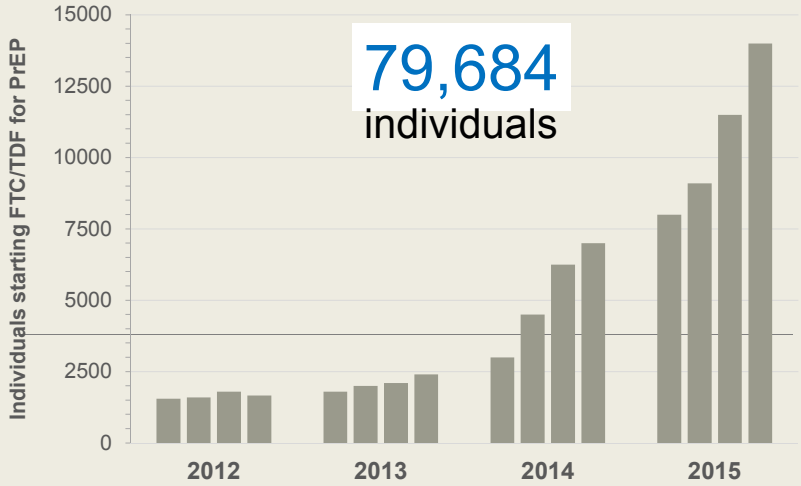
Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Early Release / Vol. 64
November 24, 2015

Vital Signs: Estimated Percentages and Numbers of Adults with Indications for Preexposure Prophylaxis to Prevent HIV Acquisition — United States, 2015

Dawn K. Smith, MD[1]; Michelle Van Handel, MPH[1]; Richard J. Wolitski, PhD[1]; Jo Ellen Stryker, PhD[1]; H. Irene Hall, PhD[1]; Joseph Prejean, PhD[1]; Linda J. Koenig, PhD[1]; Linda A. Valleroy, PhD[1]

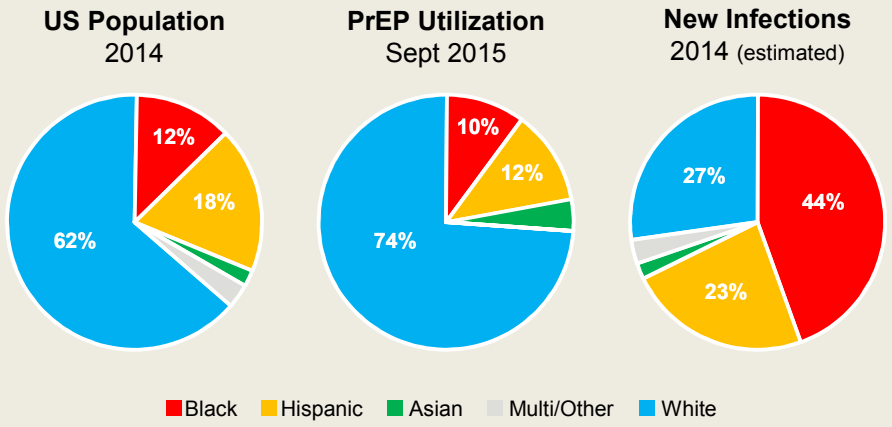
- 24.7% sexually active MSM=492,000
- 18.5% of PWID=115,000
- 0.4% of heterosexual adults=624,000
- Data derived from national probability surveys

PrEP has taken off in the US…



Rawlings K et al (McAllister presenting). IAC Durban 2016, abstract #TUAX0105LB
http://www.natap.org/2016/IAC/IAC_17.htm

…and it's not reaching those most at risk



Bush S et al. ASM / ICAAC 2016, abstract #2651
http://www.aidshealth.org/wp-content/uploads/2016/07/GILD_Bush-PrEP-Race-Utilization.ext-June-2016.pdf

Use of FTC/TDF for PrEP 2012-2015

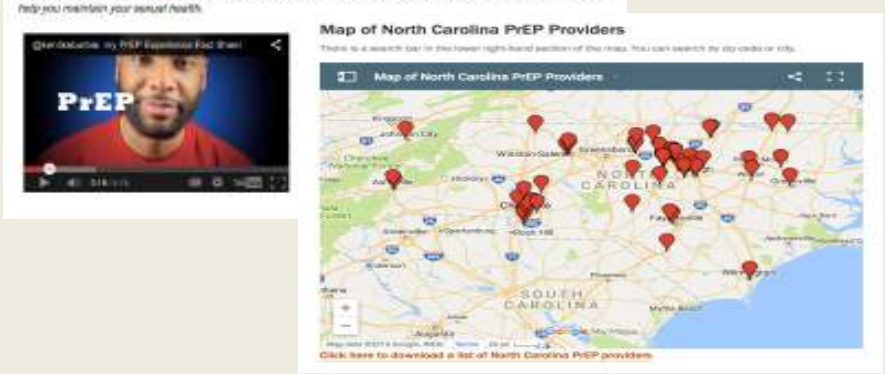
South		Northeast		Midwest		West	
TX	6.8%	NY	15.9%	IL	5.4%	CA	16.7%
FL	5.7%	MA	5.1%	MN	2.5%	WA	3.5%
GA	3.7%	PA	4.7%	OH	2.1%	AZ	1.8%
DC	3.3%	NJ	2.5%	MO	1.2%	CO	1.5%
NC	1.7%		0.8%	MI	1.2%	OR	1.2%
MD	1.5%	RI	0.5%	IN	1.0%	NV	0.6%
VA	1.2%	NH	0.2%	WI	0.6%	UT	0.5%
TN	1.0%	ME	0.2%	KS	0.5%	NM	0.4%
LA	0.9%	VT	0.1%	IA	0.3%	HI	0.2%
AL	0.5%			NE	0.2%	ID	0.2%
SC	0.4%			ND	0.1%	MT	0.1%
KY	0.4%			SD	0.0%	WY	0.1%
OK	0.4%					AK	0.0%
MS	0.3%						
DE	0.3%						
AR	0.2%						
WV	0.1%						

Mera R, et al. IAS2016, Durban, SA

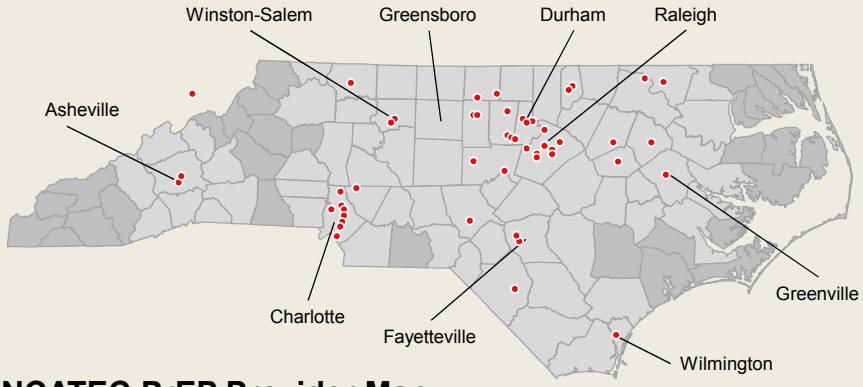
PrEP Provider Training

NC AIDS Training Education Center

http://www.med.unc.edu/iamprepared



Current PrEP Service Gaps



NCATEC PrEP Provider Map
22 November 2016

No PrEP provider within 1 county radius

Can PrEP be delivered in NC's HD clinics?

May 2016 – survey of all 85 NC local HDs

- 56 directors (66%) responded
  - 2 prescribing PrEP (now 4-5: Cabarrus, Orange, Surry, Wake ± Durham)
  - 7 externally refer, 11 considering services
- Main barriers among 47 without any services:
  - lack of local PrEP providers, lack of PrEP awareness, perceived lack of PrEP candidates
- Needs assessment for training/support:
  - Help identifying clients, prescribing & mgm't, outreach and educational materials for clients

Zhang, Rhea, Fleischauer, Hurt, Mobley, Seña, Swygard, McKellar. *Unpublished data.*

Blended Implementation Model: Durham County Department of Public Health

Internal referrals

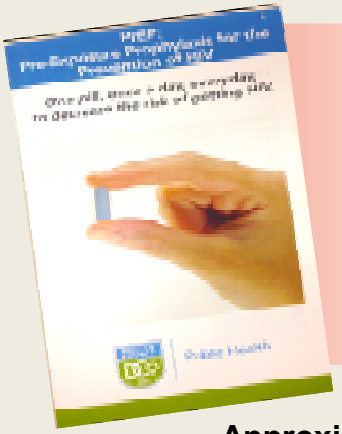
External referrals

Public Health

Steps to PrEP in Durham

- CONVENED PrEP Task Force in 2014 with NC HIV/STD Branch and key partners
- OBTAINED approval from local Health Director and Board of Health to integrate services in STD clinic
- DEVELOPED clinic procedures for priority groups, baseline testing and follow-up
- DISCUSSED logistics of referrals between clinic staff and prescribing providers
- CREATED referral packet with PrEP brochure, drug assistance form, reminders
- DISSEMINATED information through CBOs and community-wide efforts (e.g. bus ads)

PrEP Referrals, May 2015– July 2016



125
evaluated and referred

26% Partners to HIV+

85% High risk MSM

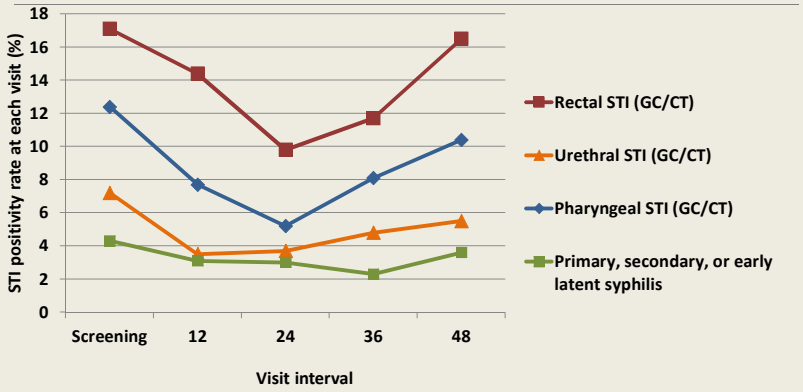
10% Women

5% Transgender

Approximately 57% have initiated PrEP.

37% have been retained on PrEP over 3-6 months.

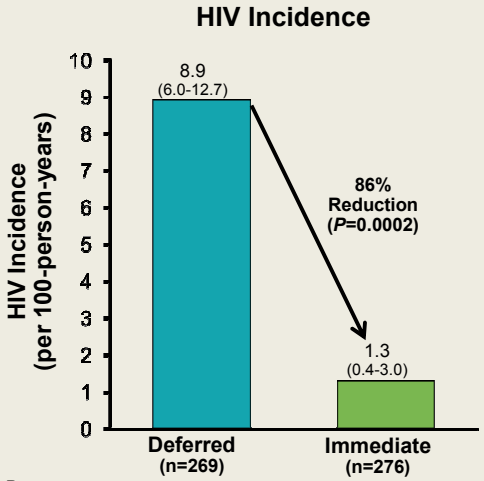
PrEP Demo: STI positivity



Overall STI incidence (90/100 person years) remained stable during follow-up (P>0.1) (Liu, Cohen, JAMA Int Med, 2015)

United Kingdom GU Med Clinics: PROUD Study

- Significantly fewer new HIV infections with immediate versus deferred PrEP (3 versus 19 cases)
  - 86% reduction (*P*=0.0002)
  - Number needed to treat to prevent 1 infection: 13
- HIV post exposure prophylaxis (PEP) used by 31% in deferred arm
- Risk behaviors were similar between the 2 arms



McCormack S, et al. 22nd CROI. Seattle, 2015. Abstract 22LB.

Summary

- The MSM population is diverse and risks will vary greatly.
- MSM similar health concerns as others, but some are at increased risk for STIs because of biological, behavioral, social/structural issues.
- MSM continue to be affected by high rates of gonorrhea, chlamydia syphilis and HIV.
- STD screening should be annual, conduct oral and rectal testing for gonorrhea and chlamydia
- PrEP offer new opportunities to engage at risk persons and providers in STD diagnosis and disease control.

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