SEXUAL HEALTH AS A HOLISTIC APPROACH TO STI/HIV PREVENTION AND CARE– WHY DOES THIS MAKE A DIFFERENCE?

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CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment (CHAC)
April 18, 2023

The Journey

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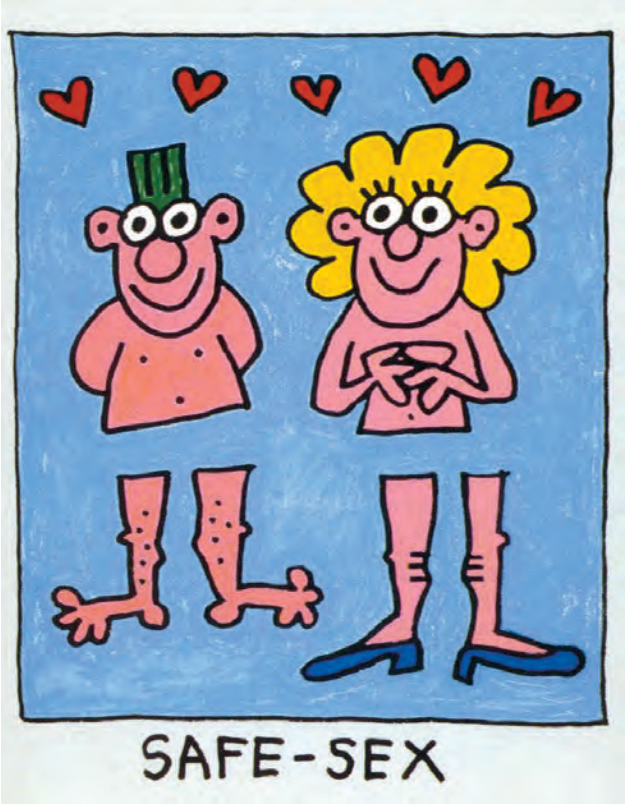
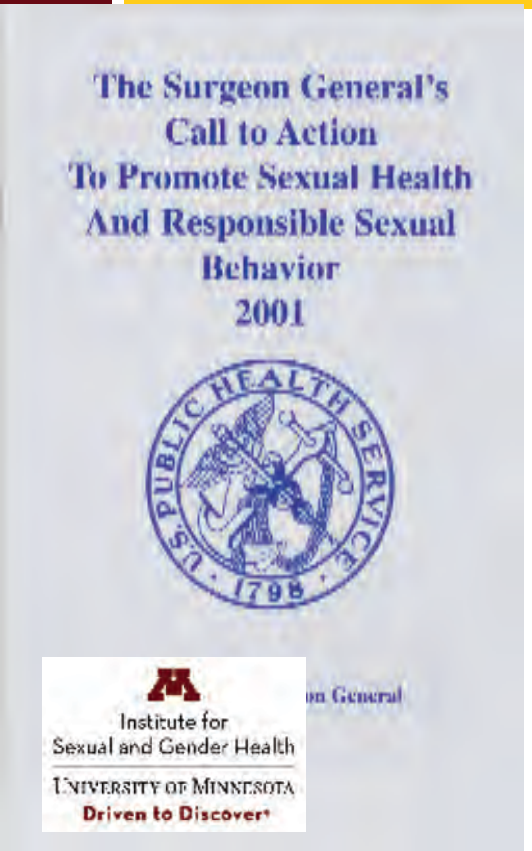
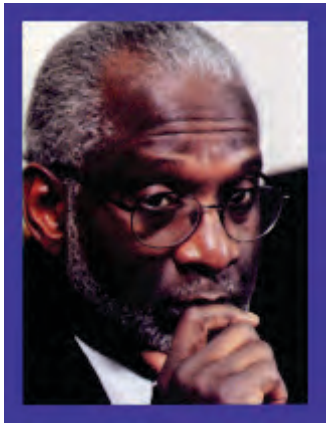
Early de-sexualized STI/HIV Prevention



Recognizing Sexual Health as Critical to Overall Health and Well-Being



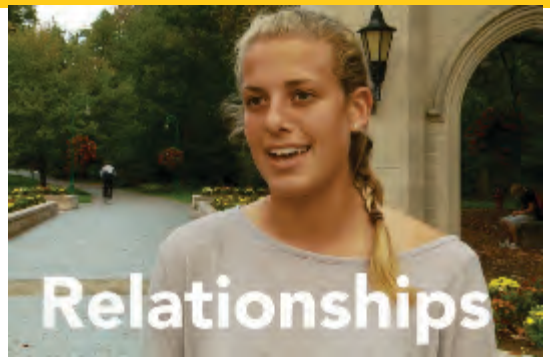


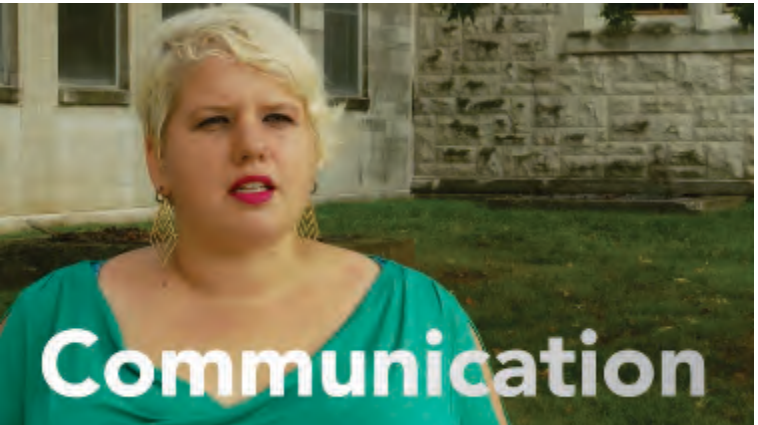
Sexual health an essential component of overall individual health; major impact on overall health of communities.

David Satcher, MD, MPH

BUT WHAT IS SEXUAL HEALTH?

What is Sexual Health?

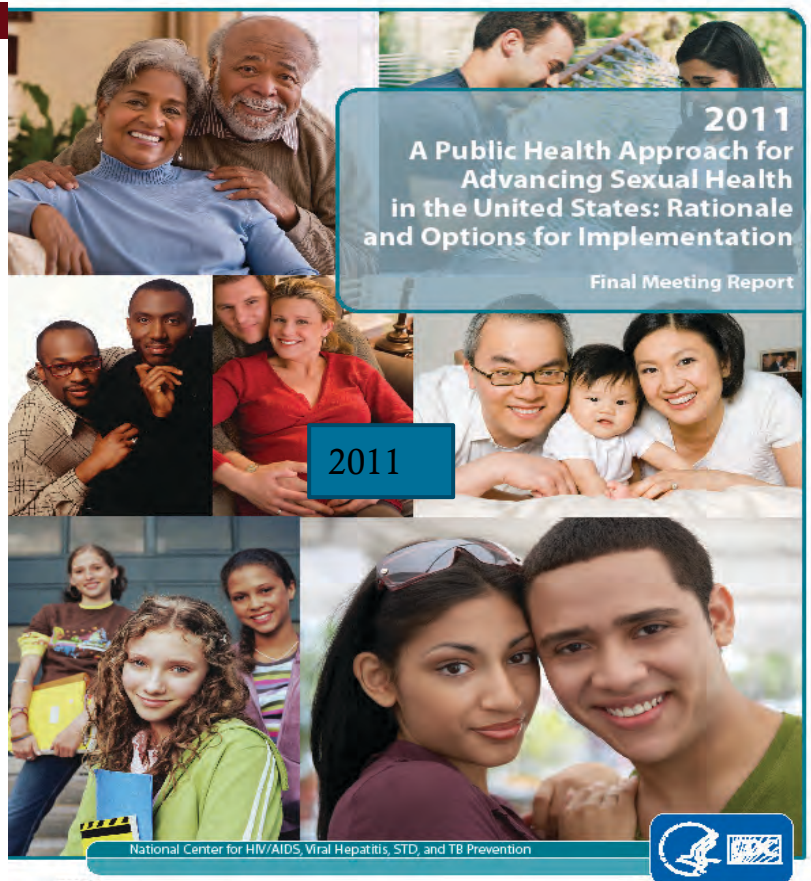




WHO Definition (2002; 2006)

- state of physical, emotional, mental, and social well-being related to sexuality
- not merely absence of disease, dysfunction, or infirmity.
- requires a positive and respectful approach to sexual relationships, as well as possibility of having pleasurable & safe sexual experiences, free of coercion, discrimination, and violence.
- For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected, and fulfilled.

CDC Efforts to Address Sexual Health

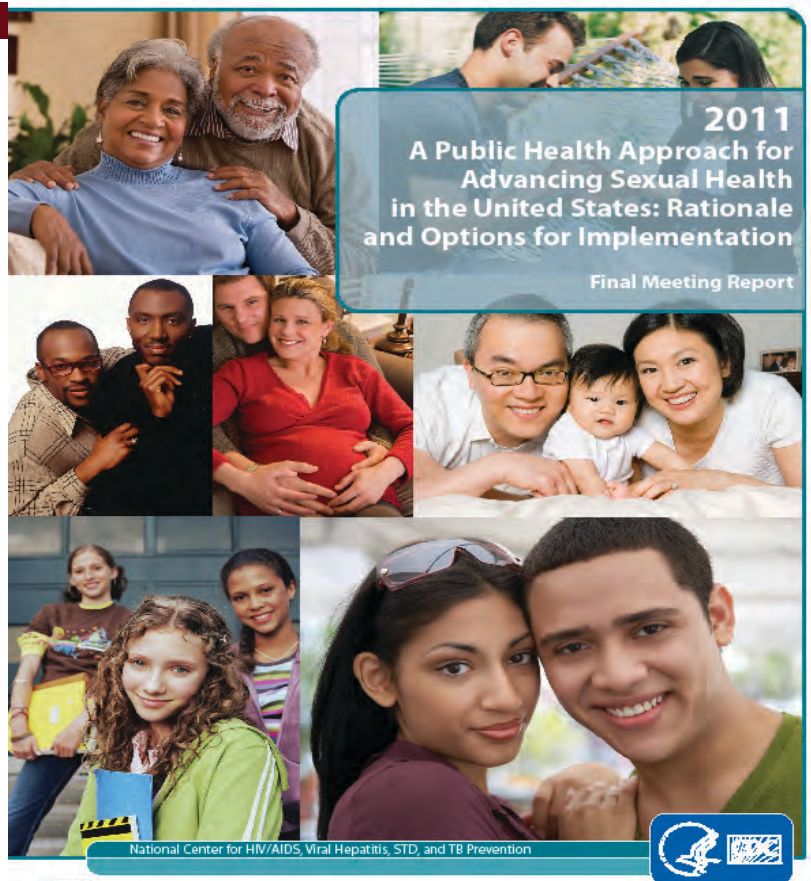


onclusion: SH framework is broad, positive, inclusive, empowering

ecommendations:

·Engage new and diverse partners
·Normalize conversations
·Reduce stigma, fear, and iscrimination
·Enhance the efficiency and ffectiveness of prevention essaging and services

2013.
Public Health Reports.



Addressing the "Syndemic" Responding with a Systematic Sexual health Approach

Public Health Reports

CDC ASPPH

Impact Factor: 3.117 / 5-Year

Volume 128 Issue 2_suppl1, March-April 2013

Previous issue

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Guest Editorial

Free access | Editorial | First published March 1, 2013 | pp. 1–4

Understanding Sexual Health and its Role in More Effective Prevention Programs

John M. Douglas, Jr. MD, Kevin A. Fenton MD, PhD, FFPH

JAMA The Journal of the American Medical Association

David Satcher, MD, PhD
The Satcher Health Leadership Institute, Morehouse School of Medicine, Atlanta, Georgia.

Edward W. Hook III, MD
Division of Infectious Diseases, University of Alabama at Birmingham, Birmingham.

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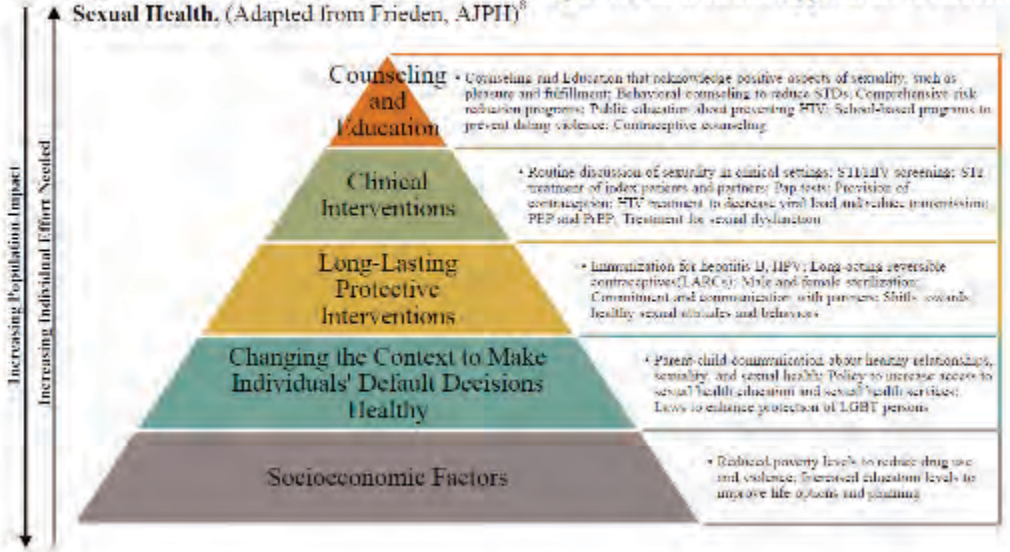
Department of Family Medicine and Community Health, University of Minnesota Medical School, Minneapolis.

VIEWPOINT

Sexual Health in America
Improving Patient Care and Public Health

JAMA Published online June 18, 2015

Figure 1. The Health Impact Pyramid and Examples of Public Health Approaches to Address Sexual Health. (Adapted from Frieden, AJPH)[6]



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A Call for a Paradigm Shift

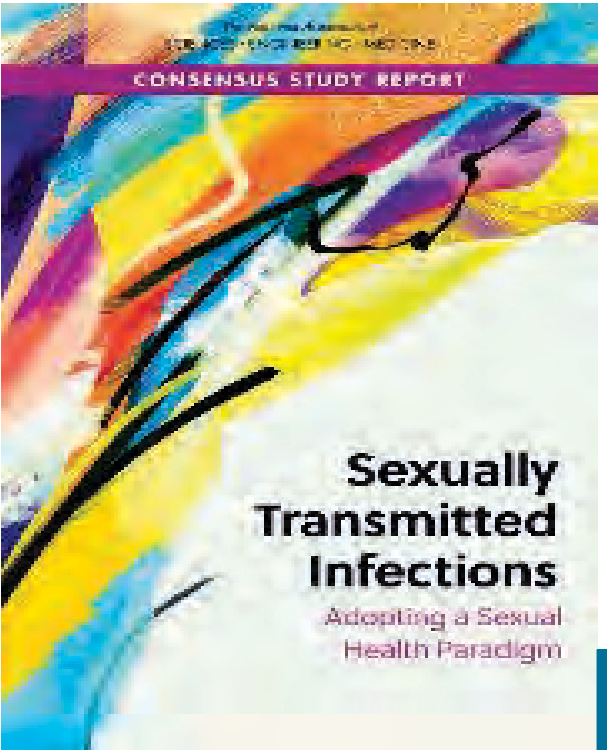
Morbidity and a stigmatizing, fear based-approach → Integrated sexual health promotion approach

The Need to Promote Sexual Health in America: A New Vision for Public Health Action

Jessie V. Ford, MS, Megan B. Ivankovich, MPH,† John M. Douglas, Jr. MD,‡ Edward W. Hook, III, MD,§ Lynn Barclay, BA,¶ Joycelyn Elders, MD,|| David Satcher, MD, PhD,** and Eli Coleman, PhD††*

Sexually Transmitted Diseases, *44*(10), 579-585.
doi:10.1097/OLQ.0000000000000660

How to better address STI/HIV Prevention and Care?



2021

Sexual health an essential component of the strategy

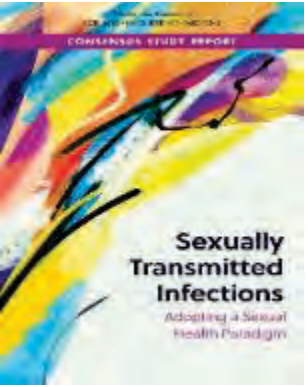
- educate, reduce stigma, fear, and discrimination
- help change the sexual and gender climate
- normalize sexual conversations
- promote research and provide an integrated and sexual health approach .

National Academies of Sciences, Engineering, and Medicine

- The framework incorporated:
  - the concept of intersectionality
  - that sexual health is inextricably linked to overall health and well-being across the life span,
  - that human sexuality is a vital element of mutually consensual love and pleasure, as well as the fundamental prerequisite for procreation.

Recommendations

- A holistic approach that focuses on sexual health in the context of broader health and well-being
- Eradicate stigma
- Educate the U.S. population on what it means to be sexually healthy and where and how individuals can access comprehensive sexual health services.
- While this paradigm shift is needed, it should not be viewed as a political issue nor one that needs to be in conflict with religious beliefs or ethical standards.
- To support this goal at the federal level, the committee recommends that the Department of Health and Human Services (HHS) develop a vision and blueprint for sexual health and well-being that can guide the inclusion of a sexual health paradigm across all HHS programs, including the major public insurance programs as well as the public health programs administered throughout the department.



A Sexual Health Framework

- Acknowledgement of sexual health as an element in overall health
- Emphasis on wellness
- An integrated approach to prevention
- Converse explicitly about sexuality – improve sexual communication
- Recognizes that pleasure is the fundamental reason people have sex and people place a premium on their sexual pleasure
- Focus on positive and respectful and consensual relationships
- Intersectionality - address stigma, discrimination, prejudice, health disparities and equity

Promising Evidence

- Reduction of risk behaviors
- Increased use of prevention services
- Decreased adverse health outcomes

Jeffrey S. Becasen, Jessie Ford & Matthew Hogben (2015) Sexual Health Interventions: A Meta-Analysis, The Journal of Sex Research, 52:4, 433-443, DOI: 10.1080/00224499.2014.947399

Matthew Hogben, Jessie Ford, Jeffrey S. Becasen & Kathryn F. Brown (2015) A Systematic Review of Sexual Health Interventions for Adults: Narrative Evidence, The Journal of Sex Research, 52:4, 444-469, DOI: 10.1080/00224499.2014.973100

PLOS ONE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

What is the added value of incorporating pleasure in sexual health interventions? A systematic review and meta-analysis

Mirela Zaneva, Anne Philpott, Arushi Singh, Gerda Larsson, Lianne Gonsalves

Published: February 11, 2022 • https://doi.org/10.1371/journal.pone.0261034

- Incorporating sexual pleasure within SRHR interventions can improve sexual health outcomes.
- Pleasure-incorporating interventions on condom use which has direct implications for reductions in HIV and STIs.
- Agencies responsible for sexual and reproductive health consider incorporating sexual pleasure considerations within their programming.

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Importance of Sexual Heath Indicators

- The development of a comprehensive scorecard with key sexual health indicators has been proposed by some entities e.g., (e.g. Public Health England, United Nations Population Fund (UNFPA), WHO)
- A growing number of countries have conducted national sexual health surveys (e.g., Australia, Canada, Flanders, France, Germany, Ireland, Latvia, Malta, The Netherlands, Portugal, Spain, United Kingdom)
- But such an attempt has not been made in the U.S.

SEXUAL INDICATORS FOR THE UNITED STATES:

MEASURING PROGRESS AND DOCUMENTING PUBLIC HEALTH

frontiers | Frontiers in Public Health

TYPE Original Research
PUBLISHED 26 January 2023
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Sexual health indicators for the United States: Measuring progress and documenting public health needs

Jessie V. Ford[1*†], Megan B. Ivankovich[2†] and Eli Coleman[3]

[1]Department of Sociomedical Sciences, Columbia University, New York, NY, United States, [2]Population Reference Bureau, Washington, DC, United States, [3]Institute for Sexual and Gender Health, University of Minnesota Twin Cities, St. Paul, MN, United States

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Conclusions

- Our findings provide broad evidence of sub-optimal sexual health in all domains measured, indicating the need for new approaches to meet goals of national initiatives.
- Available indicators contain crucial gaps.
- Considerations for addressing these gaps include adding new measures (although we recognize the difficulty of doing this), creating research partnerships across disciplines, and developing a new comprehensive survey of sexual health as other countries have done.

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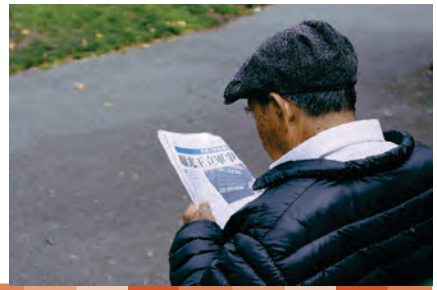
No thanks!
We are too busy



New Tools for STI Prevention

CDC/HRSA Advisory Committee

April 18th, 2023

Stephanie Cohen, MD, MPH
Director, HIV/STI Prevention
Disease Prevention and Control Branch
San Francisco Dept of Public Health

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Disclosures

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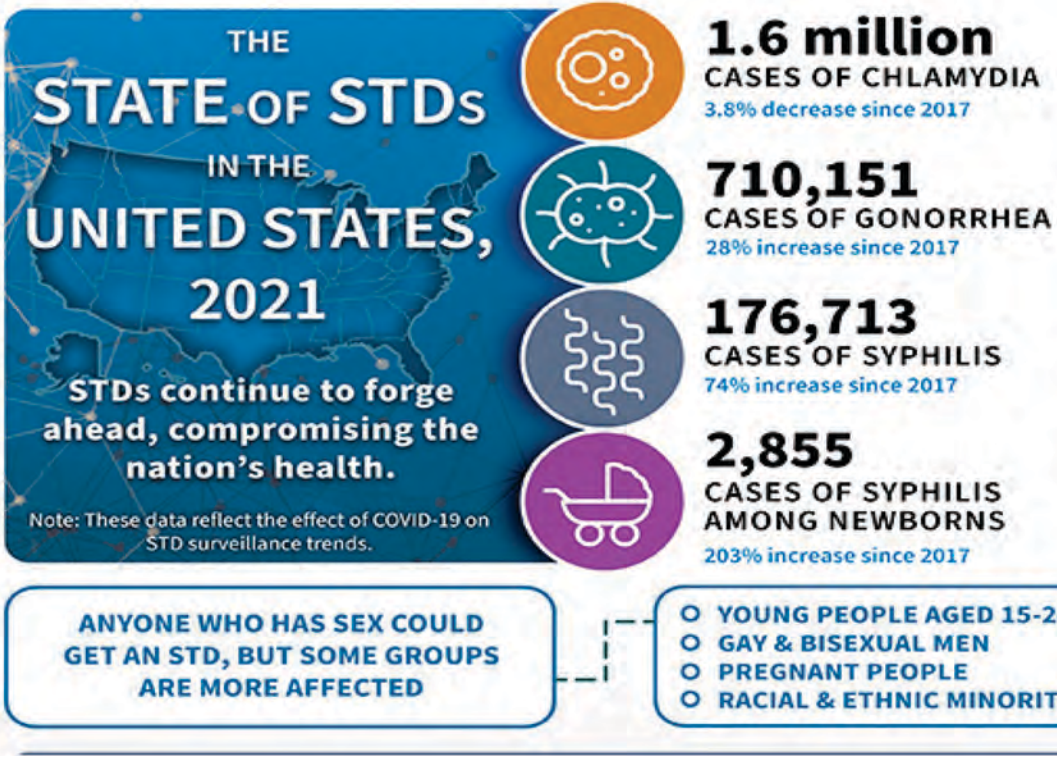
- Doxycycline provided by Mayne Pharmaceuticals
- Laboratory support from Cepheid & Hologic

Professionals Affiliations:

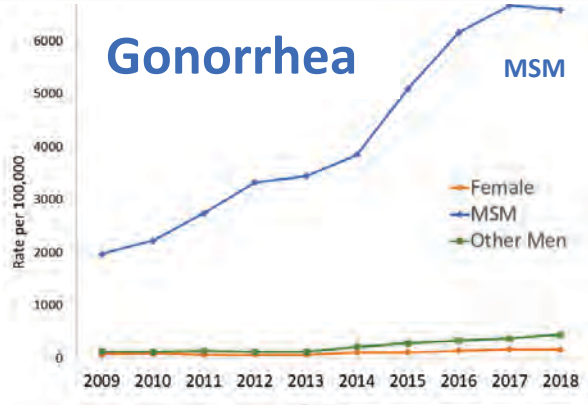
- *San Francisco Department of Public Health*
- *University of California, San Francisco, Division of Infectious Diseases*

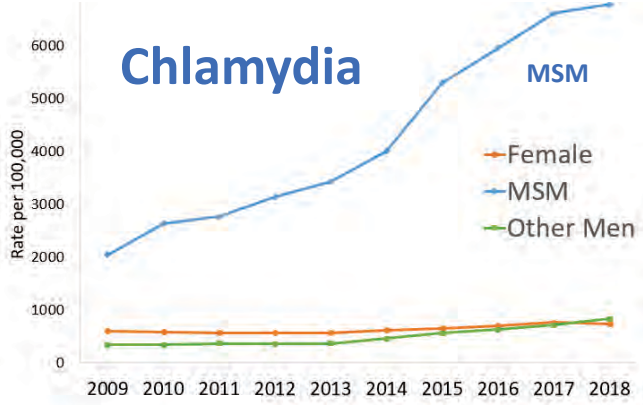
The views expressed herein do not necessarily reflect the official policies of the City and County of San Francisco; nor does mention of the San Francisco Department of Public Health imply its endorsement.

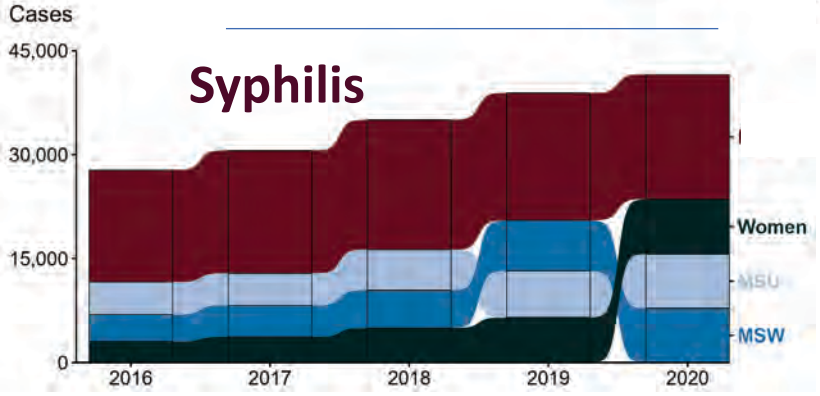
The US is Experiencing Steep, Sustained Increases in Sexually Transmitted Infections



The global epidemic of STIs disproportionately impacts men who have sex with men (MSM)







San Francisco DPH
STI surveillance data 2018

CDC 2020 STI surveillance
https://www.cdc.gov/std/statistics/2020/default.htm

Doxycycline Post-Exposure Prophylaxis (doxy-PEP)

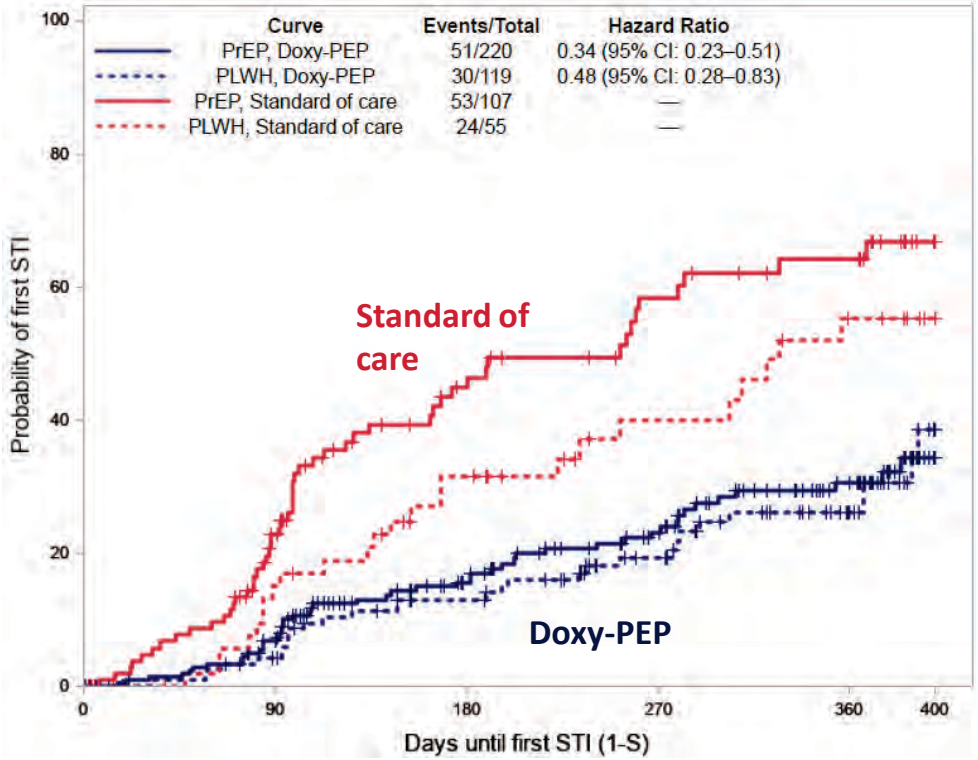
- Why Doxycycline?
  - Safe, well tolerated, and inexpensive
  - Active against chlamydia (CT) & syphilis
  - Some resistance in gonorrhea (GC), but not used as 1st line treatment for GC
- Three RCTs (Ipergay, DoxyPEP, DOXYAC) have demonstrated efficacy of doxy-PEP in preventing bacterial STIs in men who have sex with men (MSM)
- Concerns
  - Lack of efficacy in cis women (DPEP study, Kenya)
  - Impact of intermittent doxy use on drug resistance (in STIs and other bacteria)
  - Impact on microbiome

Recent RCTs of doxy-PEP

	DoxyPEP	DOXYVAC	DPEP
Location	US (San Francisco and Seattle)	France	Kenya
Eligibility	Male sex at birth Living with HIV or on PrEP ≥ 1 STI in past 12 months Condomless sex with ≥ 1 male partner in past 12 months	MSM On PrEP > 6 months Enrolled in ANRS Prevenir Bacterial STI in prior 12 months No STI symptoms	Cis women On PrEP ≥ 18 and ≤ 30 years old
Design	Randomized 2:1 Open label	2x2 factorial design Randomized 2:1 to doxy-PEP and 1:1 to 4CMenB vaccine Open label	Randomized 1:1 Open label
STI testing	Quarterly 3-site GC/CT testing and syphilis testing	Quarterly 3-site GC/CT testing and syphilis testing	Quarterly genital GC/CT and syphilis testing
Endpoint	% of quarterly visits with an STI Time to first STI (2^o)	DoxyPEP: Time to a first episode of syphilis or CT; Time to first GC (2^o) 4CMenB vaccine: Time to a first GC infection	Time to first STI
Total "N"	501	502	449

Doxy-PEP significantly reduces STI incidence in cis men who have sex with men and trans women who have sex with men

- Doxycycline 200 mg taken after condomless sex reduced the incidence of gonorrhea, chlamydia and syphilis by 65% per quarter among men who have sex with men and transgender women with history of a recent sexually transmitted infection



DOXYPEP

Doxycycline PEP for prevention of STIs among MSM and TGW who are living with HIV or on PrEP , International AIDS Conference, July 2022, Montreal, Canada, NCT03980223

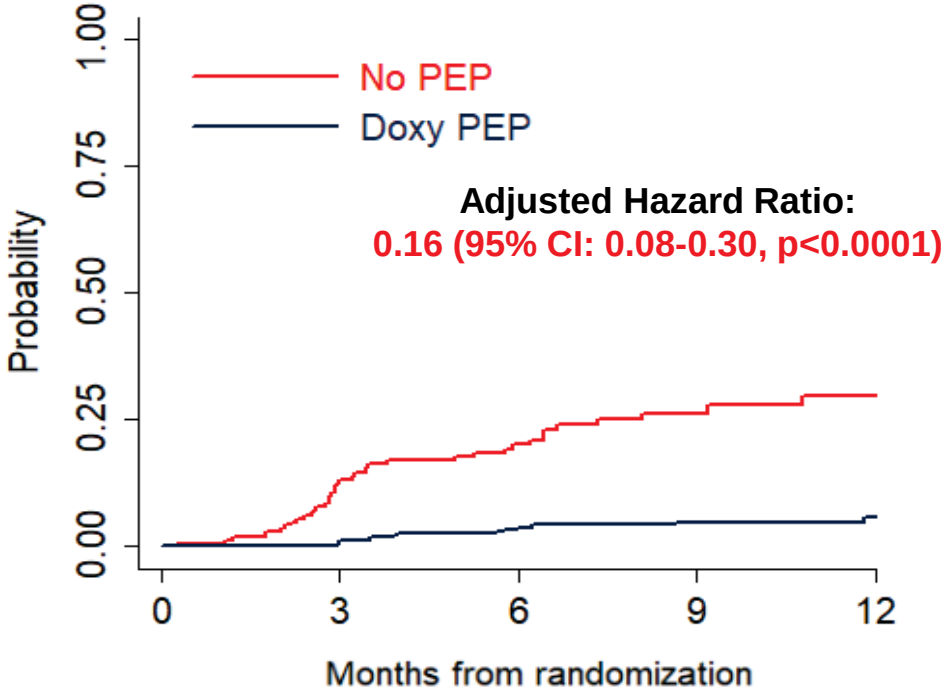
30th CROI 2023

DOXYVAC: Doxycycline PEP
Time to First CT or Syphilis Infection

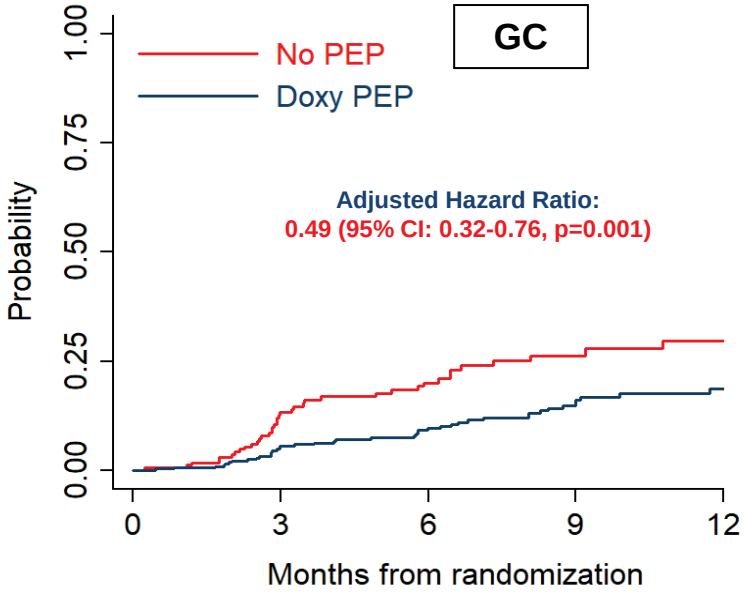
No interaction between Doxy PEP and 4CMenB vaccine (p=0.99)

Median follow-up: **9 months**
(IQR: 6 to 12)

49 subjects infected
36 in No PEP arm
(incidence: 35.4/100 PY),
13 in Doxy PEP arm
(incidence: 5.6/100 PY)



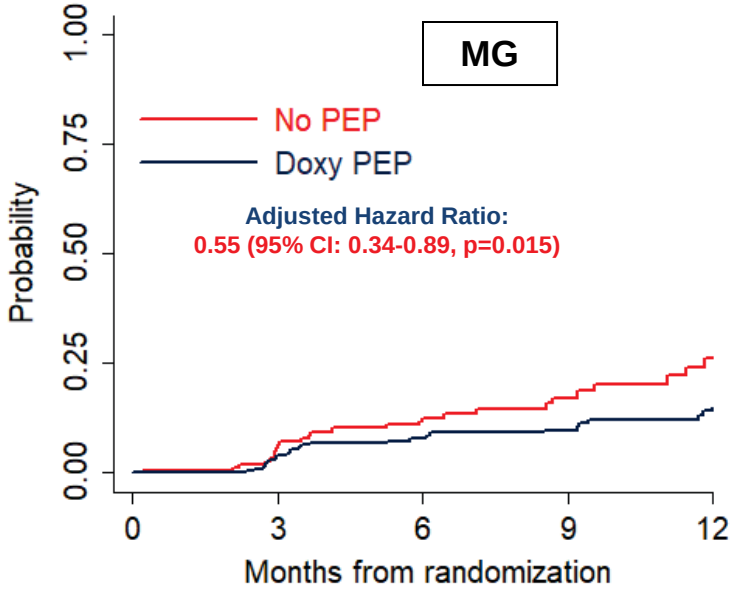
Time to First Gonorrhea (GC) and Mycoplasma Genitalium (MG) infection



Number at risk

No PEP	170	125	90	47	20
Doxy PEP	332	259	201	128	66

84 subjects infected
40 in No PEP arm (incidence: 41.3/100 PY),
44 in Doxy PEP arm (incidence: 20.5/100 PY)



Number at risk

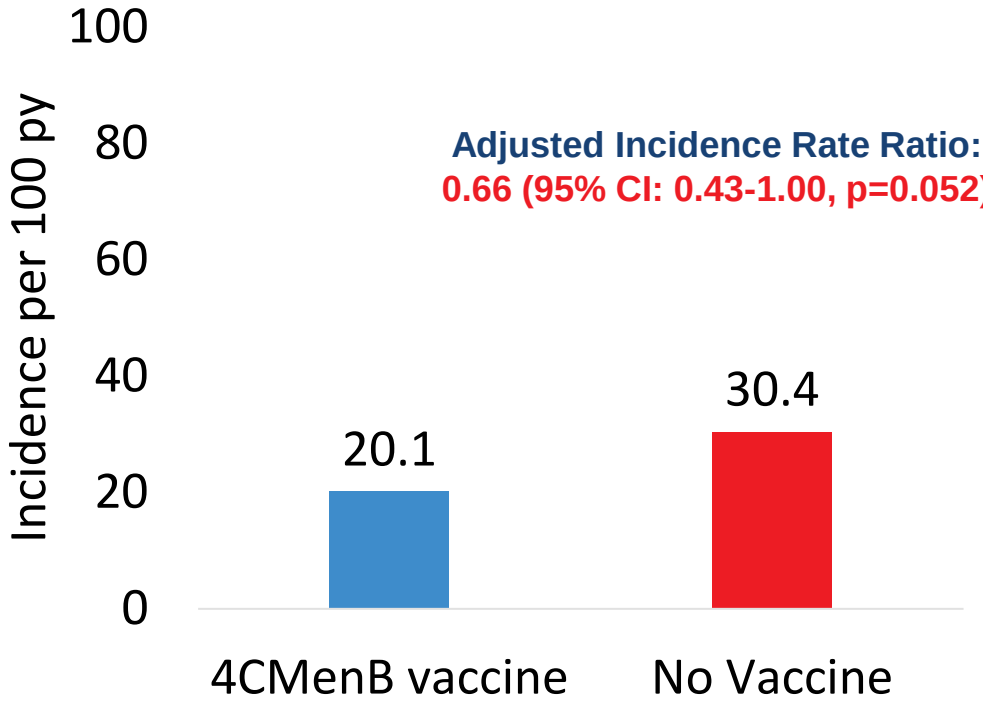
No PEP	170	148	110	67	38
Doxy PEP	332	298	234	157	89

68 subjects infected
31 in No PEP arm (incidence: 29.4/100 PY),
37 in Doxy PEP arm (incidence: 16.8/100 PY)

Jean-Michel Molina, CROI 2023

DOXYVAC: 4CMenB Vaccine
Cumulative Incidence of GC Infections

90 GC infections
54 in No Vaccine arm,
36 in 4CMenB vaccine arm



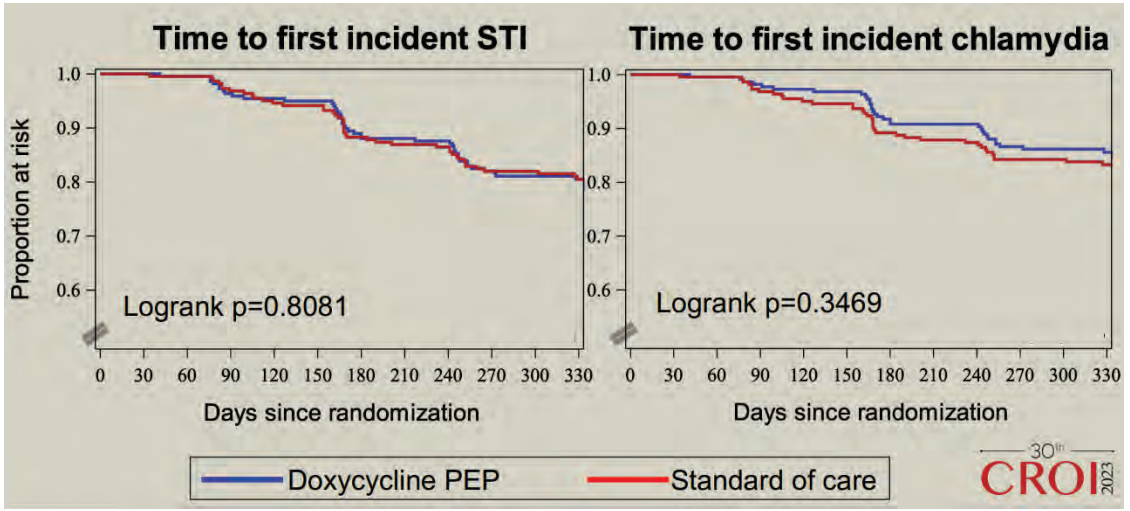
Adjusted Incidence Rate Ratio:
0.66 (95% CI: 0.43-1.00, p=0.052)

GC infections were considered from M3 visit (1 month after 2nd vaccine dose)

Jean-Michel Molina, CROI 2023

DPEP Kenya Trial

- 18% had an STI at enrollment
- Annual STI incidence of 27%
- 109 new STIs
  - 50 doxyPEP
  - 59 standard of care
- 78% of STIs were CT
  - 35 doxyPEP
  - 50 standard of care



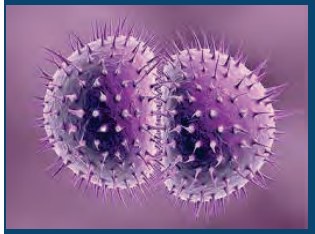
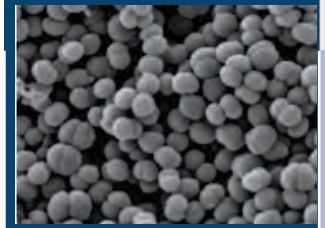
NO difference between the two arms

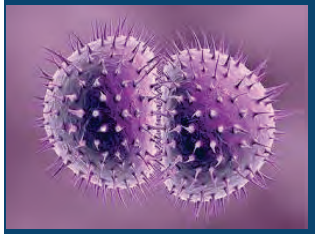
Jenell Stewart, CROI 2023

Why was doxy-PEP not effective for STI prevention in cis-women in DPEP study?

- Anatomy: Endocervical tissue may differ from urethral, rectal, and pharyngeal tissue
- Exposures: Type and frequency of STI exposures may differ in high prevalence setting, and fewer average number of partners
- Resistance: To date, no known cases of resistant *C. trachomatis* globally; however, high rates of resistant *N. gonorrhea*
- Adherence: Trial was designed to maximize adherence, and self-reported adherence was high but imperfect

Jenell Stewart, CROI 2023

 *N. gonorrhoeae*	• DoxyPEP: TCN-R in 30% of isolates in doxy-PEP arm vs. 11% in SOC arm (no difference in high-level TCN-R (10% vs. 11%) • DoxyVac: High-level TCN-R in 33% of isolates in doxy-PEP arm vs. 19% in SOC arm • Suggests doxy-PEP may be less protective against TCN-R strains; however, limited by small numbers
 *S. aureus*	• Doxy-PEP associated with 14% absolute reduction in colonization and an 8% absolute increase in doxycycline resistance compared to baseline. • MRSA prevalence was low (6%) & doxy-R MRSA was unchanged with doxy-PEP use.
 Non-pathogenic *Neisseria* species	• Nearly two thirds of isolates had pre-existing doxycycline resistance. • No significant change associated with doxy-PEP use.



N. gonorrhoeae

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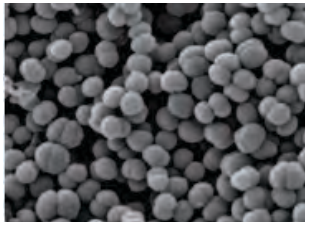

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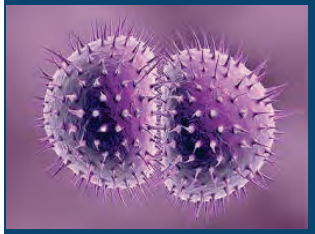
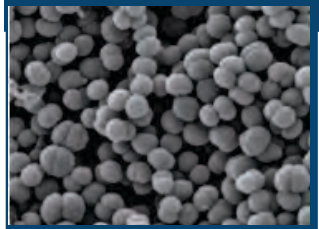
 *N. gonorrhoeae*	• DoxyPEP: TCN-R in 30% of isolates in doxy-PEP arm vs. 11% in SOC arm (no difference in high-level TCN-R (10% vs. 11%) • DoxyVac: High-level TCN-R in 33% of isolates in doxy-PEP arm vs. 19% in SOC arm • Suggests doxy-PEP may be less protective against TCN-R strains; however, limited by small numbers
 *S. aureus*	• Doxy-PEP associated with 14% absolute reduction in colonization and an 8% absolute increase in doxycycline resistance compared to baseline. • MRSA prevalence was low (6%) & doxy-R MRSA was unchanged with doxy-PEP use.
 Non-pathogenic *Neisseria* species	• Nearly two thirds of isolates had pre-existing doxycycline resistance. • No significant change associated with doxy-PEP use.

SFDPH Released Interim Guidelines for DoxyPEP

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Health Update

Doxycycline Post-Exposure Prophylaxis Reduces Incidence of Sexually Transmitted Infections

October 21, 2022

Situational Update

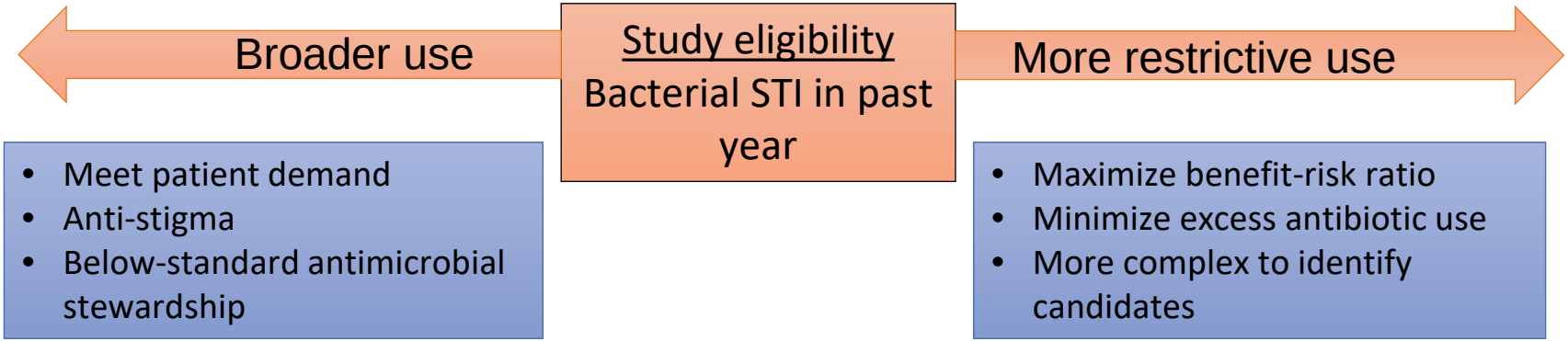
Researchers at the San Francisco Department of Health (SFDPH), Zuckerberg San Francisco General, University of California, San Francisco, and the University of Washington recently collaborated on a randomized controlled clinical trial of post-exposure prophylaxis (PEP) of sexually transmitted infections (STIs) using a single dose of doxycycline 200 mg within 72 hours after oral, anal, or vaginal sex, in men who have sex with men (MSM) and transgender women (TGW) who were living with HIV (PLWH) or taking HIV pre-exposure prophylaxis (HIV PrEP). **The study showed that this regimen significantly reduced acquisition of chlamydia, gonorrhea, and syphilis in these populations.**

Participants randomized to doxycycline PEP (doxy-PEP) had a 66% (HIV-negative and on PrEP) and 62% (PLWH) reduction in STIs per quarter of study follow-up, compared with participants randomized to standard of care (no doxy-PEP). Taking doxycycline was also safe and well-tolerated by participants, with no drug-related serious adverse events. These data were recently presented at the 2022 International AIDS Conference in Montreal, Canada. Data are still being collected and analyzed to assess the impact of doxy-PEP on risk for drug resistance in bacterial STIs, *Staph aureus*, and commensal *Neisseria*, and on the gut microbiome.

The CDC has released considerations for doxy-PEP as an STI prevention strategy, but there is not yet detailed guidance from CDC on doxy-PEP, for which its indication is currently off-label. STIs can cause significant morbidity and reducing STI rates in San Francisco is an urgent public health priority. **Doxy-PEP is the first biomedical prevention tool that has been shown to be effective and well-tolerated, community awareness is growing, and many providers in SF are already prescribing doxy-PEP to their patients at risk for STIs.** SFDPH is providing guidance to SF clinicians on the use of doxy-PEP to reduce STI incidence in MSM and TGW at risk of bacterial STIs.

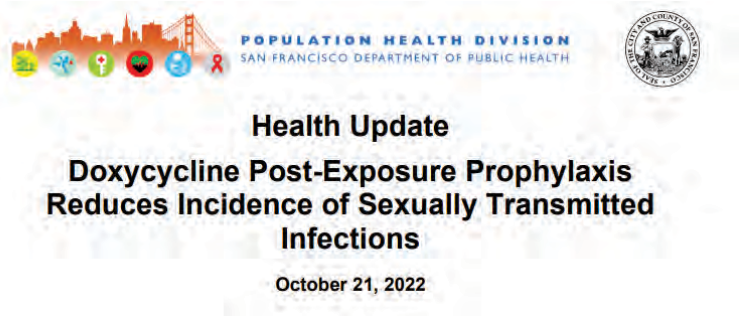
https://www.sfcityclinic.org/sites/default/files/2022-10/Health%20update_DoxyPEP_FINAL.1.pdf

Who Should be Offered doxy-PEP?



Slide courtesy J. Dombrowski

Doxy-PEP
Interim Guidelines



1. **Recommend doxy-PEP** to cis men and trans women who: 1) have had a bacterial STI in the past year and 2) report condomless anal or oral sexual contact with ≥ 1 cis male or trans female partner in the past year. These were the eligibility criteria used for the DoxyPEP study. Patients with a history of syphilis should be prioritized for doxy-PEP.

2. **Offer doxy-PEP using shared decision making** to cis men, trans men and trans women who report having multiple cis male or trans female sex partners in the prior year, even if they have not previously been diagnosed with an STI.

3. **Doxy-PEP not recommended for cis women** based on currently available evidence from Kenya DPEP study.

Counseling patients about doxy-PEP

- Utilize shared-decision making to support patient's choice
- Guide self-assessment of risk
- Review what we know about effectiveness of doxy-PEP
- Review how to use doxy-PEP
- Acknowledge unknowns
  - Impact on microbiome
  - Impact on antibiotic resistance in STIs and non-STI bacteria
- Offer comprehensive package of sexual health services

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Doxy-PEP as part of a comprehensive package of sexual health services

Primary prevention

Education

Condoms

Risk reduction counseling

Vaccines

Hepatitis A & B

HPV

Mpox

Meningococcal Vaccine (ACWY)

PEP, PrEP and TASP

HIV PEP

HIV PrEP (Daily, 2-1-1, LA-injectable)

Doxy-PEP

Linkage to ART

Secondary prevention

STI Screening & Treatment

Partner Services

Address social determinants of health

Mental health& Substance Use treatment

Anti-Poverty

Anti-Racism

Access to care

Policy

Reproductive rights

LGBTQ rights

Criminal justice reform

Next steps for doxy-PEP

- CDC guidelines will be critical for supporting safe and equitable access
- Implementation science:
  - Interest, uptake, community engagement, social marketing strategies, provider education
  - Long-term impact on individual health
  - Long-term impacts on antimicrobial resistance
  - Modelling studies to assess potential impact on STI incidence
- Sustained support for sexual health clinics in US
- Ongoing research into vaccines for STIs, including MenB for GC prevention

Thank you!

- DoxyPEP Participants
- DoxyPEP Study team
- SFCC team - Registration, Nursing, Clinician, PrEP, LINCS, Research, Social work and behavioral health
- Montica Levy, Christopher Ruiz, Alejandro Vigil
- Oliver Bacon
- Judith Sansone
- Alison Cohee, Dorien Cimmiyotti, Melody Nasser, va, Sally Grant, Yvonne Piper

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

San Francisco City Clinic
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DOXYPEP

Syndemic, Holistic Approaches to Disease Surveillance:

Measuring What Really Matters

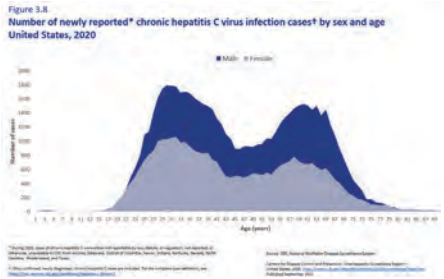
HIV, STI and Related Co-morbidities in Real World Settings to Inform Public Health Action

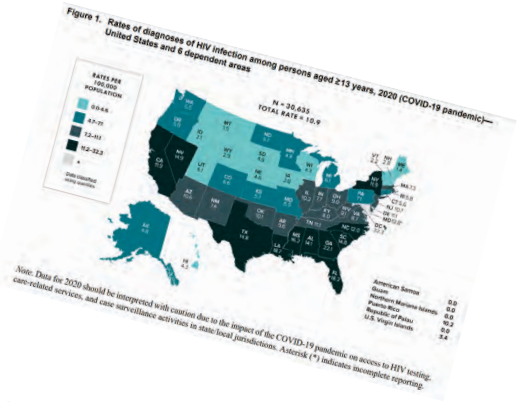
Mark Stenger, Team Lead (Acting)
Enhanced Surveillance and Special Studies Team
Surveillance and Data Science Branch
Division of STD Prevention

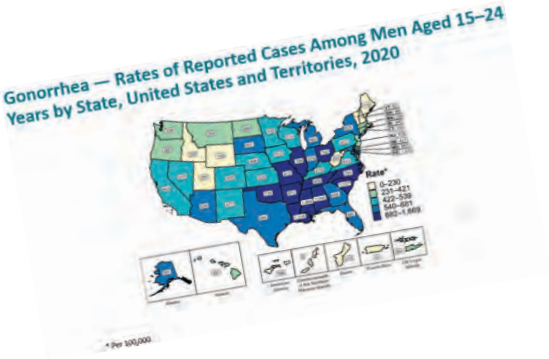
2023 Meeting of the CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment (CHAC)

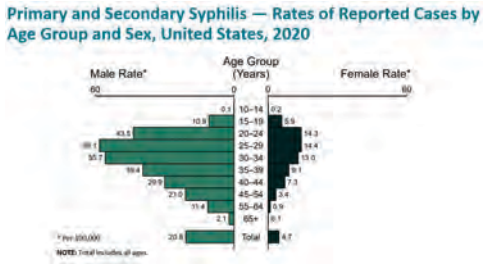
Disease surveillance has historically focused on aggregate case counts by single diseases

- **Number of cases reported:**
  - HIV
  - Gonorrhea
  - Syphilis
  - Hep C
  - TB
- **Data are often aggregated by**
  - Sex
  - Age Group
  - County/State
  - Race and Hispanic Ethnicity
- **Disease-specific data are presented as if they occur uniquely in a social vacuum**









What do we mean by a syndemic, holistic approach to disease surveillance?

- Person-centric

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- Person-centric monitoring of multiple sequential/concurrent diagnoses

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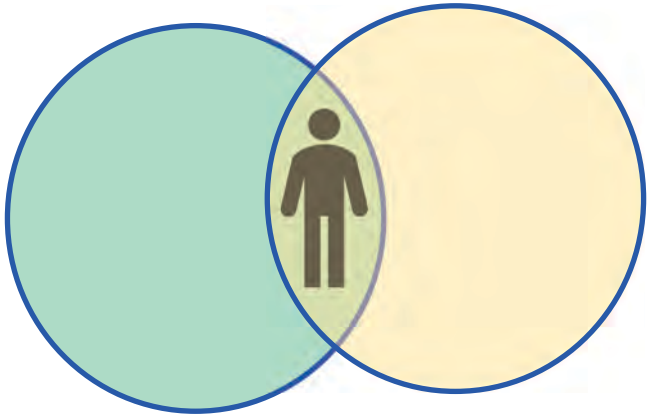
- Person-centric monitoring of multiple sequential/concurrent diagnoses
- Information on STI screenings and preventive services (PEP, PrEP, EPT) at sexual health visits



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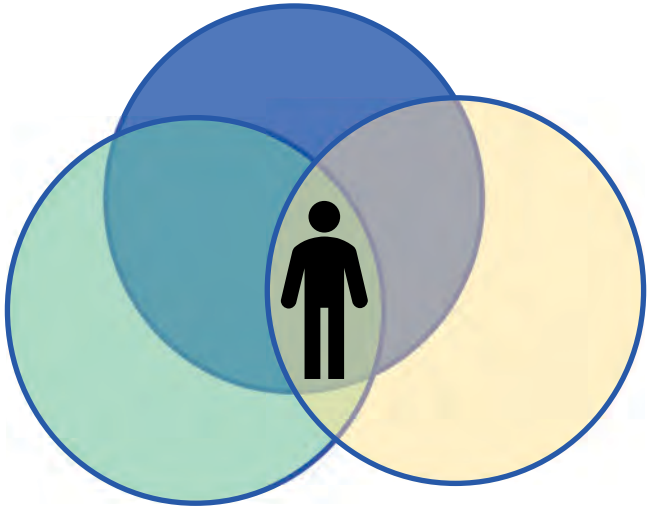
- Matching of patients/persons across multiple disease registries for prevalence of co-infections



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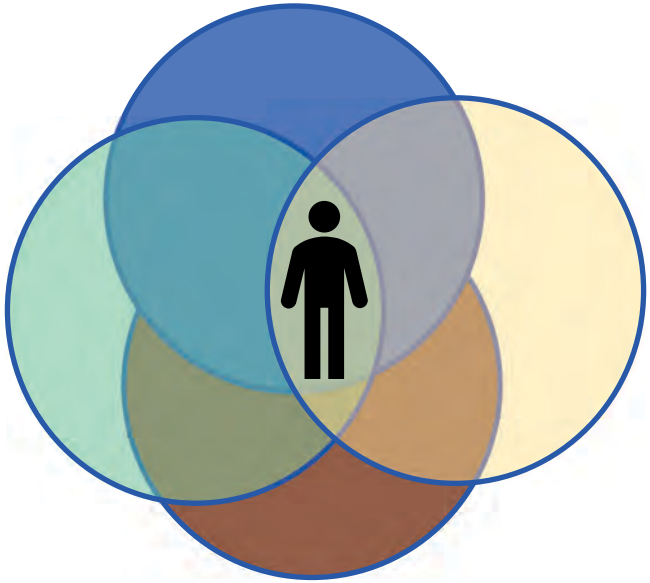
- **Monitoring person-level risks and other co-morbidities**



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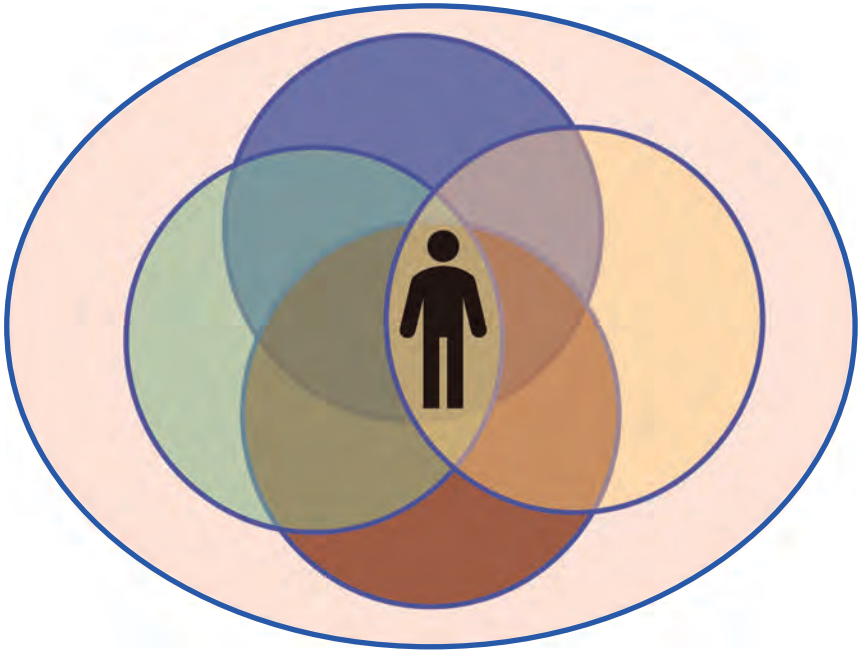
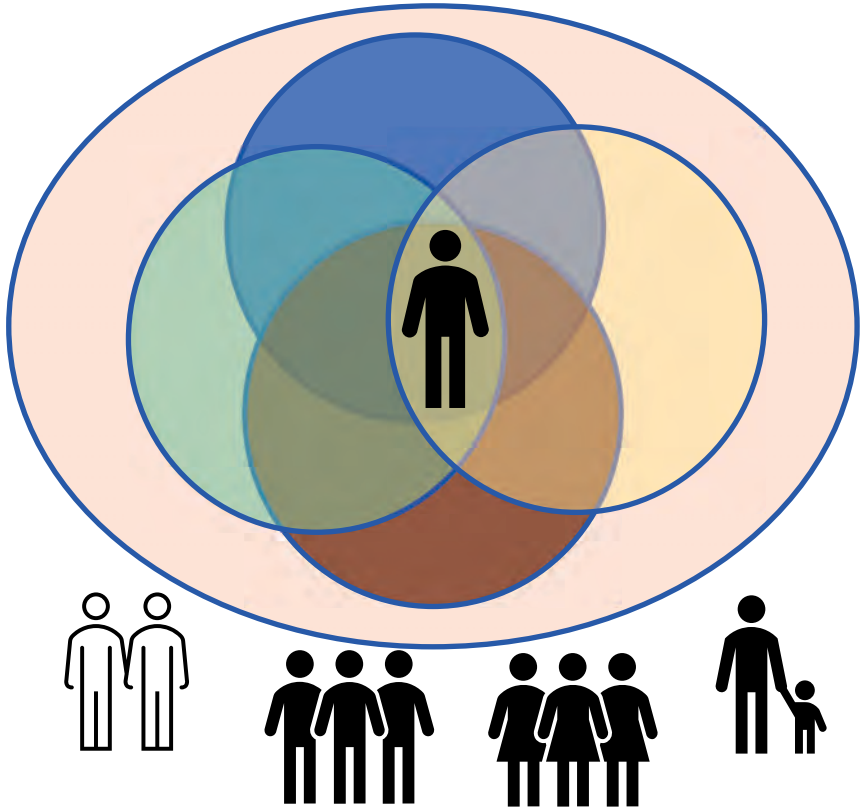
- Monitoring person-level risks and other co-morbidities
- Information on community prevalence

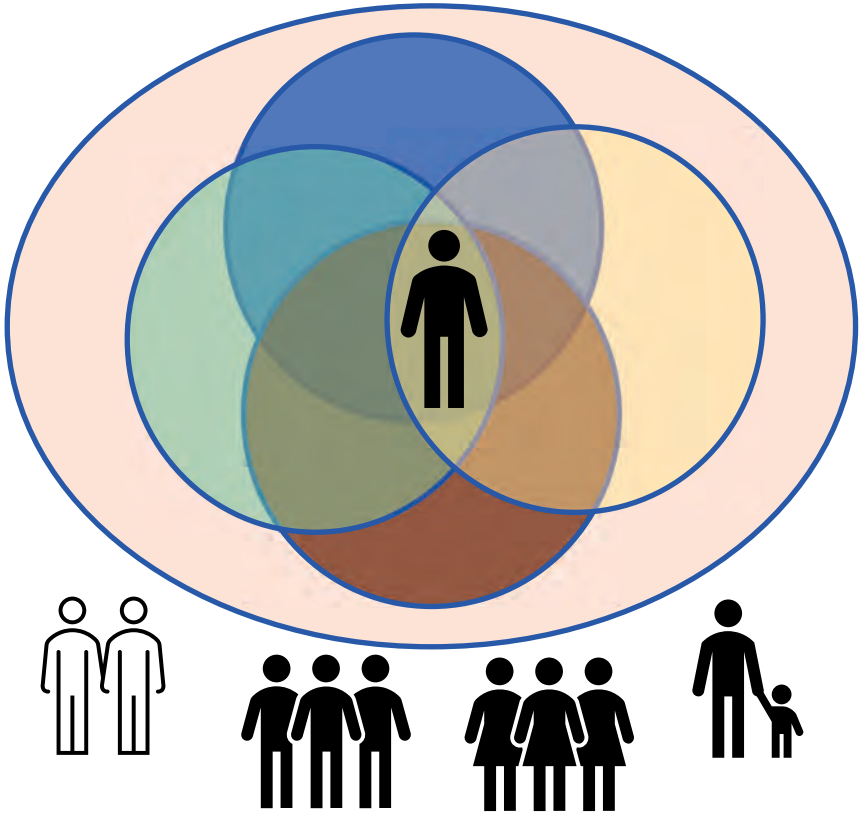


What do we mean by a syndemic, holistic approach to disease surveillance?

- Person-centric monitoring of multiple sequential/concurrent diagnoses
- Information on STI screenings and preventive services (PEP, PrEP, EPT) at sexual health visits
- Matching of patients/persons across multiple disease registries for prevalence of co-infections
- Monitoring recent/ongoing person-level risks and co-morbidities
- Information on community prevalence
- **Understanding the social ecology of community settings and contexts**

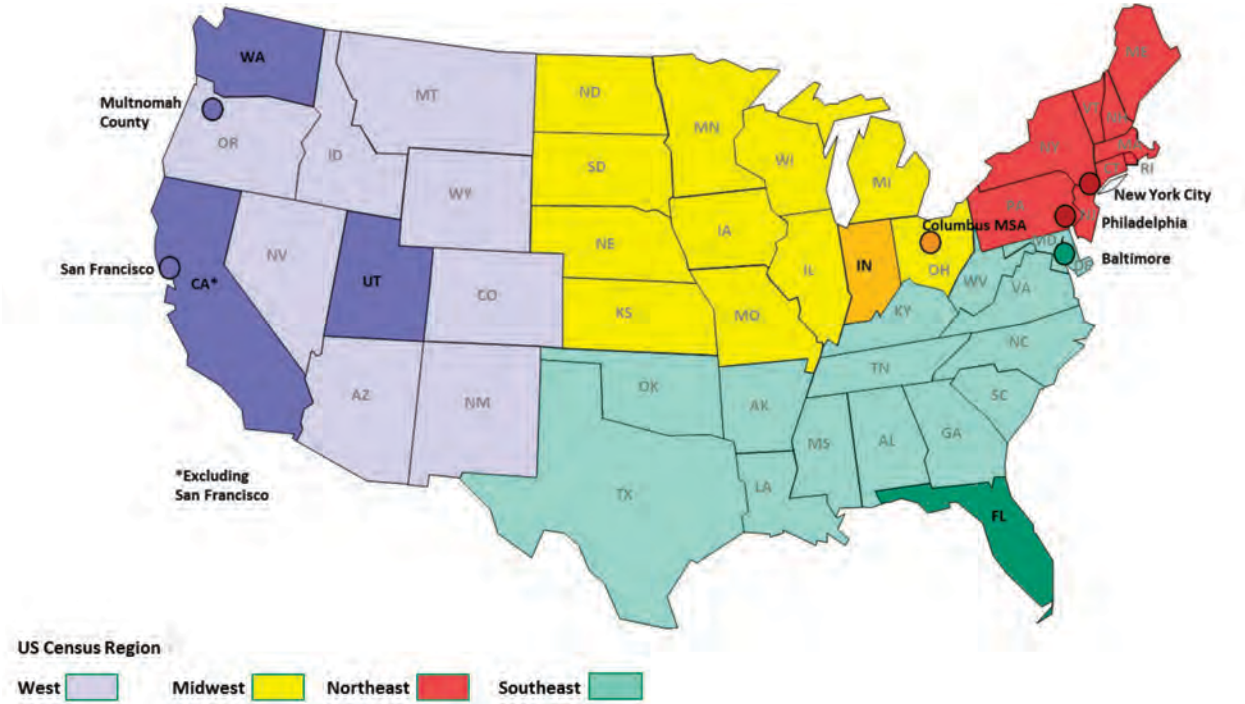


How is a syndemic, holistic surveillance approach useful?



- These data can help inform geographically tailored prevention and intervention planning
- Identify potential ‘upstream’ factors unique to communities that contribute to disease incidence
- Provide timely insight into changing trends in risk behaviors and health equity measures
- Understand the uptake and co-factors of biomedical disease prevention interventions such as PrEP and dPEP

Monitoring Syndemics in the STD Surveillance Network (SSuN)



SSuN Sites 2019 - 2024:

Baltimore
California
Columbus (MSA)
Florida
Indiana
Multnomah County
New York City
Philadelphia
San Francisco
Utah
Washington State

An integrated approach to surveillance (SSuN)

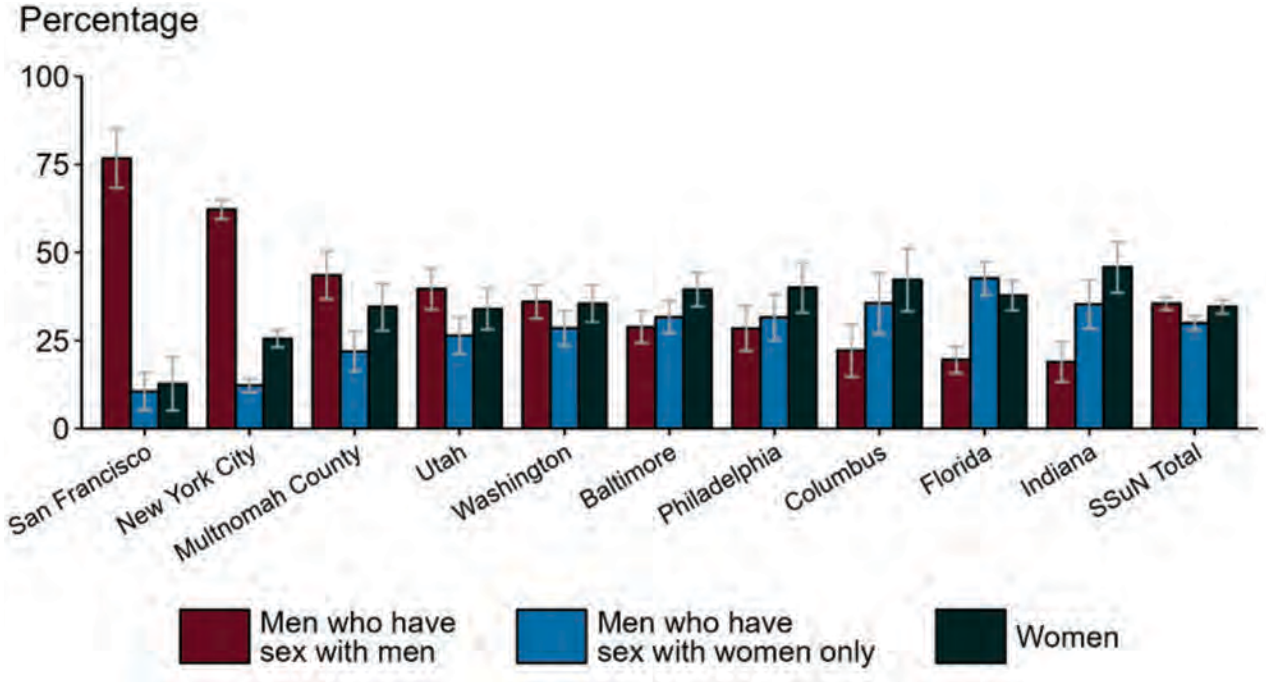
Sentinel Surveillance in STD/Sexual Health Clinics:

- full census of all patients presenting for care
- locally-developed unique person ID
- Demographics, behavioral data
- All lab tests performed
- All diagnoses given
- All treatments/preventive services patients receive
- HIV registry match for all patients

Enhanced Case-based Surveillance in Communities:

- Full census of all diagnosed and reported GC & syphilis cases
- Random sample of STD cases reported in jurisdiction
  - locally-developed unique person ID
  - Provider record review
  - Patient interviews with demographics and behavioral data
  - preventive services (EPT, PrEP)
- Lab tests reported with case
- All treatments associated with the STD reported
- HIV registry match for all reported cases

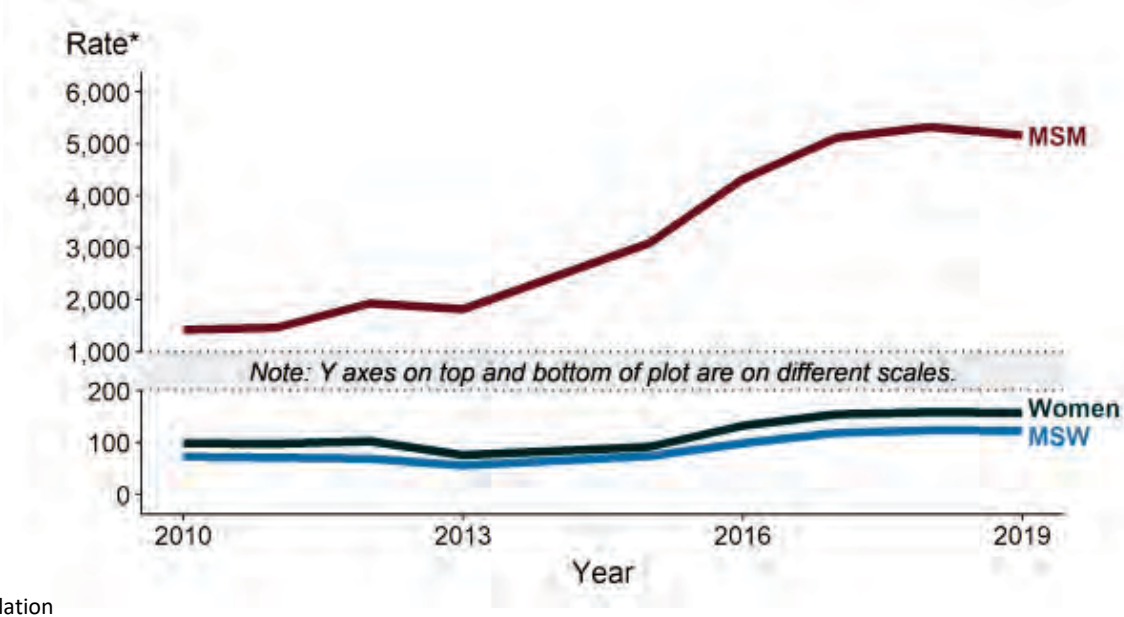
Estimated Proportion of Gonorrhea Cases by Sex and Sex of Sex Partners and Jurisdiction, STD Surveillance Network (SSuN), 2021*



* Reported 2021 data are preliminary as of March 28, 2023

NOTE: Estimate based on weighted analysis of data on sex of sex partners obtained from interviews (n = 5,312) conducted among a random sample of gonorrhea cases reported January to December 2021. Includes ten SSuN sites reporting completed case investigations in 2021 for at least 2% of all reported gonorrhea cases.

Gonorrhea – Estimated Rates* of Reported Gonorrhea Cases by MSM, MSW and Women, STD Surveillance Network (SSuN), 2019



* Per 100,000 population

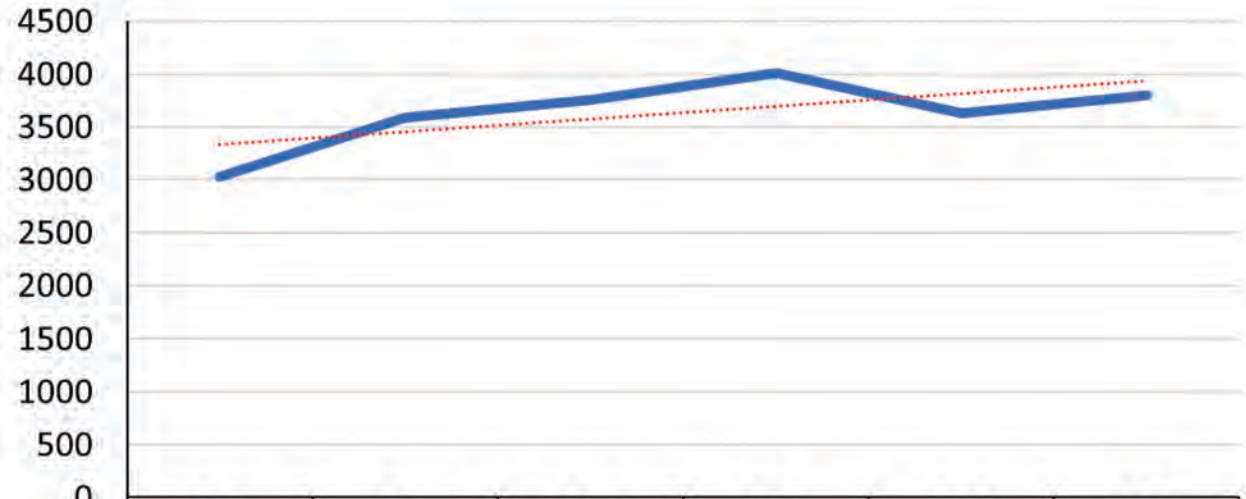
Note: Estimate based on weighted analysis of data obtained from interviews (n=28,979) conducted among a random sample of reported gonorrhea cases. Sites include Baltimore, Philadelphia, New York City, Washington State, San Francisco and California (excluding San Francisco)

Acronyms: MSM=Men who have sex with men, MSW=Men who have sex with women only

Adapted from: *Stenger M, Pathela P, Anschuetz G, et al. Increases in the rate of Neisseria gonorrhoeae among gay, bisexual and other men who have sex with men (MSM)— findings from the STD Surveillance Network 2010–2015. Sex Transm Dis. 2017;44(7):393–397.*

SSuN
STD SURVEILLANCE NETWORK

Modeled/Estimated* Rates of Reported Gonorrhea Cases Among MSM 15-69 in the US, 2016 - 2021

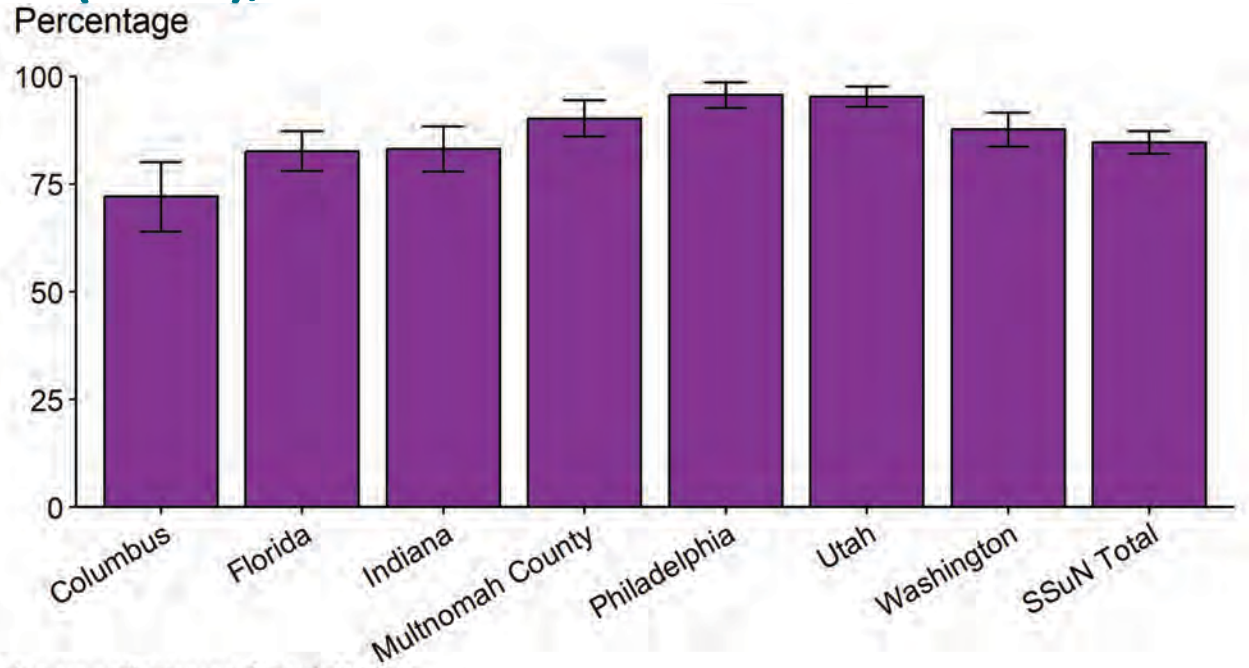


	2016	2017	2018	2019	2020	2021
Cases per 100,000	3,033	3,584	3,754	4,011	3,633	3,803

* Unpublished draft analysis 2023; MSM case estimates developed based on weighted proportion of men reporting male sex partners in the STD surveillance Network 2016-2021, adjusted by county urbanicity; MSM denominator data (Grey, et al) with projections through 2021.
2021 NNDSS case data considered preliminary – Maryland counties not included in trend analysis due to data suppression.

SSuN
STD SURVEILLANCE NETWORK

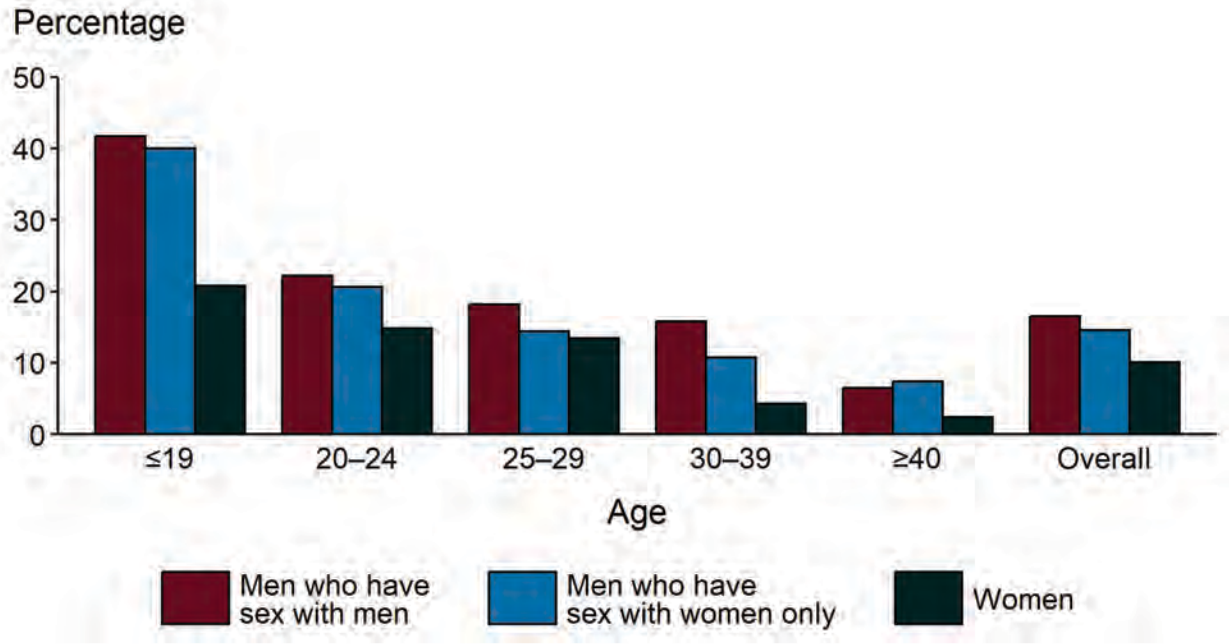
Gonorrhea – Estimated Proportion of Cases Treated with Recommended Regimen by Jurisdiction, STD Surveillance Network (SSuN), 2021*



* Reported 2021 data are preliminary as of March 28, 2023

NOTE: Includes only SSuN jurisdictions with treatment and dosage data ascertained for at least 80% of sampled, investigated cases. In 2021, the recommended treatment for uncomplicated gonorrhea was monotherapy with 500 mg ceftriaxone intramuscular. Data in this figure reflect patients treated in compliance with the current treatment recommendations. N = 3,462 completed investigations among randomly selected cases.

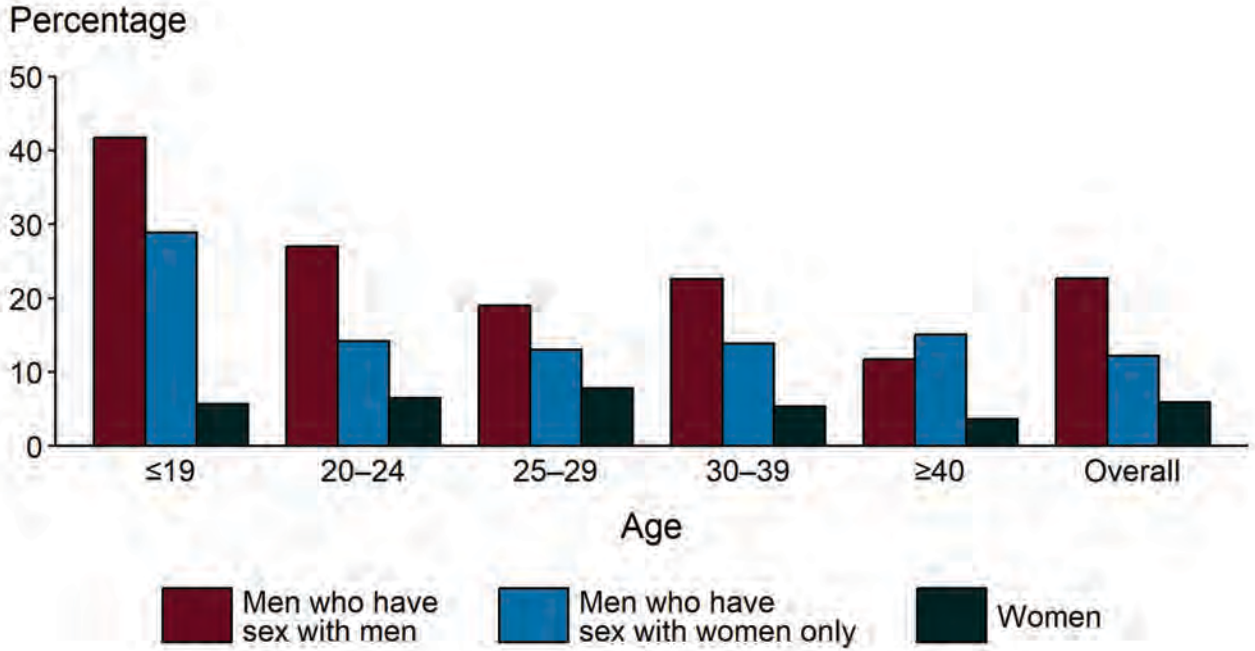
Chlamydia — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2021*



* Reported 2021 data are preliminary as of March 28, 2023

NOTE: Results are based on unique patients in participating jurisdiction with known sex of sex partners attending SSuN STD clinics who were tested ≥1 times for chlamydia in 2021 (n = 41,110).

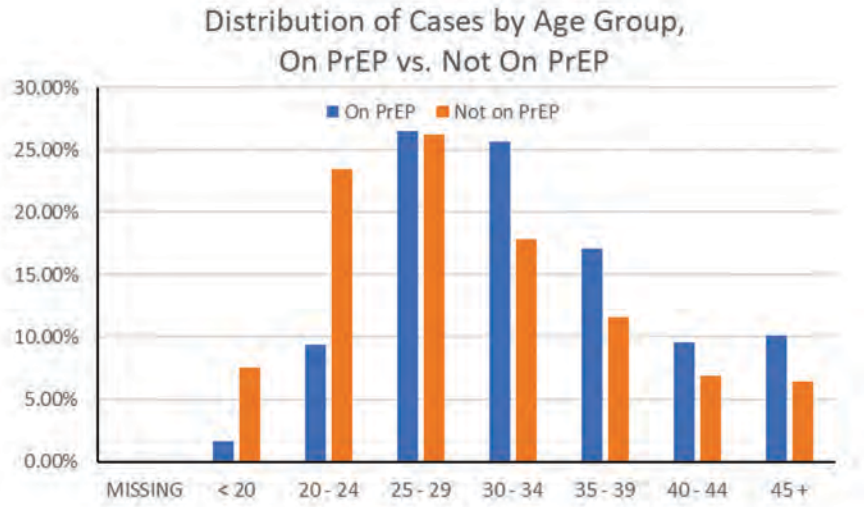
Gonorrhea — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2021*

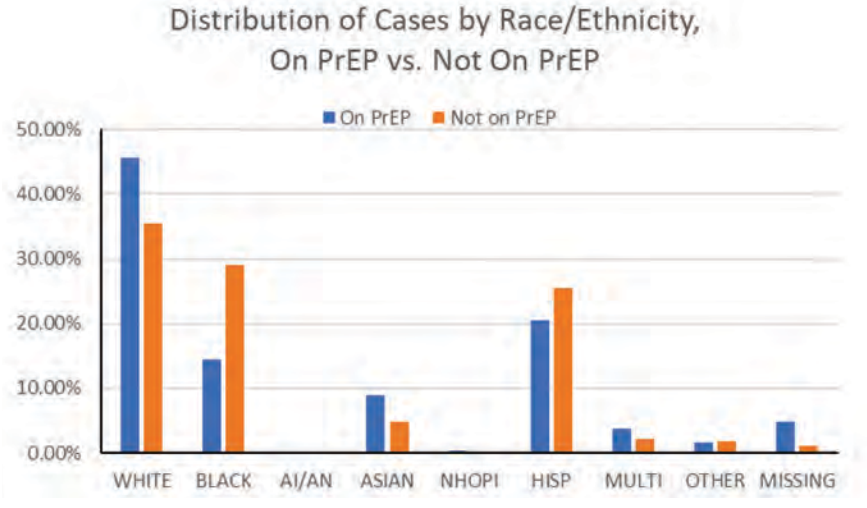


* Reported 2021 data are preliminary as of March 28, 2023

NOTE: Results are based on data obtained from unique patients in participating sites with known sex of sex partners attending SSuN STD clinics who were tested ≥1 times for gonorrhea in 2021 (n = 41,017).

Comparing PrEP users to those not using PrEP – among a cohort of HIV-negative MSM diagnosed and reported with gonorrhea in SSuN Sites* (2021)

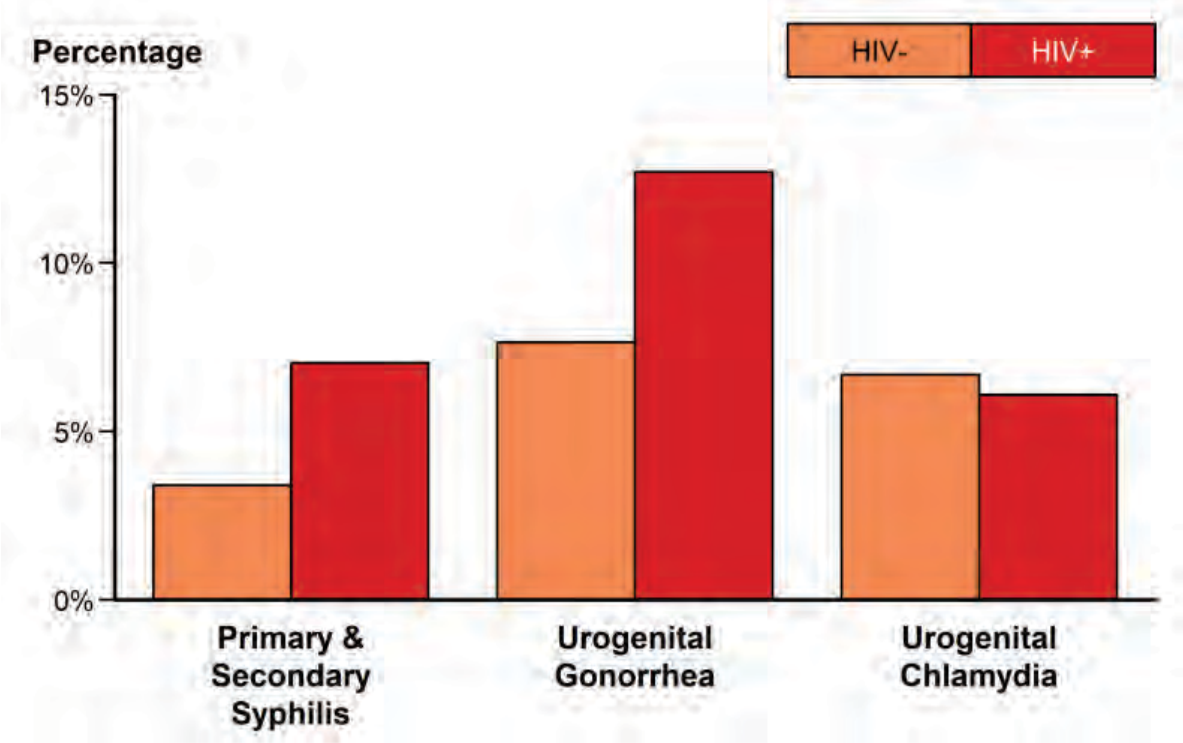




* N=3,098 HIV-negative men diagnosed and reported with gonorrhea and interviewed in 10 SSuN sites Jan-June 2021

- PrEP users were generally older and more likely to be non-Hispanic White than those not reporting PrEP use
- PrEP users also reported significantly more partners in the previous 3 months at their gonorrhea diagnosis (mean of 8.5 for PrEP users versus 3.8 among non-PrEP group)

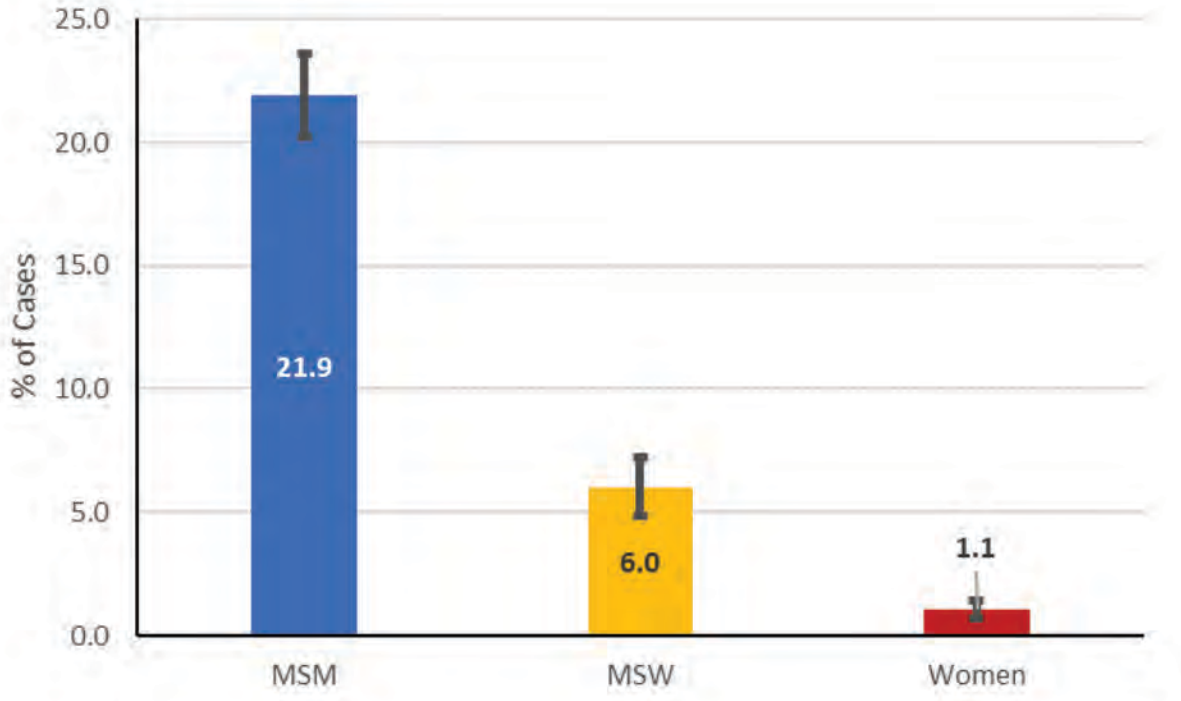
Proportion of MSM Attending STD Clinics with P & S Syphilis*, Urogenital Gonorrhea, or Urogenital Chlamydia by HIV Status, SSuN, 2018



* Includes SSuN Jurisdictions that reported data on at least 20 patients with a diagnosis of P & S syphilis in 2018

Source: Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2018. Atlanta: U.S. Department of Health and Human Services; 2019. DOI: 10.15620/cdc.79370.

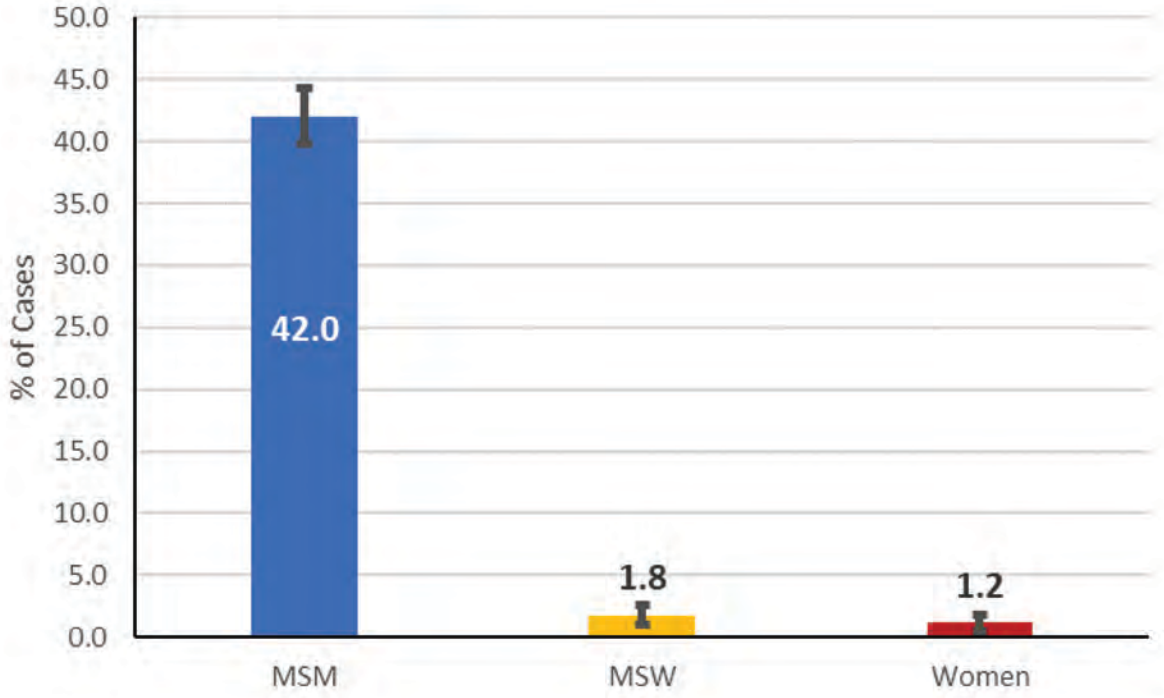
Estimated HIV Prevalence Among Reported Gonorrhea Cases* by MSM, MSW and Women, SSuN, 2020-2021



* Estimate based on HIV registry match and/or self report among 9,555 randomly sampled cases reported from all provider types in 10 SSuN sites 2020-2021

Source: unpublished SSuN data, March 2023.

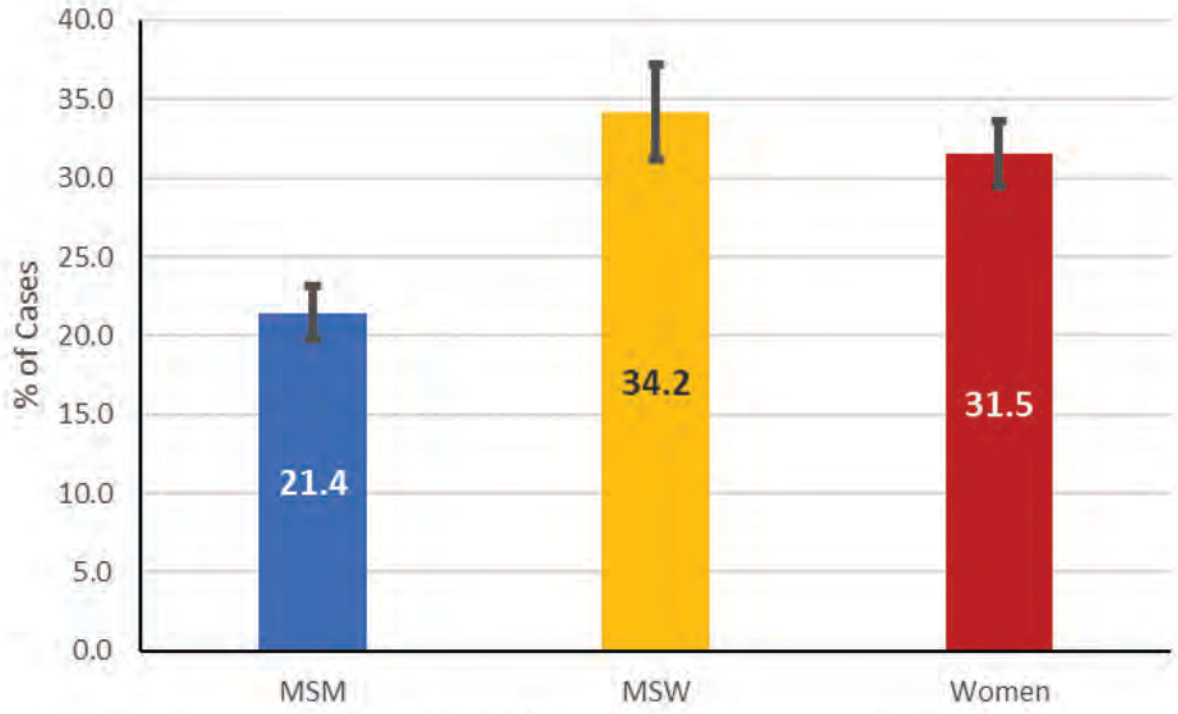
Estimated Proportion of HIV-Negative Gonorrhea Cases* on PrEP by MSM, MSW and Women, SSuN, 2020-2021



* Estimate based on HIV registry match and/or self report, and Self report of PrEP use among 8,688 randomly sampled HIV-negative cases reported from all provider types in 10 SSuN sites 2020-2021

Source: unpublished SSuN data, March 2023.

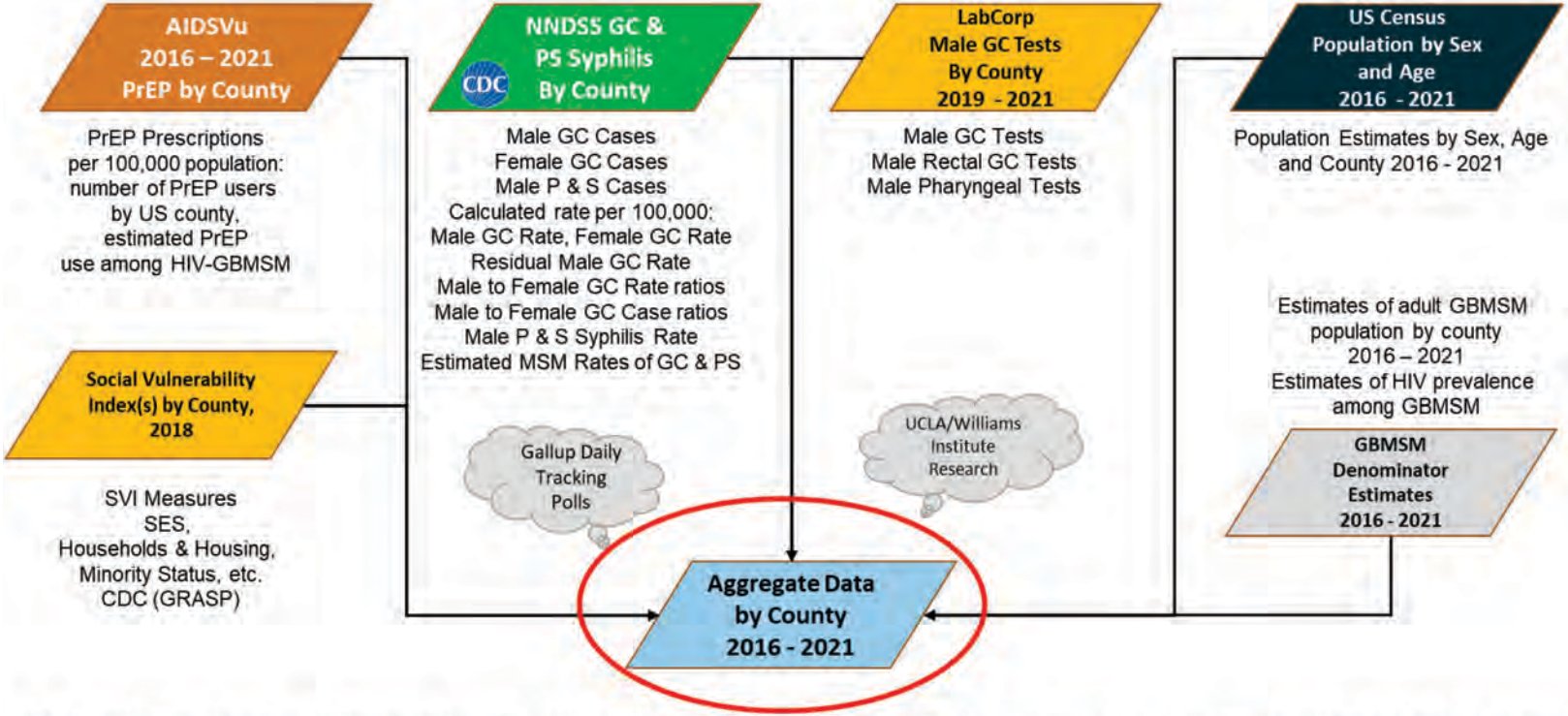
Estimated Proportion of GC Cases* Reporting Not Knowing HIV-status of Their Most Recent Sex Partner by MSM, MSW and Women, SSuN, 2020-2021



* Estimate based on patient-reported knowledge of their most recent sex partner's HIV status among randomly sampled gonorrhea cases reported from all provider types in 10 SSuN sites 2020-2021 (N=8,177 with complete responses)

Source: unpublished SSuN data, March 2023.

Ecologic Analyses with Surveillance Data



Analytic methods included descriptive, correlation analysis & simple regression modeling for trajectories.

Ecologic Analyses with Surveillance Data

- STIs (gonorrhea and syphilis) continue to increase among MSM, though some moderation in trajectory may be emerging (which may be a COVID-19 artefact, may reflect network saturation, or reflect changes in behavior)

- Preliminary analysis indicates that there is no correlation between PrEP use and either *decreasing* or *increasing* trajectories of STIs among MSM in US counties

Limitations

- Enhanced, syndemic and holistic surveillance activities are not currently nationally representative – additional resources would permit expansion to more states in future cycles

- Previous case-based enhanced surveillance efforts have only focused on diagnosed and reported gonorrhea cases from all providers, and to a census of patients receiving care in STD clinics

- Expansion of these activities to include a sample of syphilis cases and data collection in other sexual and reproductive health provider settings is planned, as additional resources become available

Thank You!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

mstenger@cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

NATIONAL COALITION FOR SEXUAL HEALTH

ALTARUM
SOLUTIONS TO ADVANCE HEALTH

It's about honesty. It's about knowledge. It's about time.

Leveraging the Power of Communications to Improve Sexual Health

Susan Gilbert, MPA
Co-Director, National Coalition for Sexual Health
Altarum

Reduce Stigma

Change Attitudes

Build Skills

Increase Knowledge

Create Positive Norms

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It's about honesty. It's about knowledge. It's about time.

“Being sexually healthy means being able to enjoy a healthier body, a satisfying sexual life, positive relationships, and peace of mind.”

Tested and embraced by public via focus groups and online survey

- Benefit-driven
- Holistic
- Digestible

There Is an Art and Science to Effective Health Communications

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- The art (& messaging) must rest on a **solid foundation of research**
- Research guided by a **practical behavior change model** (NIMH conference)
- A recent **WHO statement** makes a compelling case for behavioral science & research

Intention
to perform the behavior

Shaped by factors such as:

- Benefits outweigh costs
- Social norms support behavior
- Positive emotional reaction
- Self-efficacy
- Consistent with self-image
- Risk perception & knowledge

Skills
to perform the behavior

- Define the desired behaviors
- Define the specific skills required
- Assess which skills need to be improved/learned/practiced

Supportive Environment

- Access to health services and products
- Access to sex ed/information
- Positive societal norms (free of stigma, discrimination)
- Free of other constraints

It's about honesty. It's about knowledge. It's about time.

Understanding and Engaging with Audience(s) Is Essential

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Conduct audience research to:

Understand

- Attitudes
- Skills
- Knowledge
- Behaviors
- Environmental factors

Use qualitative and quantitative research

Explore

- Barriers to behavior
- Perceived benefits of behavior

Key to messaging

Learn

- Culture
- Values
- Aspirations

What matters in their everyday lives?
Who do they admire?
What do they aspire to?

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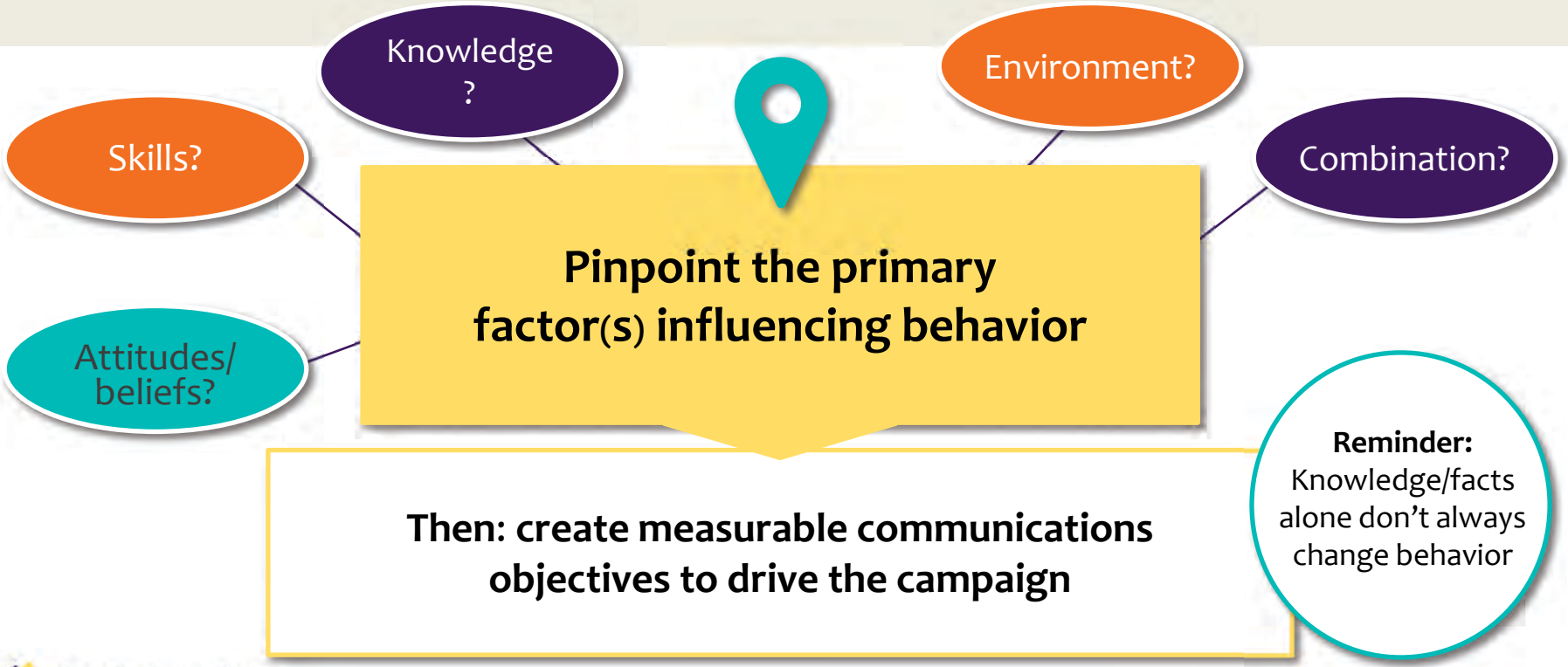
The Key Steps in Communications Planning



A Practical Example – Young Adults, Sexual Health Communications, and Relationships

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NCSH conducted focus groups and a survey to explore:

- Relationship and communication experiences
- Perceived benefits of and barriers to open communication
- Comfort level talking openly
- Topics they'd like to discuss more openly
- Skills and information that would help them do so
- Best channels and messengers

Young adults surveyed
1,256

Focus groups conducted
16

Significant Anxiety and Fear Around Open Communication

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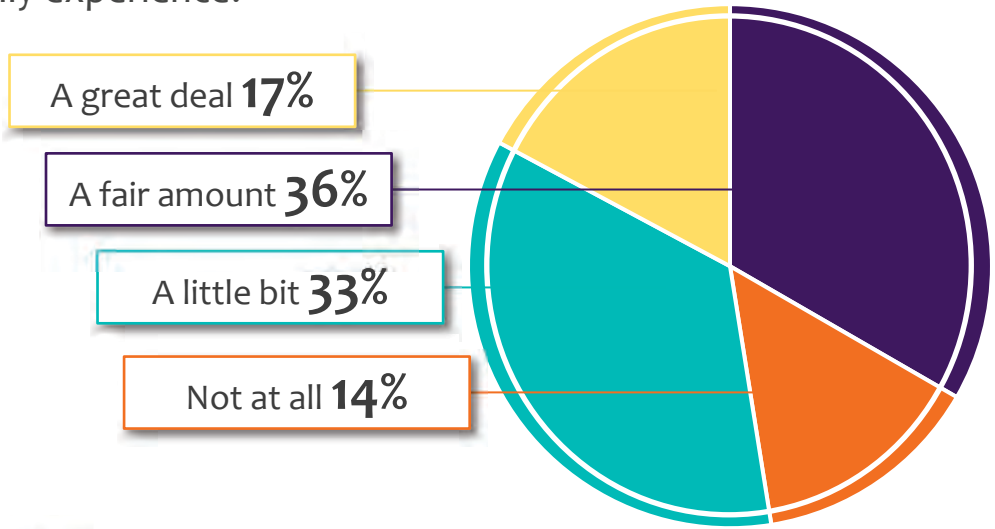
Q: If you want to start a conversation with a partner about sexual health or topics related to your relationship, **how much anxiety or nervousness** do you usually experience?



"A fear of rejection. That something I say will somehow offend them, be too much, and they'll leave."

–Focus group participant

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Top 5 Barriers to Open Communication

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- Don't want to hurt a partner's feelings — 54%
- Don't know when or how to bring up topics — 49%
- Low self-esteem or lack of confidence — 48%
- Worry partner(s) will get angry or upset — 47%
- Feel embarrassed about certain topics — 46%

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What Would Help Young Adults Communicate Better?

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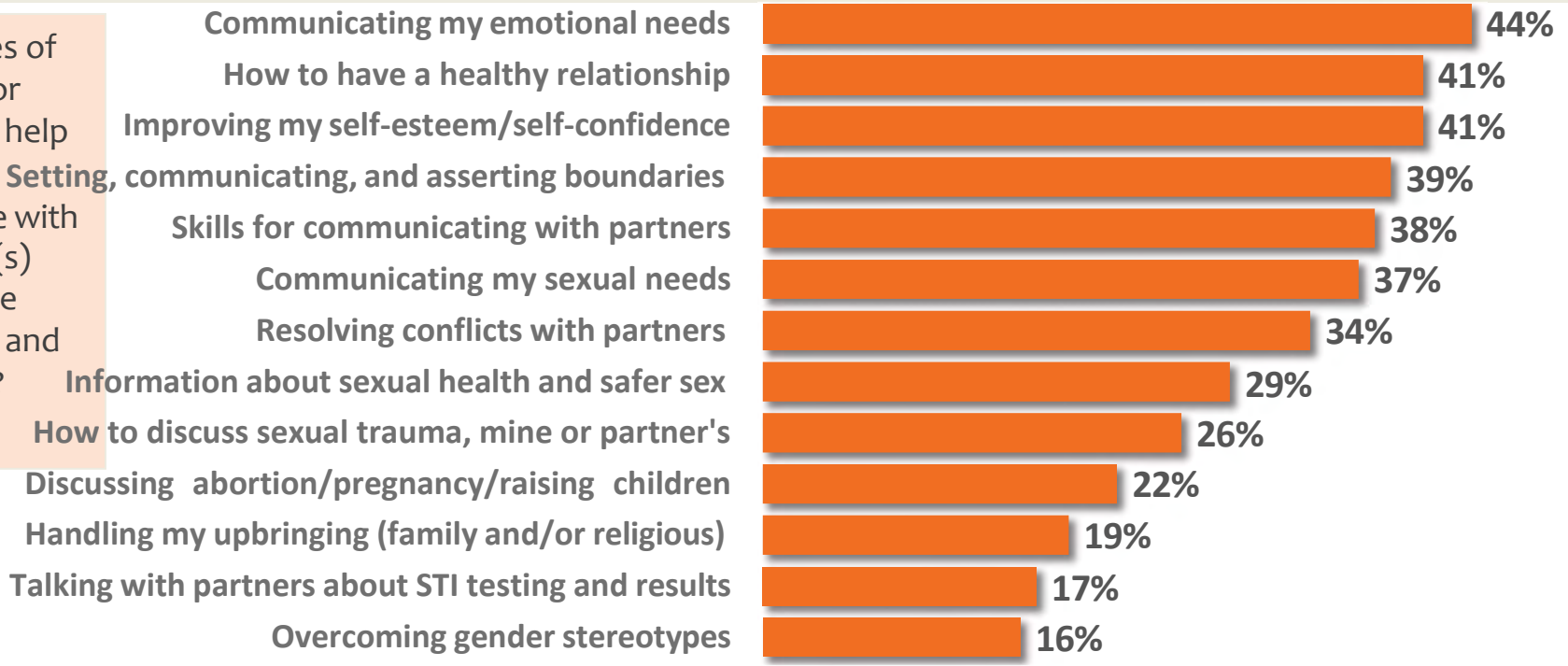
Q: What types of information or advice would help you better communicate with your partner(s) about positive sexual health and relationships?



It's about honesty. It's about knowledge. It's about time.

Top Action Steps to Achieve Good Sexual Health

> *"You must feel good about yourself and have peace of mind in order to have good relationships."*
>
> *–Focus group participant*

According to NCSH research with adults ages 18-70, the most important action steps are:

- Valuing who you are and deciding what's right for you: **54%**
- Building positive relationships: **49%**
- Choosing partners who treat you well: **34%**
- Getting smart about your body and protecting it: **32%**

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What Are the Benefits of Open Communication?

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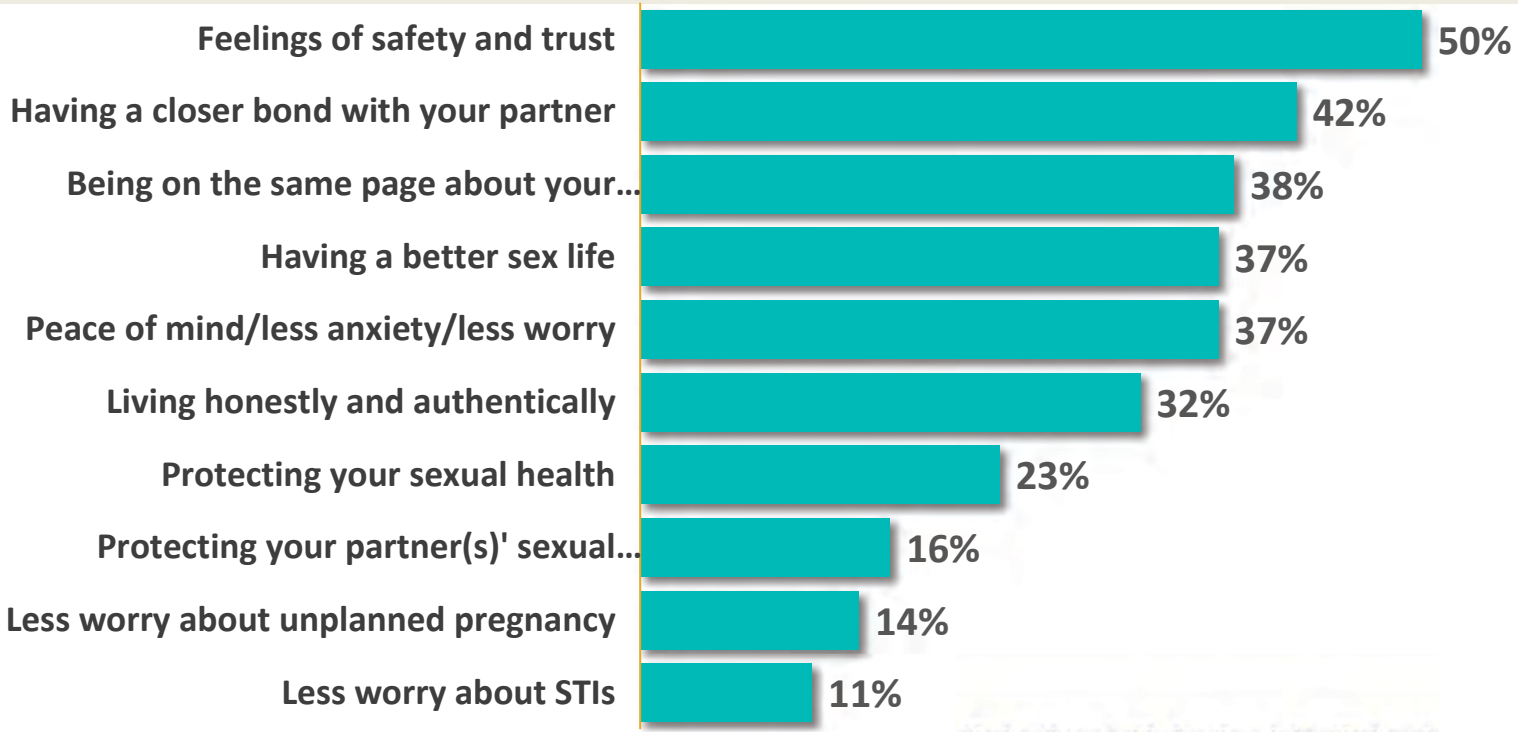
Q: What do you consider to be the top 3 benefits of talking openly with your partners about sexual health and/or your relationship?

(multiple responses)



We Need to Fill the Void for Youth, Young Adults, and Parents

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"I grew up in the South, and it wasn't an education. **It was a shame factor.** It was basically, you touch genitalia, you get disease, you die. I think there's a lot of shame that needs to be deprogrammed out of being a sexual being. It's harder to get the courage to talk about it with a partner, express what you want, or express what you need."

–Focus group participant

- Most don't have access to comprehensive, accurate sex ed and relationship education
- Most young adults lack positive role models
- Nearly all focus group participants said parents were negative role models (*And they wanted to do/be the opposite of their parents*)

No surprise: *It's the generational effects of a lack of relationship and sex education for most parents*

Our Communications Objectives

(Phase 1 for Young Adults)

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Build Skills

to

- Communicate effectively
- Build positive relationships
- Reduce anxiety/fear in having conversations
- Increase self-esteem

Influence Attitudes

to create beliefs that

- Open communication won't always disrupt the relationship and can lead to benefits
- It's "good/cool" to be the person who starts the convo/ talks openly
- We can reduce fear/anxiety
- Communication matters—even in non-serious/short-term relationships

Increase Knowledge

about

- How to prepare in advance for conversations and raise topics
- What is a healthy relationship?
- How to discuss trauma
- Safer sex and sexual health

It's about honesty. It's about knowledge. It's about time.

How Do We Move the Needle? (Part One)

We need to be systematic and creative to hit the mark

- Establish measurable communications objectives
- Measure progress regularly and adjust as needed

Engage CREATIVE TALENT to PERSUADE audience(s) to act, change attitudes, and shift culture

- Can't just tell people what to do, they need a compelling reason
- Health behavior is the product we're trying to sell, but health benefits often don't motivate
- Campaign identity/brand needed to drive a movement.
  e.g., "Designated Driver"

Culture shift mainly driven by cultural influencers (not institutions)

- Campaigns should engage and partner with influencers,
  e.g., social media influencers, entertainment media, others
- Why? Cultural influencers can meet audiences where they are, change attitudes, role-model behaviors, reduce stigma, and drive them to a campaign/resource

How Do We Move the Needle? (Part Two)

Create tools & activities based on communications objectives

- For young adults, interactive role-playing tools are key for skills-building
- Formats: role-playing scenarios, scripts, zines, quizzes, mini-comics, and short-form text
- In-person formats
  e.g., online support groups and "Master Classes"

Tone matters in messaging

- Avoid top-down directives and commands —*"Show Us, Don't Tell Us"*
- Feature peers, friends, and likeable health care providers/therapists
- Tie into benefits that matter and everyday realities & challenges

Develop and pretest all messages with audiences

- "Nothing About Us, Without Us."
- To ensure they are appealing, clear, relevant, motivational
- Test when being developed and when they are nearly final
- Message development shouldn't be an untested, solitary activity (at your desk)

"I would say not to command someone to do something or tell someone to do something directly, but be more about the softer side of things, like encouraging someone or being more positive about the tone."

–Focus group participant

Go Big, Go Long, and Go Deep—Be Creative!

- Changing behavior is often a long-term process: most programs should be multi-year
- Messaging needs to be repeated often from multiple sources and over time
- "One dose" of information is unlikely to produce or sustain behavior change
  Remember: Coke never stops advertising!
- Well-designed communications work:

"Designated Driver" (DD)
72% of young adults served as a DD; 61% of young adults who drank rode with a DD.

Thailand Condom Campaign
Over 8 years, condom use rose from 12% to 95% among commercial sex workers.

Other Examples (if time allows)
WinBlack
CDC Campaigns

Questions?

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www.nationalcoalitionforsexualhealth.org