

Providing PrEP To Your Patients

1. Initial Clinical Assessment

- Last unprotected sexual encounter?
- HIV Testing
- **Concomitant medications**
- **Screen for renal disease**
 - **TDF CrCl >60, TAF CrCl >30**
- **Screen for hepatitis B**
 - **TDF or TAF**
- **Screen for osteopenia**
 - **TAF**

Providing PrEP To Your Patients

1. Initial Clinical Assessment
2. Initial labs
 - **Oral Medications**

Test	Screening/Baseline Visit	Q 3 months	Q 6 months	Q 12 months	When stopping PrEP
HIV Test	X*	X			X*
eCrCl	X		If age ≥ 50 or eCrCL < 90 ml/min at PrEP initiation	If age < 50 and eCrCl ≥ 90 ml/min at PrEP initiation	X
Syphilis	X	MSM /TGW	X		MSM/TGW
Gonorrhea	X	MSM /TGW	X		MSM /TGW
Chlamydia	X	MSM /TGW	X		MSM /TGW
Lipid panel (F/TAF)	X			X	
Hep B serology	X				
Hep C serology	MSM, TGW, and PWID only			MSM, TGW, and PWID only	

* Assess for acute HIV infection (see Figure 4)

Providing PrEP To Your Patients

1. Initial Clinical Assessment

2. Initial labs

- **Long-acting injectable HIV PrEP**

Test	Initiation Visit	1 month visit	Q2 months	Q4 months	Q6 months	Q12 months	When Stopping CAB
HIV*	X	X	X	X	X	X	X
Syphilis	X			MSM^/TGW ⁻ only	Heterosexually active women and men only	X	MSM/TGW only
Gonorrhea	X			MSM/TGW only	Heterosexually active women and men only	X	MSM/TGW only
Chlamydia	X			MSM/TGW only	MSM/TGW only	Heterosexually active women and men only	MSM/TGW only

* HIV-1 RNA assay

X all PrEP patients

^ men who have sex with men

⁻ persons assigned male sex at birth whose gender identification is female

Providing PrEP To Your Patients

1. Initial Clinical Assessment
2. Initial labs
3. Prescribing
4. Ongoing monitoring
 - LAI Q2-6mos

Test	Initiation Visit	1 month visit	Q2 months	Q4 months	Q6 months	Q12 months	When Stopping CAB
HIV*	X	X	X	X	X	X	X
Syphilis	X			MSM^/TGW ⁻ only	Heterosexually active women and men only	X	MSM/TGW only
Gonorrhea	X			MSM/TGW only	Heterosexually active women and men only	X	MSM/TGW only
Chlamydia	X			MSM/TGW only	MSM/TGW only	Heterosexually active women and men only	MSM/TGW only

* HIV-1 RNA assay

X all PrEP patients

^ men who have sex with men

⁻ persons assigned male sex at birth whose gender identification is female

Common PrEP Concerns

- PrEP Choices
- PrEP Engagement
- Resistance
- Frequent STIs (risk compensation)
- **Insurance/Medication Payment barriers**



Additional Resource



Agencies and clinics across the country are working on ways to expand access to PrEP – especially as new options (like injectable PrEP) become available. We understand that developing and sustaining a PrEP program is difficult—practitioners need clear, evidence-based tools and resources that they can use to educate patients, train staff, develop protocols, and promote buy-in from diverse stakeholders.



YOU DON'T HAVE TIME TO REINVENT THE WHEEL

BLUPrint provides evidence-based solutions to support equitable, effective, and high-quality HIV prevention programs. Our team has compiled information and resources from providers, clinics, and programs across the country. We have developed customizable materials designed to streamline your workload while allowing for adaptation to the unique needs and context of your setting.

Marcus's Results

Lab results:

HIV Ab/Ag - Negative

Urine GC/CT – GC positive

Pharyngeal GC/CT – GC positive

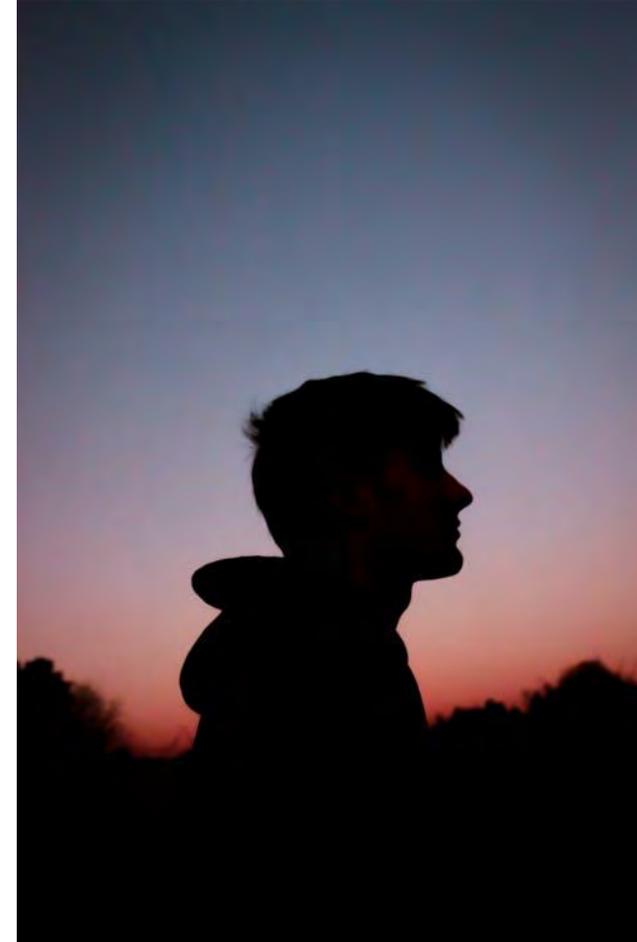
Rectal GC/CT – GC positive

RPR – Non-reactive



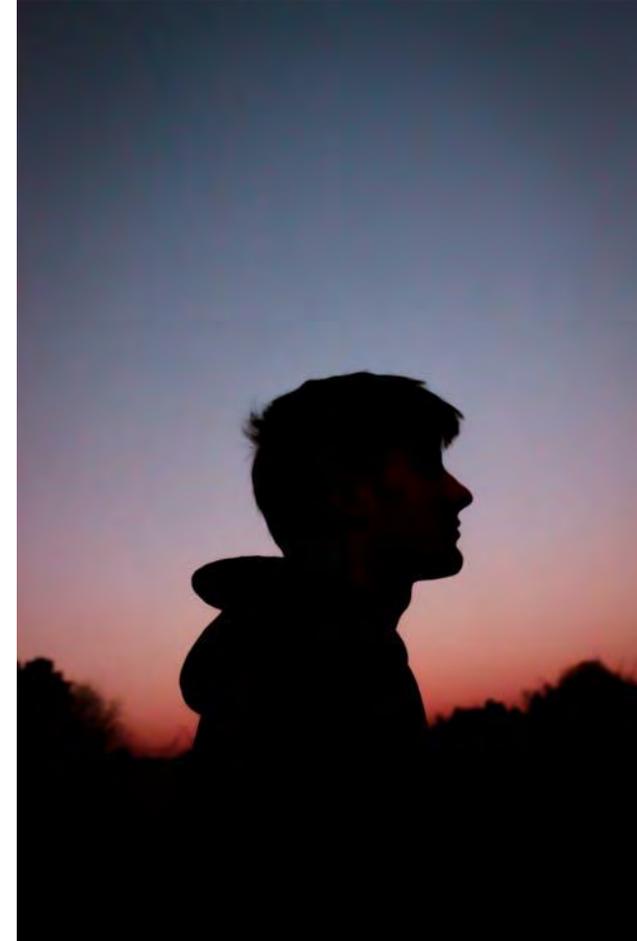
Marcus's Follow-up

- Marcus started HIV PrEP with daily oral TDF-FTC
- He continued to follow with us in clinic every quarter



Marcus Has An Issue

- 29-year-old male in New York City
- Takes HIV PrEP for HIV prevention
- Sexually active with men
 - Four partners since his last visit, no condom usage
- Walks in to clinic due with 2 days of green penile discharge
- **Routine testing for HIV, syphilis, and three-site gonorrhea/chlamydia testing performed**
- **Treated empirically with Ceftriaxone and Doxycycline**



Marcus's Prevention Plan



Primary Prevention

Vaccination

- HPV
- Hepatitis A/B
- Meningococcal ACYW
- Mpox

Medication

- HIV PrEP



Secondary Prevention

Routine screening

- Q3 Month Screening

Syndromic testing/treatment

Presumptive treatment

Marcus's Results

Lab results:

HIV Ab/Ag - Negative

Urine GC/CT – GC positive

Pharyngeal GC/CT – GC positive

Rectal GC/CT – GC positive

RPR – 1:128

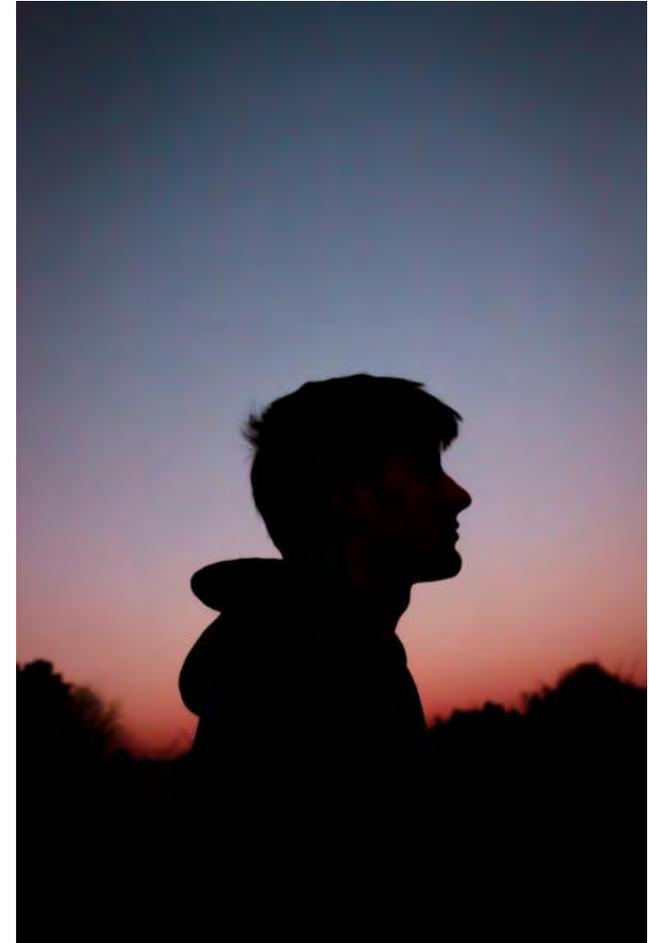
- 1:4 - 2 months ago



Received additional 7 days (total 14 days) of Doxycycline for early latent syphilis

Marcus

- Returned 6 weeks later
- **“I got totally better but now it hurts again when I pee”**
 - Seven partners since his last visit
 - Is sure that his regular partners got treated for gonorrhea and syphilis
 - Repeat routine testing for HIV, syphilis, and three-site gonorrhea/chlamydia testing was performed
 - Treated empirically with Ceftriaxone and Doxycycline



Marcus's Results

Lab results:

HIV Ab/Ag - Negative

Urine GC/CT – GC positive

Pharyngeal GC/CT – GC positive

Rectal GC/CT – CT positive

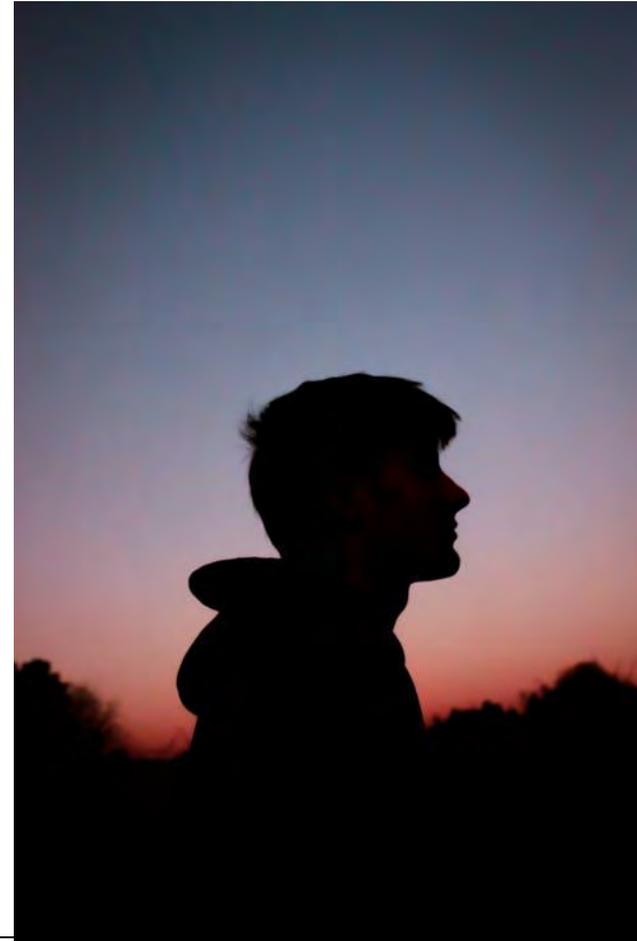
RPR – 1:32

- 1:128 – 6 weeks ago



Marcus

- Called to give Marcus his results and he was pretty upset
- **“This is frustrating, is there anything I can do so I stop getting STIs?”**



Medication Prophylaxis

Medication Prophylaxis

1. HIV post-exposure prophylaxis (PEP)
2. HIV pre-exposure prophylaxis (PrEP)
3. **Doxy-PEP**



What is Doxy-PEP?

Doxycycline 200 mg

by mouth up to 72 hours
after a condomless
sexual encounter at
any anatomic site



- Doxycycline
- 200mg by mouth
- Up to 72 hours after
- A condomless sexual encounter at any anatomic site

What We Know About Doxy-PEP From Trials

Randomized Controlled Trials of Doxy-PEP

Study	Population	Effectiveness
IPEGAY	MSM/TGW taking PrEP	Reduction in time to first STI HR 0.53 (0.33-0.85) reduction seen in CT and syphilis but NOT GC
DoxyPEP	MSM/TGW taking PrEP or PWH	Reduction in STI per quarter RR 0.38 (0.24-0.6)
DoxyVac	MSM taking PrEP	Reduction in time to first CT or syphilis HR 0.16 (0.08-0.30). Reduction in time to first GC HR 0.49 (0.32 – 0.76)
dPEP	Females taking PrEP	No reduction in STI incidence RR 0.88 (0.6-1.29)

MSM = men who have sex with men, TGW = transgender women, PWH = Persons with HIV, GC = gonorrhea, CT = chlamydia, OR = odds ratio, HR = hazards ratio, RR = relative risk reduction

- Doxycycline **post-exposure prophylaxis** (PEP) is safe and well tolerated
- Doxy-PEP **prevents** STIs in MSM and transgender women
- Doxy-PEP **did not** prevent STIs in cis-women in the dPEP study

The Real World - Males

Study & Location	Population	Results	Timeframe
San Francisco (Public Health Clinics) Sankaran et al., JAMA Intern Med 2025	MSM, TGW	Chlamydia ↓ 50%; Syphilis ↓ 51%; Gonorrhea ↑ slightly	13 mo
California – Kaiser Permanente Traeger et al., JAMA Intern Med 2025	HIV PrEP users	Chlamydia ↓ 9.6%→2%; Syphilis ↓ 1.7%→0.3%; Gonorrhea ↓ slightly; stable in non-users	Quarterly
San Francisco (96 Weeks) Spinelli et al., Clin Infect Dis 2025	4,592 PrEP pts (55% Doxy-PEP; incl. PLWH, trans men, cis women)	Sustained ↓ Chlamydia & Syphilis (AOR 0.17); Gonorrhea ↓ initially then ↑ (AOR 1.28)	96 wk
Chicago (CDPH Clinics) Luc et al., Sex Transm Dis 2025	219 young MSM	Overall STI ↓ 77%; Chlamydia ↓ 78%; Syphilis: none; Gonorrhea ↓ 54%	2024
Philadelphia (Public STI Clinic) Lewis et al., Sex Transm Dis 2025	508 MSM on PrEP	Any STI ↓ 39%; Chlamydia ↓ 60%; Gonorrhea ↓ 51%; crossover confirmed	2019–23
New York City (CHP) Zucker et al., AJPH 2025	100 early adopters (gbMSM, TGW; 12% PLWH, rest on PrEP)	Any STI ↓ 14%→7.9%; Chlamydia ↓ 11.9%→2.8% (IRR 0.30); Gonorrhea NS	9 mo pre vs post
Boston (MGH Sexual Health Clinic) Raccagni et al., JAC-AMR 2025	670 pts (24% of clinic)	Chlamydia ↓ 8.5%→3.9%; Syphilis ↓ 2.4%→1.4%; Gonorrhea NS; spillover benefit seen in non-users	Year 1

Implementation – Barriers & Facilitators (dPEP Female Trial)

- Qualitative sub-study of 69 young women (18–30, Kisumu, Kenya) in dPEP trial
- Barriers to adherence:
 - Side effects (esp. nausea on empty stomach)
 - Pill burden (dPEP + daily HIV PrEP)
 - Stigma, privacy concerns
 - Partner disapproval & conflict
 - Forgetfulness, routine disruptions
- Facilitators:
 - Belief in effectiveness
 - Discreet pill carriers (lipstick containers)
 - Social/family encouragement
 - Integration into routines
- **Suggests adherence challenges, not drug ineffectiveness, explain null results**

Table 2 Barriers and Facilitators Identified in The Interviews, Grouped by Time Points

Theme	Month 1 (Initial IDIs)	Month 6 (IDIs)	Month 12 (IDIs at Exit)	FGDs (after study exit)
Barriers				
Side Effects	✓ (28/40)	✓ (15/40)	✓ (25/40)	✓
Stigma and Privacy Concerns	✓ (21/40)	✓ (27/40)	✓ (15/40)	✓
Forgetfulness and Routine Disruptions	✓ (8/40)	✓ (16/40)	✓ (20/40)	✓
Partner Influence and Reactions	✓ (13/40)	✓ (14/40)		✓
Pregnancy and Health Concerns		✓ (5/40)		
Access Issues			✓ (5/40)	
Facilitators				
Perceived Effectiveness/Protection	✓ (12/40)	✓ (15/40)	✓ (30/40)	✓
Use of Discreet Pill Carriers	✓ (10/40)	✓ (16/40)	✓ (15/40)	✓
Social Support and Encouragement	✓ (9/40)	✓ (14/40)	✓ (20/40)	✓
Routine Integration	✓ (7/40)	✓ (14/40)	✓ (25/40)	✓
Health Education and Provider Support		✓ (8/40)		
Fear Reduction		✓ (1/40)		
Positive Experiences and Benefits		✓ (7/40)		

The Real World - Females

- Multi-center case series:
 - 35 AFAB patients
 - (<1% of 5U,744 Doxy-PEP users) at 4 U.S. SHCs
- Demographics:
 - Median age: 29 years
 - 83% transgender men, 14% cisgender women
 - 97% condomless sex with cis men
 - 23% sex work
 - 43% chemsex
- **Use:** Median 236 days; ~2 doses/month
- STI outcomes:
 - Pre-PEP: 46% had ≥ 1 STI
 - Post-PEP: 20% had ≥ 1 STI
 - Gonorrhea & M. genitalium most common
 - No pregnancies observed; pregnancy screening inconsistent
 - **Urgent need for efficacy data in female populations**

Counseling on Doxy-PEP Risks

Well Known Side Effects:

- Gastrointestinal distress
- Photosensitivity
- Pill esophagitis

Growing Understanding:

- No resistance seen with chlamydia or syphilis”
- Shifts in colonization: ↓ S. aureus, ↑ GAS
- Resistance emerging in gonorrhea and commensals

Unknowns:

- Impact on M. genitalium
- Impact on microbiome
- Impact on STI diagnostics and presentations
- Potential cross-resistance with other antibiotics

Antimicrobial Resistance – STI Pathogens

Study	Key Findings	Implications
Soge et al., Clin Infect Dis 2025 (King County)	Gonorrhea tetracycline resistance ↑ 27%→70%; high-level resistance ↑ 2%→65%; strongest with >3 Doxy-PEP doses/mo	Doxy-PEP likely accelerating gonorrhea resistance
Molina et al., DOXYVAC, CROI 2023 (France)	↑ tetracycline-resistant gonorrhea in Doxy-PEP arm	Confirms concern for gonorrhea resistance
Luetkemeyer et al., NEJM 2023 (DoxyPEP trial)	Gonorrhea resistance signal low; cultures limited	No strong evidence yet, but surveillance critical
Vanbaelen et al., Lancet Infect Dis 2025 (DoxyPEP trial)	Post-hoc DoxyPEP trial: tetracycline MIC correlated with cephalosporin MICs only in non-Doxy-PEP users	No evidence yet that Doxy-PEP drives ceftriaxone resistance

Antimicrobial Resistance – Commensals & Other Bacteria

Study	Key Findings	Implications
Truong et al., JAC-AMR 2022	Oral tetracyclines (2–18 wks) ↑ resistance in oral, GI, and respiratory flora	Doxy-PEP could select resistant reservoirs
Robinson et al., Sci Rep 2025	46% of commensal Neisseria resistant; linked to doxy use; high-level resistance via tetM plasmid	Reservoir for gonorrhea resistance
Args et al., Nat Med 2025	Gut resistome: tetracycline resistance genes ↑ (DNA 46→51%, RNA 4→15%); esp. in frequent users	Expands resistance gene pool
Mittelstaedt et al., J Infect Dis 2024	S. aureus: 13.7% tetracycline-nonsusceptible; co-resistance with TMP-SMX (↑4.5×) & clindamycin (↑3.6×)	Doxy resistance may co-select for multidrug resistance
Luetkemeyer et al., NEJM 2023 (DoxyPEP trial)	↑ tetracycline-resistant S. aureus among Doxy-PEP users	Off-target resistance risk confirmed
Molina et al., DOXYVAC, CROI 2023 (France)	No increase in MRSA or ESBL E. coli in Doxy-PEP arm	Reassuring for broader commensal resistance
Soge et al., Clin Infect Dis 2025	Tetracycline-resistant Staph aureus and GAS more common in Doxy-PEP users	Commensals themselves may become resistant pathogens

Counseling on Doxy-PEP Risks

Well Known Side Effects:

- Gastrointestinal distress
- Photosensitivity
- Pill esophagitis

Growing Understanding:

- No resistance seen with chlamydia or syphilis”
- Shifts in colonization: ↓ S. aureus, ↑ GAS
- Resistance emerging in gonorrhea and commensals

Unknowns:

- Impact on M. genitalium
- Impact on microbiome
- Impact on STI diagnostics and presentations
- Potential cross-resistance with other antibiotics

Implementation – Who Should Get Doxy-PEP?

CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention, United States, 2024

Recommendation*	Strength of recommendation and quality of evidence [†]
<ul style="list-style-type: none">Providers should counsel all gay, bisexual, and other men who have sex with men (MSM) and transgender women (TGW) with a history of at least one bacterial sexually transmitted infection (STI) (specifically, syphilis, chlamydia or gonorrhea) during the past 12 months about the benefits and harms of using doxycycline (any formulation) 200 mg once within 72 hours (not to exceed 200 mg per 24 hours) of oral, vaginal, or anal sex and should offer doxycycline postexposure prophylaxis (doxy PEP) through shared decision-making. Ongoing need for doxy PEP should be assessed every 3–6 months.	AI High-quality evidence supports this strong recommendation to counsel MSM and TGW and offer doxy PEP.
<ul style="list-style-type: none">No recommendation can be given at this time on the use of doxy PEP for cisgender women, cisgender heterosexual men, transgender men, and other queer and nonbinary persons.	Evidence is insufficient to assess the balance of benefits and harms of the use of doxy PEP

* Although not directly assessed in the trials included in these guidelines, doxy PEP could be discussed with MSM and TGW who have not had a bacterial STI diagnosed during the previous year but will be participating in sexual activities that are known to increase likelihood of exposure to STIs.

[†] See Table.

Implementation – Screening

- Screen for sexually transmitted infections (STIs) as indicated:
 - HIV Testing
 - Gonorrhea/Chlamydia NAAT testing (including extra-genital)
 - Syphilis testing
 - Hepatitis testing
 - Vaccination status
 - Counsel on
 - Prevention strategies
 - Benefits and risks of Doxy-PEP
 - **As well as using it for it's intended purpose**
 - Drug-drug interactions (antacids, cations)

Implementation – Counseling

Well Known Side Effects:

- Gastrointestinal distress
- Photosensitivity
- Pill esophagitis

Growing Understanding:

- No resistance seen with chlamydia and syphilis
- Decreased colonization with *S. aureus* but increased GAS
- Growing resistance to Doxycycline in STIs (GC) and commensals (*S. aureus*)

Unknowns:

- Impact on *M. gen*
- Impact on the microbiome
- Impact on STI presentations
- Cross-resistance with other antibiotics

Patient Decision Aids

What is Doxy-PEP? A way to lower your chance of getting a sexually-transmitted infection (STI) such as gonorrhea, chlamydia and syphilis by taking an antibiotic called doxycycline after condomless sex.

Below is an example of how to take Doxy-PEP. This schedule can vary depending on when and how you have sex.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NO SEX	SEX	SEX multiple times	SEX	NO SEX	NO SEX	SEX
	Doxy-PEP 200 mg	Doxy-PEP 200 mg	Forgot pills			Doxy-PEP 200 mg

Sex = oral, anal or vaginal/front-hole sex where a condom isn't used for the entire time.

🔴 = 200mg of doxycycline (two 100mg pills)
No more than 200mg should be taken every 24 hours, even if you have sex multiple times in a day.

If you forget to take your Doxy-PEP after sex and have sex again within 72 hours, simply take a 200mg dose now. No need for multiple doses.

You have up until 72 hours after sex to take Doxy-PEP, but it's best to take it as close to sex as possible.

Doxy-PEP is not 100% effective against preventing STIs, so you will still need to get tested for STIs regularly.

Doxy-PEP does not protect against HIV. It is different from STI treatment. In this case, do not take Doxy-PEP.

How to take Doxy-PEP

- Doxy may increase sun sensitivity; use sunscreen for protection.
- Take with a large glass of water and food to ease stomach upset.
- Remain upright for 30 minutes after taking to minimize stomach irritation.
- Wait 2 hours before taking dairy, calcium, vitamins, or antacids after taking doxy. Fiber intake is fine.

Tell your healthcare provider if...

- If you have symptoms of an STI, or have a partner who knows they have an STI tell your provider. In this case, do not take Doxy-PEP.
- If you are taking any other antibiotics from another provider, pharmacy or friend.

Things we are still learning about Doxy-PEP:

- The long term effects of Doxy-PEP on the bacteria we already have in our intestines and on our skin.
- Whether using Doxy-PEP will make it harder to treat bacterial infections with doxycycline in the future.

- Columbia pilot tested a visual decision aid (PDA) in two NYC sexual health clinics
- 30 participants (all AMAB; 30% living with HIV; all with ≥1 STI in past year)
- PDA counseling improved:
 - Familiarity with Doxy-PEP +27%
 - Comfort with Doxy-PEP +24%
 - Knowledge about Doxy-PEP +16%
- **Participants rated the PDA highly acceptable, appropriate, and feasible**

• Bosco J et al. *AIDS Behav.* 2025

Patient Decision Aids

Doxy PEP – How to Take

Two 100 mg pills of doxycycline ideally within 24 hours but no later than 72 hours after condomless oral, anal or vaginal sex

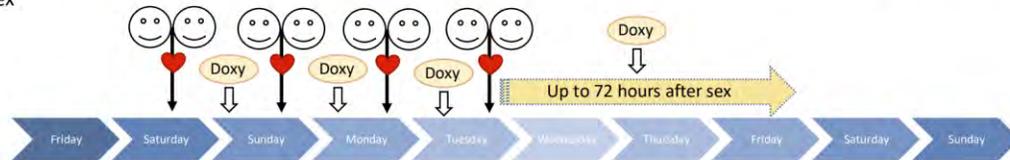
 = sex without a condom, including oral sex

Example: Sex on Sat; take dose of doxy by Tues

Example: Sex on Thursday; take dose of doxy by Sunday



Example 2: Daily (or more) sex Sat-Tues; take daily dose of doxy and last dose within 24 hours but not later than 72 hours after last sex



No more than 200 mg every 24 hours

About Doxy-PEP



What is doxy-PEP?

- Doxy-PEP means taking the antibiotic doxycycline after sex, to prevent getting an STI. It is like a morning-after pill but for STIs. Taking doxy-PEP reduces your chance of acquiring syphilis, gonorrhea, and chlamydia by about two-thirds.

When should I take doxy-PEP?

- Two 100 mg pills of doxycycline should be taken ideally within 24 hours but no later than 72 hours after condomless sex. Condomless sex means oral, anal or vaginal/front-hole sex where a condom isn't used for the entire time.



What about when I have sex again?

- If you have sex again within 24 hours of taking doxycycline, take another dose 24 hours after your last dose. You can take doxycycline as often as every day when you are having condomless sex but don't take more than 200 mg (two 100 mg pills) every 24 hours.



How should I take doxy-PEP?

- Take doxycycline with plenty of water or something else to drink so that it does not get stuck when you swallow. If your stomach is upset by doxycycline, taking it with food may help.
- Some people are more sensitive to the sun when they take doxycycline, so wear sunscreen.
- Please do not share doxycycline with others.
- Avoid dairy products, calcium, antacids, or multivitamins 2 hours before after taking doxycycline.



What are we still learning about doxy-PEP?

- Does it affect normal ("good") bacteria in our intestines?
- Could it increase or decrease the bacteria that live on our skin, or make them resistant to doxycycline (for example staph)?
- Will doxy-PEP increase doxycycline resistance in bacteria that cause STIs?
 - Although doxycycline has been used for decades, there is not resistance to doxycycline in chlamydia or syphilis.
 - About 25% of gonorrhea in the US is already resistant to doxy; doxy-PEP may not work against these strains. The DoxyPEP study and other studies will help understand whether using doxy-PEP changes resistance in gonorrhea.



Reminders

- Call us at 628-217-6692 if you run out of doxycycline, if you are having any side effects, or if you think you may have an STI.
- Please continue to get tested for STIs every 3 months and whenever you have symptoms.
- Doxy-PEP doesn't protect against MPX (monkeypox), HIV, or other viral infections



How Do I Prescribe Doxy-PEP?

FOR _____ DATE _____

ADDRESS _____

REFILL _____ TIMES

A generically equivalent drug product may be dispensed unless the practitioner hand writes the words "Brand Necessary" or "Brand Medically Necessary" on the face of the prescription.

R_x

Doxycycline Monohydrate 100mg tabs
Take 2 tabs by mouth as needed every 24 hours
Take 2 capsules by mouth, once daily as needed (take within 72 hours of condomless sex),
Take no more than 2 capsules in any 24-hour period. Take with water and remain upright for 30 mins after taking
Dispense: #60 tabs
Refills: 0

SIGNATURE

DEA NO.

ADDRESS _____

Reorder Item #6120 Total Pharmacy Supply, Inc. 1-800-878-2822

How Do I Prescribe Doxy-PEP?

FOR _____ DATE _____

ADDRESS _____

REFILL _____ TIMES

A generically equivalent drug product may be dispensed unless the practitioner hand writes the words "Brand Necessary" or "Brand Medically Necessary" on the face of the prescription.

Rx

Doxycycline Monohydrate 100mg tabs

Take 2 tabs by mouth as needed every 24 hours

Take 2 capsules by mouth, once daily as needed (take within 72 hours of condomless sex),

Take no more than 2 capsules in any 24 hour period. Take with water and remain upright for 30 mins after taking

Dispense: #60 tabs
Refills: 0

SIGNATURE

DEA NO.

ADDRESS _____

Reorder item #6120 Total Pharmacy Supply, Inc. 1-800-878-2822

Hyclate or Monohydrate

- Hyclate – cheaper
- Monohydrate – less GI distress

How Do I Prescribe Doxy-PEP?

- Detailed instructions

FOR _____ DATE _____

ADDRESS _____

REFILL _____ TIMES

A generically equivalent drug product may be dispensed unless the practitioner hand writes the words "Brand Necessary" or "Brand Medically Necessary" on the face of the prescription.

Rx

Doxycycline Monohydrate 100mg tabs
Take 2 tabs by mouth as needed every 24 hours

Take 2 capsules by mouth, once daily as needed (take within 72 hours of condomless sex),
Take no more than 2 capsules in any 24 hour period. Take with water and remain upright for 30 mins after taking

Dispense: #60 tabs
Refills: 0

SIGNATURE

DEA NO.

ADDRESS _____

Reorder item #6120 Total Pharmacy Supply, Inc. 1-800-878-2822

How Do I Prescribe Doxy-PEP?

FOR _____ DATE _____
ADDRESS _____
REFILL _____ TIMES

A generically equivalent drug product may be dispensed unless the practitioner hand writes the words "Brand Necessary" or "Brand Medically Necessary" on the face of the prescription.

Rx

Doxycycline Monohydrate 100mg tabs
Take 2 tabs by mouth as needed every 24 hours
Take 2 capsules by mouth, once daily as needed (take within 72 hours of condomless sex),
Take no more than 2 capsules in any 24 hour period. Take with water and remain upright for 30 mins after taking

Dispense: #60 tabs
Refills: 0

SIGNATURE _____ DEA NO. _____
ADDRESS _____

Reorder item #6120 Total Pharmacy Supply, Inc. 1-800-878-2822

- Dispense and refills
- 25% of patients used \geq 10 doses per month

How Do I Prescribe Doxy-PEP?

doxycycline 100 MG Capsule ✓ Accept ✗ Cancel

Product: **DOXYCYCLINE HYCLATE 100 MG OR CAPS** [View Available Strengths](#)

Sig Method: **Specify Dose, Route, Frequency** [Taper/Ramp](#) [Combination Dosage](#) [Use Free Text](#)

Dose: 200 mg 100 mg

doxycycline 100 MG Capsule [Details](#)

↑ Single dose of 200 mg exceeds recommended maximum of 100 mg by 100% [Use 100 mg](#)

Override Reason/Comment: [Not clinically significant](#)

Calculated dose: 2 capsule

Route: [Oral](#) **Oral**

Frequency: [Daily PRN](#) [Daily \(0900\)](#) **2X Day**

Duration: [Doses](#) **Days**

Starting: 9/9/2023 Ending: First fill:

Dispense: Days/Fill: [Full \(0 Days\)](#) [30 Days](#) [90 Days](#)

Quantity: 60 capsule Refill: 0

Dispense As Written

Renewal Provider: Do not send renewal requests to me

Mark long-term: DOXYCYCLINE HYCLATE (TETRACYCLINES)

⚠ Patient Sig: [Take 2 capsules by mouth Daily As Needed Take within 72 hours of condomless sex and ideally within 24 hours. Take no more than 2 capsules \(200mg\) in any 24 hour period. Take with water and remain upright for 30 mins after taking.](#)

[Edit the additional information appended to the patient sig](#)

ⓘ The sig contains both discrete and free text elements. Review the final sig above.

Indications: [Antimicrobial Therapy](#)

Acne Vulgaris Bacterial Infection

Indications (Free Text):

Class: [ePrescribe](#) **ePrescribe** [Normal](#) [Phone In](#) [OTC](#) [Historical Med](#)

ⓘ Next Required ✓ Accept ✗ Cancel

How Do I Follow Patients on Doxy-PEP?

Follow-up

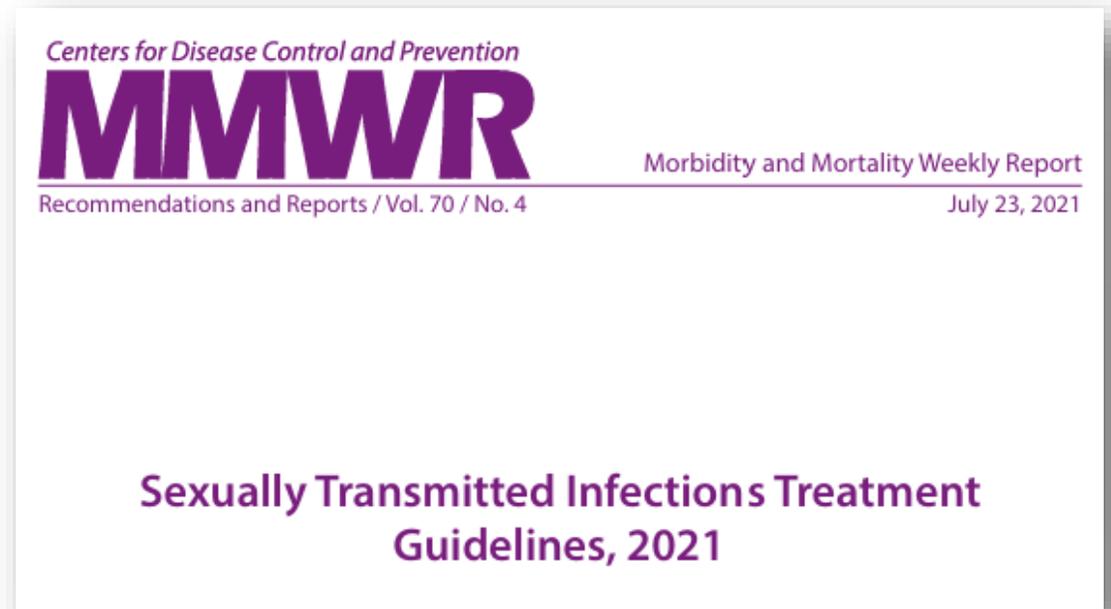
- Visits every 3-6 months
 - Repeat HIV and STI screening
 - Assess for side effects
 - Repeat counseling
 - Re-assess need for prevention modalities
 - Prescribe as appropriate

Population	Recommendations
Men who have sex with men	At least annually, test at each site of exposure (urethra, rectum) for sexually active MSM regardless of condom use or every 3-6 months <u>if at increased risk</u> .
Patients taking PrEP	All patients starting and taking oral PrEP should have genitourinary and extra-genital testing performed at baseline and every 3 months.
Persons living with HIV	For sexually active individuals, screen at first HIV evaluation and at least annually thereafter. More frequent screening might be appropriate depending <u>on individual risk behaviors</u> and local epidemiology
Non-pregnant Women	Test at least annually for sexually active women under 25 years of age and those aged 25 years and older <u>if at increased risk</u> Rectal chlamydial testing can be considered in females <u>based on sexual behaviors and exposure</u> through shared clinical decision making.
Men who have sex with women***	Consider screening young men in high prevalence clinical settings (adolescent and STI clinics and correctional facilities)
Pregnant Women	All pregnant women under 25 years of age and those aged 25 years and older <u>if at increased risk</u> . retest during 3rd trimester if under 25 years of age or at risk.

How Do I Treat Patients With STIs Taking Doxy-PEP?

Treat As Needed

- Treat as per the 2021 STI Guidelines
 - ***Exception: Consider in-person and exam and deferring empiric treatment for “exposure”***

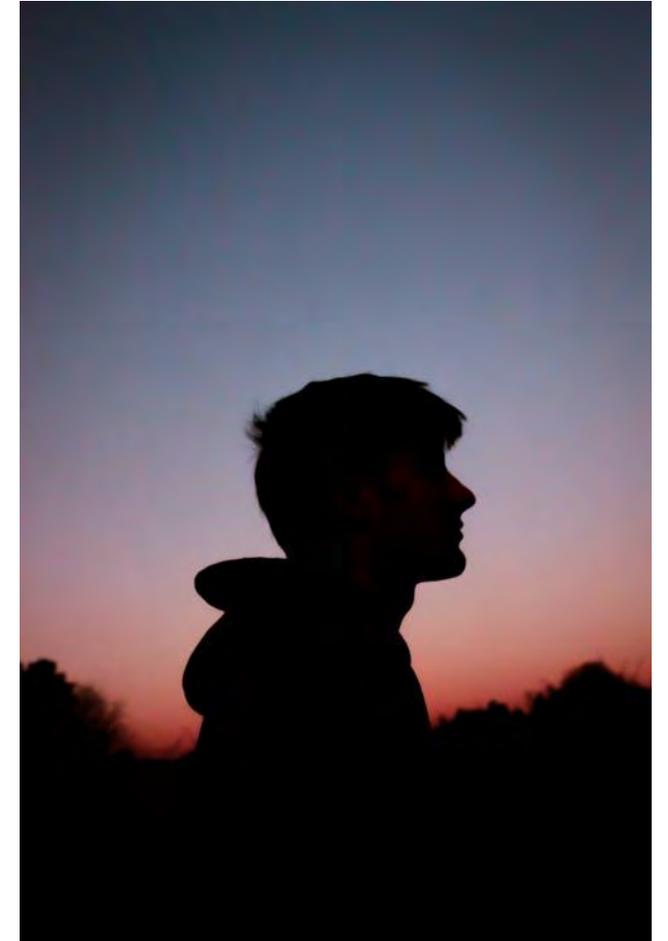


Clinical Conundrums

- What do I do if...
 - My patient's test comes back positive for chlamydia after I've prescribed Doxy-PEP?
 - Doxycycline 100mg by mouth twice daily for 7 days
 - My patient is taking Doxy-PEP incorrectly?
 - Repeat counseling and provide documents to assist with taking it properly
 - My patient's partner was diagnosed with an STI?
 - Assess if your patient took Doxy-PEP "appropriately" after every recent encounter with that partner
 - Consider in person assessment and testing as opposed to empiric treatment

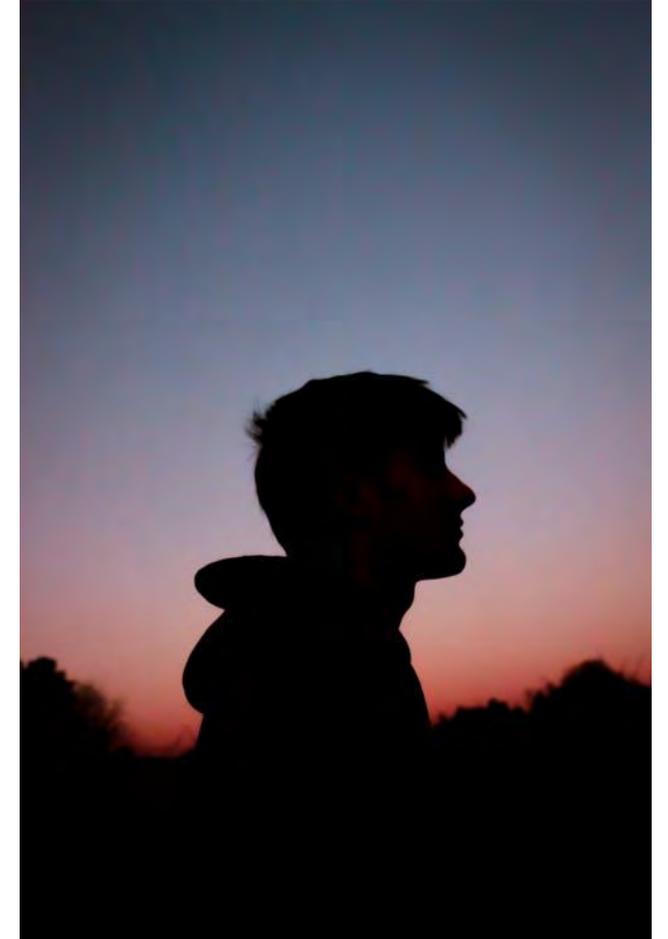
Marcus

- Marcus starts Doxy-PEP



Marcus Comes Back

- Return to clinic 4 weeks later
- “It hurts when I pee, and I have a lot of green discharge”
- Labs repeated
 - Plus, gonorrhea culture
- Treated with Gentamicin and Azithromycin



Marcus's Results

Lab results:

HIV Ab/Ag - Negative

Urine GC/CT – GC positive

Pharyngeal GC/CT – GC positive

Rectal GC/CT – negative

RPR – 1:16

- 1:128 – 10 weeks ago, 1:32 4 weeks ago



Marcus's Gonorrhea Culture

Lab results:

Azithromycin – susceptible (MIC 0.125)

Ciprofloxacin – resistant (MIC 1)

Ceftriaxone – susceptible (MIC 0.016)

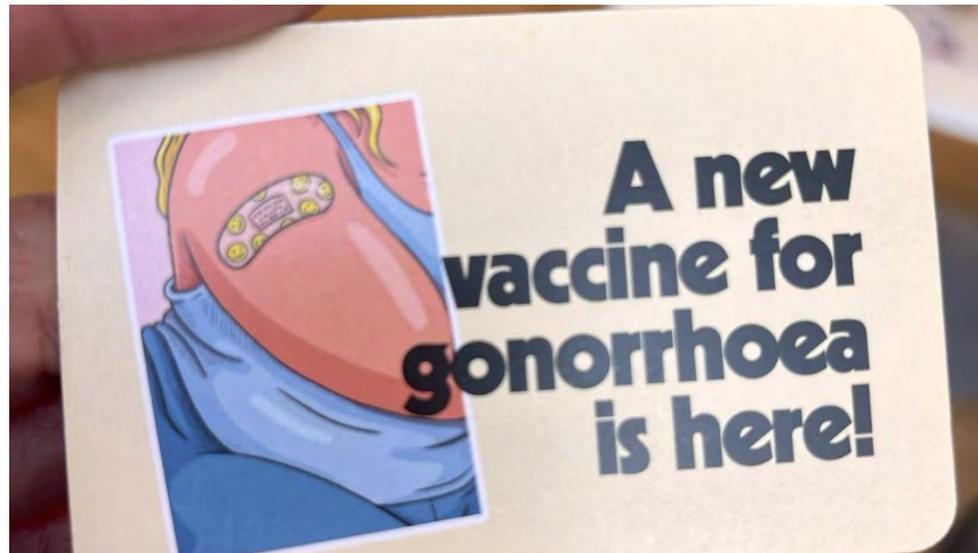
Cefixime – Susceptible (48mm)

Tetracycline – resistant (MIC 12)



Tetracycline Resistant Gonorrhoea

- Will it work for prophylaxis?
- What else can you offer him?



Vaccination to Prevent GC Infection and Resistance

World-first gonorrhoea vaccine rollout begins in UK as infection rates soar

3 August 2025

Share Save

Josh Parry
LGBT & Identity Reporter



Gonorrhoea vaccines will be widely available from Monday in sexual health clinics across the UK, in a bid to tackle record-breaking levels of infections.

The jabs will first be offered to those at highest risk – mostly gay and bisexual men who have a history of multiple sexual partners or sexually transmitted infections.

NHS England say the roll out is a world-first, and predict it could prevent as many as 100,000 cases, potentially saving the NHS almost £8m over the next decade.

The Terrence Higgins Trust, who **campaigns for the vaccine** to be introduced in the UK, told the BBC it was "a huge win" for sexual health.

- The roll-out of the NHS's world-first routine vaccination for gonorrhoea...is a real step forward for sexual health and I know health service staff, alongside local authority colleagues, have been working hard to hit the ground running.
- This vaccine is already used to protect against Men B and **is proven to be effective against gonorrhoea**, preventing the spread of infection and reducing the rising rates of antibiotic-resistant strains.

Vaccination to Prevent Infection and Resistance

- Meningococcal serogroup B (MenB)-4C vaccine
 - 57 proteins were predicted to be surface expressed (outer membrane proteins [OMPs])
 - Majority of OMPs showed high sequence identity between the 2 bacterial species

Clinical Infectious Diseases

MAJOR ARTICLE



The Serogroup B Meningococcal Vaccine Bexsero Elicits Antibodies to *Neisseria gonorrhoeae*

Evgeny A. Semchenko,¹ Aimee Tan,¹ Ray Borrow,² and Kate L. Seib^{1*}

¹Institute for Glycomics, Griffith University, Gold Coast, Queensland, Australia; and ²Vaccine Evaluation Unit, Public Health England, Manchester Royal Infirmary, United Kingdom

Background. *Neisseria gonorrhoeae* and *Neisseria meningitidis* are closely-related bacteria that cause a significant global burden of disease. Control of gonorrhoea is becoming increasingly difficult, due to widespread antibiotic resistance. While vaccines are routinely used for *N. meningitidis*, no vaccine is available for *N. gonorrhoeae*. Recently, the outer membrane vesicle (OMV) meningococcal B vaccine, MeNZB, was reported to be associated with reduced rates of gonorrhoea following a mass vaccination campaign in New Zealand. To probe the basis for this protection, we assessed the cross-reactivity to *N. gonorrhoeae* of serum raised to the meningococcal vaccine Bexsero, which contains the MeNZB OMV component plus 3 recombinant antigens (*Neisseria* adhesin A, factor H binding protein [fHbp]-GNA2091, and *Neisseria* heparin binding antigen [NHBA]-GNA1030).

Methods. A bioinformatic analysis was performed to assess the similarity of MeNZB OMV and Bexsero antigens to gonococcal proteins. Rabbits were immunized with the OMV component or the 3 recombinant antigens of Bexsero, and Western blots and enzyme-linked immunosorbent assays were used to assess the generation of antibodies recognizing *N. gonorrhoeae*. Serum from humans immunized with Bexsero was investigated to assess the nature of the anti-gonococcal response.

Results. There is a high level of sequence identity between MeNZB OMV and Bexsero OMV antigens, and between the antigens and gonococcal proteins. NHBA is the only Bexsero recombinant antigen that is conserved and surfaced exposed in *N. gonorrhoeae*. Bexsero induces antibodies in humans that recognize gonococcal proteins.

Conclusions. The anti-gonococcal antibodies induced by MeNZB-like OMV proteins could explain the previously-seen decrease in gonorrhoea following MeNZB vaccination. The high level of human anti-gonococcal NHBA antibodies generated by Bexsero vaccination may provide additional cross-protection against gonorrhoea.

Keywords. STI; gonorrhoea; *Neisseria gonorrhoeae*; immune response; meningococcal vaccine.

Gonorrhea Vaccine Does Not Need to Be Perfect

A Gonococcal Vaccine Has the Potential to Rapidly Reduce the Incidence of *Neisseria gonorrhoeae* Infection Among Urban Men Who Have Sex With Men

[Ben B Hui](#)^{1,✉}, [Thilini N Padeniya](#)¹, [Nic Rebuli](#)¹, [Richard T Gray](#)¹, [James G Wood](#)², [Basil Donovan](#)¹, [Qibin Duan](#)^{1,3}, [Rebecca Guy](#)¹, [Jane S Hocking](#)⁴, [Monica M Lahra](#)^{5,6}, [David A Lewis](#)^{7,8,9}, [David M Whiley](#)¹⁰, [David G Regan](#)^{1,2}, [Kate L Seib](#)^{11,2}

- 100% efficacy, 30% vaccine coverage of MSM
 - 94% reduction in GC within 2 years
- 50% efficacy, 30% vaccine coverage of MSM
 - 62% reduction in GC within 2 years
- Elimination of gonorrhea is possible within 8 years with vaccines of $\geq 50\%$ efficacy lasting 2 years, providing a booster vaccination is available every 3 years on average.

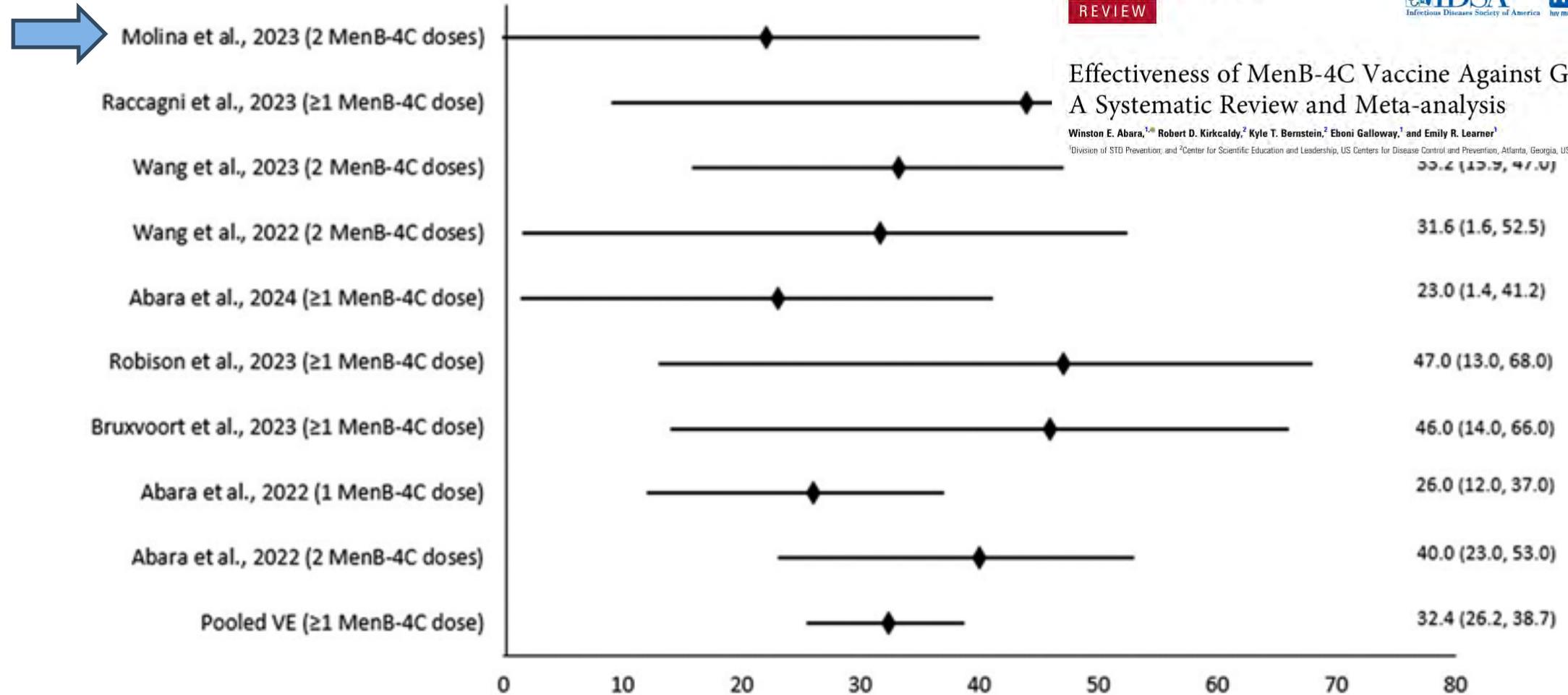
What About Vaccination For Gonorrhea?

The Journal of Infectious Diseases
REVIEW



Effectiveness of MenB-4C Vaccine Against Gonorrhea: A Systematic Review and Meta-analysis

Winston E. Abara,^{1,4} Robert D. Kirkcaldy,² Kyle T. Bernstein,² Eboni Galloway,¹ and Emily R. Learner¹
¹Division of STD Prevention, and ²Center for Scientific Education and Leadership, US Centers for Disease Control and Prevention, Atlanta, Georgia, USA



STI Prevention Summary

- We are in an era of STI prevention choice and patients should be aware of their options for HIV and STI prevention.
- Doxy-PEP
 - Real-world data supports clinical trials confirming effectiveness for syphilis/chlamydia, mixed for gonorrhea
 - Works to prevent syphilis and chlamydia in MSM and TGW, with or without HIV
 - Did not work in women in the dPEP study
 - Doxy-PEP reduces STIs but drives tetracycline resistance in gonorrhea and commensals, with risks of co-selection for multidrug resistance
 - There remain unknowns about the overall impact, risks, and unintended consequences of Doxy-PEP that potential users should be aware of (**Shared Decision Making**)
- 4CMenB
 - Observational studies suggest modest protection
 - Randomized controlled trials did not show a significant reduction in gonorrhea incidence
- Flexibility is key, management will change as we learn more
- **Surveillance and Research is needed to understand long-term risks, benefits, and optimize prevention combinations**

Questions

