Sexual Health Update

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Learning Objectives

- Explain the differences between primary, secondary, and tertiary prevention for HIV/AIDS
- Summarize some distinct health needs for LGBT patients
- Describe current state of sexually transmitted infections

Disclosures

- I will discuss one off-label for On-Demand PrEP which is clearly identified.

Sexual Health Topics

- Definition
- HIV/AIDS Prevention
- LGBT Health
- Sexually Transmitted Diseases (or Infections)

American Academy of Family Physicians

- Being in good sexual health means you are well informed, careful, and respectful to yourself and others. It also means enjoying yourself sexually in a way you are comfortable with.
- It is normal for your sexual health to evolve as you age. To stay healthy, it is best to regularly reflect on your thoughts, feelings, and emotions. Doing this in advance will prepare you for sexual encounters.

https://familydoctor.org/importance-of-sexual-health/

World Health Organization

- …a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.

https://www.cdc.gov/sexualhealth/

HIV/AIDS in the US

- 2020 new diagnosis stats
  - 30,635 new HIV diagnosis in the US
    - 156 in New Mexico (8.9/100,000)
    - Annual number of new diagnoses decreased 8% from 2016 to 2019
  - Transmission categories
    - 68% men who have sex with men
    - 22% heterosexual contact
    - 7% injection drug use
  - Race/ethnicity
    - 42% black (men and women); only 13.4% of population (2019 census)
    - 27% Hispanic/Latino
    - 26% White
- Estimated 1.2 million people in the US have HIV
  - 13% don't know they have it

Source: https://www.cdc.gov/hiv/basics/statistics.html

HIV/AIDS Primary Prevention

- Awareness & education
- Circumcision
  - https://www.cdc.gov/hiv/risk/male-circumcision.html
- Condoms
- Fewer sexual partners
- No injectable drug use
- Post-exposure prophylaxis (PEP)
- Pre-exposure prophylaxis (PrEP)

Estimated Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act

Type of Exposure	Risk per 10,000 Exposures*
Receptive Anal Intercourse	138
Insertive Anal Intercourse	11
Receptive Penile-Vaginal Intercourse	8
Insertive Penile-Vaginal Intercourse	4
Receptive Oral Intercourse	Low
Insertive Oral Intercourse	Low
Blood Transfusion	9,250
Needle-Sharing During Injection Drug Use	63
Percutaneous (Needle-Stick)	23

https://www.cdc.gov/hiv/risk/estimates/riskbehaviors.html

*Assume intact skin/tissue and no other STDs

HIV/AIDS Primary Prevention – PEP

- Non-occupational PEP (nPEP) – CDC
  - HIV testing: baseline, 6 wks, and 12wks
  - Test at 6 months if Hep C acquired at time of exposure
  - Not ideal for people who may be exposed to HIV frequently
- Occupational PEP (oPEP) – US Public Health Service
  - HIV testing: baseline, 6 wks, 12wks, and 6 months
  - Baseline, 6wks and 4 months if fourth generation combination HIV Ag/Ab test is used

Source: https://www.cdc.gov/hiv/clinicians/prevention/pep.html

HIV/AIDS Primary Prevention – PEP

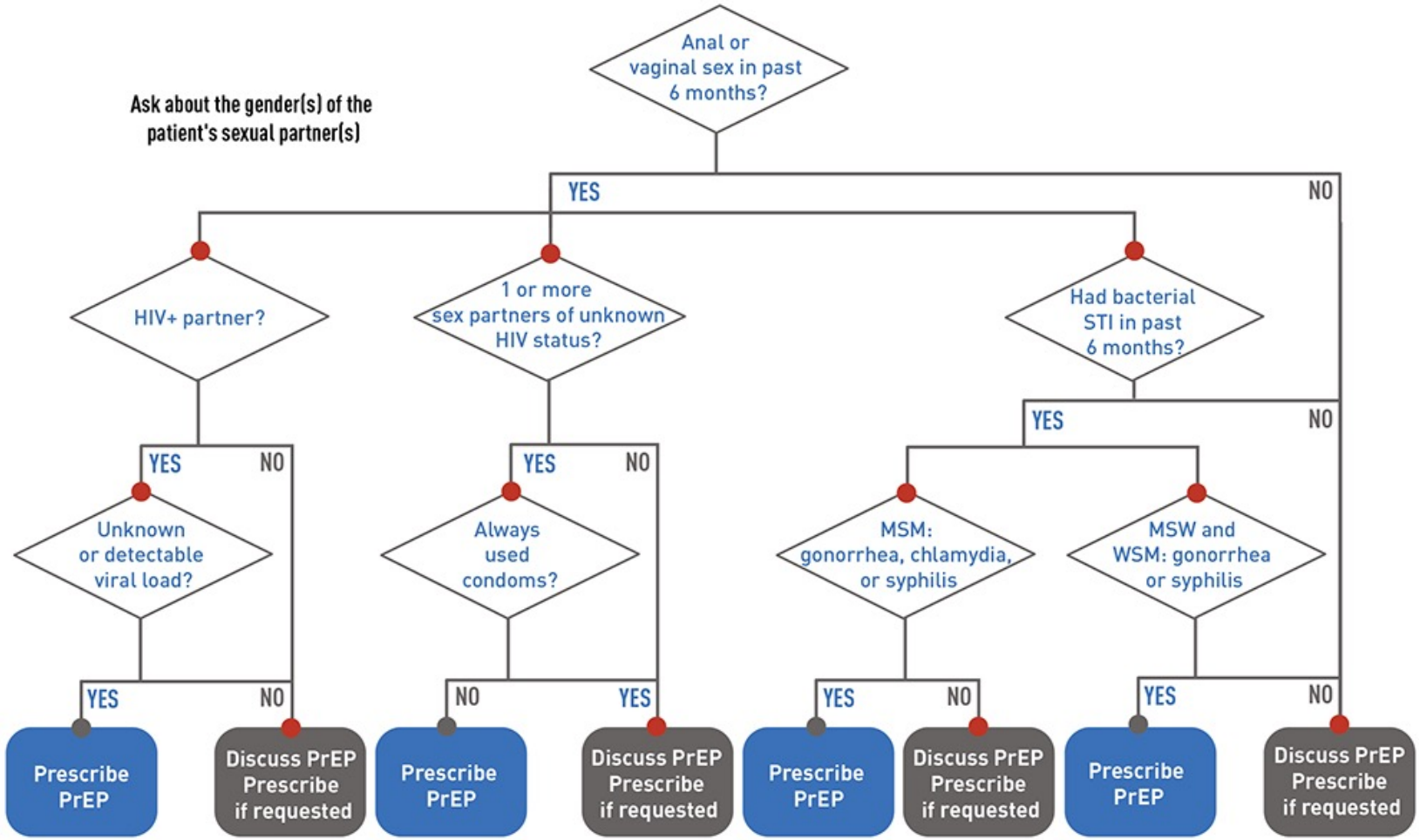
- nPEP & oPEP:
  - Recommended regimen: emtricitabine + tenofovir + raltegravir
  - Started within 72 hours of possible exposure to HIV
- Meta-analysis of 15 studies had 1 seroconversion due to nPEP failure (8.6/1,000 patients)
  - Siika AM, Nyandiko WM, Mwangi A, et al. The structure and outcomes of a HIV postexposure prophylaxis program in a high HIV prevalence setup in Western Kenya. J Acquir Immune Defic Syndr. 2009;51(1):47-53

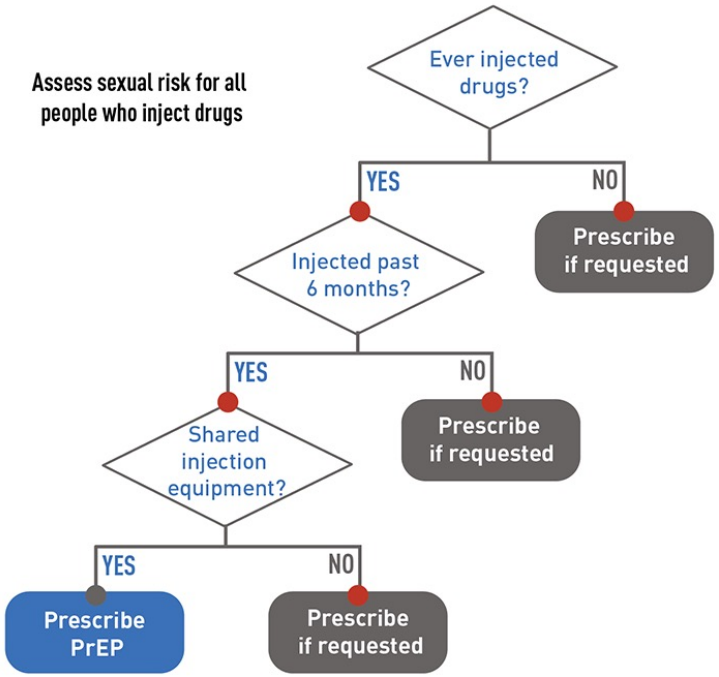
HIV/AIDS Primary Prevention – PrEP

- USPTF Grade A
  - *The USPSTF recommends that clinicians offer preexposure prophylaxis (PrEP) with effective antiretroviral therapy to persons who are at high risk of HIV acquisition.*
- Efficacy
  - Reduces risk of getting HIV from sex 99%
  - Reduces risk of getting HIV from injected drugs 74-84%
- Does NOT prevent other sexually transmitted infections

Source: https://www.cdc.gov/hiv/clinicians/prevention/prep.html

HIV/AIDS Primary Prevention – PrEP





HIV/AIDS Primary Prevention – PrEP Rx

- Emtricitabine/tenofovir disoproxil – *daily pill*
  - For people at risk through sex or injection drug use
- Emtricitabine/tenofovir alafenamide – *daily pill*
  - For people at risk through sex
  - NOT for people assigned female at birth who are at risk for HIV through receptive vaginal sex.
- Cabotegravir – *bi-monthly injection*
  - FDA approved in 2021
  - For people at risk through sex
  - Can be used in patients with serious kidney disease

HIV/AIDS Primary Prevention – Cabotegravir

- 600 mg injected into gluteal muscle two consecutive months then every two months thereafter
  - For example: January, February, April, June…
- Must weigh at least 77 pounds (35 kg)
- Only monitoring labs are HIV and STIs
- In-office administration only
- Common side effects: pain, tenderness and induration for a few days

HIV/AIDS Primary Prevention – On-Demand PrEP

- AKA “intermittent,” “non-daily,” “event-driven,” or “off-label” PrEP use
- Most studied is the 2-1-1 schedule
  - 2 pills 2-24 hours before sex
  - 1 pill 24 hours after the first dose
  - 1 pill 24 hours after the second dose
- Only evidence is for use in MSM when having anal sex without a condom
- Used in Europe and Canada, but neither FDA-approved nor CDC-recommended

HIV/AIDS Secondary Prevention

- Early detection through routine screening
- USPSTF Grade A
  - The USPSTF recommends that clinicians screen for HIV infection in all pregnant persons, including those who present in labor or at delivery whose HIV status is unknown.
  - The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years. Younger adolescents and older adults who are at increased risk of infection should also be screened.
- CDC
  - Recommends everyone between 13 and 64 years old get tested at least once
  - Annually testing for those at high risk (e.g., >1 sex partner since last test or men who have sex with men)

HIV/AIDS Tertiary Prevention

- Prevent advancement of disease
- Early treatment with antiretroviral therapy (ART)
  - Daily pill(s) to reduce the amount of HIV in the body
  - Keeps the immune system working and the body healthy
  - Decreases the possibility of transmitting to others
- Undetectable = Untransmissible
  - Undetectable viral load on blood test cannot sexually transmit the virus
  - Also known as treatment as prevention
  - https://www.niaid.nih.gov/diseases-conditions/treatment-prevention

Source: https://www.cdc.gov/hiv/risk/art/index.html

AIDS

- Acquired Immune Deficiency Syndrome
- CD4 cells (AKA T cells; healthy 500-1,600 on blood test)
  - HIV attacks CD4 cells
  - AIDS diagnosed when CD4 count below 200
- Outcome
  - Survival rate is about 3 years without treatment
  - Death is by opportunistic infections

Source: *https://familydoctor.org/condition/aids/*

LGBT Health

- Sexually transmitted infections (e.g., chlamydia, gonorrhea, HIV, HPV, hepatitis, and syphilis)
  - Hepatitis more likely in MSM; can lead to serious liver disease
  - HPV causes anal warts and can lead to anal cancer (need anal paps?)
- Gay men more likely to:
  - Have Eating disorders, depression, anxiety
  - Use tobacco and alcohol
- Gay women more likely to:
  - Have gyn cancer, risk factors for breast cancer
  - Use tobacco and heavily/binge drink alcohol

http://glma.org/index.cfm?fuseaction=Page.viewPage&pageId=938&parentID=534

LGBT Health – Transgender Facts

The ten states with the highest percentage of transgender people are:

1. Hawaii (0.60%)
2. New Mexico (0.56%)
3. California (0.55%)
4. Georgia (0.51%)
5. Vermont (0.48%)
6. Mississippi (0.46%)
7. Oklahoma (0.46%)
8. Oregon (0.46%)
9. Delaware (0.46%)
10. Alabama (0.45%)

New Mexico stats

- Transgender Population: 11,750
- Transgender Population per 100k: 557
- Transgender Population Percentage: 0.56%

Source: https://worldpopulationreview.com/state-rankings/transgender-population-by-state

LGBT Health – Feminizing Hormones

Estrogen and anti-androgen options for transgender women

Route	Formulation	Dosing
Oral	Estradiol	2–4 mg daily
Parental (subcutaneous, intramuscular)	Estradiol valerate	5–30 mg every 2 weeks
Transdermal	Estradiol	0.1–0.4 mg twice weekly
Anti-androgens	Progesterone	20–60 mg PO daily
	Medroxyprogesterone acetate	150 mg IM every 3 months
	GnRH agonist (leuprolide)	3.75–7.5 mg IM monthly
	Histrelin implant	50 mg implanted every 12 months
	Spironolactone	100–200 mg PO daily
	Finasteride	1 mg PO daily

LGBT Health – Hormone Surveillance

Surveillance recommendations for transgender women on estrogen

- Monitor for feminizing and adverse effects every 3 months for the first year, then every 6–12 months
- Obtain baseline hematocrit and lipid profile and monitor at follow-up visits
- Obtain baseline bone mineral density if a patient is at risk for osteoporosis; routine screening after age 60, or earlier if sex hormone levels consistently low
- Obtain prolactin at baseline, at 12 months after initiation of treatment, biennially thereafter
- Monitor serum testosterone during the first 6 months until levels are <55 ng/dL
- Monitor serum estradiol at follow-up visits; target 100–200 pg/mL

LGBT Health – Masculinizing Hormones

Testosterone options for transgender men

Route	Formulation	Dosing
Oral (not available in United States)	Testosterone undecanoate	160–240 mg/day
Parental (subcutaneous, intramuscular)	Testosterone enanthate, cypionate	50–200 mg/week
		100–200 mg/10–14 days
Implant (subcutaneous)	Testopel®	75 mg/pellet
Transdermal	Testosterone gel (1%)	2.5–10 g/day
	Testosterone patch	2.5–7.5 mg/day

LGBT Health – Hormone Surveillance

Surveillance recommendations for transgender men on testosterone

- Monitor for virilizing and adverse effects every 3 months for the first year, then every 6–12 months
- Obtain baseline hematocrit and lipid profile and monitor at follow-up visits
- Obtain baseline bone mineral density if a patient is at risk for osteoporosis; routine screening after age 60, or earlier if sex hormone levels consistently low
- Monitor serum estradiol during the first 6 months and thereafter until uterine bleeding has ceased
- Monitor serum testosterone at follow-up visits; target 300–1,000 ng/dL
    - Peak levels for parenteral testosterone measured 24–48 hrs after injection
    - Trough levels for parenteral testosterone measured before injection

STD/STI – Chlamydia

Chlamydia — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2020

Rank*	State	Cases	Rate per 100,000 Population
1	Mississippi	23,919	803.7
2	Louisiana	32,997	709.8
3	Alaska	5,090	695.8
4	South Carolina	34,118	662.7
5	North Carolina	64,640	616.3
6	Georgia	62,582	589.4
7	New Mexico	12,084	576.3
8	Tennessee	37,907	555.1
9	Alabama	27,075	552.2
10	Illinois	68,716	542.3
11	Oklahoma	21,208	536.0
12	Maryland	32,398	535.9
13	Arkansas	16,053	531.9
14	Missouri	31,815	518.4
15	Arizona	37,289	512.3
16	Ohio	59,520	509.2
17	New York	97,722	502.3
18	Kansas	14,620	501.8
19	Delaware	4,855	498.6
20	Indiana	33,372	495.7
21	Hawaii	7,005	494.7
	US TOTAL†	**1,579,885**	**481.3**
22	Virginia	40,965	479.9

Estimates are that 15-24 year olds acquire half of **all** new STDs

(53% in 2020)

STD/STI – Gonorrhea

Gonorrhea — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2020

Rank*	State	Cases	Rate per 100,000 Population
1	Mississippi	13,773	462.8
2	Louisiana	15,483	333.1
3	South Carolina	16,705	324.4
4	Alabama	14,426	294.2
5	Oklahoma	11,204	283.1
6	Missouri	16,855	274.6
7	South Dakota	2,424	274.0
8	Alaska	1,982	270.9
9	Tennessee	18,458	270.3
10	North Carolina	28,258	269.4
11	Ohio	30,977	265.0
12	Arkansas	7,857	260.4
13	Illinois	31,055	245.1
14	Michigan	23,412	234.4
15	Arizona	16,342	224.5
16	Georgia	23,463	221.0
17	New Mexico	4,608	219.8
18	Iowa	6,919	219.3
19	New York	42,517	218.6
20	North Dakota	1,660	217.8
21	Indiana	14,111	209.6
22	Nevada	6,364	206.6
	US TOTAL†	**677,769**	**206.5**
23	Texas	58,246	200.9
24	Maryland	12,052	199.3

In 2020, about half of all infections were estimated to be resistant to at least one antibiotic.

STD/STI – Syphilis

Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2020

Rank*	State	Cases	Rate per 100,000 Population
1	Nevada	767	24.9
2	Mississippi	741	24.9
3	Alaska	176	24.1
4	Oklahoma	941	23.8
5	New Mexico	467	22.3
6	Arizona	1,454	20.0
7	California	7,688	19.5
8	Arkansas	502	16.6
9	Georgia	1,757	16.5
10	Florida	3,520	16.4
11	New York	3,022	15.5
12	Louisiana	704	15.1
13	Oregon	628	14.9
14	Maryland	873	14.4
15	Missouri	829	13.5
16	Hawaii	182	12.9
	US TOTAL†	**41,655**	**12.7**
17	South Carolina	652	12.7
18	North Carolina	1,322	12.6
19	Illinois	1,467	11.6
20	Tennessee	767	11.2

Since reaching a historic low in 2000 and 2001, the rate of P&S syphilis has increased almost every year, increasing 6.8% during 2019–2020

STD/STI – Congenital Syphilis

Congenital Syphilis — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2020

Rank*	State†	Cases	Rate per 100,000 Live Births
1	New Mexico	42	182.9
2	Arizona	120	151.2
3	Texas	561	148.6
4	Nevada	46	131.2
5	Oklahoma	53	107.8
6	California	481	107.7
7	Louisiana	63	106.9
8	Mississippi	37	101.0
9	Alaska	8	81.4
10	Hawaii	12	71.4
11	Florida	154	70.0
12	Georgia	82	64.9
13	Arkansas	23	62.9
	US TOTAL‡	**2,148**	**57.3**
14	Oregon	19	45.4
15	Maryland	31	44.2

Since 2013, the rate of congenital syphilis has increased each year. In 2020, this included 149 congenital syphilis-related stillbirths and infant deaths.

STD/STI – New Mexico Department of Health

- The New Mexico Department of Health (NMDOH) has several initiatives to respond to these high rates.
  - Disease Prevention Team (DPT) in every region of the state who interview cases, provide disease management, and ensure partner services to get timely treatment to sexual partners. They are an excellent resource if you have questions or need referrals.
  - Recently started a new initiative to expand capacity to diagnose, stage and treat syphilis at our busiest Public Health Offices (PHO) by recruiting new midlevel providers.
  - Several targeted outreaches and special clinic nights at PHOs to reach persons most likely to have syphilis, including gay/bisexual men.

Source: https://www.nmhealth.org/publication/view/general/4858/

STD/STI – New Mexico Department of Health

- Clinicians across New Mexico are essential partners to fight expanding STD and reduce our rates, with timely and effective diagnosis and treatment. What can you do?
  - Test and presumptively treat all patients who present with Primary or Secondary Syphilis symptoms.
  - Test and presumptively treat all these cases' sexual partners. Stress to your patients the importance of getting their partners treated to prevent re-infection.
  - If you suspect syphilis based on symptoms or exposure, order an RPR with Reflex to Titer and a Treponemal test for a confirmatory.
  - Report promptly to the STD Program by sending the Confidential Case Reporting Form via fax to 505.476.3638.
  - Determine pregnancy status for all infected women. Test all pregnant women for syphilis during the first prenatal visit, again at 28 weeks, and at delivery.
  - Order serial RPR's at least every three months if you are concerned about reexposure

Source: https://www.nmhealth.org/publication/view/general/4858/

Questions?