Keeping up with STIs

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Disclosures

Susan LeLacheur has no relevant disclosures

Objectives

1. Describe current STI epidemiology and disparities health and healthcare in STI burden in the U.S.
2. Choose an appropriate screening or testing strategy for each of the common STIs: gonorrhea, chlamydia, syphilis, herpes, HPV, HAV, HBV, HCV and HIV.
3. Choose an appropriate treatment for each of the following STIs: gonorrhea, chlamydia, syphilis, herp[es and HIV.
4. Access CDC STI guidelines and other primary resources for up-to-date patient care information on the management of STIs.

Changing Epidemiology

THE STATE OF STDs IN THE UNITED STATES, 2019

STDs increased for the 6th year, reaching a new all-time high

1.8 million
CASES OF CHLAMYDIA
19% increase since 2015

616,392
CASES OF GONORRHEA
56% increase since 2015

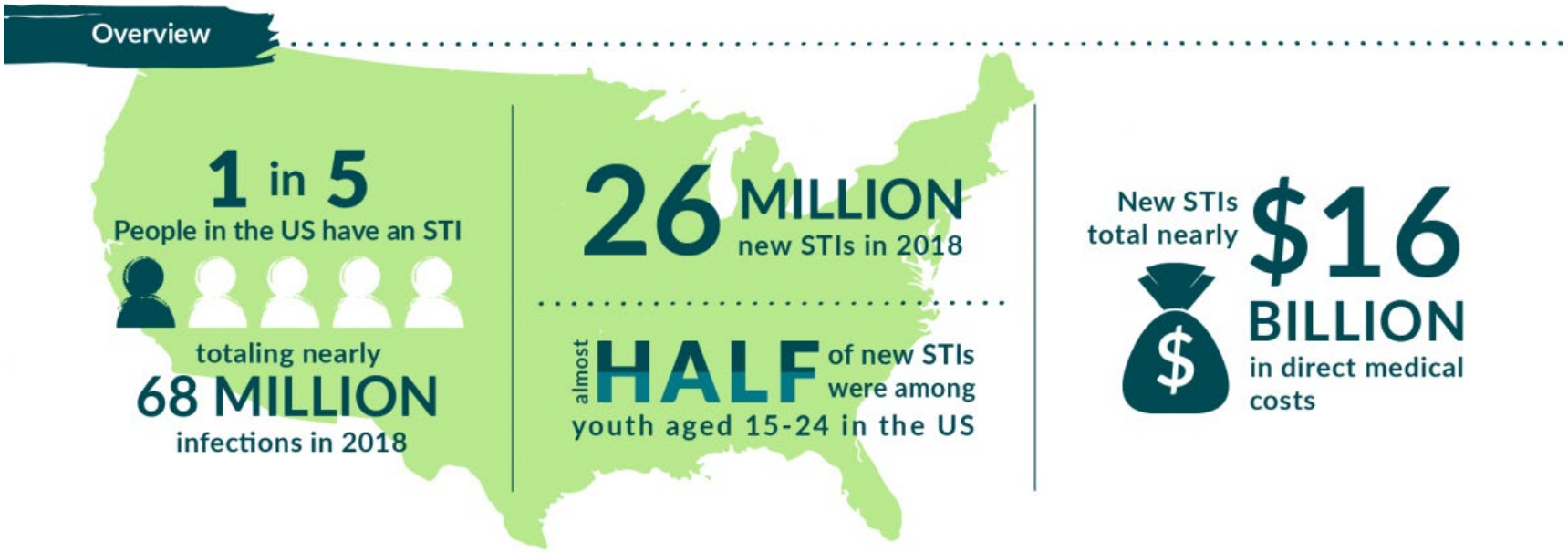
129,813
CASES OF SYPHILIS
74% increase since 2015

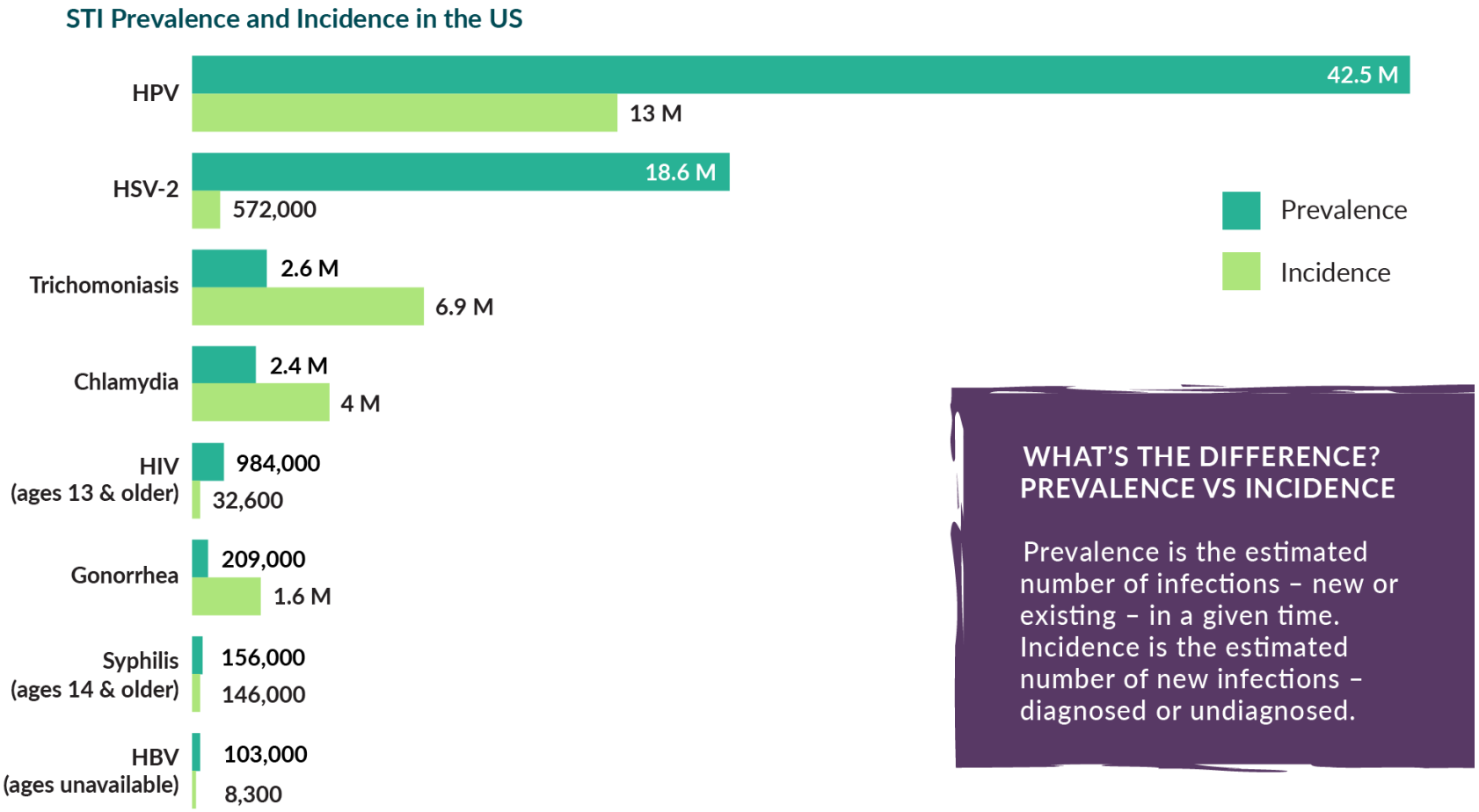
1,870
CASES OF SYPHILIS AMONG NEWBORNS
279% increase since 2015

LEARN MORE AT: www.cdc.gov/std/

ANYONE WHO HAS SEX COULD GET AN STD, BUT SOME GROUPS ARE MORE AFFECTED

- YOUNG PEOPLE AGED 15-24
- GAY & BISEXUAL MEN
- PREGNANT PEOPLE
- RACIAL & ETHNIC MINORITY GROUPS


Overview
1 in 5
People in the US have an STI
totaling nearly
68 MILLION
infections in 2018
26 MILLION
new STIs in 2018
almost HALF of new STIs were among youth aged 15-24 in the US
New STIs total nearly $16 BILLION in direct medical costs



CDC https://www.cdc.gov/std/statistics/images/RevisedIncidence-Prevalence-8.png

STI Disparities

Sex

Sexual orientation

Gender identity

"Race" – e.g. GC/100,000 =

- 73.9 White;
- 355.8 AI/Alaskan native;
- 581 Black

Chlamydia/100,000

- 414,291 White
- 18,371 AI/Alaskan native
- 504,409 Black

White young adults in the United States are at elevated STD and HIV risk when they engage in high-risk behaviors. Black young adults, however, are at high risk even when their behaviors are normative.

Factors other than individual risk behaviors and covariates appear to account for racial disparities, indicating the need for population-level interventions.

HALFORS DD ET AL. 2007
AJPH **97**, 125_132, HTTPS://DOI.ORG/10.2105/AJPH.2005.075747

2021 Sexually Transmitted Diseases Treatment Guidelines

https://www.cdc.gov/std/treatment-guidelines/default.htm

Report to the Health Department:

- Chlamydia
- Gonorrhea
- Neonatal herpes
- Syphilis
- Chancroid

https://portal.ct.gov/dph/Infectious-Diseases/STD/Sexually-Transmitted-Diseases-Control-Program

STI Screening

50% of STIs are in those 15-24

But don't forget about older people

Screening recommendations:

- Opt out HIV for all, repeat as indicated
- HCV once for all, repeat as indicated, including in pregnancy
- Annual GC & chlamydia all sexually active women <25 & as indicated >25 (new partner, STI dx)
- Syphilis, HIV, chlamydia & HBV for pregnant women
- Trichomonus & HPV annually for HIV+ women
- Sexually active MSM annually & as indicated by sexual practices

https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm

2021 Guidelines

New in the Guidelines

- Updated treatment recommendations for chlamydia, trichomoniasis, and pelvic inflammatory disease.
- Updated treatment recommendations for uncomplicated gonorrhea in neonates, children, and other specific clinical situations (e.g. proctitis, epididymitis, sexual assault), which builds on broader treatment changes published in Morbidity and Mortality Weekly Report late last year.
- Information on FDA-cleared diagnostic tests for *Mycoplasma genitalium* and rectal and pharyngeal chlamydia and gonorrhea.
- Expanded risk factors for syphilis testing among pregnant patients.
- Recommended two-step serologic testing for diagnosing genital herpes simplex virus.
- Harmonized recommendations for HPV vaccination with the Advisory Committee on Immunization Practices.
- Recommended universal hepatitis C testing in alignment with CDC's 2020 hepatitis C testing recommendations.

Updated treatment recommendations for chlamydia, trichomoniasis, and pelvic inflammatory disease.

Chlamydia

- **Doxycycline** 100 mg orally 2 times/day for 7 days
- **Azithromycin** (1 gm PO) **or Levofloxacin** (500 mg PO X 7d) are alternative regimens

Trichamoniasis

- **Metronidazole** 500 mg 2 times/day for 7 days **for women**
- **Metronidazole** 2 g orally in a single dose **for men**
- **Tinidazole** 2 g orally in a single dose is an alternative for men or women

PID

- **Ceftriaxone** 500 mg IM in a single dose* PLUS **Doxycycline** 100 mg orally 2 times/day for 14 days WITH **Metronidazole** 500 mg orally 2 times/day for 14 days
- OR same using **Cefoxitin** 2 gm IM with **Probenecid OR other parenteral 3rd gen** cephalosporin instead of **ceftriaxone**

Updated treatment recommendations for uncomplicated gonorrhea in neonates, children, and other specific clinical situations (e.g. proctitis, epididymitis, sexual assault), which builds on broader treatment changes (Morbidity and Mortality Weekly Report 2020).

A single 500 mg intramuscular dose of ceftriaxone for uncomplicated gonorrhea.

Treatment for coinfection with *Chlamydia trachomatis* with **oral doxycycline (100 mg twice daily for 7 days) should be administered when chlamydial infection has not been excluded.**

Updated treatment recommendations for uncomplicated gonorrhea in neonates, children, and other specific clinical situations (e.g. proctitis, epididymitis, sexual assault), which builds on broader treatment changes (Morbidity and Mortality Weekly Report 2020).

Neonates (ophthalmia Neonatorium)

- Prevention **erythromycin** 0.5% ophthalmic ointment
- Treatment **Ceftriaxone** 25–50 mg/kg body weight IV or IM in a single dose, not to exceed 250 mg

Children

- **≤ 45kg Ceftriaxone** 25–50 mg/kg body weight IV or IM in a single dose, not to exceed 250 mg IM
- **≥ 45kg Ceftriaxone** usual adult dose

PID, proctitis, epididymitis, sexual assault

- **Ceftriaxone** plus **doxycyline** usual adult dose

Information on FDA-cleared diagnostic tests for *Mycoplasma genitalium* and rectal and pharyngeal chlamydia and gonorrhea.

Associated with cervicitis, PID, preterm delivery, spontaneous abortion, and infertility

- Frequently asymptomatic, but detected in 10-30% of women with clinical cervicitis
- Rectal infection with *M. genitalium* has been reported among 1%–26% of MSM
- Resistance to azithromycin has been rapidly increasing, testing is often not available

NAAT for *M. genitalium* is FDA cleared for use with urine and urethral, penile meatal, endocervical, and vaginal swab samples

- Men with recurrent NGU, women with recurrent cervicitis and +/- those with PID

Treatment

- **Doxycycline** 100 mg orally 2 times/day for 7 days, followed by **azithromycin** 1 g orally initial dose, followed by 500 mg orally once daily for 3 additional days (2.5 g total)
- **If macrolide resistant or resistance testing is not available: Doxycycline** 100 mg orally 2 times/day for 7 days followed by **moxifloxacin** 400 mg orally once daily for 7 days

Expanded risk factors for syphilis testing among pregnant patients.

All women should be screened serologically for syphilis at the first prenatal care visit

- Nontreponemal Ab (eg. RPR) traditional syphilis screening algorithm or treponemal antibody testing (e.g., immunoassays) using the reverse sequence algorithm.

Screen twice during the third trimester: at 28 weeks' gestation and at delivery, for pregnant people who live in communities with high rates of syphilis or who have been at risk for syphilis acquisition during pregnancy.

- Sex with multiple partners,
- Sex in conjunction with drug use or transactional sex,
- Late entry to prenatal care or no prenatal care,
- Methamphetamine or heroin use,
- Incarceration of the woman or her partner, and unstable housing or homelessness

Recommended two-step serologic testing for diagnosing genital herpes simplex virus.

- If genital lesions are present, clinical diagnosis of genital herpes should be confirmed by type-specific virologic testing from the lesion by NAAT or culture (*186*).

- Type-specific serologic tests can be used to aid in the diagnosis of HSV infection in the absence of genital lesions.

Harmonized recommendations for HPV vaccination with the Advisory Committee on Immunization Practices.

Routine HPV vaccination for all adolescents at age 11 or 12 years.

- A 2-dose vaccine schedule (at 0- and 6–12-month intervals) is recommended for persons who initiate vaccination before their 15th birthday.
- A 3-dose vaccine schedule (at 0-, 1–2-, and 6-month intervals) for immunocompromised persons regardless of age of initiation.

Only the 9-valent vaccine is available in the U.S.

- Administering vaccine starting at age 9 years.
- Catch-up vaccination through age 26 years for those not vaccinated previously.
- Shared clinical decision-making between a patient and a provider regarding HPV vaccination is recommended for certain adults aged 27–45 years not vaccinated previously.

Recommended universal hepatitis C testing in alignment with CDC's 2020 hepatitis C testing recommendations.

HCV screening – HCV Ab and confirm with HCV RNA

- At least once in a lifetime for all adults aged ≥18 years
- All women during each pregnancy, except in settings where the prevalence of HCV infection is <0.1%

One-time hepatitis C testing is recommended regardless of age, setting, or recognized conditions or exposures (e.g., HIV infection, history of injecting drug use, or children born to women with HCV infection).

- Routine periodic HCV testing is recommended for persons with ongoing risk factors (e.g., injecting drug use or hemodialysis).

Take Home Points

STIs are increasing – screen generously or you will miss a lot!

Diagnostics and treatments have changed – when in doubt check the guidelines.

Don’t assume, get a sexual history but follow the guidelines on routine screening.

Don’t base your decisions on stereotyping.

Vaccinate, prescribe PrEP and discuss prevention of STIs.