Sexually Transmitted Diseases for Health Care for the Homeless providers

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SF DPH
What about you?

Slides will be available on www.nhchc.org
Goals

- Review screening recommendations for: HIV, Chlamydia, Gonorrhea, Syphilis and HPV (Human Papilloma Virus)
- Understand treatment recommendations and recourse
- Share innovative prevention strategies for HCH programs
- Understand that STD Screening and TX is EVERYONES Job
Who is making these recommendations...

- U.S. Preventive Services Task Force (USPSTF)
  http://www.uspreventiveservicestaskforce.org/

- Centers for Disease Control and Prevention
  http://www.cdc.gov/

- Health Care for the Homeless Clinician's Network Prevention Task force
  http://www.nhchc.org/network.html
Common Contagious Diseases and STDs

- **Bacterial diseases-STD**
  - Chlamydia (CT)
  - Gonorrhea (GC)
  - Syphilis

- **Viral diseases**
  - HIV
  - HPV
For Each Disease

- Epidemiology
- Screening recommendations
  - Tests
- Treatment Recommendations-where to get the information
- Things we can do…..
  - Prevention
  - Innovative programming and Quality Improvement efforts
Some Basics
What IS Screening?????

- **Screening testing**
  - Looking for disease which gives no symptoms
  - Most effective when done for
    - a common disease
    - bad consequences
    - use a highly accurate, non-invasive, inexpensive test

- **Accuracy of screening is dependent on:**
  - Prevalence of disease in the population
  - Sensitivity and specificity of test used

- **Diagnostic testing**
  - Looking for the cause of abnormal signs, symptoms, etc
Why is Screening Important?

- Decrease Disease
- Decrease related diseases
- Decrease Bad Outcomes
- Protect Newborns

- DECREASE COST: 
  MONEY IS HOUSING
Partner Treatment

Expedited Partner Therapy (EPT) is the clinical practice of treating the sex partners of patients diagnosed with chlamydia or gonorrhea by providing prescriptions or medications to the patient to take to his/her partner without the health care provider first examining the partner.

Essential for HCH Programs

- Make Screening a part of routine care, done by all staff.
  - Including Sexual History & LMP (last menstrual period)
  - Make a ‘vital sign’

- Create team-based clinic flow models to incorporate prevention screening

- Copy innovative practices from other providers
Why medical providers can’t do it alone: It takes a team!

- Patients need to get tested and they need follow up after testing to find out results.

- May be weeks between getting a test done and having all the information necessary to interpret the test result.

- Many treatments require follow-up and medication adherence.
Why medical providers can’t do it alone: It takes a team!

- Taking a Trauma Informed Sexual and Substance use History often requires counselor or treatment team assistance
HIV

0.4% of general population

3.4% of the Individuals Experiencing Homelessness
Diagnoses of HIV infection, 2009 - 40 states and 5 U.S. dependent areas
N = 42,959

Notes: Data include persons with a diagnosis of HIV infection regardless of the stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

Number
- 0 - 100
- 101 - 500
- 501 - 1,300
- 1,301 - 6,120

Confidential name-based HIV infection reporting not implemented by January 2006
Data classed using quartiles
Rates of Diagnoses of HIV Infection among Adults and Adolescents, 2009—40 states and 5 U.S. Dependent Areas

N=42,793

Total Rate = 21.1

Rates per 100,000 population
- <10.0
- 10.0 – 19.9
- 20.0 – 29.9
- ≥30.0

American Samoa: 0.0
Guam: 2.9
Northern Mariana Islands: 0.0
Puerto Rico: 27.5
U.S. Virgin Islands: 38.1

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
AIDS diagnoses, 2009 - United States and 5 U.S. dependent areas
N = 34,993

Notes. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
Health Disparity and HIV

Estimated Rate of New HIV Infections, 2009, by Gender and Race/Ethnicity

- **Male**
  - Black: 103.9
  - Hispanic: 39.9
  - White: 15.9

- **Female**
  - Black: 39.7
  - Hispanic: 11.8
  - White: 2.6

Modes of HIV Transmission

Estimated New HIV Infections, 2009, by Transmission Category

- MSM: 61%
- Heterosexual: 27%
- MSM-IDU: 3%
- IDU: 9%
Spatial Distribution of Mean Community Viral Load by Neighborhood in SF, 2005-2008

A new way to look at community health and HIV
CDC Recommendations: HIV Screening in a Health Care Setting

- HIV screening for all patients ages 13 to 64
  - Testing will be performed unless the patient declines. opt-out screening
  - Unless: prevalence of undiagnosed HIV infection in their patients has been documented to be <0.1%.

- Initiate voluntary HIV screening until health center establishes that the diagnostic yield is <1 per 1,000 patients screened, at which point such screening is no longer warranted.
CDC Recommendations: Consent

- **Separate written consent is not recommended**
  - Screening should be incorporated into the general consent for medical care
  - “Opt-Out’ testing

- **Prevention counseling should not be required**
  with HIV diagnostic testing or as part of HIV screening programs in Healthcare settings.
Current Status of Legislation to Change HIV Testing Laws in the United States


Top 10 HIV Clinical Developments of 2008
CDC Recommendations: Syndemics and Testing

All patients

- Initiating treatment for TB

- All patients seeking treatment for STDs, including all patients attending STD clinics,
  - should be screened routinely for HIV during each visit for a new complaint, regardless of whether the patient is known or suspected to have specific behavior risks for HIV infection.
CDC Recommendations:
Interval For HIV Testing

- Test People at High risk **once a year.**
  - injection-drug users and their sex partners
  - persons who exchange sex for money or drugs
  - sex partners of HIV-infected persons,
  - MSM or heterosexual persons who themselves or whose sex partners have had more than one sex partner since their most recent HIV test.
‘typical’ primary HIV-1 infection

HIV-1 p24 antigen

HIV proviral DNA

HIV antibodies

HIV viral load

HIV-1 p24 antigen

symptoms

1° infection

‘window’ period

weeks

years

Time following infection

0 1 2 3 4 5 6 / 2 4 6 8 10
Current HIV technologies: Detection of antibodies

- **Screening tests**
  - Enzyme immunosorbent assays (EIAs)
  - Simple/rapid immuno-diagnostic assays

- **Confirmatory or supplemental tests**
  - Western blot (WB)
  - Line immunoassays (LIAs)

- **Alternatives to confirmatory tests**
  - Repetitive EIA or rapid assays
<table>
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<th>TEST</th>
<th>SPECIMAN</th>
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<td>WAIVED MODERATE COMPLEXITY</td>
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National HIV-AIDS Strategy: Work Together to Decrease The Spread of HIV

- Test
- Linkage, Engagement, and Retention
- Treatment
- Adherence
- Substance use treatment
- Housing

- National In+Care
  http://www.incarecampaign.org/
Treatment Resources

- National HIV/AIDS Clinicians’ Consultation Center
  - http://nccc.ucsf.edu/home

- HIV Treatment Guidelines
  - http://www.aidsinfo.nih.gov/guidelines/

HIV Prevention: KEY POINTS

- Rates of HIV higher in homeless population than the general population
- Highest rates with young African American MSM
- CDC 2006 recommendations: test everyone in their life time, and repeat yearly for high risk.
- Know consent laws for opt out in your state
- National AIDS Strategy: work together to test, treat, engage, house
Key Components for HIV Prevention and Disease management

- Multi Disciplinary Teams
- Community Partnerships
- Treat HIV as a Chronic Disease
- Incorporate HIV testing as regular health care maintenance
- Address Homelessness and behavioral health issues
- Incorporate Quality Improvement Strategies into all programs
Chlamydia

Estimated 3 million new cases in U.S. annually

Most frequently reported disease in U.S.

Direct and indirect annual costs total approximately $2.4 billion
Note: The total rate of chlamydia for the United States and outlying areas (Guam, Puerto Rico and Virgin Islands) was 293.6 per 100,000 population.
Chlamydia—Positivity Among Women Aged 15–24 Years Tested in Family Planning Clinics, by State, Infertility Prevention Project, United States and Outlying Areas, 2009
Incidence is highest among sexually active adolescents and young adults.
Transmission

- Transmission is **sexual** or **vertical** (to newborn)
- Highly transmissible
- Incubation period 7-21 days
- Significant asymptomatic reservoir
- Re-infection is common
Clinical Syndromes Caused by *C. trachomatis*

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<tr>
<th>Local Infection</th>
<th>Complication</th>
<th>Sequelae</th>
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<td>Epididymitis</td>
<td>Infertility (rare)</td>
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<td>Reiter’s syndrome (rare)</td>
<td>Chronic arthritis (rare)</td>
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<td>Rhinitis</td>
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<tr>
<td><strong>Infants</strong></td>
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<td>Rare, if any</td>
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- Conjunctivitis
- Urethritis
- Cervicitis
- Proctitis
- Pneumonitis
- Pharyngitis
- Rhinitis
- Endometritis
- Salpingitis
- Perihepatitis
- Reiter’s syndrome
- Epididymitis
- Infertility
- Ectopic pregnancy
- Chronic pelvic pain
- Chronic arthritis
- Chronic lung disease?
- Rare, if any
Chlamydia Infection
Clinical Manifestations
Why Screen for Chlamydia?

- Screening can reduce the incidence of PID by more than 50%.
- Cost effective:
  - CDC estimates that “for every dollar spent on chlamydia screening, we could save $12”
- Most infections are asymptomatic.
- Screening decreases the prevalence of infection in the population and reduces the transmission of disease.
Chlamydia Screening Recommendations

- All sexually active women under 25 years and under
  - Initial screen
  - Repeat annually, Consider repeat with new or multiple sex partners
  - Repeat 2-3 months after an infection
  - CDC -- older women with risk factors for chlamydial infections (those who have a new sex partner or multiple sex partners).
- Pregnant women at the first prenatal visit.
- Third trimester: women aged <25 years and those at increased risk for chlamydia
What about chlamydia screening among men?

- Obvious source of transmission
- Urine-based testing advantage
- Unpublished cost effectiveness analysis demonstrate community and future partner benefits
- Limited data on prevalence & outcomes
- No guidelines available
- MSM and TG at high risk
Testing Technologies

- **Culture**
  - Historically the “gold standard”
  - Not easily available

- **Non-culture tests**
  - Nucleic Acid Amplification Tests (NAATs) ****
  - Non-Amplification Tests
  - Can detect *N. gonorrhoeae* in the same specimen
Nucleic Acid Amplification Tests (NAATs)

- FDA cleared for:
  - All NAATs
    - urethral swabs from men
    - cervical swabs
    - Urine from Women and men ***
  - Certain NAATs
    - vaginal swabs ****

- Non-FDA cleared for:
  - rectal
  - pharyngeal
  - (some laboratories have met regulatory requirements)
BEST Way to TEST take Home

- Heterosexual men-Urine
- Women-Vaginal Swab
- MSM- Rectal and Pharyngeal
Treatment of Uncomplicated Genital Chlamydial Infections

**CDC-recommended regimens**
- Azithromycin 1 g orally in a single dose, OR
- Doxycycline 100 mg orally twice daily for 7 days

**Alternative regimens**
- Erythromycin base 500 mg orally QID x 7 days,
- Erythromycin ethylsuccinate 800 mg PO 4 QID x 7 days,
- Ofloxacin 300 mg orally twice a day for 7 days
- Levofloxacin 500 mg orally once a day for 7 days
Chlamydia Reinfection Rates

Whittington et al. 2001; Fortenberry et al. 1999; Blythe et al. 1992
Chlamydia Partner Management

- Partners with contact during the **60 days** preceding the diagnosis should be evaluated, tested and treated.
- Most important risk factor for re-infection is an untreated partner.
- Repeat CT infections place women at greater risk for PID and infertility than first infection.
Repeat Testing after Treatment

- Pregnant women
  - Repeat testing 3 weeks after completion of recommended therapy

- Non-pregnant women
  - Test of cure not recommended:
    - Unless compliance is in question, symptoms persist, or re-infection is suspected
  - Repeat testing 3-4 months after treatment
    - especially adolescents due to high prevalence of repeated infection
  - Screen at next health care visit
Chlamydia: KEY POINTS

- Most common bacterial (curable) STD in the U.S.
- Most cases in women and men give no symptoms
- All sexually active women 25 y.o.a. and younger should be tested at least annually
- High re-infection rate:
  - Treat partners!
  - Re-test 3 month
Chlamydia: KEY POINTS

MONEY SAVED From Chlamydia Screening and Treatment means: MORE HOUSING
PLEASE,
TAKE A SEXUAL HISTORY
Include ‘LMP’ (Last menstrual period) as a Vital Sign
Most common in young adults and adolescents
CT co-infection of GC cases remains at about 40%
Resistance to medication is a spreading problem
High Correlation with HIV infection
Gonorrhea: Rates by County, US, 2009
Gonorrhea—Rates by Age and Sex, United States, 2009

Most common in young adults and adolescents
Gonococcal Isolate Surveillance Project (GISP)—Percentage of *Neisseria gonorrhoeae* Isolates with Resistance or Intermediate Resistance to Ciprofloxacin, 1990–2009
Risk Factors

- Multiple or new sex partners or inconsistent condom use
- Urban residence in areas with disease prevalence
- Adolescents, females particularly
- Lower socio-economic status
- Use of drugs
- Exchange of sex for drugs or money
Transmission

- Efficiently transmitted by:
  - Male to female via semen
  - Female to male urethra
  - Rectal intercourse
  - Fellatio (pharyngeal infection)
  - Peri-natal transmission (mother to infant)

- Gonorrhea associated with increased transmission of and susceptibility to HIV infection
Gonorrhea Infections
Clinical Manifestations
Gonococcal ophthalmia
Disseminated gonorrhea - skin lesion
Gonorrhea Screening

USPSTF: Sexually active women
- < 25
- Previous Gonorrhea/ Chlamydia or STD
- Commercial sex work
- New or Multiple Partner
- Drug use
- inconsistent Condom
Gonorrhea
Screening Recommendations

- Targeted screening: consider in
  - Populations with prevalence of 1-2% or more
  - MSM
  - Transgender
  - High-risk women
    - Young age
    - New or multiple partners
    - Pregnant women

No Screening men and women at low risk
Diagnostic Methods

- Culture tests
- Non-culture tests
  - Amplified tests (NAATs)
    - Polymerase chain reaction (PCR) (Roche Amplicor)
    - Transcription-mediated amplification (TMA) (Gen-Probe Aptima)
    - Strand displacement amplification (SDA) (Becton-Dickinson BD ProbeTec ET)
  - Non-amplified tests
    - DNA probe (Gen-Probe PACE 2, Digene Hybrid Capture II)
  - Gram stain
Gonorrhea treatment: Pharyngeal or Anogenital

Ceftriaxone 250 Mg IM x 1

Azythromycin 1 gram x 1 or Doxycycline 100 mg PO BID x 7 days

Re-Test 3 Months after treatment
Monitor for treatment failure

Dual treatment regardless of Chlamydia results
Gonorrhea treatment: Anogenital only - Dual treatment regardless of CT results

- **Cefixime** 400 mg PO x 1

  or

- **Azythromycin** 1 gram x 1 or
  - **Doxycycline** 100 mg PO BID x 7 days

  or

- Single-dose injectable cephalosporin regimens

Re-Test 3 Months after treatment
Monitor for treatment failure
Gonorrhea treatment: Alternative Anogenital only

- Cefpodoxime 400 mg PO x 1
- Azythromycin 1 gram x 1 or Doxycycline 100 mg PO BID x 7 days
- Cefuroxime 1 gram PO x 1
GC Partner Management

- Partners with contact during the 60 days preceding the diagnosis should be evaluated, tested and treated

- If no sex partners in previous 60 days, treat the most recent partner
Gonorrhea: KEY POINTS

- Second most common bacterial (curable) STD in the U.S.
- Concentrations of infection in MSM in urban areas
- Resistance to medications is a spreading problem
  - Dual Treatment
  - Re-test 3 months
- High Correlation with HIV infection
PLEASE, TAKE A SEXUAL HISTORY
Include ‘LMP’ (Last menstrual period) as a Vital Sign
‘Know Syphilis in all its manifestations and relations, and all things clinical will be added unto you’

-Sir William Osler, 1987
Syphilis

- Spirochete
- Transmission): direct contact (sexual)
  - Highest risk in early syphilis
  - 1/3 exposed in early syphilis
- 28 U.S. counties account for 50% of the reported cases
- local outbreaks centered in urban areas among MSM
Incubation: ~3 weeks

Primary Syphilis: 2-6 weeks duration

Secondary Syphilis: 2-12 weeks post contact (ave 6) 2-6 weeks

Latent Syphilis: 4 wks-30 yrs

Tertiary Syphilis
NOTE: The total rate of primary and secondary syphilis for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 4.6 per 100,000 population.
NOTE: In 2009, a total of 2,194 (69.9%) of 3,141 counties in the United States reported no cases of primary and secondary syphilis.
Primary and Secondary Syphilis—Rates by Age and Sex, United States, 2009

Men 15-54
Primary and Secondary Syphilis—Reported Cases* by Stage, Sex, and Sexual Behavior, United States, 2009

* Of the reported male cases of primary and secondary syphilis, 20% were missing sex of sex partner information.
† MSW = men who have sex with women only; MSM = men who have sex with men.
Primary and Secondary Syphilis—Reported Cases* by Sex, Sexual Behavior, and Race/Ethnicity, † United States, 2009

* Of the reported male cases of primary and secondary syphilis, 20% were missing sex of sex partner information; 1.7% of reported male cases with sex of sex partner data were missing race/ethnicity data.
† No imputation was done for race/ethnicity.
‡ MSW = men who have sex with women only; MSM = men who have sex with men.
Primary Syphilis

Photos: Dr. Joseph Engelman, San Francisco City Clinic
Rash of Secondary Syphilis

Photo: Dr. Joseph Engelman, San Francisco City Clinic

STD Atlas, 1997
Secondary Syphilis
Other Symptoms

Website, 2000

STD Atlas, 1997
Neurosyphilis

- Can occur at any stage of infection
- Asymptomatic invasion of CSF very common

Early:
- Meningitis
- Uveitis
- Cranial nerve dysfunction

Late:
- Tabes dorsalis
- General paralysis
Testing for syphilis

- Can examine a swab from a chancre, if present

- Blood tests
  - First, Non-treponemal test
    - VDRL or RPR
  - Confirmed with treponemal test

- Reverse sequencing becoming more common
  - First, treponemal test
  - Follow up with titer from a non-treponemal test
All Syphilis TESTS may stay positive for years

Percent of Persons Reactive with Serologic Tests for Syphilis

- RPR - no therapy
- RPR - therapy
- FTA

Syphilis Stages:
- 1° Syphilis
- 2° Syphilis
- Latent
- Tertiary
Treatment of Syphilis

The earlier you diagnosis syphilis, the easier it is to treat it
Early syphilis, and early latent:

- Penicillin G benzathine 2.4 Units IM once

- If PCN allergic: Doxycycline 100 mg po BID x 14 days (not prgenent)
Treatment and response to therapy

- **FOUR Fold Decrease** in Non-Treponemal test (RPR or VDRL) titers in 6-12 months depending on stage

- Follow-up Serology (blood test) 3, 6, 12 months

- Check for any new onset primary, secondary or neurosyphilis during follow-up.

Re-Infection can occur!

Re-infection can occur!
Late latent, Syphilis: Treatment

- Penicillin G benzathinine 2.4 Units IM every week x 3 weeks

And

- Doxycycline 100 mg po BID x 28 days (not pregnant)
Syphilis Take Home Points

- Syphilis is increasing, especially among young, black men.
- Syphilis does not go away without treatment, and may result in symptoms decades after the initial infection.
- Interpretation of test results is complex:
  - 2 or 3 tests performed in sequence over days to weeks
  - combined with a thorough patient history and physical exam.
  - Four fold drop of RPR/VDRL
Syphilis take home Points

TEAM BASED TREATMENT IS THE KEY TO PREVENTION AND TREATMENT!
PLEASE,
TAKE A SEXUAL HISTORY
Human Papillomavirus (HPV)
Human Papillomavirus (HPV)

- Non-enveloped DNA virus
  - Skin and mucous membranes
- Over 100 genetically distinct types
  - ~40 types are sexually transmitted
    - Low-risk
    - High-risk
HPV infection and cervical cancer

- Most common sexually transmitted infection
  - First infection acquired around time of initial sexual activity
- Most infections clear within 1 year
  - Average duration 8-16 months
- Necessary causal factor in cervical carcinogenesis
  - Persistent infection is key factor (high-risk types)
- Some HPV types more persistent than others
- Types 16 and 18
  - ~70% cervical cancer
  - ~50% cervical intraepithelial neoplasia (CIN 2 and CIN 3)
Cervical Intraepithelial Neoplasia (CIN)

- Histologic diagnosis (biopsy)
- Spectrum of intraepithelial changes of cervix
- Graded on basis of thickness of abnormality
  - Epithelial layer is divided into thirds
CIN as precursor of cervical cancer

- CIN 3 – most likely to progress
- CIN 2 – may regress
  - Sometimes caused by low-risk HPV types
- CIN 1 – often regresses
  - Not considered precancer
How is CIN 2/3 diagnosed?

Routine Exam → Cervical cancer screening (Pap +/- HPV test) → Cytology lab → Abnormal → Diagnostic test (colposcopy and cervical biopsy) → Histology lab → CIN 2/3

Therapeutic procedure:
- Ablation
- Excision
- Surgical specimen
  → Histology lab → CIN 2/3
HPV infection - natural history

Initial HPV infection

- 1 year
- Up to 5 years
- Decades

Persistent infection

CIN* 1

CIN* 2/3

CANCER

CLEARED HPV INFECTION

*CIN = cervical intraepithelial neoplasia
Genital HPV and Cervical Cancer

- Every year 12,000 women diagnosed
  - 4,000 women die annually

- Low risk types: 6 and 11 (often cause warts)
  - 1% of sexually active adults have genital warts

- High risk types: 16 and 18
  - Cause 70% of cervical cancers
  - Less common cancers as well
    (anus, penus, vulva, vagina, oropharynx)
HPV: Risk Factors

- Multiple sex partners
- Presence of genital warts on sex partners
- In men:
  - Failure to use a condom
  - Number of casual sex partners
- Ano-receptive intercourse for intra-anal but not perianal warts
HPV: Clinical Manifestations

- High-risk infections usually asymptomatic
- 4 morphologic types of Genital warts:
  - Condyloma acuminata (cauliflower shaped)
  - Smooth papular (dome-shaped)
  - Keratotic (thick, horny layer; may resemble a common wart or seborrheic keratosis)
  - Flat to slightly raised flat-topped papules
Cervical Wart
Perianal Warts
HPV Screening: PAP Smear

- **New ACOG guidelines**
  - 1st PAP smear at age 21 (unless sexually active earlier)
  - Annual pap smear ages 21–30
  - If no ABN Paps, can reduce frequency to every 2 or 3 years after age 30
- **More frequent PAP smears if abnormal**
HPV: Diagnosis

- **Clinical examination** reliable; bright light and magnification may assist
- **Pap smear**
- **Acetowhite test**: not recommended for routine screening
- **Biopsy** not required routinely
- **HPV typing**: of no proven benefit in external genital warts; may be valuable in patients with cervical intraepithelial neoplasia
- **No serologic tests or viral cultures**
HPV vaccines

- Non-infectious virus like particles (VLPs)
- Quadrivalent
  - High-risk types 16 and 18 and low-risk types 6 and 11
  - FDA-approved for females 9-26 years (2006)
  - ACIP recommended in females 11-12 years
- Bivalent
  - High-risk types 16 and 18
  - Pending FDA approval
- Prophylactic
  - High efficacy against CIN 2 and 3 for at least 5 years in vaccine-type naïve 9-26 year-old females
- Very safe, well-tolerated
Genital Warts: Treatment

- May be asymptomatic
- Can be painful, friable, or pruritic
- Some may resolve spontaneously (often recur later)
- Socially stigmatizing and emotionally distressing
- Current available therapies:
  - May be able to get rid of warts but do not eliminate the infection
  - May not decrease the infectivity
  - Most modalities have similar efficacy; no simple, routinely effective therapy
Genital Warts: Therapy

- Physician-prescribed/Patient-applied
  - **Podofilox (Condylox)** solution or gel
  - **Imiquod (Aldara)** cream

- Best for patients who desire more control over their care
- Less invasive
- Require patient education
Genital Warts: Treatment

- Physician applied therapies
  - Trichloroacetic (TCA) or bichloroacetic (BCA) acid
  - Podophyllin resin
  - 5-fluorouracil cream
  - Cryotherapy with liquid nitrogen
- Office surgeries
  - Curettage
  - Electrosurgery
  - Fine-scissor or tangential shave excision
Genital Warts: Treatment

- Complex destructive modalities
  - Laser
  - Intralional interferon
  - Requires in depth training and are not recommended for first-line treatment
  - Systemic interferon not efficacious
Resources

- National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
  [http://www.cdc.gov/nchhstp/About.htm](http://www.cdc.gov/nchhstp/About.htm)

- [http://www.healthypeople.gov](http://www.healthypeople.gov)

Resources

- [http://caps.ucsf.edu](http://caps.ucsf.edu) Center for AIDS prevention Studies

- [http://www.stdhivtraining.org](http://www.stdhivtraining.org) California STD Training Center
- [http://www.cdph.ca.gov/programs/std/Pages/default.aspx](http://www.cdph.ca.gov/programs/std/Pages/default.aspx) California DPH STD Branch
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HIV Testing
Chlamydia
Gonorrhea
Syphilis
HPV
Prevention
Non-Treponemal Tests –
Some Causes of False Positive Reactions

- Autoimmune Disease (like lupus)
- Malaria
- Recent immunization
- Skin diseases
- Tuberculosis
- IV Drug abuse
- Viral infections
- An illness with a fever
- Pregnancy
- HIV
- Other STDs
- Multiple blood transfusions
- Leprosy
- Old age
Herpes Simplex (HSV)
Herpes Simplex

- HSV types 1 and 2
- 16.2% or 1 in 6 people ages 14–49 years
- More common in women than men (transmission from men to women more common)
- Diagnosis: History, DFA, culture, serology
Primary herpes, male
Primary herpes, female
Herpes cervicitis
HSV presentation

- Primary episode may include
  - Outbreak of sores—vesicles that erupt and cause PAINFUL ulcers (important to make this distinction between Syphilis)
  - Fever
  - Flu-like illness
  - Lymphadenopathy (swollen glands)
Fig. 35-3. Clinical course of primary genital herpes.
HSV

- Counseling is important
- Viral shedding
- Use of condoms
- Neonatal risk
HSV Serologic Tests

- Recommendation from CDC (2002)
- Problem: many persons with genital HSV are minimally symptomatic, but there is shedding of virus
  - Vesicles are often absent
  - False negative cultures with recurrent lesions
HSV Serologic Tests

- HSV-2 infection = sexually acquired
  - HSV-2 antibodies indicates anogenital infection
  - HSV-1 antibodies do not distinguish orolabial from anogenital
- Older HSV antibody assays not reliable
- HSV-specific glycoprotein G2 for HSV 2 infection and glycoprotein G1 for HSV 1
  - POCKit HSV-2, HerpeSelect HSV1/2
    - Sensitivity 80-98%, Specificity ≥ 96%
HSV Treatment - Primary

- Acyclovir 400 mg po TID for 7-10 days
- Acyclovir 200 mg po 5 times a day for 7-10 days
- Famciclovir 250 mg po TID for 7-10 days
- Valacyclovir 1 g po BID for 7-10 days
- Treat soon as possible
- Therapy does not eradicate or affect the number of recurrences
- Severe episodes may require IV Acyclovir
Recurrent HSV Infections

- Give patient script to have at home to start during prodrome or with first sx.
- ACV 800 mg po BID for 5-7 days
- Famvir 125 mg po BID for 5-7 days
- Valtrex 500 mg po BID for 3-5 days
- Valtrex 1 gram po qd for 5 days
Recurrent HSV infections

- Suppression for those with frequent recurrences (>6 per year)
- Periodically stop and reassess (q 6 mos to 1 year)
- Acyclovir safe for up to 6+ years
  - ACV 500 mg BID
  - Famvir 250 mg BID
  - Valcyte 500mg qd
CAVEATS

- ACV gives only partial control of symptoms
- ACV not recommended in pregnancy
- No impact on the rate of recurrences
- Only active against replicating HSV not latent virus
- Topical ACV even less effective
Genital HSV and AIDS

- Severe, often perianal
  - IV Acyclovir
- Suppressed with daily ACV; some use higher than normal doses
- ACV-resistant HSV
  - Mutation in the thymidine kinase enzyme of HSV; interferes with activation of acyclovir
  - Also resistant to valacyclovir and usually famciclovir
Herpes: Treatment in Pregnancy

- Available data for acyclovir do not indicate an increased risk of major birth defects (first trimester)
  - Limited experience with valacyclovir or famciclovir

- Acyclovir may be used with first episode HSV or severe recurrent disease (CDC 2002)

- Risk of transmission to the neonate is 30-50% among women who acquire HSV near delivery