HIV Primary Care Guidelines

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Learning Objectives

Upon completion of this presentation, learners should be better able to:

• Discuss the initial evaluation and laboratory testing to be performed in HIV infected persons
• Apply primary care guidelines for the general population to those with HIV infection
Faculty and Planning Committee Disclosures

Please consult your program book.

There will be no off-label/investigational uses discussed in this presentation.
In my Practice

1. I only provide primary care to persons with HIV infection
2. I provide primary care to both HIV infected and uninfected persons
3. I provide primary care to more persons without HIV infection compared with persons with HIV infection
4. I do not provide primary care
Executive Summary IDSA/HIVMA PCG

The purpose of these guidelines is to assist health care providers in the primary care management of persons infected with HIV, with emphasis on:

- Transmission of HIV infections
- HIV Diagnosis (testing and counseling)
- Risk Screening
- Management, with special sections on women and children
- Adherence to Care

*Primary Care Guidelines Clin Infect Dis 2009;49:651-81*
Guideline Development Process
GOALS OF THE INITIAL EVALUATION - I

- Confirm HIV infection.
- Identify acute problems requiring immediate intervention to prevent morbidity.
- Assure that the patient understands how to avoid transmitting HIV.
- Identify chronic medical problems and troubling symptoms.
- Identify problems requiring referral (medical, housing, psychological, social, legal, or financial).
- Establish stage of HIV disease.
GOALS OF THE INITIAL EVALUATION - II

- Estimate prognosis (rate of progression, risk for progression).
- Establish a baseline of physical findings for comparison with future examinations.
- Begin to discuss appropriate anti-HIV drug therapy.
- Identify indications for prophylaxis.
Goals of Initial Evaluation: III

- Identify social support (friends, family, spouse, coworkers) and its limitations.

- Establish a plan, based on findings, for long-term management of identified problems.

- Carry out the above and communicate recommendations in a process that establishes confidence and trust.
The Initial History: Key Components

• **HPI:**
  - Estimation of time of infection, including likelihood of infection with resistant virus
  - HIV-associated symptoms

• **PMH:**
  - Prior STDs, hepatitis
  - TB exposure, TB test results
  - h/o chicken pox or shingles
  - Vaccination status
  - Travel history: exposure to endemic pathogens
The Initial Physical Examination: Key Components

- **Overall**: body habitus, vital signs
- **Skin**: fungal infections (periungual, feet, groin, axilla), edema, pigmented lesions (Kaposi's sarcoma), nodules, molluscum, folliculitis, psoriasis, condylomata
- **HEENT**: Careful eye and oral examination (thrush, OHL, ulcers, gingivitis)
- **Lymphatics**: generalized vs. focal lymphadenopathy
- **Abdomen**: hepatosplenomegaly
- **Anogenital**: warts, STDs, ulcerations
- **Neurologic**: mental status, peripheral neuropathy (↓LE vibratory sensation, absent ankle jerks)
Abacavir and HLA-B5701

1. Abacavir can only be prescribed in those who are B5701 positive
2. Abacavir can only be prescribed in those who are B5701 negative
3. I think my brother flew in a B57 over Vietnam
4. B5701 is associated with high risk of CHD
Coreceptor Tropism testing

1. Testing should be done at baseline for all patients
2. Testing should be done only at time of failing first regimen
3. Testing should be done only prior to prescribing a CCR5 antagonist
4. I heard Donna Futterman bought a new i-phone with CCR5 capability
Baseline Tests

**HIV antibody test**
- Do if HIV infection not clearly documented

**CD4+ T lymphocyte cell count and percent**
- Estimates stage of HIV disease
- Urgency of anti-HIV therapy

**Plasma HIV RNA (viral load)**
- Estimates risk of progression

**Genotype**

**HLA B5701:** prior to starting ABC

**Tropism:** prior to CCR5 inhibitor
Case 1

33 yo AAF admitted to hospital for pneumonia. Pt denies any prior illness. Has h/o unprotected sex with 5 partners. Denies any recreational drug use or excessive alcohol use. Smokes 1ppd x 19 years. During the hospitalization, she accepts HIV testing and rapid test is “positive”

A CD4 and VL are obtained. CD4 267 and VL is pending.

Pt feels well at time of discharge.
Baseline tests

All of the following should be obtained except:

1. CMV IgG
2. G6PD
3. Hepatitis B and C
4. Cryptococcal Antigen
5. Toxoplasma IgG
Baseline Laboratory Evaluation: Routine

• **CBC with differential**
  - Rule out anemia, leukopenia, thrombocytopenia
  - Establish pre-therapy baseline

• **Comprehensive chemistry panel**
  - AST, ALT, Alk Phos, Bili: liver injury
  - BUN, creat, Cr Cl: renal impairment, malnutrition
  - Albumin: nutritional status
  - Glucose or Hgb A1C: IGT, DM
Baseline Laboratory Tests

• **G-6-PD:**
  – Obtain in patients at risk (African Americans, Mediterranean descent)
  – Avoid oxidant drugs if deficient (dapsone, sulfonamides, primaquine)

• **Fasting lipid profile:** Establish pre-treatment baseline

• **Urinalysis:** Baseline testing for renal toxicity, especially in African-Americans (risk for HIVAN)
Baseline Laboratory Evaluation: Viral Hepatitis Assessment

- **HBsAb and total core Ab**: Assess need for vaccination
- **HBsAg**: chronic hepatitis B
- **Anti-HCV**: chronic hepatitis
  - Follow with HCV RNA if seropositive or if seronegative but high risk or abnormal transaminases
  - Order HCV genotype in those with chronic HCV
- **Total anti-HAV antibody**: Assess need for vaccination
Baseline Laboratory Tests: Other Serologies

- **Anti-Toxoplasma IgG:**
  - If positive, use *Toxoplasma* prophylaxis if CD4 <100
  - If negative, counsel about avoidance of
    - cat feces
    - undercooked meat
- **Anti-CMV IgG**
  - If negative, patient should receive CMV-negative blood products
- **Anti-HSV IgG:** not indicated
- **Cryptococcal antigen:** not indicated in axs persons
Case 2

47 yo Trinidad M recently diagnosed HIV+, CD4 560 and VL 23,000 referred for “Chickenpox vaccination.”

He reports never having chickenpox as a child, no history of shingles. Of note, his referring physician ordered a VZV IgG which was negative.
You advise

1. Vaccination with varicella primary vaccine
2. Suggest he get exposed to child with chickenpox so he can develop natural immunity
3. Nothing
4. Contact his provider immediately if any exposure so he can receive VZIG within 96 hrs of exposure
**Baseline Evaluation: TST with PPD or IGRA**

- **Tuberculin skin test:**
  - \( \geq 5 \text{ mm} = \text{positive: obtain CXR and if abnormal, obtain sputum} \)
  - Anergy testing not indicated
  - Repeat yearly for those at risk
  - Repeat after immune reconstitution on ART if negative at baseline
  - Do not repeat if known previous positive TST
  - IGRA preferred for prior BCG and convenience

- **CXR:**
  - Consider baseline CXR, especially in:
    - Patients at risk for TB
    - IDUs (interstitial markings may mimic PCP)
Tests for Sexually Transmitted Infections

- **Non-treponemal syphilis test:** with confirmatory test if positive
  - CSF for neuro or ocular or treatment failure
  - CSF for late latent or unknown duration
  - Consider CSF if RPR $\geq 1:32$ or CD4 $< 350$

- **Screening tests for GC and Chlamydia**

- **Pap Tests** in women
  - Follow abnormals with colposcopy

- **Anal Pap Tests** in men, especially MSM, h/o HPV, women with abn. cervical PAP
  - Follow abnormals with high-resolution anoscopy
Appropriateness of primary care practice guidelines

There is no systematic method to predict whether guidelines developed on general population should apply to individuals with HIV.

1. I follow general guidelines for all my HIV infected patients
2. I modify general guidelines because I believe my patients are at higher risk for co-morbid conditions. E.g. NCEP, ADA, colon CA
3. I do not believe the general guidelines can be used because we do not understand what the risks of common lab tests in HIV mean (e.g. abnormal lipids, DXA scans)
FRAX™ WHO Fracture Risk Assessment Tool

Calculation Tool

Please answer the questions below to calculate the ten year probability of fracture with BMD.

Country: US (Black)  Name / ID:  About the risk factors

Questionnaire:

1. Age (between 40-90 years) or Date of birth
   Age: ___________________________ Date of birth: ___________________________

2. Sex
   Male ☐ Female ☐

3. Weight (kg)

4. Height (cm)

5. Previous fracture
   No ☐ Yes ☐

6. Parent fractured hip
   No ☐ Yes ☐

7. Current smoking
   No ☐ Yes ☐

8. Glucocorticoids
   No ☐ Yes ☐

9. Rheumatoid arthritis
   No ☐ Yes ☐

10. Secondary osteoporosis
    No ☐ Yes ☐

11. Alcohol 3 or more units per day
    No ☐ Yes ☐

12. Femoral neck BMD
    Select: [ ]

Risk factors

For the clinical risk factors a yes or no response is asked for. If the field is left blank, then a "no" response is

http://www.shef.ac.uk/FRAX/
Screening and Treatment Bone Disease

Initial approach

HIV infected individual

Assess risk factors
- Age
- Sex
- Weight/Height
- Hx. of Fractures
- Secondary causes

Lifestyle advice
- Smoking cessation
- Vitamin D and Calcium intake
- Weight bearing exercise
- Sun exposure

Indications for DXA

< 50 years
- PREmenopausal female
- AND NO hx. of fracture?

WAIT

≥ 50 years
- POSTmenopausal female
- AND/OR hx. of fracture?

Measure BMD by DXA

McComsey, CID 2010
Payoff Time

- **Payoff Time = Minimum time until incremental benefits > incremental harms**
  - Applies to any guideline where harms are short-term and benefits are long-term
    - Colorectal cancer screening (CRC)
      - Will vary by guideline and by patient population
  - Payoff time can be compared to life expectancy
    - If death likely before payoff time, guideline not advised
    - If death unlikely before payoff time, guideline advised

Braithwaite RS Arch Intern Med 2007;167:2361-5; Braithwaite RS Med Care 2009 Jun;47(6):610-7
Figure 1 Prevalence of neoplastic lesions in the HIV-infected subjects and HIV-uninfected control subjects.

Prevalence ↑ 62.5% vs 41.2%; age 52 vs 60; more advanced 60.0% vs 16.7% and more proximal lesions (88% would be missed by flex sig)
### Table 8. Guidelines From Various Sources Regarding Aspects of Care of HIV-Infected Persons

<table>
<thead>
<tr>
<th>Title</th>
<th>Issuing Agency</th>
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</thead>
<tbody>
<tr>
<td><strong>Antiretroviral therapy for adults and adolescents</strong></td>
<td></td>
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<tr>
<td>Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents</td>
<td>U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td><strong>Antiretroviral therapy for pediatric patients</strong></td>
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<tr>
<td>Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection</td>
<td>NIH</td>
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<tr>
<td><strong>Antiretroviral therapy for pregnant women</strong></td>
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<tr>
<td><strong>Chronic kidney disease</strong></td>
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<tr>
<td>Guidelines for the Management of Chronic Kidney Disease in HIV-Infected Patients</td>
<td>HIV Medicine Association of IDSA</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td></td>
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<tr>
<td>Clinical Practice Recommendations</td>
<td>American Diabetes Association</td>
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<tr>
<td><strong>Hepatitis</strong></td>
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<tr>
<td>Management of chronic hepatitis B</td>
<td>European Assoc For The Study Of The Liver</td>
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<tr>
<td>Guidelines for the clinical management and treatment of chronic hepatitis B and C coinfection in HIV-infected adults</td>
<td>European AIDS Clinical Society (EACS)</td>
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<td><strong>HIV testing and counseling</strong></td>
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<tr>
<td>Revised Guidelines for HIV Testing</td>
<td>CDC</td>
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<td><strong>Hyperlipidemia in HIV</strong></td>
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<tr>
<td>Guidelines for the Evaluation and Management of Dyslipidemia in Human Immunodeficiency Virus (HIV)-Infected Adults Receiving Antiretroviral Therapy</td>
<td>HIV Medicine Association of IDSA; Adult AIDS Clinical Trials Group</td>
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### Table 8. — Continued

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<tr>
<th>Immunization schedules</th>
<th>CDC [<a href="http://www.cdc.gov/vaccines/recs/schedules/">http://www.cdc.gov/vaccines/recs/schedules/</a>]</th>
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<tr>
<td>Practice Guidelines for Quality Standards for Immunization</td>
<td>ACIP [<a href="http://www.cdc.gov/vaccines/pubs/ACIP-list.htm#comp">http://www.cdc.gov/vaccines/pubs/ACIP-list.htm#comp</a>]</td>
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<td>Mental health</td>
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<td>Metabolic complications in HIV</td>
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<td>Occupational exposures</td>
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<tr>
<td>Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis</td>
<td>U.S. Public Health Service [<a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm</a>]</td>
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<td>Opportunistic infections</td>
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<tr>
<td>Guidelines for Treating Opportunistic Infections among HIV-Infected Adults and Adolescents</td>
<td>U.S. Public Health Service; HIVMA/IDSA; CDC [<a href="http://aidsinfo.nih.gov/guidelines">http://aidsinfo.nih.gov/guidelines</a>]</td>
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<td>Opportunistic infections in children</td>
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<tr>
<td>Pediatric HIV</td>
<td>American Academy of Pediatrics (AAP) [<a href="http://aapredbook.aappublications.org/">http://aapredbook.aappublications.org/</a>]</td>
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<tr>
<td>Resistance testing</td>
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<tr>
<td>Antiretroviral Drug Resistance Testing in adults Infected with Human Immunodeficiency Virus type 1</td>
<td>International AIDS Society USA Panel [<a href="http://www.iasusa.org/pub/">http://www.iasusa.org/pub/</a>]</td>
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<tr>
<td>Risk assessment</td>
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<tr>
<td>Incorporating HIV Prevention into the Medical Care of Persons Living with HIV</td>
<td>CDC, Health Resources and Services Administration, NIH, HIV Medicine Association of IDSA [<a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm</a>]</td>
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Summary

• Primary care screening guidelines are often applicable to HIV patients
  – *Payoff time* may help to determine when particular guidelines are applicable
  – Caution we do not under screen because of wrong assumptions
  – Need to implement general medical screening and treat conditions identified
  – Need for an assessment that is aimed at preventing, detecting and controlling specific conditions or risk factors associated with HIV infection
  – HIVMA Primary Care Guidelines Anticipate Release Fall 2012