HIV Prevention Pearls

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Disclosure Information

• I have no financial relationships to disclose
• I will not discuss off label use and/or investigational use in my presentation
Case

• 45 yo male with type 1 diabetes, s/p living donor kidney transplant
• Seen in clinic to discuss possibility of a pancreas transplant
  – Deemed to be good candidate
• At the end of the visit, the patient disclosed his sexual orientation and asked about the possibility of getting a referral for HIV Pre-exposure Prophylaxis (PrEP)
  – He was told by his doctor that partaking in such risky behavior would disqualify him from getting a pancreas transplant
Case, 2 years later

• Patient did not pursue PrEP further and received a pancreas transplant
• Asked a different doctor about a PrEP referral
  – Provider was supportive and arranged for an ID clinic visit
  – HIV Ag/Ab checked and was negative
• When he presented to the ID clinic a month later, he was not feeling well
• Labs checked
  – HIV Ag/Ab positive
  – HIV VL >10 million copies/mL
  – CD4 count 30 cells/mm3
HIV IS PREVENTABLE
But People Keep Getting Infected!

- 2.1 MILLION new infections worldwide in 2015
- Nearly 40,000 new HIV diagnoses in the US in 2015
  - Rate of newly diagnosed HIV among black MSM rose by 22% between 2005 and 2014
  - Among black MSM aged 13 to 24, new HIV diagnoses increased by 87%
No Change in Number of New HIV Infections in Minnesota

New HIV Disease Diagnoses, HIV (non-AIDS) and AIDS Cases by Year, 2006-2016

*Includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year.

^Includes all new cases of AIDS diagnosed within a given calendar year, including AIDS at first diagnosis^^ and AIDS ((progressed)^^ previous diagnosis of HIV).

This includes refugees in the HIV+ Resettlement Program, as well as, other refugee/immigrants diagnosed with AIDS subsequent to their arrival in the United States.
WHY?

- HIV disproportionately effects underserved populations
  - Challenges accessing healthcare
  - Distrust of the healthcare system
- Persistent stigma about HIV
  - Fear of disclosing sexual orientation and HIV risk
- Behavior change is hard
- Lack of knowledge about HIV prevention options among healthcare providers
Biomedical Tools to Prevent HIV

- Pre-Exposure Prophylaxis (PrEP)
- Post-Exposure Prophylaxis (PEP)
- Treatment as Prevention

https://www.avert.org/professionals/hiv-programming/prevention/overview
What if there were a pill that could help prevent HIV?

There is.

Ask your doctor if PrEP is right for you.

Pre-exposure prophylaxis: A daily pill to reduce risk of HIV infection

www.cdc.gov/hiv/basics/prep.html
HIV Pre-Exposure Prophylaxis (PrEP)

- Truvada (tenofovir/emtricitabine) approved in 2012 for preventing HIV
  - One pill daily
  - Low toxicity
  - Low rate of side effects
  - Highly effective

  - Daily PrEP can reduce risk of acquiring HIV
    - from sex by ~90%
    - from IVDU by ~70%
Who Should Be Offered PrEP?

• MSM
  – Unprotected anal sex in past 6 months
  – STI in past 6 months
  – HIV+ partner

• Heterosexual
  – Inconsistent condom use with partner(s) at risk for HIV (IVDU, bisexual male)
  – HIV+ partner

• IVDU
  – Any sharing of injection or drug preparation equipment in past 6 months

"It may be more inconvenient, but the 'Reverse Prostate Exam' is a lot less embarrassing for the both of us."
Not As Scary As It Sounds...

• Baseline labs
  – HIV Ag/Ab
  – Renal function (CrCl>60)
  – Pregnancy test
  – Hepatitis B and C serology

• Every 3 months
  – Repeat HIV testing
  – Risk reduction counseling

• Every 6 months
  – Check renal function
  – Screen for gonorrhea, chlamydia and syphilis

• At least every 12 months
  – Reassess need for ongoing PrEP
A Few Key Points About Monitoring

- Written consent is not required for HIV testing
- HIV Ag/Ab test of choice
- Consider testing for STIs at every visit
  - Don’t forget to test all potentially exposed sites (throat, rectum, urine)
Paying for PrEP

• Covered by insurance
• Gilead prescription assistance program
Why aren’t providers prescribing PrEP?

- Lack of knowledge
- Discomfort asking about sexual risk
- Concern about risk compensation
- Concern about medication toxicity in healthy people
- Logistical concerns (time constraints, insurance issues, need for monitoring, etc)
Case

• 22 yo male presented to the ED with 3-4 days of nausea, abdominal pain and bloody stools
  – WBC 3.1
  – CT scan demonstrated mild perirectal inflammatory changes and extensive lymphadenopathy

• Given zofran and IVF then d/c to follow up in primary care clinic
Case, cont

• Presented to primary care clinic 2 days later
  – Symptoms unchanged
  – Disclosed that he had been the victim of a sexual assault 3 weeks prior

• HIV Ag/Ab returned indeterminate
• Follow up HIV RNA >9 million copies/mL
• CD4 count 130 cells/mm3
Another Missed Opportunity

• HIV could have been prevented by using Post-Exposure Prophylaxis (PEP)
  – PEP is not only for healthcare exposures
  – PEP can be used up to 72 hours after high risk sexual encounter or IVDU

Exposed to HIV? The clock is ticking!

72 hours

To be effective, PEP must begin within 72 hours of exposure
How to Prescribe HIV PEP

• Determine when sexual or IVDU exposure occurred
• Determine degree of risk
  – Known HIV+ partner?
  – High risk partner of unknown HIV status?
• If high risk:
  – Check HIV Ag/Ab, Cr, LFTs
  – Don’t forget about screening/treating for STIs, Hep B, C if indicated
  – Start PEP
    • Dolutegravir 50mg daily + Truvada 200/300mg daily x28 day
## PEP Testing Recommendations

<table>
<thead>
<tr>
<th>Test</th>
<th>Source</th>
<th>Exposed persons</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>Baseline</td>
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<tr>
<td>HIV Ag/Ab testing(^a) (or antibody testing if Ag/Ab test unavailable)</td>
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<tr>
<td>Hepatitis B serology, including:</td>
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<tr>
<td>hepatitis B surface antigen</td>
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<tr>
<td>hepatitis B surface antibody</td>
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<tr>
<td>hepatitis B core antibody</td>
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</tr>
<tr>
<td>Hepatitis C antibody test</td>
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<tr>
<td>Syphilis serology(^e)</td>
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<td>Gonorrhea(^f)</td>
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<td>Pregnancy(^h)</td>
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<td>estimated creatinine clearance(^i))</td>
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<tr>
<td>aminotranferase</td>
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</tbody>
</table>

For all persons considered for or prescribed nPEP for any exposure

For all persons considered for or prescribed nPEP for sexual exposure

For persons prescribed
tenofovir DF+ emtricitabine + raltegravir
or
tenofovir DF+ emtricitabine + dolutegravir

https://stacks.cdc.gov/view/cdc/38856
Even if you don’t feel comfortable prescribing PEP, let your patients know it exists.
Treatment as Prevention

- HIV infected individuals with an undetectable viral load cannot transmit HIV to others.

The PARTNER study (2016)

1,000 mixed status couples

All HIV+ partners virally suppressed and on effective treatment

58,000 sex acts without a condom

0 transmissions of HIV

Viral suppression from ART prevents HIV transmission

AVERT.org Source: The PARTNER study (2016)
What Does This Mean For You?

• It is critical to find individuals with HIV so that they can initiate treatment

• TEST regularly
  – Opt out testing
  – Everyone should get tested at least once
  – Test those at risk at least once yearly

• REFER patients with HIV immediately to infectious disease
Summary

• You play a key role in preventing HIV
  – PreP and PEP are highly effective and can be prescribed by general internists
  – Make HIV testing part of your routine practice
Questions?