Working with Adolescents and Young Adults For STD/HIV Prevention

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Disclosures

- In the past 12 months, Dr. Hsu has had the following significant financial interests or other relationships with manufacturer(s) of product(s) or provider(s) of service(s) that will be discussed in this presentation:
  - none
- This presentation will include discussion of pharmaceuticals or devices that have not been approved by the FDA.
  - "Off-label" use of extra-genital (rectal and pharyngeal) nucleic acid amplification tests (NAATs) for gonorrhea and chlamydia

Objectives

- Review key interview/policy strategies for adolescents/young adults
- Understand adolescent risk-taking in context of normal adolescent development
- Utilize normative adolescent development to inform adolescent/young adult STI/HIV prevention strategies
- Contextualize strategies in social ecological and health impact models

Acknowledgments

- To adolescent health colleagues
  - Liz Alderman
  - Gale Burstein
  - Susan Gray
  - Erin Livensparger
  - Arik Marcell
  - Christina Nordt
- To pediatric ID colleagues
  - Rana Chakraborty and AAP Committee on Pediatric AIDS
  - Ellen Cooper
  - Carole Moloney
  - Steve Pelton
  - Zoon Wangu

Case History

18 y.o. Latino male presents to urban pediatric ED

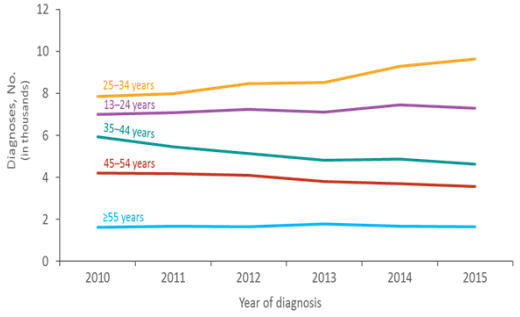
CC: cold symptoms for a week 1 wk (8/2011)
Hx: Painless rectal bleeding; divulges confidentially to pediatric resident that he has sex with men
PMH: Major depression and self-mutilating behaviors @ age 14, chlamydia infection @ age 17, negative HIV rapid test 6 mo ago

Exam: mild swelling of tonsils but unremarkable exam

Labs:
- Urine & throat STI tests negative; rectal NAAT CT pos, GC neg
- Syphilis negative
- HIV viral load 2.4 million copies/ml

Pedi ED attending calls Pedi ID service…

Diagnoses of HIV Infection among Men Who Have Sex with Men, by Age at Diagnosis, 2010–2015—United States and 6 Dependent Areas



Note: Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do NOT include men with HIV infection attributed to male-to-male sexual contact *and* injection drug use.

HIV and Syphilis Rates in MSM

- Numerator based upon national 2008 surveillance data on new HIV and syphilis diagnoses
- Denominator based upon estimated proportion of men who engaged in same-sex behavior in past 5 years (3.9%)
- HIV diagnosis rate = 672/100,000 MSM
  - 67x rate of other men
  - 58x rate for women
- 1º and 2º syphilis diagnosis rate = 154/100,000 MSM
  - 71x rate of other men
  - 96x rate for women

Purcell et al., *Open AIDS J*, 2012

Back to our case …

After discussion between Pedi ID and ED teams, and discussion about possible phone scenarios, pediatric ID fellow calls patient back on his private cell.

She introduces herself as a physician calling back from the medical center, asks patient if he can speak for a few minutes confidentially, and tells him he should come in for follow-up of lab test results.

He says "It's positive, isn't it."

Fellow reiterates that is very important to speak in person.

He says "I know you have to say that but I think my test is positive." He reluctantly agrees to come the next morning to see her in the Adolescent Center.

Development of Adolescent as Health Consumer

- Respect adolescent's evolving autonomy
- Facilitate collaborative decision-making

Alderman, www.cdc.gov/std/treatment/Adolescent-Webinar-Slides-June-1-2011.pdf

Becoming a Surrogate Frontal Lobe

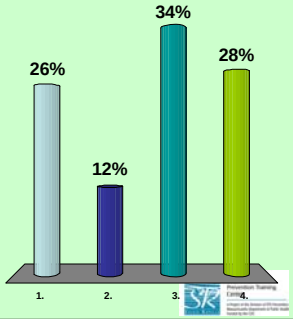
- You have to protect them, but if you overprotect, they never learn self-regulation
- Goal: create a relationship in which young people are willing to ***risk*** using us as a resource in their own change and growth

Livensparger, 13th NEAETC Annual Summit on HIV and Adolescents, 2010

Back to our case:

How many of you think he showed up the next day?

1. He showed
2. He didn't show, but called
3. He didn't show or call
4. He didn't show or call, and his cell was no longer in service



Approach to the Adolescent

Key Interview Strategies

- Assess developmental level
- Discuss confidentiality with adolescent/parent
- Appropriately ensure confidentiality, time alone
- Brief risk assessment at most visits
- Systems for follow-up of confidential results
- Make the teen comfortable
  - Developmentally appropriate questions
  - Non-judgmental
  - Poker face
  - Confidentiality
  - Spend time with the teen alone
  - Normalize

Alderman, http://www.cdc.gov/std/treatment/Adolescent-Webinar-Slides-June-1-2011.pdf
Nordt, Adolescent Visit, 2011

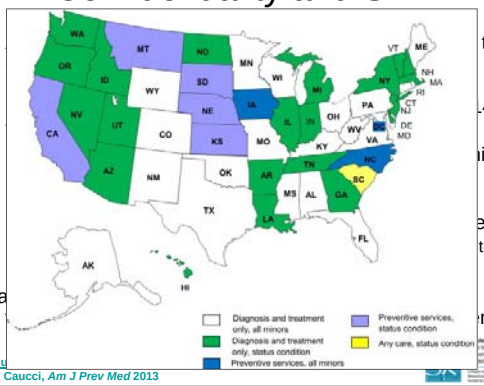
Confidentiality and STI*

- All 50 states and the District of Columbia allow minors to consent to STI services
  - Only 8 jurisdictions allow consent to preventive or prophylactic services
- 11 states require that a minor be a certain age (12 or 14) to consent
- 32 states include HIV in package of STI services to which minors may consent
- 18 states allow but do not require physicians to inform parents that a minor is seeking or receiving STI services
  - Exception: Iowa requires parental notification for positive HIV test

Nature of these health issues is such that some minors would choose to forgo treatment rather than seek parental consent.

www.guttmacher.org/statecenter/spibs/spib_MASS.pdf
Culp & Caucci, *Am J Prev Med* 2013

Confidentiality and STI*



Culp & Caucci, *Am J Prev Med* 2013

Exceptions to Provision of Confidential Health Services

- Suspected physical, sexual or emotional abuse
- At risk for harm to self or others
- Confidential reporting of STIs to health department

Alderman, www.cdc.gov/std/treatment/Adolescent-Webinar-Slides-June-1-2011.pdf

Barriers to Care

- Health care providers more likely to view structural barriers as important
  - Finances, transportation, family care (58%)
  - Substance abuse (49%)
- Patients more likely to describe emotional barriers as important
  - Fear of HIV medication side effects (82%)
  - Fear of people knowing (58%)
  - Stigma (55%)

We underestimate the impact of emotional vs. circumstantial barriers to testing, care, and treatment.

Seekins et al. XVIII Intl AIDS Conf, Vienna, Austria, 2010

Still the next day …

Fellow calls him, he answers, states he is feeling much better, and he doesn't want to come back.

Fellow reiterates that she herself will be present, that we have important results to share, we can work with him, inquires about his schedule the next day, and extracts a promise that he will show the next day.

5 Days Post-ED Visit (1)

Pediatric ID inpatient consult team is paged by front desk, fellow meets patient immediately after registration and he is roomed

Patient brings his best friend, a girl and fellow 18 y.o. to whom he is "out" and with whom we may share all information.

Ground rules:

- Confidentiality established up front
- Patient requests we not ask questions about his sexual history, and asks to keep visit short (complains of prior prolonged visits)
- Fellow agrees, states we will discuss plan shortly, but asks patient to describe a little more about his home life and what he might do this weekend, if the HIV test is positive versus negative

Additional history:

- Mother from Puerto Rico, patient born in U.S.
- Lives 2 blocks away with mom, one older brother, and one younger sister, with whom he is close, but not enough to discuss worries about HIV, nor is he "out" to them
- Dropped out of middle school

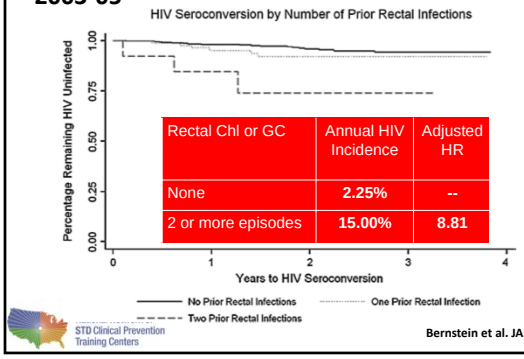
5 Days Post-ED Visit (2)

- Visit highlights
  - Discussion of chlamydia test results (transmission is possible although he is asymptomatic) and high HIV viral load in the absence of antibody/antigen testing
  - Encouragement to patient and his friend to develop a plan for the weekend (he plans *never* to have sex again, but particularly not this weekend; no SI/HI)
  - Once patient understands and agrees, fellow introduces the pediatric HIV team NP and ID attending who reinforce her messages (briefly)
- Nurse administers 1 g azithromycin for chlamydia
- Patient goes to lab

Not in time for this case, but useful for highest risk adolescents …

HIV PREVENTION INCLUDES PrEP FOR THOSE AT HIGHEST RISK FOR ACQUISITION

MSM in SF City Clinic
Diagnosed with Rectal Chlamydia or Gonorrhea
2003-05

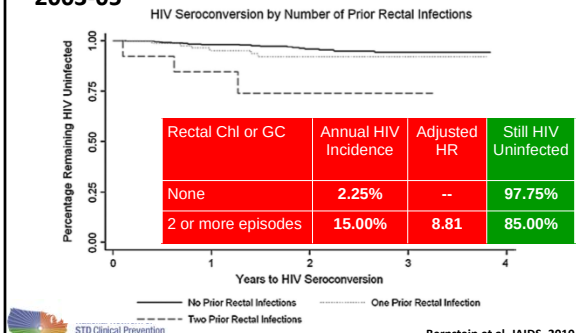


Rectal Chl or GC	Annual HIV Incidence	Adjusted HR
None	**2.25%**	--
2 or more episodes	**15.00%**	**8.81**

STD Clinical Prevention Training Centers

Bernstein et al. JAIDS, 2010

MSM in SF City Clinic
Diagnosed with Rectal Chlamydia or Gonorrhea 2003-05



Rectal Chl or GC	Annual HIV Incidence	Adjusted HR	Still HIV Uninfected
None	2.25%	--	97.75%
2 or more episodes	15.00%	8.81	85.00%

STD Clinical Prevention Training Centers

Bernstein et al. JAIDS, 2010

HIV Treatment as Prevention

Antiretroviral treatment should be offered to all HIV-infected persons not only to provide benefit to individual health but also to reduce transmission to sex partners.

HIV pre-exposure prophylaxis should be available to HIV-negative men and women who are sexually active or injecting illicit drugs who are at substantial risk of HIV infection.

NEW REFERENCE: **CDC, USPHS. Pre-exposure prophylaxis for the prevention of HIV infection in the U.S. – 2014. A Clinical Practice Guideline.**

http://www.cdc.gov/hiv/prevention/research/prep/

Prescribing PrEP: CDC Guidance for MSM, Heterosexual Couples, IDUs

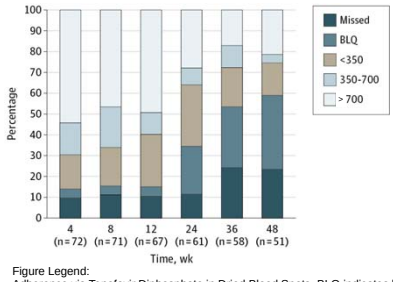
Component	Recommendation
Risk assessment	▪ PrEP indicated for those at high HIV risk ▪ FDA-approved for adults and adolescents weighing >=35kg
Eligibility	▪ HIV negative, adequate renal function
Dosing	▪ 1 tenofovir/emtricitabine tablet, once daily
Follow-up	▪ Testing for HIV/STI every 3 mos, even if asymptomatic ▪ Counseling on risk reduction and testing creatinine at 3 mos and then annually
Discontinuation	▪ PrEP not meant for lifelong administration but rather for periods of highest risk

CDC. MMWR 2011;60:65-68.
CDC. MMWR 2012;61:586-589.
CDC. MMWR 2013;62;463-465.

The JAMA Network

From: **Safety and Feasibility of Antiretroviral Preexposure Prophylaxis for Adolescent Men Who Have Sex With Men Aged 15 to 17 Years in the United States**

JAMA Pediatr. Published online September 05, 2017. doi:10.1001/jamapediatrics.2017.2007



Conclusions and Relevance: Adolescent Medicine Trials Network (ATN 113) enrolled a diverse sample of adolescent MSM at risk for HIV. Approximately half achieved protective drug levels during the monthly visits, but adherence decreased with quarterly visits. **Youth may need additional contact with clinical staff members to maintain high adherence.**

Figure Legend:
Adherence via Tenofovir Diphosphate in Dried Blood Spots. BLQ indicates below the lower limit of quantitation.

Date of download: 9/14/2017

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Epilogue (1)

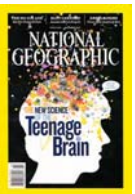
- **Visit #2 – 10d post-ED**
  - "Out" to family who accompany him to visit; brother already openly gay
- **No show – 17d post-ED visit**
- **Visit #3 – 3 wks post-ED visit**
  - Started on emtricitabine-tenofovir, atazanavir + ritonavir (with convincing)
  - Referred to psych for depression follow-up
- **Visit #4 – 7 wks post-ED visit**
  - Med compliance/tolerance assessed – despite jaundice, continues meds
- **Visit #5 – 3 mths post-ED visit**
  - Med compliance/tolerance assessed – jaundice resolved, few missed doses
  - Refused MDPH partner services & peer support group

Epilogue (2)

- **1 year later…**
  - Viral Load undetectable, CD4 500 (30%);
  - Secondary syphilis s/p treatment
  - precancerous changes on rectal pap smear with extensive genital warts pending excision
  - Continued struggles with meth use, unprotected oral sex and self-acceptance
- **1.5 years later…**
  - Viral Load undetectable, CD4 616 (27%), med compliance good
  - Extensive anal warts resected
  - Social situation:
    - Moved to suburbs
    - Still trying to obtain GED, unsure about employment
    - Last sexual encounter ~1/4 year ago, protected
    - Last meth use ~1/4 year ago, before move
    - Last THC use ~1 month ago (prior was daily or weekly use)
    - Has not yet accepted his attraction to males, intermittently struggles with guilt regarding his HIV status, no appts with psych & no psych meds

Questions

- Would you have done anything differently if he were 15 or 25 years old?
  - Concepts of early, mid and late adolescence
  - Work-in-progress being replaced by adaptive-adolescence theories



» **Love of novelty leads directly to useful experience; hunt for sensation provides the inspiration needed to "get you out of the house" and into new terrain**

» **Risk-taking occurs because more weight is given to payoff, particularly new social rewards/relationships, not because less weight is given to risk (risk-taking is necessary to move out of the home into less secure situations)**

» **Douglas Fields, NIH neuroscientist, "This makes the period when a brain area lays down myelin a sort of crucial period of learning—the wiring is getting upgraded, but once that's done, it's harder to change."**

RE-FRAME COUNSELING TO INCLUDE ALTERNATIVE [SAFER/HEALTHIER] RISKS YOUTH CAN TAKE

"Rather than trying to eliminate adolescent risk taking via abstinence programs or training in social skills or social norms – strategies that have not proven successful to date – a better tactic might be to reduce costs of adolescent risk taking by limiting access to particularly harmful risk-taking situations, while providing opportunities to engage in risky and exciting activities under circumstances designed to lessen changes for harm."

Spear LP, Adolescent neurodevelopment, *JAdolHealth*, 2013

Sexual Exploration

- We don't teach infants to crawl or walk by moving their limbs for them
  - although they are inefficient at first, this is something they have to do for themselves
- Of course, we want to minimize risk
  - *"if crawling is unsafe because the floor is dirty or littered with broken glass, the appropriate response is not to confine and restrict the child from crawling, but to clean up the mess."*

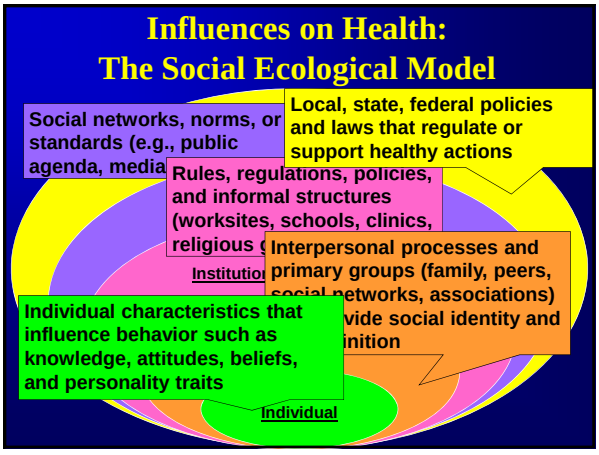
Bay-Cheng L et al. , "Not Always a Clear Path": Making Space for Peers, Adults, and Complexity in Adolescent Girls' Sexual Development," from *Sexualization of Girls and Girlhood,* Zurbriggen EL and Roberts T-A, eds., Oxford University Press, 2012.

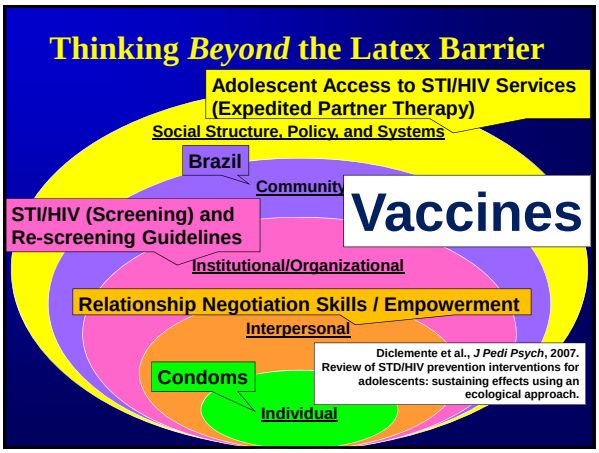
Adolescent STI/HIV Prevention

- ☑ "Clean up the floor" by encouraging immunizations, including HPV, HAV and HBV, and offering HIV PrEP e.g. to young MSM at high-risk for HIV acquisition
- ☑ Provide information (STI/HIV infection, transmission, implications of infection, screening, prevention) to all adolescents as part of sexual health care
- ☑ Integrate sexuality education into clinical practice

  USPSTF recommends hi-intensity STD prevention behavioral counseling for all sexually active adolescents
- ☑ Re-channel adolescent risk-taking into safer avenues

Influences on Health: The Social Ecological Model





Summary

- Review key interview/policy strategies for adolescents/young adults
  - Confidentiality! Access to Care!
- Understand adolescent risk-taking in context of normal adolescent development
- Use normative adolescent development to inform adolescent/young adult STI/HIV prevention strategies
  - Go biomedical/structural: – make healthy choices default normal choices (re-screening prior STI positives, HIV PrEP)
  - Go with the flow: re-channel risk-taking
- Contextualize strategies in social ecological and health impact models