



# HIV – Where we are now? And where we want to be?

Jessica Leston

HIV/STI/HCV Clinical Programs Manager

Northwest Portland Area Indian Health Board/ National IHS HIV Program

# Overview

- HIV epidemiology and trends
- Evolution of HIV screening recommendations
  - Prenatal HIV screening in HIS
  - Universal HIV screening in IHS
- Special topics in HIV
  - Prevention, acute HIV syndrome, PEP, PrEP, rapid testing, gaps

# Acknowledgements

- Brigg Reilly
- Dr. Peter Leone
- California Area IHS
- CCUIH

# New Cases of HIV, USA, AI/AN

(CDC surveillance, 2010-2014)

- Approximately 44,000 new cases/year in the USA
- HIV incidence among AI/AN patients has increased from 174 cases (7.9/100,000) in 2010 to 222 in 2014 (9.5/100,000)
- In 2014, an estimated 84% of new HIV cases were transmitted via sexual contact among Men Who Have Sex with Men (MSM)
- AI/AN persons living with HIV/AIDS (PLWHA) have the lowest proportion of survival after 12, 24, and 36 months when compared to other age-matched groups

Centers for Disease Control and Prevention. *HIV Surveillance Report, 2014*; vol. 26.

<http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2015. Accessed March 28, 2016

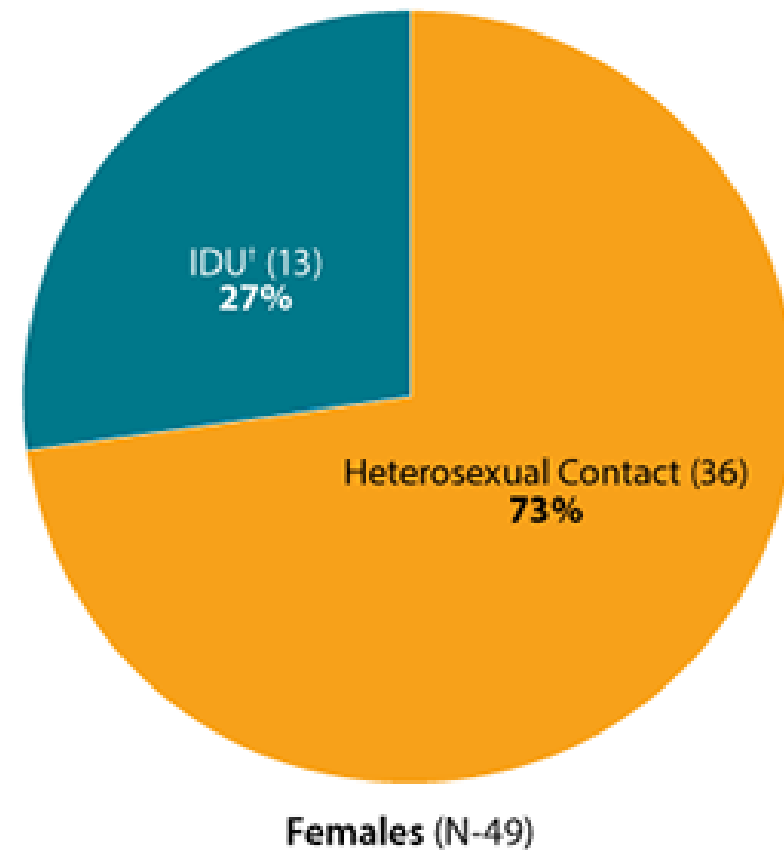
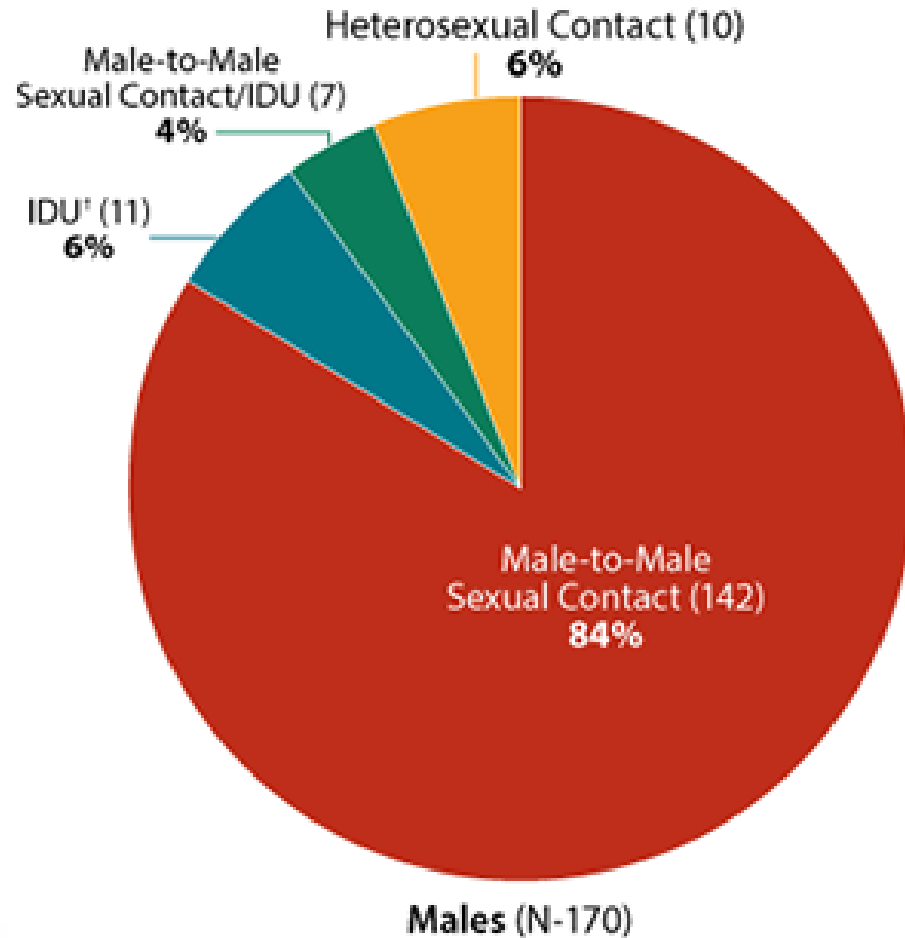
# Death rates

- Death rates from HIV among AI/AN about half of Whites 1990-1998
- Death rates from HIV among AI/AN about double Whites 1999-2008
- Late Diagnosis, poor linkage to care possible factors for change

## **Death Rates From Human Immunodeficiency Virus and Tuberculosis Among American Indians/Alaska Natives in the United States, 1990–2009**

Reilley, B., Bloss, E., Byrd, K. K., Iralu, J., Neel, L., & Cheek, J. (2014). Death rates from human immunodeficiency virus and tuberculosis among American Indians/Alaska Natives in the United States, 1990–2009. *American journal of public health, 104*(S3), S453-S459.

# Main Transmission routes, Indian Country



# Terminology

***Diagnostic testing:*** performing an HIV test based on clinical signs or symptoms

***Targeted testing:*** performing an HIV test on subpopulations of persons at higher risk based on behavioral, clinical or demographic characteristics

***Screening:*** performing an HIV test for all persons in a defined population

***Opt-out screening:*** performing an HIV test after notifying the patient that the test will be done; consent is inferred unless patient declines

# Screening-

## When is it the best course of action?

- Disease is often asymptomatic
- Early detection bestows benefits on patient (and community in infectious disease)
- Test is reliable, noninvasive, inexpensive
- Screening does not replace risk-based testing/clinical judgment



# HIV Screening –1996

- Antibody test developed 1996
- No effective treatment
- Blood donors screened universally
- Transfusion-related HIV effectively stopped

# HIV Screening – 2001

- Clinical trials show dramatic decrease in mother to child transmission with antiretroviral drug reduces transmission from 15% to 8%. In conjunction with other interventions (caesarean section, no breastfeeding), transmission reduced to 1-2%
- Prenatal HIV screening recommended. Mother to child transmission effectively stopped for women reaching prenatal care.

# Screening in Pregnancy

- Opt-out rapid testing with option to decline for women with undocumented HIV status in L&D
- Initiate ARV prophylaxis on basis of rapid test result
- Rapid testing of newborn recommended if mother's status unknown at delivery
- Initiate ARV prophylaxis within 12 hours of birth on basis of rapid test result

# HIV Screening – 2006

- **National recommendation for at least one HIV test for 13-65 y.o. (CDC) or 15-64 (USPSTF)**
- HIV can be effectively treated/managed as a chronic disease
- Most patients do not disclose risk, have no symptoms
- Discovery of serostatus reduces risky behavior
- Adherence to treatment/low viral load stops transmission

# Missed Opportunities: South Carolina

- 4,315 reported HIV cases
- 3,157 (73%) made 20,271 health-care visits prior to their first positive HIV test
- Diagnosis codes at 15,648 (77%) of prior visits would not have prompted an HIV test
- 1,784 (42%) developed AIDS within 1 year
- 1,302 (73%) made 7,988 previous health-care visits (*median 4 per patient*)
- 6,303 (79%) were visits to emergency departments
- Diagnosis codes for 6,277 (79%) of prior visits would not have prompted an HIV test

*MMWR 55:47, December 1, 2006*

# National Screening Guidance

**CDC 2006** – Screen **all** Americans age 13-64

**American College of Physicians 2008** – Screen **all** Americans age 13 and above

**American Academy of Pediatrics 2011** – Screen age 16-18 if prevalence > 0.1%

**US Preventive Service Task force 2012** – Screen **all** Americans age 15-65

# Routine, voluntary HIV screening for all

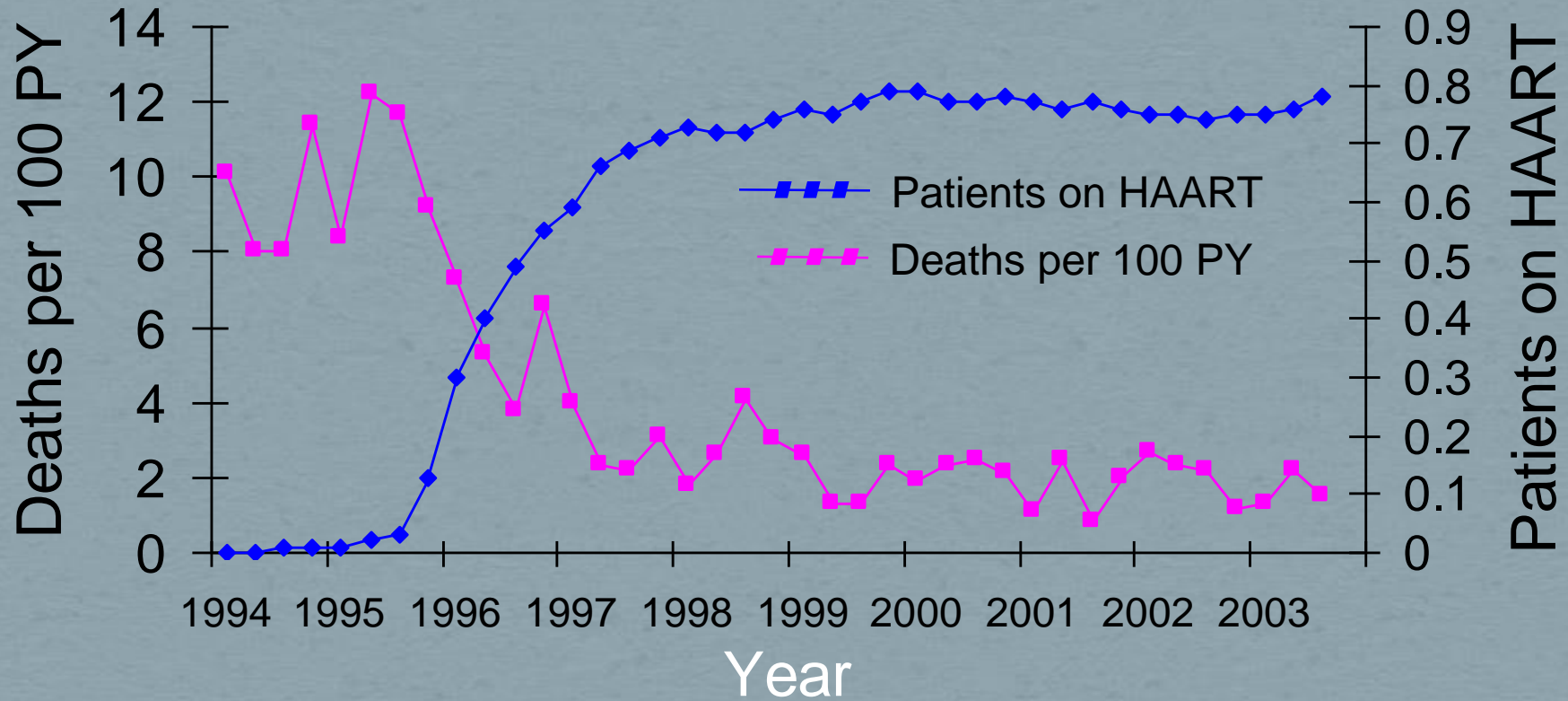
- Persons 13-64 in health care settings, not based on risk
- All patients with TB or seeking treatment for
- STDs should be screened for HIV
- Repeat HIV screening of persons with known risk at least annually

# Screening is voluntary

- Inform patients orally or in writing (general medical consent) that HIV testing will be performed unless they decline.
- Arrange access to care, prevention, and support services for patients with positive HIV test results



# Treatment Is Effective



Mortality and HAART Use Over Time  
HIV Outpatient Study, CDC, 1994-2003

## Screening: HIV vs Cervical Cancer

	HIV	Cervical Cancer
Annual new cases	56,300	11,270
Deaths	15,564	4,070

# Case Study 1

- Female, 35 y.o. in 15 year monogamous relationship
- Complained of persistent headache, generalized weakness
- Recent asthma and diabetes diagnosis
- Labs show elevated glucose

# Case Study (con't)

- Over next 6 months patient had 10 more visits
- Persistent headache, weakness
- ER multiple times, clinic visits, external hospital overnight admission
- Workups revealed nothing notable

# Case Study (con't)

- Patient diagnosis:
  - Pain seeking behavior
  - Depression
  - Non-compliant with medical recommendations

# Case Study (con't)

- Seven months after onset of symptom, patient referred to external neurologist consult
- Diagnosis from neurologist
  - Cryptococcal meningitis resulting from AIDS

# HIV Screening - Recap

- Goal of new CDC recommendations to increase number who know HIV+ status
- People do not perceive risk
- Clinicians do not offer test
- Stigma more with “identified” risk and infection less so with testing itself
- Knowing HIV+ status can reduce transmission by:
  - Behavior change
  - Addressing Co-morbidity
  - Reducing viral load

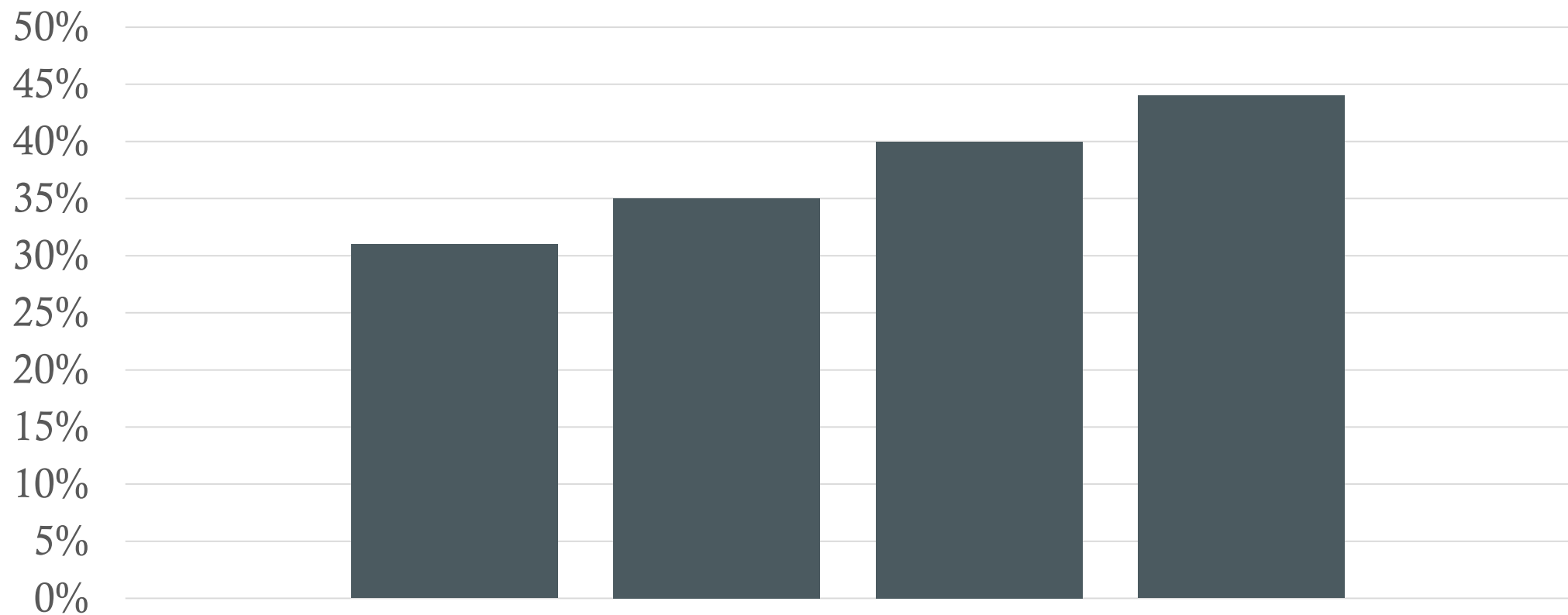
MMWR 55:1-7, 2006

Inungu J. AIDS Patient Care STDs 16:293, 2002

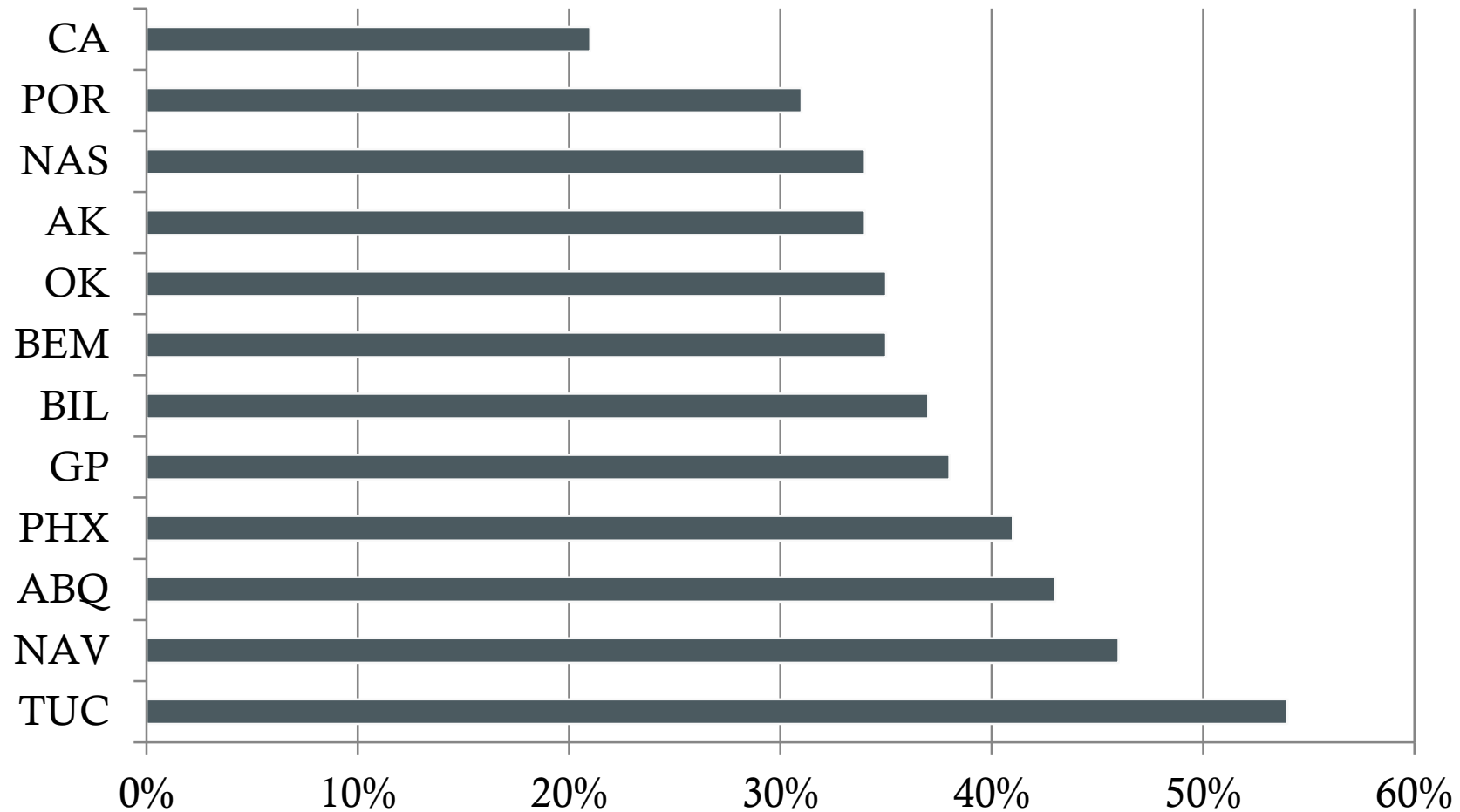
# HIV Screening Trends



# HIV Ever Screened, 13-64 y.o., IHS, 2011-2015



# HIV Ever Screened, 13-64 y.o.



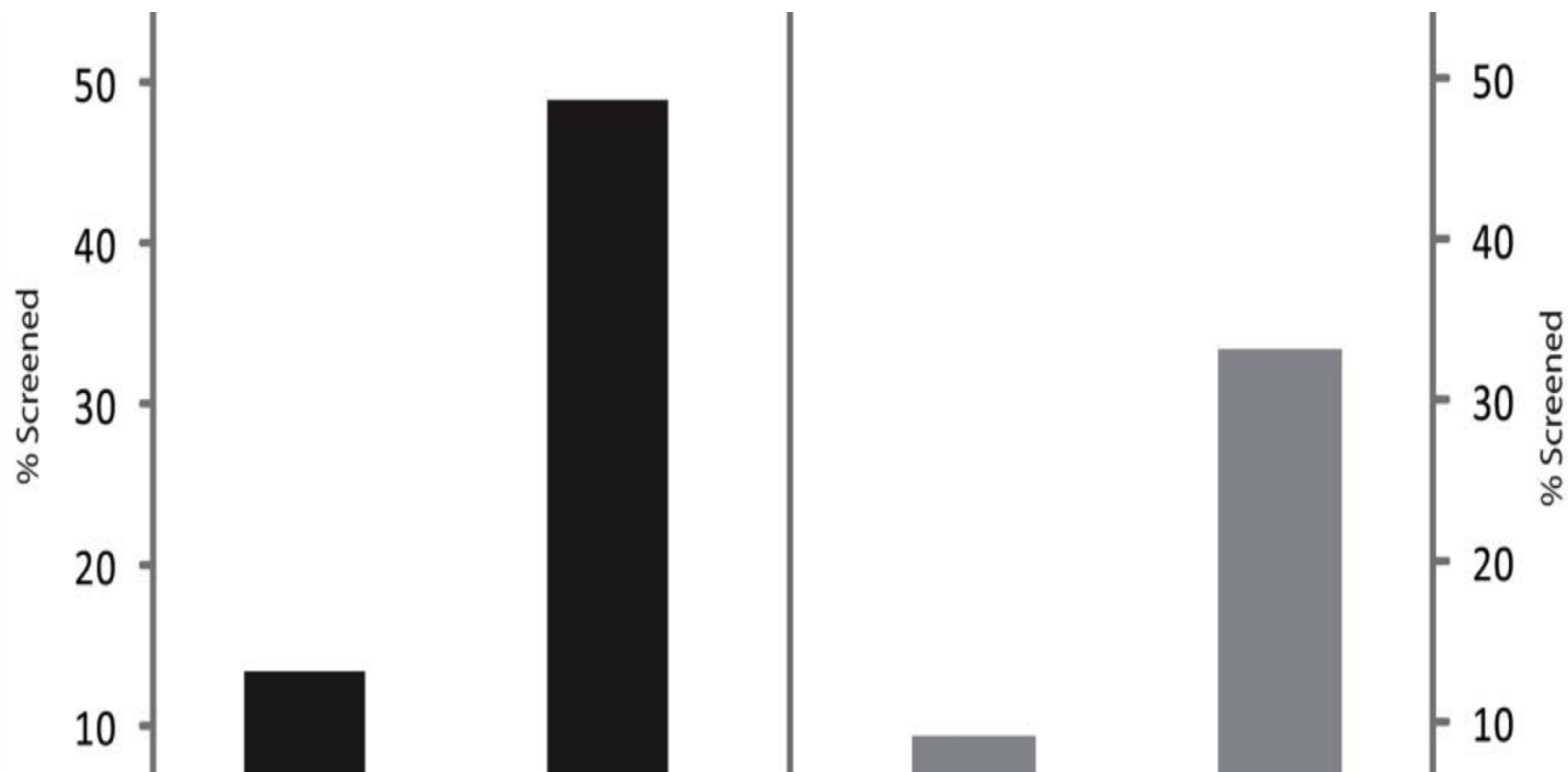
# Implementation of National HIV Screening Recommendations in the Indian Health Service

*Journal of the International Association of Providers of AIDS Care (JIAPAC) (2015)*

**Results:** A total of 51 (84%) of 61 facilities were interviewed. In univariate analysis, factors that were correlated with higher rates of HIV screening were having **an HIV screening standing order** (unadjusted odds ratio [UOR] 8.7, 95% confidence interval [CI] 2.0-37.3), **sexually transmitted disease (STD) screening standing order** (UOR 5, CI 1.1-21.7), having **an HIV ECR in place for a year or longer** (UOR 10.2, CI 2.8-37.5), and **inclusion of both providers and nurses in offering HIV screening** (UOR 4.8, CI 1.4-16.7). In multivariate analysis, ECRs (adjusted odds ratio [AOR] 9.1, 95% CI 1.8-45.1) and STD standing orders (AOR 7.4, 95% CI 1.1-51.0) remained significantly associated with higher HIV screening.

**Conclusion:** Policy and practice interventions such as ECRs and standing order/testing policies and delegation of screening are correlated with high HIV screening, are scalable across health networks, and will be used for improving other infectious disease screening indicators in such as STD and hepatitis C.

# Clinical Reminder Impact, POR Area Clinic



**PRENATAL CARE:**

**FIRST PN VISIT:**

CBC  
1 HOUR GLUCOLA  
HIV (INFORMED REFUSAL)  
U/A AND URINE C&S  
URINE GC & CHLAMYDIA  
PRENATAL PROFILE (QUEST #15191):  
BLOOD TYPE  
RH FACTOR  
ANTIBODIES  
RUBELLA TITER  
RPR  
HBsAg

Pap done at first Dr. PN

**EVERY VISIT:**

U/A only if sx

**16-20 WEEKS:**

OFFER Quad-Test (MAFP)

**28 WEEKS:**

CBC  
RPR  
IF RH (-): ANTIBODY SCREEN  
1 HOUR GLUCOLA \*\*\*  
URINE CULTURE \*\*\*  
URINE GC & CHLAMYDIA \*\*\*

**35-36 WEEKS:**

GROUP B STREP VAGINAL/RECTAL SWAB

**POSTPARTUM CHECK:**

HCT  
PAP SMEAR  
URINE GC & CHLAMYDIA  
HCG\*\*\*\*

\*\*\* Send pt to lab prior to seeing provider

**WOMEN'S HEALTH:**

**WOMEN'S EXAM AGE 23-39:**

PAP SMEAR (schedule prn)  
LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
CBC, RPR, GLUCOSE, HIV Q 2yrs

**WOMEN'S EXAM AGE 40-49:**

PAP SMEAR (schedule prn)  
MAMMOGRAM REFERRAL (q 2 years)  
LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
RPR, GLUCOSE, HIV Q 2 yrs

**WOMEN'S EXAM AGE 50-64:**

PAP SMEAR (schedule prn)  
MAMMOGRAM REFERRAL  
LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
RPR, GLUCOSE, HIV q 2 yrs

**WOMEN'S EXAM AGE 65+:**

MAMMOGRAM REFERRAL  
LIPID PROFILE q 5 YEARS  
GLUCOSE

**MEN'S HEALTH:**

**MEN'S EXAM AGE 23-39:**

LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
RPR, GLUCOSE, HIV Q 2 yrs

**MEN'S EXAM AGE 40-49:**

LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
RPR, GLUCOSE, HIV Q 2 yrs

**MEN'S EXAM AGE 50-64:**

LIPID PROFILE q 5 YEARS  
GC/CHLAMYDIA  
RPR, GLUCOSE, HIV Q 2yrs

**MEN'S EXAM AGE 65+:**

LIPID PROFILE q 5 YEARS  
GLUCOSE

**WELL CHILD CHECKS:**

**10-14 DAYS:**

PKU

**9-15 MONTHS OLD:**

HCT  
Lead Screen (at 1 and < 2 yrs)

**HEADSTART PHYSICAL:**

HCT

**SPORTS AND ADOLESCENT PHYSICAL**

**EXAMS:**

GC/CHLAMYDIA  
RPR, HIV if over age 13yrs

**DIABETES:**

**INITIAL VISIT AND ANNUALLY:**

U/A, URINE MICROALBUMIN  
CMP  
LIPID PROFILE (Fasting preferable)  
HEMOGLOBIN A1C \*\*\*  
EKG (q 2 yrs)  
CBC (only on Initial visit)

**EACH VISIT q 3 MONTHS:**

HEMOGLOBIN A1C \*\*\*

**ACUTE ALCOHOL WITHDRAWAL**

**/ REHAB PX:**

CMP (STAT)  
Mg++ (STAT)  
LIVER PROFILE (ASAP)  
AMYLASE/LIPASE (ASAP)  
U/A, HCG (ASAP)

**ANNUAL:**

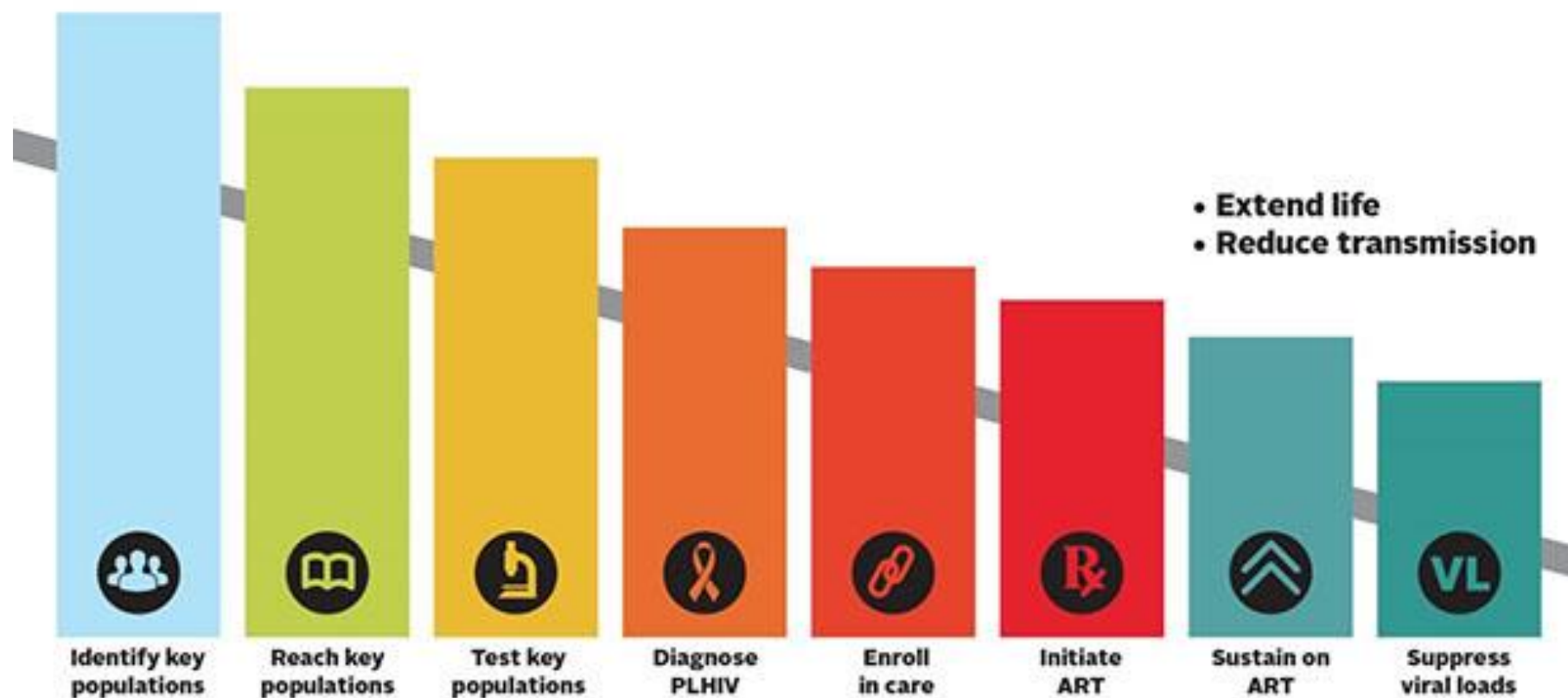
HEPATITIS PANEL,  
RPR, HIV  
GC/CHLAMYDIA  
PPD

\*\*\* Send pt to lab prior to seeing provider

# Patient flow

- HIV testing included as part of general medical consent
- HIV test offered as part of national, age-based recommendation
- HIV test offered by nurse as with many other screenings
- Patient can ask questions or decline

# The **LINKAGES** Prevention, Care and Treatment Cascade





# Special Topics

More evidence based HIV prevention strategies:

- HIV testing ✓
- STI screening and testing
- Condom access and distribution
- Media Campaigns
- Health education and risk Reduction Counseling
- Needle and syringe exchange
- ART for prevention
- Post-exposure prophylaxis (PEP)
- Pre-exposure prophylaxis (PrEP)



# STI Screening

- Chlamydia (CT) *Measure in RPMS*
- Gonorrhea often bundled with CT
- Syphilis
- HIV follow up of STI+ patient *Measure in RPMS*
- HCV although rarely sexually transmitted *Measure in RPMS*

# Condom Access



# Prevention – Social Media

I KNOW MY BODY.  
I KNOW MY STATUS.

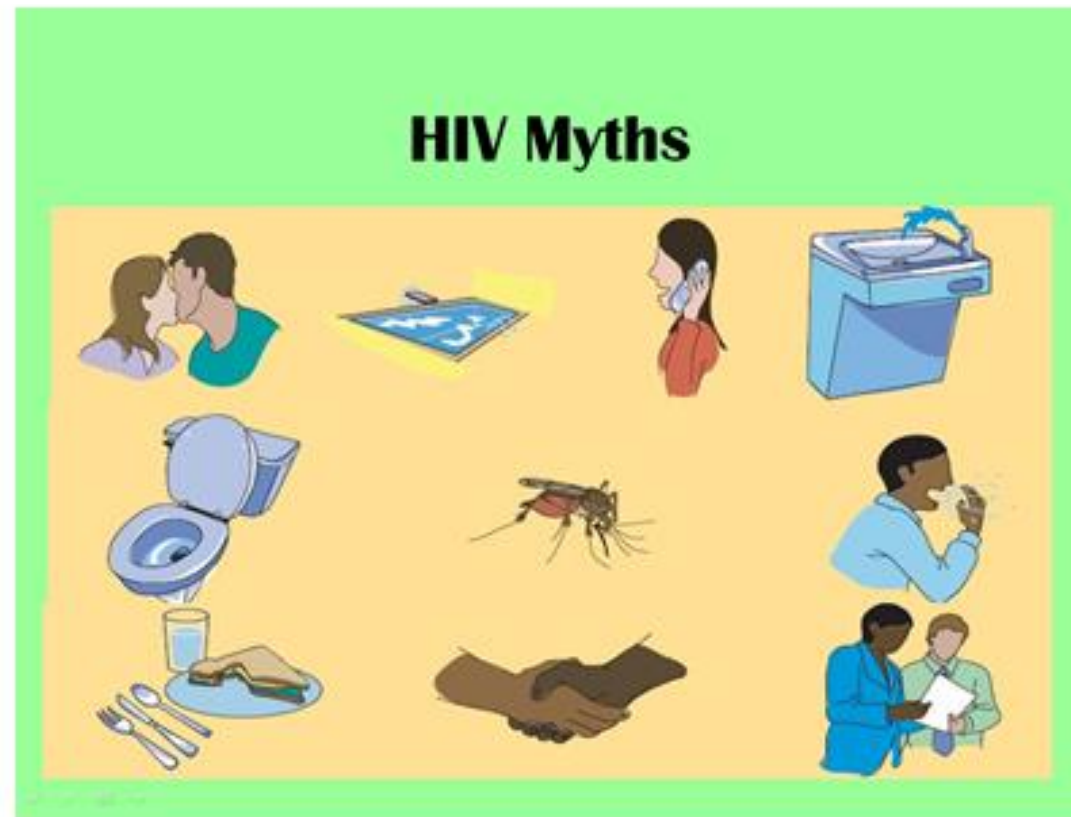
**NATIVE**  
TESTED. PROUD.

American Indian and Alaska Natives and Native Hawaiians are 2-3 times more likely to get HIV than anyone else. We're working to make sure everyone has the tools and information they need to stay safe. Visit [www.gettested.gov](http://www.gettested.gov) for more information and to find a testing site near you.

**WE R NATIVE. WE R PROUD.**  
WE ARE STD/HIV TESTED.

Getting tested for STDs/HIV can protect you and those you love. Find your nearest testing site at [GetTested.gov](http://GetTested.gov) or [www.gettested.gov](http://www.gettested.gov). Learn more at [www.gettested.gov](http://www.gettested.gov) or [www.gettested.gov](http://www.gettested.gov).

# Prevention - HIV 101 Flip Chart





# Open a dialogue about sexual health – and health education/risk reduction counseling

- Get to know your patient and her/his risk(s)
- Ask lots of embarrassing questions
- Educate about sign and symptoms of STI/HIV
- Don't forget about drug use around sex
- Don't forget about shared drug paraphernalia

# Quick Tips

- Avoid preface statements before inquiring
- Make sure definition of “sexually active” is clear
- It’s OK to use colloquial terminology
- Standard brief history:
  - Do you have sex with men, women or both?
    - For MSM: Do you top, bottom, or both?
  - Are you in a relationship with anyone?
    - Do you have sex with anyone else?
  - How often do you use condoms for...?

# Needle and Syringe Exchange

NEWS SPORTS LIFE MONEY TECH TRAVEL OPINION 61° CROSSWORDS ELECTIONS 2016 OLYMPICS VIDEO MORE

## Funding ban on needle exchanges effectively lifted

Laura Ungar, USA Today 7:28 p.m. EST January 7, 2016

1135  
23  
3



(Photo: The Courier-Journal)

**f 1135** CONNECT **t** TWEET **in 23** LINKEDIN **3** COMMENT **e** EMAIL **+** MORE

Congress effectively lifted the nation's long-standing ban on federal funding for needle exchange programs, which allow intravenous drug addicts to trade dirty syringes for clean ones in the hope of preventing disease.

The measure was quietly tucked into the omnibus spending package signed by President Obama last month. Though federal funds still

# Post Exposure Prophylaxis (PEP)

- The use of therapy to prevent infection following exposure to pathogen
- Types of exposure include: percutaneous (needlestick), splash, bite, sexual
- For health-care workers, PEP is commonly considered for exposures to HIV and HBV
- Exposures common – 56 documented cases of HCW contracting HIV from exposures; 138 other possible cases\*
- Area of considerable concern but little data\*

\*MMWR June 29, 2001 / 50(RR11);1-42



# Warmline PEP

- Via University of California San Francisco
- **Call for a Phone Consultation**
- **(888) 448-4911**  
9 a.m. – 2 a.m. EST,  
Seven days a week

# Acute HIV

- 40-90% develop symptoms of Acute HIV
- Signs and symptoms typically begin 1-4 weeks following exposure
- 50%-90% with symptoms seek medical care
- Of those diagnosed with Acute HIV, 50% of patients seen at least 3 times before diagnosis

*Kahn et al, NEJM 1998*

*Weintrob et al, Arch Int Med 2003*

# Clinical Syndrome of Acute HIV

- Providers considered acute HIV for 16% of patients who sought care
- Estimated Prevalence:
  - 1% of persons with symptoms and  $\geq 1$  risk factor
  - 0.66% of ambulatory visits for fever (age 13-54)
  - 0.5% of ambulatory visits for rash (age 13-54)
- Common Mis-diagnoses: mononucleosis, rocky mountain spotted fever, strep, influenza, “viral illness,” secondary syphilis

# What is Pre-Exposure Prophylaxis (PrEP)?

## **Pre-exposure prophylaxis**

Use of anti-HIV medications **before** an exposure, to reduce the risk of becoming infected

**Tenofovir** is the most studied agent for PrEP

- Pharmacokinetics allow infrequent dosing
- Few drug-drug interactions
- Safe and well tolerated
- Resistance less likely

# Concept rooted in 4 lines of evidence



## Five major studies demonstrated PrEP's preventive efficacy across risk groups

Study	ARV Used	Frequency	Group
CAPRISA 004	Tenofovir vaginal gel	Before & after sex	Heterosexual women
iPrEx	Truvada oral	Daily	MSM & transwomen
Partners PrEP	Tenofovir & Truvada oral	Daily	Heterosexual discordant couples
TDF2	Tenofovir & Truvada oral	Daily	Heterosexual men & women
Bangkok Tenofovir Study	Tenofovir oral	Daily	Injection drug users

# CDC PrEP Guidance: For Whom Is PrEP Recommended?

Daily oral PrEP is recommended for adults at **substantial risk** of acquiring HIV infection:

- Sexually active MSM
- Heterosexually active men and women
- Injection drug users

	MSM	Heterosexual Women and Men	IDUs
Detecting substantial risk of acquiring HIV infection	<ul style="list-style-type: none"> <li>• HIV-positive sexual partner</li> <li>• Recent bacterial STI</li> <li>• High number of sex partners</li> <li>• History of inconsistent or no condom use</li> <li>• Commercial sex work</li> </ul>	<ul style="list-style-type: none"> <li>• HIV-positive sexual partner</li> <li>• Recent bacterial STI</li> <li>• High number of sex partners</li> <li>• History of inconsistent or no condom use</li> <li>• Commercial sex work</li> <li>• In high-prevalence area or network</li> </ul>	<ul style="list-style-type: none"> <li>• HIV-positive injecting partner</li> <li>• Sharing injection equipment</li> <li>• Recent drug treatment (but currently injecting)</li> </ul>

# PrEP

- <http://www.cdc.gov/hiv/pdf/guidelines/PrEPguidelines2014.pdf>
- Studies have shown that PrEP reduces the risk of getting HIV from sex by more than 90% when used consistently. Among people who inject drugs, PrEP reduces the risk of getting HIV by more than 70% when used consistently.
- Daily dose of Truvada, adherence is key, not a Plan B type of intervention
- Diabetes analogy: exercise and diet preferable intervention, but medication is also an essential response from provider

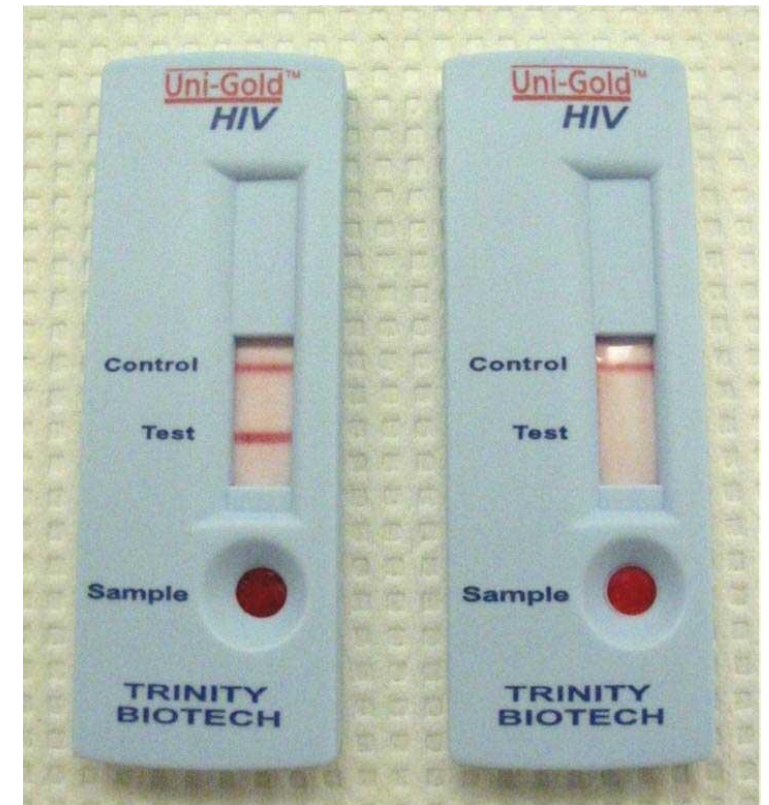


# PrEP

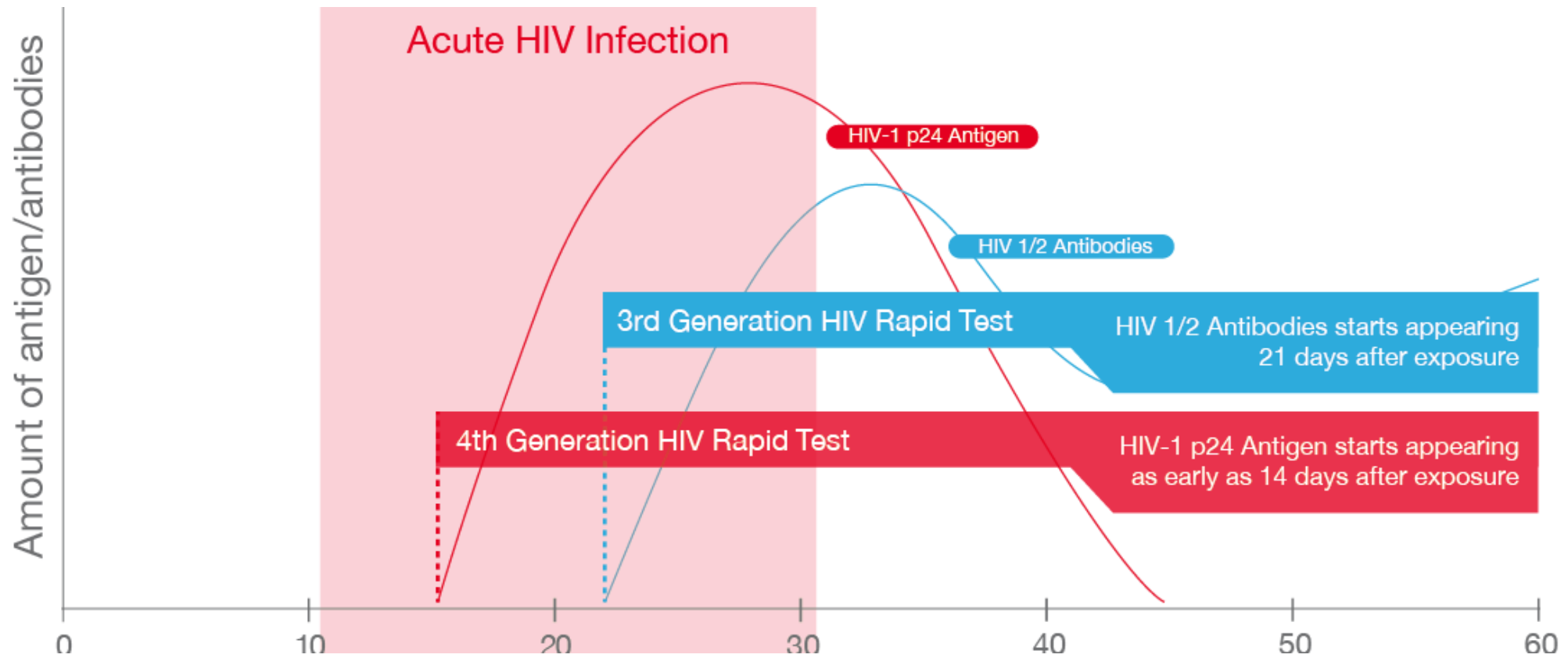
- Currently there are more questions than answers – That is ok
- PrEP has enormous potential as a part of our prevention toolkit
- If:
  - We are able to easily identify those at highest risk
  - Cost issues are addressed
  - It is made part of a spectrum of prevention services

# Rapid testing

- Many options, easy to use, CLIA waived, POC
- Most SUs using conventional testing due to ease of bundling with other routine serum tests
- Community based testing, PEP situations, last minute prenatal patients, patient with low probability of returning for results, are examples of special situations that may be best suited to rapid testing
- Other rapid testing options: HCV, Syphilis



# 4<sup>th</sup> Generation Testing



# Gaps – additional considerations

- We aren't testing enough men
- High screening sites in IHS starting to plateau at 65%-70%
- ER, UC often only point of patient contact
  - Determine who responsible for HIV+ test follow up
  - Consider 4<sup>th</sup> generation testing for acute HIV
  - At a minimum, more aggressive consideration of HIV as differential dx

# Gaps – additional considerations

- **Stigma**—patients can still endure severe stigma which can lead to housing and other crises. If HIV awareness in your community needs improvement we can work with your CHRs and tribal health programs
- **Injecting drug use**—increasing use of injecting prescription drugs and opioids, can assist with expertise on prevention among injecting drug users, overdose prevention, and other harm reduction options to reduce morbidities associated with injecting

# We cannot test and treat our way out of this epidemic

- Address Contextual/Structural issues
- Health Care/ Public Health reform
- Continue to expand HIV testing but must strengthen linkage to care
- Sexual Health and not Sexual Disease
- Comprehensive sexual health education
- Rights-based (Support same gender unions, etc)
- Use social network for prevention education and testing

# How we can help

- Clinical training as needed on 1) discussing HIV+ test results 2) management and linkage to care, 3) clinical preceptorships
- Technical assistance on screening: deployment and use of clinical reminder, sample standing orders and testing policies
- Providing your SU screening data for trends and patient lists of untested active clinical population
- Patient education materials

# We need your help

- Best practices and streamlining of screening practice examples come from the field
- If you have an example we can learn from on any aspect of your HIV program in Indian Country, please share it with us



# Clinical Care: Training Providers/Nurses/Pharmacists/Techs

- American Academy of HIV Medicine
- AIDS Education Training Center
- Mini-Residency
- ACRN certification for nurses
- PACT training from Partners in Health/NAIHS
- IHS HIV Project ECHO telemedicine conference

# IHS HIV Project ECHO

## **Monthly telemedicine telemedicine conference**

- Sponsored by University of NM
- Uses video conferencing with ZOOM software
- Twenty minute didactic talk re HIV care
- Participants present 2-3 active cases
  - HIV experts discuss the case and offer management advice
  - HIPAA adherent
  - Sessions recorded
  - CME offered



# Thank you

*“Tell me and I’ll listen. Show me and I’ll watch. Involve me and I’ll learn.” – Teton Lakota*