

NIDA's AIDS Research Program: Priorities and Programs Update

Jacques Normand, Ph.D.

Director, AIDS Research Program

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U.S. Department of Health and Human Services
National Institutes of Health
National Institute on Drug Abuse

Objectives

- Brief overview of NIDA AIDS portfolio and budget
- Where we have been
 - Programmatic Profile
 - Recent Initiatives
- Where we are going
 - Expand Prevention

Overview of NIDA AIDS Portfolio and Budget

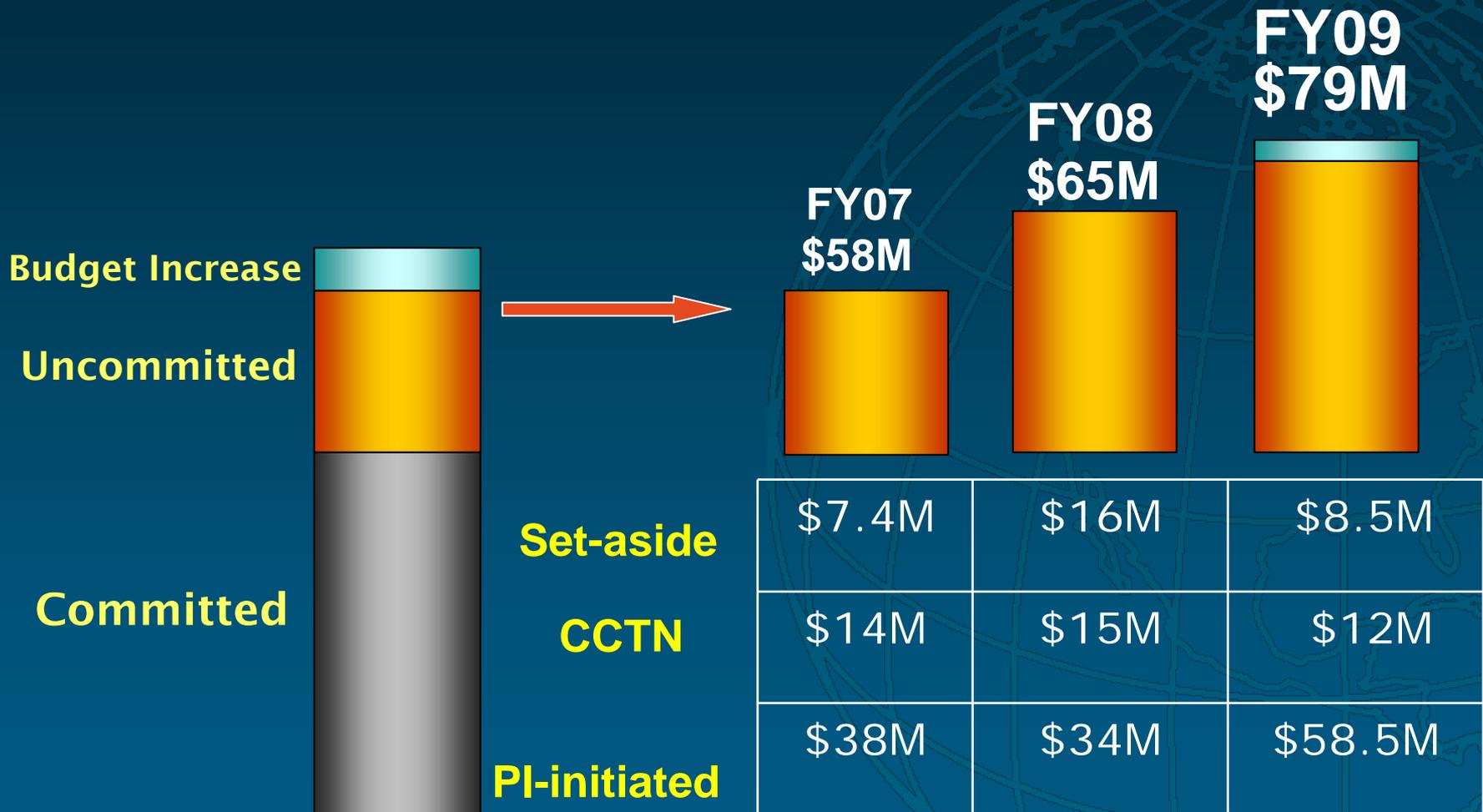
NIDA's FY08 Funding by OAR Research Areas of Emphasis

1. Natural History and Epidemiology	\$45M
2. Etiology and Pathogenesis	\$34M
3. Microbicides	\$1.8M
4. Vaccines	\$2.4M
5. Behavioral and Social Science	\$195M
6. Therapeutics	\$7.4M
7. Training, Infrastructure, and Capacity Building	\$6.6M
8. Information Dissemination	\$1.6M

FY08 AIDS Funding by NIDA Divisions

DPMC	\$50M
DESPR	\$108M
DCNBR	\$56M
DBNBR	\$28M
CCTN	\$12M
IRP	\$12M

HIV/AIDS Funds Available in FY07–FY09



Where We Have Been

Recent Initiatives

Programmatic Profile

Initiatives FY08

- Avant-Garde
- A-START
- International R21
- CRDF Small Grants
- Non-Injection Drug Use
- CTN032 HIV T&C in Drug Tx
- Criminal Justice
- Long-Acting Sustainable Therapies

Results of Recent International Initiatives

- R21 RFA
 - 6 Behavioral & Social Sciences (3 Prevention)
 - 3 Epidemiology & Natural History
 - 2 Etiology & Pathogenesis
 - China 3, Mexico 1, Taiwan 1, Kyrgyzstan 1, Cambodia 1, Tanzania 1, Bulgaria 1, Russia 2
- CRDF funded 2 small grants—1 in Estonia & 1 five-country collaboration

Initiatives FY09

- Avant-Garde
- A-START
- IAS/NIDA Fellowship
- Criminal Justice
- Long-Acting Therapies
- PA Smoking and HIV
- Neuropathogenesis in the Current HAART Era
- GALT Supplement
- CTN 032 STD Clinics

Current HIV Portfolio

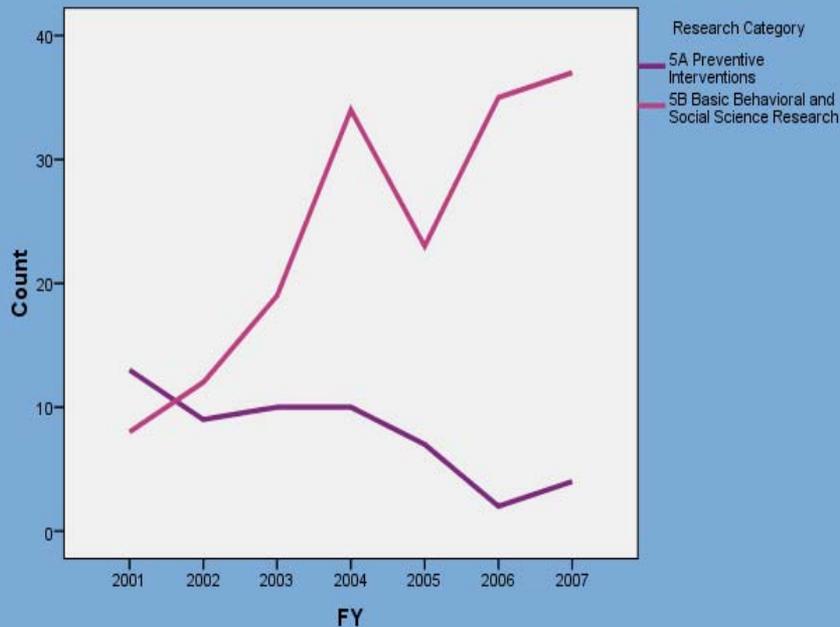
- Predominant Areas and Trends
 - Epidemiology largest area
 - Prevention large but has been decreasing
 - Basic biomedical increased by about 25%
 - Natural history of HIV/AIDS
 - Medical consequences of HIV/AIDS and co-infections

Current HIV Portfolio (cont.)

- Expand Basic Biomedical Portfolio
 - Avant-Garde (2 Basic and 1 Therapeutics/Prevention)
 - HIV Viral and Host Genetics FY07 RFA
 - Proteomics FY07 P20 RFA
 - GALT Supplement
 - Epigenetics RFA
 - Stimulus Supplement on CNS effects (e.g., neurocognitive impairment) of substance abuse and HIV/SIV infection including acute and early infection stages
 - IRP HIV new projects
 - Acute infection in IDUs

Behavioral Social Sciences

Figure 2: Emphasis Area 5, Categories A and B by Year



Problem Because:

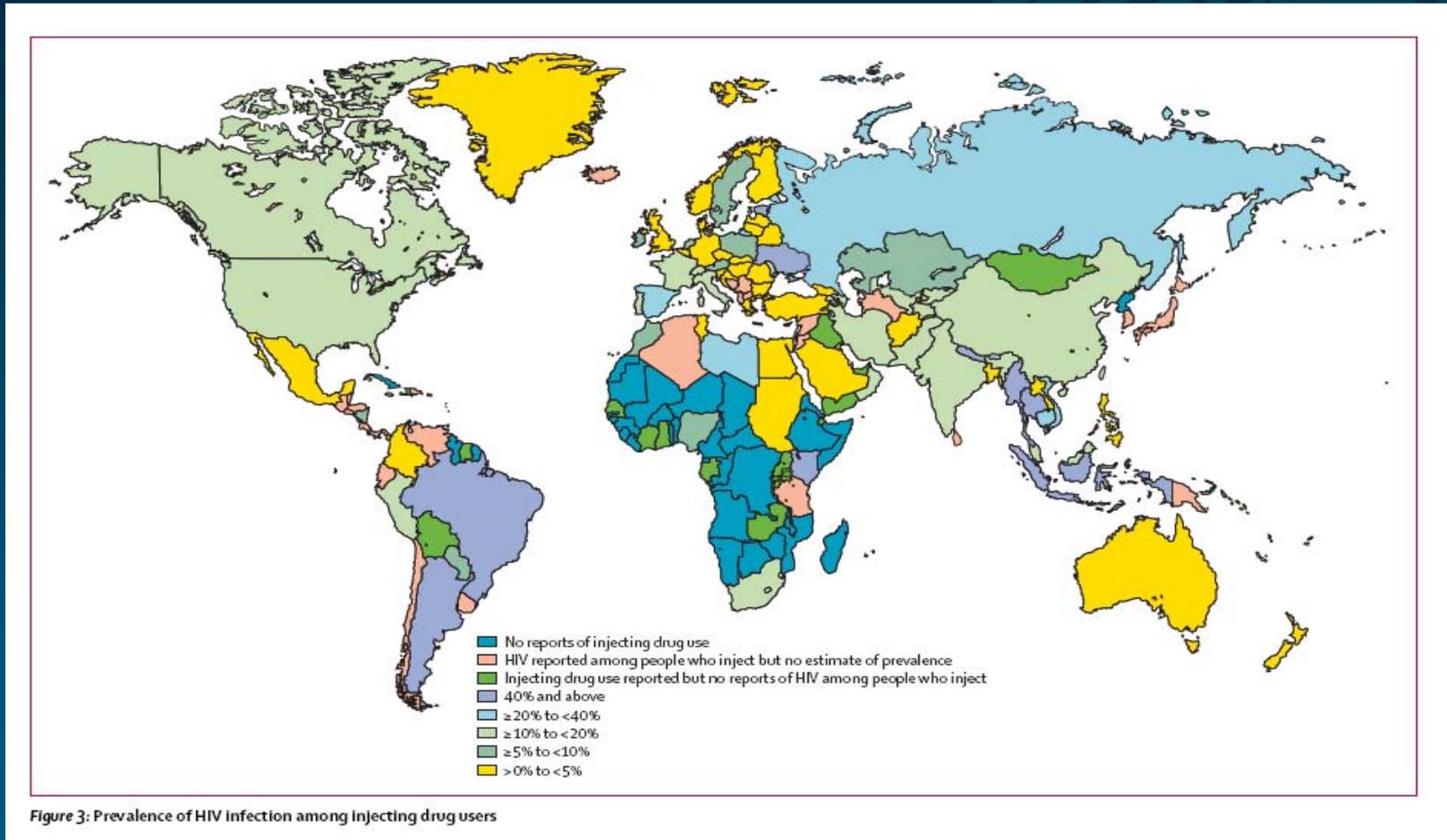
- Number of people living with HIV in U.S. is increasing (~ 1.2 M)
- U.S. incident cases 56K
- Worldwide, for every 2 HIV+ gaining access to HAART, 5 new infections occur
- Recent failure of biomedical prevention strategies:
 - Vaccine
 - Microbicides
 - Diaphragm
 - HSV-2
- Recent successes:
 - IDU (12%)
 - Circumcision

Current HIV Prevention Portfolio

- Drug treatment as HIV prevention
- Outreach and behavioral interventions targeting high-risk groups
 - African Americans, Latinos, Women, MSM, Criminal Justice, Homeless, Adolescents
- Adherence to drug Tx and HAART
- Testing and counseling
- International
 - IDU (comprehensive outreach and Tx)
- Effect of early drug abuse preventive interventions on STIs and HIV

Where We Are Going

Prevalence of HIV Infection Among IDUs



Prevalence of Injecting Drug Use

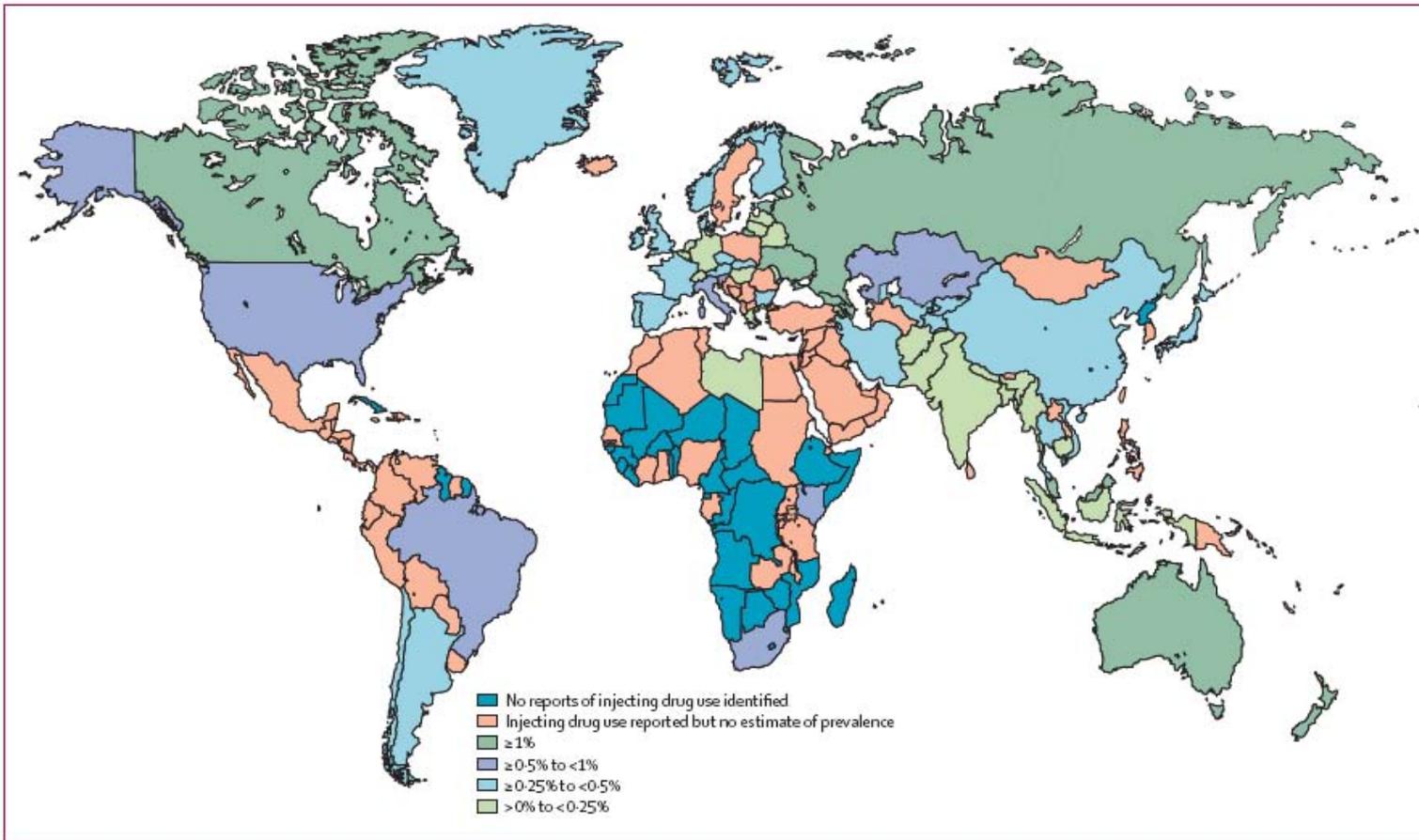
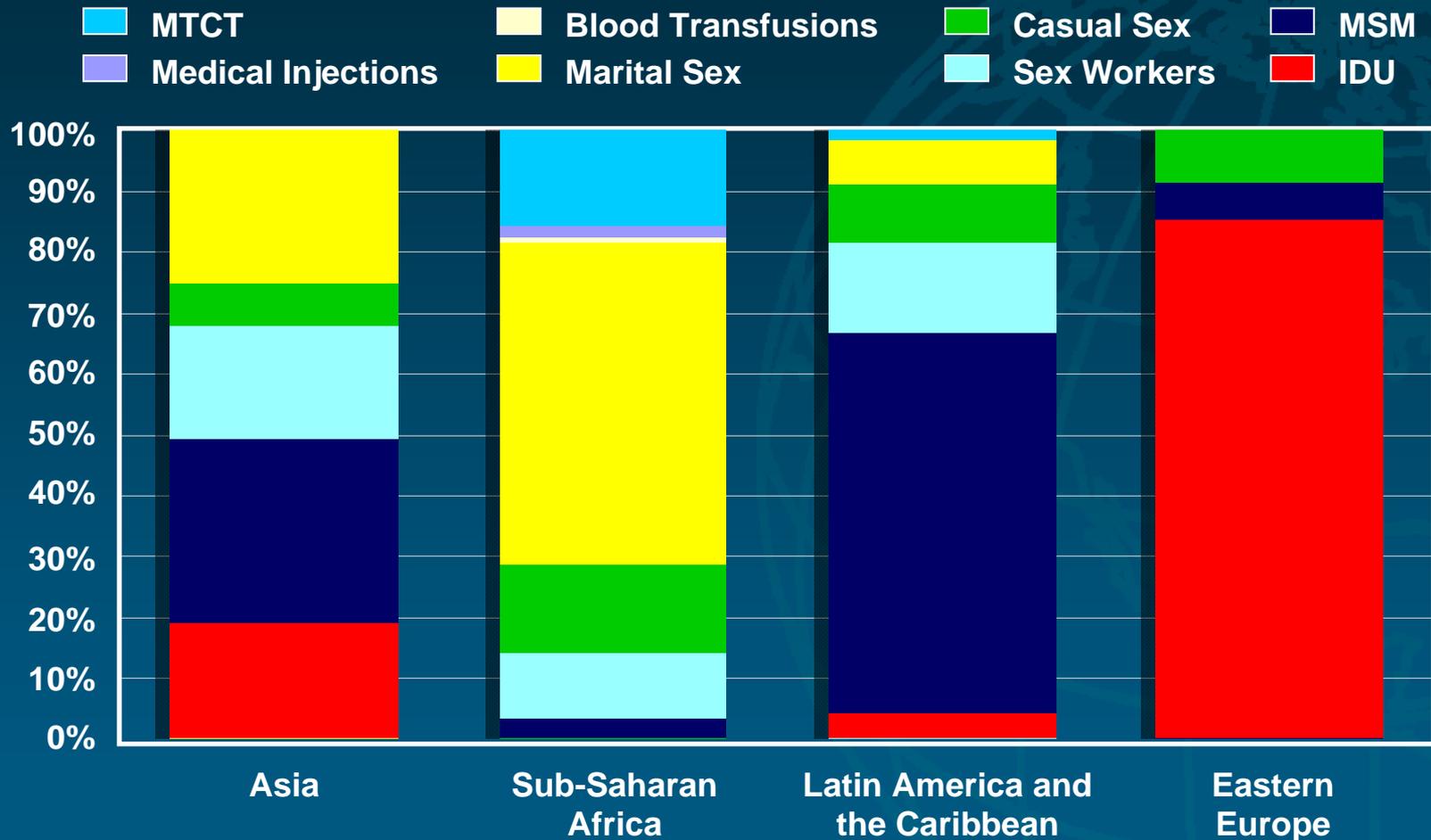


Figure 2: Prevalence of injecting drug use

Infection Sources by Regions of the World



Novel Prevention Paradigm

No single intervention has been found to be universally effective at preventing the transmission of HIV; packages of specific interventions must be designed for geographical settings according to the local transmission patterns and risk behaviors.

Cohen, M.S., et al. *Journal of Clinical Investigation* 118:1244–1254, 2008

HIV Prevention: What Works

- Male Circumcision
- Needle Exchange
- Education and Behavior Modification
- Testing and Counseling
- Condom
- Screening of Blood Supply
- Treatment of Drug and Alcohol Abuse
- ART for Mother-to-Child Transmission

Possible Effective HIV Prevention

- HAART at population level
 - Seek and treat
 - Pre-exposure prophylaxis (PrEP)
 - Post-exposure prophylaxis
- STD treatment
- Vaccines

HIV Prevention Portfolio

- Have
 - Most of the focus has been on IDU
 - Comprehensive outreach
 - Focused on preventing acquisition
 - Focused on individual risk behaviors
- Need
 - Non-injection (i.e., sexual risk)
 - HIV+
 - Focus on high-risk group most affected by epidemic
 - Structural interventions
 - Network
 - Seek and treat

NIDA FY10 Priorities

- High-Risk MSM
- International Regional HIV/AIDS
- Incentive Strategies to Improve HIV Testing, Tx, Adherence, and Retention
- Education, Counseling, Testing, and Linkage to Care
- Reduce Late Testers (e.g., CD4 count)
- International Regional Networks
- Reduce HIV Incidence by Targeting High-Risk Communities
- Epigenetic Regulatory Mechanisms in HIV/AIDS and Drug Abuse

NIDA International Research Initiatives

- International Program Announcements
 - AIDS-Science Track Award for Research Transition (R03) PA-07-349
 - International Research Collaboration on Drug Addiction (R01) PA-07-275
 - International Research Collaboration on Drug Addiction (R21) PA-07-310
 - International Research Collaboration on Drug Addiction (R03) PA-07-311
- NIDA AIDS Research Program Web Site:
www.drugabuse.gov/AIDS

NIDA International HIV Training Initiatives

- Support professional development of HIV/AIDS researchers in the following research areas:
 - basic biomedical
 - epidemiology
 - prevention
 - treatment
 - operational research
- Promote the development of regional networks



NIDA Training Mechanisms

- Humphrey Fellowship
- INVEST Research Fellowship
- IAS/NIDA Fellowship Program *New*
- INVEST/Clinical Trials Network Fellowship
- Distinguished International Scientific and Collaboration Award (DISCA) and USDISCA
- Fogarty International Center Research Grants
 - AITRP and ICOHRTA-AIDS/TB



Where We Are Going

- HIV Prevention
 - Drug Tx
 - HIV/AIDS Tx
 - Minority MSM
 - Minority Women
 - Prevention for HIV+
 - Migration/Immigration
 - Community/Neighborhood Approach

International AIDS Society (IAS) and
National Institute on Drug Abuse (NIDA)

**Joint Fellowship Programme
Encouraging HIV and Drug Abuse Research**

To be awarded at the IAS Conference on HIV Pathogenesis, Treatment and
Prevention (IAS 2009) in Cape Town, South Africa in July 2009.

More information on www.iasociety.org/iasnida.aspx.



This 5-year, \$2.5M award is designed to support
individual scientists of exceptional
creativity
who propose
cutting-edge
and
transformative
approaches to **major challenges**
in biomedical and behavioral
research on **drug
abuse and HIV/AIDS**

Avant-Garde
AWARD

NIDA NATIONAL INSTITUTE
ON DRUG ABUSE

NATIONAL INSTITUTES OF HEALTH
U.S. Department of Health and Human Services

Additional information is available at:
<http://drugabuse.gov/avgp.html>

NIDA



AIDS Research
Program

www.drugabuse.gov/AIDS