

HIV IMPLEMENTATION SCIENCE

Course: PSY 598
Sec No. 92107
Room No.: PSYN 120 (8/24 only: PSY254)
Session A: 8/20-10/9
Tuesdays 2:00-5:00 PM
Credits (2)

Instructor: Mary Jane Rotheram-Borus, Ph.D.
Email: Rotheram@ucla.edu
Office: PSY-N 244
Phone: (310) 308-3025

DESCRIPTION

"Introduction to HIV Identification, Prevention and Treatment Services" offers pre-doctoral students and postdoctoral fellows¹ an overview of HIV implementation science theory, methods, and application. More fundamentally, it introduces students to: (a) broad theoretical models guiding HIV research, (b) specific frameworks guiding the implementation of "evidence-based" programs in real world settings, and (c) nuts and bolts of doing implementation work (measurement, fidelity, cost). Beyond didactic learning, this course also is a forum for the application of knowledge gained and provides opportunities to analyze HIV data or gain experiential knowledge.

LEARNING OBJECTIVES:

At the end of this introductory course, pre-doctoral and post-doctoral students understand:

1. The global epidemiology of HIV/AIDS, particularly the intersection of HIV, drug abuse, and mental health risk;
2. The distribution and variations of the various risk groups for HIV infection, including MSM, drug use, and mentally ill;
3. The natural history of HIV/AIDS infection and disease progression;
4. The social impact of HIV/AIDS on global societies;
5. Ethical issues in the testing and study of HIV and the treatment cascade;
6. Specific intervention strategies for HIV/AIDS targeting individual risk groups;
7. The major treatment and prevention theories and intervention modalities, particularly evidence-based interventions;
8. The issues among Men-Who-have-Sex-with-Men (MSM) community in the United States and their efforts to control the epidemic in their community;
9. The major issues and politics of HIV/AIDS that promote and hinder control of the epidemic

LEARNING OUTCOMES:

1. About 80% of the students in the course will be able to: (a) design an HIV research study or (b) apply implementation principles in the application of HIV intervention technologies in at least one setting, context, or with sampled population at a *very well* or *well* level (5 or 4, on 0 to 5 scale).

¹ Fellows participate in the course as auditors and are not subject to the written assignments or grading, although still expected to read, discuss and use the class to launch an implementation science product.

2. About 80% of the students in the course will be able to: (a) critique published or planned HIV research and recommend theory-based strategies for improvements, or (b) appraise the strengths and weaknesses of ongoing HIV research and recommend theory-based and methodologically-sound strategies for improvements at a *very well* or *well* level (5 or 4, on 0 to 5 scale).

ASSIGNMENTS:

Critical Analysis of Research Articles. Students will select two to three articles a week to become familiar with and be prepared to briefly summarize the issues that the article addresses. A discussion of the article in the context of other assigned readings for each week. There are three pod casts which will be required for each student to view, listed on the syllabus.

Structured Research Proposal or Experiential Lab. Each student is asked to draft a 5 page research proposal for full credit in the course which will include a paragraph summarizing the Aims, a Significance Section of 1.5-2 pages; an Approach section that includes the methods of the proposed study; and an Analyses section.

GRADING SCHEMA:

A (90 – 100%) B (80 – 89%)
C (70 – 80%) D (60 – 70%) E (0 – 60%)

For issues relevant to *Academic Integrity* and *Student Disability*, please refer to the office of the provost: <http://provost.asu.edu/academicintegrity> and the graduate students' office: http://graduate.asu.edu/student_community/student-support-services, respectively.

WEEKLY COURSE SCHEDULE:

Readings shown are subject to change with the publication of new science and knowledge. The instructor is not responsible for the cost of your reading packages and copyright issues are handled by the copy center.

1: Basic HIV immunology, transmission dynamics, and course of disease – Early beliefs and consequences; Shifts in the intersection of sexual and drug use with the onset of antiretroviral therapies

Des Jarlais DC, Feelemyer JP, Modi SN, Abul-Quader A, Hagan H. High coverage needle syringe programs for people who inject drugs in low and middle income countries: a systematic review. *BMC Public Health*. 2013;19:53.

Abdul-Quader AS, Feelemyer J, Modi S, Stein ES, Briceno A, Semaan S, Horvath T, Kennedy GE, Des Jarlais DC. Effectiveness of structural-level needle/syringe programs to reduce HCV and HIV infection among people who inject drugs: a systematic review. *AIDS Behav*. 2013;17:2878-2892.

Abdool Karim SS, Karim QA, Detels R. Acquired immunodeficiency syndrome. In: Detels R, McEwen J, Beaglehole R, Tanaka H, *Oxford Textbook of Public Health: The Practice of Public Health*. 5th ed. OxfordUniversity Press, Oxford England; 2009.

Koop CE. The early days of AIDS, as I remember them. *Ann Forum Collab HIV Res*. 2011;13:5-10.

McMichael AJ, et al. The immune response during acute HIV-1 infection: clues for vaccine development. *Nature Rev*. 2010;10:11-23.

Power C, Boisse L, Rourke S, Gill MJ. NeuroAIDS: an evolving epidemic. *Can J Neurol Sci.* 2009;36:285-295.

Shoptaw S, Reback CJ. Methamphetamine use and infectious disease-related behaviors in men who have sex with men: implications for interventions. *Addiction.* 2007;102 Suppl 1:130-135.

Colfax G, Shoptaw S. The methamphetamine epidemic: implications for HIV prevention and treatment. *Curr HIV/AIDS Rep.* 2005;2:194-199.

Strathdee SA, Shoptaw S, Dyer TP, Quan VM, Aramrattana A. Towards combination HIV prevention for injection drug users: addressing addictophobia, apathy and inattention. *Curr Opin HIV Aids.* 2012;7:320-325.

Symposium: Advancing HIV Prevention: Lessons from Biology, Medicine, and Public Health Law
The Biology of HIV Transmission: What We Think We Know and How We Know It

Julie M. Overbaugh

Fred Hutchinson Cancer Research Center, Seattle, WA, United States

<http://www.croiwebcasts.org/console/player/25774?mediaType=slideVideo&>

Symposium: Advancing HIV Prevention: Lessons from Biology, Medicine, and Public Health Law
HIV Phylogenetics: Lessons for HIV Prevention

Christophe Fraser

Imperial College London, London, United Kingdom

<http://www.croiwebcasts.org/console/player/25775?mediaType=slideVideo&>

Symposium: Toward a Cure: A Challenging Game of Hide and Seek
T Memory Stem Cells: The Stem Cell Reservoir for HIV?

Mathias Lichterfeld

Massachusetts General Hospital, Boston, MA, United States

<http://www.croiwebcasts.org/console/player/22119?mediaType=audio&>

2: Epidemiology of HIV – domestic and globally; interaction of HIV sexual and drug abuse epidemics; interaction with mental health disorders – Patterns in high income countries: AU, EU, USA, Canada; the BRICS (Brazil, Russia, India, China, South Africa); Patterns in low and middle income countries over time: Southern Africa, Southeast Asia, Central and South America

Detels R. The role of epidemiology in challenging the HIV/AIDS pandemic. *J Epidemiol.* 2001;11:95-102.

Beyrer C, Stephens H. Transmission of HIV and other infections in Southeast Asia. In: Lu Y, Essex M, eds. *AIDS in Asia.* New York: Kluwer Academic, Plenum Publishers, 2004;317-333.

Tran NT, Detels R, Nguyen TH, Hoang TL, Pham THN. Drug use, sexual behaviours and practices among male drug users in Hanoi, Vietnam. *Int J Drug Policy.* 2004;15:182-188.

Mills EJ, Barnighausen T, Negin J. HIV and aging — preparing for the challenges ahead. *N Engl J Med.* 2012;366:1271-1273.

Global Report: UNAIDS report on the global AIDS epidemic

2013. http://www.unaids.org/sites/default/files/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/UNAIDS_Global_Report_2013_en.pdf

AIDSVu: <http://aidsvu.org/>

3: Antiretroviral therapies-Treatment as Prevention, Pre-Exposure and Post-Exposure Prophylaxis, especially among drug users

Lampthey P, Wilson D. Scaling up AIDS treatment: what is the potential impact and what are the risks? *PloS Med.* 2005; 2:102-104.

Cohen J. The ins and outs of HIV. *Science.* 2010; 327:1196-1197.

Martin E, Schackman BR. Updating the HIV-testing guidelines — a modest change with major consequences. *N Engl J Med.* 2013;368:884-886.

Sax PE, Baden LR. When to start antiretroviral therapy - ready when you are? *N Engl J Med.* 2009; 360:1897-1899.

Kitahata MM, Gane SJ, Abraham AG, Merriman B, Saag MS, Justice AC, ... & Moore RD. Effect of early versus deferred antiretroviral therapy for HIV survival. *N Engl J Med.* 2009;360:1815-1826.

Grant RM, Lama JR, Anderson PL, McMahan V, Liu AY, Vargas L, ... & Glidden DV. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *N Engl J Med.* 2010;362:2587–2599.

Morris BJ, Bailey RC, Klausner JD, Leibowitz A, Wamai RG, Waskett JH, ... & Hankins CA. Review: a critical evaluation of arguments opposing male circumcision for HIV prevention in developed countries. *AIDS Care.* 2012;14:1565-1575.

Gardner EM, McLees MP, Steiner JF, et al. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clin Infect Dis.* 2011; 52:793-800.

Leibowitz A, Parker KB, Rotheram-Borus MJ. A US policy perspective on oral pre-exposure prophylaxis for HIV. *Am J Public Health.* 2011;101:982-5.

Dr. Raphael J. Landovitz – PrEP for HIV Prevention: What We Know and What We Still Need to Know for Implementation

<http://chipts.ucla.edu/2015/02/25/dr-raphael-j-landovitz-prep-hiv-prevention-know-still-need-know-implementation/>

Dr. Yvonne Bryson MD – Progress and Strategies for HIV remission and Cure

<http://chipts.ucla.edu/2015/06/26/dr-yvonne-bryson-md-progress-strategies-hiv-remission-cure/>

4: HIV Treatment Cascade, including male circumcision and PrEP among drug users

Reback CJ, Peck JA, Fletcher J, Numo M, Dierst-Davies R. Lifetime substance use and HIV sexual risk behaviors predict treatment response to contingency management among homeless, substance-dependent men who have sex with men. *J Psychoactive Drugs.* 2012;44:166-172.

Bayer R, Oppenheimer GM. Routine HIV testing, public health, and the USPSTF — an end to the debate. *N Engl J Med.* 2013;368:881-884.

Sullivan SG, Wu Z, Detels R. Missed opportunities for testing in Asia. *AIDS.* 2010;Suppl 3:S49-S53.

Centers for Disease Control and Prevention (CDC). Interim guidance: preexposure prophylaxis for the prevention of HIV infection in men who have sex with men. *MMWR Morb Mortal Wkly Rep.* 2011;60:65-68.

Cohen J. Halting HIV/AIDS epidemics. *Science.* 2011;334:1338-1340.

Shelton JD. ARVs as HIV prevention: a tough road to wide impact. *Science*. 2011; 334:1645-1646.

Abdool Karim Q, Abdool Karim SS, Frohlich JA, Grobler AC, Baxter C, Mansoor LE, ... & Taylor D. Effectiveness and safety of Tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. *Science*. 2010;329:1168-1174.

Cohen M, Chen YQ, McCauley M, Gable T, Hosseinipour MC, Kumarasamy N, ... & Fleming TR. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011;365:493–505.

Cohen J. HIV Prevention and cure insights come from failure and success. *Science*. 2012;335:1291.

5: Levels of intervention: nations, health systems, communities, families, and individuals

Rotheram-Borus MJ, Lee MB, Murphy DA, Futterman D, Duan N, Birnbaum J, & the Teens Linked To Care Consortium. Efficacy of a preventive intervention for youth living with HIV. *Am J Public Health*, 2001;91:400-405.

Comulada WS, Weiss RE, Cumberland W, Rotheram-Borus MJ. Reductions in drug use among young people living with HIV. *Am J Drug Alcohol Abuse*. 2007;33:493-501.

Rotheram-Borus, M., Swendeman, D., Comulada, S., Weiss, R.E., Lee, M., & Lightfoot, M. (2004). Prevention for Substance-using HIV positive young people: telephone and in-person delivery. *Journal of Acquired Immune Deficiency Syndromes*, 37 (2) S68–S77.

The NIMH Collaborative HIV/STD Prevention Trial Group & Rotheram-Borus MJ. (China, PI). Results of the NIMH collaborative HIV/STD prevention trial of a community popular opinion leader intervention. *J Acquir Immune Defic Synd*. 2010;54:204-214.

Rotheram-Borus MJ, Wu Z, Liang LJ, Li L, Detels R, Guan J, Yin Y, Swendeman D, & the NIMH Collaborative HIV/STD Prevention Trial Group. Reductions in sexually transmitted infections associated with popular opinion leaders in China in a randomized controlled trial. *Sex Transm Infect*. 2011;8:337–343.

Rotheram-Borus MJ, Lee MB, Gwadz M, Draimin B. An intervention for parents with AIDS and their adolescent children. *Am J Public Health*. 2001;91:1294-1302.

Li L, Lee SJ, Jiraphongsa C, Khumtong S, Iamsirithaworn S, Thammawijaya P, Rotheram-Borus MJ. Improving the health and mental health of people living with HIV/AIDS: 12-Month assessment of a behavioral intervention in Thailand. *Am J Public Health*. 2010;100:2418-2425.

Rotheram-Borus MJ, Lester P, Song J, Lin YY, Leonard NR, Beckwith L, Ward MJ, Sigman M, Lynwood L. Intergenerational benefits of family-based HIV interventions. *J Consult Clin Psych*. 2006;74:622-627.

Janssen RS, Holtgrave DR, Valdiserri RO, Shepherd M, Gayle HD, De Cock KM. The serostatus approach to fighting the HIV epidemic: prevention strategies for infected individuals. *Am J Public Health*. 2001;91:1019-1024.

Holtgrave DR. Achieving and advancing the goals of the national HIV/AIDS strategy for the United States. *AIDS Behav*. 2014. Epub ahead of

print: http://download.springer.com/static/pdf/551/art%253A10.1007%252Fs10461-014-0903-z.pdf?auth66=1417559297_49e9a57c02009bb12ef0d9abcc8fd8d0&ext=.pdf

Kerrigan D, Kennedy C, Morgan-Thomas R, Reza-Paul S, Mwangi P, Win KT, McFall A, Fonner V, Butler J. A community empowerment approach to the HIV response among sex workers: effectiveness, challenges, and

considerations for implementation and scale-up. *Lancet*. 2014; doi:10.1016/S0140-6736(14)60973-9. Early online publication: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)60973-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)60973-9/fulltext)

MJ Wawer, NK Sewankambo, D Serwadda, TC Quinn. Control of sexually transmitted diseases for AIDS prevention in Uganda: a randomised community trial. *The Lancet* Feb. 13, 1999, Volume 353, Pages 525-535.

Christopher Hudson. Community-based trials of sexually transmitted disease treatment: repercussions for epidemiology and HIV prevention. *Bulletin of the World Health Organization* 2001.

H. Grosskurth, J. Todd, E. Mwijarubia, P. Mayaud, A. Nicoll, G. ka-Gina, J. Newell, H. Grosskurthb, J. Toddb, P. Mayaudb, A. Nicollb, J. Newellb, D. Mabey, R. Hayes, F. Mosha, K. Senkoro, J. Chagalucha, A. Klokke, E. Mwijarubie, G. ka-Ginaf, K. Mugeye. Impact of improved treatment of sexually transmitted diseases on HIV infection in rural Tanzania: randomised controlled trial. *The Lancet*, Volume 346, Issue 8974, 26 August 1995, Pages 530–536

Piot P, Bartos M, Larson H, Zewdie D, Mane P. Coming to terms with complexity: a call to action for HIV prevention. *Lancet*. 2008;372:845-859 .

6: Horizontal vs vertically integrated delivery systems; the intervention implications

Rotheram-Borus MJ, Swendeman D, Flannery D. Family wellness, not HIV prevention. *AIDS Behav*. 2009;13:409-413.

Rotheram-Borus MJ, Swendeman D, Flannery D. Evidence based family wellness interventions, still not HIV prevention: reply to Collins. *AIDS Behav*. 2009;13:420-423.

Grossman CI, Purcell DW, Rotheram-Borus MJ, Veniegas R. Opportunities for HIV combination prevention to reduce racial and ethnic health disparities. *Am Psych*. 2013;68:237-246.

Gupta GR, Parkhurst JO, Ogden JA, Aggleton P, Mahal A. (2008). Structural approaches to HIV prevention. *Lancet*, 372(9640), 764-775.

Ford N, Mills E, Calmy A. Global health: rationing antiretroviral therapy in Africa – treating too few too late. *N Engl J Med*. 2009;360:1808-1810.

LeRoux IM, Tomlinson M, Harwood JM, O'Connor MJ, Worthman CM, Mbewu N, Stewart J, Hartley M, Swendeman D, Comulada WS, Weiss RE, Rotheram-Borus MJ. Outcomes of home visits for pregnant mothers and their infants: a cluster randomised controlled trial. *AIDS*. 2013;27:1461-71.

7: Successful intervention models for each risk profile: men-who-have-sex-with-men, sex workers, injecting drug users, young women, heterosexual men, infants

Hammett TM, Phan S, Gaggin J, Case P, Zaller N, Lutnick A, ... & Des Jarlais DC. Pharmacies as providers of expanded health services for people who inject drugs: a review of laws, policies, and barriers in six countries. *BMC Health Serv Res*. 2014;14:261.

Shoptaw S, Jarvik ME, Ling W, Rawson RA. Contingency management for tobacco smoking in methadone-maintained opiate addicts. *Addict Behav*. 1996;21:409-412.

Landovitz RJ, Fletcher J, Inzhakova G, Lake JE, Shoptaw S, Reback CJ. Effectiveness of interventions for the prevention of HIV and other sexually transmitted infections in female sex workers in resource poor setting: a systematic review. *AIDS Patient Case and STDs*. 2012;26:320-328.

Rotheram-Borus MJ, Swendeman D, Chovnick. The past, present, and future of HIV prevention: integrating behavioral, biomedical, and structural intervention strategies for the next generation of HIV prevention. *Annu Rev Clin Psychol*. 2009;5:143–167.

Centers for Disease Control and Prevention: Replicating Effective Programs (REP): <http://www.cdc.gov/hiv/prevention/research/rep/>

Center for Disease Control and Prevention: Diffusion of Effective Behavioral Interventions (DEBI): <https://www.effectiveinterventions.org/>

8: Global donors models for diffusing evidence-based interventions: Centers for Disease Control and Prevention, United Nations, World Health Organization, World Bank, Gates Foundation, Presidents' Emergency Program For AIDS Relief

Wilson P, Wright K, Isbell MT. Left behind: Black America: a neglected priority in the global AIDS epidemic. *Black AIDS Institute*, March 2009

Zuniga JM. IAPAC recommendations to the Obama Administration for the US response to the global HIV pandemic. *J Int Assoc Physicians AIDS Care (Chic)*. 2009;1:13-20.

El-Sadr WM, Mayer KH, Hodder SL. AIDS in America - Forgotten but not gone. *N Engl J Med*. 2010;362:967-970.

Dieffenbach CW, Fauci AS. Universal voluntary testing and treatment for prevention of HIV transmission. *JAMA*. 2009;301:2380-2382.

The United States President's Emergency Plan for AIDS Relief (PEPFAR): <http://www.pepfar.gov/>

9: Theoretical models of implementation science: application to Southern Africa

Catania JA, Kegeles SM, Coates TJ. Towards an understanding of risk behavior: an AIDS risk reduction model (ARRM). *Health Educ Q*. 1990;17:53-72.

Ewart CK. Social action theory for a public health psychology. *Am Psychol*. 1991;16:931-946.

Hightow-Weidman LB, Fowler B, Kibe J, McCoy R, Pike R, Calabria M, Adimora A. HealthMpowerment.org: development of a theory-based HIV/STI website for young black MSM. *AIDS Educ Prev*. 2011;23:2-12.

Centers for Disease Control and Prevention: Mpowerment: A Community-level HIV Prevention Intervention for Young Gay Men. <http://www.cdc.gov/hiv/prevention/research/rep/packages/mpowerment.html>

Rotheram-Borus MJ, Swendeman D, Chorpita B. Disruptive innovations for designing and diffusing evidence-based interventions. *Am Psychol*. 2012;67:463-476.

M Shahmanesh, V.Patel, D Mabey, F. Cowan. Effectiveness of interventions for the prevention of HIV and other sexually transmitted infections in female sex workers in resource poor setting: a systematic review. *Trop Med Int Health*. 2008;22:659-679.

10: Application of theoretical models of implementation science to the HIV epidemic in Phoenix, Arizona

Arizona Department of Health Services, HIV Prevention Program: <http://www.azdhs.gov/phs/hiv/>

Bierly A. Community Involvement Raises HIV Testing

Rates. <http://www.nih.gov/researchmatters/may2011/05162011community.htm>

Bogart LM, Thorburn S. Are HIV/AIDS conspiracy beliefs a barrier to HIV prevention among African Americans? *J Acquir Immune Defic Syndr*. 2005;38:213-219.

African Americans and HIV/AIDS. Kaiser Family Foundation Fact Sheet, February 2005.

CH Brown, DC Mohr, CG Gallo, C Mader (2013). A computational future for preventing HIV in minority communities: How advanced technology can improve implementation of effective programs. JAIDS.

11: Role of new technologies (rapid diagnostic tests, mobile phone interventions, monitoring virus with Google Glass, embedded sensing) on implementation science of HIV

Tomlinson M, Rotheram-Borus MJ, Swartz L, Tsai AC. Scaling up mHealth: where is the evidence? *PLoS Med*. 2013;10:e1001382.

Tomlinson M, Rotheram-Borus MJ, Doherty T, Swendeman D, Tsai AC, Ijumba P, le Roux I, Jackson D, Stewart J, Friedman A, Colvin M, Chopra M. Value of a mobile information system to improve quality of care by community health workers. *SAJIM*, 2013;15:1-9.

Rotheram-Borus MJ, Tomlinson M, Swendeman D, Lee A, Jones E. Standardized functions for smartphone applications: examples from maternal and child health. *Int J Telemed Appl*. 2012;2012:1-16.

Ramanathan N, Swendeman D, Comulada WS, Estrin D, Rotheram-Borus MJ. Identifying preferences for mobile health applications for self-monitoring and self-management: focus group findings from HIV-positive persons and young mothers. *Int J Med Inform*. 2013;82:e38-e46.

Swendeman D, Rotheram-Borus MJ. Innovation in sexually transmitted disease and HIV prevention: internet and mobile phone delivery vehicles for global diffusion. *Curr Op Psychiatry*. 2010;23:139-144.

12: Shifting role of primary health care when HIV care is carved out; HIV care and pharmaceutical products in high income countries

Ryan White HIV/AIDS Program: <http://hab.hrsa.gov/abouthab/aboutprogram.html>

Taylor SL, Leibowitz A, Simon PA, Grusky, O. Zip code correlates of HIV-testing: a multi-level analysis in Los Angeles. *AIDS Behav*. 2006;10:579-586.

Leibowitz AA, Sood, N. Market power and state costs of HIV/AIDS drugs. *Int J Health Care Finance Econ*. 2007;8:59-71.

Leibowitz AA, Taylor SL. Distance to public test sites and HIV testing. *Med Care Res Rev*. 2007;65:568-584.

Leibowitz AA, Mendes AC, Desmond K. Public funding of HIV/AIDS prevention, treatment and support in California. *J Acquir Immune Defic Syndr*. 2011;58:e11-e16.

Morris BJ, Bailey RC, Klausner JD, Leibowitz A, Wamai RG, Waskett JH, Banerjee J, Halperin DT, Zoloth L, Weiss HA, Hankins CA. Review: a critical evaluation of arguments opposing male circumcision for HIV prevention in developed countries. *AIDS care*. 2012;24:1565-1575.

13: Health strengthening in low income vs high income countries: the role of community health workers; pharmaceutical dispensaries to stop medication outages; religious leaders' and shamans' roles in advancing care

Ebola Virus Disease, Outbreak Response Plan in West Africa, WHO and the Governments of Guinea, Liberia, and Sierra Leone: <http://www.who.int/csr/disease/ebola/evd-outbreak-response-plan-west-africa-2014.pdf>

Frieden TR, Damon I, Bell BP, Kenyon T, Nichol S. Ebola 2014 – new challenges, new global response and responsibility. *N Engl J Med.* 2014;371;1177-1180.

Lightfoot M, Rotheram-Borus MJ, Towns B, Cline TR, Webber D, Murphy DA, Tsai LF. Religious groups as diffusers of HIV antibody testing and prevention messages. *J Comm Psych.* 2001;29:459-472.

14: Design features of all implementation programs

The White House Office of National AIDS Policy. Implementing the National HIV/AIDS Strategy: Overview of Agency Operational Plans, 2011: <http://www.aids.gov/federal-resources/national-hiv-aids-strategy/nhas-operational-plan-overview.pdf>

Rotheram-Borus MJ, Swendeman D, Flannery D, Rice E, Adamson DM, Ingram B. Common factors in effective HIV prevention programs. *AIDS Behav.* 2009;13:399-408.

15: Routine monitoring of implementation, process, and outcomes to iteratively improve systems of care

AIDSVu: <http://aidsvu.org/>

Dimagi: HIV Mobile Decision Support. <http://www.dimagi.com/hiv-support/>

Scoreboard: Open-Source Monitoring and Evaluation for HIV Education. <http://www.grassrootsoccer.org/research-development/scoreboard/>

AIDS Scorecards. Overview: UNAIDS Report on the Global AIDS Epidemic, 2010. https://www.unaids.org/sites/default/files/media_asset/20101123_aids_scorecards_en%5B1%5D_1.pdf