Women, Gender Based Violence and HIV: Resisting “Legitimate” Rape

Mardge Cohen

Chicago WIHS

Warning! Uterus has determined that this is a legitimate rape. This is not a test. Self destruct sequence will begin in 5... 4... 3... 2... 1

someecards
user card

Presidential Memoranda

The White House
Office of the Press Secretary
For Immediate Release
March 30, 2012

Presidential Memorandum -- Establishing a Working Group on the Intersection of HIV/AIDS, Violence Against Women and Girls, and Gender-related Health Disparities

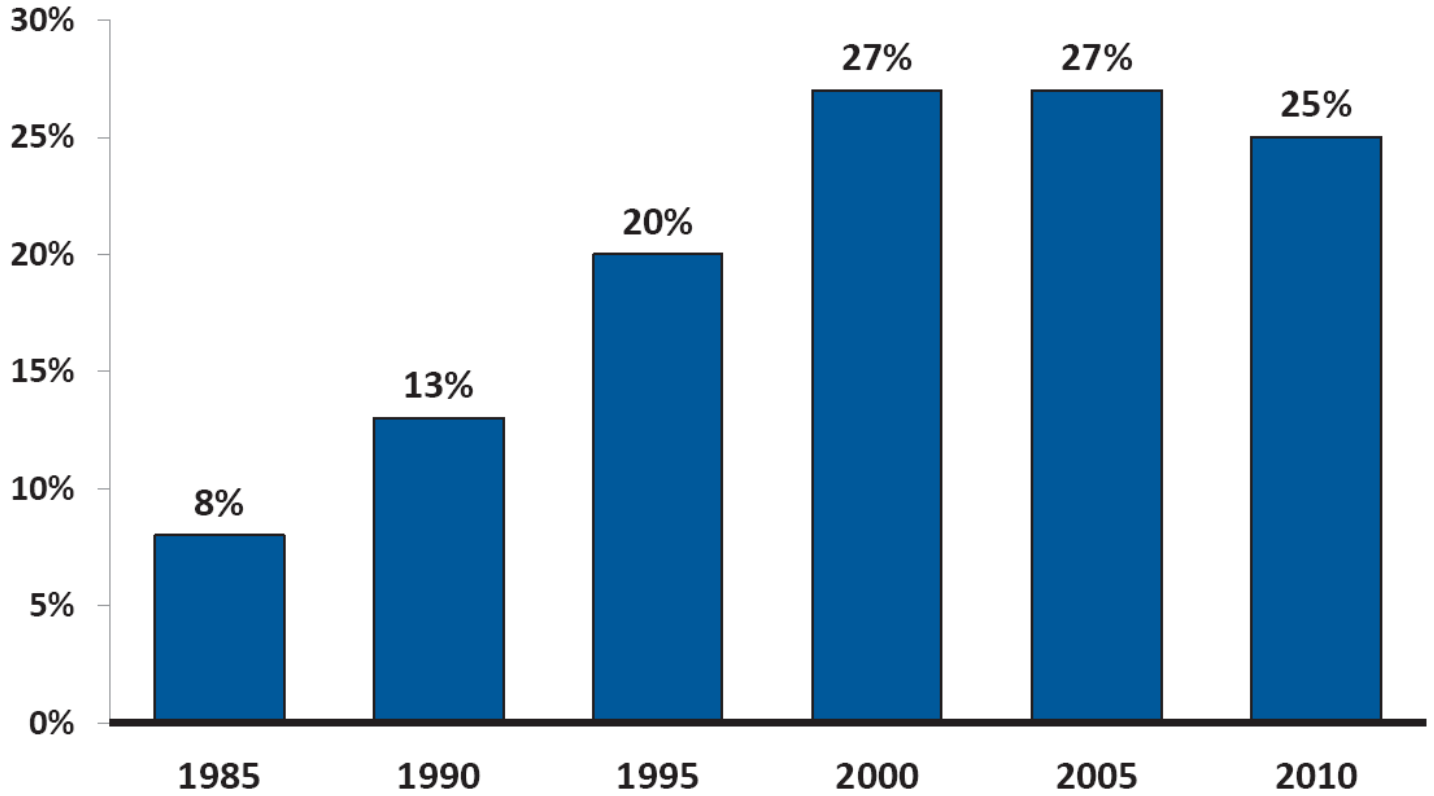
MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Establishing a Working Group on the Intersection of HIV/AIDS, Violence Against Women and Girls, and Gender-related Health Disparities

Throughout our country, the spread of HIV/AIDS has had a devastating impact on many communities. In the United States, there are approximately 1.2 million people living with HIV/AIDS, including more than 290,000 women. Women and girls now account for 24 percent of all diagnoses of HIV

U.S. ~280,000 women with HIV

Figure 1: Women as a Proportion of New AIDS Diagnoses, 1985–2010[1,2,11]



Women and adolescent girls bear the burden of the HIV epidemic globally

Dr. Geeta Rao Gupta,
Deputy Executive Director, UNICEF
(AIDS 2012)
Wednesday Plenary Session
Washington D.C.

- Worldwide, women constitute >50% of people living with HIV
- For women aged15–49, HIV is the leading cause of death.

- Women and girls are particularly vulnerable to HIV because of
  - limited control of resources (income, land and employment)
  - limited access to education
  - limited social capital

HIV and Intimate partner violence (IPV)

- Increased biological exposure
  - trauma to the vaginal wall during forced sex
  - increased frequency of sex
  - increased number of sexual partners
  - Increase in STIs
- Younger HIV+ women report partner violence 10x more than HIV- women
- Role of alcohol and drug use
- Co-presence of violence and other risk-factors such as relationship power inequity

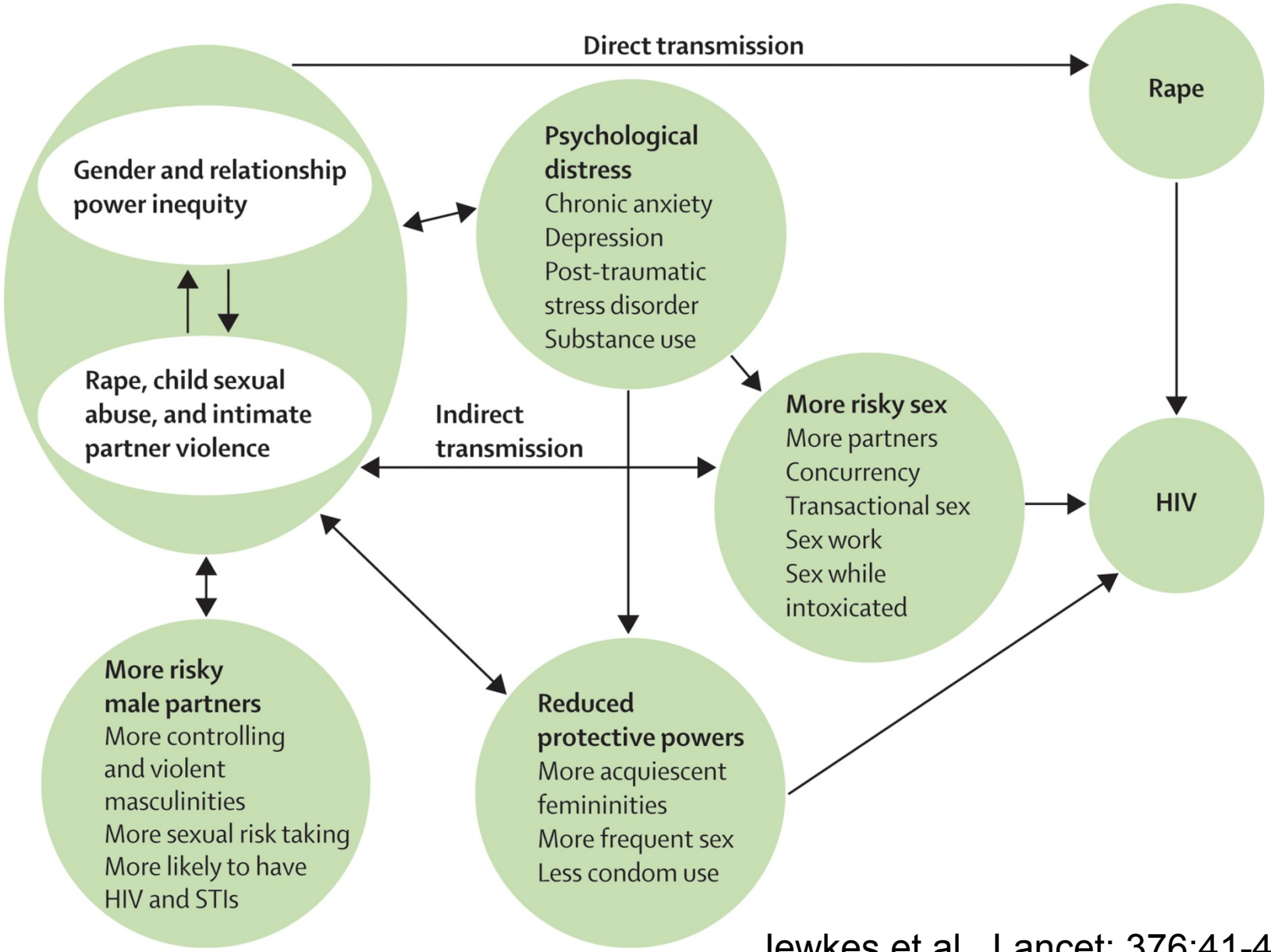
van der Straten et al. 1998, Maman et al. 2002, Dunkle et al. 2004, Jewkes et al. 2006, Dunkle et al. 2007, Geeta Rao Gupta et al. 2011 Jewkes et al. 2010,Kalichman et al. 2007, Tsai et al. 2011

How to think about Gender

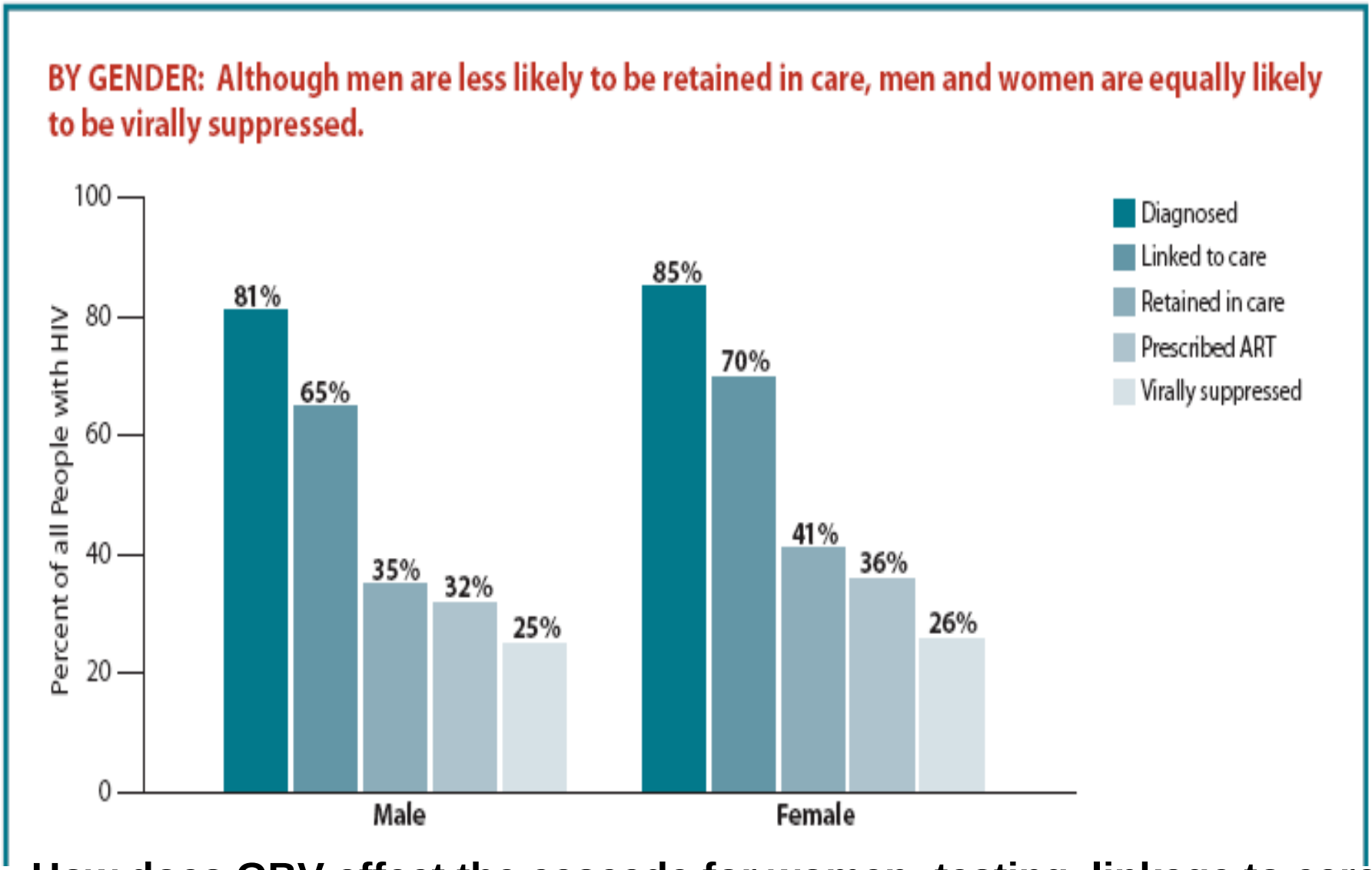
- Society's ideas about appropriate roles, rights, duties, responsibilities, behaviors, and status of women and men in relationship to each other (WHO)

- Women tend to be disproportionately harmed by gender norms
  - Confer greater access to resources, power, influence to men, creating and perpetuating inequities between women and men

Gender-inequity and based violence (GBV) and HIV



Jewkes et al.. Lancet; 376:41-48. 2010



How does GBV affect the cascade for women: testing, linkage to care, staying in care for themselves, for eliminating perinatal transmission, adherence to ART and successful virologic suppression?

CDC Fact sheet. HIV in the United States: Stages of Care. July 2012

Gender Roles Study in HIV + and HIV- Women in Chicago WIHS

- 101 HIV+ and 42 HIV- women
- Evaluated gender roles (attitudes, self-silencing and unmitigated communion, sexual relationship power, and stereotypic gender role personality characteristics)
- HIV+ women had significantly ↑ levels of self-silencing and ↓sexual decision making power than HIV- women, controlling for age, income, and education.
  - Averaged over 16 year period, HIV+ women had ↓health related QOL and ↑ depressive symptoms. Self-silencing fully mediated the relationship between HIV status and depressive symptoms and partially mediated the relationship between HIV status and health related QOL.

Brody, L.R., Dale, S., Kelso, G., Cruise, R., Weber, K., Watson, C.?, Stokes, L., & Cohen, M. Gender roles and coping in relation to depression and quality of life in women with and at risk for HIV (In press). In S. Dworkin S, P. Passano & M. Gandhi (Eds). In Justice and In Health: A New Era in Women's Health and Empowerment. California: UC Press.

HIV Testing Among Women Seeking Abuse Services in Johannesburg, South Africa

- Gender based violence contributes to risk of HIV infection and is barrier to accessing HIV testing.
- Correlates of not getting testing
  - Caring for children
  - Conversing with partners about HIV
- Need safe confidential, "secret" (self-knowledge) access to integrated services to increase testing

Adams JL, Hansen NB, Fox AM, et al. Correlates of HIV testing among abused women in South Africa. Violence Against Women. 2011 Aug;17(8):1014-23.

Gender Inequality Increases vertical transmission of HIV

Impact on PMTCT

- Primary prevention for women of childbearing age.
- Prevention of unintended pregnancies
- Prevention of HIV transmission from mothers to their infants
- Provision of treatment, care and support to HIV+ women and their children and families

Ghanotakis E, Peacock D, Wilcher R. The importance of addressing gender inequality in efforts an end vertical transmission of HIV. Journal of the International AIDS Society 2012;15 (Supp 2):17385

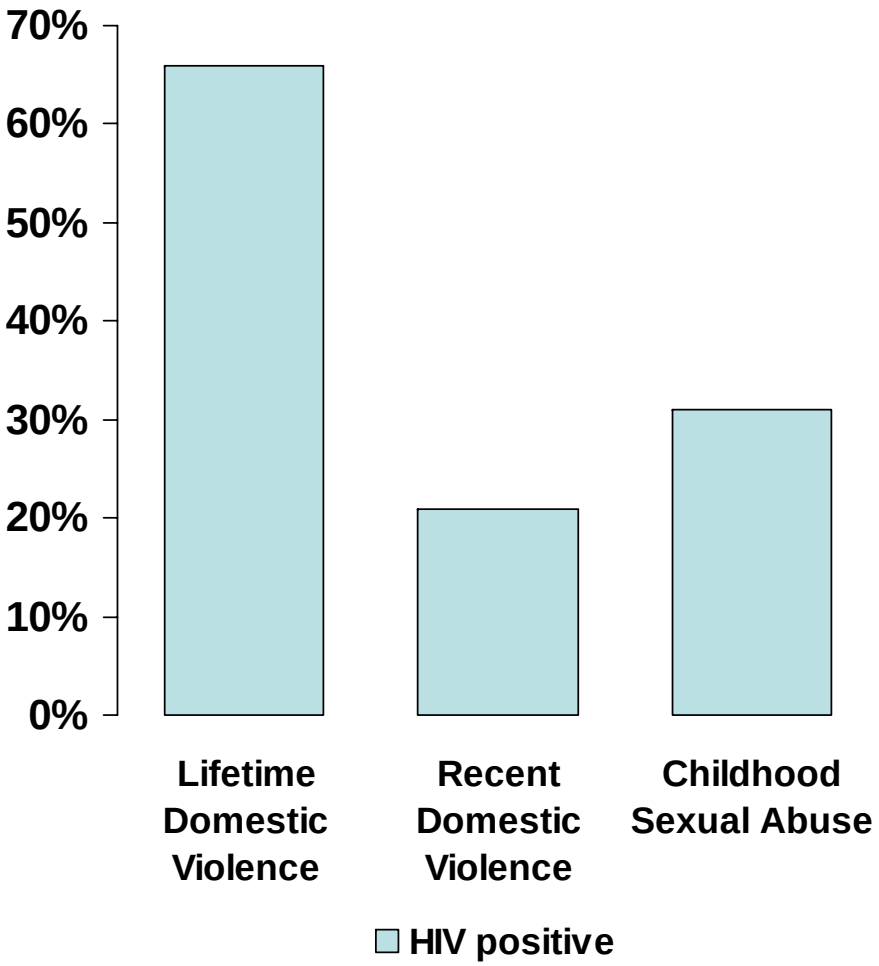
Partner Violence and Reproductive Coercion

- 53% reported physical/sexual partner violence; 19% reported experiencing pregnancy coercion; 15% reported birth control sabotage. Associated with unintended pregnancy.
- 1/3 of respondents reporting partner violence also reported reproductive control.

Miller E, Decker MR, McCauley HL, et al. **Pregnancy coercion, intimate partner violence and unintended pregnancy.** Contraception. 2010 Apr;81(4):316-22.

Domestic Violence and Childhood Sexual Abuse in WIHS Women

(Cohen, Deamant, Barkan, et al., *AJPH* 2000;90:560-5)



Multivariate Behavioral Correlates of Childhood Sexual Abuse

- Drug use, ever
  (OR = 4.25, p < .001)
- Male partner w/HIV risk
  (OR = 2.07, p < .001)
- Lifetime male sex partners (>10)
  (OR = 2.29, p < .001)
- Sex for drugs, money or shelter
  (OR = 2.62, p < .001)

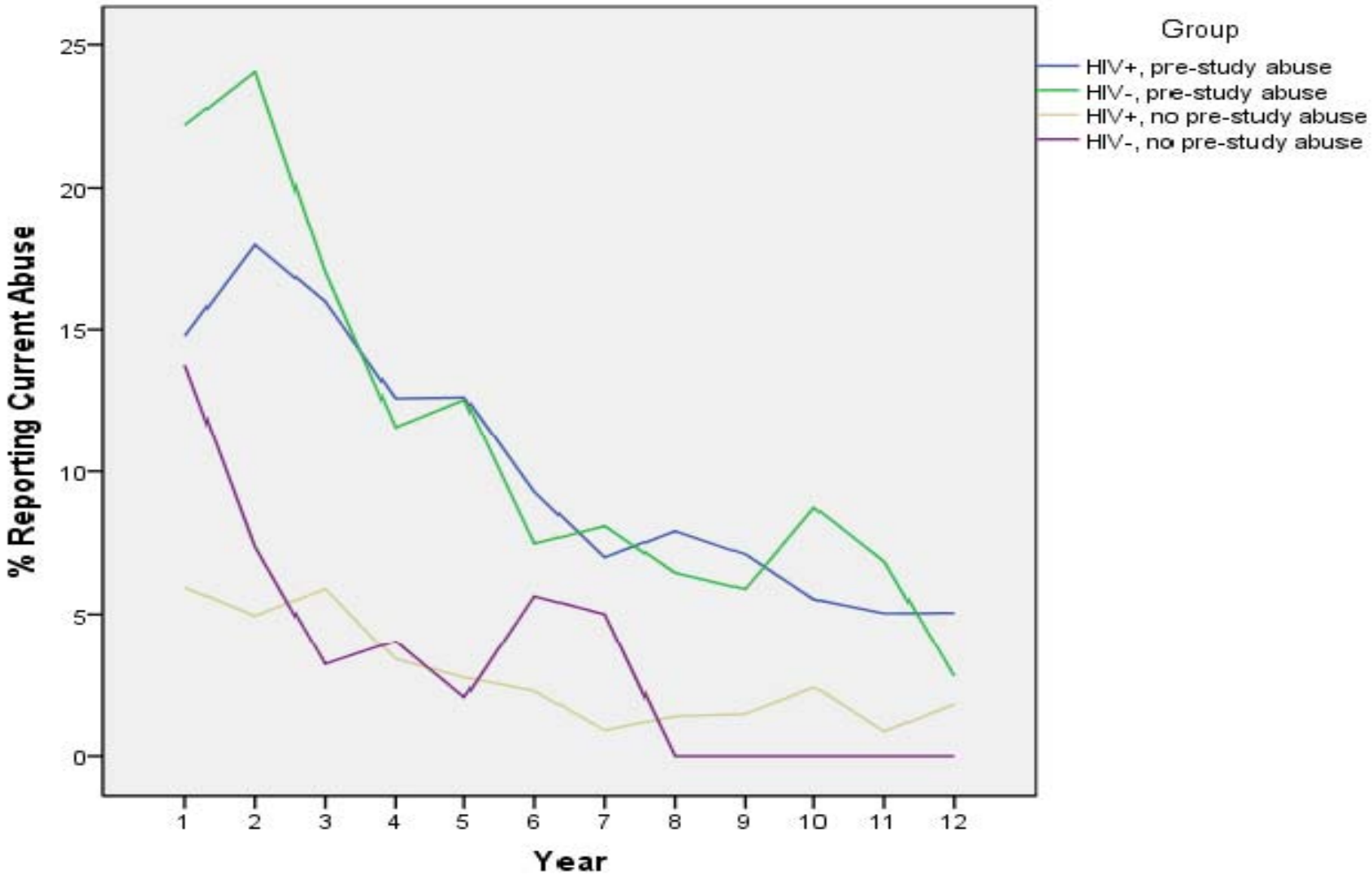
***OR adjusted for HIV serostatus, age, race/ethnicity and annual household income**

HAART Nonuse Among Women for Whom HAART was Indicated

Cohen MH, Cook JA, Grey D, et al. 2004 *AJPH*, 94:1147-1151

	Odds Ratio (95% CI)
Crack, heroin, cocaine use	**2.11 (1.17,3.79)**
History of phys/sex abuse	**1.72 (1.07,2.77)**
Race White	**0.45 (0.22,0.96)**
AA	0.73 (0.45,1.17)
Latino	Ref
Private Health Insurance	0.83 (0.48,1.45)
Income <$12,000/year	0.82 (0.52,1.28)
Depressive Symptoms	0.84 (0.56,1.25)
Hepatitis C antibody positive	1.16 (0.78,1.71)
High school education	0.69 (0.46,1.02)

Abuse exposure by study year, HIV status, and prior abuse



-History of Abuse -72%; new abuse -6%; cumulative abuse -78%
-2450 abuse events were reported by 794 (36%) of women during the study period

Association of recent abuse with mortality

	Current Abuse	Deaths	Person-years	HR[a]	95% CI[a]
Unadjusted	No	392	16495	1	NA
	Yes	45	1682	1.16	0.84, 1.60
Baseline-Adjusted [b]				1.17	0.84, 1.64
Fully-Adjusted [c]				1.13	0.79, 1.60
Weighted [c]				2.07	1.66, 2.57
Weighted, trimmed [d]				1.54	1.18, 2.02

[a] HR, hazard ratio; CI, confidence interval

[b] Adjusted for baseline variables: Study Site, HIV Serostatus, Age, Race, Income, Education, History of Pre-WIHS Abuse, Childhood Sexual Abuse, Health Care Utilization, CES-D Score, Cognitive Function, Drug Use, Smoking Status, Having a Partner, Unstable Housing, Transactional Sex, Hazardous Drinking, Viral Load, CD4 Count, Nadir CD4 Count, HAART Use, Non-adherence

[c] Adjusted (or weighted) for baseline and time varying variables: Study Site, HIV Serostatus, Age, Race, Income, Education, History of Pre-WIHS Abuse, Childhood Sexual Abuse, Health Care Utilization, CES-D Score, Cognitive Function, Drug Use, Smoking Status, Having a Partner, Unstable Housing, Transactional Sex, Hazardous Drinking, Viral Load, CD4 Count, Nadir CD4 Count, HAART Use, Non-adherence

[d] Weighted trimmed at the 0.1 and 10

Rates of trauma and PTSD in HIV+ women are much higher than national averages

Meta-analysis of all studies among US HIV+ women

Categories	Number of Studies	Pooled *n*	Prevalence (%)	95% Confidence Interval	Reference Prevalence
Intimate Partner Violence	8	2285	**55.3**	36.1 - 73.8	**24.8**
Childhood Sexual Abuse	7	3013	**39.3**	33.9 - 44.8	**16.2**
Childhood Physical Abuse	6	1582	**42.7**	31.5 - 54.4	**22.9**
Childhood Abuse Unspecified	2	232	**58.2**	36.0 - 78.8	**31.9**
Lifetime Sexual Abuse	8	1182	**61.1**	47.7 - 73.8	**12.0**
Lifetime Abuse Unspecified	6	1065	**71.6**	61.0 - 81.1	**39.0**
Recent PTSD	6	499	**30.0**	18.8 - 42.7	**5.2**

Machtinger E, Wilson T, Haberer J, Weiss, D. **Psychological trauma in HIV-positive women: a meta-analysis.** Aids and Behavior. January 17, 2012

Recent Trauma ➔

4x the rate of ART Failure

Potential factors	Detectable viral load on ART
Age (increase of one year)	OR 1.0 (0.93-1.1; p=.96)
African-American	OR 1.8 (0.6-6.1; p=.32)
Transgender	OR 0.9 (0.2-3.2; p=.84)
CD4 count <200 cells/μl	OR 2.1 (0.7-6.5; p=.20)
<90% ART adherence	OR 1.0 (0.3-3.6; p=.97)
Depression	OR 0.8 (0.3-2.7; p=.78)
Low self-efficacy	OR 1.7 (0.4-8.1; p=.50)
Low social support	OR 2.2 (0.6-6.9; p=.18)
Drug use	OR 1.1 (0.4-3.4; p=.88)
Lifetime coerced sex	OR 1.2 (0.4-3.8; p=.78)
Recent coerced sex	OR 1.8 (0.3-12.0; p=.53)
Lifetime trauma	OR 1.2 (0.3- 4.5; p=.77)
Recent trauma	**Odds ratio 4.3 (1.1-16.6; p=.04)**

Machtinger E. e al. Recent Trauma is associated with Antiretroviral failiure and HIV transmission risk behavior among HIV-positive women and female-identified transgenders. AIDS Behav March 2012

Women's Equity in Access to Care and Treatment (We-ACTx), Rwanda

Gender Based Violence Survey, July 2009

Of 414 women screened, 256 (62%) reported a history of violence

- Husband withholding money for food/rent
- Husband forcing patient to have sex
- Husband preventing woman from leaving the house or seeing friends.
- Husband refusing to go for HIV care, but using her supply of antiretroviral treatment

GBV: WE-ACTx Intervention

- 62 women joined support groups
- 80% live with their abusive partner.
  - Brought their husbands in for counseling as well.
- 34 men joined a support group to reduce their abusive behavior.

- Results
  - Women acquired negotiating skills and courage
  - Reduced abuse, more peaceful households
  - Men enrolled in clinic for their own care

Relationship between gender inequity and violence, power, and sexual risk practices in Botswana and Swaziland

Violence, Power, and Sexual Risk Outcomes

Gender Inequity Norms	Sex-Specific Models	Male-controlled sexual decision-making	Rape Perpetration (forced sex)	Raped (forced sex)	Transactional Sex	Intergenerational Sex (10+ years)	Unprotected sex with non-primary partners	Multiple/ concurrent sex partners
		AOR						
	Men	**1.90**	**2.19**	-------	1.12	1.06	**1.90**	**1.42**
		(1.09–2.35)**	**(1.22–3.51)****	-------	(0.83–1.89)	(0.78–1.59)	**(1.14–2.31)****	**(1.10–1.93)****
	Women	**2.05**	--------	0.83	1.35	**1.36**	1.35	0.79
		(1.32–2.49)**	--------	(0.42–1.59)	(0.99–1.64)*	**(1.08–1.79)****	(0.86–2.21)	(0.51–1.59)

All models adjusted for age, married/cohabitating, country of residence, alcohol consumption, and variables significant at $p<0.10$ in univariate analyses;
**Variables retained at significance $p<0.05$.
*Variables marginally significant at $p<0.10$.
doi:10.1371/journal.pone.0028739.t005

Shannon K, Leiter K, Phaladze N, Hlanze Z, et al. (2012) Gender Inequity Norms Are Associated with Increased Male-Perpetrated Rape and Sexual Risks for HIV Infection in Botswana and Swaziland. PLoS ONE 7(1): e28739. doi:10.1371/journal.pone.0028739

Gender inequities in sexual risks among youth with HIV in Kigali, Rwanda

Table 2 **Sexual risk behaviours for patients by gender**

	Total sample (*N* = 107)	**Women aged 16–24 years (*N* = 76), *n* (%)**	**Men aged 16–24 years (*N* = 31), *n* (%)**	***P* value**
Consensual sex				
Yes	38 (36%)	32 (42%)	6 (19%)	0.01
No: virgin	59 (55%)	35 (46%)	24 (77%)	
No: forced only	10 (9%)	9 (12%)	1 (3%)	
Forced sex				
Yes	24 (22%)	22 (29%)	2 (6%)	0.01
No	83 (78%)	54 (71%)	29 (94%)	
	Sample, sexually active (*n* = 38)	**Women aged 16–24 years (*N* = 32), *n* (%)**	**Men aged 16–24 years (*N* = 6), *n* (%)**	***P* value**
Median age at consensual sexual debut (IQR)	17 (15–18)	17 (15–18)	16 (15–17.5)	0.88
Age asymmetry at first sex				
Median age difference (IQR)	7 (3–10)	9 (5–11)	0.5 (−0.75–3.25)	0.01
% ≥5 years	25 (66%)	24 (75%)	1 (17%)	0.01
% ≥10 years	14 (37%)	13 (41%)	1 (17%)	0.38
Median number of partners				
Lifetime (IQR)	2.5 (1–5)	3 (1–6)	3 (2–4.75)	0.79
Past 6 months (IQR)	1 (0–1)	1 (0–1)	1 (0.25–1)	0.48
Ever offered in exchange for sex *(not mutually exclusive)*				
A meal/food	12 (32%)	10 (31%)	2 (33%)	
Go out on a date	11 (29%)	10 (31%)	1 (17%)	0.03
Money	22 (58%)	21 (66%)	1 (17%)	
Clothes	9 (24%)	8 (25%)	1 (17%)	
Cell phone, cosmetics, jewelry	12 (32%)	11 (34%)	1 (17%)	
Condom use (past 6 months) (*n* = 27)				
Always	12 (44%)	10 (43%)	2 (50%)	1.00
Less than always	15 (56%)	13 (57%)	2 (50%)	
Skipped (no sex past 6 months)	11			

Test FS, Mehta SD, Handler A, Mutimura E, .A M Bamukunde AM, Cohen M. Gender inequities in sexual risks among youth with HIV in Kigali, Rwanda. Int Jourl of STD & AIDS 2012; 23: 394–399.

HIV and Sex Workers

- In 26 medium and high HIV prevalence rates, 30·7% of sex workers were HIV-positive and OR for infection was 11·6 (95% CI 9·1-14·8).
- Need to address role of stigma, discrimination, and violence targeting female sex workers

Baral S, Beyrer C, Muessig K, et al.**Burden of HIV among female sex workers in low-income and middle-income countries: a systematic review and meta-analysis.** Lancet Infect Dis. 2012 Jul;12(7):538-49

Role of depression, stress, and trauma in HIV disease progression

- Searched PubMed for English articles 1990-2007
- Consistent evidence that chronic depression, stressful events, and trauma may negatively affect HIV disease progression (↓CD4 cells, ↑ VL, ↑ risk for clinical decline and mortality.
- Research to investigate biological and behavioral mediators of these psychoimmune relationships, and for interventions that might mitigate the negative health impact of chronic depression and trauma.

Leserman J. **Role of depression, stress, and trauma in HIV disease progression** Psychosom Med. 2008 Jun;70(5):539-45.

Is trauma's influence on health/behaviors mediated by coping styles, self-efficacy, social support, mental health, and substance abuse?

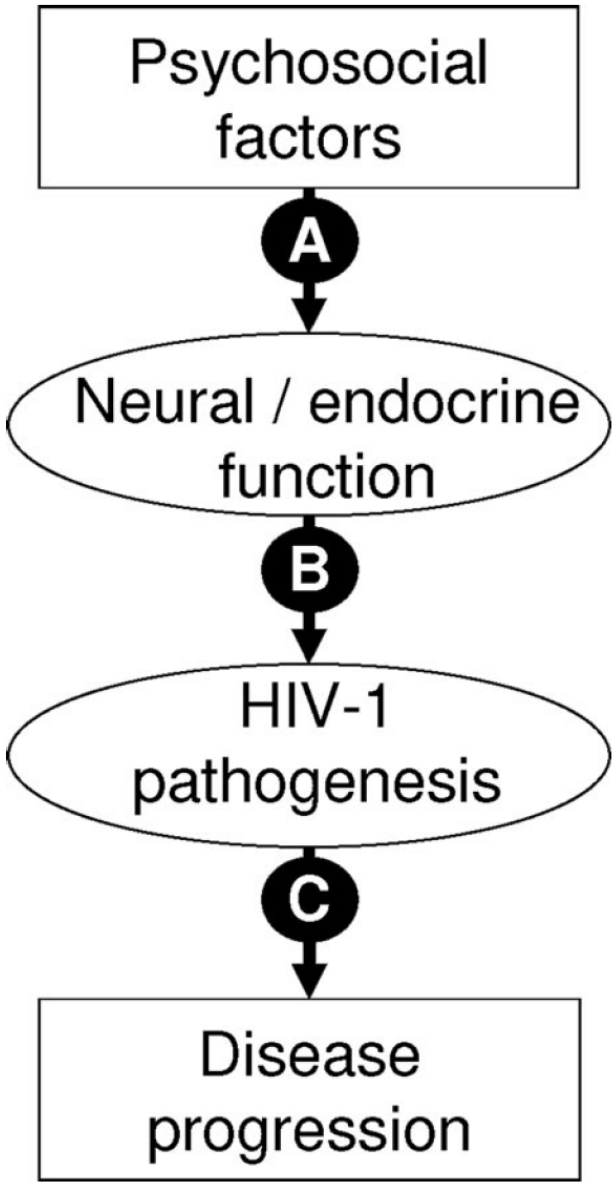
In 611 HIV+ outpatients, models found past trauma exposure associated with

- ↑odds of recent unprotected sex
- medication nonadherence
- hospitalizations
- HIV disease progression

- **When hypothesized mediators were included, trauma remained associated with most outcomes even after adjusting for all hypothesized psychosocial mediators.**
- **CONCLUSION: Past trauma influences adult health and behaviors through pathways other than the psychosocial mediators considered in this model**

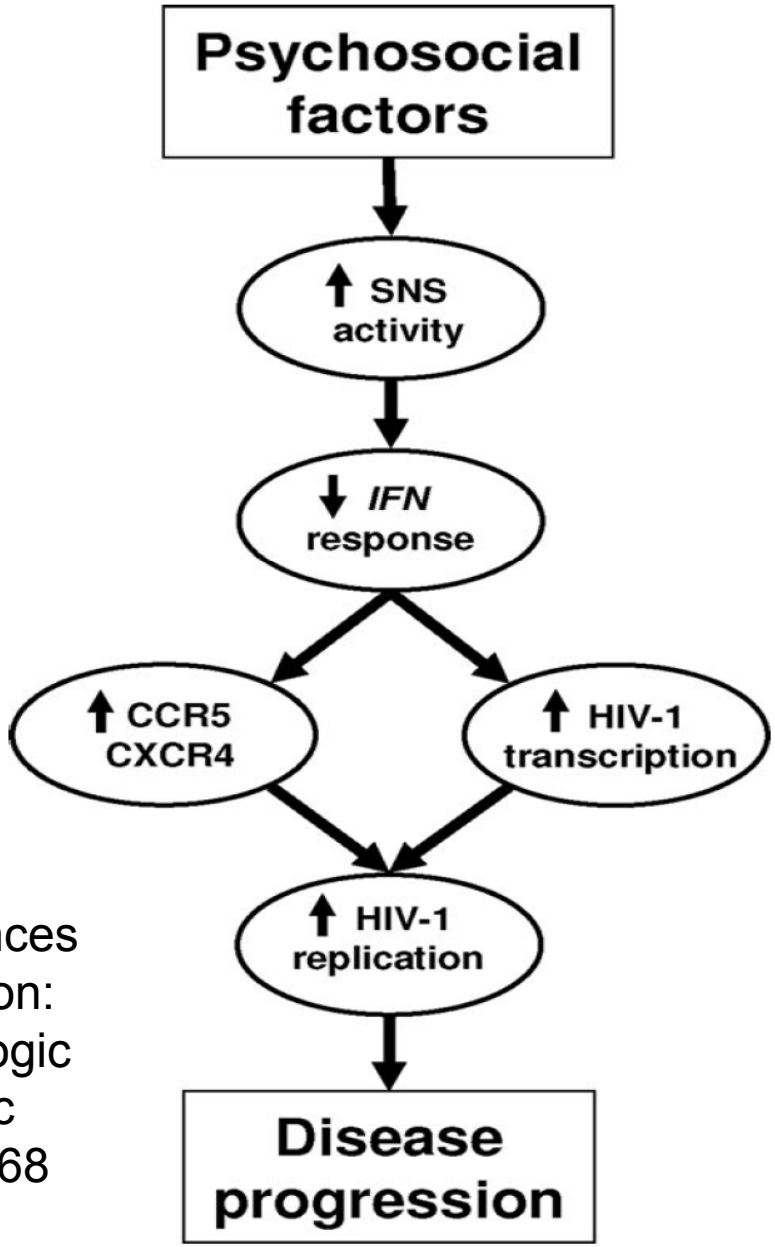
Pence BW, Mugavero MJ, Carter TJ, Leserman J, Thielman NM, Raper JL, Proeschold-Bell RJ, Reif S, Whetten K. **Childhood trauma and health outcomes in HIV-infected patients: an exploration of causal pathways.** J Acquir Immune Defic Syndr. 2012 Apr 1;59(4):409-16.

BIOBEHAVIORAL MECHANISMS IN HIV



Cole S. Psychosocial Influences on HIV-1 Disease Progression: Neural,Endocrine, and Virologic Mechanisms. Psychosomatic Medicine June 2008 vol. 70 no. 5 562-568

BIOBEHAVIORAL MECHANISMS IN HIV



Cole S. Psychosocial Influences on HIV-1 Disease Progression: Neural,Endocrine, and Virologic Mechanisms. Psychosomatic Medicine 2008;70 (5): 562-568

Childhood sexual abuse and neuroendocrine and immunology response

- Childhood sexual abuse activates HPA axis, ↑ plasma concentrations of proinflammatory cytokines, (IL-1, IL-6, and TNF-α)
- Among gay and bisexual men, CSA and early trauma influence transmission and progression and management of HIV.
- Childhood adversity promotes the formation of a neuroimmune pipeline in which inflammatory signaling between brain and periphery is amplified which to coupling of depression and inflammation, which may contribute to later affective difficulties and biomedical complications.

Odebrecht S, Nunes V, Watanabe Impact of Childhood Sexual Abuse on Activation of Immunological and Neuroendocrine Response. Aggression and Violent Behavior. 2010;15(6):440 - 445

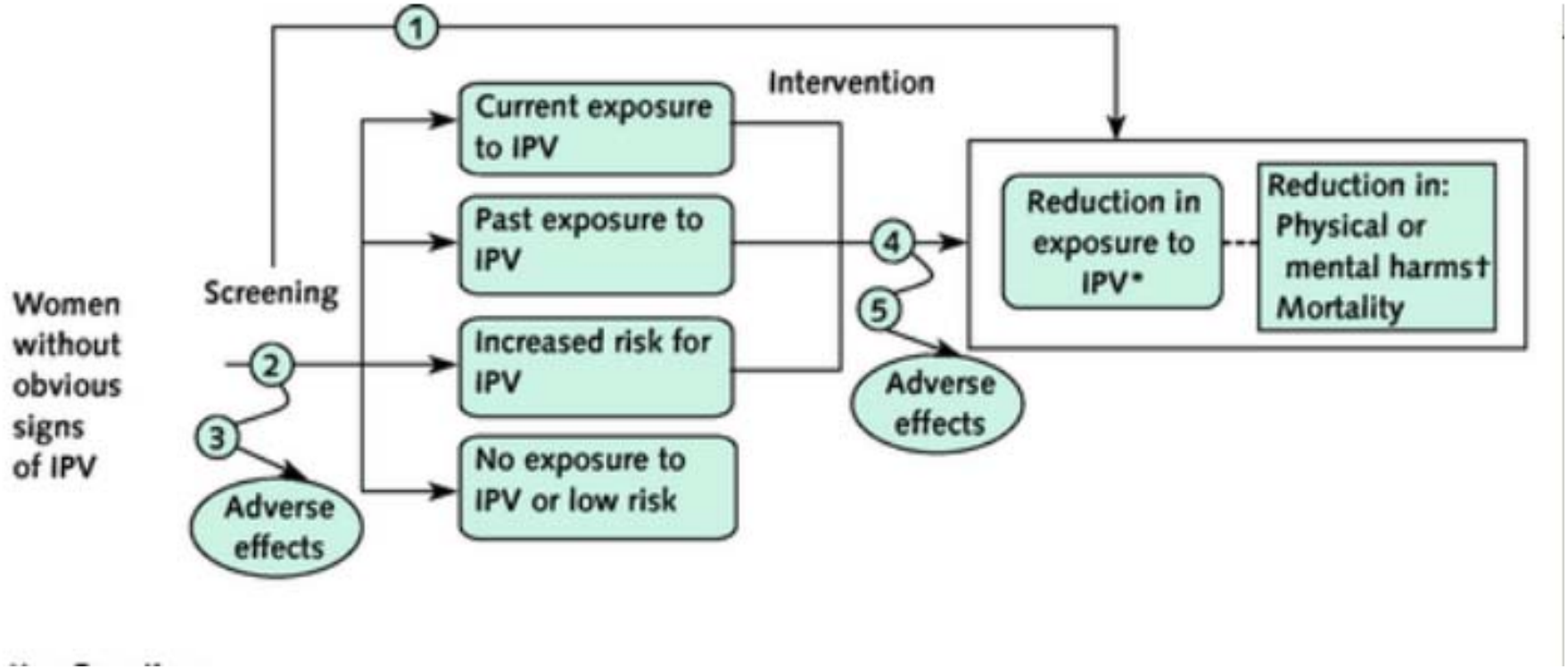
O'Cleirigh C, Safren SA, Mayer KH. The Pervasive Effects of Childhood Sexual Abuse:Challenges for Improving HIV Prevention and Treatment Interventions. J Acquir Immune Defic Syndr. 2012 Apr 1;59(4):331-4

Miller GE, Cole SW. **Clustering of depression and inflammation in adolescents previously exposed to childhood adversity** Biol Psychiatry. 2012 Jul 1;72(1):34-40.

How do things change?

Screening Women for Intimate Partner Violence

Ann Intern Med. 2012;156(11):796-808

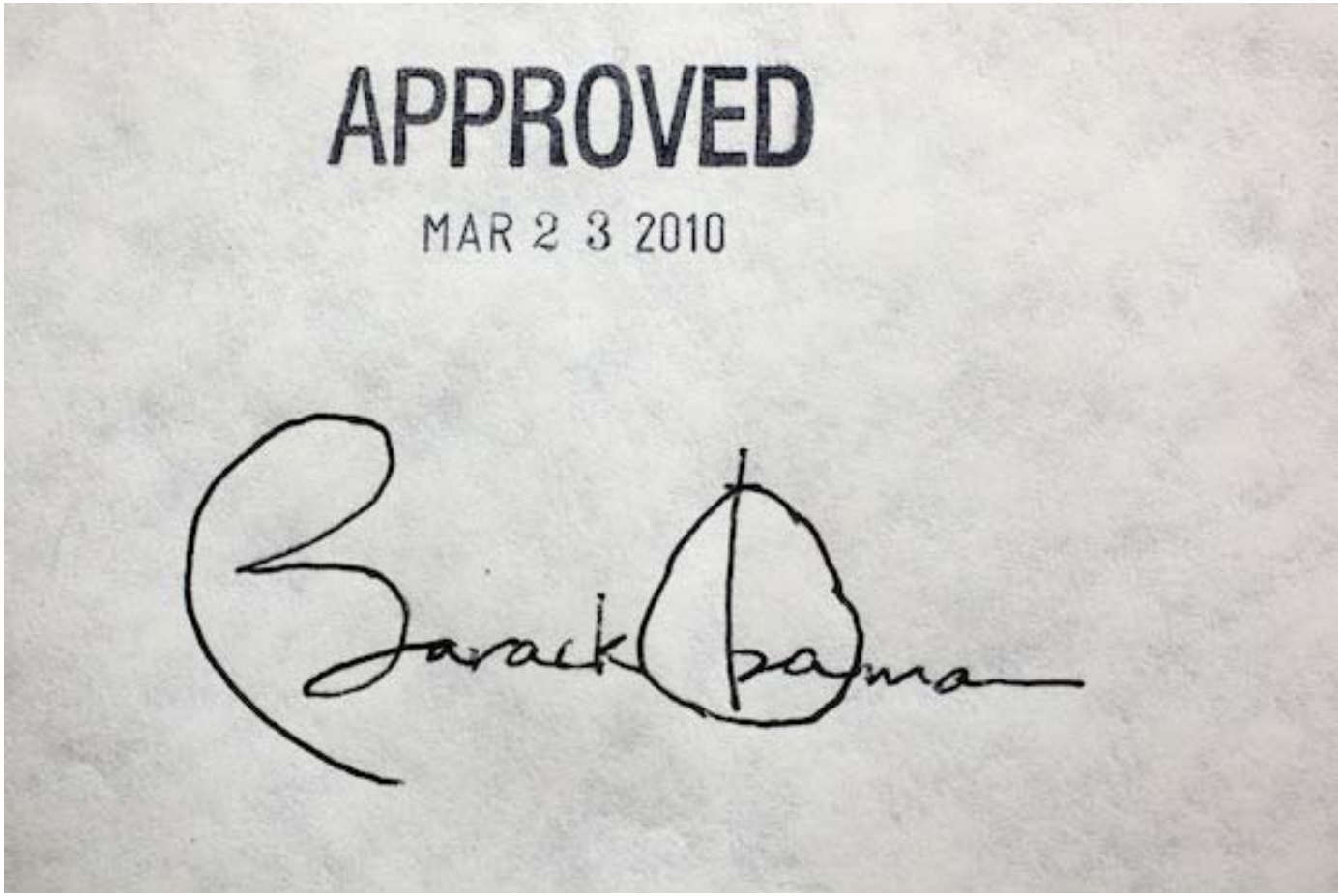


Trials limited by heterogeneity, lack of control groups, high loss to follow-up, self report measures, and lack of accepted reference standards.

Conclusion: Screening instruments accurately identify women experiencing IPV. Screening women for IPV can provide benefits that vary by population, while potential adverse effects have minimal effect on most women.

What Women Gain From the Affordable Care Act–Starting August 1, 2012

- Women who are insured can now access screening and counseling for domestic and interpersonal violence.



Conflicting evidence…..

3 large scale trials evaluating partner violence screening showed that universal screening did not improve women's health or life quality or reduce re-exposure to partner violence.

- MacMillan HL, Walhen CN, Jaamieson E, et al; McMaster Violence Against Women Research Group. Screening for intimate partner violence in helath care settings: a randomized trial. JAMA. 2009.302(5):493-501
- Robinson-Whelen S, Hughes RB, Powers LE, et al. Efficacy of a computerized abuse and safety assessment intervention for women with disabilities: a randomized controlled trial. Rehabil Psychol. 2010 May;55(2):97-107.
- Klevens J, Kee R, Trick W, et al. Effect of Screening for Partner Violence on Women's Quality of Life: A Randomized Controlled Trial. *JAMA*. 2012;308(7):681-689.
- Editorial: **Wathen CN, MacMillan HL. Health care's response to women exposed to partner violence: moving beyond universal screening. JAMA. 2012 Aug 15;308(7):712-3.**

What should we do?

- Train, sensitize providers to open the dialogue.
- Provide seamless, integrated referral systems from clinic setting to clinical and community services
- Consider individual assessments and treatment plans contextually
- Research best interventions

Global Plan: Elimination of New HIV Infections Among Children by 2015 and Keeping their Mothers Alive

- Gender must become a fundamental consideration as countries develop plans
- Without implementation of comprehensive gender transformative PMTCT programs, elimination of vertical transmission of HIV will remain elusive

Targeting men with GBV prevention and HIV risk reduction

- South African RCT:
  - reduced negative attitudes toward women in the short term; reduced violence against women in longer term.
  - increased talking with sex partners about condoms; more likely to have been tested for HIV at follow-ups.
  - Few differences on other HIV transmission risk reduction outcomes.
- Programme H (Brazil/ N780) quasi experimental design
  - Improved gender equitable attitudes,beliefs
  - Increased recognition of women as having sexual rights
  - Increased HIV testing
  - Increased condom use
- Malawi Male Motivator Project (Malawi/N400) RCT
  - Increased contraceptive use
  - Improved communication within couples

Kalichman SC, Leickness C,. Simbayi LC. Integrated Gender-Based Violence and HIV Risk Reduction Intervention for South African Men: Results of a Quasi-Experimental Field Trial. Prev Sci. 2009 September; 10(3): 260–269.

Ghanotakis E et al. Journal of the International AIDS Society 2012, **15**(Suppl 2):17385

Family Clinic Intervention: RCT in Northern California clinics

- Trained family planning counselors; n= >900 women
- Intervention
  - enhanced IPV screening, educating on IPV and reproductive coercion, sexual and reproductive health with control of reproductive choices (e.g., birth control use, condom use, pregnancy and timing of pregnancy).
  - Educate and facilitate women using local IPV and sexual assault resources.
- Results
  - 71% reduction in odds of pregnancy coercion in intervention clinics compared to control clinics
  - Women in intervention arm more likely to report ending unhealthy or unsafe relationship regardless of IPV status

Miller E, Decker MR, McCauley HL, et.al. **A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion.** Contraception. 2011 Mar;83(3):274-80.

The IMAGE Project (South Africa)

- Community RCT empowerment of women and girls with 5400 participants
- Results:
  - 55% reduction in participants' experience of violence compared to constant or increase in control groups
  - ↑ positive HIV-related communication
  - ↑ female autonomy in decisionmaking
  - Improved uptake of HIV VCT
  - ↓ unprotected sex with a nonspousal partner

Ghanotakis E et al. Journal of the International AIDS Society 2012, **15**(Suppl 2):17385

STEPPING STONES

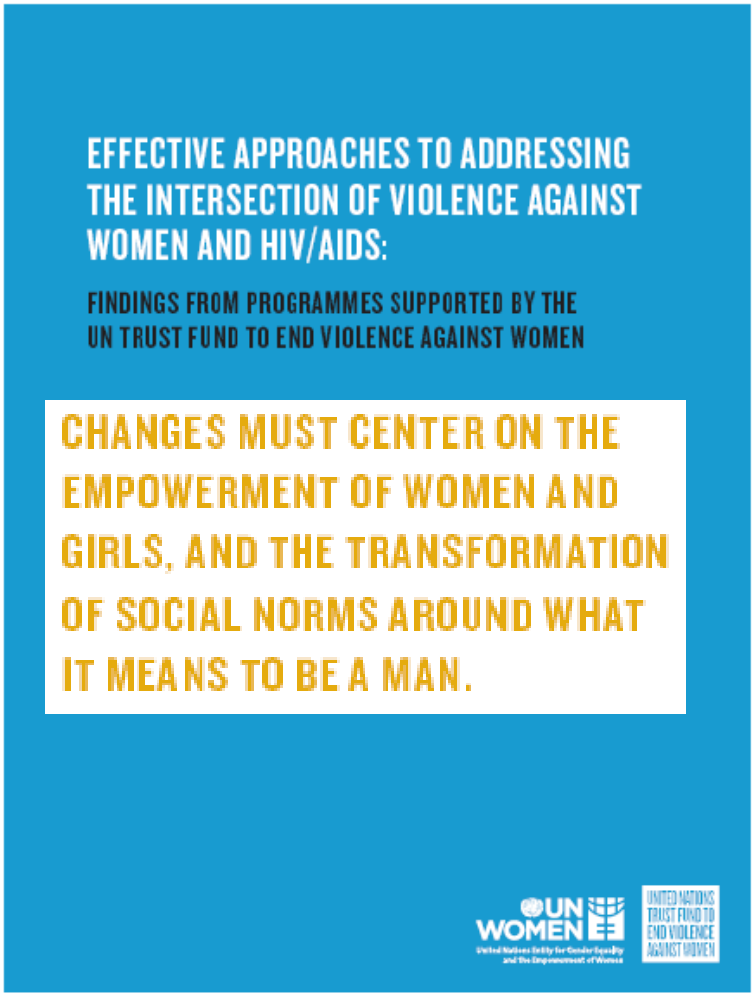
- RCT in South Africa.
  - 13 3-hour sessions for young women and men on sex education; role playing; self-reflection; discussion related to HIV, gender roles, gender-based violence, and reproductive health. Separate men and women groups, with final joint meeting.
  - vs.young women received 3-hour course on HIV and safe sex.
  - Follow up at 12 & 24 months, tests for HIV and HSV-2.
- Results
  - Significantly lower rates of HSV-2, risk factor for HIV, but no change in HIV rates
  - Young men reported significant declines in violence against women, including rape. Changes were greater after 24 months than at 12 months

Jewkes RK, Dunkle K, Nduna M, Shai N. **Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study.** Lancet. 2010 Jul 3;376(9734):41-8

- Our findings suggest that the focus should shift from asking about violence to equipping counselors to discuss gender inequality in relationships more broadly. This needs to be part of basic counselor training as it is integral to approaching HIV risk reduction.

Christofides N, Jewkes R. Acceptability of universal screening for intimate partner violence in voluntary HIV testing and counseling services in South Africa and service implications. AIDS Care 2010; 22: 279-285. CrossRef | PubMed

Provider Interventions



- Establish effective integrated care and referral systems
- Train providers on links of violence and HIV
- Include survivor networks & train survivors as peer counselors
- Train and empower providers to recognize and decrease GBV, decrease stigma & vulnerability and improve care

Final Thoughts

- Sexual practices flow from gender identities
  - Why gender inequity, HIV and GBV are entwined
  - why they are so hard to change
  - how change should be approached.

- Align agendas of HIV prevention/treatment and building gender equity to extend human rights globally and reduce HIV transmission and deaths
- Resources remain severely and disproportionately limited. (need distribution efficiency)
- Develop and test more gender-equitable strategies and interventions to improve percentages at each point in the cascade and improve %age of women and men globally with viral suppression

Jewkes R and Morrell R. **Gender and sexuality: emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention.** J Int AIDS Soc. 2010; 13: 6.