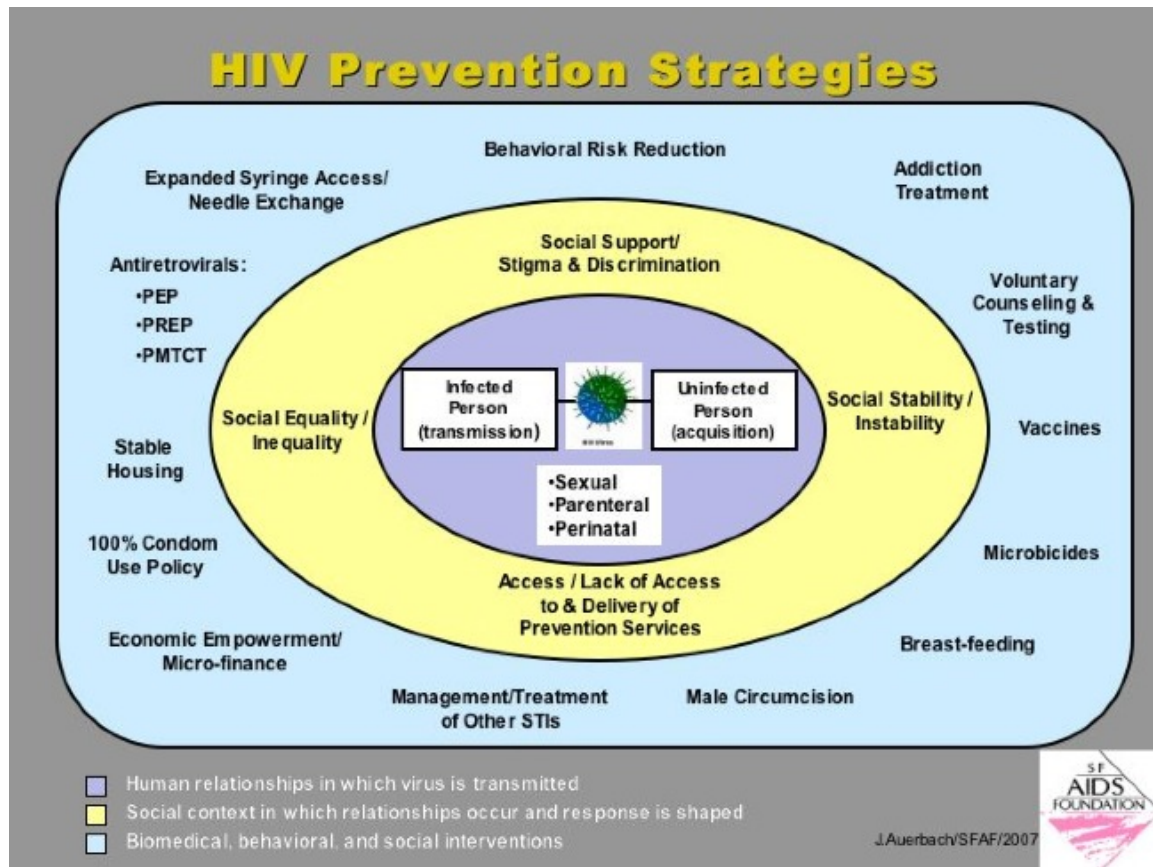


Behavioral and Social Science Approaches to HIV Prevention

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Notes: What I would like to do in starting this discussion is to frame how I think about HIV prevention. If there's a take home message I would like you to go away with is this graphic. This simple graphic depicts a frame of how to think about HIV prevention.



Notes: At the core, HIV is a virus - a biologic pathogen which is transmitted from an infected person to an uninfected person in the course of human relationships, which are dyadic (involving two people - the infected person who transmits the virus and the uninfected person who acquires the virus). So transmission of HIV is relational by definition. We have a tendency to not look at it that way, we tend to individualize HIV and our responses to it. The point here is that HIV does not come to a single or isolated individual, rather it the outcome of a social interaction.

HIV transmission occurs through three basic routes - sexual, perinatal (from mother to infant during pregnancy & childbirth) and parenteral (through the skin, needles-to-blood contact). But these activities occur in context of human relationships - through IV drug sharing, perinatally through childbirth, sexually, etc. Which themselves are effected by social and cultural contexts.

Second circle: Social context and factors in which relationships occur and response is shaped. The way our society is organized, our cultural norms, our values, institutions, and organizations both affect our vulnerability to HIV infection and also offer points for intervention. Some of these have to do with whether you are in a supportive environment or an environment with a lot of stigma and discrimination. In some cases these are institutionalized through laws and policies that actively discriminate groups of people or make it difficult to access services. In terms of social stability & instability, an extreme example is rape being used as tools of genocide against women in civil unrest in Rwanda. Certainly the availability of services, both general health services and prevention services, affect our vulnerability or resilience against HIV infections. In general, whether society supports equal arrangements or not, we have great inequality by class, that can affect vulnerability to HIV infection.

The third, outside circle depicts an array of prevention interventions developed, tested or in planning phases - including biomedical strategies, behavioral and social interventions.

Behavioral Interventions

Goal:

To change behaviors to reduce risk of HIV infection by delaying onset of intercourse, reducing number of sex partners, increasing condom use, reducing or eliminating drug injection and/or sharing drug use equipment.

Notes: In general terms, behavioral interventions are those strategies designed, developed and implemented by researchers to test a concept. They design a test: If we do this, then it will produce x outcome.

Examples:

Delay onset of intercourse - and let me point out that this is not abstinence - or AOUM (abstinence-only until marriage), which prohibits sex unless it occurs in a legally sanctioned heterosexual marriage. Instead this idea is based on public health constructs that if young people delay sexual debut (becoming sexually active) by even one year, it can effectively prevent HIV transmission. Data indicates that older teens uses condoms more.

Reduce sex partners as a way of reducing infection - having fewer partners, particularly in environments where there is a lot of HIV infection, can reduce transmission of HIV.

Reduce or eliminate drug injection altogether (for those who are ready to stop), and use the harm reduction model if the drug user is not ready to quit, but in the meantime help them not get HIV while they are dealing with addiction, by not sharing contaminated needles and paraphernalia (cottons and cookers).

Behavioral Interventions

Types:

- ❖ Individual, couple, small group counseling
- ❖ Information and skills-building programs
- ❖ Peer and network interventions to change social norms
- ❖ Social marketing & mass communications campaigns

Notes: Include skills building that can include very basic things such as how to use condoms, or using female condoms

Peer education- delivered by people who are influential in affecting their peers. Such as opinion leaders or community leaders.
Social marketing & mass communications campaigns provide the general population or sometimes a more targeted group with messages about risk reduction

Behavioral Interventions

Content:

- ❖ HIV Risk Reduction Information
- ❖ Perceptions of Risk or Vulnerability
- ❖ Personal, Interpersonal, and Technical Skills (with and without practice)
- ❖ Enhancement of Responsibility, Self-Esteem or Group Pride
- ❖ Enlistment of Social Support
- ❖ Risk Reduction Supplies
- ❖ Referrals to Services
- ❖ HIV/STI Testing

Settings:

- ❖ Health Care Venues
- ❖ HIV/AIDS Service Organizations
- ❖ Schools
- ❖ Community-based Organizations
- ❖ Military Institutions
- ❖ Commercial Establishments
- ❖ Prisons
- ❖ Homes

Outcomes:

- ❖ Psychosocial (e.g., self-efficacy)
- ❖ Behavioral (e.g., condom use)
- ❖ Biological (e.g., STI diagnosis)

Notes: The issue of outcomes is a big one in behavioral intervention. Since we rely on information self reported by the individual, there is a problem of accuracy. Also, it is important to point out that HIV infection is an outcome, but it is hard to use this as a measurable outcome for many reasons.

Another major question is why using HIV incidence as an outcome measure for behavioral studies hasn't been done historically or why it is so difficult to use that measure. I think behavioral scientists will be very quick to say that behavioral interventions are about changing behavior, it's the theory behind the method and design of the intervention, when that is what you are trying to change, then that's what you should measure.

But the public health and biomedical scientists, and I think real people, would say: but you haven't answer the question. You might have changed people's behavior by getting them to use condoms more, but what does that tell me about whether you actually prevented people from getting infected by HIV?

Behavioral Interventions

Findings:

Meta-analyses have found that such interventions have resulted in 0% to 40% reductions in risk behaviors associated with HIV transmission and acquisition among different population groups and exposure categories (See JAIDS, 2002, Vol. 30 S).

Notes: After 25 plus years of robust research in behavior interventions, we now have meta-analyses and systematic reviews -- which means people can take 10, 20, or however many studies that have comparable and rigorous designs and evaluations for a whole set of interventions for a specific group of people and look at them together, can we find common outcomes to say this kind of interventions produced this much outcome. These analysis have found that such interventions have resulted in a range of 0% to 40% reductions in risk behaviors (depending on the intervention) associated with HIV transmission and acquisition among different population groups and exposure categories.

CDC's Replicating Effective Programs Plus:

www.cdc.gov/hiv/projects/rep/default.htm

- ❖ Community Promise
- ❖ Healthy Relationships
- ❖ "light" Living in Good Health Together
- ❖ Mpowerment
- ❖ Partnership for Health
- ❖ Popular Opinion Leader
- ❖ Project Respect
- ❖ Real AIDS Prevention Project
- ❖ Street Smart
- ❖ VOICES/VOCES

Notes: Here I just listed this deemed by the CDC as effective interventions. Some of you are probably familiar with them and using them.

Caveats about Behavioral Interventions

- ❖ Reliance on self-report data
- ❖ Measure behavior, not infection
- ❖ Short duration and follow-up
- ❖ Potential erosion of behavioral change over time
- ❖ Sustainability
- ❖ Question of how adaptable interventions are and should be

Notes: Typical behavioral intervention studies tends to take 3-18 months, so we don't know how long the change can be sustained. We have very little that looks at people over the life course. As you grow older, your circumstances change, so interventions you received when you were younger might not work later on.

Social Science Research

Types of Research:

- ❖ Social Determinants
 - Underlying factors that fuel epidemic
- ❖ Social Impacts
 - Demographic and household changes
 - Governance and security
 - Gender dynamics
- ❖ Social Interventions
 - Policy change
 - Institutional change

Notes: We need to connect behavioral to social research. We tend to move quickly from social research to interventions. We need to talk about basic social science - what are the actual dynamics in society playing out that affect people's behavior that then could affect by interventions?

There are three basic types of social science research in HIV prevention:

What are the social determinants - what are the underlying factors that fuel the epidemic? Racism, sexism, homophobia, etc.

Social Impacts: What is HIV doing to communities? what are the consequences of the epidemic: Demographic and household changes on populations that bear the burden of the impact of HIV - e.g., those living in high prevalence countries, gay men, et cetera Has HIV made some society unstable?

Gender dynamic is very important, gender does not just mean women, but the full spectrum of gender identity and expressions.

Social/Structural Interventions

Goal: To modify social arrangements and/or affect social conditions that facilitate health promotion and risk reduction

Examples:

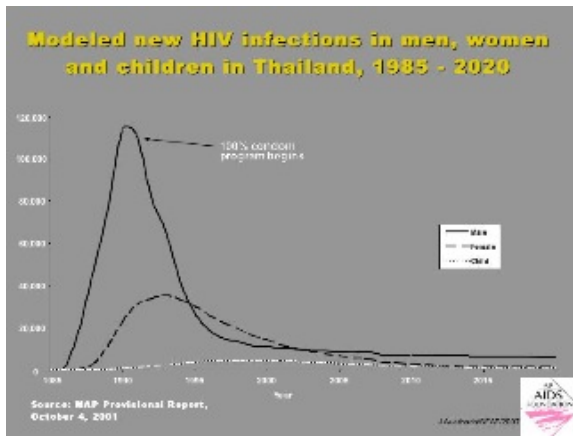
- ❖ 100% Condom Use Program
- ❖ Syringe Access (S/NEP)
- ❖ Economic Empowerment for Women (IMAGE)
- ❖ Stable Housing

Thai 100% Condom Use Program

- ❖ Made condom use mandatory in all brothels, even while prostitution remained illegal.
- ❖ Promotion of condom use coupled with emphasis on decreasing visits to sex workers.
- ❖ Program included mass media, community mobilization, NGO engagement, political commitment

Results:

- ❖ Among military recruits, visits to sex workers decreased 34% and condom use with sex workers increased 32% between 1991 and 1995.
- ❖ HIV incidence rate declined from 3/100 person-years to 0.3/100 person years between 1991 and 1993.
- ❖ Program replicated in other Asian countries.



Syringe/Needle Exchange Programs

- ❖ Syringe exchange programs have been shown to reduce the risk of HIV transmission among IDUs without increasing drug use.
- ❖ In NYC, HIV incidence among IDU declined by over 40% between 1991 and 1996, in great part due to access to clean needles (Des Jarlais, et al. 1998).
- ❖ Study of 99 cities concluded that HIV prevalence decreased by 18.6% per year in cities with SEP, and increased by 8.1% in cities without SEP (MacDonald, et al. 2003).

Economic Empowerment for Women

- ❖ Microfinance
 - IMAGE study showed no effect on HIV incidence or risky sexual behavior, but did show reduction in physical and sexual abuse among intervention participants (Pronyk, et al. 2006)
- ❖ Property & Inheritance Rights
 - Limited evidence for impact on HIV incidence.

Conclusion

- ❖ Need to know more about the long-term effects of behavioral interventions
- ❖ Need to better operationalize and measure social-level factors
- ❖ Need more social interventions, allowing for non-randomized designs
- ❖ Need interdisciplinary thinking and advocacy