

## Chapter 5 Strategies and Interventions





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### Purpose

This chapter provides the tools that providers need to design and implement programs that (1) fit into San Francisco's reinvigorated approach to HIV prevention, and (2) address HIV prevention needs at multiple levels in accordance with the Spectrum of Prevention framework described in the first section of the chapter.

There are four “tool boxes” to assist providers:

- **Tool Box #1:** Program design and implementation principles
- **Tool Box #2:** Behavioral theory
- **Tool Box #3:** Strategies and interventions
- **Tool Box #4:** Standards of practice and quality assurance

Providers are invited to use these tools creatively in different combinations to meet the larger goal of establishing integrated, coordinated, and responsive HIV prevention programs for San Francisco's at-risk populations. It is indicated when there are mandates attached to specific tools (e.g., under many of the strategies and interventions, implementation requirements are listed). Other information is offered as guidance to programs and can be applied as relevant.

The information presented here attempts to summarize key points; thus, further research may be required for more detailed information (references are provided where applicable). This chapter does not provide guidance on the content or curricula for interventions. The types of prevention information, messages, and mode of delivery should be dictated by the specific and current prevention needs of populations, as identified by a needs assessment (see Chapter 3: Community Assessment for needs assessments with various populations, pp. 45–136) or other scientifically sound methods. Curricula can also be borrowed and adapted from other programs with demonstrated relevance and effectiveness. Two resources for program curricula are:

- The CDC's *REP+*: Replicating Effective Programs Plus Other Resources (<http://www.cdc.gov/hiv/projects/rep/default.htm>), which includes the Compendium of HIV Prevention Interventions with Evidence of Effectiveness, among other tools
- The CDC's Diffusion of Effective Behavioral Interventions for HIV Prevention (DEBI) (<http://www.effectiveinterventions.org/>)
- The UCSF Center for AIDS Prevention Studies Prevention Tool Kit (<http://www.caps.ucsf.edu/projects/curricula.html>)

### How to Read This Chapter

Because this chapter reflects a new approach to HIV prevention, it is recommended that all readers review Section I and II, which provide an overview of this new framework. In order to get a sense of the wide range of theories, strategies, and interventions that can be used to build HIV prevention programs, readers will find it useful to read the full chapter. Those seeking information about specific theories, strategies, or interventions are invited to use the index at the back of this Plan to locate the appropriate pages.

## Terms and Definitions

<b>Behavioral Theory</b>	A model or framework, developed through multiple observations over time, that depicts and predicts how people behave and that shows how the different factors that influence behavior are linked together.
<b>CTR</b>	Counseling, testing, and referral
<b>Intervention</b>	The type of service or prevention modality a program provides (e.g., outreach, social marketing)
<b>IRRC</b>	Individual risk reduction counseling
<b>MSW</b>	Multiple session workshop
<b>PCM</b>	Prevention case management
<b>PCRS</b>	Partner counseling and referral services
<b>PEP</b>	Post-exposure prevention
<b>SSG</b>	Single session group
<b>STD</b>	Sexually transmitted disease
<b>Strategy</b>	A prevention approach that can be applied across a spectrum of possible interventions (e.g., peer education)
<b>VBGO</b>	Venue-based group outreach
<b>VBIO</b>	Venue-based (street and community) individual outreach

## Chapter Outline

### **Section I: San Francisco's New Approach to HIV Prevention**

Outlines a framework for a comprehensive citywide approach to HIV prevention programs.

### **Section II: Tool Box #1: San Francisco's Principles of Program Design and Implementation**

Describes the unique attributes of San Francisco's approach to HIV prevention programs.

### **Section III: Tool Box #2: Behavioral Theory**

Outlines several behavioral theories that can be used as foundations for the development of HIV prevention programs.

### **Section IV: Tool Box #3: Strategies and Interventions**

Outlines a range of HIV prevention activities that can be combined and adapted to create HIV prevention programs tailored to the needs of specific populations.

### **Section V: Tool Box #4: Standards of Practice and Quality Assurance**

Highlights the key administrative elements of HIV prevention programs that are needed to ensure high-quality services.

### **Appendix 1: Update on Rapid Testing**

### **Appendix 2: Update on Prevention Technologies Under Development**

## Background

HIV prevention has seen many successes in San Francisco in recent decades, with new infections decreasing dramatically since the 1980s. Despite these successes, recent increases in new HIV infections among men who have sex with men (MSM) call for a reinvigorated approach to HIV prevention. This new approach is described in detail in Chapter 1: Community Planning: The History and the Future (pp. 1-10). Current and future HIV prevention programs need to be implemented in the spirit of this new approach, which means focusing on the following three areas:

- Improving overall health and wellness, including physical, mental, emotional, and spiritual health.
- Ensuring that prevention reaches and is relevant for both HIV-negative and HIV-positive people.
- Strengthening linkages and coordination to ensure that the whole spectrum of community and individual needs is met. This includes improved linkages to services for people living with HIV as well as high-risk HIV-negative individuals and those who do not know their serostatus. Examples include linkages to primary care, sexually transmitted disease (STD) detection and treatment, mental health services, substance use prevention and treatment, housing, financial assistance, social support services, and many others.

## San Francisco's Framework for Program Design and Implementation

To successfully make this shift in our approach, HIV prevention efforts must address the existing needs in multiple ways and at multiple levels. Cohen & Swift's (1999) Spectrum of Prevention framework (Exhibit 1), which was originally designed for injury prevention, provides a solid model for doing just that. This framework has been adopted by the Prevention Institute (<http://www.preventioninstitute.org/>), a well-renowned national center dedicated to improving community health and well-being by building momentum for effective prevention. Implementing interventions at all six levels in the framework represents a recognition that HIV prevention is not just about the individual; it is also about the service, community, and policy environment in which individuals live their lives.

Level 1 interventions are effective at changing behaviors for individuals, one at a time. If done well, they prevent HIV infections and can be cost-effective (Holtgrave et al 2002). Examples of Level 1 interventions are individual risk reduction counseling (IRRC) and single session groups (SSG).

However, the spread of HIV is a population-level phenomenon, and population-level trends cannot be changed with individual-level approaches alone. That is why we also need interventions in Levels 2 through 6. Level 2 interventions are aimed at promoting health and wellness at the community level. Level 3 interventions address provider training, and Level 4 interventions focus on coordination among providers. Level 5 interventions address structural barriers to services, such as the lack of substance abuse treatment slots, as well as structural and community-level practices or phenomena that affect HIV risk (e.g., discrimination, disenfranchisement). Level 6 interventions aim to change policies that may directly or indirectly affect HIV transmission, such as changing legislation that makes it challenging to implement rapid testing in community settings. HIV prevention is far more likely to impact populations if strong interventions are implemented at all these levels. It is not a requirement that each program address all levels in the framework, although some programs might do this. It is the responsibility of the SFDPH to

ensure that the programs selected for funding reflect the mix of approaches outlined in the Spectrum of Prevention, and it is the responsibility of the HPPC and the SFDPH to identify gaps on an ongoing basis and to make sure unmet needs get addressed.

Exhibit 2 gives an example of how this framework could be implemented.

## EXHIBIT 1

### The Spectrum of Prevention

#### LEVEL 1: THE INDIVIDUAL

Strengthening individual knowledge, skills, and ability to initiate and maintain behavior change

#### LEVEL 2: THE COMMUNITY

Promoting community education, skills building, and behavior change through reaching groups of people with HIV prevention messages and resources to promote health and wellness

#### LEVEL 3: THE INDIVIDUAL HIV PREVENTION PROVIDER

Educating providers to transmit skills and knowledge at Levels 1 and 2

#### LEVEL 4: THE COMMUNITY OF HIV PREVENTION PROVIDERS

Bringing together HIV prevention providers and their partners to reach broader goals and have a greater impact

#### LEVEL 5: STRUCTURAL BARRIERS

Changing organizational and systems-level practices to meet the multiple needs of people living with or at risk for HIV (e.g., substance use, mental health)

#### LEVEL 6: POLICY AND LEGISLATION

Developing strategies to change laws and policies to influence outcomes of HIV prevention efforts

Source: Adapted from Cohen and Swift (1999)

## EXHIBIT 2

### Implementing the Spectrum of Prevention: Example

#### **LEVEL 1: THE INDIVIDUAL**

Providing HIV counseling, testing, and referral using standard or rapid testing

#### **LEVEL 2: THE COMMUNITY**

Conducting a social marketing campaign to promote HIV counseling, testing, and referral among high-risk groups

#### **LEVEL 3: THE INDIVIDUAL HIV PREVENTION PROVIDER**

Providing training for HIV test counselors

#### **LEVEL 4: THE COMMUNITY OF HIV PREVENTION PROVIDERS**

Establishing a standard citywide protocol for HIV prevention programs to link their clients to HIV counseling, testing, and referral services

#### **LEVEL 5: STRUCTURAL BARRIERS**

Developing strategies to increase available mental health and substance use treatment resources to which people can be linked after receiving an HIV test

#### **LEVEL 6: POLICY AND LEGISLATION**

Developing strategies to ensure that state and federal policies require that counseling and referral always accompany HIV testing

There are several principles that underlie the creation of effective programs for San Francisco populations. The principles reflect the latest science as well as San Francisco's core values about how HIV prevention should be done in the local context. Both HIV prevention providers and the HIV Prevention Section play a role in ensuring that these principles are adhered to throughout the HIV prevention network of services. Providers must incorporate these elements into their programs, and the HIV Prevention Section must take a leadership role in creating and supporting referral networks and coordination among providers (especially between prevention and care services).

Because all of these principles are important, and because different HIV prevention providers might place different levels of importance on each depending on their programs, they are listed alphabetically and not in order of priority.

### Community Focus

There are multiple ways that providers can bring a community focus to HIV prevention:

- All prevention programs should strive to stimulate community involvement through cultivation of community trust over time (e.g., staff should be nonjudgmental, open, compassionate, trustworthy, responsive).
- Community members should be invited to participate in the development and implementation of programs when appropriate.
- Both the content and method of delivery of an intervention should be culturally appropriate for the population. This requires an understanding of, respect for, and attention to how people from a cultural group communicate and interact, as well as their values and beliefs. Cultural competency can be defined in many ways and is not limited to race/ethnicity and language.
- Providing incentives such as food, food vouchers, transportation tokens, t-shirts, or condoms, can be useful for recruiting some populations to participate in HIV prevention programs and can go a long way toward building community trust. Likewise, attention to recruitment and retention of staff and volunteers is critical for the continuity of programs, which contributes to agency credibility and helps promote trust.

### Cost Effectiveness

Cost-effectiveness of an intervention or program can determine whether it is cost-saving (i.e., the cost of the intervention per HIV infection averted is less than the lifetime cost of caring for a person with HIV) or cost-effective (i.e., the cost per HIV infection averted compares favorably with other preventive services, such as smoking cessation) (CAPS Fact Sheet 2002, "Can cost-effectiveness analysis help in HIV prevention?") In San Francisco, programs should be as cost-effective as possible. Some studies suggest that certain strategies and interventions are cost-effective, and this is indicated throughout this chapter. San Francisco is currently working on a local model for cost-effectiveness, which will help determine how best to use limited HIV prevention resources. When the model is completed, the HPPC will provide updates to the community. For more on cost-effectiveness in HIV prevention, see a report prepared by the Rand Corporation, "Maximizing the Benefit: HIV Prevention Planning Based on Cost-Effectiveness," at <http://www.rand.org/publications/DRU/DRU3092.pdf>.



## Defining the Population to Be Reached

How a target population is defined can influence how effective a program is. As a general rule, the more well-defined the population the more effective and cost-effective programs are. Populations can be defined by behavioral risk, gender, age, sexual orientation, ethnic or cultural identity, other factors, or a combination of these factors. However, providers might not define a population in the same way that the individuals in that population might think of themselves. For example, a provider might define its population to be reached as heterosexually identified African American MSM; however, to reach this population, a program might need to reach out to sexually active African American men overall, because individuals in this population do not self-identify as MSM. Regardless, interventions aimed at the general population are not effective or cost-effective in this era of the HIV epidemic in which not everyone is equally affected.

## Harm Reduction/Risk Reduction

A harm reduction approach to prevention accepts that harmful behavior exists, and the main goal is to reduce the negative effects of the behavior rather than ignore or pass judgment on the person or the behavior. The term “harm reduction” is used most often in the context of drug use, but the approach can be used with sexual risk behavior as well. A harm reduction approach encourages safer drug use or sexual practices among those engaging in high-risk behaviors and acknowledges the social and environmental factors that affect drug use and high-risk sexual behaviors, such as poverty, racism, and stigma. (See also the section on Harm Reduction, p. 201.)

## Linkages and Referrals

HIV prevention in San Francisco is part of a larger system of health and social services. In order for HIV prevention to be effective, each HIV prevention program should have in place a system for linking clients to appropriate resources within or outside the agency. The system must go beyond simply handing out a card with a name and phone number; the referral process must include providing support to the client to access the service he or she is being referred to, as well as tracking of referrals and referral follow-up. For many, if not most, individuals at risk, as well as affected communities, HIV is not the main priority; linkages are necessary because if a client's basic health and social service needs are not being met, HIV prevention is less likely to result in behavior change. Examples of appropriate referral resources include, but are not limited to: services for people living with HIV, behavior change counseling/skills-building, primary care, STD detection and treatment, mental health services, substance use prevention and treatment, housing, financial assistance, social support services, immigration services, legal services, shelter services, shelters for battered women and children, rape crisis counseling, child protective services, suicide prevention, job training and placement, youth and runaway services, family planning, and services for people with physical, emotional, and/or learning disabilities. The referral system should include policies and procedures for following up after a referral is given. Referrals are one mechanism to ensure that people receive needed services, and whoever delivers an intervention should be trained in community resources and referral mechanisms. The development of referral relationships should consider both individual needs (i.e., linking individuals with needed services) and community needs (i.e., creating change at the systems level to link under-served communities with the service system).

## Prevention Messages

Prevention messages should be appropriate to the population, concise, and delivered with frequency over an extended period of time for maximum effect. This is important regardless of where an intervention lies on the Spectrum of Prevention, and providers serving similar populations should collaborate with each other to ensure consistency in the messages. Attention to saturation is important, because hearing the same message over and over can lead to what some call prevention fatigue. Needs assessments and formative research can help determine when it is time to change a prevention message or give it a new look. For example, a community survey or focus groups could solicit participants' opinions about current social marketing campaigns, which could reveal if and how the intended audience is responding to a particular message.

## Science-based Programs

HIV prevention programs should have a strong scientific foundation. Program designs should be based on a needs assessment (i.e., a process that uses research methods to collect and analyze information to determine the educational and service needs of a population). Needs assessments for many populations are already provided in this Plan (see Chapter 3: Community Assessment, pp. 45-136). Providers may find it necessary to conduct additional research with their specific populations to assess risk behaviors, identify barriers to accessing services, and explore possible strategies and interventions. A needs assessment may include primary data (e.g., interviews) and/or secondary data (e.g., literature review). Once a needs assessment is completed, programs should be designed that include the following elements (HPPC 2001, p. 124):

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- A clearly defined population to be reached (e.g., defined by behavioral risk population [BRP], subpopulation, race/ethnicity, gender, age)
- Clearly defined overall goals and specific objectives
- Theory as the foundation
- A focus on reducing specific risk behaviors through practicing skills (for individual-level interventions)
- A realistic timeline for implementing activities and achieving objectives

Finally, program implementation and program effectiveness should be evaluated using scientific tools, such as a survey. (For more on evaluation, see Chapter 6: Evaluation, pp. 231-251.)

## Special Needs

Some populations, or subgroups within a population, can be very difficult to access. Providers should use creative means to reach these groups. Groups that often get missed with conventional HIV prevention efforts include people who are visually or hearing impaired, people with developmental disabilities, people who do not read, people who speak English as a second language, and people who speak non-English languages. Local Special Populations Action Teams (SPATs) can provide training, technical assistance, advocacy, and support to ensure that HIV prevention education and services are accessible to persons in these special populations (<http://www.oc.ca.gov/hca/public/hiv/spat.htm>).

### Introduction

Behavioral theory can be helpful for developing effective HIV prevention programs. Both informal theories, which providers develop through working with their specific populations, and formal theories, which have been tested with many different populations, exist. Theories are important for HIV prevention because interventions based on sound theoretical models are the most effective at encouraging behavior change (Valdiserri et al 1992).

Although only formal theories are presented here, they are not the only existing theories. The Implicit Theory Project of the University of California, San Francisco Center for AIDS Prevention Studies (UCSF CAPS) (Freedman et al, under review) explored the informal theories that HIV prevention providers use as the foundation for their programs. The researchers interviewed several Bay Area providers about (1) what promotes risk behavior among their clients, and (2) how they think behavior change happens. The interviews revealed a diversity of theories underlying various programs, but three themes emerged across programs regarding their understanding of how to change clients' risk behavior:

- **Context.** HIV prevention is usually not the client's primary concern. Structural issues, such as racism, homophobia, poverty, and violence, have a greater impact on clients' daily lives and HIV prevention must be integrated into a process in which these larger concerns are addressed (although there are limitations to the extent to which providers are actually able to address these issues).
- **Community.** Building a sense of community and connectedness to others is an essential component of HIV prevention, because it contributes to building self-esteem, which in turn helps clients to engage in risk reduction practices.
- **Change.** Once the larger contextual issues are addressed and a sense of community is created, then providers are able to directly focus on supporting clients to reduce their HIV risk behaviors.

These findings reflect San Francisco's approach to HIV prevention – one in which addressing structural issues, maintaining community-driven programs, and focusing on behavior change are three central components. Providers are encouraged to develop programs based on either formal theories or implicit theories that they know work for their populations, based on their experience.

## Diffusion of Innovations

## COMPONENTS

**Diffusion:**

“The process by which an innovation is communicated through certain channels over time among the members of a social system.” This can refer to information about how to prevent HIV, or information about available HIV prevention programs or services. When people participate in HIV prevention activities, they tell others about the activity as well as what they learned.

**Innovation:**

“An idea, practice, or object that is perceived as new by an individual or other unit of adoption.”

**Innovators, early adopters, early majority adopters, late majority adopters, and laggards:**

The five categories of “adopters” according to how long it takes them to accept a new idea or implement a new behavior.

**Factors that influence the speed and extent of diffusion:**

Whether the innovation is better than the behavior or condition it will replace; whether it fits with the intended audience’s existing values, experiences, and needs; and how much commitment it takes to adopt the innovation.

## HIV PREVENTION EXAMPLES

Outreach or social marketing efforts help get the word out about new developments in HIV prevention, such as the new condoms on the market or a new HIV testing site.

In HIV prevention, this could be a new program or service, new prevention materials (such as new types of condoms available), or a new harm reduction approach to prevention that an agency is trying to promote.

Whatever the HIV prevention idea, practice, or object is that is being promoted, it reaches people in different ways and at different rates. This ranges from innovators (those who take on the new practice or idea right away) to laggards (who never take on the new practice or idea).

To successfully promote an HIV prevention idea, practice, or object, it must be promoted in way that is appropriate for the population an agency is trying to reach. In a way, the innovation has to be “marketed” or “spun” in whatever way will make it easier for the population to accept it.

## Empowerment Education Theory/Popular Education

## COMPONENTS

**Popular Education:**

Interventions based on this theory, developed by Brazilian educator Paulo Freire, use a “problem-posing” and participatory methodology of education with a group of individuals from the community.

**Dialogue:**

In the dialogue process, everyone participates as “co-learners.” People discuss and share their experiences in a group.

**Critical Consciousness:**

Dialogue eventually leads to a process of critical reflection in which people begin to see and understand the social context for their personal problems.

**Praxis:**

The ultimate goal is praxis, which is the continual interplay of discussion, critical thinking, problem solving, and action to promote individual and community change.

## HIV PREVENTION EXAMPLES

Giving people the chance to participate in a collective effort to address the cofactors that affect HIV risk (e.g., poverty, homelessness, drug use) can influence both individuals and communities. In HIV prevention, this method could be used in group interventions (e.g., single session groups [SSGs], multiple session workshops [MSWs]) that focus on addressing a specific issue or range of issues related to HIV prevention that the group defines for itself.

In SSGs or MSWs, an HIV prevention agency could facilitate a dialogue among participants about their life experiences and how they have affected their risk for HIV.

Through such a discussion, participants might notice common themes that contribute to HIV risk in their community. For some groups, a theme might be how drug use relates to unsafe sex. For others, a theme might be depression or mental health. Identifying the themes helps the group understand the “bigger picture” of HIV and the multiple issues that play into HIV risk.

Ongoing discussions like this can lead to people internalizing what they have learned and begin to develop a sense of power in their own lives and in their communities. Over time, this process might lead to community organizing (see pp. 216-217) or changes in risk behaviors at the community level.

(Freire 1970, Horton & Freire 1990)

## EXHIBIT 5

### Health Belief Model

#### COMPONENTS

**Perceived Susceptibility:**

People are motivated to change behavior when they believe that they are susceptible to the disease.

**Perceived Severity:**

People are motivated to change behavior when they believe that the disease generally has serious consequences.

**Perceived Benefits:**

People are motivated to change behavior when they believe that changing the behavior will reduce their risk.

**Perceived Barriers:**

People are motivated to change behavior when they believe that there are few or no negative consequences (e.g., expensive, dangerous, unpleasant, inconvenient) of changing the behavior.

**Cue to Action:**

A specific stimulus, such as a prevention intervention, is often required to trigger behavior change.

#### HIV PREVENTION EXAMPLES

Someone who sees first-hand the effects of HIV on their social circle or community might have a high perceived susceptibility because HIV is “close to home.” Someone who does not know anyone with HIV and who does not engage in high-risk behaviors might have a low perceived susceptibility.

Someone who perceives HIV to be a “manageable chronic illness” might have a lower level of perceived severity compared with someone who views HIV as a “fatal disease.”

People might be more willing to change their sexual or needle-sharing behaviors if they believe that it will help them. A belief that condoms protect against HIV would lead to high motivation to use them, but a belief that condoms do not protect against HIV might lead to low motivation to use them.

A belief that condoms reduce sensation during sex might be a perceived barrier to condom use. A belief that condom use is difficult to negotiate might be a perceived barrier to condom use.

Participating in an HIV prevention program might be just the thing a person needs to start a process of behavior change. Interventions such as outreach, individual counseling, or group sessions can act as the “cues to action” and give people the tools and support they need to change their behavior. In addition, media messages and social marketing campaigns can also act as cues to action.

(Streicher & Rosenstock 1997)

## EXHIBIT 6

### Social Cognitive Theory/Social Learning Theory

#### COMPONENTS

**Environment:**

Factors external to the person may influence behavior.

**Situation:**

A person's perception of their environment influences behavior.

**Behavioral Capability:**

A person's knowledge and skills to perform a behavior influence whether a person engages in a behavior.

**Outcome Expectations/Expectancies:**

A person expects certain results from engaging in a particular behavior and places a certain value on the results, and these factors affect their behavior.

**Self-efficacy:**

A person's confidence in performing the behavior affects whether they will engage in the behavior.

**Observational Learning:**

A person acquires new behaviors from watching the actions of others and observing the results.

**Reciprocal Determinism:**

The interaction of the person, the behavior, and the environment in which the behavior is performed affects a person's behavior.

#### HIV PREVENTION EXAMPLES

Social, economic, political, and a variety of other factors can affect a person's ability to engage in HIV protective behaviors. Examples are cofactors such as poverty, limited access to services, policies that prevent people from receiving treatment on demand for drugs or mental health issues, and a host of others.

The amount of control someone feels over their life situation could influence how they approach HIV risk reduction and whether they will engage in safer behaviors.

The more knowledgeable someone is regarding a prevention strategy or the more practice they have had, the better they will be at that behavior. For example, knowing that condoms help protect against HIV, knowing how to put them on, and having the skills to discuss condom use with a partner represents behavioral capability.

If a person believes that using condoms during sex will protect their partner from getting HIV, and it is very important to them to protect their partner, they will be more likely to use condoms.

The more a person feels they are capable of engaging in a behavior, the better they will be at it and the more likely they will be to do it – whether it relates to negotiating condom use, being able to keep sterile needles for injection on hand, or any other behavior.

Using drama or theater to deliver an HIV prevention message is an example of observational learning. Actors can model behaviors such as condom negotiation skills.

This overarching theme highlights how the environment can affect behavior and how behavior can affect the environment. A person who uses only sterile needles to inject drugs can support their friends to adopt the same practice. This in turn creates a social circle that is supportive of safer injection behaviors, which continues to motivate individuals in that circle and possibly in other circles to maintain this practice.

(Baranowski et al 1997)

## EXHIBIT 7

### Social Networks/Social Support/Peer Support Theories

#### COMPONENTS

**Social Networks:**

“Social networks” refers to the density, complexity, size, and other characteristics of a social group, and they are related to health and well-being.

**Social Support:**

“Social support” refers to the positive emotional and practical products that people derive from their social networks, and it is related to health and well-being.

**Peer Support:**

“Peer support” refers to the social support received from peers (people with whom a person identifies because of similar age, race/ethnicity, culture, or other aspects of identity), and it is related to health and well-being.

(Wohlfelder 1997)

#### HIV PREVENTION EXAMPLES

How social networks are formed and how people relate to each other within those networks can influence individual behavior – ranging from drug and alcohol use, to sexual practices, to injection practices.

For someone who is trying to stop using drugs or alcohol or reduce their use, because they notice that it has negative effects on their health, support and encouragement from family and friends can be very helpful.

Someone trying to reduce or quit using alcohol or drugs would have a harder time if all of their friends and peers use. However, someone with friends or social situations in which alcohol and drugs are not present might be better able to reduce their use or stop using.

## EXHIBIT 8

### Stages of Behavior Change Model

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#### COMPONENTS

**Precontemplation:**

A person has no intention of changing a behavior within the near future.

**Contemplation:**

A person intends to change a behavior within the near future.

**Preparation:**

A person has begun to take a few steps toward changing a behavior.

**Action:**

A person has made changes in a behavior.

**Maintenance:**

A person is able to continue the new behavior for an extended period of time.

**Pros and Cons:**

For people to move from one stage to the next, either the pros of changing the behavior must increase and/or the cons of changing the behavior must decrease.

(Prochaska et al 1997)

#### HIV PREVENTION EXAMPLES

Someone who has never used condoms and has not thought about starting to use them is in the precontemplation stage.

A person who has thought about starting to use condoms, but has not done it yet, is in the contemplation stage. They might have been prompted to think about condom use because of something that happened in their life, such as having a friend disclose his or her HIV-positive status.

Someone in this stage might purchase or find out where to get condoms or begin to discuss condom use with partners.

Someone in the action stage has started to use condoms during sex at least some of the time.

In the maintenance stage, a person has incorporated condom use and discussions about condom use into their sexual encounters and this has gone on for some time.

For someone to move from preparation to action in terms of condom use, for example, the pros of condom use would have to increase (e.g., their partner says they would feel more comfortable having sex if condoms were used) and/or the cons would have to decrease (e.g., the person does not have to pay for condoms because they found a place to get them for free).



## EXHIBIT 9

### Theory of Reasoned Action

#### COMPONENTS

**Behavioral Intention:**

Whether a person intends to perform a behavior is the most important predictor of actual behavior.

**Attitude:**

A person's beliefs and values about the behavior determine his or her attitude about the behavior, and attitude affects behavioral intention.

**Subjective Norm:**

A person's perception of whether important individuals (e.g., peers) approve or disapprove of the behavior and whether he or she is motivated to act according to those people's opinions determine his or her subjective norm, and subjective norm affects behavioral intention.

(Montano et al 1997)

#### HIV PREVENTION EXAMPLES

Someone who actually plans ahead of time not to use drugs or alcohol during sex is more likely to succeed than someone who has no intention of abstaining or has not thought about their plans.

Someone who thinks using drugs or alcohol during sex is fun and exciting will have different behavioral intentions than someone who feels nervous about this behavior because it might lead to unsafe sex.

If friends think using drugs or alcohol during sex is fun, a person may be likely to believe that he or she should do the same.

## EXHIBIT 10

### AIDS Risk Reduction Model

#### COMPONENTS

**Labeling:**

A person must consciously identify a sexual behavior as high risk for contracting HIV before they will consider any change.

**Commitment:**

A person must commit to reducing high-risk sexual behavior and/or increase low-risk sexual behavior in order to carry out that change.

**Enactment:**

Seeking and enacting strategies to achieve the behavior change goals constitute enactment.

(Catania et al 1990)

#### HIV PREVENTION EXAMPLES

The more someone feels that anal sex can put them at risk for contracting HIV, the more likely they are to consider changing that behavior.

A person must make a commitment or agreement to not having anal sex as often, or increasing condom use when they have anal sex, in order for the behavior change to occur.

If this person purchased condoms or sought out partners willing to engage in other types of sex besides anal sex, this would constitute enactment.

## EXHIBIT 11

### IMB (Information, Motivation, Behavioral Skills) Model

COMPONENTS	HIV PREVENTION EXAMPLES
<b>Information:</b> People need information regarding HIV transmission and prevention in order to reduce their risk for HIV.	People need to know that HIV can be transmitted through sexual or blood-to-blood contact and that condom use and the use of sterile injection equipment can prevent transmission.
<b>Motivation:</b> How motivated a person is to change HIV risk behaviors affects whether they act on the information they receive.	Someone who wants to start practicing safer sex is more likely to be able to translate the idea that condoms can protect against HIV into actual behavior.
<b>Behavioral Skills:</b> The necessary skills to perform the behavior must be present in conjunction with information and motivation for behavior change to occur.	Having information and being motivated to change behavior will not be enough to result in behavior change unless a person knows how to talk to their partner about condom use, how to correctly put on and take off a condom, etc.

(Fisher & Fisher 1992)

### Introduction

There are numerous types of strategies and interventions for HIV prevention, and new ones are constantly evolving. The main strategies and interventions used in San Francisco and other urban settings are described here. (Two new prevention technologies still in development – microbicides and vaccines – are reviewed in Appendix 2 because if they become available, they will have important implications for prevention.) The strategies and interventions are organized into seven categories that reflect an expanded emphasis on activities and approaches that go beyond health education and risk reduction:

- Counseling, testing, and referral (CTR)
- Partner counseling and referral services (PCRS)
- Prevention with positives
- Health education and risk reduction strategies and interventions
- Public information and community-level strategies and interventions
- Structural interventions
- Perinatal transmission prevention

Although the most obvious audiences for the HIV prevention strategies and interventions described here are the populations at risk, providers may also consider designing programs for individuals or groups who serve the population at risk, such as health care providers and other non-HIV prevention service providers. Such programs may include cultural competency training, training on federal, state, or local standards and guidelines (e.g., for CTR), or training on how to educate and counsel patients about HIV-related issues (e.g., HIV training for STD providers). For more on provider training, see Section V: Standards of Practice and Quality Assurance (pp. 224–225).

The HIV Prevention Section must take a leadership role to ensure that the citywide mix of strategies and interventions complement each other, are not duplicative, and are regionally coordinated. For example, five late-night outreach programs for MSM who inject drugs in the Tenderloin may not be necessary. However, if each program is designed to reach a specific subpopulation of MSM injectors, or if each outreach program has a different goal, it may be appropriate to implement all programs, as long as they are coordinated. Because the HIV Prevention Section is the organization with the most comprehensive perspective in terms of citywide HIV prevention activities, it must be responsible for monitoring their coordination.

## Counseling, Testing, and Referral

### Overall Goal, 2004-2008

To promote early knowledge of HIV status (negative and positive) through HIV counseling, testing, and referral that also provides information regarding transmission, prevention, and the meaning of HIV test results.

#### BACKGROUND

Counseling, testing, and referral (CTR) is a key intervention for helping people learn their serostatus and linking them to appropriate HIV prevention and care services. Succinct overviews of CTR for both standard and rapid testing are given in Exhibits 12 and 13.

CTR is becoming an increasingly important component in combating the epidemic. To achieve the overall goal for CTR listed above, providers need to develop strategies to motivate high-risk individuals to get tested. Strategies with proven success at motivating people to seek testing include:

- On-the-street peer-based testing for adolescents (Johnson et al 2001)
- Availability of rapid testing for African Americans (Keenan & Keenan 2001), injection drug users (IDUs), MSM, and STD clinic patients (Spielberg et al 2003)
- Videotaped educational programs for low-income women of color (Apanovitch et al 2003)
- Post-visit follow up in the clinical setting for adolescents (Beckmann et al 2002)
- Among women, concern for family and significant others (Riess et al 2001)

Providers also need to identify and reduce barriers to testing, which include:

- Lack of accessibility for high-risk populations (CTR should address this barrier by providing services to high-risk populations in appropriate settings. For example, testing for drug users should be made available in drug treatment facilities, needle exchange sites, and shelters [Strauss et al 2003].)
- Denial of HIV risk factors (Kellerman et al 2002)
- Fear of being HIV-positive (Kellerman et al 2002, Spielberg et al 2003)
- Fear of discrimination (Spielberg et al 2003)
- Fear of name being reported to public health officials (Spielberg et al 2003)
- Inability to afford treatment if HIV-positive (Spielberg et al 2003)
- Anxiety while waiting for results (Spielberg et al 2003)
- Dislike of counseling (Spielberg et al 2003)
- Dislike of blood draws (Spielberg et al 2003)

There are two additional areas related to CTR that San Francisco will focus on in 2004 and beyond:

- **Ensure that HIV-infected individuals are offered and provided support for accessing medical care and other supportive services.** CTR providers need to strengthen linkages with primary care and other services for people living with HIV. Simply providing a list of resources to clients is not sufficient. Follow-up contact (through outreach if necessary) and the development of trusting relationships are critical for transitioning HIV-positive individuals into care settings, especially for youth (Martinez et al 2003). High-risk HIV-negative individuals should be transitioned into appropriate HIV prevention and social services in a similar manner.
- **Expand the availability of rapid testing.** See Appendix 1 (pp. 226-228) and Exhibit 13 (p. 177) for more information on the implementation of rapid testing. Many of the barriers to CTR can be addressed through rapid testing.

#### WHY DO HIV COUNSELING, TESTING, AND REFERRAL?

CTR is a highly effective intervention. It serves as a potential entry point to a multitude of services for individuals who might never access any other HIV prevention service. The most effective CTR services include cognitive-behavioral counseling (Dilley et al 2002) and referrals to services (Eichler et al 2002) prevention services for high-risk HIV-negative individuals and care and prevention services for HIV-positive individuals. CTR has been associated with reductions in sexual and drug use HIV risk behavior and/or reduced HIV transmission among serodiscordant couples (Choi & Coates 1994), HIV-positive IDUs (Colon et al 1996), and STD clinic patients (Elwy et al 2002). Post-test counseling that focuses on how to disclose serostatus to partners as well as how to discuss safer sex may lead to increases in condom use (Crepaz & Marks 2003). CTR is also an effective mechanism for transitioning HIV-positive individuals into care (Eichler et al 2002, Martinez et al 2003). Finally, making CTR available to pregnant women resulted in 93% of HIV-infected women in 25 states learning their HIV status before delivery (MMWR 2002). CTR and PCRS may be very cost-effective interventions (Pinkerton et al 2001), especially when targeted to high-risk populations, but it depends on a number of factors (e.g., HIV prevalence, the likelihood of behavior change after receiving a test result).

## Counseling, Testing, Referral (CTR) – Standard Testing

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	CTR is a series of personalized, client-centered encounters in which individuals can learn their serostatus as well as obtain tools to assess their own risk. CTR includes helping clients initiate and sustain behavior changes that decrease risk for HIV and giving referrals and information relevant to clients' needs.
<b>Implementation Requirements</b>	<ul style="list-style-type: none"> <li>• Risk assessment (pre-test) and disclosure (post-test) counseling must always be provided that addresses: (1) behavior change or maintenance, and (2) linkages to appropriate services.</li> <li>• Collect CTR data as indicated in their HIV Prevention Section contract.</li> <li>• CTR providers must adhere to the following guidelines:               <ul style="list-style-type: none"> <li>• CDC's Revised Guidelines for Counseling, Testing, and Referral Standards and Guidelines (MMWR 2001b), <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5019a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5019a1.htm</a></li> <li>• California Department of Health Services, Office of AIDS, HIV Counseling and Testing Guidelines (1997)</li> <li>• HIV Prevention Section, HIV Counseling, Testing and Referral Program Policies and Procedures</li> </ul> </li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• UCSF HIV Insite provides links to additional information and guidelines: <a href="http://hivinsite.ucsf.edu/InSite.jsp?page=kbr-07-01-04">http://hivinsite.ucsf.edu/InSite.jsp?page=kbr-07-01-04</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Suitable for all populations, although different groups may be reached through anonymous versus confidential testing or through different CTR venues.</li> <li>• Can be very inclusive when a provider offers anonymous, confidential, appointment-based, and drop-in services.</li> <li>• Can be provided in a variety of setting, including HIV/AIDS prevention providers, primary care facilities, drug treatment facilities, and from a mobile CTR site.</li> <li>• Having two visits (testing visit and disclosure visit) may (1) reinforce commitment to reducing risk and seeking supportive services among some clients, and (2) may be a good approach for clients who may be too anxious to take the test and receive results the same day (as is done with rapid testing).</li> </ul> <p><b>Confidential CTR services:</b></p> <ul style="list-style-type: none"> <li>• Expand the possibilities for follow-up and case management of the client getting tested.</li> </ul> <p><b>Anonymous CTR services:</b></p> <ul style="list-style-type: none"> <li>• Serve the needs of clients who do not want their name or identifying information on record.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May have fewer benefits for people who are isolated or lack social support or for people in an early stage of recovery from substance abuse (although CTR can become part of the recovery process).</li> <li>• May not be appropriate for communities in which there is stigma attached to HIV if it is offered at an HIV or AIDS service provider.</li> </ul>

## Counseling, Testing, Referral (CTR) – Rapid Testing

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	As of 2003, CTR using rapid testing involves a fingerstick to capture a drop of blood for HIV antibody testing. Individuals receive their HIV test results the same day, in as little as 20 minutes. HIV-positive individuals receive a preliminary positive result the day of the test. These clients then have a confirmatory test done using a standard test. They return for their confirmatory test result in a week or two.
<b>Implementation Requirements</b>	<p>Rapid testing CTR providers must adhere to the following guidelines:</p> <ul style="list-style-type: none"> <li>• All those listed for Standard CTR (Exhibit 12)</li> <li>• CDC's Quality Assurance Guidelines for Testing Using the OraQuick® Rapid HIV-1 Antibody Test (2003): <a href="http://www.cdc.gov/hiv/rapid_testing/materials/QA-Guide.htm">http://www.cdc.gov/hiv/rapid_testing/materials/QA-Guide.htm</a></li> <li>• California Department of Health Services, Office of AIDS, Supplement to the HIV Counseling and Testing Guidelines (1997) – OraQuick Rapid HIV Testing in Counseling and Testing Settings (2003)</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• HIV Prevention Section: rapid testing policies and procedures manuals</li> <li>• General Information: <a href="http://www.cdc.gov/hiv/rapid_testing/">http://www.cdc.gov/hiv/rapid_testing/</a></li> <li>• CLIA regulations: <a href="http://www.cms.hhs.gov/clia/">http://www.cms.hhs.gov/clia/</a></li> <li>• California Migden Bill AB 1557 information: <a href="http://www.dhs.cahwnet.gov/ps/ls/lfsb/html/Phlebotomy.htm">http://www.dhs.cahwnet.gov/ps/ls/lfsb/html/Phlebotomy.htm</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Provides another CTR option for clients.</li> <li>• May be more appropriate than standard testing for clients who are less likely to return for results at a later date (e.g., homeless individuals, persons for whom there is stigma attached to testing).</li> <li>• Offers same-day opportunities for linking people to appropriate care, prevention, or other services, if they are offered on site.</li> <li>• Uses a fingerstick instead of a blood draw (a blood draw or Orasure is required to confirm a positive result).</li> <li>• Can be done anonymously or confidentially.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Can be challenging to implement in a non-medical community setting because of federal and state regulations (see Appendix 1, pp. 226-228).</li> <li>• Not yet well-known or understood by communities and providers in San Francisco.</li> <li>• If done anonymously, more difficult to follow up to give a confirmatory result for HIV-positive clients.</li> <li>• Can be an emotionally intense experience for counselors as well as clients and is therefore not appropriate for inexperienced counselors.</li> </ul>

Note: For an update on the implementation of rapid testing in San Francisco, see Appendix 1, pp. 226-228.

## Partner Counseling and Referral Services

### Overall Goal, 2004-2008

Offer PCRS to all individuals who are HIV-positive.

#### BACKGROUND

The intent of partner counseling and referral services (PCRS) is to reduce HIV transmission by offering the HIV-positive person options about informing their sexual or needle-sharing partners of possible exposure to HIV and to provide CTR and other services to those partners referred (Exhibit 14). PCRS is not just for use in the CTR setting among those testing positive for the first time. In San Francisco, PCRS has a broader scope and can be integrated into any HIV prevention program that works with HIV-positive people. In San Francisco, PCRS has been under-utilized. This may be due to negative community perceptions of PCRS, particularly among gay men. In addition, due to a lack of clarity around what PCRS should look like, effective training in PCRS methods has not occurred, limiting the ability of San Francisco's providers to maximize this intervention.

San Francisco's PCRS model requires that all publicly funded CTR providers offer PCRS, and that all clients who test positive will be offered more than one option for how their partners can be notified. San Francisco also encourages the use of this model among Ryan White CARE Act-funded providers, private medical providers, and non-CTR providers. There are at least three mechanisms for reaching the partners of infected persons:

- **Self referral.** The provider supports the HIV-positive person to develop disclosure skills to tell their own partner(s). This is the model on which San Francisco's demonstration project is based (see below).
- **Dual referral.** The provider acts as facilitator between the HIV-positive person and their partner(s).
- **Provider referral.** The provider asks for the names and identifying information of the HIV-positive individual's partner(s). The partner(s) are then contacted and notified that they might have been exposed to HIV. The infected individual's name is not released to the partner(s). CTR is then offered to the referred partners.

The SFDPH was funded by CDC to implement a PCRS demonstration project, which will begin in early 2004. This demonstration project will compare the effectiveness and community acceptability of two types of referral. The first type of referral is a new and innovative model based on self referral (Method 1 above), which will be administered by the HIV Prevention Section through a new Partner Disclosure and Assistance Program (PDAP). This approach will be compared with provider referral, implemented by City Clinic (City Clinic will continue to offer all three options above). All referred partners will be offered rapid testing. Final results from the demonstration project are expected in late 2005.



## WHY OFFER PARTNER COUNSELING AND REFERRAL SERVICES?

PCRS is a potentially effective intervention for reaching the approximately 20% of individuals in San Francisco who do not know they are HIV-positive. In studies of PCRS for HIV, 8% to 39% of partners tested were found to have previously undiagnosed HIV infection (Golden 2002). Further, a New York City study suggests that individuals might be willing to use PCRS services; nearly all respondents reported a willingness to notify their partners personally if they were HIV-positive, and 90% of heterosexuals and 80% of MSM reported they would be willing to provide partner contact information to their provider (Carballo-Dieiguez et al 2002). Finally partner notification was associated with higher condom use in one study (Hoxworth et al 2003).

In San Francisco, it is key that a variety of PCRS options be available to clients because no one approach will likely be acceptable to or effective for all populations. According to a review of the literature, provider referral is more effective than self referral at getting partners to come in for HIV testing (Mathews et al 2002). In San Francisco, however, it remains to be seen which PCRS options will have the most success and be the most widely accepted in the community. Finally, PCRS may be a very cost-effective intervention (Varghese et al 1999), especially when targeted to high-risk populations, but it depends on a number of factors (e.g., HIV prevalence, the likelihood of behavior change after receiving a test result).

## Partner Counseling and Referral Services (PCRS)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	<p>PCRS assist individuals in learning that they may have been exposed to HIV, based on information from an HIV-positive sexual or needle-sharing partner. PCRS can be provided in at least three ways: (1) self referral, where the provider supports the HIV-positive person to develop disclosure skills to tell their partner; (2) dual referral, where the provider acts as facilitator between partners, or (3) provider referral, where the provider contacts and notifies the partner. With method 3, PCRS is confidential; the infected individual's name is not released to the partner. CTR is then offered to the referred partners.</p>
<b>Implementation Requirements</b>	<p>All agencies providing PCRS must adhere to the following guidelines:</p> <ul style="list-style-type: none"> <li>• CDC's HIV Partner Counseling and Referral Services Guidance (1998): <a href="http://www.cdc.gov/hiv/pubs/pcrs.htm">http://www.cdc.gov/hiv/pubs/pcrs.htm</a></li> <li>• California Department of Health Services, Office of AIDS HIV Partner Counseling and Referral Services Guidelines (2000)</li> </ul> <p>All agencies providing PCRS must:</p> <ul style="list-style-type: none"> <li>• Collect PCRS data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's informational document on PCRS implementation: <a href="http://www.cdc.gov/hiv/partners/Interim/partnercounsel.htm">http://www.cdc.gov/hiv/partners/Interim/partnercounsel.htm</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can assist anyone wishing to inform partners of their HIV-positive status.</li> <li>• Can be especially valuable for clients wishing to notify a partner who is not currently in their life or who may have a violent or abusive reaction to hearing the news directly from the client.</li> <li>• May be the only means by which some people learn of their possible exposure to HIV.</li> <li>• Offers options to clients for how to inform partners.</li> <li>• PCRS is always provided in-person, allowing for on-the-spot counseling, testing, and referrals.</li> <li>• Can be used with rapid testing to reduce barriers for referred partners to get tested.</li> <li>• When a self referral approach is used, it promotes discussion of sex and sexuality between partners and affirms individual and community responsibility.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• If the provider referral method is used, it can only reach those partners voluntarily mentioned by the testing client who wish to use this service.</li> <li>• Provider referral may discourage individuals from talking to their partners.</li> <li>• May not be perceived favorably by all populations.</li> </ul>

## Prevention with Positives

### Overall Goal, 2004-2008

Build the capacity of HIV prevention, care, and other providers to conduct prevention with positives.

#### BACKGROUND

Until recently, little attention has been paid to the unique HIV prevention needs of HIV-positive individuals. Although HIV-positive people have always been included in prevention interventions, the interventions have not always addressed issues such as health maintenance, discussion of serostatus with partners, how to cope with depression related to finding out one is HIV-positive, or other issues relevant for HIV-positive people. A recent assessment of HIV prevention programs found that many agencies have adjusted their HIV prevention programs to include messages or components relevant for HIV-positive people, even if they do not have a formal prevention with positives program or intervention (DeMayo 2003). This assessment also revealed that formal prevention with positives programs address most or all of eleven main content areas. These content areas are incorporated into the Implementation Recommendations listed in Exhibit 15.

In 2003, the HPPC held a joint meeting with the HIV Health Services Planning Council (also known as the CARE Council) to discuss collaboration around the design and implementation of prevention with positives programs. The two Councils agreed on the following definition of prevention with positives:

Prevention with positives is any intervention that addresses the specific prevention needs of HIV-positive persons. HIV-positive people should be involved in the planning and implementation of all prevention with positives programs.

The main goals of prevention with positives are:

- To reduce the spread of HIV and STDs
- To help HIV-positive people achieve and maintain physical, emotional, sexual, and reproductive health and well-being
- To assist those HIV-positive people who do not know they are positive in learning their HIV status

At the joint meeting, the Councils set the following priorities and recommendations for improving prevention with positives:

#### **Strengthen linkages from testing to care.**

- Counseling must always accompany testing, because this is when referrals are given and behavior change is discussed.
- A strong referral network must be in place that is recognized and utilized by all CTR sites.
- Barriers to utilizing care services must be addressed with the client, such as mental health issues, substance use issues, and lack of transportation. The CTR program's role in transitioning the person into

services might extend beyond the session at which the individual learns his or her status. The goal is to transition the client into primary care and other health and social services through appropriate means identified by the CTR program (e.g., providing more than one post-disclosure visit, having the HIV test counselor also serve as the client's case manager).

#### **Address information gaps.**

- A stronger focus is needed on the ways in which drug use (both IDU and non-IDU) can affect sexual risk behaviors.
- Clear and consistent messages need to be developed around issues such as: How does viral load affect infectiousness? What is superinfection?

#### **Improve substance use and mental health services for HIV-positive persons.**

- Improve access to substance use and mental health treatment for HIV-positive persons, through making changes to systems and policies.
- Train mental health and substance use workers in HIV and HIV prevention.

#### **Increase the use of PCRS.**

- Increase the availability of voluntary, client-centered, confidential, and community-driven PCRS.
- Train providers in (1) appropriate methods for assisting clients in disclosing their HIV status to their partners, and (2) dealing with the barriers to disclosing serostatus to partners (e.g., threat of domestic violence, threat of being reported to Immigration and Naturalization Service [INS]), and (3) resources available to support PCRS.
- For more on PCRS, see pp. 178-180.

#### **Integrate HIV prevention into care services.**

- Implement prevention with positives in the context of primary care, case management, and social/emotional support groups for people living with HIV/AIDS (PLWHA).
- In the primary care setting, prevention with positives can be facilitated by a doctor, nurse, health educator, or peer advocate.

Regarding the final priority, recent research shows that effective prevention in clinical settings is sorely lacking (Fisher et al 2002, Morin 2002, Wilson & Kaplan 2000). In San Francisco as well as other places, clinicians do not have a working understanding of prevention with positives, nor do clinicians generally have any specific discussions with their HIV-positive patients about safer sex or needle sharing (Morin 2002). Because prevention with positives has the potential to be extremely effective in the clinical setting, working with the primary care providers of PLWHA is a top priority. The SFDPH and the two Councils will provide leadership in this area over the next few years by outlining and implementing concrete strategies for improving this aspect of HIV prevention work.

It is important that San Francisco HIV prevention providers have the capacity to conduct prevention with positives, and capacity-building in this area is a top priority. The HIV Prevention Section will offer training and provide technical assistance in this area beginning in 2004.

## WHY DO PREVENTION WITH POSITIVES?

Prevention with positives interventions have proven effectiveness at increasing harm reduction and health promotion behaviors (Margolin et al 2003) and reducing risk behaviors (Grinstead et al 2001, Rotheram-Borus et al 2001). Further studies support the efficacy of prevention case management (PCM), an intervention commonly used with HIV-positive individuals (see section on PCM, pp. 188–189).

The number of research studies on the effectiveness of HIV prevention interventions for HIV-positive individuals has been steadily increasing over the last few years. Studies in progress at CAPS in San Francisco include:

- The Unity Project (<http://www.caps.ucsf.edu/unity/>) (Principal Investigator: Morin)
- Prevention with Positives Evaluation Center (Principal Investigator: Morin)
- Seropositive Urban Men’s Intervention Trial (Principal Investigator: Gomez)
- VOICE: A Prevention Intervention for HIV Seropositive Injection Drug Users (Principal Investigator: Gomez)
- Providing Prevention: An Intervention for HIV Medical Providers (Principal Investigator: Dawson Rose)

## Prevention with Positives

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	<p>Prevention with positives is any intervention that addresses the specific prevention needs of HIV-positive persons. HIV-positive people should be involved in the planning and implementation of all prevention with positives programs.</p> <p>The main goals of prevention with positives are:</p> <ul style="list-style-type: none"> <li>• To reduce the spread of HIV and STDs</li> <li>• To help HIV-positive people achieve and maintain physical, emotional, sexual, and reproductive health and well-being</li> <li>• To assist those HIV-positive people who do not know they are positive in learning their HIV status</li> </ul>
<b>Implementation Recommendations</b>	<p>Prevention with positives programs should:</p> <ul style="list-style-type: none"> <li>• Be designed for HIV-positive people (prevention with positives can still be done in mixed serostatus groups, as long as the messages address the specific, unique needs of HIV-positive individuals).</li> <li>• Include multiple sessions, if it is an individual-level intervention, to promote long-term health and wellness (prevention with positives can also be done at the community level, e.g., social marketing).</li> <li>• Discuss how HIV-positive individuals might potentially put others at risk.</li> <li>• Include a comprehensive risk assessment (i.e., both behaviors and cofactors) and incorporate a risk reduction conversation about responsibility in not infecting others without promoting shame or stigma.</li> <li>• Incorporate skills-building techniques on how to protect others, rather than focusing only on how to protect oneself.</li> <li>• Train staff in both HIV prevention and sensitivity to HIV-positive individuals.</li> <li>• Include HIV-positive individuals in the design and delivery of programs.</li> <li>• Provide linkages to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, HIV CTR, and other HIV prevention services.</li> <li>• Address the impact of cofactors (e.g., substance use, mental health, homelessness, domestic violence).</li> <li>• Incorporate harm reduction.</li> <li>• Address disclosure issues.</li> <li>• Empower individuals to make healthy choices.</li> <li>• Be tailored to the individual.</li> <li>• Help individuals cope with depression related to finding out one is HIV-positive.</li> <li>• Be integrated into HIV care services.</li> <li>• Be sensitive to who the best prevention messengers are for their particular population (e.g., HIV-positive peers, professional case managers).</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Collins et al 2000: <a href="http://www.caps.ucsf.edu/publications/pozmono.pdf">http://www.caps.ucsf.edu/publications/pozmono.pdf</a></li> <li>• “Incorporating HIV Prevention into the Medical Care of Persons Living with HIV” (MMWR 2003b): <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm</a></li> <li>• AIDS Research Institute, AIDS Policy Research Center, links to prevention with positives resources: <a href="http://ari.ucsf.edu/policy/pwp.htm">http://ari.ucsf.edu/policy/pwp.htm</a></li> <li>• U.S. Conference on AIDS Institute, “Prevention with HIV Positive People: What Is It? How To Do It!” (2002): <a href="http://ari.ucsf.edu/pdf/USCA.pdf">http://ari.ucsf.edu/pdf/USCA.pdf</a></li> <li>• California Department of Health Services, Office of AIDS, “Prevention with Positives: A Guide to Effective Programs” (2003): <a href="http://ari.ucsf.edu/policy/Effective_PWP_Programs.doc">http://ari.ucsf.edu/policy/Effective_PWP_Programs.doc</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Involves HIV-positive individuals in the prevention of HIV transmission.</li> <li>• Can support links between prevention and care services.</li> <li>• Has demonstrated effectiveness among many populations.</li> <li>• Can be supported by both prevention and care funding sources, thus promoting collaboration at the city and provider levels.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Faces barriers to implementation, including legal (e.g., criminalization of non-disclosure of HIV status) and environmental barriers (e.g., stigma) (Shriver et al 2000).</li> </ul>

## Health Education and Risk Reduction Activities

### Overall Goal, 2004-2008

Include health education and risk reduction activities as part of larger programs that link individuals to HIV CTR and create community, structural, and policy change.

#### BACKGROUND

In addition to a renewed focus on CTR, PCRS, and prevention with positives, San Francisco will continue to support a broad range of individual-, group-, and community-level health education and risk reduction activities. All of the activities in this section have proven effectiveness at reducing sexual and/or injection-related risk behaviors. To maximize their effectiveness, these strategies and interventions should not function in a vacuum; they should be used in combination as appropriate, link individuals to CTR and PCRS services, and take a prevention with positives approach as necessary.

The centerpiece of the health education and risk reduction activities is venue-based individual outreach (VBIO). VBIO is a primary entry point for helping individuals access a broad range of HIV prevention and other services. In addition, VBIO in itself can be a stand-alone intervention when its goal is to provide risk reduction information or to distribute condoms. Using an outreach model to conduct other types of interventions, such as CTR or individual risk reduction counseling (IRRC), can be very effective for reaching populations that may face barriers in showing up for appointments (e.g., homeless persons). VBIO must be a high priority in order for HIV prevention to continue to reach high-risk populations in San Francisco.

VBIO should be nested within a larger network of health education and risk reduction strategies and interventions. Interventions can be individual-level (e.g., individual risk reduction counseling [IRRC], prevention case management [PCM], group-level (e.g., single session groups [SSGs], multiple session workshops [MSWs]), or community-level interventions (e.g., social marketing, community organizing). Strategies range from peer education to harm reduction to Internet-based approaches.

Providers must determine how best to combine the various health education and risk reduction strategies and interventions to create the most appropriate and effective programs for their consumers, based on scientific evidence as well as their experience. Regardless, at a citywide level, the whole spectrum of prevention must be covered, from individual-level to community level to structural interventions, in order for HIV prevention to be effective in this era of the epidemic. (See Exhibits 1 and 2 for more on the Spectrum of Prevention, which shows how health education and risk reduction activities can be incorporated into a program with a broader scope.)

## VENUE-BASED (STREET AND COMMUNITY) INDIVIDUAL OUTREACH

Venue-based individual outreach (VBIO) is highly effective for:

- Decreasing sexual risk behavior (Birkel et al 1993)
- Increasing condom use (Wendell et al 2003)
- Decreasing injection-related risk behavior (Buchanan et al 2003, Watters et al 1990, Weibel et al 1993)
- Reaching clients who might not otherwise be reached through traditional means and addressing their multiple needs (Tinsman et al 2001)
- Linking difficult-to-reach HIV-positive populations (e.g., high-risk youth) into care services (Martinez et al 2003)
- Providing access to HIV CTR and increasing HIV testing rates among high-risk youth, especially when the outreach workers are peers and on-the-street CTR is offered (Gleghorn et al 1997, Johnson et al 2001)

Outreach can also be cost-effective, according to one assessment of the cost-effectiveness of various interventions (Pinkerton et al 2001). For example, to avert the greatest number of infections among IDUs, as much as possible of available funds needs to be spent on outreach (Wilson & Kahn 2003).

In San Francisco, there is a pressing need for late night and early morning outreach for MSM drug users (non-IDU), sex workers, and other populations that HIV prevention might not otherwise reach (Pendo et al 2003). Outreach at these times could not only help to decrease risk behaviors but would also link individuals to needed services, such as drug treatment and HIV CTR. Such outreach must respect the fact that people are out late at night to have fun and should recognize the times when people are most open to intervention (e.g., before people hit the streets, when people are coming down from being high). Exhibit 16 describes outreach and how and when to implement it.



## Venue-Based (Street and Community) Individual Outreach (VBIO)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	<p>VBIO is a face-to-face interaction between an outreach worker (or a team of outreach workers) and a client or a small group of clients that takes place on the street or in venues where the population one is trying to reach may congregate* at appropriate times of the day, night, week, and year. VBIO may be a one-time intervention or part of a long-term relationship established by the outreach worker with clients in a particular community. It can be done as a brief encounter or more extended encounter during which HIV prevention education and referrals are given. It may also be used to recruit individuals into HIV prevention programs but must always include HIV education and referrals.</p>
<b>Implementation Requirements</b>	<p>All VBIO providers must:</p> <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	<p>VBIO should:</p> <ul style="list-style-type: none"> <li>• Include the following: (1) distribution and demonstration of prevention materials, such as condoms and bleach kits, (2) assessment of client needs, (3) provision of health education/risk reduction information, (4) dialogue about a client's life issues that affect HIV risk, and (5) referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> <li>• Work with the HIV Prevention Section to develop a method for tracking referrals made to other services to the extent possible.</li> <li>• Be a known and trusted resource.</li> <li>• Be used to engage client in other interventions, such as CTR, IRRC, or PCM when appropriate.</li> <li>• Be consistent and continuous and involve client follow-up when possible.</li> <li>• Reach high-risk populations at appropriate times, including late night and early morning hours, and at appropriate locations.</li> <li>• Consider including distribution of injection equipment.</li> <li>• Outreach workers should participate in the Institute for Community Health Outreach outreach worker trainings, as well as ongoing harm reduction trainings and the outreach providers meeting convened by the HIV Prevention Section.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's Guidelines for Health Education and Risk Reduction Activities under Street and Community Outreach (1995): <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can reach large numbers of people.</li> <li>• Can be implemented creatively, in combination with other interventions.</li> <li>• Appropriate for nearly all populations, especially those who are marginalized, difficult to reach, and not connected to the service system.</li> <li>• Can link individuals to services.</li> <li>• Can be implemented as a longer encounter (up to 20 minutes) or a brief encounter (5 minutes).</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May not be accepted or permitted in certain venues.</li> <li>• Can draw negative attention from uninformed law enforcement.</li> <li>• Cannot always meet clients' needs for services if there is a lack of available referral resources.</li> <li>• Is challenging to conduct outcome evaluation, in terms of behavior change and referral outcomes.</li> </ul>

\*Examples of venues are street corners, raves, schools, faith institutions, hospitals, sport leagues, gyms, the general assistance office, single room occupancy hotels (SROs), halfway houses, Internet chat rooms, outdoor cruising spots, bookstores, sex clubs, public housing, laundromats, crack houses, street fairs and other community events, massage parlors, porn theaters, bars, night clubs, community centers, and retail merchants.

## Prevention Case Management

Prevention case management (PCM) has only emerged in the last five years as a common approach to HIV prevention, and there are no published studies to date on its effectiveness. However, several studies are in progress. Some examples are:

- The SFDPH AIDS Office's PCM/Multiple Session Workshop (MSW) Outcome Study (Sebesta 2003)
- The New York City Department of Health's HIV PCM Evaluation  
(<http://www.hunter.cuny.edu/health/aidshp/prj.pcm.html>)

Preliminary results from the SFDPH study indicate that PCM is effective at decreasing the highest risk sexual and injection behaviors (Sebesta 2003, unpublished report). Risk behaviors among study participants decreased dramatically in the first month and remained low at four-month follow-up for both HIV-positive and HIV-negative individuals. However, PCM was no more effective at facilitating behavior change than MSW. Since MSWs can reach more people, they may be more cost-effective (see section on MSWs, pp. 196-197). However, PCM may be more appropriate than MSW for some individuals or populations (e.g., people in crisis, people with mental health and/or substance use issues, people needing intensive support around linking to ancillary services, people who would not feel comfortable attending a group intervention). Continuing analysis of data from this study will examine the efficacy of PCM in linking clients to needed substance use, mental health, primary care, prevention, and other health and social services. PCM is not intended to replace CARE case management for HIV-positive clients. The role of the prevention case manager is to work with the individual around prevention and behavioral change and to coordinate with the CARE case manager, who links the individual to CARE services.

PCM has some unique characteristics compared with IRRC and group-level interventions that may make it the most suitable intervention for some individuals. For example, PCM is more intensive and involves a more ongoing relationship with the provider than does IRRC. Unlike group interventions, it is also an individually tailored service. Therefore, individuals who need intensive one-on-one support for dealing with life issues may benefit more from PCM than other intervention types. HIV-positive individuals are one such group, and thus prevention with positives can be done using PCM. Exhibit 17 describes PCM and how and when to implement it.

## Prevention Case Management (PCM)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	<p>“PCM is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption and maintenance of HIV risk-reduction behaviors by clients with multiple, complex problems and risk-reduction needs. PCM is intended for persons having or likely to have difficulty initiating or sustaining practices that reduce or prevent HIV acquisition, transmission, or reinfection. As a hybrid of HIV risk-reduction counseling and traditional case management, PCM provides intensive, ongoing, individualized prevention counseling, support, and service brokerage. This HIV prevention activity addresses the relationship between HIV risk and other issues such as substance abuse, STD treatment, mental health, and social and cultural factors” (CDC HIV Prevention Case Management Guidance, September 1997). PCM can be used with HIV-negative and HIV-positive individuals and can be provided in a face-to-face setting. PCM is a more intensive, longer-term intervention than individual risk reduction counseling (IRRC).</p>
<b>Implementation Requirements</b>	<p>All PCM providers must:</p> <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> <li>• Adhere to the HIV Prevention Case Management: Standards and Guidelines for the Delivery of Services of San Francisco, developed by the Prevention Case Management Standardization and Evaluation Project Community Advisory Board (2000). Available from the HIV Prevention Section.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC Prevention Case Management Guidance (1997): <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=1356++++&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=1356++++&amp;TopNum=50&amp;CallPg=Adv</a></li> <li>• CDC HIV Prevention Case Management Literature Review and Current Practice (1997): <a href="http://www.cdc.gov/hiv/pubs/hivpcml.htm">http://www.cdc.gov/hiv/pubs/hivpcml.htm</a></li> <li>• CDC review of PCM programs across the country: Purcell et al (1998)</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Appropriate for HIV-positive individuals, high-risk HIV-negative individuals, and high-risk individuals who do not know their serostatus.</li> <li>• Suitable for people seeking some stability/regularity in their lives and people who are reaching an action stage in dealing with health concerns.</li> <li>• Can be implemented in a variety of settings (e.g., health care facilities, CBOs)</li> <li>• Provides personal attention to individuals for whom privacy and confidentiality are important.</li> <li>• Provides opportunities for linkages and referrals to other health and social services, including primary care, mental health, substance abuse, HIV CTR, STD testing and treatment, and other HIV prevention services, and referrals can be tracked and followed up on.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May not be appropriate for people who perceive themselves to be low risk or for individuals who are not able to keep appointments or commit to longer-term, one-on-one, intensive interactions or to a behavior change plan.</li> <li>• Insufficient for creating community-wide impact unless accompanied by outreach or other interventions.</li> <li>• May be challenging to find prevention case managers.</li> </ul>

## INDIVIDUAL RISK REDUCTION COUNSELING

Individual risk reduction counseling (IRRC) is an effective intervention for many populations at changing drug use and sexual risk behaviors, whether it is a brief single encounter, an extended more intensive encounter, or more than one encounter. Multiple encounters are more likely to result in behavior change. For example, Des Jarlais (1995) reported reductions in injection drug use risk behavior as a result of IRRC, with both a short basic knowledge intervention and an enhanced knowledge plus counseling intervention. Branson et al (1998) reported increased condom use and decreased number of partners among STD clinic patients receiving IRRC. A study by Kamb et al (1998) demonstrated an increase in 100% condom use and reduced repeat STD infections among heterosexual adolescent and adult STD clinic patients with both an enhanced and brief IRRC intervention compared with didactic instruction alone. IRRC sessions with HIV-positive women were effective at increasing self-efficacy and condom use in another study (Fogarty et al 2001). Although no cost-effectiveness information for this particular intervention was found in the literature, Kahn (1995) reports on one study that found an extended counseling intervention for IDUs to be cost-effective. Exhibit 18 describes IRRC and how and when to implement it.

## Individual Risk Reduction Counseling (IRRC)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	IRRC is a personalized, client-centered encounter between an individual and a trained counselor provided in a face-to-face or non-face-to-face setting. It can be a one-time intervention, or the client and counselor can meet more than once. IRRC is highly mobile and can take place in an outreach setting, a person's home, shelters, clinics, community centers, over the telephone, or on the Internet. IRRC is a time-limited intervention that can be used as a vehicle for transitioning clients into more intensive services.
<b>Implementation Requirements</b>	All IRRC providers must: <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	IRRC should: <ul style="list-style-type: none"> <li>• Consist of counseling sessions that are at least 30 minutes long.</li> <li>• Include (1) HIV/STD information, (2) discussion of risk behaviors and a written risk reduction plan, (3) counseling, (4) skills building, and (5) referrals to appropriate health and social services, including primary care, mental health, substance abuse, HIV CTR, STD testing and treatment, and other HIV prevention services.</li> <li>• Track and follow up on referrals and linkages made.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's Guidelines for Health Education and Risk Reduction Activities (1995) under Risk Reduction Counseling:  <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a> </li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Generally suitable for all populations.</li> <li>• Can be implemented in a variety of settings (e.g., outreach, health care facilities, community-based organizations).</li> <li>• Provides personal attention to individuals for whom privacy and confidentiality are important.</li> <li>• Can help transition clients into more intensive services, such as PCM.</li> <li>• Provides opportunities for linkages and referrals to other health and social services, including primary care, mental health, substance abuse, HIV CTR, STD testing and treatment, and other HIV prevention services, and referrals can be tracked and followed up on.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Multi-session IRRC may not be appropriate for people who are not able to keep appointments.</li> </ul>

## NEEDLE EXCHANGE

A CDC report on needle exchange programs ([http://www.cdc.gov/idu/facts/aed\\_idu\\_syr.htm](http://www.cdc.gov/idu/facts/aed_idu_syr.htm)) published in 2002 quotes the following conclusion of the National Institutes of Health Consensus Panel on HIV Prevention:

“An impressive body of evidence suggests powerful effects from needle exchange programs.... Can the opposition to needle exchange programs in the United States be justified on scientific grounds? Our answer is a simple and emphatic no. Studies show reduction in risk behavior as high as 80%, with estimates of a 30% or greater reduction of HIV in IDUs.”

This same CDC report concludes that needle exchange programs do not encourage drug use, and they have demonstrated effectiveness in the following areas:

- Providing opportunities for IDUs to use sterile syringes and share less often
- Linking hard-to-reach IDUs with public health services, including tuberculosis and STD treatment
- Helping IDUs stop using drugs, through referrals to substance use treatment

Further, several studies have found use of needle exchange to be associated with reduced needle sharing and other injection-related risk reduction behaviors (Guydish et al 1995, Hagan et al 1991, UC Berkeley School of Public Health, undated report, Watters et al 1994). A few studies suggest reduced HIV transmission as a result of needle exchange (Heimer et al 1996), but it is unlikely that any study will ever show this conclusively because of barriers related to sample size and randomization (UC Berkeley School of Public Health, undated report). A review of the literature, including government reports, overwhelmingly supports the effectiveness of needle exchange (Vlahov & Junge 1998). It is also a cost-effective approach in terms of new infections averted (Holtgrave et al 1998, Lurie et al 1998, UC Berkeley School of Public Health, undated report). Most cost-effectiveness studies suggest that the cost per HIV infection averted is far below the \$119,000 lifetime cost of treating an HIV-infected person (UC Berkeley School of Public Health, undated report).

It is widely believed that the availability of needle exchange in San Francisco is responsible for keeping new HIV infections at endemic as opposed to epidemic levels among IDUs, although no formal studies provide conclusive evidence to this effect. Even in the absence of such data, which would be nearly impossible to generate for the reasons explained earlier, needle exchange programs are clearly justifiable in the context of an epidemic of a highly lethal, preventable infectious disease (UC Berkeley School of Public Health, undated report). Needle exchange is therefore a high priority intervention for IDUs, and needle exchange providers should consider how best to meet the needs of different IDU subpopulations. Exhibit 19 describes needle exchange and how to implement it.

## Needle Exchange

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	Needle exchange programs are community or street-based programs that provide sterile needles and other injection equipment to IDUs and hormone, steroid, vitamin, and insulin users. Needle exchange can be primary (i.e., individuals exchange their own needles) or secondary (i.e., individuals exchange needles for friends or a group of people).
<b>Implementation Requirements</b>	Needle exchange sites must provide, at a minimum, the following materials and services: <ul style="list-style-type: none"> <li>• Safer injection supplies, including syringes.</li> <li>• Condoms and safer sex supplies.</li> </ul>
<b>Implementation Recommendations</b>	<p>Needle exchange sites should provide some combination of the following services/materials, depending on what is appropriate for the site:</p> <ul style="list-style-type: none"> <li>• Materials (e.g., alcohol swabs) to help prevent abscesses and other bacterial infections.</li> <li>• HIV CTR.</li> <li>• Sexual and injection risk reduction education.</li> <li>• Substance use treatment and other health and social services, either on-site or through referral.</li> <li>• Crisis intervention.</li> <li>• Screening for tuberculosis, hepatitis B, hepatitis C, and other infections, either on-site or through referral.</li> </ul> <p>Needle exchange programs should:</p> <ul style="list-style-type: none"> <li>• Be adequately staffed.</li> <li>• Promote their services through creative channels, to ensure that those who need or want services know when and where to get them.</li> <li>• Have a designated health education and referral and resource person.</li> <li>• Offer passes that reserve spots in drug treatment programs (i.e., drug treatment vouchers) to interested clients, when possible.</li> <li>• Meet the safety needs of clients (e.g., minimizing police presence, having a protective and vigilant staff).</li> <li>• Collaborate and/or develop memoranda of understanding with HIV prevention education agencies and other health and social service providers (e.g., SFDPH wound care) to provide services at the needle exchange site.</li> <li>• Provide referrals to appropriate health and social services not offered on site, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> <li>• Be tailored to IDU subpopulations (e.g., needle exchange for speed-using gay men might need to be different from needle exchange for transgendered persons).</li> <li>• Advocate for policies that increase access to clean needles (see CDC's article on "Policy Efforts to Increase IDU's Access to Sterile Syringes": <a href="http://www.cdc.gov/idu/facts/aed_idu_pol.htm">http://www.cdc.gov/idu/facts/aed_idu_pol.htm</a>)</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can be tailored to the needs of a particular neighborhood or IDU subpopulation.</li> <li>• Provides a bridge to other prevention, health, and social services.</li> <li>• Can be useful for people who inject hormones (e.g., transgendered persons), steroids, or vitamins, as well as for IDUs.</li> <li>• May be more appropriate than pharmaceutical outlets for higher-risk populations that may benefit from linkages to services.</li> <li>• Can reduce transmission of hepatitis B and C as well as HIV.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Site locations and hours may not be known among all IDUs.</li> <li>• May not always be perceived as safe, due to fear of law enforcement, agencies that have the power to remove children from their homes, INS, or other government authorities.</li> <li>• May not be appropriate in the context of a 24-hour residential treatment program and abstinence-based drug treatment programs.</li> <li>• Cannot currently be funded with federal funds.</li> <li>• Can face resistance from neighbors where the site is located.</li> </ul>

## SINGLE SESSION GROUPS

A number of studies have shown that single session groups (SSGs) can be effective at reducing sexual risk behavior in many different populations. They have also been shown to be cost-effective with some populations and in some contexts (Pinkerton et al 2001). However, multi-session interventions are more likely to have an impact (see the section on MSW, pp. 196–197). Because of this, providers need to justify why they would implement an SSG when an MSW or other multi-session intervention would be appropriate and feasible. In some contexts, multi-session interventions may not be feasible (e.g., when clients are unlikely to attend multiple sessions), and in these cases SSG can be used. SSGs can be implemented as drop-in groups or as more structured interventions.

Several effective SSG interventions have been described in the literature. Many of them use a peer-led approach, which is likely part of the reason for their effectiveness (see the section on Peer Education, pp. 202–203). Populations that have reported decreases in HIV risk behavior after participating in SSGs include:

- African-American male adolescents in Philadelphia (Jemmott et al 1992)
- Gay and bisexual men in Philadelphia (Valdiserri et al 1989)
- Gay Asian/Pacific Islander men in San Francisco (Choi et al 1996)
- Adolescents (Kennedy et al 2000a)
- Incarcerated individuals (Grinstead et al 1999)

Exhibit 20 describes SSGs and how to implement them.



## Single Session Groups (SSGs)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	An SSG is a one-time intensive session that focuses on information about HIV (e.g., transmission, behavior change), motivational activities, skills-building, self-esteem issues, social support, and/or community building. It may also touch on other relevant issues specific to the population. This intervention may be implemented as planned groups, impromptu groups, drop-in groups, support groups, a mobile intervention using vans as session sites, or other method.
<b>Implementation Requirements</b>	All SSG providers must: <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	SSGs should: <ul style="list-style-type: none"> <li>• Be advertised and promoted through media and outreach.</li> <li>• Recruit participants via other activities, both HIV- and non-HIV-related.</li> <li>• Be followed by additional support, follow-up groups, and/or “booster” groups.</li> <li>• Include ground rules created and adopted by participants.</li> <li>• Include discussions about issues beyond just HIV as appropriate (e.g., racism, homophobia).</li> <li>• Be provided in community venues that are accessible to the population.</li> <li>• Provide referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC’s Guidelines for Health Education and Risk Reduction Activities (1995) under Individual and Group Interventions:  <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a> </li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Appropriate for populations that cannot commit to multiple sessions.</li> <li>• Can be run as one-time skills-building workshops.</li> <li>• Can recruit clients for other prevention-oriented activities.</li> <li>• Can contribute to shifting community norms when offered frequently and focused on particular topics of interest to the community.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Not as effective as MSW at changing HIV risk behavior.</li> <li>• Less helpful for people with serious mental health issues, for the highest-risk populations, and for those most in denial about their risk.</li> <li>• Difficult to conduct outcome evaluation in terms of behavior change if client is not linked to additional services.</li> </ul>

## MULTIPLE SESSION WORKSHOP

A multiple session workshop (MSW) is a very versatile intervention because the content can be tailored to almost any population. Further, the MSW has demonstrated effectiveness at reducing a variety of sexual risk taking behaviors as well as affecting knowledge and attitudes about HIV among several populations, especially when compared with SSGs:

- Homeless adolescents (Rotheram-Borus et al 1991)
- Gay and bisexual men in general (Roffman et al 1998)
- Young African American women (DiClemente & Wingood 1995)
- Low-income African American women (Carey et al 2000)
- Incarcerated African American and white women (St. Lawrence et al 1997)
- STD clinic patients (Branson et al 1998)
- Immigrant Latina women (Gomez et al 1999)
- Middle school students (Levy et al 1995)
- Incarcerated HIV-positive men (Grinstead et al 2001)
- Heterosexual men (Elwy et al 2002)
- HIV-positive women (Fogarty et al 2001)
- HIV-positive and HIV-negative IDUs (Latkin et al 2003)
- HIV-positive youth (Rotheram-Borus et al 2001)

Finally, an MSW is likely a cost-effective intervention, depending on the specific population and the context in which it is implemented (Pinkerton et al 2001, Pinkerton et al 2002). In addition, preliminary results from a local study show that MSW is no more or less effective at creating behavior change than PCM. Because PCM only reaches one individual at a time and MSW can reach multiple people, the MSW may be a more cost-effective intervention for people who would attend a group-level intervention and do not need or want more intensive one-on-one counseling and support (see also the section on PCM, pp. 188-189). Exhibit 21 describes MSWs and how to implement them.

## Multiple Session Workshop (MSW)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	An MSW is a series of workshops, groups, or meetings that introduce HIV issues and link them to other life issues not as easily or immediately understood as relating to HIV. The expectation is that the same individuals will attend all workshops in a series. Workshop topics usually build on each other from session to session. Groups may be mixed or serostatus-specific, structured, or need/issue-driven groups for risk reduction and psychosocial support. Groups can be held in a variety of community settings.
<b>Implementation Requirements</b>	All MSW providers must: <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	The MSW should: <ul style="list-style-type: none"> <li>• Be advertised and promoted through media and outreach.</li> <li>• Recruit participants via other activities, both HIV- and non-HIV-related.</li> <li>• Be followed by additional support, follow-up groups, and/or “booster” groups.</li> <li>• Include ground rules created and adopted by participants.</li> <li>• Include discussions about issues beyond just HIV as appropriate (e.g., racism, homophobia).</li> <li>• Be provided in community venues that are accessible to the population.</li> <li>• Provide referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC’s Guidelines for Health Education and Risk Reduction Activities (1995) under Individual and Group Interventions:  <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a> </li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Better than SSGs for addressing HIV risk reduction issues and strategies in greater depth, dealing with the underlying causes of unsafe behavior, and creating behavior change.</li> <li>• Attracts people seeking connection with others who have shared experiences and interests (e.g., gay men seeking social contacts and support outside of the gay bar scene).</li> <li>• Suitable for people with high perception of personal risk, people who are already highly motivated to attend groups, people who desire structure (e.g., some homeless and/or jobless people), and people who can commit to attending sessions on an ongoing basis.</li> <li>• Provides an opportunity for people to talk about sexual and drug-related behaviors with their peers.</li> <li>• Feasible to conduct in institutional settings (e.g., schools, treatment centers, prisons/jails).</li> <li>• Can contribute to shifting community norms when focused on particular topics of interest to the community.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May have limited effectiveness with populations who are unlikely to disclose or discuss their risk behaviors (e.g., MSM who live heterosexual lives, people engaging in survival sex).</li> <li>• May not be as effective or appropriate for mentally ill populations or people with limited free time (e.g., people who are struggling to hold onto housing/employment or juggling house, kids, education, or work).</li> <li>• May pose challenges regarding retention.</li> </ul>

## INTERNET

The Internet is a vehicle for conducting nearly every other intervention described here, including outreach, IRRC, SSG, MSW, social marketing (e.g., banner ads), and others. Use of the Internet to deliver HIV prevention messages and promote behavior change is becoming increasingly popular for at least two reasons: (1) it has the potential to reach large numbers of people, and (2) interventions can be targeted to high-risk groups, such as those seeking sex via websites and chat rooms.

Because this approach is relatively new, its effectiveness has not clearly been established. Evidence in support of its effectiveness, especially for gay men, includes the following:

- The Internet plays a central role in many gay men's lives of meeting sexual partners, and frequent unprotected anal sex is reported among gay male Internet users (Rebchook et al 2003).
- Many people report that they would access a website (61%) or chat room (30%) for HIV prevention information (Bull et al 2001).
- MSM and people with STD histories are more likely than others to report a willingness to get HIV prevention through a website or chat room (Bull et al 2001).
- A community-based organization serving Asian men in Alameda County piloted a chat room-based HIV prevention outreach intervention, which was well-accepted and well-used by over 200 MSM clients over a one-year period (Huang & Hottes 2003).
- Internet outreach to gay men conducted in San Francisco has also been met with a positive community response (Knapper 2003).

Internet users, particularly MSM, may be at higher risk for HIV than their counterparts who do not seek sexual partners on line (see Chapter 3: Community Assessment, p. 54). However, this does not necessarily mean that Internet-based interventions are always sufficient or appropriate for these high-risk men. There may be underlying factors that contribute to increased unsafe sex among this group (e.g., mental health, sexual compulsivity, community norms regarding disclosure of HIV status and condom use), and these are best addressed through in-person interventions. Exhibit 22 describes how to use the Internet as a strategy for HIV prevention.

## Internet

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	<p>The Internet is one vehicle for implementing many of the strategies and interventions described in this chapter. Listservs, chat rooms, electronic bulletin boards, banner ads, email, and websites are some examples of Internet mediums that can be used to deliver HIV prevention messages. Examples of conducting an intervention using the Internet include:</p> <ul style="list-style-type: none"> <li>• Outreach and information given in chat rooms</li> <li>• Risk reduction support provided over email</li> <li>• IRRC, SSG, or MSW done in a chat room</li> <li>• Social marketing banner ads promoting healthy behaviors</li> <li>• Listing of available HIV and STD services on websites</li> <li>• Online syphilis testing, in which individuals can print a lab form, take it to a designated provider, have their blood drawn, and access their results on line</li> </ul>
<b>Implementation Recommendations</b>	<p>Internet-based interventions should:</p> <ul style="list-style-type: none"> <li>• Be tailored to a particular population.</li> <li>• Provide referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> <li>• Be voluntary (e.g., chat room interventions should not coerce people into engaging in conversations they do not wish to have).</li> <li>• Follow all the rules of each Internet venue (e.g., chat room or website rules of conduct).</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Web outreach training manuals are available from the HIV Prevention Section.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can reach large numbers of people over a wide geographic area.</li> <li>• Presents opportunities for prevention using the same channels people use to solicit sex partners (e.g., chat rooms).</li> <li>• May be appealing for populations desiring anonymity.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Will not reach those without Internet access or computer skills, who may be low-income or marginalized groups and at high risk for HIV.</li> <li>• May not reach those who are high-risk but do not use the Internet to meet sexual partners.</li> <li>• Has the potential to compromise anonymity/confidentiality if identifying information is requested or given over the Internet.</li> <li>• May be interpreted as intrusive if individuals have accessed a website/chat room for another purpose.</li> <li>• Effectiveness not yet established.</li> <li>• Limited by the rules of the Internet service provider or chat room being used.</li> <li>• Health Insurance Portability and Accountability Act (HIPAA) regulations may limit certain types of electronic correspondence when identifying information is used.</li> </ul>

## CONDOM AND LUBRICANT DISTRIBUTION

A CDC fact sheet on condoms concludes that “Latex condoms, when used consistently and correctly, are highly effective in preventing transmission of HIV, the virus that causes AIDS” (<http://www.cdc.gov/hiv/pubs/facts/condoms.pdf>). Lubrication, or “lube,” should also accompany condom distribution, as use of lube may lower condom failure rates. Condom and lubrication distribution ensures their availability and accessibility, and condom distribution has also been associated with increased condom use among African American men and women in one community-level, targeted distribution effort (Cohen et al 1999). The cost savings to the health care system and society per condom used consistently and correctly is \$27 for high-risk heterosexuals and at least \$530 per condom for MSM (HPPC 2001), making this a highly cost-effective strategy. A study of cost-effectiveness of various interventions also determined condom distribution to be cost-effective for high-risk men and women (Pinkerton et al 2001). Exhibit 23 describes condom distribution and how to implement it.

### EXHIBIT 23

#### Condom and Lubricant Distribution

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	Condoms (female and/or male), lubrication, and other harm reduction materials for reducing sexual risk for HIV distributed to members of the population one is trying to reach.
<b>Implementation Recommendations</b>	Condom distribution should: <ul style="list-style-type: none"><li>• Be used in combination with other strategies or interventions (i.e., it is not an intervention in itself).</li><li>• Be accompanied by instructions for proper use, either verbal or written.</li><li>• Be accompanied by information about the risks of nonoxynol-9*, if condoms with nonoxynol-9 are distributed.</li><li>• Include referrals to appropriate health and social services, including primary care, mental health, substance abuse, HIV CTR, STD testing and treatment, and other HIV prevention services.</li><li>• Make available new condoms being marketed and sold, as technology improves.</li></ul>
<b>Strengths</b>	<ul style="list-style-type: none"><li>• May reduce barriers to safer sex for some populations (e.g., for those who cannot afford condoms, those who are uncomfortable buying condoms such as teens).</li><li>• Can increase ease of access to condoms (e.g., picking up condoms on the way into or out of a bar).</li></ul>
<b>Limitations</b>	<ul style="list-style-type: none"><li>• May have limited effectiveness in some populations unless accompanied by other interventions or strategies.</li><li>• May be controversial or prohibited in some settings (e.g., schools, correctional facilities).</li></ul>

\*Nonoxynol-9 is no longer recommended by the CDC as an effective means for preventing HIV transmission (<http://www.cdc.gov/hiv/pubs/mmwr/mmwr11aug00.htm>).

## HARM REDUCTION OPTIONS

Several studies establish the effectiveness of a harm reduction approach in regard to high-risk injection behaviors and sexual behaviors, particularly when used in combination with counseling and health education (Brette 1991). Examples of harm reduction for injection drug use include methadone maintenance and needle exchange. Studies show that methadone maintenance harm reduction programs are associated with lower levels of risk behavior (Margolin et al 2003) and lower seroconversion rates (Moss et al 1994). Needle exchange has been shown to be a highly effective and cost-effective harm reduction approach as well (see the section on Needle Exchange, pp. 192-193).

Condom use is an example of a harm reduction approach to sexual behavior and is an extremely effective harm reduction intervention. Other harm reduction approaches in relation to sexual behavior include withdrawal before ejaculation and negotiating to engage in oral sex instead of anal sex. Exhibit 24 describes harm reduction and how to incorporate it into HIV prevention programs.

### EXHIBIT 24

#### Harm Reduction

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	A harm reduction approach to prevention accepts that harmful behavior exists, and the main goal is to reduce the negative effects of the behavior rather than ignore or pass judgment on the person or the behavior. The term “harm reduction” is used most often in the context of drug use, but the approach can be used with sexual risk behavior as well. A harm reduction approach encourages safer drug use or sexual practices among those engaging in high-risk behaviors and acknowledges the social and environmental factors that affect drug use and high-risk sexual behaviors, such as poverty, racism, and stigma.
<b>Implementation Recommendations</b>	Agencies should: <ul style="list-style-type: none"> <li>• Attempt to reach clients “where they’re at” to assist them in making healthy choices.</li> <li>• Be attentive to the health and well-being of the entire person in considering when to use harm reduction options.</li> <li>• Should tailor harm reduction options to the needs of the population, taking into consideration the population’s norms and behaviors.</li> <li>• Provide referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> </ul>
<b>Implementation Requirements</b>	Agencies must comply with the San Francisco Health Commission’s Resolution on Harm Reduction: <a href="http://www.dph.sf.ca.us/HCRes/Resolutions/2000Res/HCRes10-00.shtml">http://www.dph.sf.ca.us/HCRes/Resolutions/2000Res/HCRes10-00.shtml</a>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Accepts the stage where a person is and promotes skills for decreasing risk.</li> <li>• Can be used in an institutional (e.g., drug treatment facility) or community (e.g., outreach) setting.</li> <li>• Can encourage safer injection practices and sexual risk reduction.</li> <li>• Can encourage positive risk reduction attitudes.</li> <li>• Can provide linkages to drug treatment.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Does not eliminate the potential harmful effects of a behavior.</li> <li>• May not be as useful for individuals not ready to change harmful behaviors.</li> <li>• May lead to increased harmful behavior if not individually tailored (e.g., promoting withdrawal before ejaculation with someone who already uses condoms consistently could inadvertently lead to decreased condom use).</li> </ul>

## PEER EDUCATION

Numerous studies have shown that peer education is an effective approach to HIV prevention and can be cost-effective as well (Pinkerton et al 2001). This strategy may be more effective in many situations than interventions delivered via non-peers (Catania et al 1991, Coates & Greenblatt 1990, Dorfman et al 1992), especially for adolescents (Lem et al 1994), because peers may be viewed as more credible, more sensitive, and better able to understand youth. Recent studies of interventions that used a peer approach found that it resulted in:

- Increased consistent condom use among HIV-positive women (Fogarty et al 2001).
- Increased HIV testing among high-risk youth (Johnson et al 2001).
- Cost-effective risk reduction for young gay and bisexual men (The Mpowerment Project, Kahn JG et al 2001).
- Reduced injection and sexual risk for HIV-positive and HIV-negative drug users (Latkin et al 2003).
- Reduced HIV risk behaviors among homeless and marginally housed women (Nyamathi et al 2001).
- Increased condom use and reduced unprotected sex among women living in low-income inner-city neighborhoods (Sikkema et al 2000).

Peer education can also have an impact on the peer educators themselves, in terms of knowledge, attitudes, and risk reduction (Pearlman et al 2002), which benefits them personally and promotes their credibility as educators.

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Peer education is not always the most appropriate approach for every population or situation. For example, if an individual or population has multiple and complex issues (e.g., substance use, mental health), the benefits that an experienced professional social worker or counselor could bring may outweigh the benefits of peer-based intervention. Ideally, HIV prevention programs using a peer education approach would seek to involve professionals who are also peers in the delivery of interventions. Exhibit 25 describes peer education and how to integrate it into HIV prevention programs.



## Peer Education

<b>Strategy or Intervention?</b>	Strategy
<b>Definition/Description</b>	Services are provided to a population by individuals recruited from that population, which may be defined by behavior, culture, race, age, ethnicity, gender identification, or other salient factors.
<b>Implementation Recommendations</b>	<p>Agencies should:</p> <ul style="list-style-type: none"> <li>• Provide counseling, supervision, safety and support structures, and adequate wages or incentives for their peer educators.</li> <li>• Incorporate feedback and experiences of peer educators into program development.</li> <li>• Ensure diversity among peer educators and make sure they are perceived as credible and as true peers by the population one is trying to reach.</li> <li>• Train peer educators to address behavior change as well as provide information.</li> <li>• Provide referrals to appropriate health and social services, including primary care, mental health, substance abuse, STD testing and treatment, and other HIV prevention services.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's Guidelines for Health Education and Risk Reduction (1995) under Individual and Group Interventions:  <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a> </li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Has a theoretical foundation in diffusion of innovations theory.</li> <li>• Draws on established social networks to disseminate information.</li> <li>• Can be used with individual, group, and community-level interventions and with all populations.</li> <li>• Can assist in changing the perception of norms regarding HIV and HIV risk behaviors.</li> <li>• Can assist in creating social networks that support and encourage self-protective behaviors.</li> <li>• Especially suited for populations who do not initially perceive themselves to be at risk.</li> <li>• Can lead to behavior change for the peer educators themselves.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May not be appropriate for small or close communities where stigma may still be attached to HIV concerns or people desiring anonymity. (Some groups may prefer to receive HIV prevention services from people outside of their immediate community, so that they can talk more freely and not fear disclosure of information.)</li> <li>• May not be as effective as an intervention delivered by a professional if an individual or population has multiple or complex issues (e.g., substance abuse, mental health).</li> <li>• Could be less effective if peer educators do not themselves adopt the behaviors and norms they are trying to promote.</li> <li>• Can be challenging to sustain due to burn-out or, among youth peers, growing too old to be perceived as a peer.</li> </ul>

## HIV PREVENTION IN STD DETECTION AND TREATMENT SETTINGS

A 2001 report from the CDC concluded that “testing and treatment of STDs can be an effective tool in preventing the spread of HIV” ([http://www.cdc.gov/nchstp/dstd/Fact\\_Sheets/facts\\_std\\_testing\\_and\\_treatment.htm](http://www.cdc.gov/nchstp/dstd/Fact_Sheets/facts_std_testing_and_treatment.htm)). The report outlines the following critical points:

- Studies have shown STD detection and treatment to be an effective tool for HIV prevention because (1) when a person is treated for an STD, it reduces his or her ability to transmit or acquire HIV, and (2) STD treatment reduces the spread of HIV infection in communities.
- Studies indicate that continuous interventions that focus on increasing access to STD services are likely more effective than intermittent interventions, such as periodic community-wide non-targeted campaigns to encourage screening.
- STD treatment is most effective in reducing HIV transmission in areas where STD rates are high, as they are among some San Francisco populations.
- Treatment of symptomatic STDs in particular is a critical component of an effective STD detection and treatment program.

Further, when a person seeks testing and treatment for an STD, it is an ideal opportunity to provide HIV prevention education, HIV CTR, linkages to risk reduction services, and PCRS for HIV and STDs. Exhibit 26 describes STD detection and treatment and how it can be used as an HIV prevention method. For more information on the link between STDs and HIV, see Chapter 3: Community Assessment, pp. 115-117).

## HIV Prevention in STD Detection and Treatment Settings

<b>Strategy or Intervention?</b>	Strategy. The actual STD testing and treatment service is not sufficient to be considered an HIV prevention intervention. The STD testing and treatment setting offers opportunities to conduct many of the other HIV prevention interventions discussed in this chapter (e.g., IRRRC, HIV CTR). Therefore, it is considered a strategy (i.e., an approach that cuts across interventions).
<b>Definition/Description</b>	HIV prevention conducted in STD detection and treatment settings is any intervention provided to individuals that involves testing and/or treatment for STDs, including but not limited to chlamydia, gonorrhea, syphilis, and herpes. The actual STD testing and treatment represents a primary prevention strategy for HIV-positive and negative individuals (people are more susceptible to acquiring or transmitting HIV if they have an STD) and a secondary prevention strategy for HIV-positive individuals (HIV-positive people may be more susceptible to HIV superinfection when they have an STD and STDs may have more severe consequences for people with compromised immune systems). However, the STD testing and treatment itself needs to be supplemented by a specific HIV prevention intervention.
<b>Implementation Recommendations</b>	<p>HIV prevention activities in the STD detection and treatment setting may include any of the following:</p> <ul style="list-style-type: none"> <li>• HIV CTR or referrals to HIV CTR.</li> <li>• Client-centered HIV risk assessment and risk reduction counseling (e.g., IRRRC).</li> <li>• Discussion and promotion of sexual health and well-being.</li> <li>• Referrals to appropriate services for high-risk HIV-negative individuals and HIV-positive individuals.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can serve as a bridge to HIV CTR for high-risk individuals.</li> <li>• May increase a person's perception of their own HIV risk if they are found to have an STD.</li> <li>• Can be done in street-based locations.</li> <li>• Can use new screening technologies.</li> <li>• Can be effective at changing community STD rates when targeted appropriately, which could in turn impact HIV transmission rates.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Must be accompanied by HIV CTR to maximize its effectiveness.</li> <li>• Will not reach people who do not get regular STD screening, those who do not have access to regular medical care, or those who do not have any symptoms and therefore do not seek screening (unless the intervention is mobile).</li> </ul>

## POST-EXPOSURE PREVENTION (PEP)

Post-exposure prevention (PEP) involves administering anti-HIV therapy to an individual who suspects that he or she has been exposed to HIV, within hours to days after the exposure. PEP has been used to prevent HIV seroconversion among (1) health care workers who have been exposed during their jobs (e.g., accidental needle sticks), and (2) individuals who may have been exposed through sexual contact or through sharing of injection equipment.

Regarding occupational exposure, PEP has been shown to reduce the risk of HIV infection among exposed health care workers by 81% (Cardo et al 1997). The U.S. Public Health Service has established guidelines for the use of PEP in such situations (MMWR 2001c). PEP is most cost-effective for occupational exposure when targeted to those exposed to known HIV-positive sources and those with severe exposures (Marin et al 1999).

The use of PEP to prevent seroconversion among those who were exposed through sexual contact or injection drug use has been less well investigated. No data supporting PEP's effectiveness at preventing seroconversions exists, and there are numerous practical and ethical considerations that would make conducting such a study challenging. However, feasibility studies have been done. One recent study in San Francisco has documented that it is feasible to implement a PEP program for nonoccupational exposure (Kahn JO et al 2001). Study participants included 401 individuals potentially exposed to HIV and 64 of their partners through whom they may have been exposed. Most study participants were between 20 and 60 years old, white, and male. Among the individuals enrolled in the study, there were four known seroconversions in the 12 months following PEP administration, and none of these had occurred by 6 months. All of the seroconversions appear to have occurred not as a result of the exposure incident for which they received PEP, but as a result of engaging in high-risk behaviors after receiving PEP (Roland 2003). Further, approximately 80% of MSM and female participants reported decreases in HIV risk behaviors at 6-month and 12-month follow-up (Martin et al, in press).

How PEP is implemented could have substantial public health implications. For example, if people believe that PEP is available, would they be less likely to practice safer sex? The potential public health implications related to PEP should be considered as the guidelines and recommendations for the administration of PEP for sexual/injection drug use exposure evolve.

For sexual exposure, assuming its efficacy, PEP was determined to be cost-effective in one study, but only for individuals who report receptive anal intercourse with a partner of unknown serostatus (Pinkerton et al 2001). Exhibit 27 describes PEP and how to implement it.

## Post-Exposure Prevention (PEP)\*

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	This intervention consists of administering anti-HIV therapy to a person within 72 hours after they have been exposed or potentially exposed to HIV (the sooner the better). It also includes the provision of or referrals to HIV CTR. For individuals exposed through sexual contact or injection drug use, PEP also includes HIV risk reduction counseling and referrals to appropriate health and social services, including primary care, mental health, substance abuse, and other HIV prevention services.
<b>Implementation Requirements</b>	Occupational exposure: <ul style="list-style-type: none"> <li>• “Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis” (MMWR 2001c), <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm</a></li> </ul>
<b>Resources</b>	Nonoccupational exposure: <ul style="list-style-type: none"> <li>• “Management of Possible Sexual, Injecting-Drug-Use, or Other Nonoccupational Exposure to HIV, Including Considerations Related to Antiretroviral Therapy: Public Health Service Statement” (MMWR 1998): <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/00054952.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/00054952.htm</a></li> <li>• PEP following sexual assault: Bamberger et al 1999, Katz &amp; Gerberding 1998, Myles &amp; Bamberger 2001</li> <li>• Review of literature and guidelines: Roland 2003, <a href="http://hivinsite.ucsf.edu/InSite.jsp?doc=kb-07-02-07">http://hivinsite.ucsf.edu/InSite.jsp?doc=kb-07-02-07</a></li> <li>• California state guidelines are under development as of November 2003</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Has been favorably received by gay and bisexual men, especially those at highest risk (Kalichman 1998).</li> <li>• People exposed through sexual means with high-risk exposures are willing to use PEP (Kahn JO et al 2001).</li> <li>• Provides opportunities for risk reduction counseling and referrals to ongoing HIV prevention services.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May act as a deterrent to risk reduction among high-risk populations if made widely available (Kahn JO et al 2001).</li> <li>• Associated with many logistical and ethical issues that remain unresolved (e.g., who should administer PEP, who is eligible for PEP, how many times can a person get PEP).</li> <li>• May not be as accessible to those exposed through injection drug use-related behaviors (Kahn JO et al 2001).</li> <li>• May have long-term effects that are as of yet unknown.</li> </ul>

\*Sometimes referred to as post-exposure prophylaxis.

## HIV PREVENTION IN PRIMARY CARE SETTINGS

Integrating HIV prevention into primary medical care is yet another way to reach high-risk HIV-negative and HIV-positive individuals, especially those who might not otherwise be reached by HIV prevention messages. Primary care-based interventions may be an especially effective way to conduct prevention with positives, since approximately 80% of HIV-positive people in San Francisco are in care. Recent local studies have documented that some HIV-positive individuals are at high risk for transmitting HIV (Fisher et al 2002) and that Ryan White Act-funded clinics are missing critical opportunities to deliver HIV prevention messages to their patients (Morin 2002).

HIV prevention in the primary care setting can involve a number of interventions, all of which are described elsewhere in this chapter. HIV prevention services that can be offered in primary care settings include (MMWR 2003b):

- Providing HIV CTR (see the section on Counseling, Testing, and Referral, pp. 174-177)
- Asking patients about their sexual and drug use risk behaviors, counseling them to reduce their risk, and reinforcing behavior change (see sections on interventions such as Individual Risk Reduction Counseling, pp. 190-191, Prevention Case Management, pp. 188-189, and Prevention with Positives, pp. 181-184)
- Referring patients to other services such as substance abuse or mental health treatment (see the section on Linkages and Referrals, p. 163)
- Facilitating partner counseling and referral services (see the section on PCRS, pp. 178-180)
- Identifying and treating STDs (see the section on STD Detection and Treatment, pp. 204-205)

When HIV CTR is offered in the primary care setting in San Francisco, all of the requirements that apply to other CTR sites must be followed (see the section on Counseling, Testing, and Referral, pp. 174-177). This includes the requirement that all HIV tests be accompanied by pre- and post-test counseling. Exhibit 28 describes HIV prevention in primary care settings.

## HIV Prevention in Primary Care Settings

Strategy or Intervention	Strategy
<b>Definition/Description</b>	This HIV prevention strategy involves any HIV prevention activity done in the context of primary medical care. Doctors, nurses, health educators or others can conduct the intervention.
<b>Implementation Requirements</b>	<ul style="list-style-type: none"> <li>• See requirements for the particular intervention being provided.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• “Incorporating HIV Prevention into the Medical Care of Persons Living with HIV: Recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America” (MMWR 2003b): <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Has the potential to reach individuals who might not otherwise be reached by HIV prevention services.</li> <li>• May be especially effective for conducting prevention with positives.</li> <li>• May support the credibility of prevention messages.</li> <li>• Broadens medical care by personalizing prevention messages through connecting them to health and well-being.</li> <li>• Can be integrated into the primary care setting in multiple ways, using various staff as the prevention messengers (e.g., doctors, nurses, Physician’s Assistants, health educators).</li> <li>• May be effective for individuals who feel comfortable sharing confidential information with their primary care provider.</li> <li>• Provides opportunities to link patients with other services on site (e.g., HIV CTR, STD testing and treatment, mental health or substance abuse treatment and counseling).</li> <li>• Has been shown to be effective in other areas of health promotion, such as smoking cessation.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May be challenging to implement in medical settings, due to restricted time available to meet with each patient.</li> <li>• May not be effective for individuals who do not feel comfortable going to the doctor or who do not trust the medical system.</li> <li>• Medical providers may be reluctant or uncomfortable discussing sexual and drug use behaviors with patients.</li> <li>• May require additional staffing, especially if routine HIV CTR is offered.</li> <li>• May require primary care providers to attend additional training.</li> </ul>

## Public Information and Other Community-Level Interventions

### Overall Goal, 2004-2008

To promote locally relevant and appropriate HIV prevention messages and interventions designed to influence large groups of individuals or entire communities.

#### BACKGROUND

Public information campaigns generally aim to increase community knowledge about an issue. Community-level interventions, in contrast, have broader goals. They aim to change the social networks and social norms that influence people's knowledge, attitudes, beliefs, skills, and behaviors. These interventions attempt to change specific behaviors on a group level, as opposed to an individual level, by using social networks to disseminate HIV prevention risk reduction messages.

Any of the strategies and interventions described here can be implemented as public information campaigns or as broader community-level interventions. Because changing knowledge or behaviors at the community level takes time, results do not happen overnight but rather over the course of months and years.

#### SOCIAL MARKETING

Social marketing is about more than providing information and messages. It is a holistic community-level approach that uses commercial marketing techniques to benefit individuals and society, with the goal of achieving changes in behaviors, attitudes, and community norms to promote health.

Social marketing has been used extensively in many developing countries to promote maternal and child health and was then extended to HIV prevention. In the U.S., social marketing has been successful in the areas of tobacco control, teen pregnancy, and other issues, as well as HIV prevention. Examples of successful local and other social marketing campaigns related to HIV prevention include the following:

- An evaluation of a San Francisco social marketing campaign called “HIV Stops with Me” revealed that the campaign was widely viewed, well-recalled, and persuasive. Fifty-four percent of survey respondents reported that they were more likely to use condoms with HIV-negative or unknown serostatus partners after viewing the campaign (Better World Advertising 2002).
- In an evaluation of a campaign to increase awareness of HIV risk among same gender loving African American men engaging in sex/drug exchange in the Tenderloin, the majority of survey respondents reported that the ads reflected their daily environment and caused them to stop and think about HIV transmission when exchanging drugs for sex (David Binder Research 2003).



- A review of calls to the San Francisco HIV/AIDS hotline revealed that during a social marketing campaign to promote testing, overall call volume increased, the number of calls resulting in referrals to HIV CTR increased, and the percentage of callers citing television or bus ads/billboards (the locations where the campaign ads appeared) as the impetus for calling increased (Keith Hocking, San Francisco HIV/AIDS Hotline, personal communication, November 2003).
- Social marketing has also been used successfully in non-San Francisco locales to recruit gay men from multiple subgroups, including men of color, youth, and closeted men, for HIV prevention counseling (Fisher et al 1996), to increase dialogue and awareness of HIV among gay men (Dawson & Hartfield 1996), to motivate gay men to get tested for HIV (Dawson & Hartfield 1996), and to increase condom use among adolescents (Kennedy et al 2000b).

Social marketing campaigns are based on and guided by research with the population one is trying to reach. The first step is to gain an in-depth understanding from and about the population through primary and secondary research. Based on the findings from this research, the appropriate behavioral objectives, interventions, messages, materials, programs, and evaluations can be designed. All these elements are based on intimate knowledge of the population and their lifestyles, values, beliefs, attitudes, fears and hopes. It is also important to understand how social marketing messages could be crafted to successfully “compete” with other messages the intended audience is receiving. For example, a social marketing campaign promoting condom use among gay male drug users must compete with community norms that do not support condom use. Campaigns that are more focused (i.e., on a particular issue among a particular audience) have a greater potential for impact if they can achieve a significant level of visibility among the population.

Social marketing campaigns must include what are called the “4 P’s” of marketing: product, price, place, and promotion. The 4 P’s are defined as follows:

- **Product.** The behavior or idea the campaign is trying to promote. The product must be presented in a way that addresses benefits that are relevant and motivating to the intended audience. For example, if a campaign is trying to encourage people to get an HIV test, the campaign must speak to the benefits of getting tested from the perspective of the intended audience, which might include benefits such as peace of mind, empowerment, and caring for oneself and one’s partner.
- **Price.** The monetary and other costs/disadvantages associated with adopting the behavior or idea. For example, the costs of adopting safer sex practices might include money (for condoms), time (to discuss condom use with partners), the perception that pleasure will be reduced, and fear of rejection or abuse resulting from asking a partner to use a condom. Social marketing campaigns must attempt to show how the benefits outweigh the costs.
- **Place.** Whether people are in the right frame of mind to attend to the message, where people will act on the message, and if the campaign is promoting a product or service (such as HIV CTR) where the product or service is provided. Research done prior to implementing a social marketing campaign

must explore what the best places are for the intended population (e.g., at bars, in sex clubs, on the streets, through social service agencies). For example, a campaign to promote HIV testing should consider what changes, improvements, and preparations need to be made at HIV CTR sites within the area the campaign is being implemented.

- **Promotion.** Which media channels and communication methods will be used to disseminate the message. Social marketing campaigns can use a number of methods to get the message out. Some of these methods are television (e.g., public service announcements), radio, posters (e.g., on bus shelters), billboard ads, newspaper ads, Internet, brochures, pamphlets, palm cards, videos, and other creative promotional items.

Exhibit 29 describes social marketing and how to implement it.

## Social Marketing

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	<p>“Social marketing is the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify, or abandon a behavior for the benefit of individuals, groups, or society as a whole” (Kotler et al 2002). Social marketing campaigns can aim to impact behavior through influencing knowledge, beliefs, attitudes, or norms. A social marketing program is research-based and is designed to achieve a specific HIV prevention objective. Social marketing strategies require attention to the four “Ps”: product (the behavior or idea you are trying to promote), price (the monetary and other costs/disadvantages associated with adopting the behavior or idea), promotion (which media channels you will use), and place (whether people are in the right frame of mind to attend to the message, where people will act on the message, and where the product or service the campaign is promoting is provided).</p>
<b>Implementation Requirements</b>	<p>All social marketing agencies must:</p> <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	<p>A social marketing campaign should:</p> <ul style="list-style-type: none"> <li>• Be based on consumer research that illuminates consumers’ lifestyles, values, attitudes, hopes, and fears about HIV and how the disease is understood in the context of their lives.</li> <li>• Clearly link to, and support, HIV prevention objectives.</li> <li>• Identify the behaviors the program will seek to promote or reduce/eliminate. These should be behavior(s) that can be realistically achieved, and the campaign should focus on those people most receptive to change.</li> <li>• Be visible enough and sustained over enough time to make an impact.</li> <li>• Link the population to appropriate resources.</li> <li>• Affirm health-promoting social norms of the population.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC’s Guidelines for Health Education and Risk Reduction Activities (Centers for Disease Control and Prevention, 1995): <i><a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a></i></li> <li>• CDCynergy – Social Marketing Edition, a planning tool for developing and implementing social marketing campaigns). Available from: <i><a href="http://www.cdc.gov/communication/cdcynergy_edu.htm">http://www.cdc.gov/communication/cdcynergy_edu.htm</a></i></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Reflects the life context of the population and the messages they think are best, because research with the population forms the basis for the campaign.</li> <li>• Can have a broader impact than individual-level interventions because it addresses the community norms and values that influence behavior.</li> <li>• When implemented effectively (e.g., appropriate visibility and message), can become sufficiently memorable and motivating to be self-sustaining (i.e., the campaign message becomes known throughout the community, for example, “Friends Don’t Let Friends Drive Drunk”).</li> <li>• Can be accessible to those who are difficult to reach through traditional prevention channels because it can reach large and diverse segments of the population (e.g., Mizuno et al 2002).</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Can be costly. Campaigns have high start-up costs and funding must be sustained over time for campaigns to exist long enough (i.e., months and years) to have an impact.</li> <li>• Evaluation of social marketing can be costly, and it is challenging to link resulting behavior changes directly to the effects of the campaign.</li> <li>• May result in little or no impact if sufficient research is not conducted up front.</li> <li>• Can be challenging to implement, because campaigns must take complex issues and behaviors and translate them into short and simple messages.</li> <li>• May be unsuccessful with those who are isolated and do not identify with the messages or people depicted in the campaign.</li> <li>• May not be effective for people with low literacy if written materials are used.</li> </ul>

## VENUE-BASED GROUP OUTREACH

Venue-based group outreach (VBGO) has been found to be an effective intervention for reaching certain consumers that might not otherwise have access to HIV prevention. It differs from VBIO in that the focus of the intervention is to reach large numbers of people with multiple approaches, as opposed to spending concentrated time with individuals. VBGO has the potential to impact knowledge, attitudes, and behavioral intention. It is difficult to say whether it leads to behavior change because most VBGO events do not have a post-intervention follow-up component to track participants' behaviors. A few studies have examined the effectiveness of this intervention. For example, group presentations provided to lesbian and bisexual women in bars and clubs in San Francisco were found to be "effective in prompting interest in HIV prevention information and intent to change behavior" (Stevens 1994). In another study, VBGO was found to be more effective for reaching high-risk young gay men compared with small group workshops (Kegeles et al 1996). Exhibit 30 describes VBGO and how to implement it.

## Venue-Based Group Outreach (VBGO)

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	<p>VBGO is outreach conducted with the goal of reaching large numbers of people with multiple approaches in community settings, including commercial venues and public events. Examples of locations and events at which VBGO could be conducted include street corners, public forums, speakers' bureaus, bars, sex clubs, street fairs, health fairs, and parades. VBGO can take a variety of forms, including information booths, community theater, or brief skits or role plays, that are designed to promote HIV risk reduction among audience members. The distribution of appropriate prevention materials (e.g., condoms, lube) may also be a component of these activities.</p>
<b>Implementation Requirements</b>	<p>All VBGO providers must:</p> <ul style="list-style-type: none"> <li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li> </ul>
<b>Implementation Recommendations</b>	<p>VBGO events should:</p> <ul style="list-style-type: none"> <li>• Respect the operating conditions at, and contribute to the spirit of, the venue/event.</li> <li>• Be interactive and engaging.</li> <li>• Emphasize community unity, creating a positive environment in which participants can socialize and mingle.</li> <li>• Encourage networking among members of different communities, through sharing of information and resources.</li> <li>• Be held in a safe environment for the intended audience.</li> <li>• Provide an opportunity for confidential, one-on-one referrals to HIV prevention or other services before or after the intervention.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can reach people who identify with a community, group scene, or social group.</li> <li>• Suitable for groups with multiple issues and barriers to change, groups with a lack of access to services, people with a low perception of risk, people needing basic information and referrals, and people that have never experienced another intervention.</li> <li>• Can provide a forum for dialogue between friends and family (community-building).</li> <li>• Can encourage individuals and communities to participate in other prevention activities.</li> <li>• Can address people at various stages of change (see the section on Stages of Change Theory, p. 170).</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May not be as effective for reaching people who do not identify with a group or community.</li> <li>• Unclear whether it can impact behavior.</li> <li>• Is challenging to evaluate.</li> </ul>

## COMMUNITY ORGANIZING

A number of studies have indicated that community organizing is an effective HIV prevention strategy and can also be cost-effective (Kahn 1995). Results from studies of some programs that used this strategy include decreases in unprotected anal sex among gay men (Coates & Greenblatt 1990, Kegeles et al 1996), higher willingness to give HIV prevention advice to drug-using friends and relatives among Latina/Latinos and non-Latino Whites (Marin et al 1992), individual and community-level behavior change among gay and bisexual men (Bueling et al 1995), and increased knowledge and behavior change among Mexican gay men (Zimmerman et al 1997). Furthermore, community organizing has been identified as an important strategy of HIV prevention among IDUs (Deren et al 2002). Community organizing can also be used to mobilize communities around policy issues, such as advocating for federal funding for needle exchange (James 1998). Exhibit 31 described community organizing and how to implement it.

## Community Organizing

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	Community organizing encompasses a wide range of strategies that involve community-wide efforts to create change and promote social justice. Community organizing can follow an action model (e.g., bringing together community members to advocate for a particular issue related to policy or resources), a popular education model (see the section on Empowerment Education Theory/Popular Education, p. 167), or other models. Examples of community organizing for HIV prevention include community-wide campaigns to promote safer sex and drug use practices, to improve city treatment on demand policies, or to address the effects of racism on HIV risk.
<b>Implementation Recommendations</b>	<p>Agencies conducting community organizing campaigns should:</p> <ul style="list-style-type: none"> <li>• Allow the problem, the solution, and the course of action to be defined by the community.</li> <li>• Facilitate the process, participate in dialogue regarding HIV information, and secure resources to promote community involvement and assist the community in attaining its goals.</li> <li>• Address multiple needs of communities or collaborate with other agencies that can address those issues.</li> <li>• Acknowledge and give consideration to existing strategies that are working in a community.</li> <li>• Implement campaigns that develop and strengthen social norms for health-promoting behaviors.</li> <li>• Include components that increase participants' self advocacy skills and sense of personal control and power.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's Guidelines for Health Education and Risk Reduction Activities (1995) under Community Level Intervention: <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Has a strong theoretical foundation.</li> <li>• Is community driven.</li> <li>• Addresses community-level obstacles to HIV risk reduction.</li> <li>• Creates networks that can be used to conduct other interventions.</li> <li>• Can contribute to health-promoting social norms.</li> <li>• Suitable for communities that have a strong identification (e.g., geographically, culturally), isolated populations, and groups with multiple issues.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• More difficult to implement with isolated populations than with groups with a strong identity.</li> <li>• May be challenging to organize populations that could be endangered as a result of the organizing (e.g., undocumented immigrants or commercial sex workers could face consequences due to their illegal status/activities).</li> </ul>

DRAMA, THEATER, AND ROLE-PLAY

Although drama and theater are being used more widely as HIV prevention strategies, especially for youth, their effectiveness has not been thoroughly studied (Elliott et al 1996). Recent studies on effectiveness come mostly from non-U.S. countries. For example, a theater intervention conducted in high schools in South Africa resulted in more changes in knowledge, attitudes, and behaviors compared with written information alone (Harvey et al 2000). Some U.S.-based theater interventions have been reported on, and they have resulted in increases in knowledge (Skinner et al 1991, Valente & Bharath 1999) and intent to change behavior (Skinner et al 1991). Role play has also been used effectively; for example, an intervention with low-income African-American mothers used role play to validate their experiences and explore steps toward behavior change (Downing et al 1999). Exhibit 32 describes drama, theater, and role play and how to implement them.

EXHIBIT 32

Drama, Theater, and Role-Play

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	This strategy encompasses any activities that use acting, theater, music, story-telling, puppetry, role-play, or other dramatization techniques to deliver HIV prevention interventions. Drama and theater can be used in small group (e.g., SSG) or community-level interventions (e.g., VBG0). The drama may be performed by professional or amateur actors as an intervention for the audience (e.g., a formal theatrical presentation). Role play can be used in individual-level (e.g., IRRC), small group, or community-level interventions as a strategy to impact their own behaviors.
<b>Implementation Recommendations</b>	<p><b>Drama and Theater:</b> Actors should:</p> <ul style="list-style-type: none"> <li>• Be available to answer questions and give referrals after the presentation.</li> </ul> <p>Dramatizations should:</p> <ul style="list-style-type: none"> <li>• Depict realistic scenarios.</li> <li>• Integrate communication of accurate HIV and AIDS information into the performance.</li> <li>• Address the intended audiences' attitudes and beliefs about HIV transmission.</li> </ul> <p><b>Role Play:</b> Role play should:</p> <ul style="list-style-type: none"> <li>• Be grounded in realistic scenarios.</li> <li>• Incorporate practice of skills (e.g., condom negotiation).</li> <li>• Be followed by discussion.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Can be effective for promoting sex-positive messages and changing attitudes and behaviors related to HIV.</li> <li>• Can model and encourage condom use.</li> <li>• Creates opportunities for skills-building (e.g., negotiating condom use).</li> <li>• Can be effective for reaching individuals who do not speak or read English.</li> <li>• Can address the multiple issues people face in their lives that affect HIV risk behavior.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May be limited in its ability to affect behavior if not accompanied by linkages to HIV prevention and other services.</li> </ul>



## OPINION LEADERS

Opinion leader strategies have been shown to be effective for different populations. Opinion leaders can be peers of the population a program is trying to reach, celebrities, or other people who have the potential to influence a community's opinions and norms. One study of an opinion leader intervention among gay men showed decreases in the percent engaging in unprotected anal sex, increases in condom use, and decreases in the percent reporting multiple sex partners (Kelly et al 1991). Use of popular opinion leaders in an intervention for women living in low-income inner-city neighborhoods resulted in increased condom use and reduced unprotected sex (Sikkema et al 2000). This strategy was deemed very cost-effective in two studies (Grossberg et al 1993, Kahn 1995). Exhibit 33 describes the opinion leader strategy.

### EXHIBIT 33

#### Opinion Leaders

Strategy or Intervention?	Strategy
<b>Definition/Description</b>	Key people who are recognized as influential and charismatic members of a community or communities are identified to help influence the opinions and behaviors of a particular population through modeling of those opinions and behavior.
<b>Implementation Recommendations</b>	Opinion leaders should: <ul style="list-style-type: none"> <li>• Be identified and determined by the population one is trying to reach.</li> <li>• Be individuals who have the capacity to truly influence social norms.</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• CDC's Guidelines for Health Education and Risk Reduction Activities (1995) under Community Level Intervention: <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a></li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Appropriate for people with a group identification, those who recognize community leaders, those who value media heroes (e.g., youth), those with perceptions of low risk, and those groups in which social stigma exists for homosexuality or injection drug use.</li> <li>• Can affect the behaviors of the opinion leaders as well as the intended audience.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• May not be as effective for those without a particular community identification.</li> <li>• May increase awareness and knowledge of HIV and AIDS, but may not result in behavior change.</li> <li>• May be ineffective if the opinion leaders do not engage in HIV preventive behaviors themselves.</li> </ul>

## HOTLINE

Hotlines are an effective method for disseminating accurate information about HIV, a critical component of HIV prevention (Kalichman & Belcher 1997), but it is unclear to what extent they are linked to behavior change. One survey of repeat callers to the Southern California AIDS Hotline found that 50% of callers reported that they had increased their practice of safer sex, and for 72% of all callers the hotline had been the only source of HIV/AIDS information since their last call (AIDS Project Los Angeles 1993). One study looking at reasons people called a hotline indicated that many people called because of fears related to actual risk behaviors they had engaged in, indicating that this may be a good source of prevention information for some individuals (Kalichman & Belcher 1997). Further, hotlines may be a key method for linking people to HIV CTR, especially those who might not be accessing other services where they would receive a referral to CTR. For example, a local hotline was a primary resource that individuals turned to in order to find out where to get an HIV test during a citywide campaign to promote testing (Keith Hocking, personal communication, 2003). Exhibit 34 describes hotlines.

## EXHIBIT 34

### Hotline

Strategy or Intervention?	Intervention
<b>Definition/Description</b>	A hotline is a confidential telephone service functioning as an education, referral, and help line for anonymous callers. Hotlines offer up-to-the-minute information on HIV and related issues, crisis intervention and counseling, and direction to other social services, as appropriate to client need.
<b>Implementation Requirements</b>	All hotlines must: <ul style="list-style-type: none"><li>• Collect Evaluating Local Interventions (ELI) data as indicated in their HIV Prevention Section contract.</li></ul>
<b>Implementation Recommendations</b>	Hotlines should: <ul style="list-style-type: none"><li>• Deliver consistent prevention messages and make sure the messages are also consistent with those disseminated by other organizations.</li><li>• Link people to HIV CTR and other appropriate services.</li></ul>
<b>Resources</b>	<ul style="list-style-type: none"><li>• CDC's Guidelines for Health Education and Risk Reduction Activities (1995) under Public Information: <a href="http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv">http://www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=P0000389&amp;TopNum=50&amp;CallPg=Adv</a></li></ul>
<b>Strengths</b>	<ul style="list-style-type: none"><li>• Widely applicable to all groups at risk for HIV and particularly appropriate for people desiring anonymity, people in crisis, people needing basic information and answers, and people whose needs are not addressed by other HIV education efforts.</li><li>• Targets a wider geographical area than most interventions and thus can reach more diverse and isolated populations.</li><li>• Often provides a first link to prevention and care services.</li><li>• Serves preventive as well as de-stigmatizing functions.</li></ul>
<b>Limitations</b>	<ul style="list-style-type: none"><li>• May have limited usefulness in directly promoting behavior change.</li><li>• Can be expensive to operate.</li><li>• Is not as accessible for people without telephones.</li><li>• Cannot reach people who do not comfortably speak the language(s) offered.</li></ul>

## Structural and Policy Strategies

### Overall Goal, 2004-2008

Coordinate efforts among providers to develop goals for structural and policy change and to implement activities to reach those goals.

#### WHAT ARE STRUCTURAL AND POLICY STRATEGIES?

Structural and policy strategies aim to change the social, political, and economic systems that affect HIV risk (CAPS Fact Sheet 2003, “What is the role of structural interventions in HIV prevention?”). For example, city policies on homelessness affect who and how many people are homeless, and homelessness increases risk for HIV. Another example is the statewide laws related to disclosure of HIV status; in California, it is a felony for an HIV-positive person to “willfully expose” another person to HIV through unprotected sex. This law does not take into account the complex issues that affect whether a person discloses and criminalizes sexual behavior without addressing the underlying reasons that people engage in unsafe sex. A final example is the lack of sufficient treatment slots for individuals with drug or alcohol addiction in San Francisco. Since drug use during sex is clearly linked to unsafe behavior, access to drug treatment is a critical HIV prevention strategy. All of these issues are potential targets for structural or policy change.

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Often, the structural factors that influence HIV transmission are not obvious. For example, how might hiring an additional 100 police officers in San Francisco affect HIV transmission? If there are more police on the streets, commercial sex workers are more likely to be seen and targeted for arrest. In response, they would be more likely to trade sex secretly, making it more difficult for outreach workers to reach them with safer sex messages, condoms, and other support services. The rates of unsafe sex would likely increase, resulting in increased HIV transmission. This example illustrates why it is important for the HIV prevention community to have a voice in all areas that affect the social and economic environment. One strategy that HIV prevention providers might use to prevent potential harm in this situation would be to work closely with and provide training to police officers about the purpose and benefits of outreach to sex workers. Engaging their support in HIV prevention efforts for sex workers might ultimately improve the effectiveness of outreach.

Examples of HIV prevention structural and policy strategies that have been used in the past include:

- A “100% condom use” campaign in Thailand to mandate that all brothels enforce the use of condoms during sex (Celentano et al 1998).
- Advocating for passage of laws that allow syringes to be distributed to pharmacies without a prescription.
- Advocating to make needle exchange legal and fundable (with General Fund monies) in San Francisco.
- Promoting and supporting sex clubs that have sex-positive environments and promote safer sex.
- Allocation of funding to eliminate drug treatment waiting lists.

## BARRIERS TO STRUCTURAL AND POLICY APPROACHES TO CHANGE

Because these types of strategies often involve advocacy, they can be difficult to fund with government money. However, HIV prevention providers engage in advocacy around social and policy issues on a daily basis, even if it is not part of a specific funded intervention. The goal is to coordinate these efforts in San Francisco and to develop common targets for social and policy change so that we can maximize our impact. The HPPC and SFDPH will provide leadership and coordination in this area over the next five years. The San Francisco Leadership Initiative represents a first step toward this goal (see Chapter 1: Community Planning in San Francisco: The History and the Future, pp. 1-10).

### Perinatal Transmission Prevention

#### Overall Goal, 2004-2008

Eliminate perinatal transmission of HIV.

Perinatal transmission in San Francisco is rare. Between 1997 and 2002, only four HIV-infected infants were born in San Francisco. The goal is to reduce this number to zero through promoting voluntary CTR and PCRS services among four groups:

- Women seeking prenatal care
- Women who deliver babies but who have not had any prenatal care
- Male partners of women seeking prenatal care/delivering babies
- High-risk women of child-bearing age who are not currently pregnant

If pregnant women learn their HIV status before delivery, medications can be administered that reduce the chance of transmission. Women who are not pregnant may also benefit from learning their status, as it can help them make informed decisions about pregnancy.

All HIV prevention providers, regardless of the type of intervention or program, must have in place procedures for referring all high-risk individuals, including the above four groups, to CTR services. In addition, all public health care facilities must implement procedures for ensuring that all pregnant women are counseled about the importance of HIV testing and offered an HIV test.

For HIV prevention to be effective and appropriate, it is imperative that HIV prevention providers adhere to certain standards of practice, as well as conduct quality assurance. Standards of practice and quality assurance procedures are often specific to an agency or program. They are generally determined during contract negotiations and thus become part of the provider's contractual obligation. However, there are some issues that are common to all providers, regardless of the nature of the service provided. These are outlined here.

### Standards of Practice for HIV Prevention Programs

- **Access to a Continuum of Care.** All providers must have in place referral networks that allow clients full access to a wide range of HIV prevention and other services, including (but not limited to) behavior change counseling and skills-building, CTR, mental health treatment, substance use treatment, housing services, financial assistance, domestic violence services, and many others. The referral systems in place must reflect the needs of the client population, and all HIV prevention staff must receive training on referral procedures. (See also the section on Linkages and Referrals, p. 163.)
- **Confidentiality.** Rules of confidentiality should be appropriate to the intervention provided. For example, in group settings, participants and facilitators can set ground rules that address issues for disclosure of personal information. In all cases, California reporting requirements and Health Insurance Portability and Accountability Act (HIPAA) regulations must be adhered to. Agencies should develop their own policies and procedures related to confidentiality for all interventions.
- **Cultural Competency.** HIV prevention programs need to be designed and delivered in a culturally appropriate manner. This includes attention to appropriate approaches to communication, languages spoken by clients, and the particular needs of different groups (e.g., by race/ethnicity, gender, sexual orientation). All programs must meet the city and county's cultural competency requirements.
- **Policies and Procedures.** All prevention providers should develop and write a comprehensive policies and procedures manual. Critical policies include a confidentiality policy (see above), a feedback and grievance procedure, and safety policies for staff and volunteers. It is important to encourage continuous input and feedback from clients and volunteers about their perceptions of the agency's sensitivity to the populations it serves. Formal grievance procedures outlining how complaints or disputes are resolved should also be developed. Other policies and procedures may include step-by-step instructions for how to deliver an intervention, protocols for reporting unusual incidents such as injuries, and workplace rules and regulations.

## Quality Assurance

- **Capacity Building.** The goal of capacity building is to strengthen and broaden the foundation of experience and expertise within an agency so that it can ensure its success and longevity. Capacity-building, when used appropriately, can help ensure that clients receive quality services. Some areas for capacity building include resource development, fundraising, board development, organizational development, and program planning. Agencies may seek outside assistance through resources provided by the SFDPH or other resources to incorporate capacity-building activities into their work. Two areas for capacity-building that the HPPC and the SFPDH will focus on in the coming years are prevention with positives and evaluation.
- **Provider Training.** Training is an essential element of any prevention program and should be incorporated into both proposals and contracts. Training should be available for and provided to all staff and volunteers. Three main types of training are necessary: (1) training on HIV and HIV prevention, (2) training related to an individual's job function, and (3) training on standards of practice for the program (e.g., training on how to give referrals, cultural competency training). All providers must adhere to the staff and volunteer training program outlined in their contract.
- **Evaluation.** Evaluation activities are another critical component of quality assurance. Evaluation helps providers know whether they are doing a good job. Evaluation requirements are outlined in contracts (e.g., Evaluating Local Interventions [ELI], client satisfaction surveys, outcome objectives). However, simply collecting the required data is not quality assurance. To conduct quality assurance, providers must critically analyze the results of their evaluation activities and make changes to their programs as necessary. Technical assistance for analysis is available from the SFDPH.

It should be noted that rapid testing technology is improving every day, and it is likely that by the time this is printed the following information will be incomplete if not out of date.

### New Testing Technologies

Until recently, the only CTR technology available required individuals to have their blood drawn and then return for results one to two weeks later. Recent advances in CTR technology include:

- **OraSure®.** This test uses a sample of oral mucus obtained with a cotton pad instead of a blood sample, and results are given within one to two weeks. This test was approved by the FDA in 1996 and has been used in multiple CTR settings throughout the country.
- **OraQuick® Rapid HIV-1 Antibody Test® (Rapid Testing).** This test uses a finger stick to capture a drop of blood for HIV antibody testing, instead of drawing a vial of blood using a needle. Individuals are able to receive their HIV test results in as little as 20 minutes. HIV-positive individuals receive a preliminary result, which is then confirmed with a standard test (using either a blood draw or Orasure). Clients can return for their standard test result in a week or two. (For more information on rapid testing, see [http://www.cdc.gov/hiv/rapid\\_testing/.](http://www.cdc.gov/hiv/rapid_testing/))

### Rapid Testing

The availability of rapid testing in particular has the potential to revolutionize HIV counseling and testing. For high-risk populations that may face more barriers to returning at a later date for test results, rapid testing could improve their ability to learn their serostatus and be linked with care services if HIV-positive, or risk reduction services if HIV-negative (Keenan & Keenan 2001). HIV test sites that have low rates of return for results may improve their return rate with rapid testing. Rapid testing is preferred by many groups, including IDUs, MSM, and STD clinic patients, because the period of anxiety while awaiting results is much shorter (Spielberg et al 2003).

At the time of this writing, only preliminary results from one pilot test of rapid testing are available. The results of this pilot test conducted at Glide Health Clinic in 2003 suggest that rapid testing may be highly effective and popular in San Francisco for some populations. Anecdotal data from other providers currently implementing rapid testing indicates that it may not be as acceptable among some populations (e.g., high-risk youth who have a lot going on in their lives and cannot cope with the emotional intensity of receiving a same-day test result). In addition, rapid testing may be highly acceptable among low-risk populations, although this might not be the ideal population for rapid testing.

Nevertheless, there may be something to learn from the Glide pilot test, even if the findings are not applicable across rapid testing providers or across all populations. The main successes and challenges that arose during that pilot test, as well as recommendations for the future, are as follows (Peter Morris, Glide Health Clinic, personal communication, 2003):



## SUCSESSES

- Of 92 individuals offered rapid testing versus standard testing, all chose rapid testing.
- Of seven positive results given, two were testing to confirm a positive result they received from a standard test. All seven learned their preliminary result and six of the seven received their confirmatory result eight days later.
- Anecdotally, many clients reported they might not have gotten tested otherwise (because of the anxiety that builds during the two-week wait for results) or might have gotten tested but not returned for results. Rapid testing is especially effective for marginalized populations, such as homeless individuals, who are less likely to return for results.
- Both clients and HIV test counselors at Glide prefer rapid testing because of the intense rapport that is developed between client and counselor. (With standard testing, the pre-test counseling and results may be given by two different counselors; with rapid testing, the client meets with one counselor for both.)
- HIV-positive clients can be transitioned into services immediately. They receive an “I Just Tested Positive” packet, an appointment with a case manager is scheduled during the week in which they await their confirmatory result, and they are referred to appropriate mental health and social support services.
- Clients who receive a preliminary positive result on the rapid test interpret the result the same way they would interpret a standard positive test result; that is, they consider themselves to be HIV-positive and therefore are willing to move along the path to care services right away.
- The counseling portion of CTR becomes even more important with rapid testing because of the intense emotions that occur in such a short timeframe, especially when a positive result is given. The pilot test was successful because it had a strong counseling component that ensured that individuals received emotional support both during and in the weeks after disclosure of results from counselors.
- Partner counseling and referral services can be offered the same way they would be with standard testing.

## CHALLENGES

- Transitioning test counselors from standard to rapid testing involves a learning curve and buy-in.
- Not all standard test counselors are suited for doing rapid test counseling. With standard testing, all counselors can do pre-test counseling and deliver negative results, but only experienced counselors deliver positive results. In contrast, all rapid test counselors have to be prepared to deliver positive results. This means that all rapid test counselors need to be experienced counselors, and it is helpful to have more than one rapid test counselor available at any given time. In addition, they must undergo specific training for rapid testing.
- Not many people know about the availability of rapid testing yet (only 13% in one study among high-risk populations [Greensides et al 2003]). Those who do know tend to be those most familiar with the latest trends in HIV and testing technologies – i.e., gay men outside of the Tenderloin, where Glide is located. Rapid testing will become more widely available beginning in November 2003. Social marketing is needed to promote its use.
- Several legislative barriers make it difficult to implement rapid testing in a community setting (e.g., CLIA regulations: <http://www.cms.hhs.gov/clia/>, the Migden Bill: <http://www.dhs.cahwnet.gov/ps/ls/lfsb/html/Phlebotomy.htm>). Further, rapid testing technology may be more difficult to use in settings that are subject to high/low temperatures (e.g., mobile vans).

## RECOMMENDATIONS

- Sites implementing rapid testing for the first time should roll out the program slowly, initially offering rapid testing no more than one day per week.
- Staff counselors should be screened for experience and ability to handle the potential emotional intensity of client encounters before doing rapid testing.
- Counseling is a critical component during the rapid testing process and cannot be curtailed.
- Extensive start-up time should be allotted to transition counseling staff from a standard testing environment to a rapid testing environment, because of the learning curve in dealing with a new set of logistics and the need to gain staff buy-in to the process.

In 2004, when more information about the implementation of rapid testing becomes available, the HPPC will host a community forum at which providers offering rapid testing, as well as clients who have used rapid testing, can share their experiences to facilitate improvements in the implementation process.

## Vaccines

### DEFINITION

There are two types of vaccines being studied – preventive and therapeutic. A preventive vaccine is designed to prevent HIV-negative individuals from acquiring HIV. Preventive vaccines may also work in another way. An HIV-negative person who has been vaccinated might still become infected with the virus, but the vaccine makes them less likely to transmit HIV to another uninfected person and/or slows their own disease progression. Therapeutic vaccines, in contrast, are for HIV-positive people. They reduce the likelihood of transmission or slow disease progression. This section focuses on preventive vaccines.

### CURRENT TRIALS

There are several vaccine trials currently in progress and several more trials planned, but no vaccine has yet been approved for use. Trials occur in three phases:

- **Phase I trials** assess the vaccine's safety and are done with a small number of healthy individuals. More than 60 Phase I HIV vaccine trials have taken place.
- **Phase II trials** assess the vaccine's ability to produce an immune response among several hundred individuals, and continue to evaluate its safety. Seven Phase II HIV vaccine trials have taken place.
- **Phase III trials** test the vaccine in several hundred to several thousand individuals to look at the drug's efficacy, benefits, and the range of possible adverse reactions. After a Phase III trial is completed, the drug company can request Food and Drug Administration (FDA) approval for marketing the drug. One such trial has been completed.

The results of the first Phase III vaccine trial were released in 2003 (<http://www.vaxgen.com/pressroom/index.html>). The vaccine tested is called AIDSVAX, produced by VaxGen. Overall, the vaccine did not result in a reduction in new HIV infections among the study population.

The company reported that African Americans, Asians, and people classified as ethnicity “other,” did appear to benefit from the vaccine and seemed to produce higher levels of antibodies after vaccination than white or Latino participants. This trial, however, was not designed to test the vaccine's efficacy in different racial groups; 86% of trial participants were white. While the findings are interesting, there is general agreement among National Institutes of Health (NIH) and CDC researchers that small sample size, statistical error, or problems with randomization led to these findings. Therefore, this data does not provide enough evidence that AIDSVAX is more effective in some populations compared with others.

The fact that different racial groups produced different levels of antibodies in response to the vaccine is nevertheless a noteworthy discovery. Researchers from the NIH and CDC are reviewing data from previous vaccine trials to see whether those findings are consistent with previous trials. Whether increased production of antibodies is protective against HIV is still in question.

VaxGen is not the only hope. Chiron, Merck, the Vaccine Research Center, and Aventis-Pasteur, among others, all have promising products that are currently being tested in Phases I and II. UCSF's Pipeline Project (<http://chi.ucsf.edu/vaccines/>) has up-to-date information about all of the vaccines currently in testing.

#### IMPLICATIONS FOR HIV PREVENTION

It is crucial that the HIV prevention community prioritizes education about HIV vaccines because an HIV vaccine will probably not be 100% effective. That could mean that no individual will be completely protected by an HIV vaccine, or that not all individuals will be protected. Although a vaccine that is less than 30% effective will not be approved by the FDA, it is still essential that whenever a vaccine becomes available, it is given in a context of behavioral counseling and risk reduction.

The HIV prevention community must:

- Insist that vaccinated individuals receive education about the limits of protection a vaccine could provide.
- Advocate for a vaccine that is considered a powerful tool to complement, rather than replace, existing prevention programs.
- Always ask clients if they are enrolled in vaccine trials, as this may affect their behaviors.

#### Microbicides

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Microbicides are gels, creams, films, or suppositories that prevent the transmission of HIV and other STDs when applied topically (e.g., in the vagina or rectum). Nonoxynol-9 is an example of a microbicide, but it is no longer recommended for protection against HIV (<http://www.cdc.gov/hiv/pubs/mmwr/mmwr11aug00.htm>).

Over 60 microbicides are in various stages of human testing, but none are currently available for general use. Microbicides, when they become available, will become a critical HIV prevention method, especially during sexual encounters where there may be imbalances of power that prevent open communication about safer sex. This is because microbicides can be applied and used without the partner's knowledge, unlike condoms. Another benefit compared with condoms is that microbicides can be woman-controlled.

Further information on microbicides can be found at <http://www.microbicide.org/>.