A Brief Look at the HIV Testing and Prevention Toolbox

Over the past 30 years, we have identified several HIV prevention tools that have at least some HIV prevention benefit. Not all tools are equal; different options work better for different people in different contexts. **Ideally, all options would be available to all people vulnerable to HIV to keep them from becoming infected.** This handout briefly reviews many of the available tools and kinds of interventions we have.

Screening and testing for HIV and STIs

HIV screening and testing

Screening and testing is the bedrock of all HIV prevention, care, and treatment activities.

Increasing testing rates, particularly in populations most vulnerable to the virus, is a necessary first step in identifying people who have HIV and linking them immediately to care. **It is also an important opportunity to identify vulnerable HIV-negative individuals and link them to the prevention services they need to stay negative.**

Additional Testing Facts:

- The CDC recommends HIV testing for all people between 13 and 64 years of age.
- **Fourth-generation laboratory testing, as well as a new fourth-generation rapid test** (e.g., *Alere Determine*), is the fastest and most modern option we have for testing. Scaling up fourth-generation testing is critical.
- Since 2012, **at-home testing** has been available, but community education about important considerations such as "window periods" (the amount of time it takes for a test to pick up an infection following exposure) or "false positives" and the need for confirmatory testing is lagging. The OraQuick test, the only rapid test approved for at home use, is third generation, meaning the window period between infection and testing positive is longer.

A NOTE ON ACUTE (RECENT) HIV INFECTION

With testing, it is important that prevention service providers and community members understand the potential signs of recent, or acute, HIV infection. In this phase, someone may be highly infectious, but test negative for HIV. From AIDS.gov:

"Within 2–4 weeks after HIV infection, many, but not all, people develop flu-like symptoms, often described as "the worst flu ever." Symptoms can include fever, swollen glands, sore throat, rash, muscle and joint aches and pains, fatigue, and headache. This is called *'acute retroviral syndrome' (ARS) or 'primary HIV infection,'* and it's the body's natural response to the HIV infection."

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Sexually transmitted infections (STI) screening and treatment

STI testing and treatment is essential for overall health and wellbeing and may help reduce the risk of someone getting HIV.

Many STIs increase the risk of getting HIV, including syphilis. STI testing and screening couple well with HIV prevention services that require linkage to medical care, such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP). Also, programs providing STI testing, such as reproductive health clinics, will continue to be gateways to linking highly vulnerable individuals to HIV prevention services.

HIV positive only options

Treatment as prevention

Having an undetectable viral load is one of the best tools we have to stop HIV transmission.

SERODISCORDANT?

"Serodiscordant" is a frequently used word in research meaning that people have different HIV statuses. When people talk about "serodiscordant couples," they mean that one partner is HIV positive and the other partner is HIV negative.

In the two most definitive studies we have on this topic, HPTN 052 and the PARTNER study, **there has been no documented case of someone passing HIV on sexually while their viral load was "undetectable."** In 2011, the groundbreaking study HPTN 052 found a 96% reduction in the risk of passing along the virus to an HIV-negative partner when the HIV-positive partner had an undetectable viral load. In 2015, the HPTN 052 team revised their findings to say that there was no evidence that an undetectable partner had transmitted HIV in the study. The PARTNER study in Europe reported in 2015 that in 16,400 cases of anal sex between gay men of opposite HIV statuses, there have been no new infections when the HIV-positive partner had an undetectable viral load.

HIV negative only options

Pre-exposure prophylaxis (PrEP)

PrEP is a once-a-day pill that, if taken correctly, can reduce your chances of getting HIV by 99%.

PREP VS. PEP

It is very easy to confuse PrEP and PEP because the names sound so similar. PrEP is "pre"—it's a pill you take daily BEFORE you have any possible exposures to HIV, and PEP is "post"—medications you take AFTER you have a possible exposure.

In 2010, the iPrEx study showed that taking one pill once a day can reduce the risk of an HIV-negative person getting HIV by over 90%. That study focused primarily on gay and bisexual men with a handful of transgender women–however, further studies have shown that PrEP is effective for other highly vulnerable populations. Truvada, a combination pill made up of two different medications (tenofovir DF and emtricitabine), is the only approved PrEP in the United States. The same medication has been available for around a decade as part of treatment for people living with HIV and is a very safe medication. A number of studies on individual- and population-level impact have made it clear that PrEP is an excellent new option that should be made widely available to whoever could benefit from it. Check out the short informational video (also available in Spanish) at www.whatisprep.org.

Post-exposure prophylaxis (PEP)

PEP is the only HIV prevention option we have that can stop infection AFTER an exposure to the virus has happened.

PEP is emergency medication that an individual takes if they believe they have just been exposed to HIV. PEP consists of 28 days of HIV medications that should be started AS SOON AS POSSIBLE and no later than 72 hours after possible exposure. Despite being an extremely important emergency prevention option, PEP is highly underused. **Increasing access to PEP is a major prevention priority.**

To be effective, PEP must begin **within 72 hours** of exposure to HIV

Options for both HIV positive and HIV negative

Condoms

Condoms work if used correctly and consistently. **However, they are not enough to stop the epidemic.**

Condoms, both insertive (male) or receptive (female), along with silicone or water based lubricants, will always remain an important HIV prevention option. However we know that many people struggle to use them with the consistency necessary to reduce the risk of HIV transmission. Human beings need options.

Clean syringes

It is essential that people who inject drugs, hormones, steroids, or any other kind of substance have open and free access to clean syringes.

We still face significant challenges to easy access for these essential prevention tools. Prevention experts agree that syringe exchange programs (SEPs) are necessary to keep the HIV epidemic under control for people who inject. Additionally, such programs partner well with other prevention options that address sexual HIV risks and overdose prevention services, such as naloxone availability for opiate overdoses.

Behavioral interventions

Prior to 2012, the CDC and HIV prevention workforce invested heavily in interventions to alter sexual and drug using behaviors. The CDC's compendium of Effective Behavioral Interventions (EBIs) still exists and provides a list of different workshops, support groups, one-on-one counseling, and other methodologies to reduce number of sexual partners, increase condom usage, and alter drug-using behaviors. Outcomes of such interventions have been very mixed in research, and the rigor of the evidence supporting EBIs has been called into question in recent years. We would argue that the power dynamics involved in modifying sexual behaviors within communities that are stigmatized for their sexuality should be considered when scaling up such interventions. Also, many interventions promoted by the CDC and others were designed before PrEP and treatment as prevention (TasP);

KEEPING AN EYE ON THE PIPELINE

Progress is being made on several new tools to prevent HIV. These include: rings, creams, gels, films, and tablets that can be inserted vaginally or rectally, new oral PrEP medications and long-acting injectable formulations, and vaccines. TAG puts out an annual report on the pipeline, including a chapter on prevention tools, that you can access here: http://www.treatmentactiongroup.org/pipeline-report

creating new interventions that are more appropriate for comprehensive prevention in the post-PrEP/TasP era is a priority. All interventions should that they fully embrace and accept human sexuality and drug use. **We need interventions that are also capable of reaching people who do not use condoms or do not intend to stop using substances.**

Housing, case management, and ancillary services

For decades, activists have recognized that we cannot take care of someone's HIV-related needs without addressing other associated factors such as housing, mental health, and substance use—and a substantial amount of evidence has shown the benefits of providing these supportive services. Case managers have frequently played a major role in helping people living with HIV access services to support their HIV care as well as their overall well-being.

Moving forward, activists will need to keep these supportive services in mind when developing plans for comprehensive prevention advocacy. We will need to better understand HIV prevention case management or other supportive services that holistically address the needs of those who are most vulnerable to HIV infection.

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