What’s on the Horizon for Long-Acting Pre-Exposure Prophylaxis (PrEP)?

Successfully ending the HIV epidemic will require the use of multiple prevention tools. Previous studies have shown that using once-a-day oral Truvada as PrEP to prevent HIV does not fit into everyone’s life. Although once-daily oral PrEP is 99.9% effective at preventing HIV, research shows that some people who try it struggle with adherence. Poor adherence to PrEP increases the chances of the medication being ineffective in preventing HIV, which can result in a person getting HIV. Researchers are now developing new long-acting medication or medication that does not have to be taken daily to prevent HIV. By developing additional options to prevent HIV, more populations will now have increased opportunities to take advantage of more simplified ways to prevent HIV.

Communities broadly can expect some new and innovative medications to enter the field to prevent HIV. The HIV Prevention Trials Network (HPTN) researched the use of long-acting cabotegravir (CAB LA) to prevent HIV. HPTN 083 was the first large-scale clinical trial of a long-acting injectable drug with the potential to be used for HIV prevention. The study examined whether a long-acting form of the anti-HIV drug cabotegravir injected once every eight weeks could safely protect cisgender men and transgender women who have sex with men from getting HIV infection. Researchers are now developing new long-acting medication or medication that does not have to be taken daily to prevent HIV. By developing additional options to prevent HIV, more populations will now have increased opportunities to take advantage of more simplified ways to prevent HIV.

An implantable formulation of islatravir is also being studied for PrEP. The implant, similar in size to a matchstick, releases a small amount of the drug over time, much like implants used for long-acting contraception. An early study of HIV-negative volunteers showed that the implant released enough drug to prevent HIV for a year.

Gilead is studying an experimental drug called lenacapavir as long-acting PrEP. Originally, lenacapavir was only being studied as a drug to treat HIV; however, Gilead announced the exciting addition of a new study arm to their Women’s HIV Prevention Study evaluating the use of lenacapavir as an injectable PrEP option administered every six months. An additional lenacapavir for PrEP study in men who have sex with men and persons of trans and non-binary experience (PURPOSE 2) is underway, with a projected trial completion date of early 2024.

Lenacapavir belongs to a group of HIV drugs called capsid inhibitors. Capsid inhibitors interfere with HIV capsid, a protein shell that protects HIV’s genetic material and enzymes needed for replication. Capsid inhibitors can disrupt HIV capsid during multiple stages of the viral life cycle. When used as treatment, this prevents HIV from multiplying and reduces the amount of HIV in the body. In the prevention context, the hope is that lenacapavir will be able to block the acquisition of HIV infection.
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4 ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (U.S.). Oral islatravir (MK-8591) once-monthly as preexposure prophylaxis (PrEP) in men and transgender women who have sex with men and are at high risk for HIV-1 infection (MK-8591-024) (Impower-024); 2020 December 3. https://clinicaltrials.gov/ct2/show/NCT04652700