# (LAI-ARV) LONG-ACTING INJECTABLE ANTIRETROVIRAL MEDICATIONS

## WHAT ARE LAI-ARVS?

LAI-ARVs are a new form of combined extended-release antiretroviral therapy that avert the need for daily medications. They are given by injection for both HIV treatment and HIV pre-exposure prophylaxis (PrEP). There are currently four types of LAI-ARVs:

### For treatment

- Cabotegravir/rilpivirine, given by injection every month or every two months.
- Lenacapavir for multidrug-resistant HIV (MDR HIV) treatment, given by injection every six months in conjunction with oral ARV **(currently not approved in Canada)**.

### For pre-exposure prophylaxis (PrEP)

- Cabotegravir, given by injection every two months.
- Lenacapavir for PrEP, given by injection every six months **(currently not approved in Canada)**.

**You should know:** Most information on the safety, efficacy and implementation of LAI-ARVs comes from clinical trials rather than "real world" experience.

## SAFETY PROFILE OF LAI-ARVS

In clinical trials, LAI-ARVs were highly efficacious and safe. Adverse events were mild or moderate, with very few serious adverse events: similar in number to those seen with oral ARVs. However, LAI-ARVs carry a higher risk of drug interaction and pregnancy complication than oral ARVs, because the medication remains in the body for several months to a year after treatment.

## WHAT ARE CONSIDERATIONS IN IMPLEMENTING LAI-ARV?

LAI-ARV requires healthcare provider training and education, refrigerated storage, and additional human resources to oversee implementation.

Patient navigators with experience in patient-oriented and shared decision making approaches can facilitate uptake; they are also needed to ensure patient adherence to injection schedules. Patient-related barriers to implementation include: high costs, availability, and lack of awareness.

# HOW EFFECTIVE ARE LAI-ARVS FOR TREATMENT AND PREVENTION?

## For treatment

In clinical trials, Cabotegravir/rilpivirine was as efficacious and safe for HIV treatment as standard oral antiretroviral therapy. A clinical trial of Lenacapavir for MDR-HIV in conjunction with oral ARV demonstrated 80% viral suppression compared to oral ARV alone.

## For prevention

In clinical trails, Cabotegravir and Lenacapavir for PrEP both had significantly better efficacy at preventing HIV infection than standard daily oral PrEP medications. Cabotegravir reduced the risk of contracting HIV by an additional 66% in cisgender men and transgender women, and by an additional 88% in cisgender women, compared with standard daily oral PrEP. Lenacapavir for PrEP reduced the risk of contracting HIV by 100% in women and by 96% in men and gender-diverse people, compared with the background incidence of HIV.

# WHO IS A CANDIDATE FOR LAI-ARV USE?

- Patients living with HIV-1, aged 12 years old and older, who weigh 35kg or more, and who are virally suppressed (viral load of <50 copies HIV-1 RNA/mL).
- Of the above group, those who may particularly benefit from LAI-ARV include:
  - Individuals with medication adherence challenges.
  - Individuals with medical issues that affect absorption of medication through the gastro-intestinal tract.
  - Individuals who experience stigma, privacy issues, or “pill fatigue” from daily oral medication.

# WHO IS NOT

Individuals considering becoming pregnant should not use LAI-ARV, since the medication remains in the body for several months to over a year after discontinuing treatment.

## DID YOU KNOW?

LAI-ARVs pose an increased risk of creating drug resistance, because they remain in the body for a long time after treatment, at a level too low to treat or prevent HIV. To mitigate this danger, patients transitioning off LAI-ARVs must immediately switch to another effective antiretroviral therapy regimen or PrEP medication. More information is needed to determine whether the benefits for patients with medication adherence challenges outweigh the risk of increased drug resistance if this medication is abruptly discontinued.

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