Common Drug Review
Patient Group Input Submissions

Emtricitabine/rilpivirine/tenofovir alafenamide (Odefsey) indicated as a complete regimen for the treatment of adults infected with HIV-1 with no known mutations associated with resistance to the non-nucleoside reverse transcriptase inhibitor (NNRTI) class, tenofovir or FTC, and with a viral load 100,000 copies/mL.

Patient group input submissions were received from the following patient groups. Those with permission to post are included in this document.
Canadian Treatment Action Council (CTAC) — permission granted to post.

CADTH received patient group input for this review on or before December 15, 2016
CADTH posts all patient input submissions to the Common Drug Review received on or after February 1, 2014 for which permission has been given by the submitter. This includes patient input received from individual patients and caregivers as part of that pilot project.

The views expressed in each submission are those of the submitting organization or individual; not necessarily the views of CADTH or of other organizations. While CADTH formats the patient input submissions for posting, it does not edit the content of the submissions.

CADTH does use reasonable care to prevent disclosure of personal information in posted material; however, it is ultimately the submitter's responsibility to ensure no personal information is included in the submission. The name of the submitting patient group and all conflict of interest information are included in the posted patient group submission; however, the name of the author, including the name of an individual patient or caregiver submitting the patient input, are not posted.

Canadian Treatment Action Council (CTAC)

Section 1 — General Information

Name of the drug CADTH is reviewing and indication(s) of interest	rilpivirine/emtricitabine/tenofovir alafenamide (R/F/TAF)
Name of the patient group	CTAC
Name of the primary contact for this submission:	[redacted]
Position or title with patient group	[redacted]
Email	[redacted]
Telephone number(s)	[redacted]
Name of author (if different)	[redacted]
Patient group's contact information: Email	[redacted]
Telephone	437-222-2822
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Website	www.ctac.ca
Permission is granted to post this submission	Yes

1.1 Submitting Organization

The Canadian Treatment Action Council (CTAC) is Canada's national non-governmental organization addressing access to treatment, care and support for people living with HIV and hepatitis C. CTAC's organizational goals are to meaningfully engage community members, service providers, policymakers and other relevant stakeholders to identify, develop, and implement policy and program solutions. CTAC understands that treatment access should be considered in its holistic form, encompassing the range of treatment, care and support needs required to reach the most successful treatment experience possible for people living with HIV and/or viral hepatitis co-infection. Full CTAC membership is reserved for: a) individual people living with HIV (including HCV co-infection); b) organizations, groups or projects with a substantial HIV mandate (including HCV co-infection). Associate CTAC membership is open to any individual, organization, group or project that supports CTAC's mandate and objectives.

1.2 Conflict of Interest Declarations

CTAC received unrestricted organizational and/or educational grants from the following organizations in the 2016-2017 fiscal year: Abbott/Abbvie, Gilead Sciences, and ViiV Healthcare.

Section 2 — Condition and Current Therapy Information

2.1 Information Gathering

On November 29, 2016, CTAC delivered a national consultation webinar that provided an overview of the Common Drug Review patient input process and key findings from the R/F/TAF clinical trials. The consultation webinar was presented by Jack Mohr, Policy Researcher at CTAC. CTAC members and organizational partners were invited to participate in the webinar. In addition, as we recognize that CDR patient input submissions are much stronger if the voice of people who have had (or believe themselves

to have had) experience with the new therapy under consideration are included, we reached out to principal investigators and asked that they inform trial participants about our patient input consultation.

In total, three participants attended the webinar. A link to the consultation webinar and web-based feedback survey was provided to webinar attendees and principal investigators by email and through CTAC's social media outlets (CTAC website, Youtube, Facebook, and Twitter). The survey was made available from Tuesday, November 29, 2016 to Friday, December 11, 2016. In total, CTAC has compiled data from three survey respondents. All of the respondents identified themselves as HIV-positive. Two respondents identified as male, aged 53 and 45, and the other respondent identified as female, aged 26. All respondents reside in Ontario and are on treatment for HIV. One respondent has been on treatment for 22 years and the other has been on treatment for over 6 years (the third participant did not indicate how long he had been on treatment). In addition to the results of this survey, survey data collected for patient submissions on F/TAF and E/C/F/TAF have been used to inform and support this patient submission.

2.2 Impact of Condition on Patients

HIV is a serious, life-threatening illness that threatens the immune system. Over time, if left untreated, HIV can compromise a person's immune system to the point that the body may no longer be able to fight off opportunistic infections. As of 2014, 75,500 Canadians are living with HIV (Public Health Agency of Canada). Access, administration of and adherence to highly-active antiretroviral treatment (HAART) can control the progression of a person's HIV. In most cases, people taking HAART achieve an undetectable viral load (or viral suppression), the point at which there is so little HIV in the bloodstream (<50 copies/mL) that it cannot be detected by conventional medical technologies. Viral suppression is linked to marked improvement in long term health outcomes and also drastically reduces the possibility of transmitting HIV to sexual partners.

While achieving and maintaining an undetectable viral load via HAART means HIV-positive people can live long lives and manage their HIV as a chronic illness, people living with HIV experience the effects of "accelerated aging". According to Centers for Disease Control and Prevention (CDC) HIV/AIDS surveillance data from 1985 to 2010, people with HIV are living longer, where more than 35% are aged 50 or older. As people living with HIV are aging, they are also more susceptible to inflammation and non-infectious co-morbidities, including bone fractures and renal failure, at earlier ages. From the literature, co-morbidities, such as kidney, liver, and cardiovascular disease, are more common in people living with HIV than the general population. Increased risk of experiencing co-morbidities is due to several risk factors, including co-infection and antiretroviral treatments themselves. In a study, people living with HIV between ages 41-50 are 16 times more likely than the general population to develop renal failure, and 46 times more likely to develop renal failure when over 60 years of age. When considering bone fracture risk, HIV+ people between the ages 40-60 are 12-16 times more at risk than those uninfected with HIV (Guaraldi G, et al. Outcomes Res. 2013 Sep 23;5:481-8).

As a chronic illness, HIV can present a number of complications, and these can vary from day to day and from patient to patient. At CTAC, we know that many people living with HIV experience negative mental health outcomes, either as side effects from treatment, or from facing stigma, discrimination and related stress. One respondent explained how stigma impacted both his care and his sense of place in his community, saying, *"No doctor in our area wants to take on HIV+ patients on a full time basis and when we seek counselling advice we are told we would have a much better life if we moved back to Toronto ie. get out of town."* Another respondent from our E/C/F/TAF survey discussed the challenge of managing his HIV while feeling unable to disclose his status, saying, *"In the past, my biggest challenge*

has been to explain to my employer periodic requests to make adjustments to my work schedule in order to seek medical advice and treatment - especially when I had consultations and follow-ups with my family doctor, ID specialist, nephrologist, ENT specialist and GI specialist within the same general period of time. My health challenges were most certainly linked with side effects to my treatment at the time."

In 2011, the Canadian AIDS Society released a study that estimated a $1.3 million total economic loss per Canadian living with HIV (analyzing statistics current through 2008). This includes a $670,000 average loss per HIV-positive person in labour productivity and a $380,000 average loss in quality of life. As a result of being on HIV treatment, many respondents described noticeable improvements in their quality of life and ability to engage in daily activities. Discussing the overall impact of treatment on her life, one respondent stated, *"Health life and work life has improved. I am [able] to work and be in a healthy relationship as well."* When asked whether treatment had improved their quality of life another respondent answered, "*yes, energy level, work life, home life, relationship with my pet, etc."*

Many people living with HIV experience intersecting vulnerabilities conditioned by the social determinants of health – the social and structural conditions in which people are born, live, work and age, shaped by the distribution of money, power and resources at the local, national and international levels. The following stories from respondents reflect the substantial impact that the social determinants of health, particularly living conditions, have had on managing their HIV:

"Challenges, caregivers, service providers, social safety net? I'm sorry but here in [rural Ontario] it is more like the wild west, we are on our own here. We have trouble with all of the above. Every day presents new challenges. For the past 2 weeks I have been dealing with a blood clot in my chest. What do you do when the primary care provider for the household can't get out of bed?"

"back in 2006 i had left Ontario for more than 3 months, i had 50 platelets and 90 cd4 count and ohip did not allow me access. I came back to the province without a home. I had no support to adhere, i was physically weak to make it to docs.[sic]"

As a result, HIV is a complicated illness that requires treatment options that can be tailored to individual needs, delivered in innovative capacities that bolster access to treatment, care and support, such as treatment outreach programs, low-threshold health care services, adherence programs and social supports.

2.3 Patients' Experiences With Current Therapy

HIV is a complex illness and people living with HIV have varying responses to treatments that are currently available. Most people living with HIV are able to work with their physicians to find a therapeutic regimen that achieves viral suppression. However, some people living with HIV are not able to achieve viral suppression, despite trying multiple treatment regimens. Additionally, treatment adherence (taking medication when prescribed, as prescribed) is necessary for treatment to be effective; non-adherence can lead to drug class resistance, requiring the adoption of a new regimen selected from fewer available treatment options. As a result, having the maximum possible treatment options available is of clinical importance.

All respondents to the R/F/TAF survey indicated current or past use of regimens containing emtricitabine and tenofovir. Two respondents had taken R/F/TAF at some point but neither was currently using the medication; one of these respondents was currently taking Atripla and the other was currently taking Isentress, Viramune, and Truvada. The third respondent did not indicate their current

regimen but had experience with both Complera and Genvoya. Respondents noted that their treatment was effective at suppressing their viral load but also came with side effects that impacted their quality of life. One respondent summed up his experience saying, "*Obviously I'd be dead without HAART. However, I did not recover a strong, fully functioning immune system and I have been saddled with a sleep disorder which makes going back to work impossible. As far as I know no one even cares enough to investigate the cause of my sleep disorder. I was told by [my doctor] that it is either the result of HIV in my brain or a drug side effect from HAART and that is where it has been left."* Another respondent noted treatment had made them *"undetectable for the past 6 years"* but that side effects included *"big belly, weight gain".*

Patients from the F/TAF and E/C/F/TAF studies also indicated experiencing both benefits and drawbacks from their treatment regimens. Some respondents experienced largely positive results, including a respondent using Truvada, Ritonovir, and Prezista, who stated, "*my quality of life has improved greatly as my energy level has increased as well as my ability to sustain relationships as I am not afraid of transmission.*" Others noted mixed results from treatment, such as a respondent using Triumeq who described the treatment as "*very effective regardless of the awful side effects".* Ongoing HIV treatment can lead to managing a growing list of complications, as highlighted in the story of one respondent who said, "*my viral load has been undetectable since within one month of commencing treatment in 2009. Until my current ARV regimen, health complications resulting from the toxicity of previous Rx medications were hepatic and renal deterioration. Hypercholesterolemia and bone density loss are also suspected collateral damage."*

2.4 Impact on Caregivers

In the R/F/TAF patient consultation, one respondent described his own experiences as a caregiver for an ex-partner living with HIV. He noted the challenge of having to manage both his own and his former partner's care in a community with few resources, stating "*My ex has been living [in rural Ontario] since around 1990 and he does not have a family doctor [locally]. We both access a once a month clinic... but get most of our health care from Emergency room visits at our local hospital."* Being responsible for managing someone else's health also impacted him socially, as he noted *"I have no significant relationships except with my housemate ex because I am here taking care of our home and myself and my ex all the time.*" Informal supports were crucial for this respondent and his partner, who said, *"We rely on rides and help from friends and family. My ex who is mainly bed ridden has house visits from social services but they do next to nothing for him."*

In the F/TAF, and E/C/F/TAF consultations, respondents highlighted a number of areas where they had or could benefit from caregiver support. One respondent who felt he needed more support noted the value of caregivers to provide "*time, assistance with navigating the social safety net, acting as a resource person, providing support."* Another respondent noted specific issues stemming from living in a rural area, identifying that *"the only barrier I have is the distance to travel to get to my appointments in Edmonton Alberta from Red Deer Alberta*." This is a common concern and barrier of many HIV patients, with the respondent in question elaborating that *"travel costs are the major challenge I face to getting to my appointments. My local ASO helps with that though."*

Section 3 — Information about the Drug Being Reviewed

3.1 Information Gathering

The information in this section was gathered in the same means described in section 2.1.

3.2 What Are the Expectations for the New Drug or What Experiences Have Patients Had With the New Drug?

Tenofovir alafenamide (TAF) is a novel prodrug of Tenofovir that clinical trials have shown to cause less renal issues and bone-mineral density loss than those associated with tenofovir disoproxil fumarate (TDF). These benefits were considered important for individuals managing lifetime use of HIV antiviral treatment. One respondent expressed interest in the medication for a friend for whom he is a caregiver. He identified this friend as struggling with *"degenerative bones in his spine and constant battles with kidney stones"* which were *"getting much worse over time."* This respondent was less certain about using R/F/TAF himself, stating that while *"HAART keeps me alive*" he didn't identify any specific benefits for himself to use R/F/TAF rather than another regimen.

Respondents in our F/TAF and E/C/F/TAF surveys also provided feedback on their attitudes toward switching to regimens that included TAF. One respondent showed interest in switching to TAF-based regimens to reduce complications from long-term TDF use, stating *"I would consider it as I face taking Truvada for a very long time and if it less harmful over long periods, it would improve my health in my later years."* This respondent saw potential long-term benefit, saying "*I think it would improve [my quality of life] as I would have less worry about complications later in my life."* Others viewed the potential benefits as less persuasive, saying "*I think it [F/TAF side effects] would be about the same [as my current regimen], simply because I experienced no side effects as of yet,"* and, *"It is my understanding that the side effects are about the same - except for perhaps a reduction in bone density loss with E/C/F/TAF".* Respondents who expressed a reluctance to switch to TAF based regimens cited their satisfaction with current regimens as a reason not to switch, saying, "*There is no compelling reason to change to another therapy when the one I am on is effective and has a better safety profile than previous therapies."* Similarly, another respondent was reluctant to make a switch saying, *"no, i am not into new challenges,"* and saying that despite possible benefits, *"i dont care, i dont have to switch and find out".*

Section 4 — Additional Information

CTAC continues to acknowledge and appreciate CADTH and CDEC suggestions as to how to improve patient input submissions, and is motivated to discuss revisions, reform, and refinements to the patient input process that can better represent the patient voice as well as improve the work of not only submitting organizations, but the CDR as a whole.