

## Putting NICE guidance into practice

### **Resource impact report: Cabotegravir with rilpivirine for treating HIV-1 (TA757)**

Published: January 2022

## Summary

NICE has recommended [cabotegravir with rilpivirine](#) within its marketing authorisation, as an option for treating HIV-1 infection in adults. See full recommendation wording in section 1.

We estimate that:

- Around 17,100 people with HIV are eligible for treatment with cabotegravir with rilpivirine in 2022/23, rising to around 18,400 in 2026/27. The increase in the eligible population is due to a rise in the prevalent population as shown in table 1.
- We expect that around 1,700 people will start treatment with cabotegravir with rilpivirine in year 2022/23. In 2026/27 it is expected that around 1,000 people will start treatment with cabotegravir with rilpivirine once cumulative market share has reached 35% as shown in table 2. Around a further 5,400 people will be receiving subsequent years treatment by 2026/27 based on an expectation that around 6,400 people will have started treatment with cabotegravir with rilpivirine by 2026/27.

**Table 1 Estimated number of people in England eligible for cabotegravir with rilpivirine**

	2022/23	2023/24	2024/25	2025/26	2026/27
Incidence of HIV (based on current number of around 3,000 and an expected decrease of 6.8% per year)	2,796	2,606	2,429	2,264	2,110
Prevalence of HIV (based on current number of around 93,000 in England over 18 years old)	93,000	95,192	97,180	98,980	100,605
Mortality (0.63%)	(604)	(617)	(629)	(639)	(648)
<b>Total population each year</b>	<b>95,192</b>	<b>97,180</b>	<b>98,980</b>	<b>100,605</b>	<b>102,067</b>

**Table 2 Estimated number of people in England receiving cabotegravir with rilpivirine**

	2022/23	2023/24	2024/25	2025/26	2026/27
People eligible to start treatment with cabotegravir with rilpivirine	17,139	17,497	17,821	18,113	18,376
Cumulative market share for cabotegravir with rilpivirine (%)	10	16	23	30	35
People starting treatment with cabotegravir with rilpivirine in year	1,714	1,086	1,299	1,335	998
People receiving ongoing treatment with cabotegravir with rilpivirine	0	1,714	2,799	4,099	5,434
<b>Total number of people receiving treatment with cabotegravir with rilpivirine</b>	<b>1,714</b>	<b>2,799</b>	<b>4,099</b>	<b>5,434</b>	<b>6,432</b>

This report is supported by a local resource impact template because the list price of cabotegravir with rilpivirine has a discount that is commercial-in-confidence. The discounted price of cabotegravir with rilpivirine can be put into the template and other variables may be amended.

This technology is commissioned by NHS England. Providers are NHS Hospital trusts.

# 1 Cabotegravir with rilpivirine

1.1 NICE has recommended cabotegravir with rilpivirine within its marketing authorisation, as an option for treating HIV-1 infection in adults:

- with virological suppression (HIV-1 RNA fewer than 50 copies/ml) on a stable antiretroviral regimen and

- without any evidence of viral resistance to, and no previous virological failure with, any non-nucleoside reverse transcriptase inhibitors or integrase inhibitors.

It is recommended only if the company provides it according to the commercial arrangement.

1.2 Current treatment for HIV-1 is antiretroviral regimens taken as tablets (orally) each day. The aim is to keep the number of virus particles in the blood (the viral load) so low that it cannot be detected, so that the virus cannot be transmitted between people. Cabotegravir with rilpivirine is the first long-acting antiretroviral injection available for HIV-1.

1.3 Treatment is recommended for all people living with HIV and must be continued for life in order to maintain viral suppression. All current therapies are daily oral regimens, consisting of a combination of antiretroviral drugs as either single- or multi-tablet regimens.

1.4 A range of potential alternative daily oral regimens is available in the event of treatment failure or a requirement or desire to change therapy for other reasons.

## 2 Resource impact of the guidance

2.1 We estimate that:

- Around 17,100 people with HIV are eligible for treatment with cabotegravir with rilpivirine in 2022/23, rising to around 18,400 in 2026/27.
- We expect that around 1,700 people will start treatment with cabotegravir with rilpivirine in year 2022/23. In 2026/27 it is expected that around 1,000 people will start treatment with cabotegravir with rilpivirine once cumulative market share has reached 35% as shown in table 1. Around a further 5,400 people will be receiving subsequent years treatment by 2026/27 based on an expectation that around 6,400 people will have started treatment with cabotegravir with rilpivirine by 2026/27.
- The market share figures are shown in the resource impact template. Table 3 shows the number of people in England who are estimated to receive cabotegravir with rilpivirine by financial year.

**Table 3 Estimated number of people receiving cabotegravir with rilpivirine using NICE assumptions**

	2022/23	2023/24	2024/25	2025/26	2026/27
People eligible to start treatment with cabotegravir with rilpivirine	17,139	17,497	17,821	18,113	18,376
Cumulative market share for cabotegravir with rilpivirine (%)	10	16	23	30	35
People starting treatment with cabotegravir with rilpivirine in year	1,714	1,086	1,299	1,335	998
People receiving ongoing treatment with cabotegravir with rilpivirine	0	1,714	2,799	4,099	5,434
<b>Total number of people receiving treatment with cabotegravir with rilpivirine</b>	<b>1,714</b>	<b>2,799</b>	<b>4,099</b>	<b>5,434</b>	<b>6,432</b>

2.2 This report is supported by a local resource impact template because the list price of cabotegravir with rilpivirine has a discount that is commercial-in-confidence. The discounted price of cabotegravir with rilpivirine can be put into the template and other variables may be amended.

### ***Savings and benefits***

2.3 Treatment with cabotegravir with rilpivirine addresses important unmet needs in the management of HIV and provides a choice of treatment modality.

2.4 Cabotegravir with rilpivirine represents a step-change in the treatment of HIV for those individuals who would benefit from an alternative to daily oral antiretroviral treatment (ART).

2.5 Cabotegravir with rilpivirine would be a valuable treatment option for people who have adequate levels of adherence but who find

daily tablets challenging or who would prefer an injectable regimen.

- 2.6 Daily oral ART is a significant burden for many individuals, both practically and because of the stigma still associated with HIV. Cabotegravir with rilpivirine may help to alleviate some of this burden.
- 2.7 The template allows users to input local assumptions for changes in outpatient attendances as a result of treatment with cabotegravir with rilpivirine.

### **3 Implications for commissioners**

- 3.1 This technology is commissioned by NHS England. Providers are NHS hospital trusts.
- 3.2 Use of cabotegravir with rilpivirine via injection will increase attendances at HIV clinics for the treatment to be administered. The resource impact template can be used to input costs associated with these attendances at a local level.
- 3.3 Cabotegravir with rilpivirine falls within the programme budgeting category 01A: Infectious disease.

## 4 How we estimated the resource impact

### *The population*

- 4.1 Using the [National Aids trust](#) data from 2019 and applying incident population and mortality rates we estimates the prevalence of HIV in England to be approximately 93,000.
- 4.2 The [annual report](#) from Public Health England on new HIV diagnosis estimated there will be around 4,100 newly diagnosed people in the UK with HIV as of 2019, we have assumed this equates to approximately 3,500 in England. Between 2014 and 2019 incidence dropped by 34%, on average 6.8% per year, this trend is assumed to continue and therefore we assume current incidence is approximately 3,000 reducing to around 2,100 in 2026/27.
- 4.3 The same report from Public Health England assumed 98% of HIV patients receive ART and 97% are virally suppressed.
- 4.4 Of these clinical experts estimated that 20% would switch treatment due to issues with tolerability, toxicity, adherence (e.g influenced by stigma, employment, travel, pill burden, “pill fatigue”) or malabsorption (e.g. due to comorbidities).
- 4.5 The [UK Collaborative HIV cohort - Hepatitis B, hepatitis C, and mortality among HIV positive individuals 2017](#) study estimated 94.7% would not be coinfectd with hepatitis B.
- 4.6 Prevalence of HIV-1 is expected to continue to increase over time because the annual incidence is greater than the annual mortality. In 2026/27 we expect around 18,400 people will be eligible for treatment with cabotegravir with rilpivirine. The resource impact over time worksheet in the resource impact template shows the calculation of the eligible population for each of the first 5 years. The population estimates for 2026/27 are shown in Table 4.



**Table 4 Number of people eligible for treatment in England in 2026/27**

<b>Population</b>	<b>Proportion of previous row (%)</b>	<b>Number of people</b>
Total population <sup>1</sup>		56,286,961
Population aged 18 and over <sup>1</sup>		44,263,393
Incidence of HIV <sup>2</sup>	0.0048%	2,110
Prevalence of HIV <sup>3</sup>	0.23%	100,605
Less mortality rate HIV <sup>2</sup>	0.63%	648
Proportion of people who are receiving antiretroviral regimen treatment (ART) <sup>2</sup>	98%	100,025
Proportion of people who are virally suppressed <sup>2</sup>	97%	97,024
Proportion of people who switch treatments <sup>4</sup>	20%	19,405
Proportion of people not coinfecting with hepatitis B <sup>5</sup>	94.7%	18,376
People expected to have received treatment by 2026/27 <sup>4</sup>	35%	6,432
<p><sup>1</sup> <a href="#">Office for National Statistics</a></p> <p><sup>2</sup> <a href="#">Public Health England Trends in HIV testing, new diagnoses and people receiving HIV-related care in UK 2019</a></p> <p><sup>3</sup> <a href="#">National Aids Trust (Assume 84% England and 285 15 years or younger)</a></p> <p><sup>4</sup> Clinical expert opinion</p> <p><sup>5</sup> <a href="#">UK Collaborative HIV cohort - Hepatitis B, hepatitis C, and mortality among HIV positive individuals 2017</a></p>		

## ***Assumptions***

4.7 The resource impact template assumes that:

- Clinical expert opinion suggests market share of cabotegravir with rilpivirine will increase each year until 2026/27 when it reaches 35% of the eligible population.
- Cabotegravir with rilpivirine is administered in secondary care clinics every 2 months and the treatment duration is assumed to be ongoing.
- Cabotegravir with rilpivirine is expected to be administered as 2 separate intramuscular injections. The dosing regimen starts with a 28-day oral lead-in, followed by monthly injections for 2 months. Thereafter, injections are given every 2 months.
- The recommended oral lead-in dosages are 30 mg daily for cabotegravir & 25 mg daily for rilpivirine. The recommended dosages for the intramuscular injections are cabotegravir 600 mg (200 mg/ml) with rilpivirine 900 mg (300 mg/ml) once every two months.
- The template allows users to input current and future practice in relation to the number of attendances for people receiving treatment with cabotegravir with rilpivirine and those not receiving cabotegravir with rilpivirine.
- It is assumed people starting treatment with cabotegravir with rilpivirine don't switch to any other treatments.

## About this resource impact report

This resource impact report accompanies the NICE guidance on [Cabotegravir with rilpivirine for treating HIV-1](#) and should be read with it. See [terms and conditions](#) on the NICE website.

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