MSAC Application 1708.1

Hepatitis Delta Virus (HDV) RNA PCR testing to determine eligibility for PBS-subsidised bulevirtide (HEPCLUDEX) for treatment of HDV

Application for MBS eligible service or health technology

MSAC Application Number:
1708.1

Application title:
Application No. 1708.1 – Hepatitis Delta Virus (HDV) RNA PCR testing to determine eligibility for PBS-subsidised bulevirtide (HEPCLUDEX) for treatment of HDV

Submitting organisation:
GILEAD SCIENCES PTY LIMITED

Submitting organisation ABN:
71072611708

Application description

Succinct description of the medical condition/s:
Hepatitis delta virus (HDV) is a rare, unique blood-borne virus that occurs in people infected with hepatitis B virus (HBV) and is transmitted by exposure to contaminated blood or bodily fluids. HDV is reliant on HBV surface antigens (HBsAg) to infect human hepatocytes and to undergo viral assembly and transmission and therefore is only found either as a co-infection or as a superinfection in patients with HBV infection. HDV infection causes hepatitis D, a form of viral hepatitis that is severe, rapidly progresses to cirrhosis, and has increased risk of hepatocellular carcinoma (HCC) compared to HBV mono-infection. Liver cirrhosis and cancer occur on average earlier in HBV/HDV co-infection; the 5-year mortality of co-infected individuals is twice that of HBV mono-infection (Cornberg et al. 2020). Chronic HDV infection causes cirrhosis and HCC with annual rates of 4% and 2.7%, respectively (Romeo et al. 2009). There is currently no pharmacological standard of care for patients with HDV.

Succinct description of the service or health technology:
Hepatitis D is a notifiable disease in Australia. The definition of a notifiable HDV case is the detection of IgM or IgG to hepatitis D virus or detection of hepatitis D virus on liver biopsy in patients who are HBV surface antigen positive. Therefore, the detection of HDV should be based on positive anti-HDV antibody testing given it is faster and not invasive compared to a liver biopsy (MBS Items 69384, 69475, 69481). If HDV is detected, quantification of HDV viral load via HDV ribonucleic acid polymerase chain reaction (RNA PCR) should be undertaken to determine the extent of viral replication which informs clinical decision making. In Australia, the HDV RNA PCR test is only offered by VIDRL (Victorian Infectious Disease Reference Laboratory) and is not yet funded on the MBS. Any collections by other states/jurisdictions are sent to VIDRL for testing/processing.

Application contact details

Are you the applicant, or are you a consultant or lobbyist acting on behalf of the applicant?
Applicant

Are you applying on behalf of an organisation, or as an individual?

Organisation

Is the applicant organisation the organisation you are representing in the HPP today?
Yes

Application details

Does the implementation of your service or health technology rely on a new listing on the Pharmaceutical Benefits Scheme (PBS) and/or the Prescribed List?
Yes

Which list/schedule will the other health technologies be listed on?
Pharmaceutical Benefits Scheme

Is the application for a new service or health technology, or an amendment to an existing listed service or health technology?
New

What is the type of service or health technology?
Investigative

Please select the type of investigative health technology:
Clinical biochemistry

PICO Sets

Application PICO sets

PICO set number	PICO set name
1	Hepatitis Delta Virus (HDV) RNA PCR testing to determine eligibility for PBS-subsidised bulevirtide (HEPCLUDEX) for treatment of HDV

Hepatitis Delta Virus (HDV) RNA PCR testing to determine eligibility for PBS-subsidised bulevirtide (HEPCLUDEX) for treatment of HDV

State the purpose(s) of the health technology for this PICO set and provide a rationale:

Purpose category:
Diagnosis / sub-classification

Purpose description:
To establish a diagnosis or disease (sub)classification in symptomatic or affected patients

Purpose category:
Monitoring

Purpose description:
To monitor a condition over time.

Purpose category:

Outcome / response assessment

Purpose description:
To assess an outcome or response following an intervention or treatment

Population

Describe the population in which the proposed health technology is intended to be used:
See detailed explanation of population in which proposed health technology is intended to be used within previous Ratified PICO for MSAC application 1708.

Redacted
Search and select the most applicable Medical condition terminology (SNOMED CT):

Intervention

Name of the proposed health technology:
HDV RNA PCR test

Comparator

Nominate the appropriate comparator(s) for the proposed medical service (i.e. how is the proposed population currently managed in the absence of the proposed medical service being available in the Australian health care system). This includes identifying health care resources that are needed to be delivered at the same time as the comparator service:
No HDV RNA PCR testing

Outcomes

Outcome description – please include information about whether a change in patient management, or prognosis, occurs as a result of the test information:

Test related outcomes:
• Safety
• Test turnaround time
• Concordance of the test with the clinical utility standard – Performance of test used in Australia compared to clinical utility standard.
  o Positive percentage agreement
  o Negative percentage agreement
• Predictive validity of the test (distinguished from presence of, or quantification of, HDV RNA as a prognostic marker)
• Suitability of the test for monitoring (ability to distinguish response to treatment from background random variation, i.e. signal to noise ratio).
• Change in management (including broader changes in clinical management from testing)

Drug:
• Safety (adverse events, physical examinations, laboratory findings)

- Effectiveness:
  - o Health-related quality of life (HRQOL)
  - o Survival
  - o Quality adjusted life years (QALYs)
  - o Liver fibrosis outcomes
  - o Liver transplants
  - o Response to treatment

PASC noted that the applicant is still working on defining what 'response to treatment' entails (i.e. what thresholds of HDV RNA and ALT levels are used for claiming a difference in patient outcomes? What thresholds are used for determining continuation or ceasing of bulevirtide treatment?) and will be included in the assessment report.

Healthcare system:
- Cost of testing and retesting
- Cost of treatment
- Cost-effectiveness of testing and treatment
- Financial implications

Proposed MBS items

Proposed Item AAAAA
MBS item number:

Please search and select the proposed category:
PATHOLOGY SERVICES

Please search and select the proposed group:
MICROBIOLOGY

Please search and select the proposed item descriptor or draft a proposed item descriptor to define the population and health technology usage characteristics that would define eligibility for funding:
AAABB
Quantitation of Hepatitis D viral RNA load in plasma or serum in:
(a) the pre-treatment evaluation for access to therapy for chronic HDV hepatitis in patients who are Hepatitis D viral antibody positive and suspected of having chronic hepatitis D; or
(b) a patient undertaking antiviral therapy for chronic hepatitis with bulevirtide for the purpose of assessing treatment effectiveness.
To a maximum of 2 tests in a 12 month period.

Proposed MBS fee:
$152.10

Indicate the overall cost per patient of providing the proposed health technology:
$0.00

Please specify any anticipated out of pocket costs:
$0.00

Provide details and explain:

As detailed in the integrated codependent resubmission for Treatment of Chronic Hepatitis Delta Virus (HDV) infection in plasma (or serum) HDV-RNA positive adult patients with compensated liver disease

How is the technology/service funded at present? (For example: research funding; State-based funding; self-funded by patients; no funding or payments):
HDV RNA PCR test is not currently funded. There is no MBS item for HDV RNA PCR testing.

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)?
Superior

Please state what the overall claim is, and provide a rationale:
Claim based on HDV RNA PCR testing versus no HDV RNA PCR testing.

Estimated utilisation

Estimate the prevalence and/or incidence of the proposed population:
It is estimated that there are no more than **Redacted** incident patients diagnosed with CHD over the next 5 years following HEPCLUDEX and HDV RNA PCR test funding on the PBS and MBS, respectively.

Provide the percentage uptake of the proposed health technology by the proposed population:

Year 1 estimated uptake(%):
to be provided
Year 2 estimated uptake(%):
to be provided
Year 3 estimated uptake(%):
to be provided
Year 3 estimated uptake(%):
to be provided

Estimate the number of patients who will utilise the proposed technology for the first full year:
Approximately **Redacted** patient will have a HDV RNA PCR test in the first full year of MBS listing.

Optionally, provide details:

Will the technology be needed more than once per patient?
Yes, multiple times

Over what duration will the health technology or service be provided for a patient? (preferably a number of years):
Every 6 months a HDV RNA PCR test is conducted.

Optionally, provide details:
HDV RNA PCR testing every 6 months to assess clinical benefit with HEPCLUDEX treatment.

What frequency will the health technology or service be required by the patient over the duration? (range, preferably on an annual basis):
6 monthly

Optionally, provide details:

Consultation

List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the health technology/service:

- Victorian Infectious Diseases Reference Laboratory

List all appropriate professional bodies / organisations representing the group(s) of health professionals who request the health technology/service:

- Australasian Hepatology Association
- Australasian Society for HIV, Viral Hepatitis & Sexual Health Medicines
- Australia Society of Infectious Diseases
- Gastroenterological Society of Australia
- The Royal College of Pathologists of Australasia (RCPA)

List all appropriate professional bodies / organisations representing the group(s) of health professionals that may be impacted by the health technology/service:

- As above

List the patient and consumer advocacy organisations or individuals relevant to the proposed health technology:

- Hepatitis Australia
- The Liver Foundation

List the relevant sponsor(s) and / or manufacturer(s) who produce similar products relevant to the proposed service or health technology:

Regulatory information

Would the proposed health technology involve the use of a medical device, in-vitro diagnostic test, radioactive tracer or any other type of therapeutic good?
No

Codependent details

Will a submission be made to the Pharmaceutical Benefits Advisory Committee (PBAC)?
Yes

Please provide a rationale for the codependency and indicate how the proposed PBS restriction would reference the intervention(s) proposed for MSAC consideration:
Hepatitis Delta Virus (HDV) RNA PCR testing to determine eligibility for PBS-subsidised bulevirtide (HEPCLUDEX) for treatment of HDV