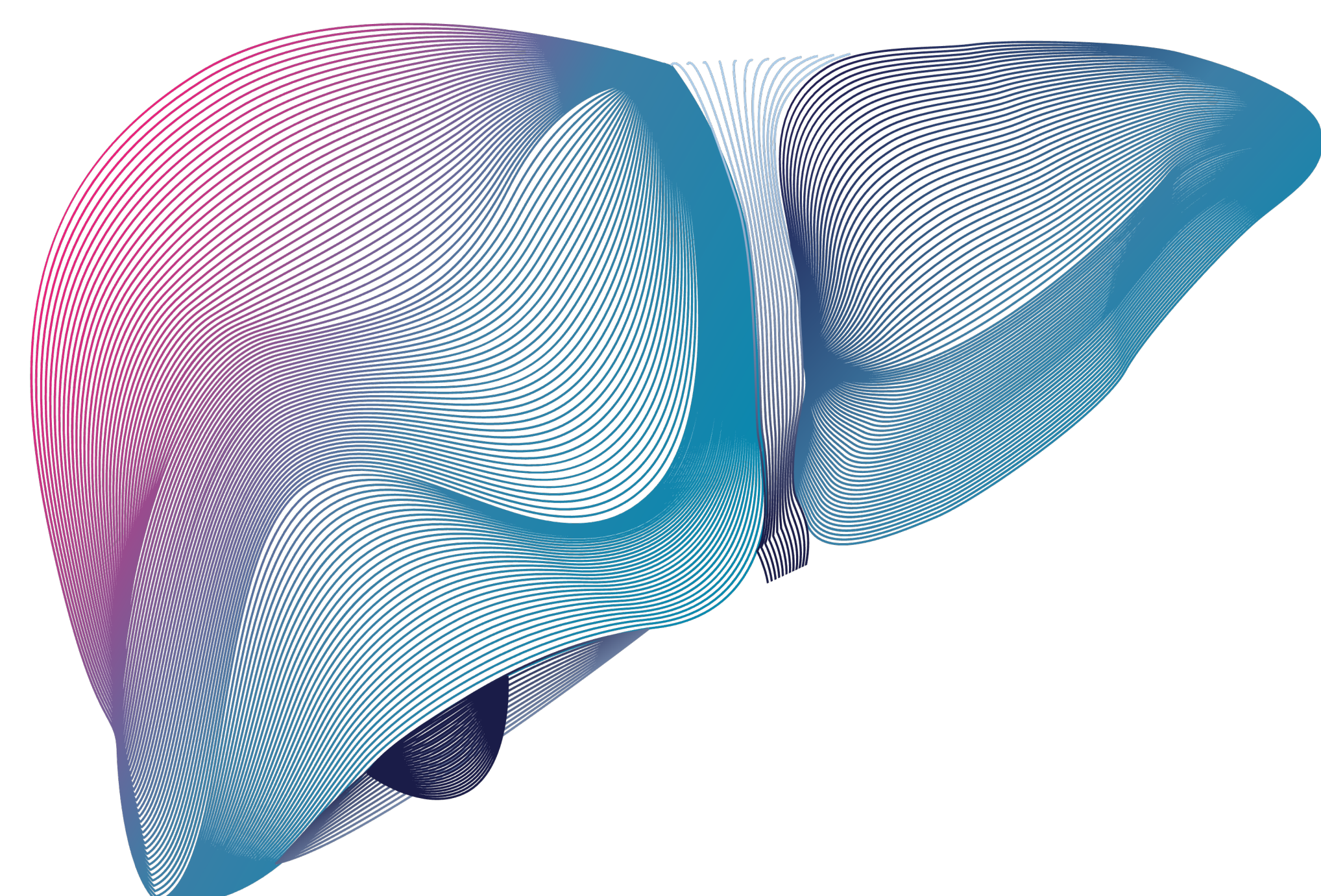


# An increase in awareness about the need to test all HBsAg positive patients for anti-HDV +/- HDV RNA is required



## Who's testing whom? Healthcare professionals' and patients' knowledge of Hepatitis Delta Virus testing

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### Introduction

Hepatitis D virus (HDV) infection is an important cause of chronic liver disease, the management of which is currently a poorly met clinical challenge. Overall, hepatitis B virus (HBV) and HDV co-infection leads to cirrhosis in 80% of patients (Gilman et al., 2019). Encouraging data are emerging for new approaches to the treatment of chronic HDV infection. Current work undertaken by members of this study team and the UK Health Security Agency have developed a national UK HDV patient register. Early data indicates that anti-HDV testing of the UK HBV population is approximately 25%, despite current European and UK guidance recommending that all patients with HBV are tested for HDV (NICE, 2017; EASL, 2017). Achieving the World Health Organization viral hepatitis elimination strategy is based on systematically testing people with relevant risk factors, so there is a need to understand factors contributing to low anti-HDV rates of testing.

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### Aim

This audit sought to understand the reasons for failure to determine HDV status in known infected HBV patients. There were three objectives:

1. Determine staffs' understanding of which patients to test for anti-HDV
2. Determine staffs' acceptability of the testing as an intervention
3. Understand levels of awareness of HDV amongst people with HBV

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### Method

The attitudes of healthcare professionals towards the acceptability of HDV testing were recorded on an online survey, disseminated via professional interest networks and social media, that was underpinned by the seven constructs of the Theoretical Framework of Acceptability (TFA): Affective Attitude; Burden; Ethicality; Intervention Coherence; Opportunity costs; Perceived Effectiveness; Self-efficacy, (Sekhon *et al*, 2017;2022). Over a four-month period, 39 hepatology professionals (31 doctors, 8 nurses) were recruited. Patients with HBV (n=70) were surveyed by telephone about their knowledge of HDV and their own testing status. Medical records provided retrospective data on their HDV testing status.

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### Results

Amongst the n=39 healthcare professionals surveyed there was a knowledge disconnect between the UK and European guidelines (NICE, 2017; EASL, 2017)) and clinicians regarding which patients should be tested for HDV. Only 66.6% of clinicians surveyed were able to correctly cite EASL (European) HDV testing guidelines, and only 53.8% were able to correctly cite NICE (UK) guidelines.

Overall, there were high levels of anti-HDV testing acceptability according to the TFA constructs, although informing people of a positive diagnosis could be difficult, an additional intervention burden for some staff was evident, and a diagnosis of HDV was felt not to improve clinic attendance.

Theoretical Framework of Acceptability Construct	Survey Item	% (n) Agreement with statement
Affective Attitude	Acceptability of HDV testing	94.9% (37/39)
	Feeling comfortable when giving positive result	46.2% (18/39)
Burden	Minimal effort required to identify people to test	79.5 % (31/39)
	Minimal effort required to request test	69.2% (27/39)
	I always remember to check if test needed	74.4% (29/31)
Ethicality	It is fair to test all HBsAg people for HDV	76.9% (30/39)
	No adverse morals / ethics of testing	79.5% (31/39)
Opportunity Costs	Identifying if test needed competes with other tasks	17.9% (7/39)
	Testing time competes with other tasks	33.3% (3/39)
Perceived Effectiveness	Diagnosis of HDV increases clinic attendance	10.3% (4/39)
	Diagnosis improves mortality & Morbidity	64.1% (25/39)
Self-efficacy	Confident to tell people they need a test	89.7% (35/39)
	Confident to tell people they have HDV	84.6% (33/39)
Intervention Coherence	I understand how testing improves outcomes	92.3% (36/39)
	Knowing a patient has HDV supports care planning	79.5% (31/39)
Overall Acceptability	Testing HBsAg positive people is a good idea	97.4% (38/39)

Of the HBsAg positive patients surveyed, 77.1% (n= 50/70) stated that they had not heard about HDV and that it had never been discussed by their healthcare professional. In contrast, 95.7% (n= 67/70) of this cohort had been tested for HDV, and were seronegative, but were not aware. There was a large diversity of ethnicities and thirty different primary languages spoken, including fifteen who required an interpreter. This reflects the linguistic and cultural challenge faced by clinicians when treating HBV patients and provides some explanation for the communication challenges.

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### Conclusions

This study shows that HDV testing is acceptable to healthcare professionals, but that some clinicians lack familiarity with the clinical guideline recommendations for universal testing of all HBsAg positive patients. Similarly in patients surveyed, a lack of knowledge and communication from healthcare professionals left them uncertain as to the nature of HDV and their own HDV testing status. A diversity of patient languages and cultures may be one cause of this, but communication needs to be sharpened to identify HBV and HV co-infected individuals and retain this group in care to reduce the associated mortality and meet the WHO objective of eliminating viral hepatitis as a public health threat by 2030. Advanced nursing roles provide a rich opportunity for patient education and are thus ideally placed to drive awareness among this patient population, and to the wider interprofessional team.

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