

Hepatitis B knowledge among people with chronic hepatitis B in Australia

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Background

▶ ~218,000 people in Australia live with chronic hepatitis B, with Australians born overseas, particularly in the Asia-Pacific region being disproportionately affected by hepatitis B.

MacLachlan, et al. ANZJPB 2013

▶ Only 56% of people with chronic hepatitis B in Australia have been diagnosed, while approximately 13% receive clinical care for their infection.

*MacLachlan, et al. ANZJPB 2013
Allard, et al. [presented in EASL 2014]*

▶ Lack of knowledge about the virus among people with, or at greater risk of hepatitis B infection may be partly responsible for the under-diagnosis and poor adherence with clinical care.

▶ Health care seeking behaviour has improved among people with chronic hepatitis B following educational interventions.

*Chao, et al. J Immigrant & Minority Health 2009
Veldhuijzen, et al. J Hepatology 2012*

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Objectives

- ▶ To assess the hepatitis B knowledge among people with chronic hepatitis B living in Australia.
- ▶ To assess the factors associated with hepatitis B knowledge in people with chronic hepatitis B living in Australia.
- ▶ This current study forms part of a larger investigation exploring:
 - To investigate knowledge, and attitudes of people with chronic hepatitis B to clinical management
 - To identify the broader social and psychological barriers to clinical management
 - To assess hepatitis B-related concerns, anxieties, confidences and other factors affecting the psychological and social health of people with hepatitis B
 - Describe the patients experience of hepatitis B clinical management in specialist liver clinics, including any discrepancies between the expectations and reality of the process

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Methods

- ▶ People diagnosed with chronic hepatitis B, who attended one of four public liver clinics in three Australian jurisdictions (VIC, NSW, NT) and one private general practice clinic (VIC), were invited to participate in the study by completing a self-administered questionnaire
- ▶ The questionnaire included 24 questions assessing hepatitis B knowledge across four domains:
 - Transmission (10 questions)
 - Natural history (5 questions)
 - Epidemiology & prevention (5 questions)
 - Clinical management (4 questions)
- ▶ The questionnaire was available in English, simplified Chinese and Vietnamese.
- ▶ In scoring hepatitis B knowledge questions, a correct answer scored one point, while total score were derived as sums of the scores of individual questions and were presented on a scale of 100.

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Results: Background characteristics

		Overall (n=93)
Mean age, yrs (SD)		45 (13)
Gender	Female	40 (43%)
	Male	53 (57%)
Region of birth	Australia, New Zealand	8 (9%)
	South/North-East Asia	70 (76%)
	Europe	4 (4%)
	South Asia	3 (3%)
	Africa	3 (3%)
	Middle-East	2 (2%)
Educational levels	Other regions	3 (3%)
	Did not attend school	5 (5%)
	Primary school	11 (12%)
	High school	32 (34%)
Self-rated English language proficiency	Higher education	45 (48%)
	Very good	20 (21%)
	Good	30 (32%)
	Limited	35 (38%)
Occupational status	No English	7 (7%)
	Employed / Home duties	62 (67%)
	Student	8 (9%)
	Retired	7 (7%)
	No job	15 (16%)

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Results: Knowledge

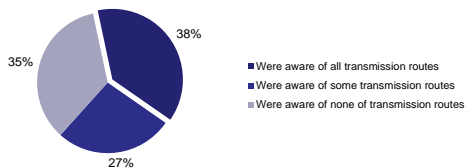
- ▶ The overall reliability coefficient of the knowledge questions was 0.93, using Cronbach's alpha.
- ▶ Cronbach's alpha coefficient in each domain was:
 - Transmission: 0.98
 - Natural history: 0.93
 - Epidemiology & prevention: 0.89
 - Clinical management: 0.85

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Results: Transmission knowledge

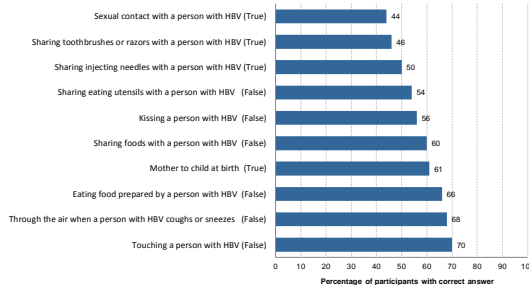
- ▶ Only 35 participants (38%) were aware of all four main routes of hepatitis B transmission (i.e. vertical, sexual contact, sharing injecting needles, sharing toothbrushes or razor blades)
- ▶ 33 participants (35%) were not aware of any transmission routes.



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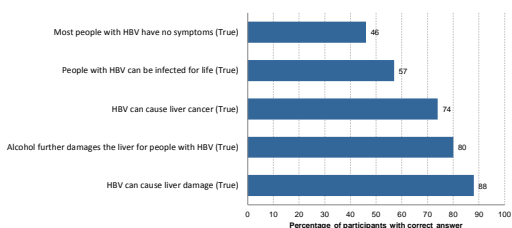
Results: Transmission knowledge



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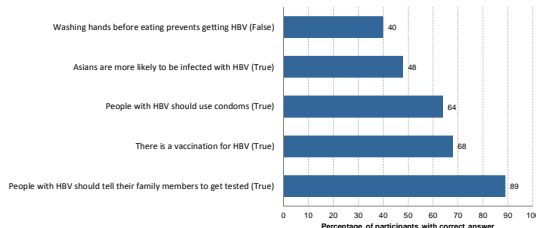
Results: Natural history knowledge



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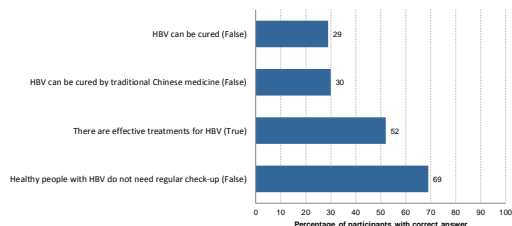
Results: Prevention & epidemiology knowledge



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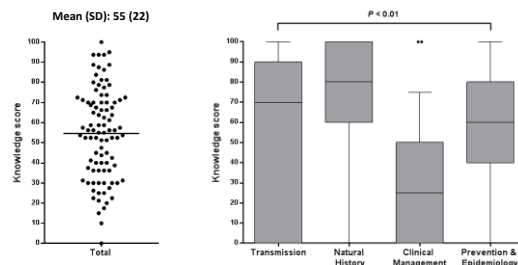
Results: Clinical management knowledge



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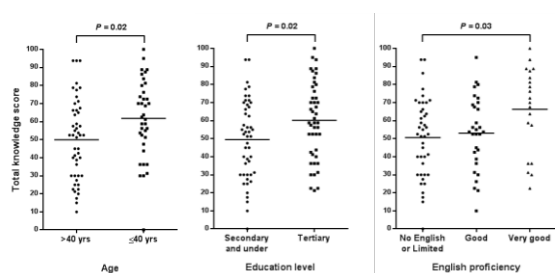
Results: Knowledge scores



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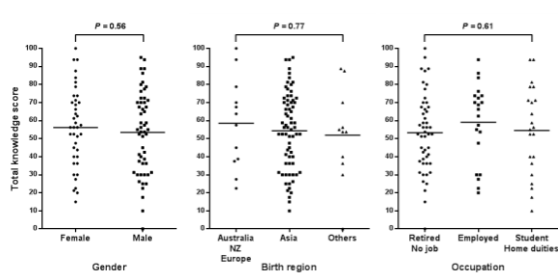
Results: Factors associated with knowledge



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Results: Factors associated with knowledge



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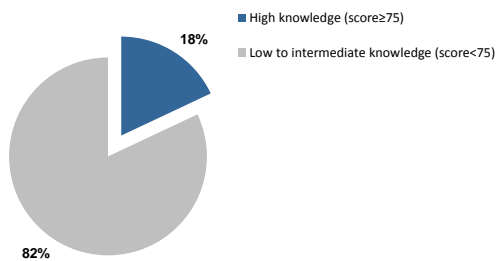
Results: Factors associated with knowledge

		Adjusted linear regression (n=85)	
		Estimated means difference (95% CI)	P
Age	>40 years	Reference	
	≤40 years	9.24 (-0.58, 19.05)	0.06
Education level	Secondary and under	Reference	
	Tertiary	11.95 (2.45, 21.44)	0.01
English proficiency	No English/Limited	Reference	
	Good	1.24 (-10.27, 12.75)	0.83
	Very good	7.60 (-7.67, 22.87)	0.32

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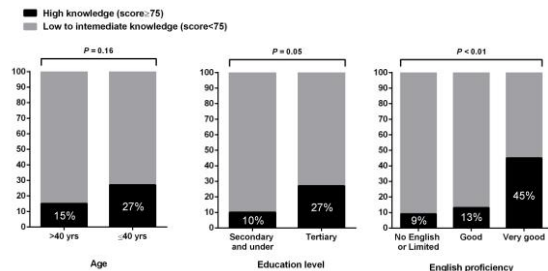
Results: High hepatitis B knowledge



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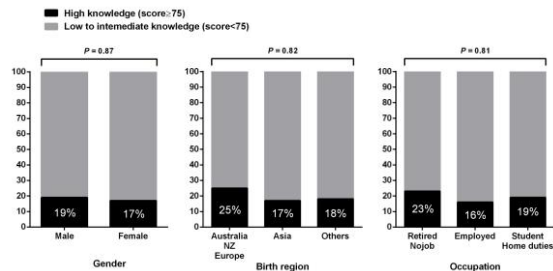
Results: Factors associated with high knowledge



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Results: Factors associated with high knowledge



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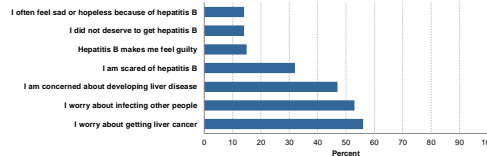
Results: Factors associated with high knowledge

		Adjusted logistic regression (n=85)	
		Adjusted Odds Ratio (95% CI)	P
Age	>40 years	1.00	
	≤40 years	1.02 (0.27, 3.78)	0.98
Education level	Secondary and under	1.00	
	Tertiary	1.10 (0.26, 4.66)	0.90
English proficiency	No English/Limited	1.00	
	Good	1.42 (0.32, 6.23)	0.64
	Very good	7.65 (1.94, 30.19)	<0.01

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Results: Factors associated with knowledge



▶ 71 (76%) reported having at least one hepatitis B-related concern or anxiety.

▶ Mean knowledge score:

Having concern: 58 vs. Not having concern: 43 ($P<0.01$).

▶ Having hepatitis B-related concerns/anxieties was independently associated with a higher knowledge score after adjusting for gender, age, educational level and English proficiency (adjusted β : 15.11; 95%CI: 4.40, 25.81; $P<0.01$).

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Limitations

- ▶ The response rate for participation in this study is suboptimal (24%) and makes the findings susceptible to a selection bias toward people feeling more confident in their understanding and knowledge about hepatitis B.
- ▶ Participants in the current study were recruited from clinical settings and over-represent people with chronic hepatitis B who were sufficiently motivated to receive clinical care for their infection.
- ▶ The knowledge gaps found in the current study will likely be more pronounced among the broader community of people with chronic hepatitis B in Australia.
- ▶ This study is unable to provide data describing hepatitis B knowledge among Australian Aboriginal or Torres Strait Islander people given that only 1% of participants identified as part of these communities.

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Conclusion

- ▶ This study identified gaps in hepatitis B knowledge among people with chronic hepatitis B.
- ▶ Any educational programs for this population should focus on the most prominent knowledge gaps including misconceptions about transmission, the silent nature of the infection, clinical management and available treatments options.
- ▶ Higher levels of education, and very good English proficiency predicted higher knowledge about hepatitis B among participants. Educational interventions need to address the needs of people with hepatitis B with a low level of academic education and English proficiency in a culturally and linguistically appropriate manner.
- ▶ Having hepatitis B-related concerns and anxieties was associated with higher hepatitis B knowledge.

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|---------------------|-----------------------|
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