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Managing chronic hepatitis B

The role of the GP

Background

General practitioners are critical to reducing the impact of chronic hepatitis B in the community. This study explored how GPs understand their role in chronic hepatitis B management.

Methods

Semi-structured interviews were held with 26 GPs from five Australian jurisdictions.

Results

The principal roles identified by GPs in chronic hepatitis B management were diagnosis, monitoring and mediating between patient and specialist. General practitioners saw themselves as essential in managing chronic hepatitis B with their frequent interaction with patients, physical access and established trusting therapeutic relationships. They supported an active role in the delivery of chronic hepatitis B pharmaceutical treatment through shared care arrangements.

Discussion

An optimal public health response to chronic hepatitis B requires a clear definition of the role of the GP. Most GPs believed their role could be more substantive and include management and treatment beyond that of diagnosis and monitoring.

Keywords

hepatitis B, chronic; general practice

Up to 170 000 people in Australia are infected with chronic hepatitis B (CHB)¹ with the numbers of people dying projected to increase from 450 per year in 2008 to 1550 per year in 2017.² General practitioners are critical in clinical management with early detection, follow up and monitoring of CHB slowing progression to liver failure and the development of hepatocellular carcinoma.^{3,4}

The Australian Government National Hepatitis B Strategy 2010–2013,⁵ as summarised in *Table 1*, identifies a central role for GPs in managing CHB. There has been little focus on describing the elements of this role, particularly in comparison to their role in managing hepatitis C or HIV.^{6,7} This qualitative study aimed to identify the constituent elements of the role of GPs in CHB from their perspectives.

Methods

Recruitment

General practitioners self-identifying as having a high caseload of patients and/or a particular interest in CHB were recruited. Potential participants were sent information and a consent form. Recruitment ensured diversity in gender, clinical experience, ethnicity, geographical distribution, practice size and type and location, and primary population cared for.

Recruitment to the study was supported by nine organisations providing hepatitis B and/or general practice related research, training or service delivery programs in Victoria, New South Wales, Queensland, South Australia and the Australian Capital Territory. In addition, seven hepatitis specialists managing public hospital

clinics in Victoria and NSW promoted the study by distributing information sheets to GPs referring CHB patients to their clinics. Invitations to participate in the study were sent to GPs from Victoria who were listed on a publicly available database as speaking one of the main languages spoken in southeast Asia, the Middle East and Africa.

Interview process

Two researchers (JW and BH) used a semi-structured interview schedule with follow up questioning to clarify responses or to seek additional information (*Table 2*). Semi-structured interviews provided the flexibility to investigate unexplored topics⁸ with the schedule revised to investigate emerging themes and/or issues to be explored in further interviews.

Face-to-face interviews were held with 21 GPs with the remaining five interviews conducted by telephone. The interviews took between 30 and 50 minutes; participants signed a consent form before the interview and were offered \$150 reimbursement.

The protocol was approved by La Trobe University Human Research and Ethics Committee.

Data analysis

All interviews were electronically recorded, transcribed verbatim and analysed following the principles of the grounded theory.^{9,10} Broad themes were identified as interviews progressed, which allowed emerging concepts to be explored in subsequent interviews. No new themes arose in the last two interviews, implying that saturation had been reached. Transcripts were read several times and data coded into thematic areas that were identified in discussion between researchers in response to issues arising through interviews. Each stage of

Table 1. Sections of the National Hepatitis B Strategy 2010–2013 describing the role of general practitioners

Section	Content
6.1 Building partnerships and strengthening community action	General practitioners providing care to culturally and linguistically diverse (CALD) communities most at risk of CHB are a link to targeted health promotion interventions. Engaging with these health service providers and their representative bodies is crucial to a nationally coordinated response
6.3 Optimising diagnosis and screening	Practitioner-initiated testing, or screening, in primary healthcare are the main approaches for identifying undiagnosed CHB Priority actions in testing and diagnosis: Develop a model of care that helps doctors who diagnose CHB to conduct appropriate follow up tests, assessments, referrals and management as appropriate
6.4 Clinical management of people with chronic hepatitis B	General practice as part of a healthcare team is central to the healthcare experience of people living with CHB. A first step to reducing the burden of hepatitis B is to improve the level of awareness among primary care doctors generally Priority actions in clinical management: Trial innovative models of the monitoring and treatment of hepatitis B ... including increased involvement of general practitioners ... Explore options for primary care practitioners to prescribe hepatitis B treatments
8. Workforce and organisational development	General practitioners ... play a significant role in identifying, monitoring, supporting and managing people with CHB infection and will play an expanding role in treatment Priority actions in workforce and organisational development: Develop education on chronic viral hepatitis B for medical practitioners, nurses, pharmacists, other healthcare workers, interpreters and people working with communities most affected

Table 2. Semi-structured interview schedule

• What prompts you to test a patient for hepatitis B and how does the diagnosis process take place?
• Do you actively monitor patients with CHB? How?
• When do you think of referring a patient to a specialist?
• What are your indicators for referring a patient with CHB to a specialist?
• What should be the role of the GP in the clinical management of patients with CHB?
• What do you think about interaction between GPs and specialist for managing patients with CHB?
• What do you think about shared care models? Do you have any experience in this regard?

transcription and analysis was carried out by two researchers independently, with discrepancies discussed by the team to reach consensus.

Analysis was enhanced by constant comparison with the transcripts and available research in this field from the initial literature review.¹⁰

Results

One overarching theme describing the essential nature of general practice in managing CHB in Australia; five themes relating to clinical management were identified. *Table 3* highlights the themes and sub-themes.

General practice was seen as essential in managing CHB given its largely asymptomatic nature, its prevalence within specific Australian communities, its transmission from mother-to-child and the need for lifelong clinical management. One GP with 10 years experience

Table 3. Themes arising from interviews with GPs

Themes	Sub-themes
Overarching theme	The centrality of general practice in the CHB response
Screening/diagnosis	Greater CHB prevalence within specific communities
	GPs proactive in screening
Disease monitoring	Providing information when diagnosing patients
	Diversity in monitoring
Referral to specialists	Low case load GP – direct referral to specialists
	Poor patient understanding of monitoring need
Treatment	Variety in referral indicators
	Patient preparation for referral
Shared care	Patient debrief after referral
	Increasing access to treatment
Shared care	Inconsistent prescribing arrangements
	Additional training needed
Shared care	Limited capacity of specialist services
	Models for increasing treatment access

of CHB patient care described general practice as the ‘lynchpin of hepatitis B’:

‘A lot of it is about health promotion, discussion, contact tracing, immunisation ... It’s GP territory, and has to be done with great sensitivity on an individual basis.’ [GP 22]

Participant characteristics

Twenty-six GPs from five Australian jurisdictions participated in the study. The background characteristics of participants and their practice profile are summarised in *Table 4*. The GPs were culturally diverse with two-thirds communicating with their patients in at least one language other than English; one or several Chinese languages, with Vietnamese being the most common. Participants had significant clinical experience and had worked in general practice for between 3 and 37 years, with most working for over 10 years, including eight working for over 30 years.

Screening and diagnosis

The most important role identified by GPs was the diagnosis of patients with CHB. One GP, working in a metropolitan area with a large southeast Asian community stated:

‘We know that the rate of hepatitis B carrier among the Asian populations has always been high. In our practice ... we always screen for hepatitis B and C routinely for all patients.’ [GP 5]

Screening was usually recommended by the GP rather than in response to patient request. This differs from other conditions where patients present to the GP with symptoms and the GP diagnoses and treats:

‘Very rarely you get a patient who comes in for a hep B consultation. They usually come in for other things. If I do a serology, a base line screen, [I say] “Do you realise you have hepatitis B?” Often it is secondary to ... other things.’ [GP 12]

A range of processes was used by GPs to screen and diagnose people with CHB, particularly in gaining consent and in giving a positive test result. Two GPs working with refugees had contradictory attitudes about ensuring their patients were aware of the implications of testing. One reported that gaining consent for testing was ‘impossible’ given language, cultural barriers and patients’ poor health literacy:

‘It might seem very autocratic but it would be basically impossible to get informed consent from them about this. ... They are just told “As part of your settlement you got to get ... some blood tests” ... we don’t really ask permission.’ [GP 1]

Another GP described that providing information to people before testing and after giving a result was a necessity as ‘people lump all blood borne viruses into “HIV scary I’m going to die” category.’ [GP 22] This GP individualised the discussion before testing based on the patient’s

Table 4. Background and practice profile of participants (n=26)

Characteristics	Number
Gender	
Male	18
Female	8
Years working as a GP in Australia[†]	
Less than 5 years	2
5–15 years	9
16–29 years	7
30 years or more	8
Language spoken other than English	
Yes [‡]	16
No	10
Australian jurisdiction	
Victoria	16
New South Wales	4
Australian Capital Territory	2
South Australia	2
Queensland	2
Practice location[§]	
Metropolitan area	25
Regional or rural area	3
Practice type[§]	
Private – solo	4
Private – group	14
Public	5
Community health centre	7
Major population cared for[§]	
Culturally and linguistically diverse communities	11
Refugees	6
People who inject drugs	6
Indigenous people	4
Men who have sex with men	3
University students	2
No specific group	3
Approximate number of patients with CHB in their practice	
Less than 10	5
10–30	8
31–99	8
100+	5
† Median 18 years; range 3–37 years	
‡ The following languages were spoken: Chinese languages and/or Vietnamese (n=12); Pakistani (Urdu and Sindhi) (n=1); Tamil (n=1); Indonesian (n=1); Malaysian (n=1); Arabic (n=1); Persian (n=1); Pitjantjara (n=1). Nine participants spoke more than one non-English language	
§ Some GPs worked in more than one practice and were counted in more than one category and some categories overlapped	

circumstances, motivation for testing and culture. When working with refugees, this GP acknowledged deportation concerns should they be found to have CHB:

'It is a generic discussion [for refugees] where we say "We are going to test you for a heap of stuff ... that ... would be probably really scary in your country because it would mean a death sentence. ... If we find it, we treat you. We don't send you back ... we make sure you stay healthy".' [GP 22]

Given the complexity of the virus, patients' cultural attitudes, and their often limited health literacy, various methods and strategies were described when providing a positive result. Several visits were suggested as necessary to confirm that a patient was aware of the implications of the infection and were receptive and able to respond effectively to the GP's advice:

'You have to find that balance between talking about [hepatitis B] being serious and really scaring people. ... If you scare them too much they want to go to the hospital. If you don't scare them enough, they don't come back at all.' [GP 22]

Disease monitoring

Monitoring CHB was nominated by most GPs as another important role. This monitoring consisted of reviewing liver function tests, with diversity in the use of ultrasound, serology and molecular testing. Eleven GPs, nine of whom had over 50 patients, used HBV DNA viral load in routine monitoring with one distinguishing differences in monitoring patients who were hepatitis B e-antigen (HBeAg) positive or negative. Three GPs, each of whom had a lower caseload referred patients directly to a specialist after diagnosis given their lack of confidence in managing the infection:

'I will refer them to specialist at least, and then get specialist advice whether they need to be monitored.' [GP 14]

One practitioner, working in two practices catering to different populations each with a greater prevalence of CHB, noted differences in patient adherence to monitoring:

'I have a list of people (with CHB) who I have to call up to get them to come back for a test. I never call my HIV positive patients. Ever.' [GP 7]

Referral to clinical specialists

All GPs referred patients with CHB to a specialist service. As noted previously, while three low caseload GPs referred every patient after diagnosis, others referred when they considered treatment or specialist advice was needed. Indications for referral varied and included a combination of elevated liver enzymes, HBeAg positivity, high viral load, ultrasound abnormality and/or at the patient's request. Several GPs described preparing patients for the specialist consultation:

'I don't want to see the patient sent to the specialist ... and then you [read] in report "your patient was reluctant to have something done" ... I tell them what the risks are and I've got special skill to alleviate their fear.' [GP 18]

Several GPs described their role extending beyond referral to include following patients who had been referred to specialists and providing ongoing support:

'The patients come back [after referral, and] ... ask any question that they feel embarrassed to ask the specialist.' [GP 16]

Pharmaceutical treatment

Prescribing treatment by GPs, rather than their current referral role, described by one participant as 'limited' [GP 17], was suggested as a useful strategy for engaging GPs in caring for CHB patients:

'It makes it more attractive for GPs. You have more control over your patients. It will probably make us more interested in treating chronic hep B, rather than "Well you are just going to the specialist anyway, why do I need to know about this?"' [GP 19]

Current restrictions for prescribing hepatitis B treatment created a paradox for GPs actively involved in providing treatment to patients with diseases just as, or more complicated than CHB, as illustrated by one HIV S100 prescriber:

'I have to manage much more dangerous drugs than hepatitis B [drugs]. ... I use much higher doses of lamivudine in HIV [positive] patients. ... I prescribe methadone for drug dependent patients. I prescribe palliative care high dose morphine. What is the fuss of anti-hep B medications?' [GP 20]

Alternatively, two GPs did not support GP involvement in treatment. One with a caseload of more than 50 patients described CHB treatment

as being in the 'specialist arena.' [GP 21] This participant was committed to their general practice role and contrasted this with the role of the specialist:

'The reason I chose to be a GP is because I want to stay general. ... There are so many issues [for CHB patients] outside just pure hepatitis.' [GP 21]

Almost all, regardless of their belief about GP involvement in treatment, emphasised the need for additional training and specialist support.

Developing a model of hepatitis B shared care

The current specialist-centred model of care for CHB was described as neither practical nor sustainable, given the limited resources and capacity of specialist services and challenges for people with CHB in accessing public hospitals:

'The logistics virtually demand it, because refugees don't have any money. They get lost. They can't speak the language. So asking to keep going to the city [to a specialist centre] is often asking for non-compliance even with a basically compliant group.' [GP 1]

'I don't think hepatitis B is going to be best managed in specialist centers ... hep B cases are rising. Specialist clinics are going to be swamped. ... I think the community-based model is efficient.' [GP 7]

Participants described other shared care models in which they were engaged including HIV, hepatitis C, methadone, diabetes and antenatal care. Given their perceived success of these models in increasing access to treatment, GPs believed these models could be successfully adopted for CHB.

While there was no general agreement, most interviewed GPs (n=17) felt they had the capacity to make substantive management decisions beyond that of diagnosis and monitoring:

'We need [specialists] as a part of the team to continue the care when cirrhosis or de-compensation happens, when hepatoma is developed, when patient develop multi-drug resistance. ... The bread and butter everyday hep B management is very simple. [It] does not need a specialist.' [GP 20]

Discussion

General practitioners are essential in reducing the burden of CHB given their relationship between

the communities with a greater prevalence of CHB and the broader health system. Previous studies recognise the GP role in expanding hepatitis C treatment access,^{11,12} while Gupta et al¹³ identify GP health policy implications resulting from their hepatitis C related health service needs, and Dev and Sievert¹⁴ identify resources to help general practice management. This current study is the first to describe how GPs understand their CHB role and is critical for informing public health responses.

Reducing the burden of CHB is predicated on people knowing their disease status and how to effectively respond to the infection. Screening and diagnosing CHB was identified as the GP's most important role. There were significant gaps in this process, particularly in comparison to the Australian experience of HIV and hepatitis C, each which is the subject of a specific nationally endorsed testing policy. These policies recognise the public and individual benefit of ensuring that the person being tested is provided with an appropriate level of information before testing and has consented to being tested.^{15,16} The lack of a systematic approach to CHB testing reflects findings of a previous Australian study where none of the participants with CHB reported receiving information at the point of diagnosis and most did not consent to testing.¹⁷

There was clear agreement about the GP's role in diagnosis, education and monitoring. While most participants supported a role for GPs in the delivery of pharmaceutical treatment, there were diverse opinions about the extent of this. The National Hepatitis B Strategy 2010–2013 recognises that only 2% of people with CHB receive any clinical management, and seeks to expand access to treatment by exploring 'options for primary care practitioners to prescribe hepatitis B treatments'.⁵ There are significant reservations in the capacity of GPs to respond to advances in CHB clinical management,^{18–21} although within our cohort there was significant CHB experience. Support for expanding the GP treatment role highlighted other complex issues being managed within general practice, the ease of access to GPs, the trusting therapeutic relationships between people with CHB and GPs, and the lack of resources of specialist clinics in the context of an increasing burden liver disease.

Increasing GP involvement in prescribing treatment for HIV has been fundamental in

improving treatment access. The shared care model currently used in Australia accredits GPs who have passed a training course and participate in continuing education to prescribe S100 medicines.²² A shared care model for the treatment and management of people with hepatitis C has been developed, albeit with treatment initiated by the specialist and monitored by the GP.^{22,23}

Limitations of this study

Qualitative studies provide the opportunity to examine issues at depth and to investigate through interviews the nuances and complexities that are missed by using quantitative methodology.^{24,25} The current study did not aim for a representative sample or to produce generalisable findings beyond the GPs who participated in the study. While participants were enrolled to gain a range of characteristics and views,²⁴ the recruitment method may have introduced potential biases given that GPs with high caseloads of CHB patients or with an interest in CHB were approached, as were GPs who referred CHB patients to public liver clinics and/or who spoke languages other than English.

Conclusion

The constituent elements of the GP's role in CHB include diagnosing, monitoring, referral and liaising between patient and specialist. While controversial, GPs supported increasing their involvement in clinical management with some interested in prescribing treatment using a shared care model.

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