

# Evaluation of enhanced notification to increase diagnosis and linkage to care for hepatitis B and C at two Victorian regional Local Public Health Units: a comparative retrospective cohort study

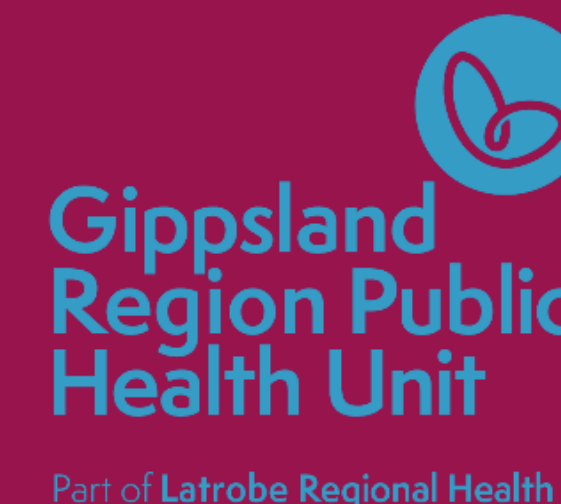
Phongsakone Inthavong<sup>1\*</sup>, Emma Beavon<sup>2\*</sup>, Shweta Bohora<sup>2</sup>, Naomi Clarke<sup>1</sup>, Jacqui Richmond<sup>1,3</sup>, Mohammad Akhtar Hussain<sup>1</sup>, Annelies Titulaer<sup>2</sup>, Joseph Doyle<sup>3</sup>, Alex Tai<sup>2</sup>, Eugene Athan<sup>1,4</sup>, Alyce Wilson<sup>2,3</sup>, Amanda Wade<sup>1,3</sup>

<sup>1</sup>Barwon South West Public Health Unit, Barwon Health,

<sup>2</sup>Gippsland Regional Public Health Unit, Latrobe Regional Health,

<sup>3</sup>Disease Elimination Program Burnet Institute,

<sup>4</sup>Centre for Innovation in Infectious Disease and Immunology Research (CIIDIR), Institute for Mental and Physical Health and Clinical Translation (IMPACT) and School of Medicine, Deakin University



## INTRODUCTION

- Hepatitis B and hepatitis C can cause liver cirrhosis, end stage liver disease and hepatocellular carcinoma, most of which can be prevented by safe and effective treatment
- Many people in Australia are not engaged in hepatitis B and hepatitis C care and treatment [1,2]
- Victorian Local Public Health Units (LPHUs) created during the COVID-19 pandemic, have expanded their remit to include management of other notifiable conditions including hepatitis B and C notifications
- Embedding public health actions locally may improve clinical outcomes

## OBJECTIVES

- To determine the impact of enhanced LPHU management of hepatitis B and C notifications compared to standard of care (SOC) management centrally at Department of Health (DoH), in the Barwon South West (BSW) and Gippsland regions.
- Outcomes include
  - Complete diagnosis of hepatitis C (antibody and RNA)
  - Hepatitis B viral load measurement
  - Treatment commencement and / or referral to specialist care
  - Enhanced notification form (ESF) completion.

## METHOD

A retrospective cohort study comparing outcomes of notifications:

- 6.3.22 – 28.8.22, SOC notification management at DoH
- 29.8.22 – 13.2.23, enhanced notification management at LPHU, see Table 1.

- Data on cases in BSW and Gippsland is being collected using the Public Health Event Surveillance System and via notifying medical practitioners.
- Descriptive and comparative statistical analysis will be conducted using STATA.

**Table 1. Public health response to hepatitis B or C notification by site**

Action for general notification	DoH	Gippsland	Barwon
ESF fax to notifying HCW	✓	✓	✓
Phone call to notifying HCW	If required	✓	✓
Phone call to case	If required	With clinician approval	If required
Information provided to notifying HCW	On request	✓	✓
Tailored local information provided to notifying HCW	✗	If required	✓
Adjusted process for antenatal notification	✓	✓	✓

## RESULTS

- During the SOC study period
  - 25 cases of hepatitis B were notified
  - 83 cases of hepatitis C were notified
- During the enhanced (LPHU) study period
  - 26 cases of hepatitis B were notified
  - 76 cases of hepatitis C were notified
- Demographic characteristics are noted in Table 2. Analysis is ongoing.

**Table 2. Demographic characteristics of people notified by study period**

	Hepatitis B		Hepatitis C		Total	
	Gippsland	Barwon	Gippsland	Barwon	Gippsland	Barwon
<b>Standard</b>					35	73
Female	1	8	11	23	12	31
Male	2	14	21	28	23	42
Age (years) Mean (SD)	48 (8.7)	43 (12.6)	46 (10.9)	49 (13.8)	48 (14.3)	47 (13.6)
<b>Enhanced</b>					41	61
Female	0	9	12	15	12	24
Male	6	11	23	26	29	37
Age (years) Mean (SD)	60 (13.7)	49 (14.7)	45 (13.8)	46 (11.6)	46 (10.7)	48 (14.4)
<b>Intra unit total</b>	9	42	67	92	76	134
<b>Grand total</b>		51	159		210	

## CONCLUSION

- Evaluating the components of the public health response and improving the care cascade is key to effective investment in achieving elimination of viral hepatitis as a public health threat.
- Data driven approaches will underpin effective micro-elimination strategies.
- Integrating clinical and public health services is likely to benefit the community and is a key advantage of the LPHU.

## REFERENCES & ACKNOWLEDGEMENTS

1. Viral Hepatitis Mapping Project: Hepatitis B, Geographic diversity in hepatitis B prevalence, management and treatment. National Report 2021, ASHM.
2. Burnet Institute and Kirby Institute. Australia's progress towards hepatitis C elimination: annual report 2022. Melbourne: Burnet Institute; 2022.