

## Cultural and Linguistic Diversity of People Living with Chronic Hepatitis B, 2011-2016: Changing Migration, Shifting Epidemiology

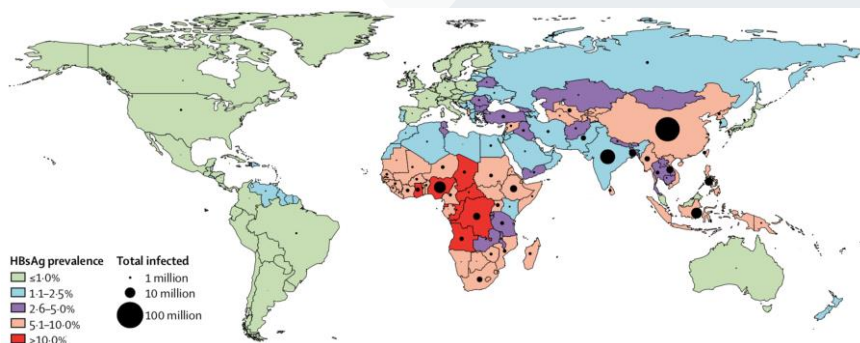
– **Jennifer MacLachlan, Benjamin Cowie**  
 WHO Collaborating Centre for Viral Hepatitis, The Doherty Institute  
 Jennifer.maclachlan@mh.org.au  
**Australasian Viral Hepatitis Conference**  
 Adelaide SA  
 August 14<sup>th</sup> 2018



A joint venture between The University of Melbourne and The Royal Melbourne Hospital

## Chronic hepatitis B in Australia

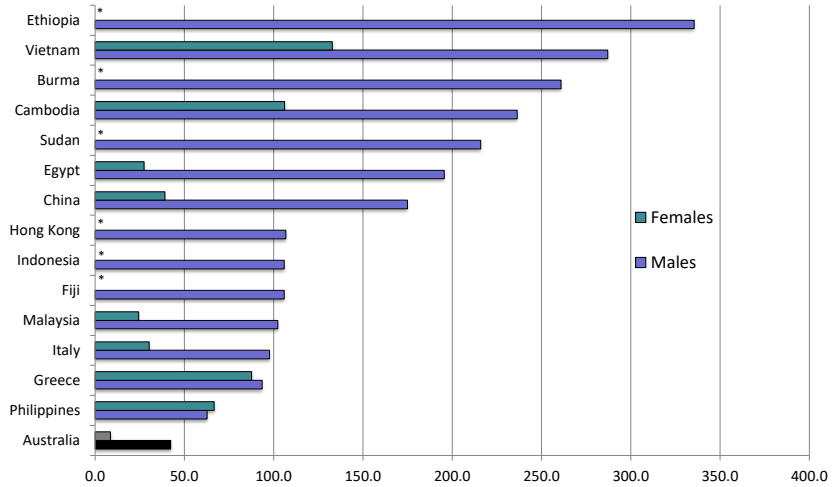
- Estimated 240,000 living with CHB<sup>1</sup>
- Majority acquired infection at birth or in early childhood in an endemic region



1. National Hepatitis B Mapping Project 2016 2. Polaris Observatory Collaborators 2018

# Reflection in liver cancer data

Age-standardized rate of HCC according to country of birth and sex, Victoria, 2004-2013



Carville 2018

## Impacts for health

- Health literacy and navigating the system
- Impacts of racism and discrimination
- Access to resources and information



- 澳大利亞肝炎協會 (Hepatitis Australia)  
電話: 1300 437222 (全國撥打無費, 轉接  
到各州或領地的分支機構)  
www.hepatitisaustralia.com
- 癌症協會熱線 13 1120  
或按號碼轉站:  
http://www.cancer.org.au/home.htm
- 澳大利亞HIV聯誼會  
www.aishm.org.au
- 澳大利亞藥物服務會  
www.gesa.org.au/hepatitis.cfm
- 全國乙型肝炎患者協會  
請見下列網址的 "Resources - Patients"  
(國語 - 粵語) 部分:  
www.alliance.hepatitis.org.au



## Estimating hepatitis B prevalence

- The last national serosurvey which assessed hepatitis B prevalence was in 2002
- Notifications only identify diagnosed cases
- Modelling methods incorporate existing data and the known epidemiology of chronic hepatitis B

---

The Peter Doherty Institute for Infection and Immunity  
A joint venture between The University of Melbourne and The Royal Melbourne Hospital

## Data sources

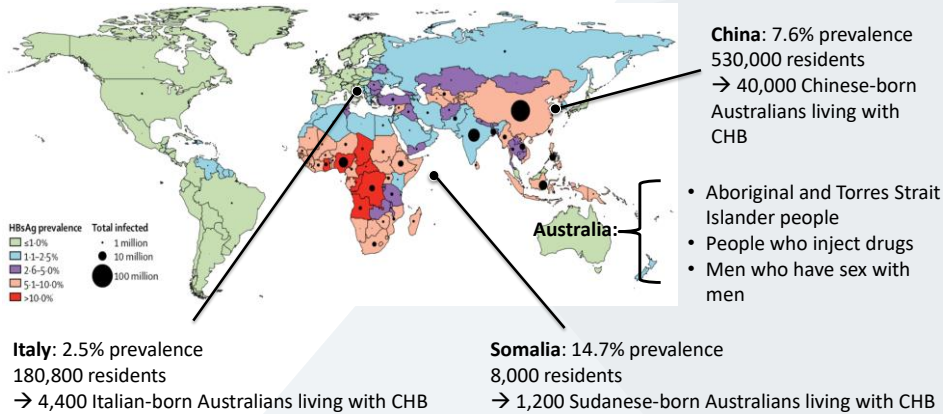
- Censuses of Population and Housing 2011 and 2016
  - Number of residents according to area of residence and country of birth and Aboriginal and Torres Strait Islander status
- Population-specific HBV seroprevalence data
  - Antenatal women<sup>1,2</sup>, adjusted upwards<sup>3</sup>
  - Aboriginal and Torres Strait Islander people<sup>4</sup>
  - People who inject drugs and men who have sex with men<sup>5</sup>
- Estimates of priority population size
  - National Drug Strategy Household Survey; Australian Study of Health and Relationships

---

The Peter Doherty Institute for Infection and Immunity  
A joint venture between The University of Melbourne and The Royal Melbourne Hospital

1. Reekie 2013, and unpublished data 2. Schweitzer 2015 3. Cowie 2010 4. Graham 2013 5. MacLachlan 2013

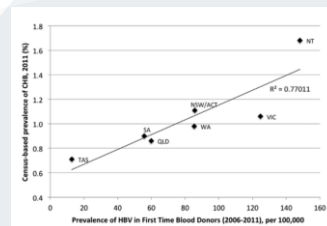
## Estimating hepatitis B prevalence



The Peter Doherty Institute for Infection and Immunity  
A joint venture between The University of Melbourne and The Royal Melbourne Hospital

## Estimating hepatitis B prevalence

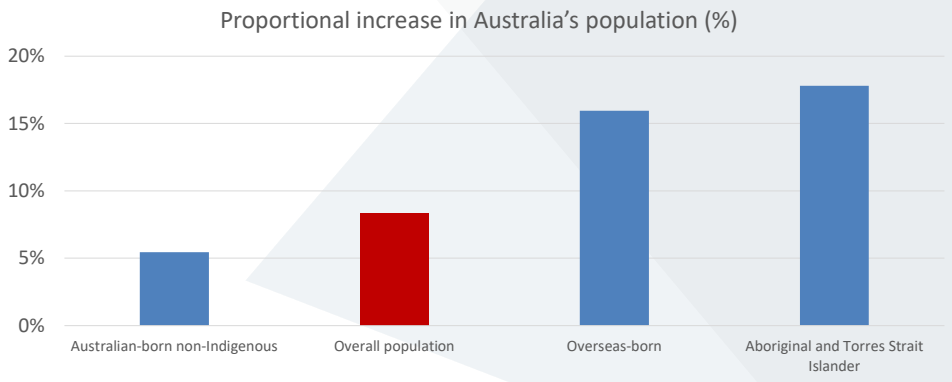
- Validated using other datasets:
  - Prevalence in blood donations
  - Notified cases by country of birth
  - National serosurvey data
- Allows identification of prevalence at geographically specific regions and for each community in Australia



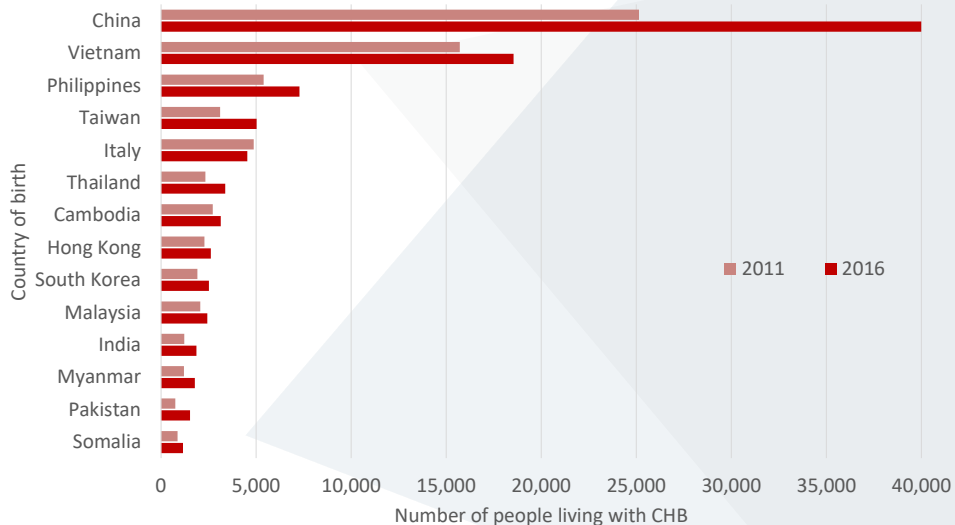
The Peter Doherty Institute for Infection and Immunity  
A joint venture between The University of Melbourne and The Royal Melbourne Hospital

## Overall changes in Australia's population living with CHB, 2011 to 2016

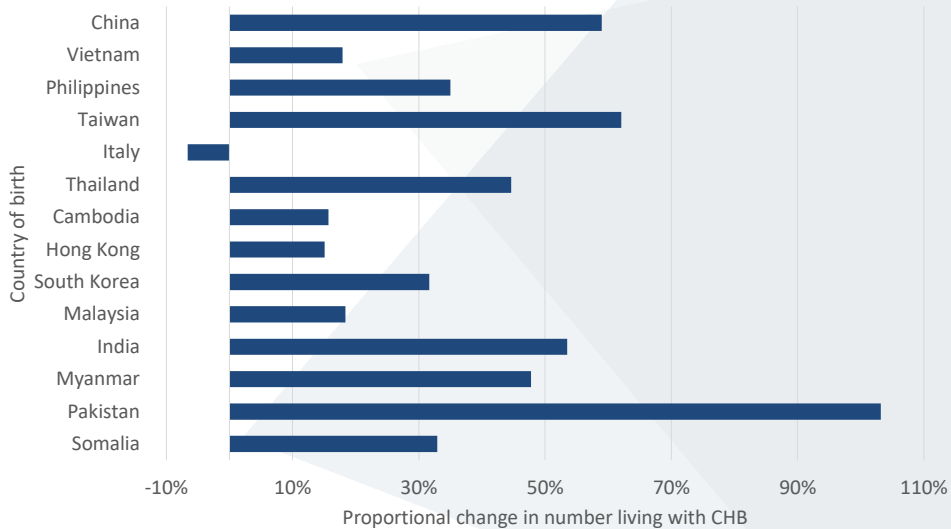
- Increased from 197,000 in 2011 to 238,000 in 2016
  - 20% increase
  - Compared to overall population increase of 8%



## Changes for most common countries of birth, 2011 to 2016



## Proportional change by country of birth, 2011 to 2016



## Drivers of changes

- Increased numbers of skilled migrants and international students from some regions
  - Particularly China and Taiwan
- Shifts in predominant refugee populations
  - Increases from Middle East, decreases from Asia-Pacific
- Ageing in historically predominant populations, especially Mediterranean

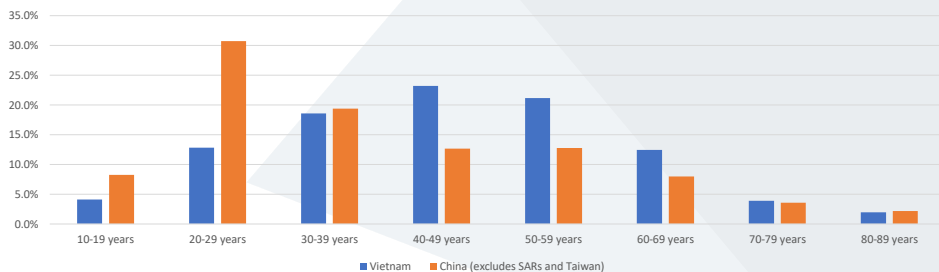
## Drivers of changes

- Increased numbers of skilled migrants and international students from some regions
  - Particularly China and Taiwan
- Shifts in predominant refugee populations
  - Increases from Middle East, decreases from Asia-Pacific
- Ageing in historically predominant populations, especially Mediterranean

The Peter Doherty Institute for Infection and Immunity  
A joint venture between The University of Melbourne and The Royal Melbourne Hospital

## Implications for practice and policy

- Identifying priority populations
- Health needs based on migration stream:
  - Newly arrived refugees and asylum seekers
  - International students
  - Clinical impacts of age distribution



## Future work

- More detailed age-specific estimates to account for impact of vaccination
- Improvement of cultural and linguistic diversity data in diagnosis, treatment data
- Application of language data to inform linguistic diversity

## Summary

- Overall number of people living with CHB in Australia has continued to increase
- Distribution according to priority population has shifted
  - Increased representation from younger migrants from Asia-Pacific
- Implications for diagnosis and engagement in care



## Acknowledgements

### **WHO Collaborating Centre for Viral Hepatitis**

#### **Doherty Institute – Epidemiology Unit**

Nicole Allard, Chelsea Brown, Kylie Carville,  
Jennifer MacLachlan, Karen McCulloch,  
Ashleigh Qama, Nicole Romero, Laura  
Thomas

### **Australasian Society for HIV, Viral Hepatitis and HIV Medicine**

Katelin Haynes, Vanessa Towell

### **Our Research Advisory Group**

### **Research & Programmatic Funding**

Department of Health, Australian Government  
Department of Health and Human Services,  
Victorian Government  
Melbourne Health Office for Research & RMH  
Foundation  
Cooperative Research Centre for Spatial  
Information  
Peter Doherty Institute for Infection and Immunity

### **Data Custodians**

Department of Health, Australian Government  
Department of Human Services, Australian  
Government  
The Kirby Institute, UNSW  
Australian Bureau of Statistics  
Australian Health Practitioner Regulation Agency

[www.doherty.edu.au/whoccvh](http://www.doherty.edu.au/whoccvh)