The investment case – a key gap in preventing the elimination of viral hepatitis.

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Burnet Institute and The Alfred Hospital
Acknowledgements

Burnet Institute

Alisa Pedrana, Jess Howell, Sophia Schroeder, Nick Scott, Christian Kuschel, Joe Doyle, Amanda Wade, Rachel Sacks Davis, Paul Dietze, Peter Higgs, Mark Stoove, Sally von Bibra and many others

WISH Forum members and Qatar Foundation

St Vincent’s Hospital – Alex Thompson, David Iser

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Department of Health, Health services – primary and tertiary hospitals

Others – Jeff Lazarus, Andrew Hill, Scott Bowden, John Dillon, Sanjeev Aurora

Disclosures

Gilead Science
Abbvie
BMS
Global impact

Viral hepatitis is the 7th biggest annual killer worldwide
- Hepatitis B is responsible for over 700,000 deaths annually

Global hepatitis B prevalence in millions (total 257 million)

Source: WHO, Global hepatitis report 2017
Global impact

Viral hepatitis is the 7th biggest annual killer worldwide

• Hepatitis B is responsible for over 700,000 deaths annually
• Hepatitis C is responsible for nearly 400,000 deaths annually

Global hepatitis C prevalence in millions (total 71 million)
Global impact

Viral hepatitis is the 7th biggest annual killer worldwide

- Hepatitis B is responsible for over 700,000 deaths annually
- Hepatitis C is responsible for nearly 400,000 deaths annually
- The number of deaths are increasing, contrasting with falls in HIV, TB & Malaria

Global deaths due to VH, TB, HIV and malaria
WHO targets for reducing new infections and stopping deaths
For the first time we have the opportunity to eliminate viral hepatitis globally

There is a vaccine to prevent hepatitis B

We have the tools to achieve the elimination of viral hepatitis as a public health threat, what we need is the commitment, leadership and funding to make it happen.

Community awareness of hepatitis B vaccine

- Yes, I was aware of this
- No, I was not aware of this

Australia
China
France
India
Malaysia
Qatar
UK
US

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There is a cure for hepatitis C

Community awareness of hepatitis C cure

- Yes, I was aware of this
- No, I was not aware of this

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<thead>
<tr>
<th>Country</th>
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<tr>
<td>US</td>
<td>40%</td>
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</table>
Game changer – direct acting antiviral

Simpler, safer and more effective
So how are we tracking towards elimination?

Only 12 countries are on track to meet WHO hepatitis C elimination targets:

- Australia
- Egypt
- France
- Georgia
- Iceland
- Italy
- Japan
- Mongolia
- Netherlands
- Spain
- Switzerland
- UK
Barrier – the price of treatments

MEDICINES SHOULDN’T BE A LUXURY

Gram for gram, this hepatitis C drug is 67 times more expensive than gold.
Drug development

- Drug development
  - Research and development
  - Registration
  - Clinical trials
- Marketing approval
  - Food and Drug Administration;
    European Medicines Agency;
    Therapeutic Goods Administration.
- Pricing
  - Production
  - Marketing
- Pathways to access
  - Centralised price negotiations
  - Licensing
  - Joint procurement
  - Personal importation schemes
Barriers – some countries – restricted access
Stigma and discrimination

Executive summary
In September, 2015, the member states of the UN endorsed Sustainable Development Goals (SDGs) for 2030, which aspire to human-rights-centred approaches the same light as potentially dangerous foods, tobacco, and alcohol, for which the goal of social policy is to reduce potential harms.

Public health and international drug policy

“The war on drugs has been an utter failure.”
- BARACK OBAMA 1/21/04

The Lancet Commissions
Investment framework for viral hepatitis elimination

Key enablers
- Political commitment and advocacy
- Public support and community mobilization
- Supportive laws, policies and guidelines
- Community-focused responses
- Skilled workforce
- Medicines and equipment
- Research and innovation

National activities
- National hepatitis plan and local investment case
- Surveillance and monitoring
- Raising awareness and stigma reduction
- Prevention
- Testing, linkage to care and treatment
- Health systems strengthening
- Investment and financing for sustainability

International activities
- Make global investment case
- Raise profile of VH
- Create international guidelines, guidance and tools
- Set and monitor global targets
- Fund and facilitate access to affordable medicines, diagnostics and prevention
- Identify and support priority activities
- Invest in new technologies (hepatitis B cure and hepatitis C vaccine)

ACTIVITY

FINANCING SOURCE
- Domestic
- Private sector
- International funders and organizations

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- Political commitment and advocacy
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ACTIVITY

RETURN ON INVESTMENT

Direct economic benefits
- Healthcare cost savings
- Disability-adjusted life years averted
- Quality-adjusted life years gained

Indirect economic benefits
- Workforce and leisure productivity
- Household security
- National and regional security

Cross-sectoral economic benefits
- Pathways to Sustainable Development Goals (SDGs)
- Stronger health systems
- Stronger partnerships and robust financial mechanisms

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15
Many countries are implementing effective viral hepatitis strategies

**Egypt**
Maximizing return on investment in hepatitis C through rapid scale-up

**China**
Progress against hepatitis B through national commitments, public–private partnerships and a public health approach
China’s efforts to combat hepatitis B have **prevented 90 million cases** of chronic hepatitis B infection; **24 million fewer people are carriers**.
Egypt

In 2015, more than 3.8 million Egyptians (7% prevalence) had chronic hepatitis C infection.

More 1.5 million+ patients treated to date with cure rates above 90%.

- 2003: MoH launches National Infection Control Program to combat hepatitis C
- 2007: First national strategy for viral hepatitis released; establishment of specialised treatment centres
- 2014: MoH and pharmaceutical companies agree to procure DAAs at prices set for LMIC; local production of DAAs commence
- 2014: Launch of Action Plan, including 250,000+ DAA treatments funded per year and national patient registry
- 2017: Government starts mass hepatitis C screening initiatives
- 2018: Mass screening of ~6 million in 30 days in October ~200,000 chronic hepatitis cases identified

>1 million cases of obesity, 20,000 of diabetes and hypertension identified.

~200,000 chronic hepatitis cases identified.
Impact of elimination and progress scenarios

Elimination strategy - 90% of people living with hepatitis C diagnosed and 80% of diagnosed people started on treatment by 2030

Progress strategy – 45% of people living with hepatitis C diagnosed and 80% of diagnosed people started on treatment by 2030
Global incidence

- Elimination
- Progress
- Status quo
Hepatitis C elimination becomes cost saving by 2030

Annual direct costs become cheaper than the status quo
Investing in viral hepatitis elimination provides multiple economic benefits

- **Up-front**
  - Investment is required up-front, resulting in negative benefit in initial years
  - Net economic benefits begin to be realized in the progress and elimination scenarios

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How can we eliminate viral hepatitis by 2030?

Integrate activities into existing health programs to strengthen infrastructure, improve co-ordination and optimize resource allocation

Strengthen health systems, including improving workforce skills and investments in technology and surveillance systems

Increase access to low-cost diagnostics and treatment through advocacy, international support, private partnerships and community mobilization

Use country-specific investment cases to mobilize domestic, private and international resources and optimize resource allocation

Build political commitment and support for VH elimination

Embed in the agenda for sustainable development – UHC
Multipronged approach
Raise awareness.

Ask us about the new HEP C treatments today! This is a safe place to ask about hepatitis C.
Prevention – high quality harm reduction
Increase testing – innovative approaches required
Treatment - no one “best” model of care
Vaccines

- Hepatitis C – we need one
- Hepatitis B – birth dose needs to be rolled out - everywhere
Recent modelling by our group - concentrated epidemics among PWID

- Introduction of a $200 vaccine reduces HCV incidence especially in settings where there is 75% or greater initial prevalence
- A vaccine reduces the
  a) frequency of HCV testing required to achieve the largest impact on epidemic
  b) and the number of treatments in all settings and associated costs
- The strategies where a vaccine was available were cheaper, provided it can be procured for under $77, $263 or $289 in low, medium and high prevalence settings
Involve everyone - and most importantly the affected communities
Acknowledgements

**Burnet Institute**

Joe Doyle, Alisa Pedrana, Amanda Wade, Nick Scott, Rachel Sacks Davis, Paul Dietze, Peter Higgs, Mark Stoove, Bridget Draper, Caitlin Douglas, Bridget Williams, Evelyn Wong, Stelliana Goutzamanis, Ned Latham, Emma McBryde, David Iser,

Sally von Bibra, Amy Kirwin and all the members of the TAP and MIX field teams and others in the Viral Hepatitis Group and Drugs and Alcohol Group

**St Vincent’s Hospital** – Alex Thompson, David Iser

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WISH Team, WISH Viral Hepatitis Forum Members, and country experts

- Alisa Pedrana, Jess Howell, Sophia Schröder, Nick Scott, Christian Kuschel, Burnet Institute
- Didi Thompson and Lisa Aufegger WISH, Imperial College London
- Annette Sohn, Director and Vice President, TREAT Asia/amfAR, The Foundation for AIDS Research
- David Wilson, Senior Program Officer in Decision Science, Bill & Melinda Gates Foundation
- Ellen ‘t Hoen, Director Medicines Law & Policy, and researcher Global Health Unit, University Medical Center Groningen
- Gottfried Hirnschall, Director, Department of HIV/AIDS and Global Hepatitis Programme, WHO
- Jeffrey Lazarus, Associate Professor, Barcelona Institute for Global Health (ISGlobal), Hospital Clinic, University of Barcelona
- John Thwaites, Chair, Monash Sustainable Development Institute, Australia
- Manik Sharma, Consultant in Gastroenterology and Hepatology, Hamad Medical Corporation
- Mark Thursz, Professor of Hepatology, Imperial College London
- Olufunmilayo Lesi, Associate Professor of Medicine, College of Medicine, University of Lagos
- Rifat Atun, Professor of Global Health Systems, Harvard University
- Ricardo Baptista Leite, Member of Parliament, Portuguese National Parliament
- Sharon Hutchinson, Professor of Epidemiology and Population Health, Glasgow Caledonian University
- Raquel Peck, CEO, World Hepatitis Alliance
- Tracy Swan, HIV/AIDS and hepatitis C treatment activist and independent consultant