

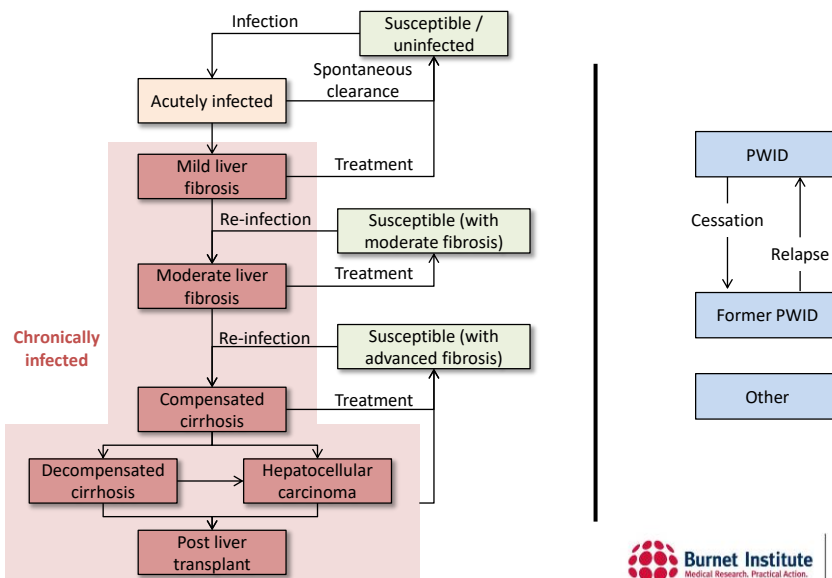
Recommendations for hepatitis C virus testing among people who inject drugs in Australia

Nick Scott

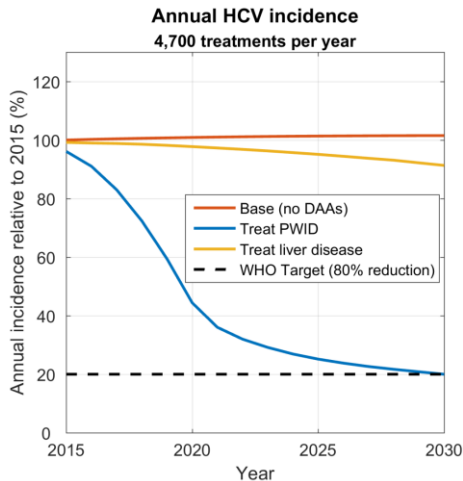
Australasian Viral Hepatitis Elimination Conference

August 2017

Model overview



Modelling: elimination is possible



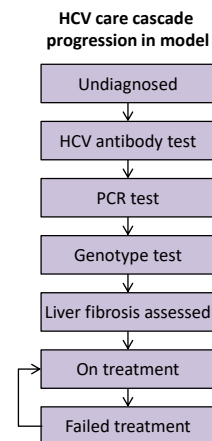
- In Australia, treatment scale-up is required among PWID to reach the WHO's incidence reduction target.
- Targeting treatments is necessary.

Scott et al. *Gut* 2017



From theory to practice: treatment scale-up and the cascade of care

- Once infected, people require:
 - Antibody test (to determine Ab+)
 - PCR test (to determine RNA+, i.e. active infection)
 - Genotype test (to determine treatment protocol)
 - Liver disease test (to assess risks)



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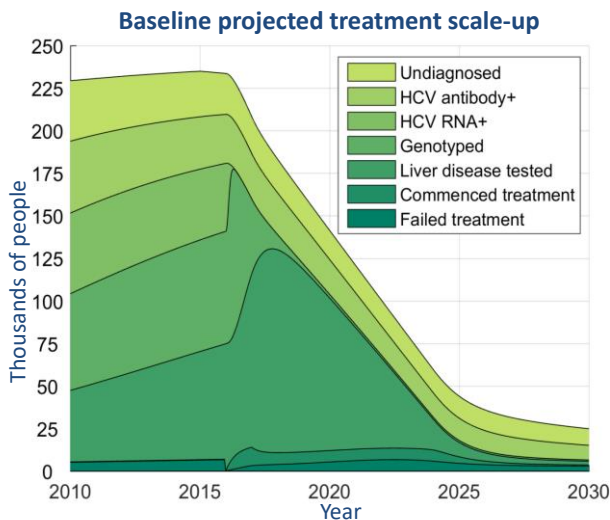
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- Liver disease test (to assess risks)

Not required in future for people with APRI < 1?

Not required in future?



Projected impact of treatment scale-up: people living with HCV



Scott et al. *IJD* 2017

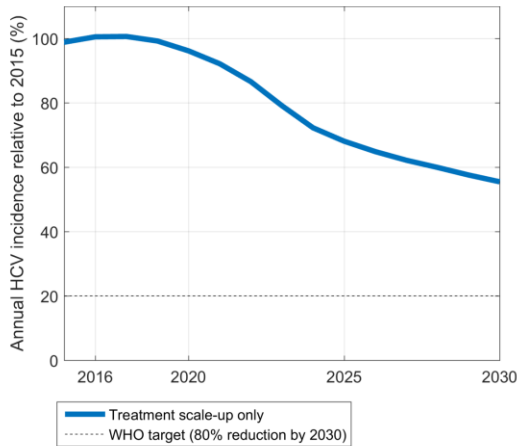
Based on current treatment uptake:

- ~230,000 in 2015
- ~24,000 by 2030



Treatment availability alone will not be enough to reach elimination targets

Projected incidence after treatment scale-up

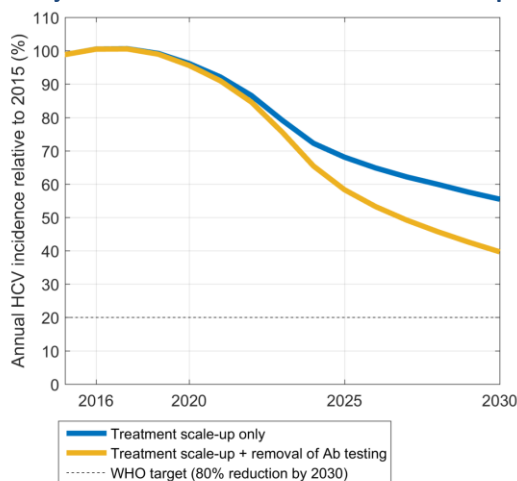


- Projected to reduce incidence by 45%
- **The majority (74%) of remaining infections were undiagnosed and among PWID**
 - Continued transmission



Improving retention in care

Projected incidence after treatment scale-up



Complete follow-up after RNA testing can increase incidence reduction

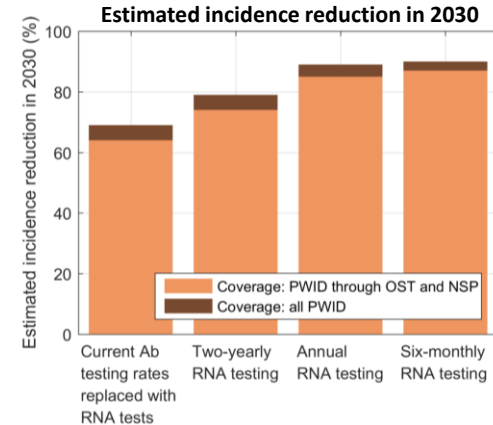
- *Rapid point-of-care antibody testing?*
- *Replacing antibody with RNA testing for screening?*



Reaching our target

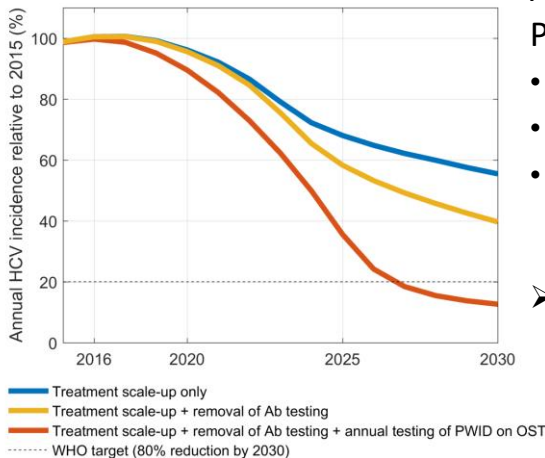
If 100% follow-up
Ab → RNA testing
were achieved:

- Annual testing of PWID would reach WHO incidence target (80% reduction)
- Even with less than perfect coverage such as testing through OST and NSP sites



Projected incidence reduction

Projected incidence after treatment scale-up



Annual RNA testing of PWID is needed to:

- Improve diagnosis rates
- Reduce loss to follow-up
- Generate enough treatment demand for treatment-as-prevention

➤ **91% reduction in incidence by 2030**



Limitations

- Treatment-as-prevention should be considered in combination with other methods of harm reduction
- The model does not consider the distribution of risk behaviour in detail
 - Very high risk individuals may have additional needs
 - Geographical distribution of infection
 - Little is known about re-infection rates in Australia
- Parameters and calibration data come from a variety of sources



Conclusions

- Treatment uptake in Australia is projected to:
 - Reduce the number of people living with HCV from ~230,000 to ~24,000 by 2030
 - Reduce incidence by 45%
- Majority of remaining infections undiagnosed and among PWID
 - Transmission can continue
- Increased testing frequency and retention in care are both required among PWID to achieve incidence reduction target
 - **Annual RNA testing through OST and NSP services may be sufficient**



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