Australia’s universal access strategy: 
Lump-sum remuneration and reaching marginalized populations

Scientia Professor Gregory Dore
Disclosures

- Research grants, travel support, and honoraria: AbbVie, Gilead, Merck
Australian Government DAA program

Features

- **Mar 2016**: unrestricted DAA access – no liver disease stage, drug and alcohol use restrictions
- All patients with chronic HCV aged 18 years+
- Involvement of non-specialists in DAA prescribing
- Minimal administration for clinicians; minimal co-payment for patients ($AUD 7–37/month)
- DAA dispensing in hospital and community pharmacies
- No cap on treatment numbers – including retreatment for failure or reinfection
- Cap on annual expenditure – exact details confidential, but probably $AUD 200-250 M
- 5 year contract period: Mar 2016–Feb 2021

*WIN, WIN, WIN*
<table>
<thead>
<tr>
<th>DAA</th>
<th>US licence</th>
<th>US list price ($US, 12 weeks)</th>
<th>AUS registered (TGA approved)</th>
<th>PBAC recommended</th>
<th>AUS funded (PBS listed)</th>
<th>US licence to AUS funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sofosbuvir + ribavirin (+PEG-IFN)</td>
<td>DEC 2013</td>
<td>$84,000</td>
<td>JUN 2014</td>
<td>MAR 2015</td>
<td>MAR 2016</td>
<td>27 months</td>
</tr>
<tr>
<td>Sofosbuvir/ledipasvir</td>
<td>OCT 2014</td>
<td>$84,000</td>
<td>MAY 2015</td>
<td>MAR 2015</td>
<td>MAR 2016</td>
<td>17 months</td>
</tr>
<tr>
<td>Paritaprevir/r/ombitasvir + dasabuvir</td>
<td>DEC 2014</td>
<td>$83,000</td>
<td>JUL 2015</td>
<td>JUL 2015</td>
<td>MAY 2016</td>
<td>20 months</td>
</tr>
<tr>
<td>Sofosbuvir + daclatasvir</td>
<td>JUL 2015</td>
<td>$146,000</td>
<td>JUN 2015</td>
<td>MAR 2015</td>
<td>MAR 2016</td>
<td>8 months</td>
</tr>
<tr>
<td>Elbasvir/grazoprevir</td>
<td>JAN 2016</td>
<td>$54,600</td>
<td>AUG 2016</td>
<td>JUL 2016</td>
<td>JAN 2017</td>
<td>12 months</td>
</tr>
<tr>
<td>Sofosbuvir/velpatasvir</td>
<td>JUN 2016</td>
<td>$75,000</td>
<td>DEC 2016</td>
<td>NOV 2016</td>
<td>AUG 2017</td>
<td>14 months</td>
</tr>
<tr>
<td>Glecaprevir/pibrentasvir</td>
<td>AUG 2017</td>
<td>$39,600 ($26,400; 8 wks)</td>
<td>JAN 2018</td>
<td>NOV 2017</td>
<td>AUG 2018</td>
<td>12 months</td>
</tr>
<tr>
<td>Sofosbuvir/velpatasvir/voxilaprevir</td>
<td>JUL 2017</td>
<td>$74,760</td>
<td>MAR 2018</td>
<td>MAR 2018</td>
<td>MAR 2019</td>
<td>20 months</td>
</tr>
</tbody>
</table>
HCV treatment uptake in Australia: 1997–2018

- Estimated number of people initiating treatment

- IFN-based
- IFN-free

Compassionate DAA access

First-generation DAAs available (in combination with PEG-IFN)

Liver biopsy requirement removed

PEG-IFN + RBV combination available

IFN + RBV combination available

Government-funded DAA programme

74,600 DAA treated during 2014–2018 = 40% of chronic HCV population

Adapted from Dore GJ, Hajarizadeh B. Infect Dis Clin N Am 2018;32:269–79
The emergence of pan-genotypic DAA therapy

Monitoring hepatitis C treatment uptake in Australia, Issue 10, June 2019
Increasing proportion of non-specialist treatment
High DAA efficacy across all sub-populations

REACH-C study: Per protocol analysis* (n=4,513)

<table>
<thead>
<tr>
<th>HIV Status</th>
<th>Overall (n=4513)</th>
<th>Positive (n=243)</th>
<th>Negative (n=4164)</th>
<th>Yes (n=1011)</th>
<th>No (n=3484)</th>
<th>Yes (n=658)</th>
<th>No (n=3826)</th>
<th>Yes (n=500)</th>
<th>No (n=3151)</th>
<th>Yes (n=746)</th>
<th>No (n=3173)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVR (%)</td>
<td>95.9%</td>
<td>97.9%</td>
<td>95.8%</td>
<td>92.9%</td>
<td>96.8%</td>
<td>93.6%</td>
<td>96.3%</td>
<td>96.6%</td>
<td>95.4%</td>
<td>97.3%</td>
<td>95.3%</td>
</tr>
</tbody>
</table>

Initiations from Mar 2016 – Dec 2017

*(n=903 with unknown SVR; 17%)

IDU: injecting drug use; OST: opioid substitution therapy
High DAA efficacy across all service models

REACH-C study: Per protocol analysis* (n=4,513)

<table>
<thead>
<tr>
<th>Service Model</th>
<th>SVR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist Liver Clinic</td>
<td>95.3%</td>
</tr>
<tr>
<td>General Practice</td>
<td>96.4%</td>
</tr>
<tr>
<td>Sexual Health Service</td>
<td>98.8%</td>
</tr>
<tr>
<td>Community Health Clinic</td>
<td>98.7%</td>
</tr>
<tr>
<td>Drug and alcohol service</td>
<td>97.6%</td>
</tr>
<tr>
<td>Prison</td>
<td>95.6%</td>
</tr>
</tbody>
</table>

Initiations from Mar 2016 – Dec 2017

*(n=903 with unknown SVR; 17%)
DAA uptake high in current PWID

Annual Needle Syringe Program Survey (n = 2,000-2,500)

Ever HCV Treatment among Chronic HCV (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>10%</td>
</tr>
<tr>
<td>2016</td>
<td>24%</td>
</tr>
<tr>
<td>2017</td>
<td>41%</td>
</tr>
<tr>
<td>2018</td>
<td>55%</td>
</tr>
</tbody>
</table>
HCV elimination in HIV population

HCV RNA prevalence among HIV/HCV cohort (antibody +ve)

% HCV RNA+

- 2014: 82% (N=298/362)
- 2015: 79% (N=285/360)
- 2016: 76% (N=289/379)

Martinello M, et al. CID 2019
HCV elimination (near) in QLD prison: Lotus Glen

HCV burden within prison (800-850 inmates)

% HCV RNA+

- 2016 (Feb): 12.6% (N=95/759)
- 2017 (Feb): 4.3% (N=35/815)
- 2017 (Dec): 1.1% (N=9/841)

Bartlett S, et al. CID 2018
ESLD and liver-related deaths: NSW data linkage

Decompensated cirrhosis

Hepatocellular carcinoma

Liver-related deaths

Australia’s DAA program: the “Netflix” model

The estimated total no. of patients in February 2018 was 47,122. Estimate+projection includes 104,223 people and yields a price per patient of AU$9,595 (U.S.$7,352). Sensitivity analysis includes 71,372 people and yields a price per patient of AU$14,011 (U.S.$10,736). Government estimate includes 61,500 people and yields a price per patient of AU$16,260 (U.S.$12,460).
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@GregDore2  for “All things Hep C”