The Scottish Hepatitis C Action Plan 4.0

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Disclosures & Acknowledgments

• Disclosures as in the booklet
• Thanks to Prof David Goldberg, Prof Sharon Hutchinson and Dr Hamish Inness
Scotland

Population : 5,200,000
Ethnic Mix : 88% Scottish
GDP per capita : $40,000
Government : Devolution from UK Government since 1999
Modelled prevalent number of HCV infected IDUs in Scotland according to stage of HCV disease, 1960-2030

- Recovered from HCV
- Cleared HCV from treatment
- Mild disease
- Moderate disease
- Cirrhosis

Graph showing the number of living IDUs (thousands) by stage of HCV disease from 1960 to 2020. The graph includes data up to 2008. The source is Hutchinson et al. Hepatology 2005.
Modelled number of IDUs with cirrhosis in Scotland by different uptake rates of HCV antiviral therapy, 2008-2030

Uptake of therapy by 225 IDUs per year

Uptake of therapy by 1,000 IDUs per year

Uptake of therapy by (up to) 2,000 IDUs per year

Living IDUs with cirrhosis

- Cirrhosis prevented from antiviral therapy*
- Compensated cirrhosis
- Decompensated cirrhosis
- HCC

* Excludes those prevented from antiviral therapy prior to 2008
Aims

• To prevent the spread of Hepatitis C, particularly among IDUs.
• To diagnose Hepatitis C infected persons, particularly those who would most benefit from treatment.
• To ensure that those infected receive optimal treatment, care and support.
Hepatitis C Action Plan for Scotland

Phase I: Sept 2006-March 2008 (41 Actions)

- Gathering evidence to inform Phase II Actions
- Generating Phase II Actions and the Phase II Action Plan
Hepatitis C Action Plan for Scotland

Phase II

• Launched: May 2008 by Health Minister

• 34 Actions

• All Actions to develop/improve services:
  Prevention
  Diagnosis
  Treatment/Care
Hepatitis C Action Plan: Phase II 2008-2011
Principles and Characteristics

The Plan:

- is based on an extensive evidence base and consultation process
- is a high level one
- embraces all service needs
- adopts a multidisciplinary approach
- covers all geographical areas and settings
- is performance managed
- addresses inequalities
- is supported by serious investment
**Action 1:**

Each NHS Board will have, or be affiliated to, a Managed Care Network (MCN) for Hepatitis C; this Network should comprise representatives of all stakeholder groups including those for the prison service, local authority social work, the voluntary sector, addictions/mental health, and people living with and affected by Hepatitis C. The Network should be guided in its practice through the use of “care” guidelines, prepared by the Hepatitis C Action Plan’s Testing, Treatment, Care and Support Working Group and SIGN Guidelines on Hepatitis C.

**Outcome (Desired):**

MCNs for all NHS Boards established and accredited.

**Responsibility:**

**Lead Organisation:**

NHS Boards.
Stakeholder maps can help shape an effective network and action plan to improve service delivery.
**Action 6:**

Testing, Treatment, Care and Support services within each NHS Board will be developed to increase the numbers of persons undergoing therapy (currently 450/year).

**Outcome (Desired):**

**Responsibility:**

Lead Organisation: NHS Boards.

**Performance Indicators:**
Number of persons offered therapy. Number of persons commenced on antiviral therapy. Proportion of those having received antiviral therapy who achieved a sustained viral response.

**Timescale:**
Targets for 2008/2011 as indicated.
Simplifying the Pathway to Cure Dried Blood Spot test Roll out for HCV in Tayside

- Conventional testing with elution step
  - HCV ab, HIV ab
  - HCV-PCR & HBsAg
  - Works where venepuncture difficult

- Over 100 staff trained in Blood spot testing, mainly 3rd sector
- HCV testing has become embedded in clinical practice (centres across Tayside)
  - Drug problem centres
  - Drug Testing and Treatment Order
  - Homeless outreach,
  - Social work departments,
  - Criminal Justice,
  - Minor injury units
  - Prisons
  - Needle exchanges
  - Addaction

- 81% of tests are carried out by support workers, without clinical qualifications

If you can test or read a test result you can refer
Diagnosis: Progress

Number of people newly diagnosed with HCV (Ab+) per year in Scotland, by referral source.
Diagnosis: International Context

Proportion of the HCV infected population in Scotland diagnosed:
(a) Estimated (2006-2014) and
(b) Projected (2014-2025)

Estimated % of HCV infected population diagnosed

Adapted from Cornberg et al. Liver Int 2011
<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living with chronic infection*</td>
<td>38,000</td>
<td>37,600</td>
</tr>
<tr>
<td>% Diagnosed*</td>
<td>38%</td>
<td>52%</td>
</tr>
<tr>
<td>New diagnoses per year</td>
<td>1,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Attend Clinic per year*</td>
<td>3,500</td>
<td>5,100</td>
</tr>
<tr>
<td>Treated per year</td>
<td>450</td>
<td>1,050</td>
</tr>
<tr>
<td>Developed End-stage Liver Disease (ESLD) per year*</td>
<td>90</td>
<td>150</td>
</tr>
</tbody>
</table>

* Estimates
Estimated number of people living with chronic HCV infection each year in Scotland

- Without scale-up in treatment & prevention efforts
- With scale-up in treatment & prevention efforts

Year:
- 2006
- 2009
- 2012

N:
- 36,000
- 37,000
- 38,000
- 39,000
- 40,000
- 41,000
- 42,000
Preventing Disease: Progress

Trends in the number of diagnosed HCV (Ab+) people hospitalised for the first time with ESLD* in Scotland, 1998-2012

* Relates to a primary or secondary hospital diagnosis (ICD code) of either ascites, hepatic encephalopathy, hepatic failure, HCC, Hepato-renal syndrome or bleeding oesophageal varices.
Excess risk of a liver and an alcohol related hospital episode post treatment (in SVR & non-SVR patients) AND post diagnosis (in spontaneously resolved patients), compared to the general population

* Age, sex & year standardised

Do we need to improve diagnosis in those older in age?

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Estimated HCV Ab+ Undiagnosed PWID, 2009* (N~27,000)</th>
<th>New HCV Ab+ Diagnoses, 2009-2012 (N~8,200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-34 years</td>
<td>29% (95% CI 15-42%)</td>
<td>45%</td>
</tr>
<tr>
<td>35-64 years</td>
<td>71% (95% CI 58-85%)</td>
<td>55%</td>
</tr>
</tbody>
</table>

* Prevost et al. Unpublished, 2014
Age distribution of people newly diagnosed with HCV (Ab+) in Scotland during 2009-2012, by referral setting
Why do we treat HCV

- Prevention of Liver failure and HCC
- So a perpetual program of treatment
- Unless prevention is improved
- Treatment as Prevention
- The Eradication agenda
  –The 600% SVR
Eradicate HCV project: a pilot of treatment as prevention in PWID

**Treat**
- 20–40 very active PWID per year
- Collecting needles and injecting
- Not required to change anything
- Treatment with
  - INF/Riba and Telaprevir

**Recruit**
- From needle exchange
  - Bring a friend, mine the vein
    - Contingency management
    - LUCY mobile phone support
    - Low threshold methadone

**End points**
- Year 2 numbers in treatment and SVR
- Year 5, 7 and 10 HCV population prevalence
  - NESI, needle exchange, entering methadone

OST: opiate substitution therapy
NESI: Needle Exchange Surveillance Initiative
Modelled “Routes” in year-2015+

PRIORTO YEAR-2015

POSSIBLE YEAR 2015+ “ROUTES”

1: CONTINUE STATUS-QUO
2: ACTIVE PWID FOCUS
3: ADVANCED FIBROSIS FOCUS
4: NO PRIORITISATION

Disease stage and PWID status

- Active PWID & Mild fibrosis
- Active PWID & Moderate fibrosis
- Active PWID & Cirrhosis
- Not Active PWID & mild fibrosis
- Not Active PWID & moderate fibrosis
- Not Active PWID & Cirrhosis
Modelled number of incident cases of Severe Liver Morbidity (SLM), according to treatment strategy*

Treating 1000 patients per year

<table>
<thead>
<tr>
<th>Year</th>
<th>Continue status-Quo</th>
<th>Active PWID focus</th>
<th>Advanced Fibrosis Focus</th>
<th>No Prioritisation</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>157</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2015</td>
<td>181</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2020</td>
<td>169</td>
<td>181</td>
<td>181</td>
<td>181</td>
</tr>
<tr>
<td>2025</td>
<td>151</td>
<td>168</td>
<td>155</td>
<td>188</td>
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<tr>
<td>2030</td>
<td>129</td>
<td>149</td>
<td>120</td>
<td>88</td>
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Treating 2000 patients per year

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<td>2030</td>
<td>70</td>
<td>126</td>
<td>111</td>
<td>69</td>
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* IFN-free/sparing availability

Legend:
- Blue: Continue status-Quo
- Red: Active PWID focus
- Green: Advanced Fibrosis Focus
- Orange: No Prioritisation

- Treating 1000 patients per year
- Treating 2000 patients per year
Modelled impact on: (A) incident chronic infections, against (B) incident ESLD cases, when treating 2,000 patients per year, according to treatment strategy*

(A)

(B)

*Continued status-Quo  Active PWID focus  Advanced Fibrosis Focus  No Prioritisation
TARGETS
During 2015-2020 at least 1,500 people per year will be initiated onto antiviral therapy in Scotland. This represents a near 20% increase on the number of people treated in 2014\textsuperscript{55}.

Assuming this treatment target is met, the Scottish Government is aiming for a 75% reduction in the annual number of people developing hepatitis C-related liver failure and/or liver cancer by 2020. This equates to a reduction from around 200 in 2013 to 50 in 2020.
Will the HCV fight be pensioned off
The start of the final chapter on HCV