WHAT IS HEPCARE EUROPE?

- Hepatitis C (HCV) infection is highly prevalent among vulnerable populations.
- Many are unaware of their infection and few have received HCV treatment.
- Recent developments in treatment offer cure rates >90%. However, the potential of these treatments will only be realised if HCV identification in vulnerable populations with linkage to treatment is optimised.
- The Hepcare Europe project, a collaboration between five institutions across four member states (Ireland, UK, Spain, Romania), has developed, implemented and evaluated interventions to improve the identification, evaluation and treatment of HCV in vulnerable populations (homeless, prisons, PWID).
HEPCARE: A new Hepatitis C Care service model

VISION:
Create an innovative, integrated system for HCV treatment, based on the joint participation of primary and specialty care practitioners

OBJECTIVE:
Improve access to HCV testing and treatment among key risk groups, including drug users and homeless, through outreach to the community and integration of primary and secondary care services

HEPCARE EUROPE is a €1.8M 3-year EU-supported project at 4 member state sites

Consortium members: UCD (Ireland); SAS (Spain); SVB (Romania); University of Bristol (UK); University College London (UK)

Irish HCV Care Cascade: Many Diagnosed Patients are Still Untreated

http://cdafound.org/polaris-hepC-tx-cascade
HOW TO MAKE HCV A ‘RARE’ DISEASE IN THE EU

Community Education
Preparation of the at risk population for testing, assessment and treatment

Point of Care Testing
Evaluation of point of care testing with HCV oral tests in diverse populations and different countries/settings and assessment of cost effectiveness

Education of Community Health Care Workers
Improve understanding of new treatments, and prepare them to act as partners in treatment and support in a ‘shared care’ primary/secondary integrated partnership

Educational tools and pathways
To help HCV negative people to minimize their risk of HCV infection and other blood borne viruses

Community Fibroscan testing strategy
Implementation and evaluation of the strategy, and assessment for advanced disease patients the reasons for non-attendance.

Linking Services across Diseases
Address key conditions in vulnerable populations in a linked up fashion (drug and alcohol addiction, primary care, STD, blood borne virus testing, TB, Hepatitis B vaccination)

Community nurse outreach and peer advocacy support
Community focused assessment for HCV disease in HCV+ as vulnerable communities do not access secondary care services.

Hepatitis C notifications by gender, 2004-2017

- Unknown sex
- Female
- Male
HepCheck
Homeless, Hep C & Competing Priorities

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1. Mater Misericordiae University Hospital, Dublin, Ireland. 2. University College Dublin, Ireland. 3. Safetynet Primary Care Network, Dublin, Ireland.

RESULTS
A total of 619 individuals were offered screening. Their ages ranged from 17 to 86, with the average age being 36.7 years and were 74% male (455 male, 163 female, 1 missing).

Of the 619 offered screening, just under a third reported having had a previous HCV test before (216) of which half recalled a positive result, 36% negative (79) & 13% unsure of the result (29).

Screening 547 HCV Antibody tests were performed
- 38% (n=206) tested positive
- 57% (n=310) tested negative
- 5% (n=31) recorded as no result/awaiting result

Of the 206 testing positive, 54% (112) were "new" positives while the remaining were "known positives"

Following a positive test 51 patients were referred to specialist care and 33 attended 2 or more appointments.

One individual completed treatment whilst another is still on treatment at the time of writing.

METHOD
The target population was homeless people accessing the Safetynet primary healthcare services in Dublin. Individuals were invited to undertake a short questionnaire and HCV antibody test.

Qualitative interviews were also carried out with selected patients (n=49) exploring a broader range of health and lifestyle issues.

CONCLUSIONS
• Community based screening intervention can enhance HCV diagnosis for at risk populations.
• Referrals to/attendance to secondary care remains a challenge for this cohort.
• Psychosocial factors at the core of why patients do not attend secondary care for HCV management.
• Addiction, mental health and homelessness were especially problematic
• Future research should examine interventions to improve attendance rates at secondary care.

HOMELESS HEPCHECK SCREENING RESULTS

- 619 OFFERED SCREENING
- 547 SCREENED
- 72 NOT SCREENED

- 38% Ab positive (206)
  - 112 "new positives"
  - 94 "known positives"

- 57% Ab negative (310)
  - 31 no result/awaiting result

- 5% Ab missing (20)

51 referrals
33 attendances
2 completed treatment
Barriers

- Limited resources
- Migration of population = difficult to link to care
- Stigma barrier to confirmatory testing
- Lack of privacy inside mobile unit
- Language
- Isolation of hard to reach populations
- Illiteracy
- Personal and social disorganization
- Distrust in healthcare services
- Lack of referral agreements with hospitals, etc
- Access and adherence to treatment

The Hidden Burden: HCV-related advanced liver disease in the community

The hidden burden of hepatitis C related advanced liver disease in the community

Nadeem Iqbal, John S Lambert, Des Crowley, Hugh Gallagher, Fidelma Savage, John Moloney, Carol Murphy, Tina McHugh, Aileen Singleton, Shay Keating, Audrey Dillon, Stephen Stewart.

Background for the Study

- Large number of HCV+ patients receiving methadone substitution therapy in drug treatment centre who do not attend specialist hepatology services
- Most of these patients have never had their liver disease staged, hence we postulated that many of these may have underlying advanced liver disease
- Fibroscan™ (FS) used to assess the liver stiffness.

Cut-offs used for disease staging

- **8.5 kPa**, which allowed access to direct acting antivirals (DAAs) in Ireland before Feb 2017.
- **25kPa**, which has a 90% positive predictive value for clinically significant portal hypertension.
- **35kPa**, which is associated with a 10-20% risk of decompensation per year.
Hidden burden of HCV: Results (1)

Total assessed (618)
75% male, mean age 38 ±7.2

HCV status known (561)
HCV positive (391)
Mean FS 11

HCV negative (170)
Mean FS 5.6

HCV status unknown (57)

Alcohol consumption
(136)
Mean FS 13.2

Abstinent
(255)
Mean FS 9.7

• HCV positive
• FS ≥8.5 kPa
• FS ≥25
• FS ≥35
GP Practices recruited n=14

Baseline Data Collected n=134 (14 practices)

HCV positive patients undergone fibroscan n=45

Patients referred to secondary care n=32

Practice Flow

Patient Flow

GP Practices received HepLink model of care n=14

Process of care

The integrated model of HCV care has been piloted in all 14 practices

• 100 Nurse assessments
• 45 HCV Ab+ patients had fibroscan
• 21/45 (46.7%) scored ≥8.5 kPa
• 13/45 (28.9%) were cirrhotic, i.e. scored > 12.5 kPa
Heplink learnings

- Most targets achieved / interventions appear feasible, acceptable to patients and professionals
- High HCV prevalence, but access to assessment/treatment a challenge (47%/15%)
- Replicated in other sites – adaptability to local needs important
- Research into practice and policy
- **Community outreach and service integration key**

What would Optimum HCV care look like in an Irish Setting

- Community Based General Practice
  - Level I GP
  - Level II GP
- Central Services
  - Addiction Services
  - Satellite Services
- Prisons
- Hepatology/ID Services

And where are the Homeless?
HEPCARE IN NUMBERS

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of individuals offered screening</td>
<td>2822</td>
</tr>
<tr>
<td>No. of individuals screened</td>
<td>2159</td>
</tr>
<tr>
<td>HCV Ab positive</td>
<td>726</td>
</tr>
<tr>
<td></td>
<td>34.2%</td>
</tr>
<tr>
<td>No. of primary care/ community sites recruited</td>
<td>50</td>
</tr>
<tr>
<td>No. of patients recruited</td>
<td>465</td>
</tr>
<tr>
<td>No. of primary care/community sites that received HCV education</td>
<td>50</td>
</tr>
<tr>
<td>No. of HCV+/primary care/community sites that received &amp; delivered enhanced HCV education</td>
<td>22</td>
</tr>
<tr>
<td>No. of Health Care Professionals trained</td>
<td>&gt;600</td>
</tr>
<tr>
<td>Masters level held</td>
<td>12</td>
</tr>
<tr>
<td>Fear recruited</td>
<td>29</td>
</tr>
<tr>
<td>Patients contacted</td>
<td>395</td>
</tr>
</tbody>
</table>

RESULTS

FIG 1: OVERALL SCREENING RESULTS

- Total Screened: 1781*
- HCV AB Positive: 607 (34%)*
- Ab Positive HCV Specialist Appointment: 222 (37%)

* Figure 2 shows breakdown of numbers per site.

- In-depth analysis of the data is ongoing including identification of risk factors for HCV infection, levels of HCV-related liver disease, prevalence of blood-borne viruses and linkage to care.
SCREENING RESULTS PER SITE

**FIG 2: SCREENING RESULTS PER SITE**

<table>
<thead>
<tr>
<th>SITE</th>
<th>Screened</th>
<th>AB positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>969</td>
<td>137 (14%)</td>
</tr>
<tr>
<td>London</td>
<td>310</td>
<td>123 (40%)</td>
</tr>
<tr>
<td>Bucharest</td>
<td>501</td>
<td>207 (40%)</td>
</tr>
<tr>
<td>Seville</td>
<td>401</td>
<td>140 (35%)</td>
</tr>
</tbody>
</table>

IMPACT IRELAND

Hepcare has:

- Linked up stakeholders in prisons, community setting, NGOs and developed new collaborations. **Bringing services together**
- Developed an advocacy document (HEPMAP) which has been disseminated to the Irish Health Authorities (HSE) (political will)

The Ireland East Hospital Group (IEHG) is planning to adopt the Hepcare vision and to create a Integrated HCV care service within its structure. The IEHG is the largest and most complex of Ireland’s hospital groups. Comprising 11 hospitals (6 voluntary and 5 statutory), IEHG spans eight counties and works with four Community Health Organisation (CHO) partners and serves a population of over a million people (25% of Irish population and 80% of HCV at risk/infected population). **Giving ‘ownership’ of the ‘pilots’ of HepCare Europe to the Governmental funded HCV services is critical.**
IMPACT ROMANIA

- Romanian patients from target population have to face multiple important social barriers in order to access free DAA treatment for their hepatitis C infection: health insurance, identity and health cards (often homeless, incarcerated unemployed etc). Social workers from the hospital team members in the HEPCARE project, intensified their activities of helping the patients to solve these issues. (assist vulnerable clients to access services)

- Up until 2018, DAA treatment was only available in Romania for patients with advanced liver fibrosis.

- Discussion between HEPCARE and members of the Special Committee for HCV Management from Romania have taken place. An official letter with a series of recommendations was prepared to be sent to this Committee as well as to the Health Minister, in order to improve HCV management in risk category populations from Romania, (advocacy for expanded access of DAA, resources for reaching ‘vulnerable populations’)

IMPACT SPAIN

- Hepcare involved stakeholders in drug addition units, therapeutic communities, NGOs and primary care centers, within a range of 20 to 100 Km from the tertiary care setting (finding patients, rural outreach).

- Pioneered an approach to diagnose HCV in a single blood draw, with reflex determination of HCV RNA in those anti-HCV Ab positive samples. The experience has been proposed in a formal protocol, adopted within our Autonomous Region and proposed at national level (rapid testing, immediate linkage to care).

- Mostly vulnerable people using illicit drugs were targeted, with serious problems in accessing health care. Of those, 40% had a positive anti-HCV test, and 50% detectable HCV RNA, representing mostly new HCV infection diagnoses. Nearly 100 people with active HCV infection were successfully linked to care, 50% of them have received treatment. (finding new infections and linking to care).
IMPACT UK

The HepCare project in London has enabled over 600 ‘hard to reach’ individuals to be screened for HCV identifying nearly 200 as being infected and has successfully supported nearly half of those into treatment using peer support. We continue to build on the unique links we have with homeless service providers across London and have a contacts with over 30 different providers. (peers supporting testing, care and treatment of homeless and marginalized populations)

Drug and alcohol service clinics – establishment of outreach clinics in a number services in London linking into treatment services using the HepLink model.

Health Inclusion Team – established links with a network of specialist nurses who work in homeless hostels and help engage their clients with treatment. (mobile health unit outreach)

St Mungos – regular screening programme with one of the largest providers of homeless accommodation.

INTEGRATE • Objectives and partners

Overall objective: To increase integrated early diagnosis and linkage to prevention and care of HIV, viral hepatitis, TB and STIs in EU member states by 2020.

- 29 nominated partners from 15 EU countries (+ Serbia) (Public Health institutions (17), Hospitals (Infectious disease and research departments) (4), NGOs (7) and Universities (1))
- September 2017- September 2020
- Overall budget 2,4 mill Euro (80% EU)
- www.integrateja.eu (CHIP-Copenhagen)
Challenges of HCV Scale up into the Community setting/an Integrated Care Model

- It's not about either hospital versus community care: both can work in partnership.
- There is still a large burden of HCV related disease in the community who are not accessing care, but are developing liver disease. They may not be 'community candidates' for treatment. Primary / secondary care linkages is necessary.
- The HCV patient may have a journey through many different services: hospital, GP, prison, drug treatment services, homeless services. Patient must be supported on this journey.
- Most care is still being focused on the 'easy to treat' and not the high transmitters.
- Services that care for HCV are not linked up: lack of vertical and horizontal health care system partnerships. We need integration.
- HCV is just one of many conditions to address in such individuals; a 'bundle of care' must be provided, and not just for HCV; and 'one size does not fit all—multiple models of care are needed (personalised medicine!).

ACKNOWLEDGEMENTS

- EU funded
- Irish Health Service Executive (HSE)
- Unrestricted grants from the pharmaceutical industry (monies well spent!)