Hepatitis C Screening Guideline Development Group
Background to recommendation 9: People who are homeless

The purpose of this document is to provide the background information to the formulation of recommendations by the Guideline Development Group (GDG).

Not all evidence in this document is presented in the National Clinical Guideline.

The National Clinical Guideline is available from: http://health.gov.ie/national-patient-safetyoffice/ncec/national-clinical-guidelines/

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Contents

History of development of the recommendation

Date	Process	Outcome
02/06/2015	Recommendations from quality appraised national and international guidelines reviewed	Agreed that to formulate a recommendation further evidence was needed on the relationship with homelessness and HCV in Ireland
14/12/2016	GDG subgroup meeting to undertake considered judgement process	Formulation of recommendation
24/01/2017	Review of subgroup recommendation by GDG	Recommendation accepted
25/04/2017	Consultation feedback reviewed by GDG	No changes to recommendation
June – July 2017	Editing	Recommendation reworded in final editing process

Considered judgement process

The considered judgment form completed by the GDG subgroup in formulating the recommendations is presented below. Please note the final wording of the recommendation may have changed after review of the GDG, after the consultation process, or during the editing process.

Date: 20 December 2016
Attendees: Margaret Bourke, Austin O'Carroll, Lar Murphy, Ursula Norton (by telephone), Sinead Donohue, Eve Robinson, Lelia Thornton

Table 1: Considered judgement form

1. What is the question being addressed? Present PICO if relevant
Q2. Who should be offered screening for Hepatitis C? **b. Should the following specified groups be offered screening?** **vii. People who are homeless**
2. What evidence is being considered to address this question and why? (This section will explain the approach taken to address this question and what GDG members are being asked to consider)
It was considered that the information to guide this recommendation should be primarily based on the characteristics and risk factor profile of the homeless population in Ireland (see Section 5.1).
3. What is the body of evidence? Source of evidence: (tick all that apply) Guidelines ✓ Primary literature ✓ Other ✓ ; specify: Irish data on drug use in the homeless population
Current Guidelines **NICE, 2013** People living in hostels for the homeless or sleeping on the streets are considered a group at increased risk of HCV infection and should be offered screening. (The National Institute for Health and Care Excellence, Hepatitis B and C: Ways to Promote and Offer Testing to People at Increased Risk of Infection (1)). *HIQA Quality Score of 148*
4. What is the quality of the evidence? To be considered if primary literature was reviewed (also apply where appropriate to guidelines)
4.1. How reliable are the studies in the body of evidence? If there is insufficient evidence to answer the key question go to section 11. Comment here on any issues concerning the quantity of evidence available on this topic and its methodological quality.
N/R
4.2. Are the studies consistent in their conclusions – comment on the degree of consistency within the available evidence. Highlight specific outcomes if appropriate. If there are conflicting results highlight how the group formed a judgement as to the overall direction of the evidence
N/R

4.3. Generalisability – are the patients in the studies similar to our target population for this guideline? is it reasonable to generalise

As in the UK, the association between homelessness, IDU and HCV infection has been established from the findings of a number of studies of homeless populations in Ireland. (see Section 5.1). However, the Irish studies are based mainly in Dublin. They may not reflect the homeless population outside Dublin, or the changes that have taken place in the homeless population in recent years.

4.4. Applicability - Is the evidence applicable to Ireland? Is the intervention/ action implementable in Ireland?

Yes, the NICE recommendation is applicable.

4.5. Are there concerns about publication bias? Comment here on concerns about all studies coming from the same research group, funded by industry etc

N/R

5. Additional information for consideration

5.1. Additional literature if applicable e.g. Irish literature

Several studies have been published that provide a profile of the population of homeless people in Ireland, mainly Dublin, up to 2013.

A cross sectional survey of homeless people in Dublin and Limerick was carried out in 2013 by interviewer administered questionnaire with a response rate of 64%. Interviewees self-reported their blood borne virus (BBV) infection status (2). In total 78% reported illicit drug use ever, with 55% reporting illicit drug use in the last 3 months. In Dublin 79.9% reported illicit drug use ever, with 56% reporting illicit drug use in the last 3 months. In limerick 60.3% reported illicit drug use ever, with 49% reporting illicit drug use in the last 3 months.

In the total study population, 43.5% reported IDU ever, and 24% reported IDU in the last 12 months. In Dublin respondents 46% reported IDU ever, and 25% in the last12 months. In the limerick respondent 22% reported IDU ever, and 15% in the last 12 months. In the Limerick sample no BBV was reported. In the Dublin population, 28.5% (151/531) reported a diagnosis of hepatitis C. Of these, 73.5% had been assessed or offered HCV treatment and 53% had received treatment. The report stated that a diagnosis of BBV, including HCV, was more common among current and past drug users but further details of this were not provided.

A census of homeless adults in north Dublin city, conducted in 2005, determined the prevalence of HCV to be 36% (95% CI 31-41%) (3). The recent increase in HCV and other blood borne disease prevalence was reported to be directly related to the increase in drug misuse in the homeless population.

A cross sectional study performed in 2012 of patients with a history of active IDU presenting to an Emergency Department in inner city Dublin over a three month period determined that 85.6% were homeless (4). Among the IDU patients, 74% were also infected with hepatitis C.

5.2. Relevant national policy / strategy / practice

Nil relevant

5.3. Epidemiology in Ireland if available and applicable

Data from the National Drug Treatment Reporting (NDTR) system showed that 13% of those entering or re-entering addiction services in 2014 had an unstable accommodation status.

35% of attendees of Addiction Services in Community Health Organisation 7 (formerly Dublin Mid Leinster) are reported to be rough sleepers, sleeping in rolling emergency beds, or in six month beds (personal communication from Dr Margaret Bourke).

6. Potential impact of recommendation

6.1. Benefit versus harm

What factors influence the balance between benefit versus harm? Take into account the likelihood of doing harm or good. Do the desirable effects outweigh the undesirable effects?

Benefits:

- Linkage to care and treatment will result in improved quality of life for detected cases.
- The offer of screening also provides an opportunity to raise awareness and educate on hepatitis C.
- Promotion and further normalisation of testing may improve uptake and reduce stigma around hepatitis C
- Detection and treatment of undiagnosed cases will reduce the risk of transmission to others.
- A recommendation that this group be screened may focus efforts and resources on this risk group

Harms:

- Detection of cases who may not yet be eligible for treatment may lead to frustration and anxiety.
- A recommendation on screening for HCV may lead to stigma towards homeless people if HCV infection risk and IDU are highlighted
- There are different populations in Ireland at present considered 'homeless'. Not all homeless are at risk. Communication may stigmatise all homeless. Specifying particular types of homeless people may stigmatise the at risk group
- Upset amongst some at the offer of HCV screening due to implied suggestion of being an IDU
- Services to support linkage to care may not yet be fully in place.
- False positives. The rate of false positive screening results depends on the population being screened. In high risk populations false positive rates are acceptable. However, in low risk populations the positive predictive value of the screening test decreases and may not be acceptable. False-positive test results incur costs and can also cause psychological harm. Confirmatory testing reduces the false-positive rate but increases the cost.

6.2. What are the likely resource implications and how large are the resource requirements? Consider cost effectiveness, financial, human and other resource implications

This is a marginalised and often difficult to reach group. Extra support will be required to pro-actively identify and access this population, and to facilitate uptake of screening. In addition support will be required to enable linkage to care and treatment.

6.3. Acceptability – Is the intervention/ option acceptable to key stakeholders?

In general, it is likely that screening will be acceptable to the intended homeless population. However, HCV screening and treatment may not be considered a priority or immediate healthcare need/ issue by the person themselves due to other health and social care needs.

Likely to be acceptable to those who provide healthcare to homeless.

Communication will need to be clear on the specific homeless population at risk, however this may further stigmatise certain homeless people.

6.4. Feasibility - Is the intervention/action implementable in the Irish context?

There are various initiatives underway, e.g. HepCheck, SafetyNet, and initiatives through the Addiction Services to offer screening for HCV to homeless people in Dublin. The exact size of the at risk homeless population and the proportion reached by these initiatives both in Dublin and in other parts of the country may be difficult to estimate.

Not all homeless may be accessing the services that are available to them, and in some areas healthcare services for homeless may be poor and so opportunities for testing may be limited.

Delivery of results may be difficult

6.5. What would be the impact on health equity?

Given principle of proportionate universalism, if the recommendation is accompanied by supports to implement it, and supports to aid linkage to care, this would have a positive impact on health equity. The homeless are a marginalised group with often greater healthcare needs than other population groups.

7. What is the value judgement? How certain is the relative importance of the desirable and undesirable outcomes? Are the desirable effects larger relative to undesirable

Recent advances in treatment options for hepatitis C make treatment more acceptable and more successful. Treatment with the new DAAs which are now available results in cure in the majority of patients with shorter duration of treatment and less side effects than previous treatments. However at present the cost of these treatments is high.

Screening enables early detection, referral for assessment and treatment where indicated. Without screening cases may go undetected for a considerable length of time due to the asymptomatic nature of HCV infection. Individuals often do not present until symptomatic, which is usually indicative of severe liver damage. Early treatment and cure will confer personal, social, and economic benefits. Early treatment and cure will also reduce the risk of transmission to others. A treatment programme exists in Ireland allowing detected cases access treatment.

The prevalence of IDU and of HCV within the homeless population is high. Given the benefits of current treatment options, and the current initiatives around linkage to care in this group, it is considered appropriate to highlight this risk group with a recommendation of screening.

8. Final Recommendations

√ Strong recommenda□on
□ Condi□onal/ weak recommenda□on

Text:
All those who are homeless should be offered screening for hepatitis C.
Or
Drug using homeless people should be offered screening for hepatitis C.

Repeat screening for those who initially test negative should be offered on an annual basis if an ongoing risk of transmission is present.

9. Justification

The prevalence of current or previous drug use is high amongst those who are homeless, as is hepatitis C infection. Given the prevalence of current IDU in this population, there is a risk of ongoing transmission to others.

10. Implementation considerations

All homeless people who register as such (with Local Authorities) and attend a hostel/shelter are assigned a key worker. Key workers can be utilised to inform homeless people about the risk of hepatitis C and direct them towards where they can avail of screening. In the bigger cities and towns, primary medical services are often available on-site in hostels/shelters. However, in more rural areas there may be difficulty in accessing testing services.

For detected cases, linkage to care and support to facilitate treatment will be important. The provision of a stable bed while on treatment will likely improve adherence to and completion of treatment.

Peer support initiatives such as Hepfriend may improve screening uptake and retention in care. Initiatives such as mobile phone directly observed therapy may also improve adherence.

In some homeless centres in Dublin, fibroscans are being carried out with subsequent linkage to specialist assessment and treatment.

Community Response through their hepatitis C group deliver education in a number of homeless centres around Dublin.

Availability of dried blood spot (DBS) testing may improve uptake of screening in this population.

11. Recommendations for research

List any aspects of the question that have not been answered and should therefore be highlighted as an area in need of further research.

Further studies needed to update information on the profile of homeless people in Ireland, particularly outside of Dublin, and to establish the sub-populations of homeless people who are at particular risk for hepatitis C. Studies to establish what interventions are most effective at improving uptake of screening and linkage to care would also be helpful.

Review by GDG

Date: 24/01/2017

It was discussed that the risk factor for those that are homeless is drug use and that perhaps a separate recommendation for homeless is not needed. It was decided that a separate recommendation is justified to highlight that this population is particularly vulnerable and sometimes poorly accessed. Also some non-drug using homeless may be at risk due the hazards in the environment they are living in e.g. discarded needles leading to a sharps injury.
The recommendation should highlight that those homeless with a risk behaviour or risk exposure should be screened.
The recommendation was amended to reflect this.

Consultation feedback and review by GDG

Please see *Report of the consultation process* for feedback received.

No material change to recommendation.

Final recommendation

Recommendation 9

9.1. Homeless people who have a history of engaging in risk behaviours associated with HCV transmission, or who have had a potential HCV risk exposure, should be offered screening.

9.2. Those who initially test HCV negative should be offered repeat testing on an annual basis, or six monthly if deemed clinically appropriate*, if there is an ongoing risk of transmission.

*More frequent testing may be considered in circumstances such as: if a risk exposure is known to have occurred; an unexplained rise in ALT; a diagnosis of another BBV.

Quality/level of evidence: low
Strength of recommendation: strong

References List

1. National Institute for Health and Care Excellence. Hepatitis B and C: ways to promote and offer testing to people at increased risk of infection. NICE Public Health Guidance 43. NICE; 2012. Available from: https://www.nice.org.uk/guidance/ph43.
2. O'Reilly F, Barror S, Hannigan A, Scriver S, Ruane L, MacFarlane A, et al. Homelessness: an unhealthy state. Health status, risk behaviours and service utilisation among homeless people in two Irish cities. Dublin: The Partnership for Health Equity; 2015. Available from: http://www.drugsandalcohol.ie/24541/1/Homelessness.pdf.
3. O'Carroll A, O'Reilly F. Health of the homeless in Dublin: has anything changed in the context of Ireland's economic boom? Eur J Public Health. 2008;18(5):448-53.
4. O'Connor G, McGinty T, Yeung SJ, O'Shea D, Macken A, Brazil E, et al. Cross-sectional study of the characteristics, healthcare usage, morbidity and mortality of injecting drug users attending an inner city emergency department. Emerg Med J. 2014;31(8):625-9.

Appendices

Evidence search and results

International and national guidelines

HCV guidelines identified, reviewed, and quality appraised as described in the National Clinical Guideline.

Grey literature

The following grey literature identified by expert members of the GDG was included for review:

- Homelessness: an unhealthy state. Health status, risk behaviours and service utilisation among homeless people in two Irish cities

Primary literature

The GDG determined that to formulate a recommendation further information was required on the prevalence of risk behaviours/ risk factors amongst homeless people in Ireland.

PICO
Population: people who are homeless in Ireland
Intervention: n/a
Comparison: n/a
Outcome: prevalence/ incidence of HCV; prevalence of risk behaviours for HCV infection

Search strategy
Sources:

- Medline
- Embase

See table 2 for search terms used in Medline search

Study type/ limits: experimental or observational studies, case studies, case reports; published between 1 January 1990 and 30 June 2015

Inclusion criteria:

- Ireland
- Homeless or displaced person
- Reports on prevalence of a risk factor for hepatitis C in this population (eg. IVDU, migrants, history of incarcerations
- Reports on prevalence of HCV in this population
- HCV status based on blood/ saliva OR selft reported

Exclusion criteria:

- Not Ireland
- Not homeless or displaced population
- Doesn't report on prevalence of a risk factor in the population or on prevalence of HCV
- No abstract

Table 2: Search terms used in Pubmed/Medline search

S1	hepatitis C or HCV or hepacivirus or hep C or hepC	Search modes - Boolean/Phrase	75,955
S2	(MM "Hepatitis C+")	Search modes - Boolean/Phrase	41,680
S3	(MM "Hepacivirus")	Search modes - Boolean/Phrase	17,399
S4	risk factor*	Search modes - Boolean/Phrase	805,438
S5	(MH "Risk Factors")	Search modes - Boolean/Phrase	603,160
S6	S1 OR S2 OR S3	Search modes - Boolean/Phrase	75,955
S7	S4 OR S5	Search modes - Boolean/Phrase	805,438
S8	transmission or transmit or mode of transmission or acquisition or acquire* or transmit*	Search modes - Boolean/Phrase	872,867
S9	(MM "Disease Transmission, Infectious+")	Search modes - Boolean/Phrase	30,139
S10	S8 OR S9	Search modes - Boolean/Phrase	879,613
S11	S6 AND S7 AND S10	Search modes - Boolean/Phrase	3,324
S12	homeless	Search modes - Boolean/Phrase	8,581
S13	(MM "Homeless Persons+")	Search modes - Boolean/Phrase	5,271
S14	S12 OR S13	Search modes - Boolean/Phrase	8,581
S15	S11 AND S14	Search modes - Boolean/Phrase	21
S16	S6 AND S7 AND S14	Search modes - Boolean/Phrase	65
S17	ireland	Search modes - Boolean/Phrase	76,054
S18	S16 AND S17	Search modes - Boolean/Phrase	0
S19	S6 AND S14 AND S17	Search modes - Boolean/Phrase	2

Search results

Figure 1: PRISMA flow diagram of review of literature on antenatal HCV screening in Ireland