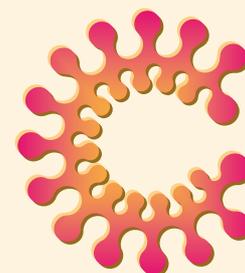


# Greater Manchester Commissioning Guidelines for Blood Borne Virus Prevention

Endorsed by Greater Manchester Director of Public Health  
March 2011



**Hepatitis**  
Greater Manchester Hepatitis C  
Strategy

## Authors

Name	Role		Contact Details
Dr Erika Duffell	Consultant in Health Protection	Greater Manchester Health Protection Unit	Erika.duffell@hpa.org.uk
Siobhan Fahey	Programme Manager of the Greater Manchester Hepatitis C Strategy	Association of Greater Manchester PCT's	Siobhan.fahey@hmr.nhs.uk
Colin Tyrie	Senior Public Health Development Advisor (Substance Misuse)	Manchester Community Health	Colin.Tyrie@manchester.nhs.uk
Dr Arpana Verma	Senior Lecturer and Honorary Consultant in Public Health	University of Manchester	Arpana.Verma@manchester.ac.uk
Dr Katie Harrison	Research Fellow	University of Manchester	klharrison@manchester.ac.uk

## Contents

	Title	Page Number
1	Introduction	3
1.2	Process involved in creating the Greater Manchester Blood Borne Virus Prevention Strategy	3
1.2	Vision	3
1.3	National Policy	4
2	Current Situation	4
2.1	Review of local blood borne virus prevention services	4
3	Gaps in Service Provision	4
3.1	Primary Prevention	4
3.1.1	Needle and Syringe Programme	5
3.1.2	Opiate Substitution Therapy provision	5
3.1.3	Health Promotion	5
3.1.4	Information, education and support	5
3.2	Secondary Prevention	5
3.3	Data collection and auditing	5
3.4	Training	5
4	Reaching the Vision	6
5	Guidance for Commissioners of Blood Borne Virus Prevention Training	7
6	Guidance for Commissioners of Drug and Alcohol Services	8
7	Guidance for Commissioners of Prison Services	10
8	Guidance for Commissioners of secondary care blood borne virus treatment services	10
9	Guidance for Commissioners of Local Authority services	10
10	References	11
11	Appendix	11

Dear Colleagues

The burden of blood borne viruses in Greater Manchester is high. There is an upward trend in the number of HIV diagnoses in Greater Manchester and an escalation in patients attending hospitals with complications resulting from Hepatitis C. Whilst there is considerable difficulty in accurately estimating the true prevalence of BBV infections, it is clear from the number of laboratory diagnoses that the prevalence of chronic Hepatitis C and Hepatitis B infections in Greater Manchester is high.



Sexual transmission of Blood borne viruses in the local population is also relatively high due to the concentration of high risk groups including sex workers and men who have sex with men (MSM). There is also a sizeable local population of people who were born in countries with a high BBV prevalence who may have been infected prior to arrival in the UK through medical procedures in these countries where infection control may have been sub-optimal. More rarely in the UK transmission occurs when Individuals are exposed to infected blood through body piercing and tattoo practice where standards may not have been adhered to and via vertical transmission in pregnancy.

Hepatitis C is the most common BBV in the Greater Manchester population and the majority of these infections are attributed to the sharing of contaminated injecting equipment by injecting drug users. Greater Manchester has a large population of Injecting drug users and a high prevalence of Hepatitis C among this group.

The prevention of blood borne viruses (Blood borne viruses) is a huge challenge for local services on account of the complexities around the transmission of these viruses and the scale of the problem. The Greater Manchester Director of Public Health group considers the prevention and management of Hepatitis C and of Sexual Health diseases such as HIV and Hepatitis B as two of their 20 public health targets for intervention.

Prevention of Blood Borne viruses has to be carried out by a number of parts of the public sector. These commissioning guidelines concentrate on providing guidance to commissioners of Blood Borne Virus Prevention training, drug and alcohol services, prison services, secondary care blood borne virus treatment services and local authority services as interventions at this level will be the most useful.

These Guidelines have been unanimously supported and endorsed by the Greater Manchester Director of Public Health group in March 2011, and I would urge you to consider the recommendations when commissioning services within Greater Manchester.

Yours sincerely

A handwritten signature in black ink that reads "Abdul Razzaq". The signature is written in a cursive style.

Abdul Razzaq, Director of Public Health, Trafford NHS and Lead Director of Public Health for the Greater Manchester Hepatitis C Strategy

## 1. Introduction

The Greater Manchester Blood Borne Virus Prevention Commissioning Guidelines are based on the Greater Manchester Blood Borne Virus Prevention Strategy. Both documents were developed by the Greater Manchester Hepatitis C Strategy (GMHCVS), a public health programme funded by the Greater Manchester Director of Public Health group.

The most common serious viruses carried in people's bloodstreams are hepatitis B, hepatitis C and HIV. Collectively these are known as blood borne viruses (BBVs). The Greater Manchester Hepatitis C Strategy (GMHCVS) Blood Borne Virus Prevention Strategy recognises the need for an integrated, local BBV prevention strategy activities to prevent future infections and reduce the ever increasing impact of BBVs on the health services.

### 1.2. Process involved in creating the Greater Manchester Blood Borne Virus Prevention Strategy

The Greater Manchester Hepatitis C Strategy commissioned University of Manchester to create HCV Prevention Joint Strategic Needs Assessment for nine PCT's across Greater Manchester and a core Greater Manchester Prevention Joint Strategic Needs Assessment (2010)<sup>1</sup> Manchester DAST commissioned a NHS Manchester area BBV Prevention JSNA (2009). The Needs Assessments had a large number of recommendations.

From the research a Greater Manchester Blood Borne Virus Strategy (2010)<sup>2</sup> was compiled. The compilation was led by University of Manchester, Manchester PCT Public Health, Greater Manchester Health Protection Unit and the Greater Manchester Hepatitis C Strategy.

In 2010 the Greater Manchester Hepatitis C Strategy carried out an online consultation with major stakeholders to prioritise the recommendations of the Strategy. The stakeholders were from each Local Authority area of Greater Manchester and included relevant professional groups from Local Authority, Primary Care, Third Sector, PCT commissioning, Public Health, Prison health care, Substance Misuse, pharmacy and antenatal.

There were 19 responses and they favoured the whole strategy and all recommendations, with very little prioritisation.

The Greater Manchester Director of Public Health Group endorsed the Strategy in December 2010, with a request that Commissioning Guidelines are created from the Strategy. The Commissioning Guidelines were created from the Strategy by classifying which commissioner would be involved with each recommendation. These Commissioning Guidelines were fully endorsed by the Greater Manchester Director of Public Health Group in March 2010.

### 1.1. Vision

Our mission statement is:-

***The prevention of BBVs in the Greater Manchester health economy will be achieved through multiagency evidence based commissioning of services in order to implement the Greater Manchester Blood Borne Virus Prevention Strategy. The aim of the Strategy is to deliver a comprehensive, integrated, equitable and cost effective approach to the prevention of BBVs. Reducing the number of new BBV infections in GM will be achieved through a range of targeted primary and secondary evidence-based interventions.***

These commissioning guidelines are based on the Greater Manchester Blood Borne Virus Prevention Strategy which is aimed at preventing blood borne virus infections across Greater Manchester. The interventions it considers excluding infection control, occupational health, renal patients and antenatal HBV screening which are all covered in other strategy documents.

This strategy should be considered in conjunction with existing local and national policies, guidelines and strategies.

BBV prevention cuts across many commissioning areas including specialist commissioning, drugs and alcohol services, public health, primary care, hepatology, gastroenterology, Infectious Disease, prison health care, housing and young peoples services. To achieve the vision a consistent approach to commissioning prevention services is crucial to the effective implementation of the strategy.

## **1.2. National policy**

Several key national strategies have been published in the last decade with one of the most important milestones in the response to the HIV epidemic being the publication in 2001 of the [National Strategy on Sexual Health and HIV](#)<sup>3</sup>. The publication of [Hepatitis C: Action Plan for England](#)<sup>4</sup> in 2004, which implements the [Hepatitis C Strategy for England](#)<sup>5</sup>, was important in driving forward the hepatitis C agenda within the National Health Service.

In February 2009, the UK Advisory Council on the Misuse of Drugs (ACMD) published its report: [The Primary Prevention of Hepatitis C Among Injecting Drug Users](#)<sup>6</sup> which focused on interventions aiming at preventing HCV transmission. The National Institute for Health and Clinical Excellence (NICE) then published guidance: [Needle and syringe programmes: providing people who inject drugs with injecting equipment](#)<sup>7</sup>.

## **2. Current situation**

### **2.1 Review of local BBV prevention services**

To inform the development of this strategy, GMHCVS commissioned the University of Manchester (U of M) to undertake a local joint strategic needs assessments (JSNA) to understand gaps in service provision as related to Hepatitis C prevention. The U of M produced 9 single PCT JSNAs, and a core JSNA for the whole of Greater Manchester<sup>1</sup>. The U of M also produced a Greater Manchester Hepatitis C Health Equity Audit<sup>8</sup> and a Teaching and Training Mapping Report<sup>9</sup>. The recommendations from this research were also used to create the Greater Manchester Blood Borne Virus Strategy<sup>2</sup>.

## **3 Gaps in service provision**

The review of local services undertaken by the University identified a number of gaps in local service provision. The key findings are listed below.

### **3.1 Primary prevention**

#### **3.1.1 Needle and Syringe Program (NSP)**

- Needle coverage was found to vary significantly across Greater Manchester. Based on the estimates of injecting drug use there is sub-optimum syringe and needle coverage across many areas.
- There is clustering of NSP service providers within many PCTs and pockets of deprivation with no coverage.
- The NSP provision varies in service time offered by areas with a shortfall in the provision of out-of-hours NSP across Greater Manchester and in services providing higher tier NSP.
- The number of needles, syringes and other paraphernalia did not correlate with estimates of service users and many NSPs did not distribute paraphernalia (filters, spoons).
- There are gender and age inequalities around NSP access and evidence of increasing numbers of persons injecting performance and image enhancing drugs accessing NSP.

- The lack of national guidance around silver foil use for promoting the move from injecting to smoking heroin is problematic.

### **3.1.2 OST Opiate Substitution Therapy (OST) provision**

- The review found varying levels of unmet treatment needs for OST and evidence of gender and age inequalities around access.
- There is variance in the availability of pharmacies providers of supervised consumption, LES/NES clinics and drug services.

### **3.1.3 Health Promotion**

- There is a lack of health promotion and free condom provision across many services that provide care for those at risk of BBV.

### **3.1.4 Information, education and support**

- There is a clear need for increased/improved service user advice, support and information to improve services across GM

## **3.2 Secondary prevention**

- There is a variation in HCV testing between PCTs areas which do not correlate with modelled estimates for those at risk.
- Due to conflicting guidance for different professional groups, many service types will offer testing for one BBV and not the others.
- Many key services do not offer BBV testing (drug services, GP and sexual health clinics) and testing in prisons is relatively low.
- There is evidence of inequities with regard to ethnicity around testing.
- Pre and post test discussion is not always offered for BBV testing which is a missed opportunity for provision of public health advice.
- Few services offer out of hours or out reach testing and there is a lack of testing in affluent areas of non-IDU at risk groups.
- Targeted testing has been shown to be effective but is limited.

## **3.3 Data collection and Auditing**

- There is a lack of robust epidemiological data for BBVs, especially around estimates of HCV incidence/prevalence.
- There is poor data on service users and around service provision, with data on NSP and testing activity been scarce.
- Auditing of service provision varies widely by service type and area.

## **3.4 Training**

- Provision of training around BBVs is inconsistent across services and PCT areas and staff training was identified as a need by most services.
- There is a lack of staff training around BBV testing in many services and a need to train pharmacy staff delivering NSP.

- There are limited formal and informal training resources for professionals around BBV testing health promotion, vaccination and policies.
- Most training that is delivered is not accredited, externally validated or fully evaluated and does not reflect the current evidence base.

#### **4 Reaching the vision**

To and reach the vision from the Greater Manchester Blood Borne Virus Strategy a set of specific commissioning guidelines have been developed. The Guidelines are specific to a section of health or social care where research shows that blood borne virus prevention can be influenced. The Guidelines are targeted to local need and are based upon the available evidence in the published literature, national guidance expert opinion and best practice.

There are nine key objectives which must be achieved in order to fulfil the aims and the vision of this strategy. These objectives of the Greater Manchester Blood Borne Virus Prevention Commissioning Guidelines are:

- To assist in the commissioning of Produce training packages for those who work directly with the following risk groups:
  - Injecting drug users
  - Sex workers
  - Men who have sex with men
  - People from countries of high prevalence
  - Vulnerable children and young people
- To assist the commissioners of drug and alcohol services to ensure that the relevant aspects of the BBV prevention strategy are adopted including ensuring that the provision of NSP and OST is within NICE guidance and planned with the available local HCNA evidence.
- To assist the Work with commissioners of drug and alcohol services, local authority services, young peoples services, prison health care and prison drug services, drug and alcohol services, Blood Borne virus secondary care treatment providers and public health services to ensure that there is provision on health promotion regarding BBVs
- Work with commissioners of young peoples services to ensure the use of targeted prevention tools when working with young people.
- Work with commissioners of young peoples services, prison health care, drug services, treatment providers and public health to ensure occupational exposure procedures are in place with clear written and accessible policies for immunisation against HBV, appropriate access to testing and PEP.
- To assist the Work with commissioners of drug and alcohol services, local authority services prison health care and prison drug services, drug and alcohol services, Blood Borne virus secondary care treatment providers and public health services prison health care, drug services, treatment providers and public health to ensure that minimum data sets are collected by service providers to facilitate service based clinical governance procedures, monitoring and research.

## 5 Guidance for Commissioners of Blood Borne Virus Training Programmes

	Research Category	Priority
All services working with IDUs should be promoting the message of 'Break the cycle', the campaign to utilise the skills of current IDUs to discourage new users by evidence based peer led interventions.	D	1
All NSPs should provide service users with the knowledge to bleach their injecting equipment using the evidence based approach recommended in the Harm Reduction Works campaign. PCTs, DAATs and harm reduction leads should review the available evidence and discuss the value of providing of 'bleaching packs' via NSP services.	D	1
Workforce in NSP and drug services requires further training and development to ensure that staff are competent and confident in providing advice for HCV and other BBVs. As part of the service level agreement NSP and pharmacy staff must complete training.	D	1
Ensure that all NSP providers receive appropriate training, particularly in relation to injecting techniques, <i>prior</i> to providing a NSP. This should be mandatory and enforced through contract monitoring processes.	D	1
Develop GM wide additional training on BBV/ HCV prevention training that is widely available across GM run several times a year with some training delivered out with normal pharmacy hours to enable attendance. This training should be for all pharmacy staff.	D	1
Training on risk assessment and indications for HCV testing for all major HCV testing providers (GPs, antenatal clinics, hospitals, drug service staff etc.).	D	1
Providing a series evidence based training packages covering all aspects relating to HCV (referral, treatment, pre, post test discussion, testing, patient care, support).	D	1
Regular updates and refresher courses, monitor outcomes of training provided.	D	1
Ensure all staff (both voluntary and paid) have access to training around BBVs.	D	1
Input more about BBV in harm reduction courses.	D	1
Pre/post test discussion training for all staff who offer BBV testing	D	1
Assess the workforce training needs in relation to Performance and Image Enhancing Drug Users.	D	1
Provide information or training where identified around the management and provision of injecting equipment and harm reduction advice for PIEDs.	D	1
Encourage PIED specialist NSP workers and PIED users to become expert advisors and peer educators respectively.	D	1
Develop evidence based training course that is specific for GPs dealing with potential high risk groups (BME, IDUs and ex-IDUs).	D	1
Individualised courses designed around each service need/role to encourage the application of the training received, that are based on professional need.	D	1

A generic education component on HCV and a local component regarding local epidemiology, care pathway (treatment centres and referral) and patient experience. Including an online core education package for HCV as part of an overall programme of training to widen access across sectors and professions. This package would contain locally relevant information (epidemiology, care pathways and contacts).	D	1
Courses should be designed to take into account preferred learning styles of participants (visual learners, auditory learners, reading/writing-preference learners or tactile learners).	D	1
All courses should have links to professional competencies for health care, social care, pharmacy and addiction staff primarily to encourage uptake by a range of professionals and equally to involve professional societies and associations.	D	1
Effective promotion and advertising across Greater Manchester to encourage uptake.	D	1
All courses should include evaluation for the application of knowledge gained to determine effectiveness and retention of knowledge.	D	1
An agreed schedule of training updates to ensure staff knowledge remains current.	D	1
Centralised funding for the GM coordinated training programme recommended for NHS and Community staff.	D	1
Provide centralised funding for a Greater Manchester coordinated project to a) standardize risk assessments in relation to BBVs and b) the BBV education provided within infection control and sharps training delivered by councils across GM.	D	1

## 6 Guidance for Commissioners of Alcohol and Drug Services

	Research Category	Priority
Conduct commissioning and NSP delivery audits to identify areas of non-compliance with NICE Public Health Guidance 18. When carrying out this order please consider: 24 hour, 7 day a week access, Range and quantity of equipment provision, Equity of provision, New emerging NSP users	NICE	1
In co-ordination with all stakeholders and partners, develop standards for IDUs to enter drug treatment services in GM. These standards should ensure that there is ease of access for IDUs into drug treatment services	D	1
In co-ordination with all stakeholders and partners develop guidelines regarding foil distribution in GM, and put in place mechanisms to ensure compliance with the guidelines by drug service commissioners.	D	1
Service providers should have a minimum dataset of service activity and service user information.	D	1

Routinely collected data must then be routinely analyzed. This function should be coordinated by the GMHCVS Prevention sub-group. Annual reports should be produced to monitor progress and be disseminated locally and to the SHA and NTA.	D	1
There should be no arbitrary limit set on the number of syringes/ packs distributed.	D	1
Ensure all services offering OST (SC pharmacies) also make needles and syringes available to their clients, in line with the NTA 'Models of care' (2006).	D	1
Ensure Condoms provided within NSP packs distributed by pharmacies	D	1
Use innovative procurement of NSP equipment to ensure that suppliers provide health promotion messages within their products.	D	1
Reduce barriers to accessing BBV testing and immunisation services, by making such services available through NSP where appropriate.	D	3
Services should monitor their performance through establishing a data collection system to measure testing, training, referral and client groups within NSP and drug services <sup>1</sup>	D	1
Ensure all PCTs have a service level agreement that requires mandatory training for all pharmacists (NSP and SC) and strongly recommends training for pharmacy technicians.	D	1
All services (especially specialist drug clinics, low threshold agencies and GPs) in regular contact with IDUs need to increase the frequency of BBV diagnostic testing of this group.	D	1
Dry blood spot testing (DBST) to be offered where appropriate. Where HCV diagnostic testing is offered through DBST methodology, testing for HIV and HBV should also be considered.	D	1
Ensure DH Guidance on Hepatitis C testing is implemented in a range of settings. In relevant circumstances consider the introduction of enhanced case finding.	c	1
Highlight need for testing younger service users in drug services.	D	1
Offer testing through other services that at risk groups may access e.g. pharmacies, prisons, hostels and outreach homeless services.	D	1
Outreach teams should target injectors including homeless, sex workers and PIEDS for BBV prevention and testing interventions. This should include harm reduction, a referral system and condom provision where appropriate.	D	1
Offer testing in other services that at risk groups access. Outreach services to improve testing among prisoners/hostels and the homeless would also decrease age inequities in HCV testing that this group experience.	D	1
Work with non injecting drug users to provide information on BBV risk. This should include information on the dangers of shared use of equipment used for inhaling drugs.	D	1

## 7 Guidance for Commissioners of Prison Services

	Research Category	Priority
All services in regular contact with IDUs and high risk groups in Prisons need to increase the frequency of BBV diagnostic testing among their service users. In prisons all prisoners should be assessed and if considered to have been at risk should be tested for BBVs and Dry blood spot testing to be offered for individuals with poor venous access.	NICE	1
Develop and introduce training for all prison staff across GM using the training provided by Buckley Hall Prison as a basis/template. This should include training on risk assessment and indications for HCV testing.	D	1
Increase the provision of health promotion and education (leaflets etc.) to prisoners.	D	1
Ensure HBV vaccination is available to all prisoners.	B	1

## 8 Guidance for Commissioners of secondary care Blood Borne Virus Treatment Centres

	Research Category	Priority
Establish guidelines on frequency of test/re testing and ensure that these guidelines are distributed	D	1
Provide HCV training to healthcare professionals, such as, midwives and health visitors.	D	1
Training on risk assessment and indications for HCV testing for all HCV testing providers including maternity services, antenatal clinics, hospitals, voluntary sector.	D	1

## 9 Guidance for Commissioners of Local Authority Services

	Research Category	Priority
Develop and introduce a standardised blood borne virus component to training on infection control and the handling of sharps based on a generic template aimed at local authorities.	D	3
Incorporation of the developed blood borne virus component and key HCV information points within any infection control or sharps training course and materials delivered by councils	D	3

An audit of local authority risk assessments for blood borne viruses to assess their quality and consistency between councils. This should include a comparison of those being immunized for HBV and those receiving training for HCV to ensure no discrepancies in risk assessment.	D	3
Develop and introduce a more in depth training course on HCV for housing workers/services.	D	3
HBV vaccinations should be made available to all staff in contact with high risk groups or potentially contaminated equipment within local authorities.	D	3

## 10 References

1. University of Manchester and Greater Manchester Hepatitis C Strategy. Greater Manchester - Joint Strategic Needs assessment for HCV PREVENTION. 2010 UK Unpublished, available on [http://www.greatermanchesterhepc.com/document\\_repository/](http://www.greatermanchesterhepc.com/document_repository/)
2. Greater Manchester Hepatitis C Strategy. Greater Manchester Blood Borne Virus Strategy. Unpublished available from [http://www.greatermanchesterhepc.com/document\\_repository/](http://www.greatermanchesterhepc.com/document_repository/)
3. Chief Medical Officer. National Strategy on Sexual Health and HIV. 2001.
4. Department of Health. Hepatitis C Strategy for England. 2002. London, Department of Health.
5. Department of Health. Hepatitis C: Action Plan for England. 1-7-2004.
6. Advisory Council on the Misuse of Drugs. The primary prevention of hepatitis C among injecting drug users. 1-2-2009. London, Home Office.
7. National Institute for Health and Clinical Excellence. Needle and syringe programmes: providing people who inject drugs with injecting equipment. 1-2-2009.
8. University of Manchester and Greater Manchester Hepatitis C Strategy. Greater Manchester Hepatitis C Health Equity Audit. 2010. UK Unpublished, available on [http://www.greatermanchesterhepc.com/document\\_repository/](http://www.greatermanchesterhepc.com/document_repository/)
9. University of Manchester and Greater Manchester Hepatitis C Strategy. Hepatitis C Teaching and Training Needs Assessment for Greater Manchester. 2010. UK Unpublished, available on [http://www.greatermanchesterhepc.com/document\\_repository/](http://www.greatermanchesterhepc.com/document_repository/)

## 11 Appendices

### Levels of evidence and grades of recommendations

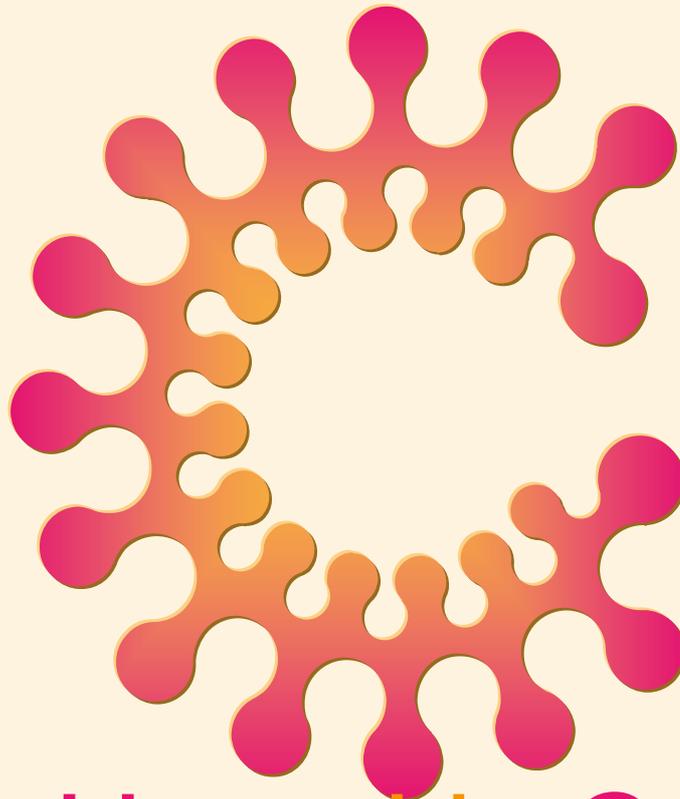
#### Levels of evidence

- 1++** High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias.
- 1+** Well conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias.
- 1-** Meta-analyses, systematic reviews or RCTs, or RCTs with a high risk of bias.
- 2++** High quality systematic reviews of case-control or cohort studies **or** High quality case-control or cohort studies with a very low risk of confounding, bias, or chance and a high probability that the relationship is causal.
- 2+** Well conducted case-control or cohort studies with a low risk of confounding, bias, or chance and a moderate probability that the relationship is causal.

- 2- Case-control or cohort studies with a high risk of confounding, bias, or chance and a significant risk that the relationship is not causal.
- 3 Non-analytic studies, e.g. case reports, case series.
- 4 Expert opinion.

#### **Grades of recommendations**

- A** At least one meta-analysis, systematic review, **or** RCT rated as 1 + + and directly applicable to the target population **or** A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1 + directly applicable to the target population and demonstrating overall consistency of results.
- B** A body of evidence including studies rated as 2 + + directly applicable to the target population and demonstrating overall consistency of results **or** Extrapolated evidence from studies rated as 1 + + or 1 +.
- C** A body of evidence including studies rated as 2 + directly applicable to the target population and demonstrating overall consistency of results **or** Extrapolated evidence from studies rated as 2 + +.
- D** Evidence level 3 or 4 **or** Extrapolated evidence from studies rated as 2 +.



# Hepatitis C

Greater Manchester Hepatitis C Strategy

**For further information please contact  
Siobhan Fahey, Programme Manager,  
The Greater Manchester Hepatitis C Strategy  
[siobhan.fahey@hmr.nhs.uk](mailto:siobhan.fahey@hmr.nhs.uk)**

**[www.gmhepc.com](http://www.gmhepc.com)**