



# **Beginner's guide to Hepatitis C testing and immunisation against hepatitis A+B in general practice**

---

*Dr Chris Ford*

*GP & SMMGP Clinical Lead*

*Kate Halliday Telford & Wrekin Shared  
Care Coordinator*



# Aims

---

- Discuss:
  - Reasons for testing for hepatitis C (and A, B and HIV) and immunisation in general practice
  - How to improve our testing and immunisation rates in general practice



# Hepatitis C

---

- Hepatitis C is an under-diagnosed and under-treated important cause of morbidity and mortality
- Hepatitis C is a common and potentially curable disease



# Prevalence of hepatitis C

---

- Between 0.4 – 1%
- +/- 500,000 people in UK
- Worldwide 170 million people
- About 3% of the world's population chronically infected with HCV
- Number of people infected / GP average list 1800 = +/- 8 – 18 people
- Many of these people may be undiagnosed



## Also

---

- Knowledge about HCV in population remains low but improving
- Less than 10% of an estimated cases of hepatitis C infection have been diagnosed
- More than 100,000 lives are at risk because of inadequate screening and treatment for the illness
- Britain is the worst country in Europe at treating Hepatitis C infection
- If no improvements, NHS will need to spend up to £8billion over the next 30 years

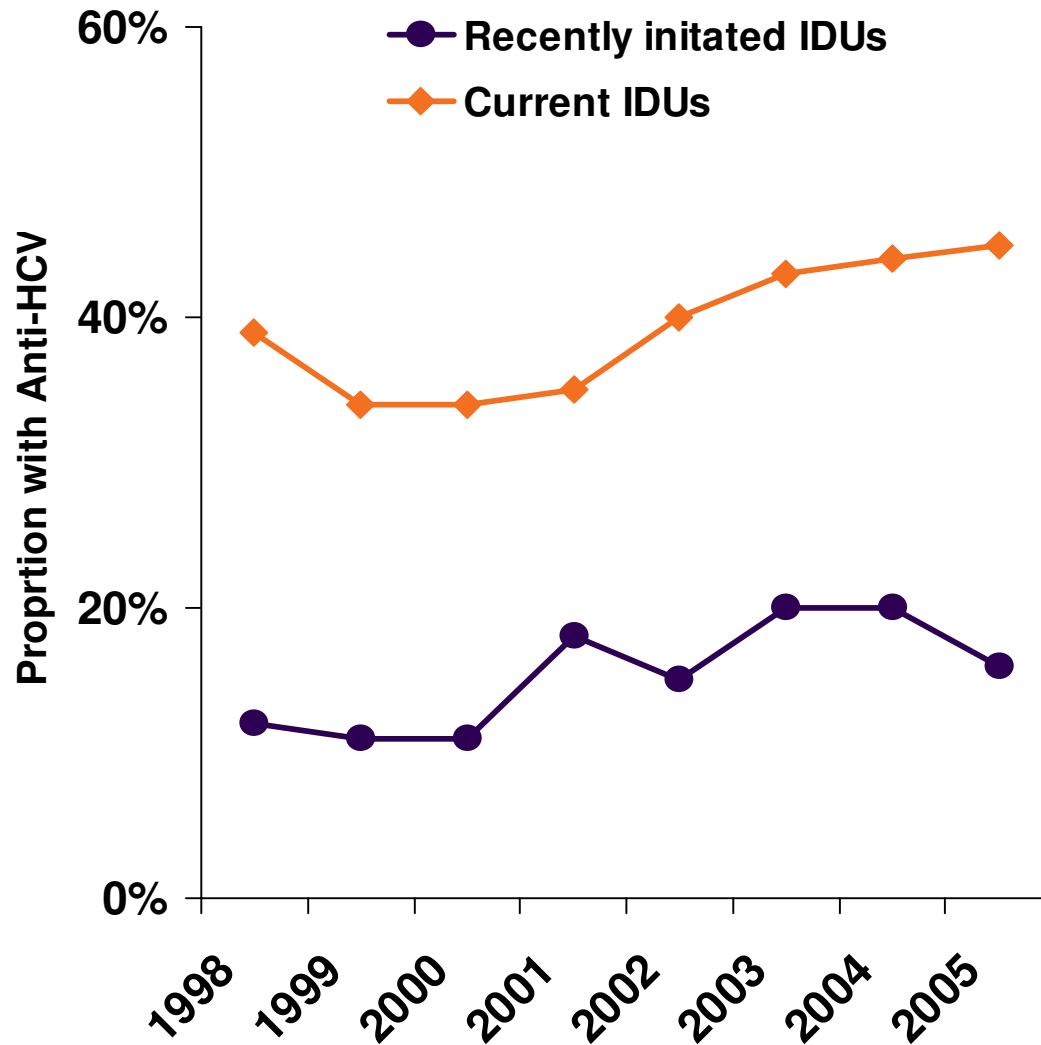


# Who gets hepatitis C

---

- HPA estimate:
  - 31% are current injectors
  - 57% are ex-injectors
  - 12% non-injecting population

# Trends in HCV prevalence among current injectors\* and recently initiated injectors# England & Wales 1998-2005

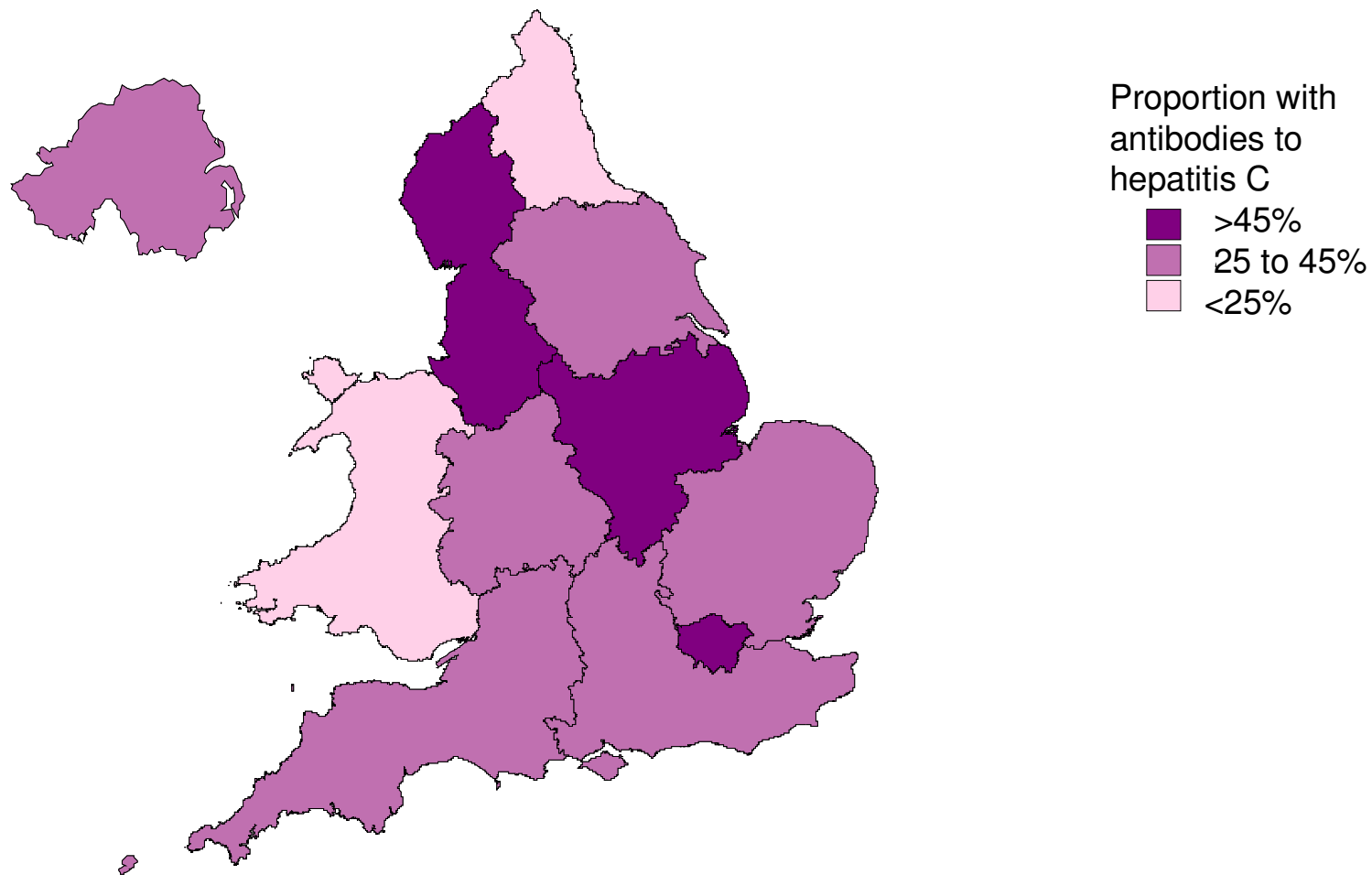


\* Those who last injected drugs in the four weeks prior to participating in the survey.

# Those who started injecting drugs in the three years prior to participating in the survey.

# Geographic variations in the prevalence of antibodies to hepatitis C among current & former injecting drug users in England, Wales & Northern Ireland

(2004 and 2005 data combined).



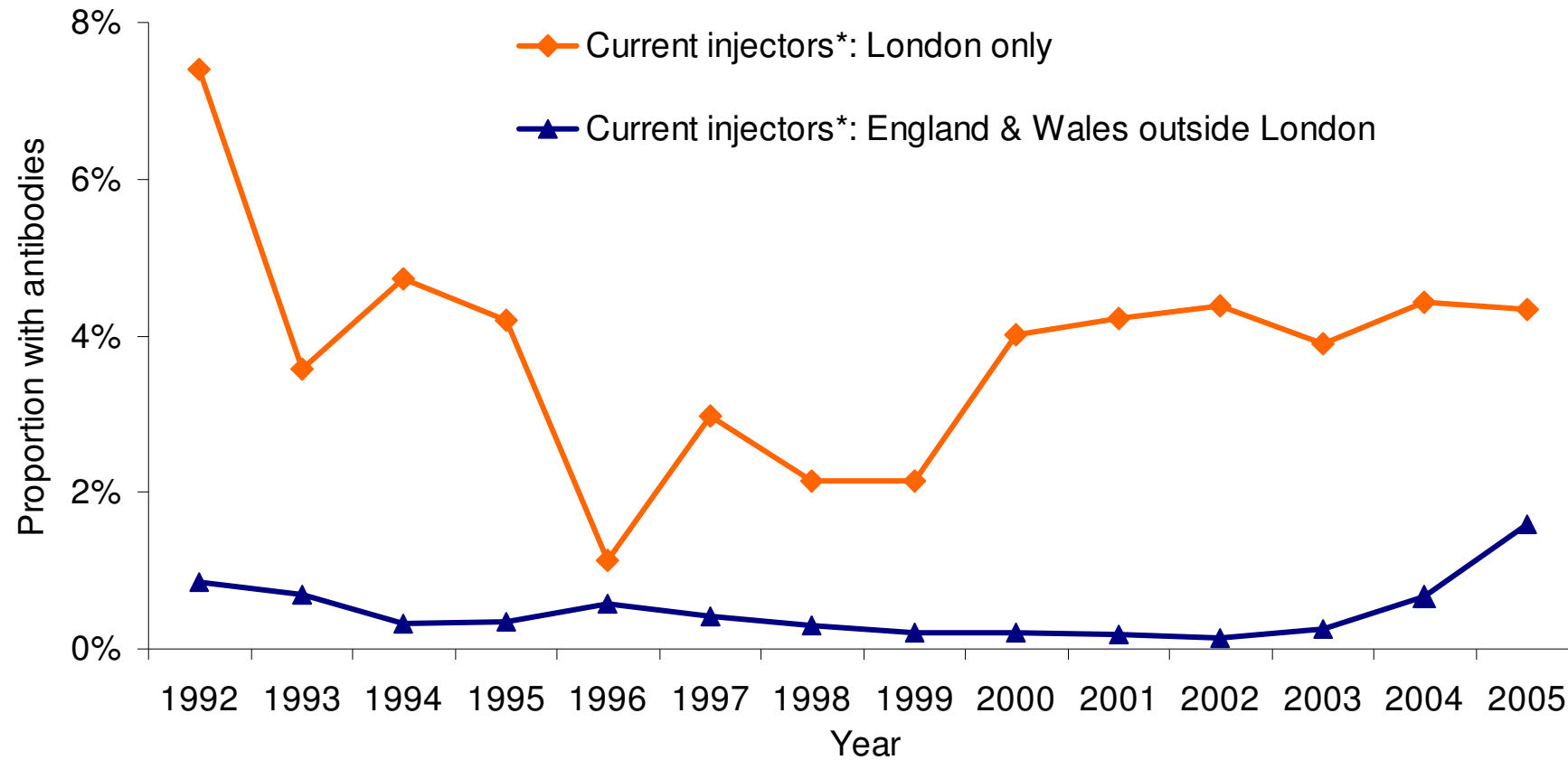


# Don't forget other infections

---

- HIV increasing in UK and only about 1/3<sup>rd</sup> know they have it
- HIV recently increased in people who inject drugs
- Hepatitis B is also common (0.3% of UK population) but is preventable with immunisation
- Hepatitis A is preventable with immunisation and needs to be in people exposed to HCV

# Prevalence of HIV infection among current\* injecting drug users in England, Wales & Northern Ireland: 1992 to 2005



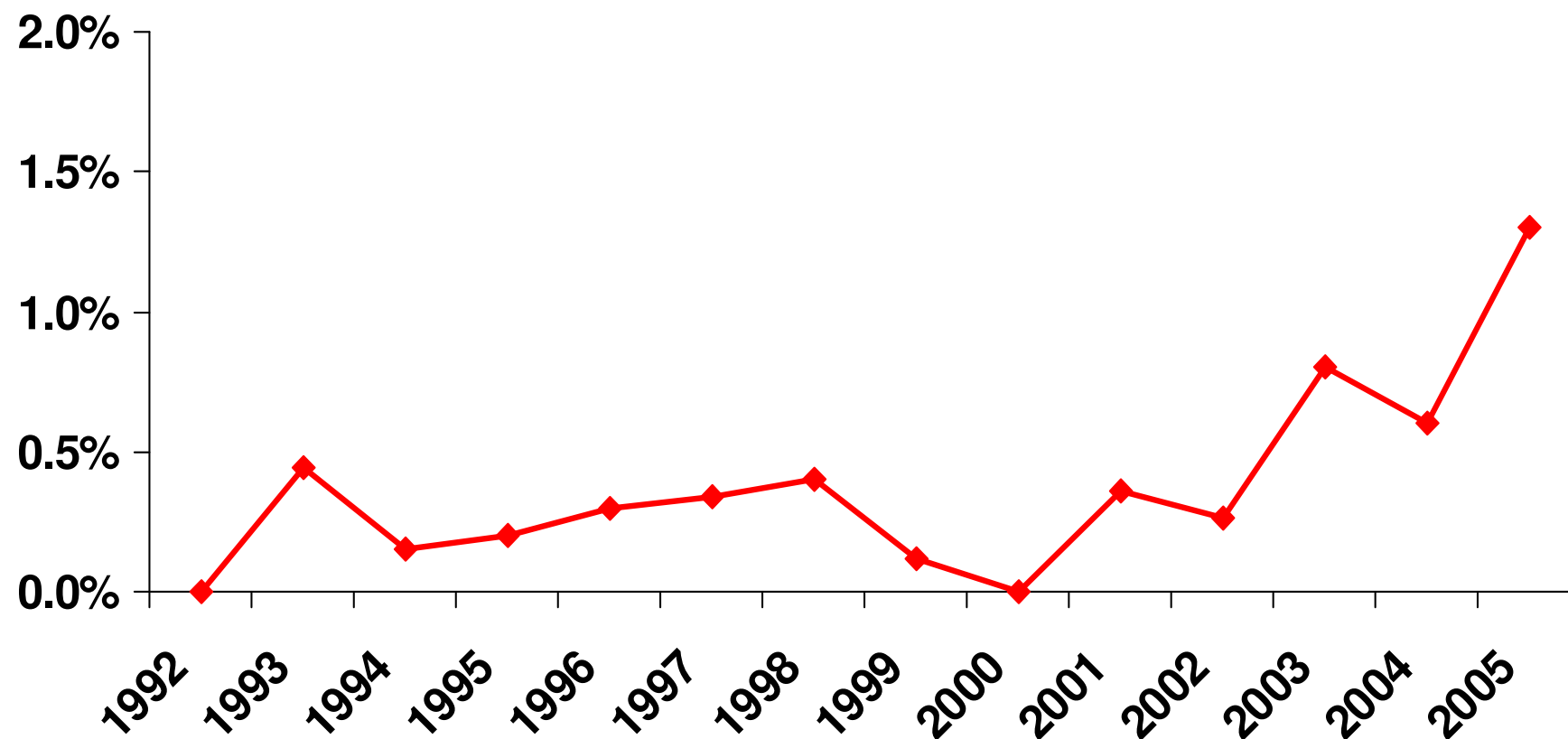
\* Those who last injected drugs during the four weeks prior to participating in the survey.

+ Those who started injecting drugs during the three years prior to participating in the survey.

Includes Northern Ireland from 2002..

# Trends in HIV infection among recently initiated injectors\* in England & Wales: 1992 to 2005

\* Those who started injecting drugs in the three years prior to participating in the survey.



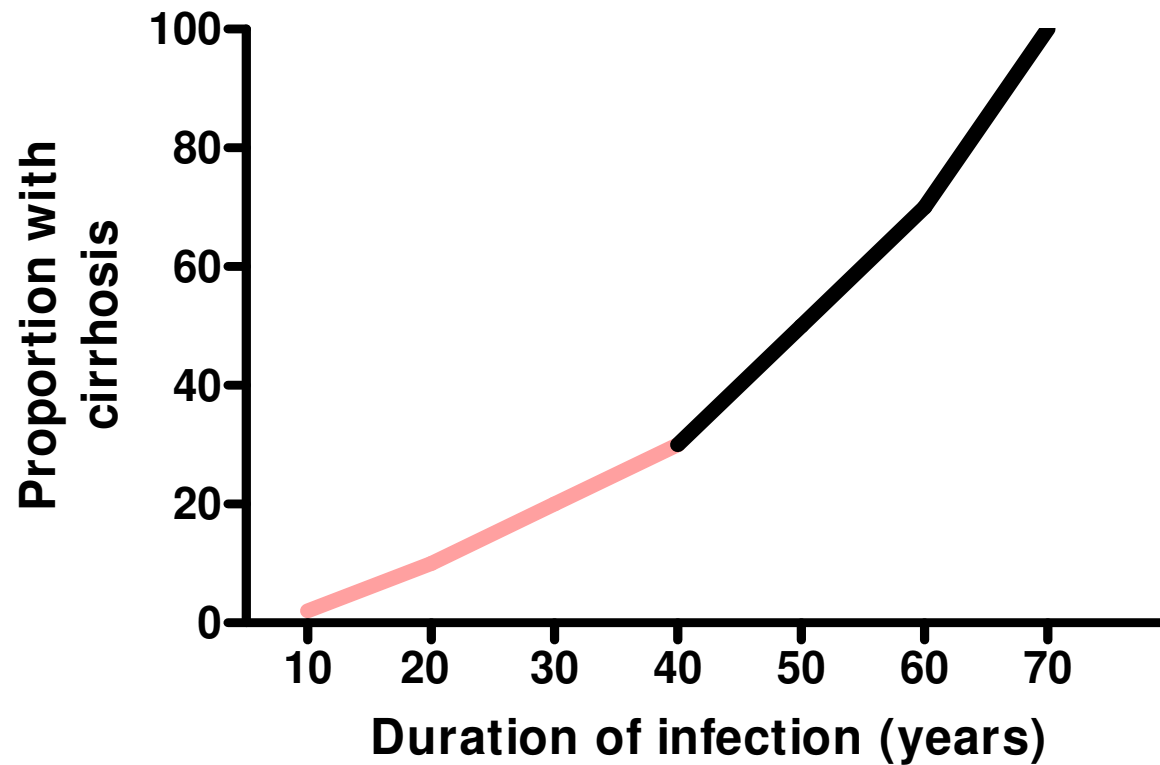


# People exposed to hepatitis C

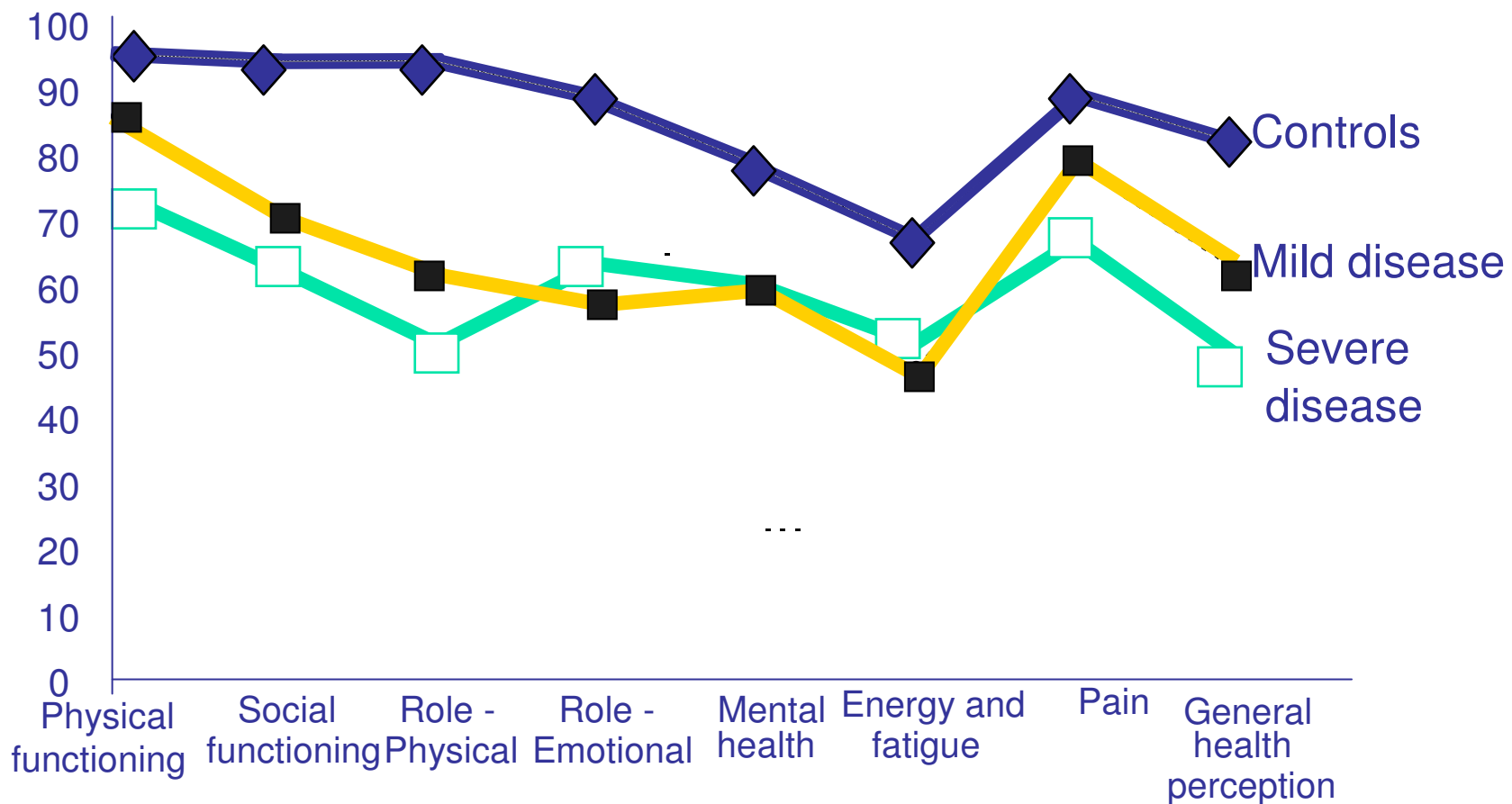
---

- 20- 25% clear the virus within 2-6 months
- 75% go on to chronic hepatitis C
  - Some will remain well and never develop liver damage
  - Most people will develop some level of long term symptoms or signs of liver inflammation
  - In time many will develop cirrhosis of the liver over an average 20-40 years
  - and 5% of those with cirrhosis will develop liver failure or cancer per year

# Natural History of Chronic HCV



# Changes in QOL with HCV





# Some good news!

---

- New report from the Health Protection Agency shows that the number of people newly diagnosed with hepatitis C has increased:
  - From 2,116 in 1996 > to 7,580 in 2005
  - Testing also increased overall
  - In GP surgeries', testing has increased by almost 60 per cent between 2002 and 2005

[http://www.hpa.org.uk/publications/2006/hepc\\_2006/default.htm](http://www.hpa.org.uk/publications/2006/hepc_2006/default.htm)



So what can we do to help this  
improvement?

---



# Add more good news!

---

- Treatment has improved
- It is worth testing and referring people
- We can help with prevention
- We can immunise
- We can provide drug treatment



# Transmission routes

---

- HCV is transmitted via blood to blood contact
- **Injecting drug use 90+%**
- Other risk factors include:
  - Born or lived abroad
  - Sexual risk
  - Previous blood transfusion or blood product recipient
  - Vertical transmission
  - Renal failure
  - Unknown



# Prevention – how can we help?

---

- No vaccine against hepatitis C
- **Primary prevention:** preventing new infections include:
  - Needle exchange programmes
  - Substitute prescribing
  - Prevention of needle-stick injuries or other occupational injuries
  - Drug consumption rooms
  - Prevention of transmission through blood or blood product transfusion
- **Secondary prevention:** eradicating the virus from those infected
  - Antiviral therapy
- **Tertiary prevention:** preventing complications from the virus in those infected
  - Alcohol



# Health Protection Agency- 2005

---

- **One third (30%) reported never having had a voluntary confidential test for hepatitis C - in 2000 half (51%) had not had a test.**
- **Of those who were infected with hepatitis C, 48% reported being aware of their infection.**
- **A third (34%) had never had a voluntary confidential test for HIV.**
- **Of those who were infected with HIV, only 47% reported being aware of their infection – compared to 74% between 1995 and 2003.**



# Testing- barriers

---

- Lack of funding
- Lack of knowledge/ confidence emphasis/ time
- Confusion over pre and post test discussion
- Lack of confidence in treatment services locally



# Testing-basics

---

- Blood needs to be taken for an **initial HCV antibody blood test** and this will indicate whether a person has ever been exposed to HCV
- Blood should also be taken at the same time for hepatitis A and B and HIV antibody tests (after appropriate pre-test discussion )
- Follow up with polymerase chain reaction (PCR or HCV RNA) test will identify current circulating virus.



# Who should be tested?

---

- Anyone who has ever injected (or snorted) drugs
- Current injecting drug users
- Recipients of blood (before Sept 1991), or blood products (before 1986 in the UK)
- If used unsterile medical equipment abroad
- People who may may had tattooing, body piercing, ear piercing or acupuncture with unsterile equipment
- Children born to mothers with known HCV



# Why should we offer testing?

---

- Testing can allay anxiety even if the result is positive
- A positive test allows early monitoring and treating if required
- Opportunity to immunise against Hepatitis B and A (co-infection significantly worsens prognosis)
- Testing can encourage the patient to change patterns of risky behaviour such as sharing, injecting, excessive drinking or unsafe sex whether the result is positive or negative
- Treatment markedly improved
- Testing promptly following recent exposure may identify acute infection, which responds to therapy in almost 100% of cases



# What do we need to cover in the pre-test discussion?

---

- Patient's understanding of their risk factors
- Informed consent
- Test is for antibodies only, will require other tests if positive to check if the virus is active or not. Antibodies can develop up to 6 months after exposure - negative test may need to be repeated
- Natural history and disease progression variable
- Risk of transmission to others: sexual, vertical, and sharing



# Potential disadvantages of testing

---

- Is the timing right? Negative result could give false reassurance if sample is taken within window period
- Are there issues behind request for a test that should be dealt with first e.g. worries about drug use, relationships
- Anxiety whilst awaiting the result
- Coping with a positive result will require adaptation
- The uncertainty of the prognosis of HCV
- Rehearse with them how they will feel if result is positive or negative



# What other advice do we need to give?

---

- Advice screening for HIV and other hepatitis
- Need for hepatitis A + B vaccinations
- Advice re alcohol
- Stop injecting if possible
- If not use clean equipment
- Harm Reduction advice especially re sharing



## Post test

---

- Result given ideally by person who carried out pre test discussion
- Does the patient want someone with them when they get the result?
- Every effort should be made to give the patient their result (as many as 1 in 5 do not receive their results)



# After testing

---

- Negative results:
  - Discuss risky behaviour
  - Window period
- Positive results:
  - Do they understand the result?
  - Need for further investigations to determine what a positive test means-



# Positive antibody tests

---

- Ideally stop alcohol
- Harm reduction advice re sharing injecting equipment, sexual transmission, home environment
- Immunisations
- Inform injecting and sexual contacts
- explain local treatment system- do they want a buddy?



# The antibody test is positive

---

- *How do we now proceed?*
- Do further investigations in general practice or refer?



# Further investigations we can then do

---

- Repeat HCV (&HBV,HAV,HIV as required)
- PCR (otherwise known as HCV RNA) to test for active infection in the blood
- Genotype (most common UK 1,2 and 3)
- FBC to check for anaemia etc
- LFT to test state of liver, U+E, Glucose, TFT



# Next steps

---

- HCV positive and unable to do further tests:
  - Discuss referral and refer all that want
  - Make sure communication is good between yourself and specialist
  - Continue to review health, alcohol etc
- HCV and HCV RNA positive:
  - Discuss referral and refer all that want with all test results in letter
  - Make sure communication is good between yourself and specialist
  - Continue to review health, alcohol etc
  - Some good examples of starting treatment in primary care



# Why treatment?

---

- Treatment successful in clearing the virus in 40-80% of patients, according to genotype
- Recent NICE guidance advocates treatment for all that want it
- Early treatment advantageous-disease may not progress in linear fashion and therapy is more effective when administered in the early stages of infection
- Liver biopsy may not be required
  - Active IVDUs do benefit from therapy
  - Active IVDUs do comply with treatment
  - Active IVDUs do not get re-infected



# Immunisation A and B

---

- Hepatitis A and B are preventable with vaccination
- UK only country in Europe where hepatitis B vaccination not done as child
- Important to do in all people who inject and / or snort drugs



# Immunisation against hepatitis A and B- barriers

---

- Lack of funding
- Lack of knowledge/ confidence/  
emphasis/ time.
  - In drug services, uptake rates have been found to be higher where staff training and confidence were better
- Lack of accessibility





# Hepatitis B immunisation- basics

---

- Hepatitis B – accelerated course of 3 injections 0, 7 and 12 days or 0,1 and 2 months. Booster dose at 12 months
- Opportunistic- don't wait for blood test- have stocks available!



## Post vaccination antibody testing and actions to consider Hepatitis B

Antibody level (miu/ml)	Status	Action
<10	Non-response	Screen for markers of present or past infection (HbsAg, antiHBc). Give additional dose. Consider repeating full course.
10-100	Poor response	Give additional dose if immune compromised e.g HIV+.
>100	Protective	No further action needed if immunocompetent.



# Hepatitis A immunisation

---

- Hepatitis A vaccine is available as a single component vaccine or combined with hepatitis B vaccine. Using them as separate vaccines is recommended as one dose of hepatitis A vaccine confers greater protection against hepatitis A than one dose of the combined vaccine because the combined vaccine only has half the amount of hepatitis A antigen than the single component vaccine.
- Opportunistic- don't wait for blood test- have stocks available



# Recommended schedules of hepatitis A and B vaccines

<b>Hepatitis Vaccines</b>	<b>Schedule</b>
Single A	2 doses with 2 <sup>nd</sup> dose after 6-12 months. 2 <sup>nd</sup> dose may be delayed for up to 3 years.
Combined A and B	Routine: 0, 1, 6 months
	Accelerated: 0,7, 21 days with booster ideally at 12 months.



# Conclusion

---

- Primary care can offer valuable opportunities for hepatitis testing, immunisation, prevention and harm reduction



# References

---

1. Health Protection Agency Hepatitis C in England - An Update , 2006
2. The Hepatitis C Action Plan The Department of Health 2004
3. The Health Protection Agency Hepatitis C in England 2005
4. All-Party Parliamentary Group on Hepatology A Matter of Chance: An audit of Hepatitis C Healthcare in England 2006
5. Unlinked Anonymous Survey of Injecting Drug Users. Health Protection Agency
6. Hepatitis C Trust  
<http://www.hepcuk.info/data/usercontentroot/home/>
7. RCGP Guidance for the prevention, testing, treatment and management of Hepatitis C in Primary Care (out May 2007)
8. Guidance of A and B vaccination of drug users in primary care and criteria for audit RCGP



# Tasks for groups

---

- What is the level of testing and immunisation in your area, surgery or service?
- How can testing and immunisation be improved in your location?
- And what do you need to do to improve services?