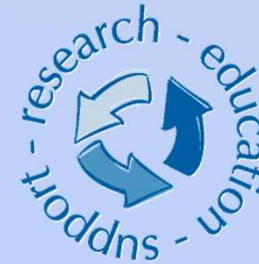


16th Annual Conference of the
National HIV Nurses Association (NHIVNA)



National HIV Nurses Association

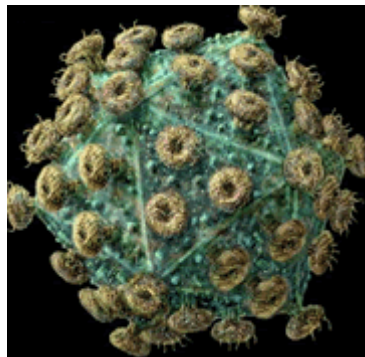
Ricky Gellissen

Imperial College Healthcare NHS Trust, London

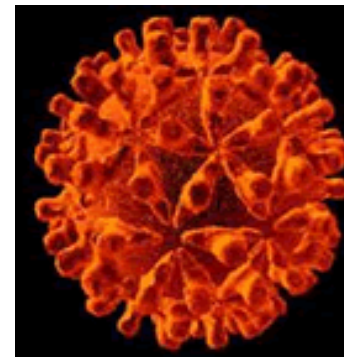
26-27 June 2014- City Hall, Cardiff

What can hepatitis learn from HIV?

Ricky Gellissen (ricky.gellissen@imperial.nhs.uk)
Imperial College Healthcare NHS Trust, London



H.I.V.



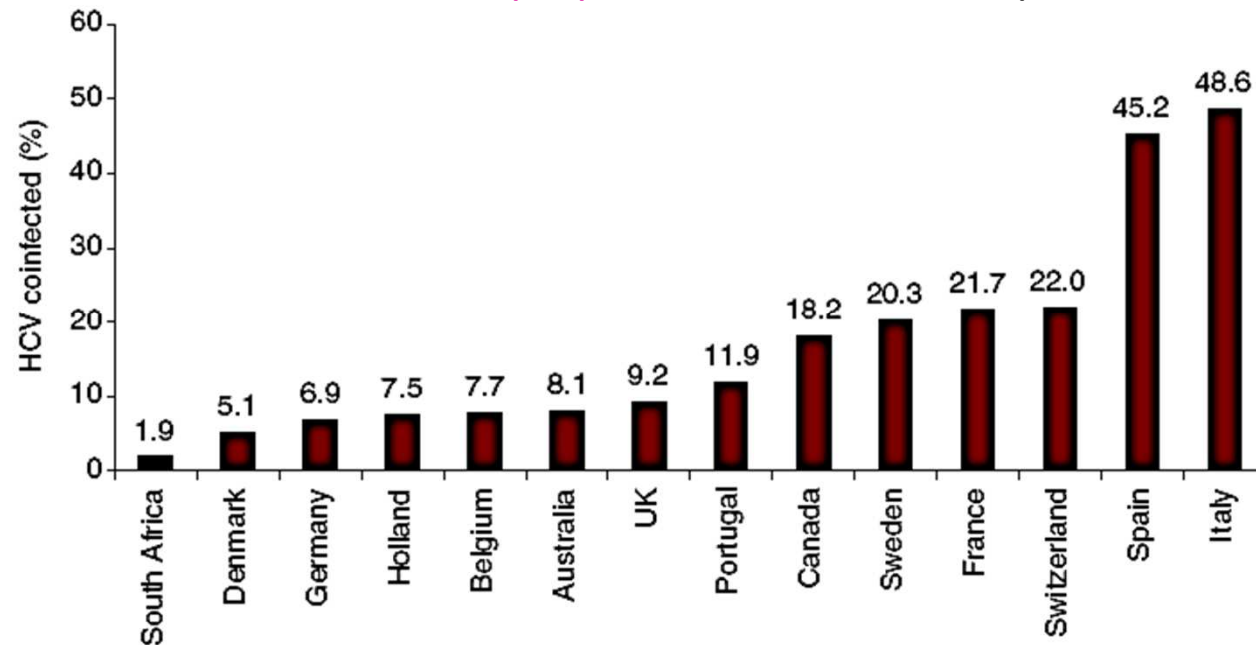
H.C.V.

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Co-infection Is Common! 9M People Worldwide



About 1 out of 4 people with HIV also have Hep C.



Prevalence differs in countries

Alter MJ. *J Hepatol* 2006;44:S6-9. UNAIDS Global Report 2008

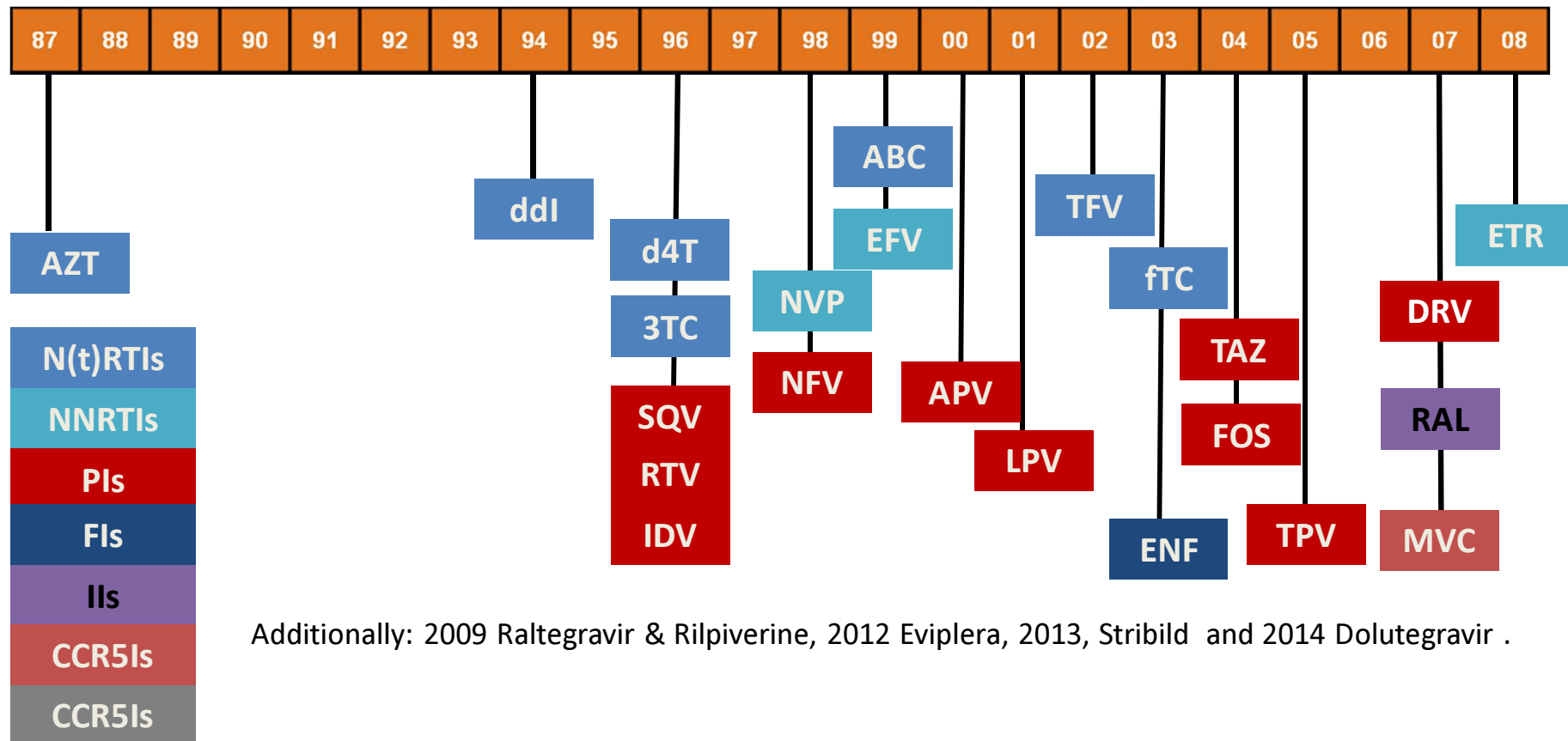
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Common themes

- Triple therapy
 - Drug-drug interactions
 - Adherence and treatment resistance
- Prevention: Sex and recreational drugs
 - Partner notification
- Legal issues and “reckless transmission”

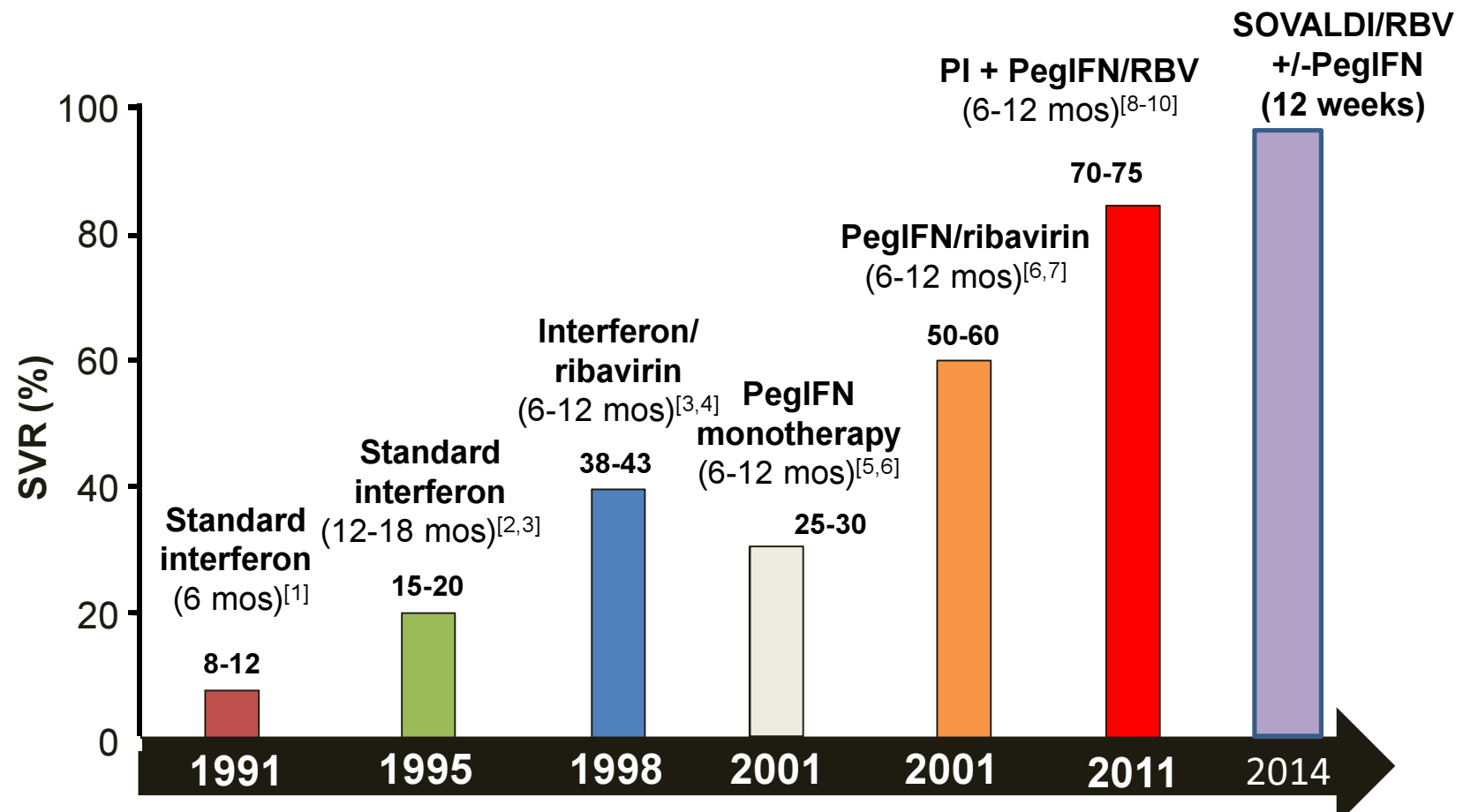


HIV drugs over the years



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Treatment of Chronic Hepatitis C (G1)



1. Carithers RL Jr., et al. Hepatology. 1997;26(3 suppl 1):83S-88S. 2. Zeuzem S, et al. N Engl J Med. 2000;343:1666-1672. 3. Poynard T, et al. Lancet. 1998;352:1426-1432. 4. McHutchison JG, et al. N Engl J Med. 1998;339:1485-1492. 5. Lindsay KL, et al. Hepatology. 2001;34:395-403. 6. Fried MW, et al. N Engl J Med. 2002;347:975-982. 7. Manns MP, et al. Lancet. 2001;358:958-965. 8. Poordad F, et al. N Engl J Med. 2011;364:1195-1206. 9. Jacobson IM, et al. N Engl J Med. 2011;364:2405-2416. 10. Sherman KE, et al. N Engl J Med. 2011;365:1014-1024.

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Drug-Drug-Interactions

The screenshot displays the website www.hiv-druginteractions.org in an Internet Explorer browser window. The page features a navigation bar with links to Interaction Charts, News & Archive, About Us, Pharmacology Resources, Links, Meetings, Feedback, and Home. The main content area is divided into several sections: 'LATEST ARTICLES' with links to meeting reports and drug interaction updates; 'DRUG INTERACTION CHARTS' highlighting the inclusion of Dolutegravir and providing a 'CLICK HERE' link to access comprehensive charts; 'TREATMENT SELECTOR TABLES' for HIV treatment; 'HIV iChart - an interaction app for mobile devices' available for free on Apple and Android; and 'EDITORIAL SPONSORSHIP' from BHIVA, EACS, and the International Congress on Drug Therapy in HIV (Glasgow). The footer includes logos for major sponsors like Janssen, Gilead, MSD, and ViiV, along with links to a Cookie Policy, Privacy Statement, and Terms and Conditions. The browser's address bar shows the URL, and the taskbar at the bottom indicates the system date and time as 13:13 on 18/06/2014.

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Drug-Drug-Interactions

hep-druginteractions - Internet Explorer provided by Imperial College Healthcare
http://www.hep-druginteractions.org/

File Edit View Favorites Tools Help
Favorites Free Hotmail Web Site Gallery

Home - Imperial Colle... consensus themes HBV... THE ALPHABET SOUP... hiv drug interactions B... Hepatitis Images, Stat... HIV-Druginteractions... hep-druginteractions... HBV iChart - Android A... University launches ig...

www.hep-druginteractions.org

Interaction Charts News & Archive Interaction Query Service About Us Pharmacology Resources Links Meetings Feedback

LATEST ARTICLES
Meeting Report - 15th HIV & Hepatitis Pharmacology Workshop, Washington
Drug interactions - Boceprevir or Telaprevir with Dolusogvir
EMA News - Simeprevir
Meeting Report - EASL, London, 2014
Meeting Report - 2014 CROI, Boston
Drug Interactions - Boceprevir or Telaprevir with maraviroc
[Click here for previous news items](#)
SITE UPDATES
Simeprevir
Simeprevir, a directly acting antiviral for HCV, has been added to the interactions charts...
[Withdrawal of interactions with HBV drugs](#)
Due to the increase in the number of licensed (and soon to be licensed) directly acting antiviral...
[Sofosbuvir](#)
Sofosbuvir, the recently approved directly acting antiviral for HCV, has been added to the interactions charts...

DRUG INTERACTION CHARTS
Access our comprehensive, user-friendly, free, drug interaction charts
[CLICK HERE](#)
Providing clinically useful, reliable, up-to-date, evidence-based information

ASSOCIATED SITES
UNIVERSITY OF LIVERPOOL
[www.hiv-druginteractions.org](#)
A comprehensive HIV drug-drug interaction resource, freely available to healthcare workers, patients and researchers. The site is also available in a low graphics version - [www.hiv-druginteractions.org](#)
BRITISH SOCIETY FOR NANOMEDICINE
Website of the British Society of Nanomedicine with sections for scientists, the general public and teachers.
EXTERNAL LINKS
Viral Hepatitis Congress
9-11 October, 2014
German Liver Foundation
Deutscher Leberstiftung
FOLLOW US ON TWITTER
For the latest additions and updates to the site, click the button to follow [hepinteractions](#) on Twitter.
EMAIL UPDATES
[Click here to register for website updates](#)
Please email webmaster@hep-druginteractions.org and include your address book to assist in automated delivery and check your SPAM or BULK folder to ensure emails are not being lost.

INTERACTION QUERY SERVICES
Telaprevir & Simeprevir Interaction Query Services
Q&A
Services for healthcare professional for queries relating to drug-drug interactions with telaprevir or simeprevir which the hospital pharmacy or medicines information unit are unable to answer
To see what other people have asked or to submit a question, click here for telaprevir or click here for simeprevir.

INTERACTION CHARTS AT YOUR FINGERTIPS
HEP iChart - an interaction app for mobile devices
iOS7 - We are aware that the update function on the app may not work properly with iOS7 on some devices. We are currently working to determine the nature and extent of the problem and to rectify this.
Available free for Apple and Android devices (search for HEP iChart in the App Store or Google Play).
This is an "offline" app that is downloaded to your device (~350 kb). An internet connection is not required to use the app, but is needed for downloading updates.

Sponsors: Janssen, GILEAD, MSD, Bristol-Myers Squibb, VERTEX, abbvie, Corbion, Policy, Privacy Statement, Terms & Conditions

Internet | Protected Mode: Off | 100% | 1336 | 18/06/2014

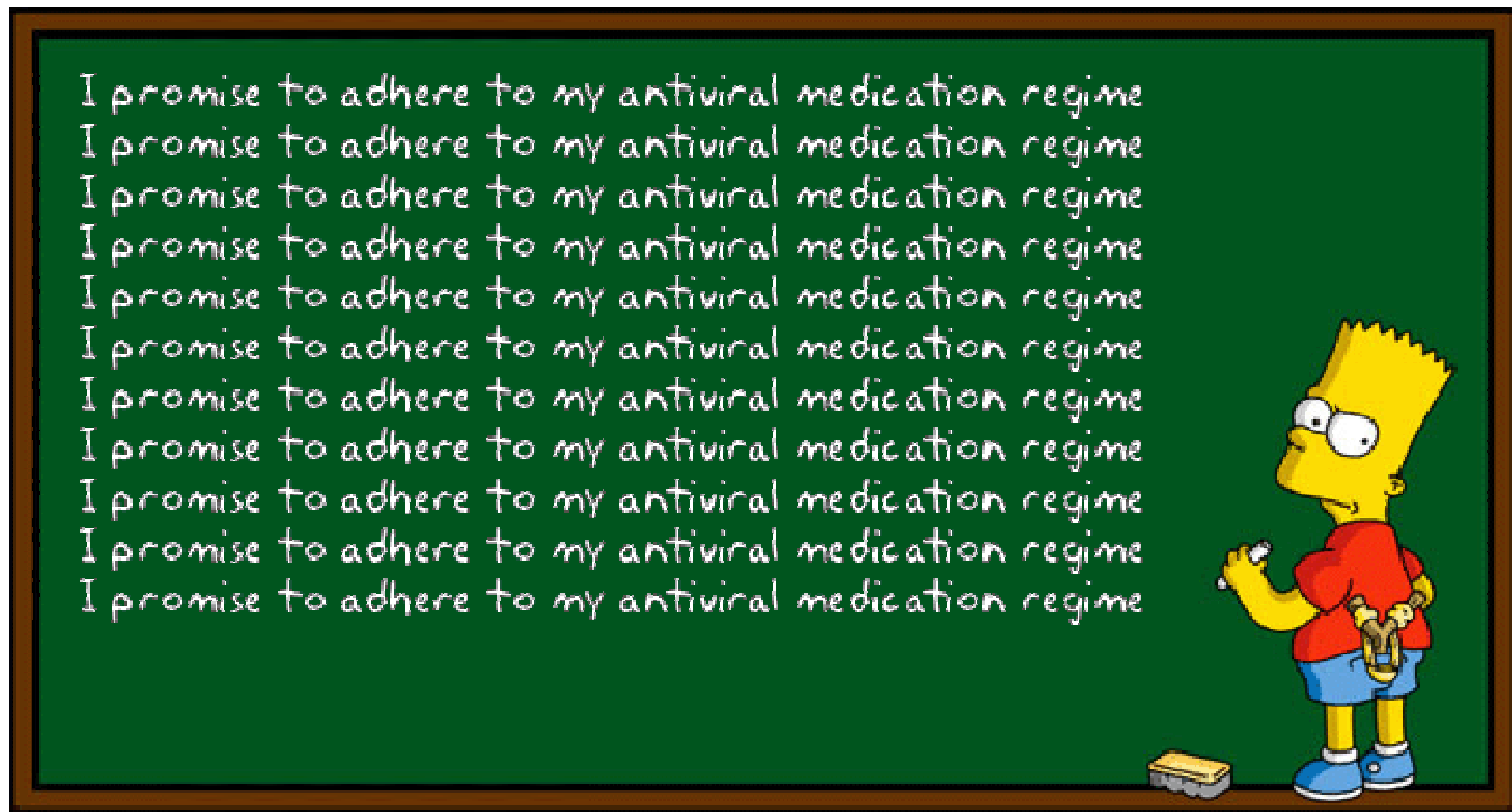
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Lifestyle Issues - Self medication

	Metabolism	BOC	TLP
Dihydrocodeine	CYP2D6, CYP3A4, UGT	■ ↑ likely	■ ↑ likely
Oxycodone	CYP2D6, CYP3A4	■ ↑ likely	■ ↑ likely
Cannabis	CYP2C9, CYP2C19, CYP3A4	■ ↑ likely	■ ↑ likely
Cocaine	Non-CYP; CYP3A4 minor	◆ unlikely	◆ unlikely
Amphetamine	??? CYP2C	?	?
Ketamine	CYP3A4, CYP2B6, CYP2C9	■ ↑ likely	■ ↑ likely
Mephedrone	Not well worked out.	?	?
Grapefruit juice	CYP3A4 inhibitor	■ ↑ likely	■ ↑ likely
St John's Wort	CYP3A4 inducer	■ ↓ likely	■ ↓ likely
Milk Thistle	CYP3A4 inhibitor	?	?

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Adherence and treatment resistance



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The “80-80-80” rule

McHutchinson noted that improved efficacy can be achieved by delivering at least:

- 80% of the interferon dose, and
- 80% of the ribavirin dose, for at least
- 80% of the standard 48-week duration of therapy.

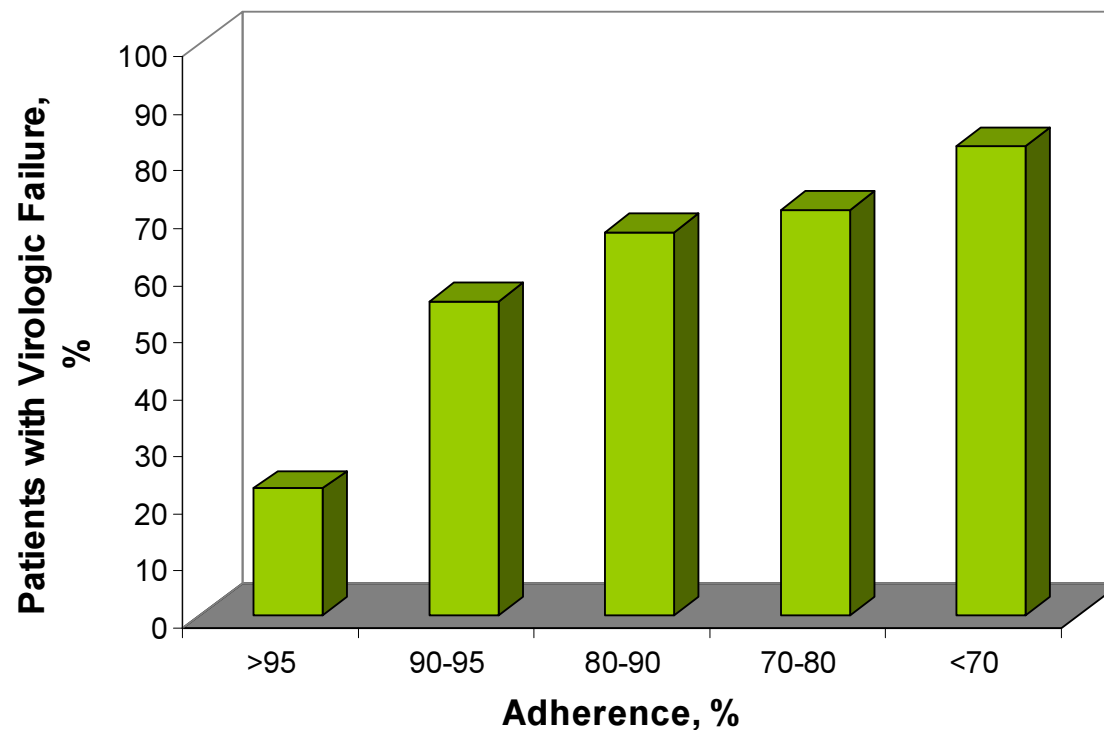
This so-called 80-80-80 rule underscores the importance of managing side effects and maximizing adherence to the regimen.

Adherence to combination therapy enhances sustained response in genotype-1-infected patients with chronic hepatitis C.

[McHutchinson JG¹](#), [Manns M](#), [Patel K](#), [Poynard T](#), [Lindsay KL](#), [Trepo C](#), [Dienstag J](#), [Lee WM](#), [Mak C](#), [Garaud JJ](#), [Albrecht JK](#); [International Hepatitis Interventional Therapy Group](#). Available online at: <http://www.ncbi.nlm.nih.gov/pubmed/12360468> Last accessed: 18.06.2014

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Correlation Between Adherence and Virological Failure



95% adherence is required to achieve undetectable viral loads in 80% of patients.

Paterson DL, Swindells S, Mohr J *et al. Ann Intern Med.* 2000;**133**:21-30

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Barriers to adherence

- Therapies with inconvenient dosing schedules and dietary restrictions decrease the likelihood of good adherence¹
- The presence of side effects is a key reason for treatment discontinuation²
- Forgetfulness is a very common barrier to adherence³
- When asked for the primary reason for missing a dose, 32% cited forgetfulness, sleeping through dosing time or running out of drug.

1. d'Arminio Monteforte A, Cozzi Lepri A, Pezzotti P, *et al.* 7th Eur. Conf on Clin Aspects & Treat of HIV Infectn. Lisbon 1999. Abs 121
2. Stewart KE, Call SA, Cloud GA *et al.*, 39th ICAAC. USA 1999; Abs 587
3. Gallant JE *et al.* J Int. Ass. of Physicians in AIDS Care. 1998; 4(5):32-35

Adherence

Factors inhibiting

- Perceptions about illness
- Education about disease and medication
- Psychological distress
- Complexity and frequency of dosing
- Expectations about efficacy and risk of side effects
- Poor patient/carer relationship
- Active substance misuse
- Patient's self-belief in their ability to adhere
- High Alcohol Intake

Factors promoting

- Easily incorporated into patient lifestyle
- Convenient and simple dosing
- Dosing not affected by food
- **Good tolerability**
- **Manageable side-effect profile**
- **Maintained quality of life**
- Compact, easy-to-swallow tablets
- Patient beliefs in the efficacy of their prescribed medication
- Patient perceptions of the severity of their disease

Adherence strategies

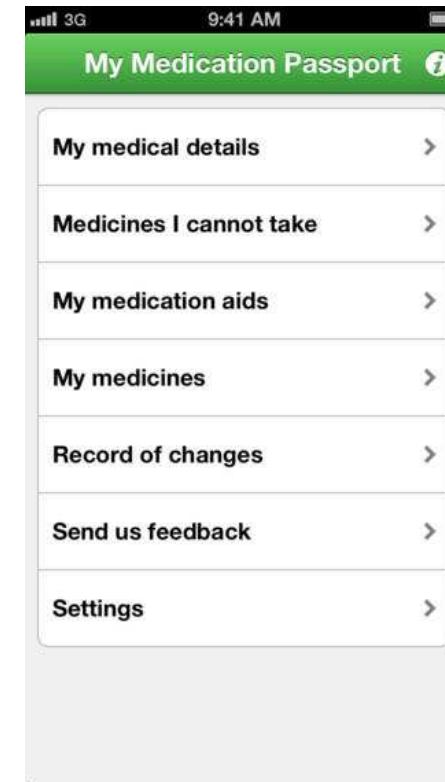
- **Reviewing written materials with each patient** and describing technical terms that may be used so that the patient does not find him/herself in an uncomfortable situation where literacy deficits have to be revealed.
- **Providing patients with pictorial or verbal information**, and with models or diagrams to supplement written materials. Displaying materials in both private and public areas creates a safe space for a person to view the materials and may prompt a person to speak with a clinician about the issues raised in the printed material.
- **Words, figures or pictures** which should represent the exact number of pills a person is taking and should correspond to the appropriate dose. Similarly indicate when & how the medication is to be taken (e.g., symbol for morning for A.M. dose and symbol for food when medication is required to be taken with food).
- **Use of medication aids** e.g. pill boxes, SMS text services, alarms
- **Discussing possible side effects** (e.g., potential drug and food interactions) prior to a person beginning a particular medication.
- **Concentrating efforts to plan for and to manage side effects** at times when a new drug or regimen is being started and thus medication side effects are most likely to occur.
- **Giving prompt attention to medication problems.**
- **Initiating a discussion regarding an individual's side effects** can assist those who may be hesitant to address such issues, especially when the subjects are perceived as embarrassing or socially unacceptable.
- **Referring to peer educators and/or group meetings** as good sources for individuals to share practical management tips.

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My Medication Passport

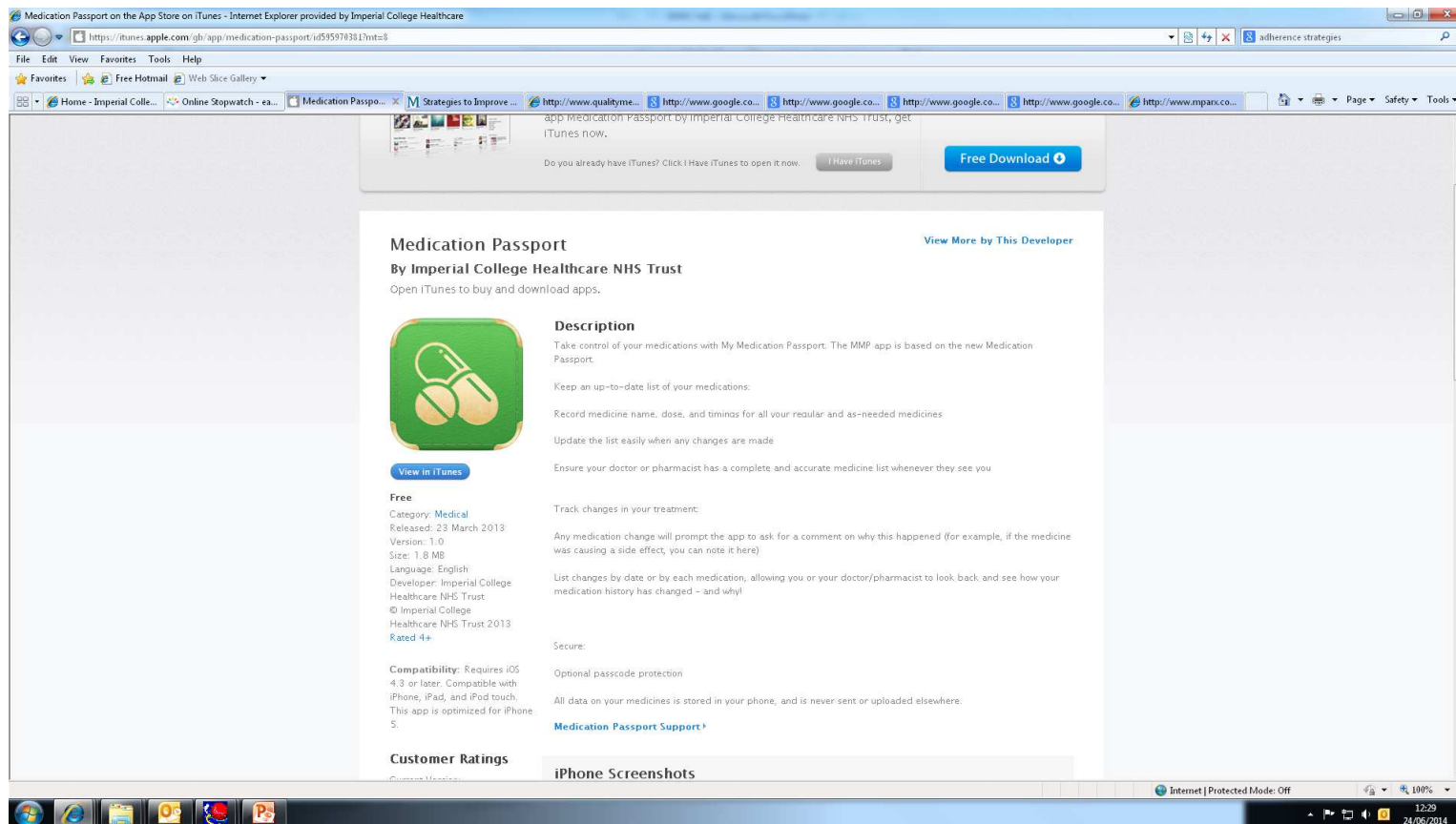
NHS

My Medication Passport



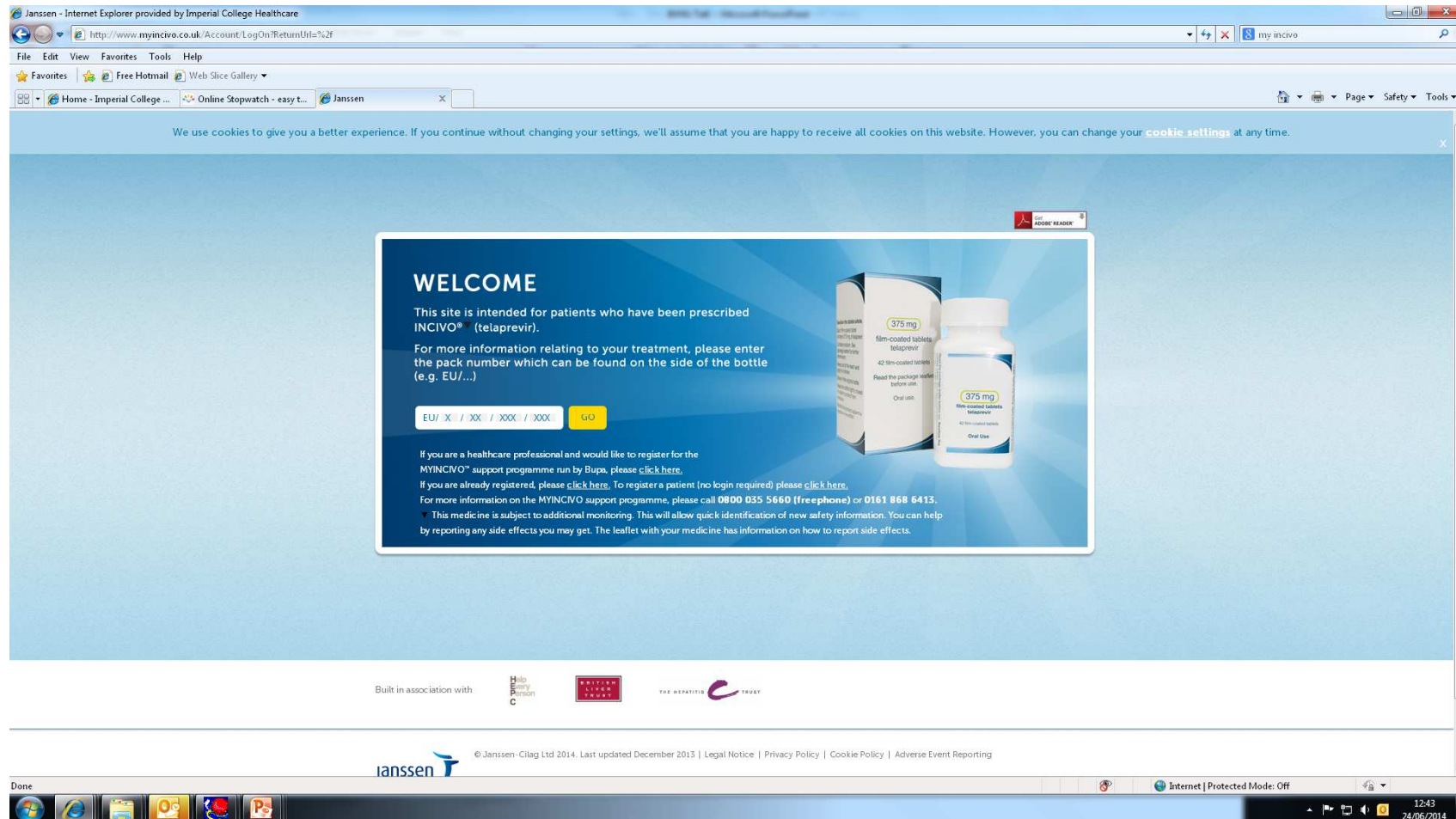
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Medication Passport App



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“My Incivo”



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BASHH Statement on Partner Notification for Sexually Transmissible Infections

- Hepatitis B: PN should include any sexual contact (vaginal or anal sex, or oro-anal sex) or injection equipment sharing partners during the period in which the index case is thought to have been infectious. The infectious period is from two weeks before the onset of jaundice until the index case is surface antigen negative. In cases without jaundice, if possible, estimate when infection is likely to have occurred based on a risk assessment. In cases of chronic infection, trace contacts as far back as any episode of jaundice, or to the time when the infection is thought to have been acquired, although this may not be possible for long look-back intervals. Appropriate repeat serological testing of contacts should be offered.
- Hepatitis C: The infectious period for acute hepatitis C is from two weeks before the onset of jaundice. However, usually there is no jaundice or history to suggest acute infection, and the look-back period for PN is to the likely time of infection (*e.g.* blood transfusion or first sharing of injection equipment), although this may not be possible for long look-back intervals. However, PN should be offered in two situations only, where:
 - There was vaginal or peno-anal sexual contact and either the index case and/or the sexual contact(s) have HIV infection
 - Sharing of injection equipment occurred during the period in which the index case is thought to have been infectious
- Appropriate repeat serological testing of these contacts should be offered. Sexual transmission of HCV through heterosexual sexual contact is uncommon if both the index case and sexual contacts do not have HIV infection, and PN is not recommended for this group.

Available online at <http://www.bashh.org/documents/4445.pdf> Last Accessed: 18.06.2014

Partner Notification

Imperial College Healthcare **NHS**
NHS Trust

Copy of PN V2 LD edit [Read-Only] - Microsoft Excel

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
	No. contacts @ risk	No. uncontactable	No. outcome already	No. contactable for P/N	Contact	Pt or Provider Ref	Risk: Sex/IVDU	Current or Ex	Regular/Known /Casual	SHIP Y/N	Contact Name	Contact Number	Provider Referral Centre	Most recent outcome of P/N (including date of that outcome)	Testing Outcomes (inc dates)	HCP verified	Follow-up Plan if necessary - DIARISE if action needed	P/N Completed Y/N		
1	5	0	2	3	1	Pt	Sex	Current	RMP	N				Informed 1.1.14. Attended Someplace 10.1.14	Tested Neg 6.2.14	Y				
2					2	Pt	Sex	Ex	CHP	N				Informed 7.1.14			Chase outcome	N		
3					3	Provider	Sex	Ex	KMP	Y	J Bloggs	7900000000	Someplace	Couldn't contact			Discuss with index at next visit	N		
4					1															
5					2															
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Policy for prosecuting cases involving the intentional or reckless sexual transmission of infection



- Intentional transmission: Section 18 Offences against the Person Act 1861
- Attempt to commit section 18
- Reckless transmission: Section 20 Offences against the Person Act 1861
- Evidential issues
- "a deliberate closing of the mind" (previously called 'Wilful blindness')

You may be guilty of Sexual Transmission of Infection if all five points below applied to you at the time of the alleged offence:

- You knew you had HIV / Viral Hepatitis
- You understood how HIV / Viral Hepatitis is transmitted
- You had sex with someone who didn't know you had HIV / Viral Hepatitis
- You had sex without a condom
- You transmitted HIV / Viral Hepatitis to that person.

http://www.nat.org.uk/media/Files/Publications/May_2010_Prosecutions_for_HIV_Transmission.pdf

<http://www.cps.gov.uk/publications/prosecution/sti.html#03> Last accessed 19.06.14

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