Hepatitis C in the Drug Using Community

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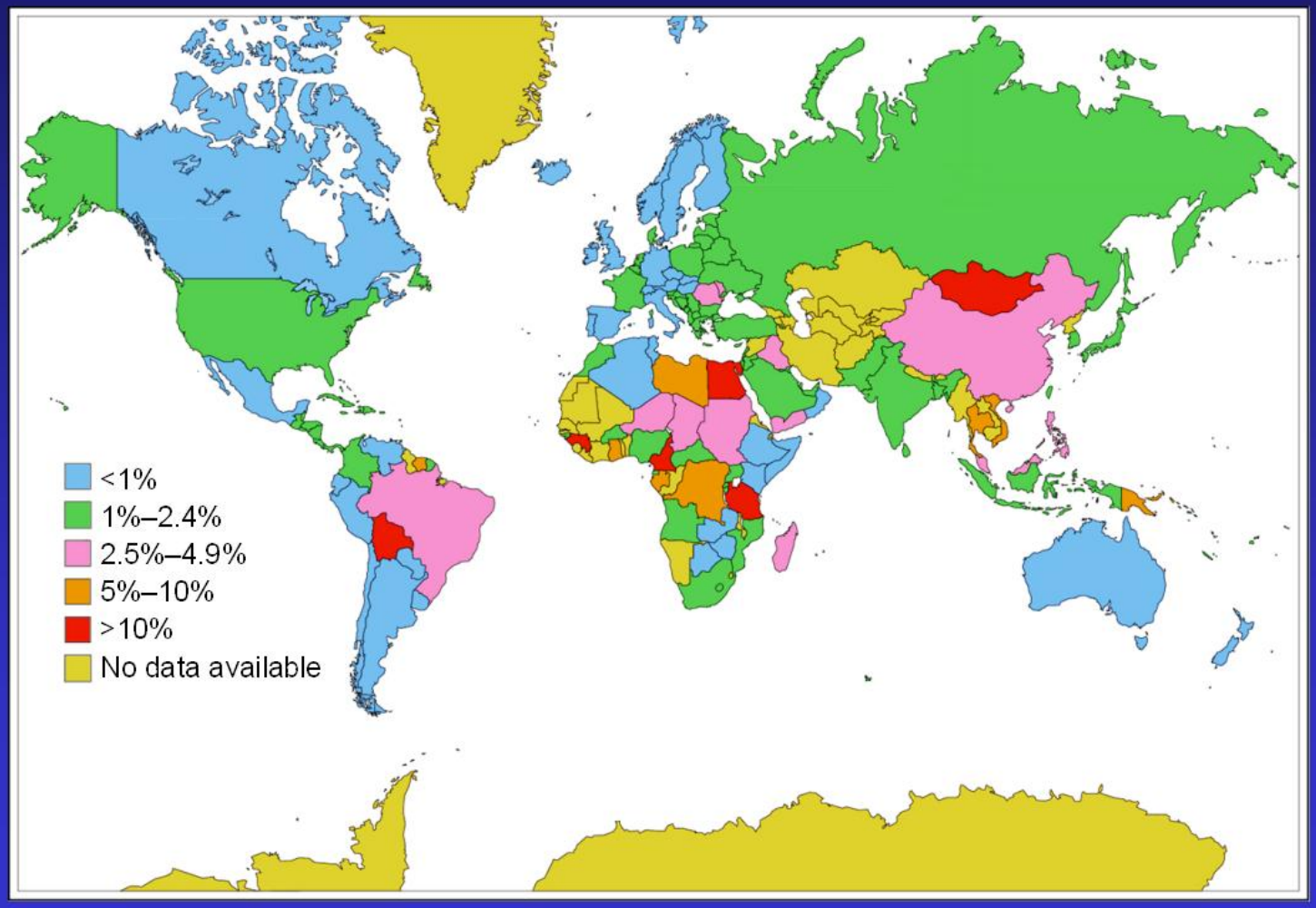
Hepatitis

- Literally “inflammation of the liver”
- This can be caused by:
  - Viruses - a range of hepatitis viruses (A,B,C,D,E & G) & others
  - Drugs - notably alcohol
  - Auto-immune disease
  - Unknown causes

Hepatitis C - Background

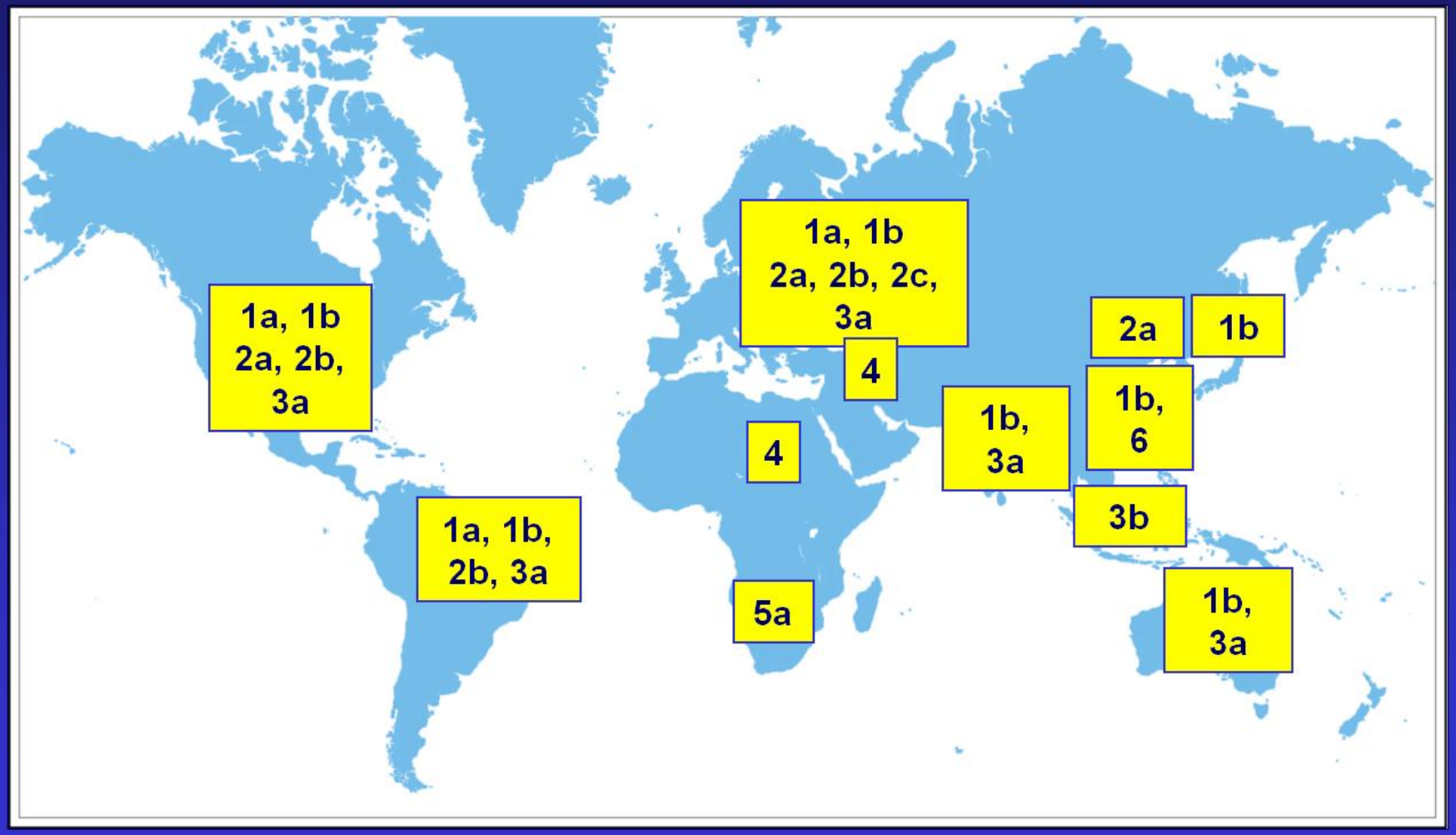
- First identified in 1989
- WHO – 170 million people infected
- 60-80% of IVDUs in Dublin area infected
- (10,000)
- 6 genotypes world-wide

HCV Infection: Worldwide Prevalence



WHO. *Wkly Epidemiol Rec*. 2000.

HCV Infection: Worldwide Genotype Distribution



Fang et al. *Clin Liver Dis.* 1997.

The Hepatitis C virus- Transmission

- **Injecting drug use** - the majority of new cases
  - Sharing needles *or other paraphernalia* (e.g. spoons, filters)
- Potential risks from snorting tools
- Sexual transmission - risk appears to be low <1%
- Mother to baby (vertical) ~5%
- Needle stick injury ~3%
- Body piercing, tattooing, electrolysis & acupuncture (if contaminated equipment or supplies used)
- Previously blood transfusion & blood products

Clinical course of hepatitis C

- Usually asymptomatic at seroconversion
- Some people clear the virus spontaneously (Keating et al., 2005)
- May be well for years
- Withour treatment ~ 20% with chronic infection will develop liver cirrhosis in 10-30 years – may die or need transplantation
- Progression is not linear
- ~ 1-5% of those with cirrhosis will develop primary liver cancer

Factors Relating to Poor Outcomes

- Use of alcohol
  - The risk of developing cirrhosis and primary liver cancer is increased substantially with heavy drinking
  - Even small amounts of alcohol consumption may be harmful
- Co-infection with HIV or Hepatitis B
- ‘Superinfection’ with hepatitis A (Vento et al., 1999)
- Age at which the infection was acquired
- Male gender

Tests for Hepatitis C

Blood Tests

- Anti-hepatitis C Virus Antibody Test
  - Shows if someone has been exposed to the virus, but not whether they remain chronically infected
  - Most people will be antibody positive within 3 months
  - To rule out infection from a known exposure, test at 6 months
- Polymerase Chain Reaction (PCR) Test
  - A confirmatory test for active virus in the bloodstream
- Liver Function Tests (LFTs / ALT)
  - Shows evidence of liver damage, but not diagnostic for HCV

Liver Biopsy

Specialist investigation to determine the extent of liver damage.

Role of Liver biopsy

- Assess the severity of fibrosis and necroinflammation
- Evaluate possible concomitant disease process, eg. Alcoholic liver disease
- Assess therapeutic intervention

Immunisation

- No vaccine is available for Hepatitis C
- Immunisation against hepatitis A and B should be actively promoted among drug users

Pre-Test Counselling

- Issues to discuss before testing

- The likelihood of a positive test result
- The potential social and financial implications of a positive result
- The patient's understanding of what a positive result means medically
- what supports are available to him or her
- what forms of treatment might be available
- patients with positive results will need clear advice about onward medical treatment and referral

Advice for those who are Hepatitis C Antibody negative on testing

- Advise on meaning and implication of the test result & ways of avoiding further exposure
- Arrange a further test if the last risk of infection was within the last 6 months
- If continued risky practices, advise on how to minimise the risk of transmission to others
- Reiterate the need for immunisation for hepatitis A and B

Management of Hepatitis C

- Consider broader health and social care needs to optimise social support, as well as specific treatments
- Refer to a specialist with an interest in liver disease for appropriate confirmatory testing and further management
- Advise on minimising the risk of transmission to others
- Inform of the need to stop or reduce alcohol intake to minimise the risk of disease progression
- Provide immunisation against hepatitis A and B & advise on testing for HIV & HBV

Specialist Care

- Some patients may require specific treatment early; others may not require specialist intervention at this time, but will need to be followed up for review of disease progress
- This may require co-operation with primary care and specialist drug services to facilitate this over many years and avoid drop-out and loss to follow up
- For those who may benefit from the specific treatments for hepatitis C infection, a period of stabilisation of drug use may be required
- Attention to general health needs, nutrition & mental health problems may be needed to make optimal use of specific medical treatments

Maximising Attendance for Specialist Appointments

- Non attendance at appointments may be a significant problem in referral for specialist hepatological advice
- Be aware of such potential problems & consider mechanisms locally to respond

Combined Therapy for Hepatitis C

- Current Guidance supports the use of combination therapy of pegylated interferon alpha & ribavirin in appropriately selected patients
- Treatment involves injections of interferon under the skin once a week, and ribavirin taken orally, for 24 or 48 weeks, depending on the genotype of infection
- Patients on therapy may need considerable support

Goals of Therapy

Primary objective = cure

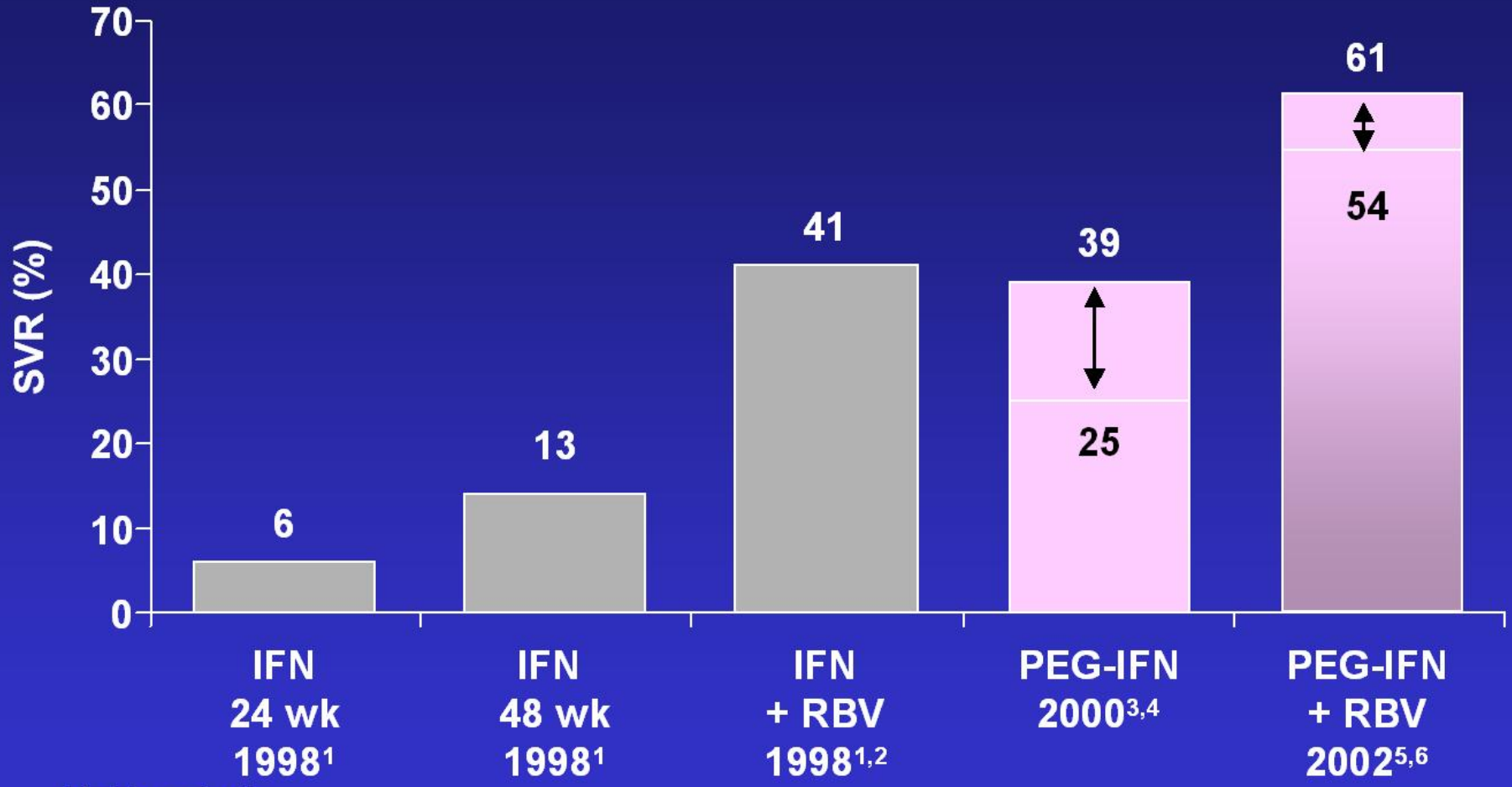
- No virus[1]
- Arrest progression (necrosis/fibrosis)
- No symptoms

Secondary objective = delay/prevent

- Reduce progression of fibrosis[1]
- Reduce progression to cirrhosis[2]
- Prevent decompensation
- Prevent HCC[2]

1. Worman. Hepatitis C: Sourcebook 2002; 2. Peters et al. Medscape HIV/AIDS eJournal. 2002;8(1).

Results of HCV Therapy: Overall SVR*



*ITT analysis.

1. McHutchison et al. *N Engl J Med*. 1998; 2. Poynard et al. *Lancet*. 1998; 3. Zeuzem et al. *N Engl J Med*. 2000; 4. Lindsay et al. *Hepatology*. 2001; 5. Manns et al. *Lancet*. 2001; 6. Hadziyannis. *EASL* 2002.

Side Effects of IFN Treatment

- Flu-like symptoms
  - Headache
  - Fatigue or asthenia
  - Myalgia, arthralgia
  - Fever, chills
- Nausea
- Anorexia
- Diarrhoea
- Psychiatric symptoms
  - Depression
  - Insomnia
- Alopecia
- Injection-site reaction
- Leukopenia
- Thyroiditis
- Autoimmunity
- Thrombocytopenia

INTRON® A. *PDR*. 56th ed. 2002; ROFERON®-A. *PDR*. 56th ed. 2002.

Side Effects of RBV Treatment

- Haemolytic anaemia
- Teratogenicity
- Cough and dyspnea
- Rash and pruritus
- Insomnia
- Anorexia

REBETOL®. *PDR*. 56th ed. 2002; Chutaputti. *J Gastroenterol Hepatol*. 2000 (suppl).

On-site Hepatitis C Treatment at the DTCB – 2003/4

- Rationale: '***To treat the patients with hepatitis C in the same location in which they receive their methadone with a view to retaining the patients in treatment***'

- Regular medical review
- Regular psychiatric review

providing adapting nurturing developing leading informing

On-site Hepatitis C Treatment ‘Pilot Study’

- Pilot study of nine patients - A ***proof of concept*** **–** that patient retention in treatment can be improved if therapy is initiated in a specialist drug treatment setting with directly observed therapy and with appropriate medical and psychiatric support on site.

- Directly observed therapy initiated at DTCB in liaison with St. James’s hospital infectious diseases unit

- Regular psychiatric review

Pilot study findings

- 8 of 9 completed treatment
- Efficacy comparable to hospital based setting
- 5 of 9 had haematological difficulties – addressed on-site
- 5 of 9 had significant depressive symptoms – addressed on-site
- 3 of 9 relapsed briefly into active addiction – addressed on-site

- Findings presented at the 1st International Hepatitis C Meeting at Dublin castle, June 2006

HCV Treatment at the DTCB

- Extended to include genotype 1
- Pathway for biopsy established via St. James's ID service
- To date, in excess of 40 patients have been treated with adherence rate of 95%
- Currently 10 patients on treatment

Key Messages for Drug Users

- Do not start injecting
- If currently injecting then stop
- If unable to stop the reduce harm
  - Use safer injection practices (this includes paraphernalia)
  - Avoid initiating others (or as a minimum provide them with harm reduction advice)
  - Use needle exchange schemes