



European Monitoring Centre
for Drugs and Drug Addiction

Injecting drug users in Europe: a key at-risk population for hepatitis B and C infection

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Main messages

- Injecting drug users (IDUs) constitute a large (>40%) proportion of the notified cases of hepatitis C (and B) where risk factor information is available
- Prevalence of serological markers is extremely high in this group, across Europe
- From a public health perspective, it is likely more cost-effective to treat active injecting drug users than ex-IDUs

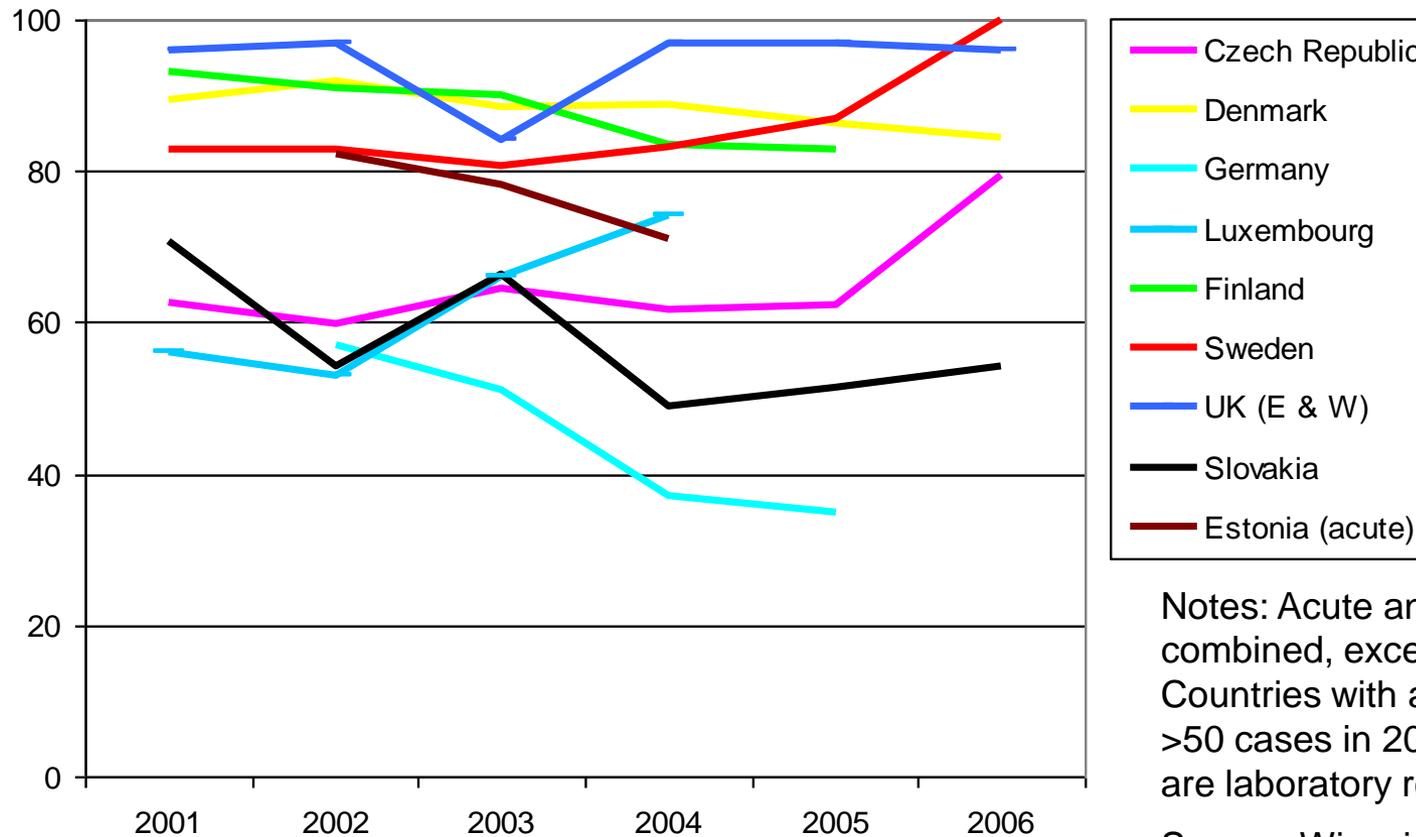


European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

- Decentralised EU agency, 27 EU countries + 3 non-EU
- Mission “To provide factual, objective, reliable and comparable information concerning drugs and drug addiction and their consequences”
- Network of national focal points and expert groups, annual reporting by EU Member States to EMCDDA
- Viral hepatitis infection is a central health indicator of EMCDDA: ongoing monitoring of HCV / HBV prevalence and notifications
- EMCDDA Annual Report and Statistical Bulletin:
<http://emcdda.europa.eu/>



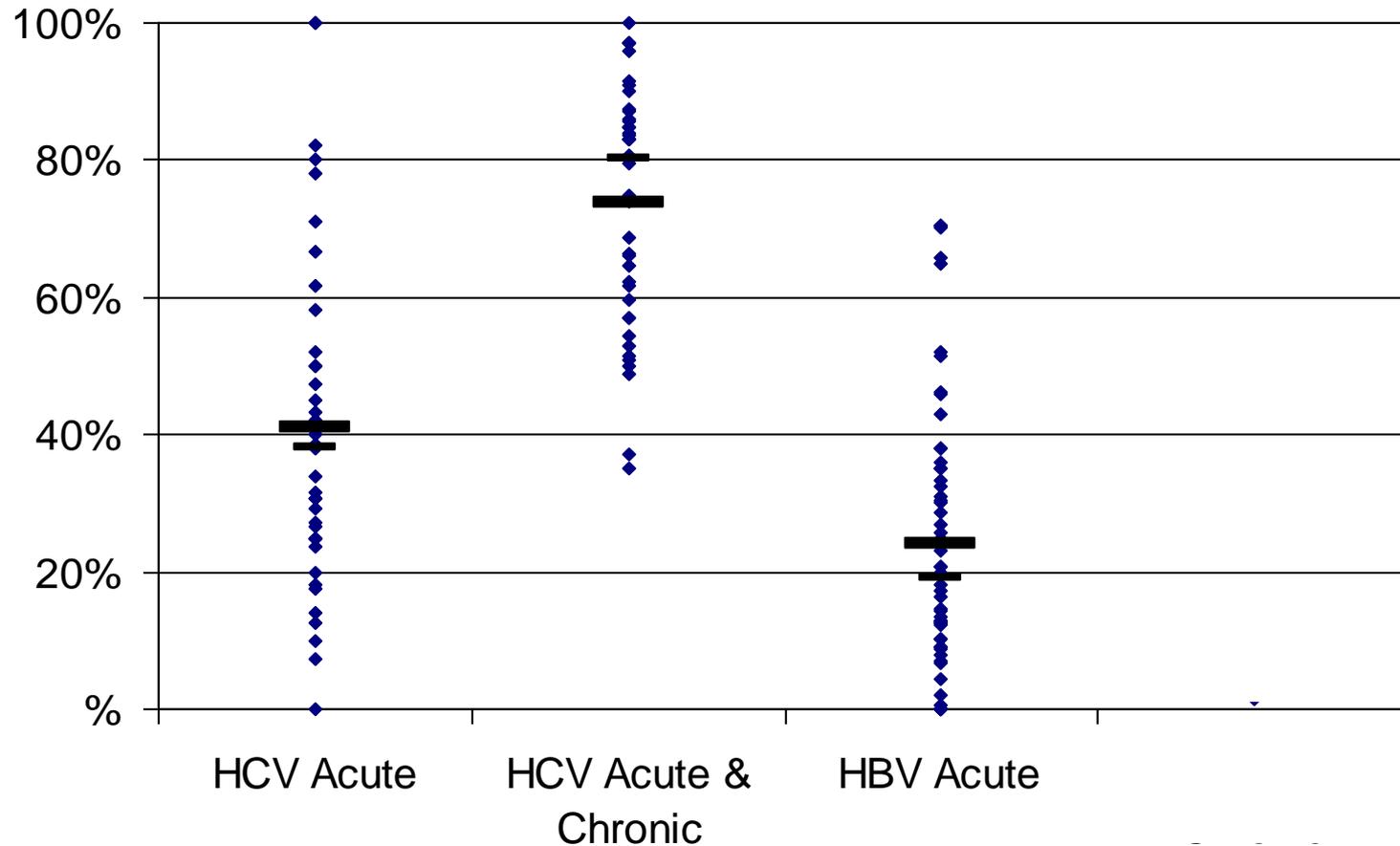
Percent IDUs among notified cases of hepatitis C where risk factors are known, 2001-2006



Notes: Acute and chronic cases combined, except for Estonia. Countries with a time series and >50 cases in 2004-2006. UK data are laboratory reports.

Source: Wiessing et al. Eurosurveillance, 2008.

% IDUs among HCV and HBV notifications with known risk factor information, EU 2002-06



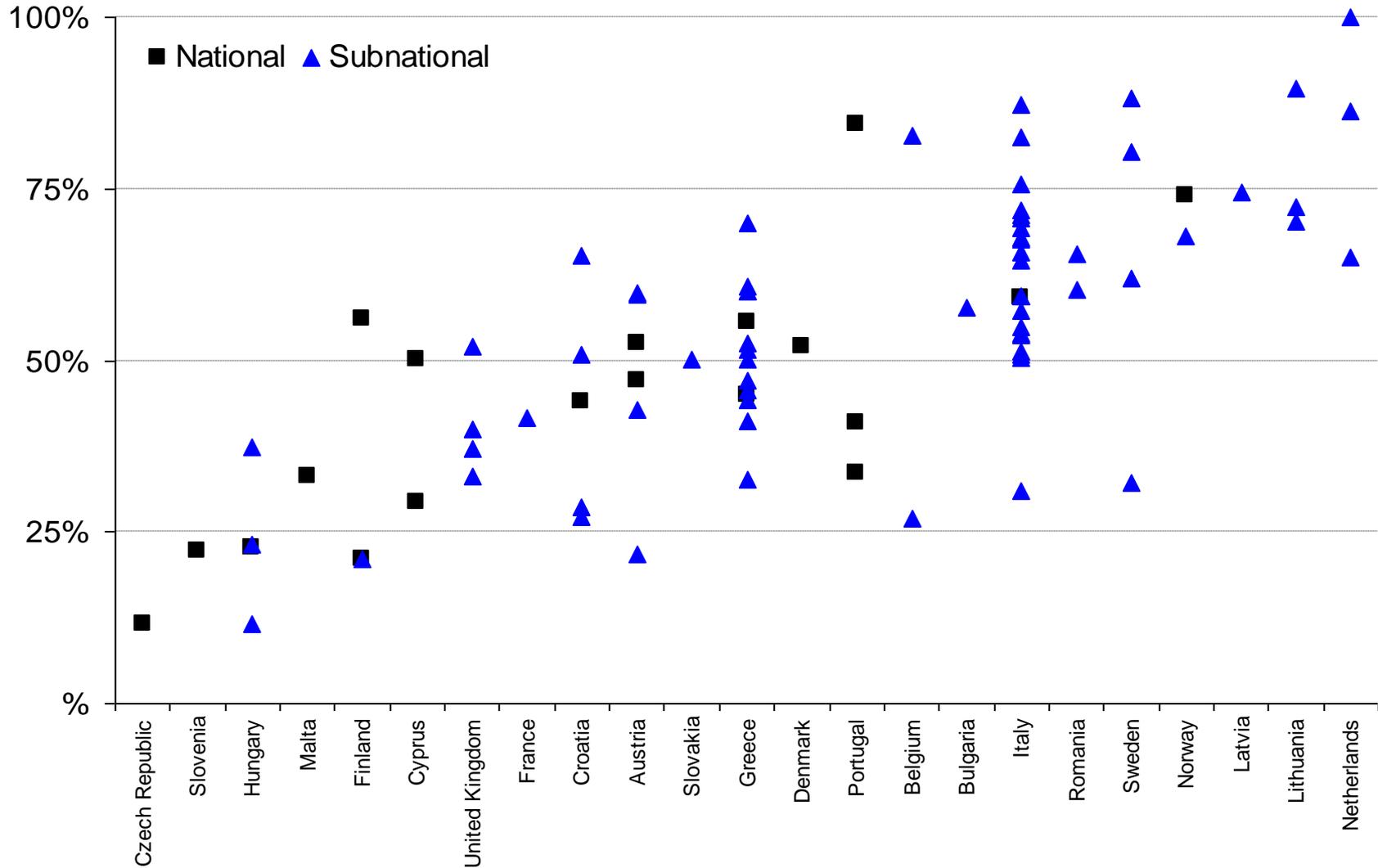
Note: average (larger bar) and median are shown

Hepatitis notifications: strengths and limitations

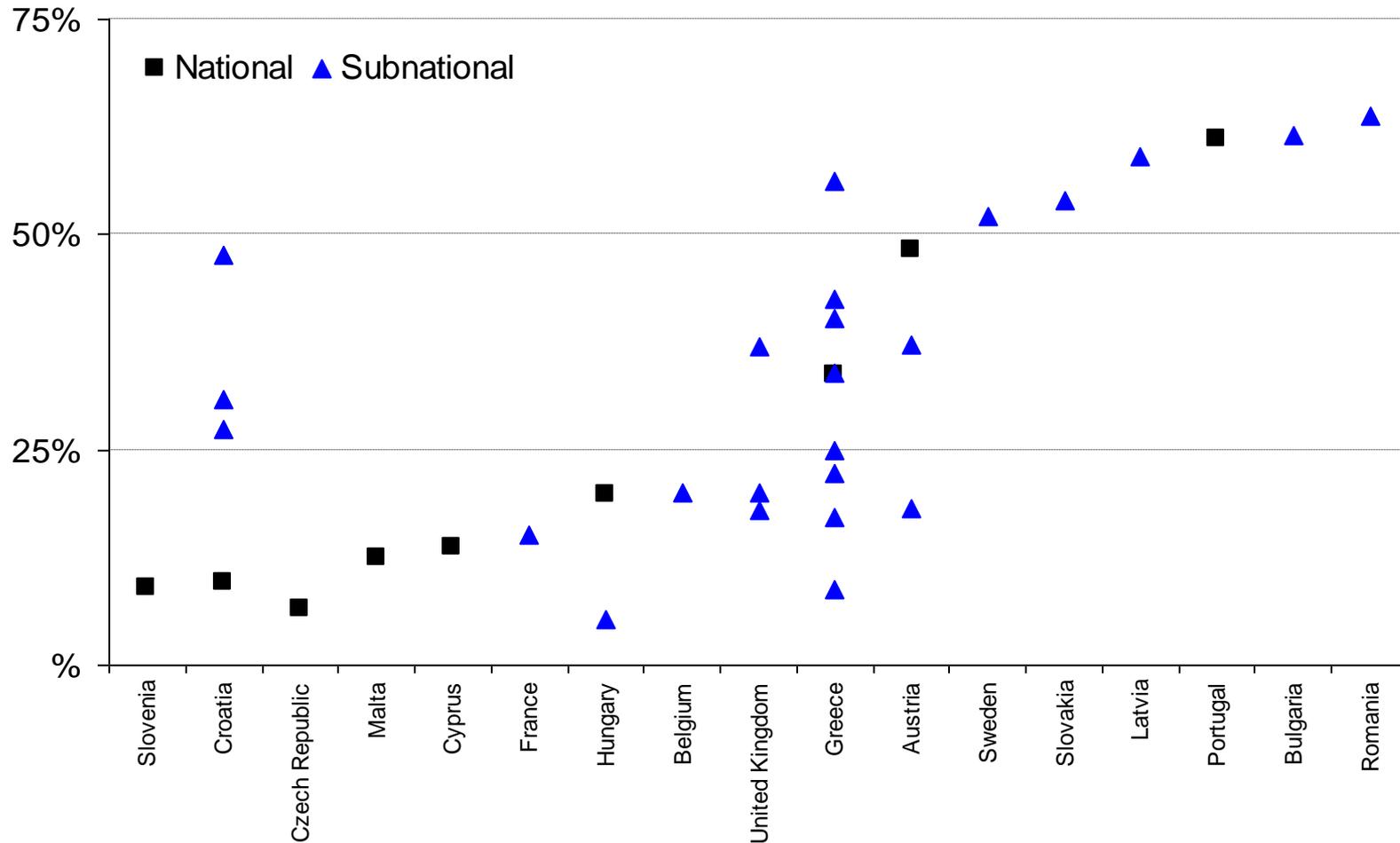
- Notifications data are unreliable (70-80% of acute cases are asymptomatic; under-reporting can be 50-98%) (Hagan H et al. J Urban Health 2002; Hansen et al. Ugeskr Laeger. 2008)
- Absolute numbers and rates are severe underestimates and should not be used to compare prevalence. Trends in chronic cases reflect testing practice and not incidence
- Difficulties in case definition and ascertainment of acute cases
- Proportion of IDU among cases with known risk may be a more reliable indicator
- Caution as can still depend on differential screening practices, although in acute cases perhaps less so



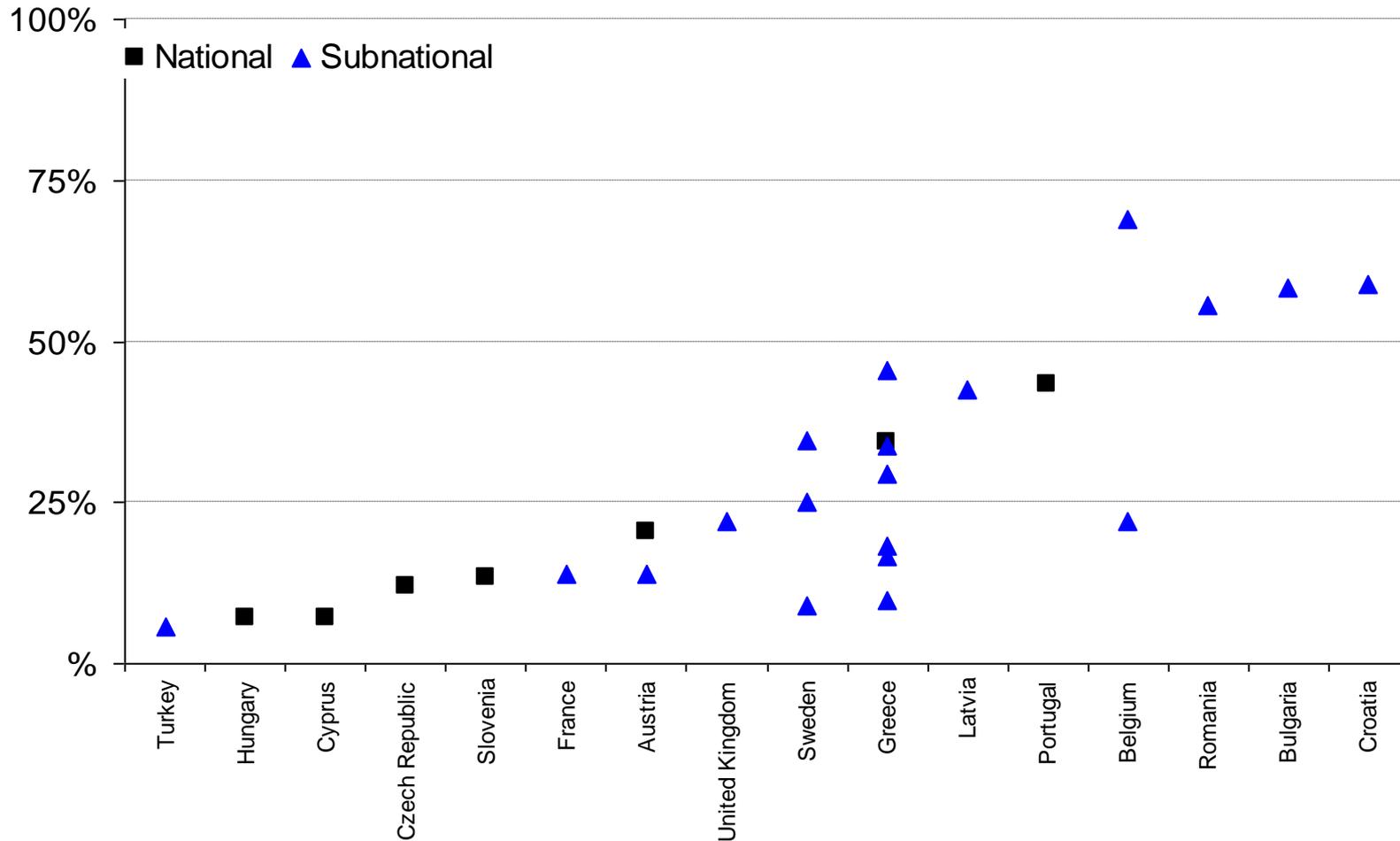
HCV antibody prevalence among injecting drug users – studies with national and subnational coverage 2007-2008



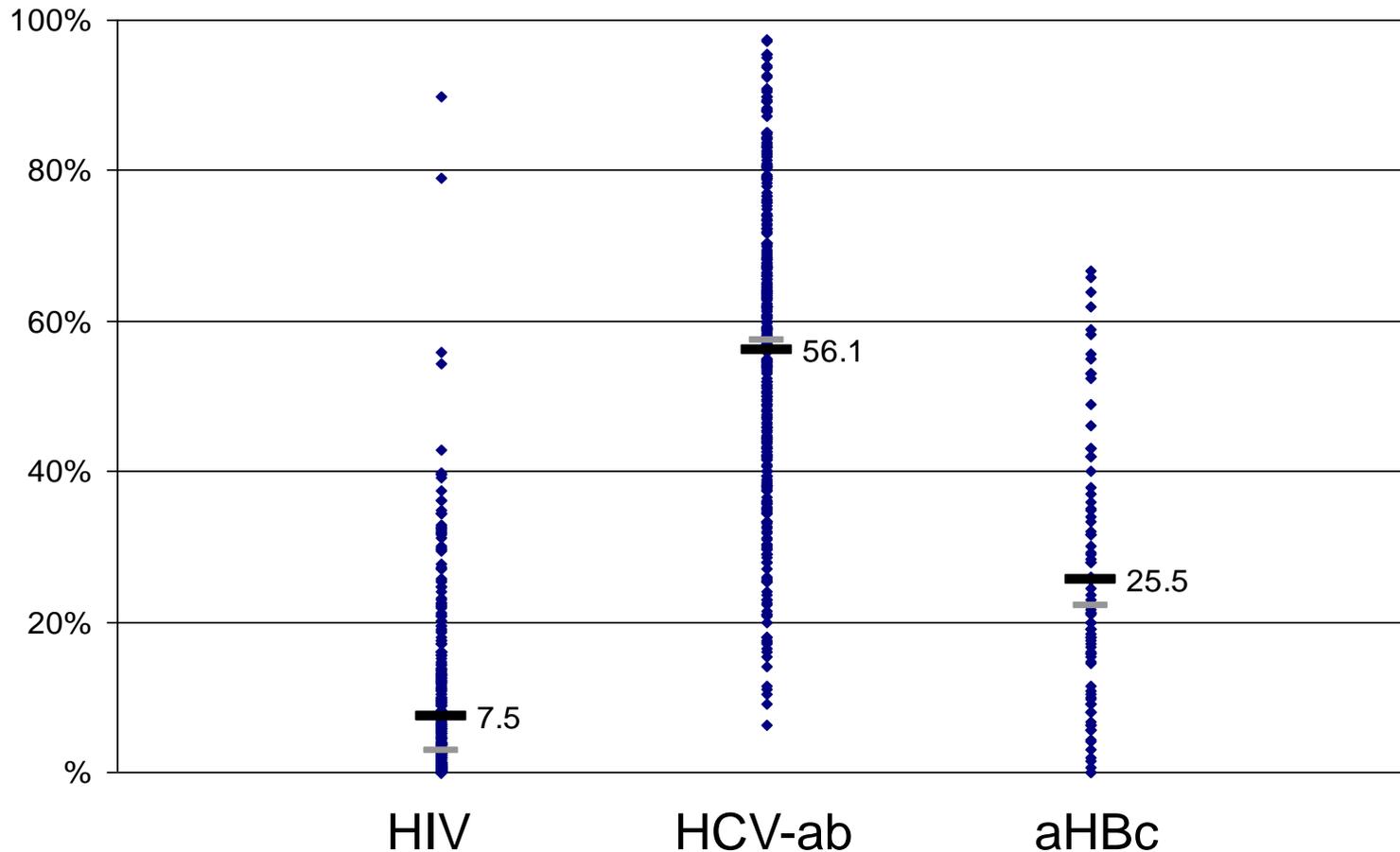
HCV prevalence in samples of young injecting drug users (under age 25), national & subnational studies 2007-2008



HCV prevalence in samples of new injecting drug users (<2 years), national & subnational studies 2007-2008



Average and median seroprevalence of HIV, HCV-ab and aHBc in samples of IDUs, EU 2002-2006



Note: the larger symbol indicates the average

Prevalence data: strengths and limitations

- Sero-prevalence studies of IDUs include undiagnosed cases, no reporting bias (do not include ex drug users)
- Denominator is IDU population, not the general population, different interpretation
- Diagnostic testing data may underestimate prevalence (but indicator of incidence/trends)
- HCV: HCV-ab data overestimates active infection
- Prevalence among young and new injectors relatively robust indicator of incidence among IDUs



Prevention and care

- Hepatitis B/C more infective than HIV. Need higher coverage / intensity of: oral substitution treatment (OST), needle & syringe programmes, information, voluntary counseling & testing etc.
- Combined approaches are likely more effective (Pollack and Heimer, EMCDDA 2004; van den Berg et al. Addiction 2007)
- Evaluate antiviral treatment as a prevention tool (e.g. modelling and ecological studies for HIV)
- Targeted vaccination for HAV, HBV (also prevents HDV) in IDUs, and in general population (IDUs often lower coverage)
- Review drug policies where they conflict with public health, e.g. cooperation between low-threshold services and police
- Educate medical staff on how to work with drug users, combine services and expertise (OST and viral treatment)



HCV antiviral treatment: Barriers among active IDUs

- **Antiviral treatment effective (~60%) and approved for active IDU**
- **...but <1% currently treated**

Why?

- **Ongoing concern over potential non-completion/compliance and re-infection**



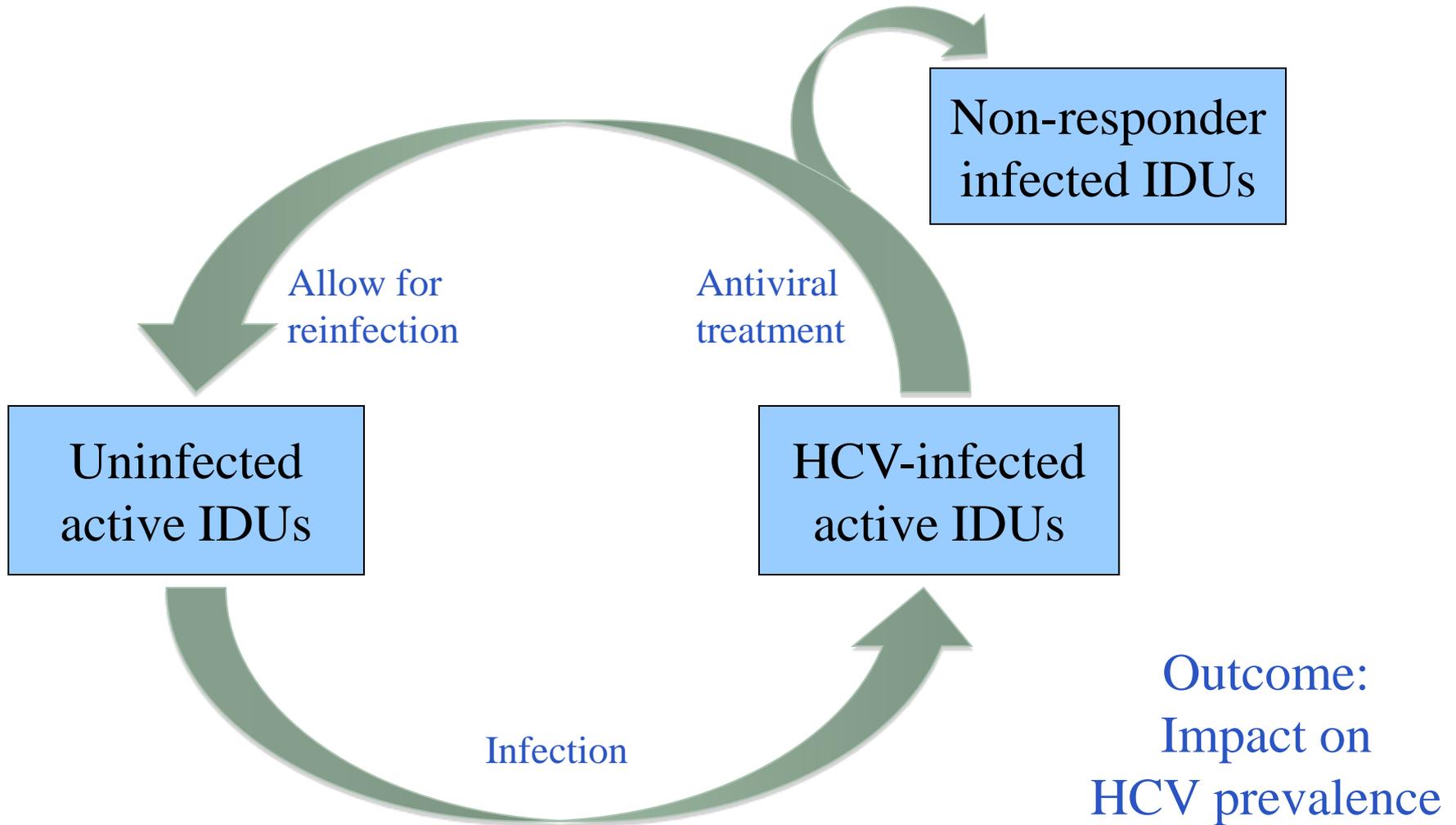
What does the evidence say?

- **IDU achieve similar SVR and compliance rates as non/ex-IDU [1]**
- **Small scale studies report low re-infection rates in first year [2].**

1. Hellard, M., R. Sacks-Davis, and J. Gold. Hepatitis C Treatment for Injection Drug Users: A Review of the Available Evidence. *Clinical Infectious Diseases*, 2009. **49**(4): p. 561-573.
2. Dalgard, O., Follow Up Studies of Treatment for Hepatitis C Virus Infection among Injection Drug Users. *Clinical Infectious Diseases*, 2005. **40**(s5): p. S336-S338.



Model

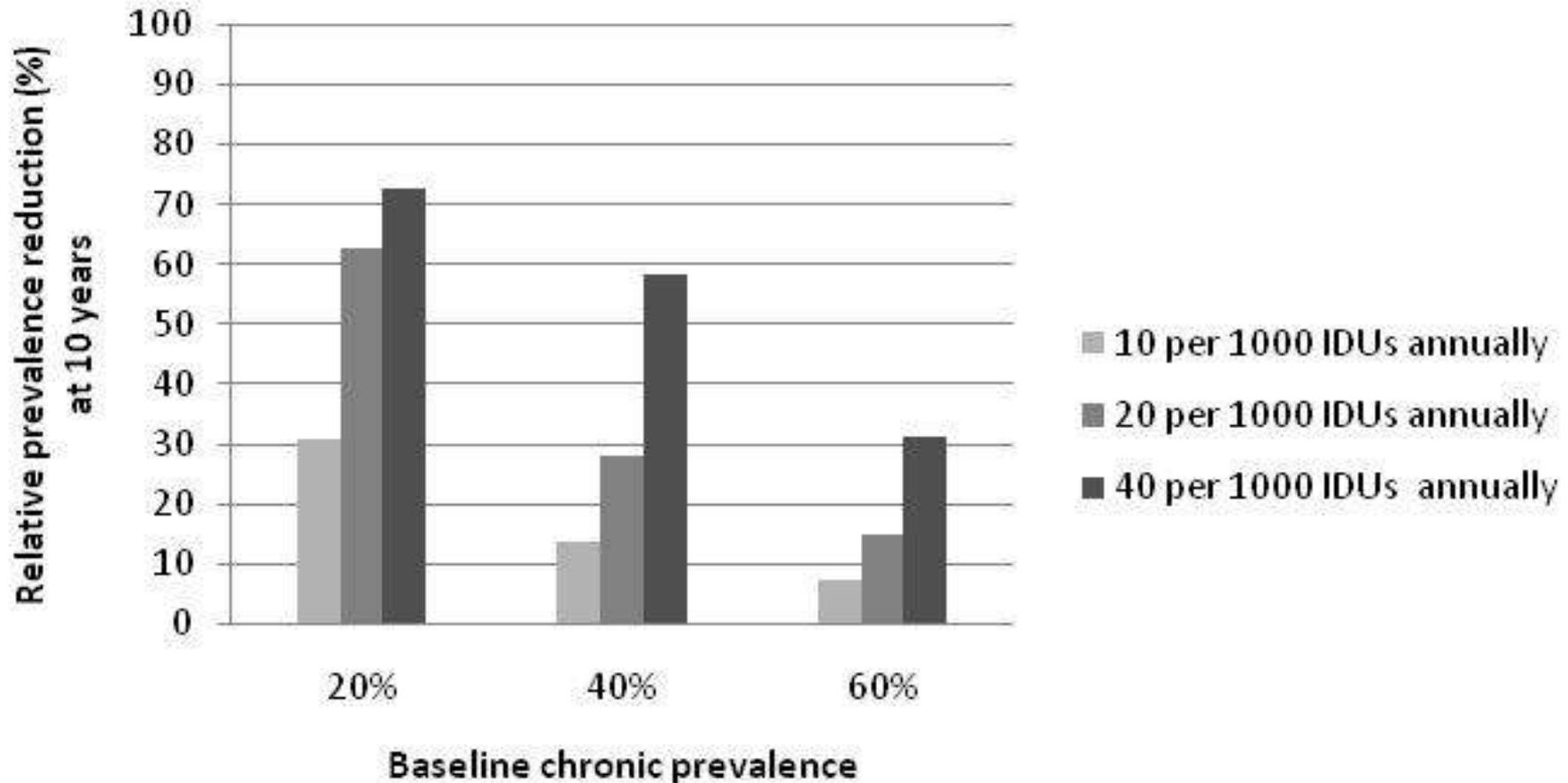


Treatment term: fixed treatment number per year

- Realistic scenario of treatment capacity and recruitment, i.e. 10 treatments per 1000 IDUs per year
- As prevalence reduces, means increasing proportion of infecteds treated over time.



Relative prevalence reductions at 10 years with varying treatment rates



‘Baseline’: untreated endemic chronic infection prevalence

- Slide suppressed on the cost-effectiveness of HCV treatment as a prevention measure (results not yet published)



Data needs

- Better data on epidemiology needed (incidence assays)
- More and better behavioural data, e.g. years since first injection
- Effectiveness of IDU prevention measures (cohort studies)
- Access to / coverage of antiviral treatment among IDUs



Conclusions 1

- Injecting drug users (IDUs) form a large proportion of the notified hepatitis B and C cases in Europe where risk factors are known
- Prevalence data show high HCV-ab (>50%) and aHBc levels (>25%) in IDUs
- Prevalence data suggest high incidence in young and new IDUs
- Better epidemiological data are needed



Conclusions 2

- Modest & achievable levels of treatment *could* reduce HCV prevalence amongst active IDUs, despite risk of reinfection
- Treatment of active IDUs likely to be cost-effective
- Treatment could play a significant role in prevention of HCV

- Note: Models can generate hypotheses, predict outcomes & set targets... but projections are approximations



Thank you

Acknowledgments

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