Photo courtesy: EUHepscreen

Cost-effectiveness of screening for chronic hepatitis B and C among migrants

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HepHIV 2014
Barcelona, 7th October 2014

Content

- Introduction
  - screening migrants for chronic hepatitis B and C
  - cost-effectiveness analyses
- Literature review
- Results
- Discussion
- Conclusions / recommendations

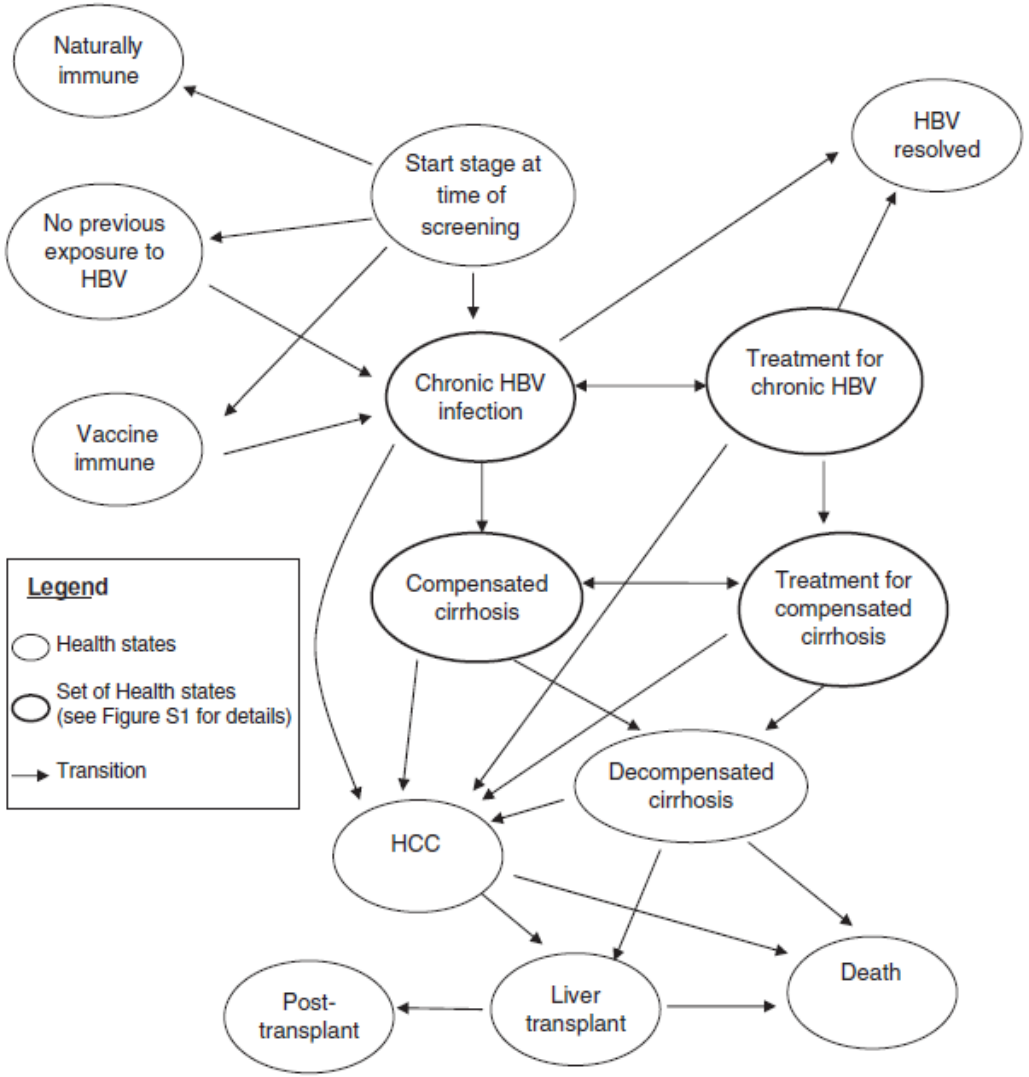
Screening migrants for chronic HBV and HCV

- Treatment of chronically infected individuals is cost-effective
- Migrants: high prevalence of chronic hepatitis B and C
- How can these patients be detected in a cost-effective manner?
- Screening programme
  - prevalence
  - participation
  - referral
  - start antiviral treatment

Cost-effectiveness analyses

- Costs
  - screening programme
  - treatment
- Benefits
  - health care costs avoided
  - QALYs gained
- Cost/benefit
  - cost per case detected
  - cost per QALY

Markov model HBV progression



Wong Liver Int 2011

Hahné *et al. BMC Infectious Diseases* 2013, **13**:181
http://www.biomedcentral.com/1471-2334/13/181

BMC Infectious Diseases

RESEARCH ARTICLE Open Access

Infection with hepatitis B and C virus in Europe: a systematic review of prevalence and cost-effectiveness of screening

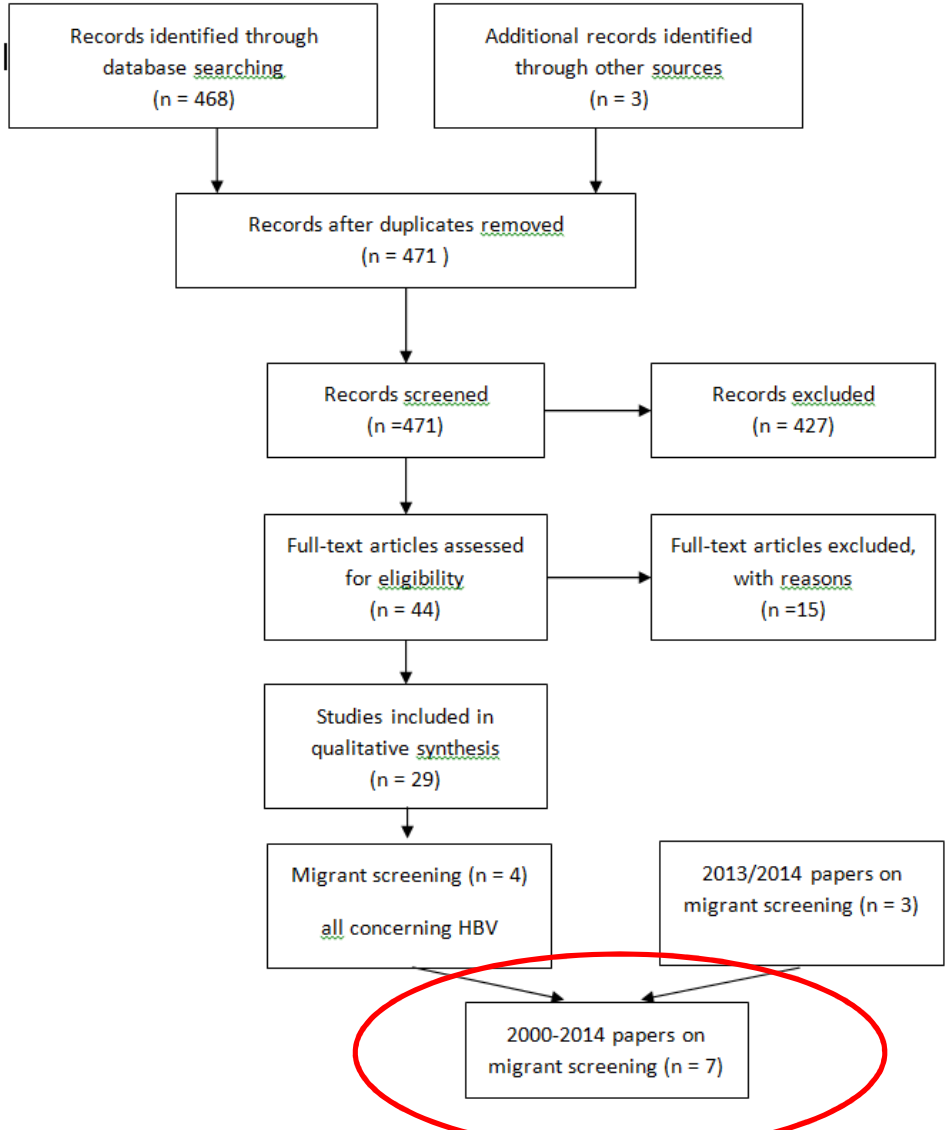
Susan JM Hahné[1*], Irene K Veldhuijzen[2], Lucas Wiessing[4], Tek-Ang Lim[3], Mika Salminen[3] and Marita van de Laar[3]

- Presented here:
  - Results from this paper
  - Update with new papers up to 2014

Methods literature review

- Published literature (Medline, Scopus, NHS economic evaluation database)
- English language
- Jan 2000-2012
- Data extraction form
- Indicators
  - costs per newly identified chronic hepatitis case
  - costs per (quality adjusted) life year gained

Results literature review: papers included



Results literature review: Costs per QALY

Author	Year	Country	Migrant population	Infection	Result*	Cost effective
Hutton	2007	USA	Asian/pacific islanders	HBV	€ 31.692	Yes
Veldhuijzen	2010	NL	1st generation from endemic countries	HBV	€ 8.694	Yes
Rein	2011	USA	Mainly Asian	HBV – cost per case detected	€ 499 - € 3.818	Yes
Wong	2011	CA	Multiple countries of birth	HBV	€ 46.260	Yes, moderately
Rossi	2013	CA	Multiple countries of birth	HBV	€ 29.000	Yes, reasonably

* in 2010 Euros

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Rossi	2013	CA	Multiple countries of birth	HBV	€ 29.000	Yes, reasonably
Miners	2013	UK	Indian subcontinent	HCV	€ 27.144	Could be
Urbanus	2013	NL	Antenal, Multiple countries of birth	HCV	€ 47.113	Yes, modest

* in 2010 Euros

Sensitivity analysis

- Prevalence ↑ (4)
- Disease progression rates ↑ (4)
- Cost of antiviral treatment ↓ (3)
- Effectiveness of treatment ↑ (3)
- % visiting specialist / accepting treatment ↑ (3)
- Participation ↑ (2)
- Screening age ↓ (2)
- Probability of leaving the country ↓ (1)

HBV vaccination after screening

- Not cost-effective
  - Large costs
  - Small effect on morbidity and mortality for susceptible adults
  - No effect on morbidity and mortality among those already chronically infected

Conclusion

- Screening and treatment of migrants is (reasonably) cost-effective

- Cost-effectiveness depends on:
  - Prevalence
  - Disease progression rates
  - Cost and effectiveness of treatment
  - Successful referral and treatment uptake

Discussion

- Need analyses of integrated screening strategies
  - combine hepatitis B and C, and HIV
  - combine with TB
  - other diseases more prevalent in migrants?
- Most (cost-)effective approach to screening?
  - outreach
  - opportunistic
  - systematic
  - in existing programmes
- See www.hepscreen.eu

Acknowledgements

Irene Veldhuijzen - Netherlands
Mika Salminen - Finland
Lucas Wiessing - Portugal
Tek Ang Lim - Sweden
Marita van der Laar - Sweden