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National Institute  
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# Hepatitis B vaccination in The Netherlands: Risk group approach

Susan Hahné

RIVM – Centre for Infectious Disease Control

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# Outline

- History of the risk group approach
- Comparison with European policies
- Evaluation of the targeted vaccination programme
  - Infants born to HBsAg positive mothers
  - Infants of immigrants
  - Behavioural high risk groups
- Conclusions
- Recommendations

# Hep B vaccination in The Netherlands

- **1983** At risk occupations and patient groups
- **1989** Universal antenatal screening + vaccination of infants born to HBsAg positive mothers
- **2002** Behavioural high-risk groups
  - drug users (DU)
  - men who have sex with men (MSM)
  - commercial sex workers (CSW)
  - heterosexuals with high rate partner change (stopped in 2007)
- **2003** children of immigrants from endemic countries
  - 17% of birth cohort

# Behavioural high-risk groups targetted in programme



# Behavioural high-risk groups targetted in programme



# Comparison with European policies

Summary of hepatitis B immunisation policies in selected countries, Europe, 2007

	Occupational risk*	Family contacts†	Babies born to HBsAg-positive mothers	Patients and carers in institutions	Immunocompromised patients or patients requiring blood transfusions‡	High-risk groups§	Children of parents from countries of high or intermediate endemicity¶	Children in day-care centres where another child is positive for HBV	Non-occupational related needle-stick injury or blood contamination
Denmark	Yes	Yes	Yes	Yes	No	Yes	No	No	No
Finland	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
Iceland	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Ireland	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes**
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes (from 2005)	Yes	No
UK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Zuckerman et al, Lancet ID 2007

# Risk group vaccination programme: Impact

- Infants born to HBsAg positive mothers
- Infants of immigrants
- Behavioural high risk groups

# Infants of HBsAg positive mothers

- Vaccine coverage van Lier et al, 2008

Birth cohort	Coverage
2003	90,4%
2004	92,3%
2005	97,4%

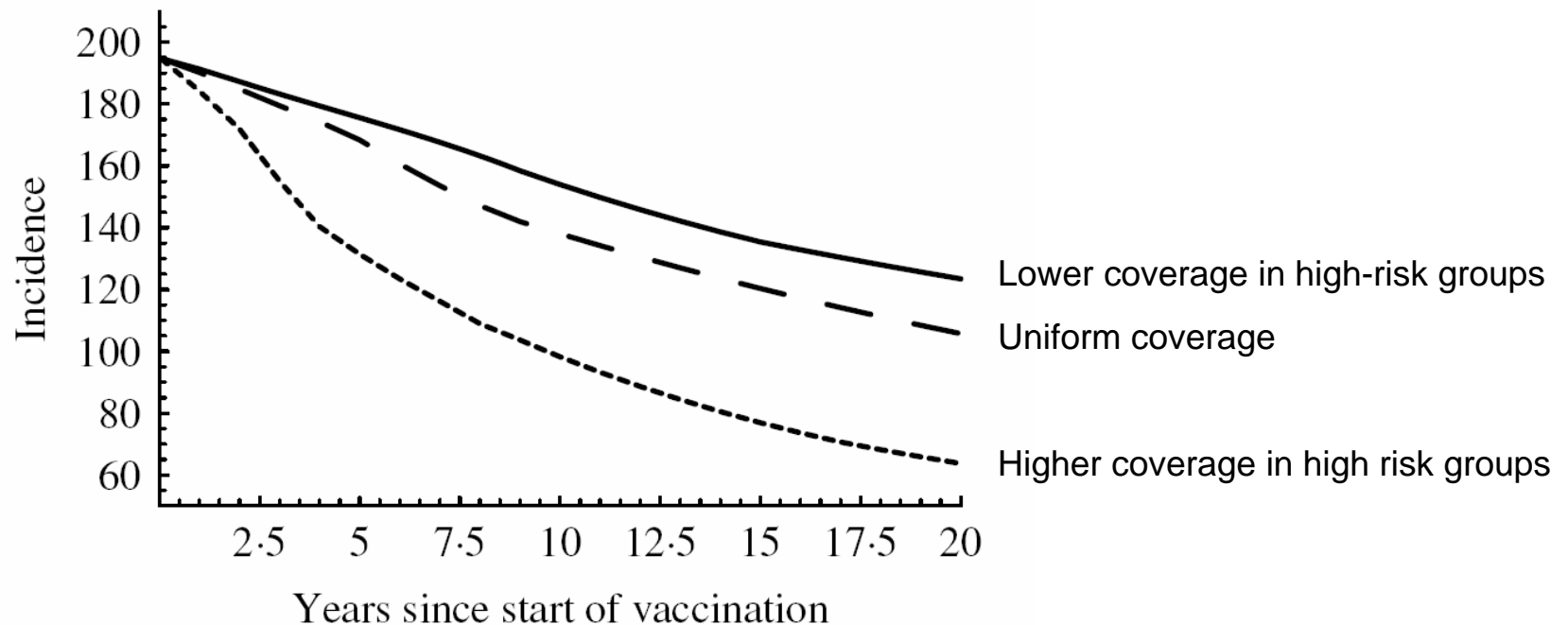
- In all regions: > 90%
- UK: 65% in 2003 (range 42%-100%) Hahné et al, 2004
- Incidence of break-through infection: 0,7% Hahné et al, 2008

# Behavioural high-risk groups (2)

- Median age of vaccination and of infection van Houdt et al, 2008
  - overall: 30 and 39 years
  - in MSM: 34 and 40 years

# Mathematical modelling (2)

- MSM in Amsterdam: predicted effect of targeted vaccination on incidence of hepatitis B
- Coverage: 2% per year



# Conclusions (1)

- **Programme to prevent perinatal transmission**
  - highly effective
  - further improvement: antiviral therapy during pregnancy
- **Vaccination of children of migrants**
  - high coverage but room for improvement
  - impact on incidence difficult to assess
  - sero-prevalence results may give more insight

# Conclusions (2)

- **IDU**
  - transmission stopped, probably not related to programme
- **MSM**
  - impact difficult to assess
    - no incidence estimates available
    - changes in risk-behaviour?
  - can be effective; early days to expect impact
  - very low estimated coverage achieved to date (7%)
  - possibly some impact seen
    - number of infections reduced
    - 'MSM strain' found less frequently

# Recommendations

- **Share methods to achieve high coverage in infants of HBsAg+ mothers and immigrants with other countries in Europe and elsewhere**
- **Increase vaccination coverage in MSM**
  - focus on young and high risk sub-groups
  - new campaign started Sept 2008
- **Continue evaluation of high-risk vaccination programme**
  - molecular typing of all acute cases
  - use advanced phylogenetic methods (coalescence)
  - behavioural surveillance (risk behaviour, determinants of vaccination)
- **Explore options to prevent heterosexual transmission**
  - screening of immigrants?

# acknowledgements

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# MAN

of

# mietje

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## [B]\* a Man

**Hepatitis B** komt voor bij 1 op de 10 mannen die seks hebben met mannen. Hepatitis B loop je gemakkelijker op dan hiv. En het is na hiv de ernstigste soa: erg besmettelijk en met grote risico's voor de gezondheid. Ook van één sekscontact kun je het krijgen.

De beste manier om je te beschermen tegen hepatitis B is vaccinatie, zoek uit of vaccinatie ook voor jou belangrijk is (circa 5 minuten).

» *is vaccinatie zinvol voor mij?*

## Gratis vaccinatie

**Vaccinatie** is nu GRATIS bij alle GGD'en! Vaccinatie tegen hepatitis B wordt aangeraden voor ALLE mannen die seks hebben met mannen. Ook voor mannen met een vaste relatie én voor mannen met hiv.

Maak nu een afspraak voor vaccinatie.

» *maak nu een afspraak*

» *al gevaccineerd?*

