

# National Program and Epidemiology of Hepatitis C in The Netherlands

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Rotterdam, The Netherlands

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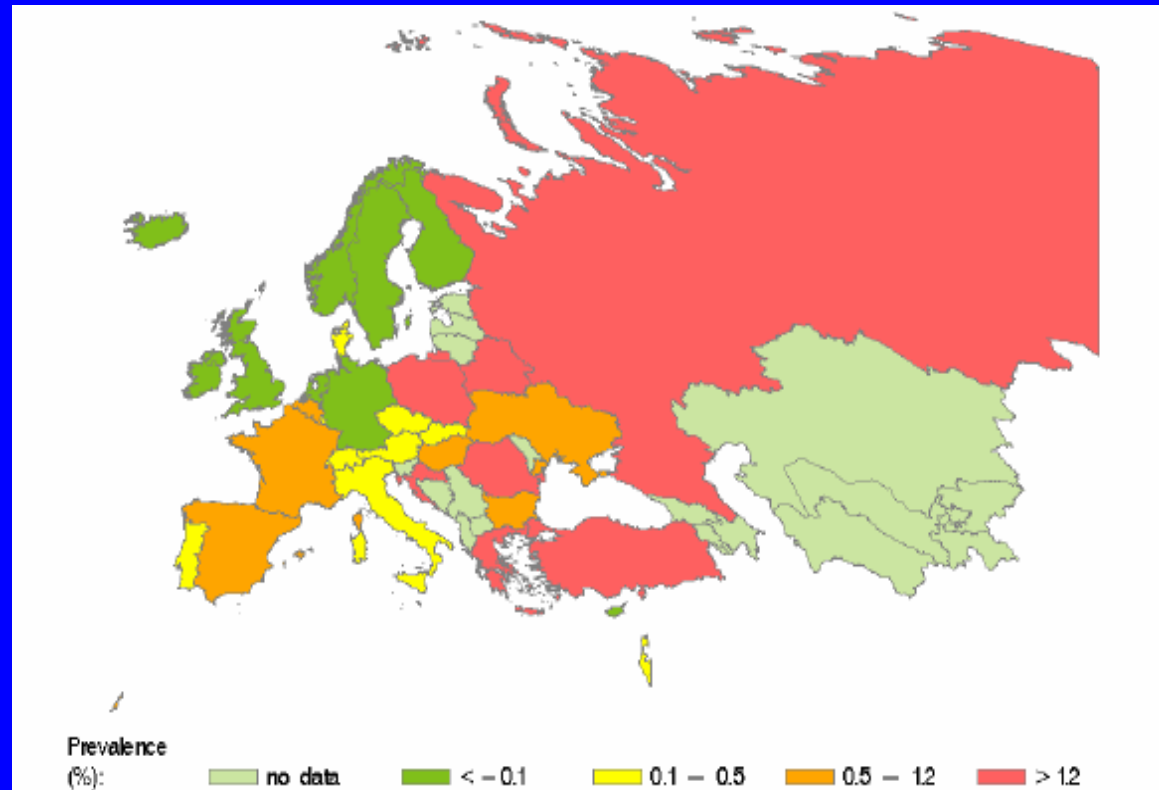
## 170–200 Million (M) Carriers Worldwide



World Health Organization. Weekly epidemiological record. 1999;74:421–428.

# HCV Prevalence Europe

WHO European region 53 countries  
0.1 - 4.5 %



**Overall 1.29% HCV prevalence rates in the 21 countries according to national sources**

<b>Austria</b>	<b>0.75%</b>	<b>Italy</b>	<b>3.00%</b>
<b>Belgium</b>	<b>1.00%</b>	<b>The Netherlands</b>	<b>0.25%</b>
<b>Czech</b>	<b>0.20%</b>	<b>Norway</b>	<b>0.60%</b>
<b>Denmark</b>	<b>0.70%</b>	<b>Poland</b>	<b>1.50%</b>
<b>Finland</b>	<b>0.60%</b>	<b>Romania</b>	<b>4.50%</b>
<b>France</b>	<b>0.84%</b>	<b>Russia</b>	<b>1.45%</b>
<b>Germany</b>	<b>0.55%</b>	<b>Spain</b>	<b>1.50%</b>
<b>Greece</b>	<b>1.05%</b>	<b>Sweden</b>	<b>0.50%</b>
<b>Hungary</b>	<b>0.80%</b>	<b>Switzerland</b>	<b>0.75%</b>
<b>Rep. Ireland</b>	<b>0.71%</b>	<b>Turkey</b>	<b>1.00%</b>
		<b>United Kingdom</b>	<b>0.55%</b>

# HCV Prevalence in The Netherlands

1997 Health Council

anti -HCV + ve                      0.1 – 0.4%

Inhabitants                              16 milion

Anti – HCV + ve                      16,000 - 65,000

HCV – RNA + ve (70%)              11,000 - 46,000

Under estimation!

# General Population Studies

Year	n	% anti-HCV+ve
1995 <sup>1</sup>	7,373	0.08
2004 <sup>2</sup>	1,355	0.6
2006 <sup>3</sup>	2,200	0.2

1. Veldhuizen et al. 1999
2. Basten et al 2007
3. Slavenburg et al. 2008

# HCV in Blood Donors

<u>Year</u>	<u>New</u>		<u>Repeat</u>	
	n	(‰)	n	(‰)
2007	3	(1.1)	1	(0.03)
2006	5	(1.6)	5	(0.12)
2005	10	(3.3)	1	(0.02)
2004	12	(2.8)	3	(0.07)
2003	9	(2.6)	0	(0.00)

Prevalence

Incidence

C. v/d Poel Sanquin. 08



# Risk Groups HCV Infection Netherlands

Risk Group	HCV-infected (%)
o IV Drug	50-80
o Recipient blood products	
- hemophilia (before < 87)	55
- hemophilia (after > 87)	0
- screened blood (after 91)	0
o Perinatal	
- HIV-ve	4
- HIV+ve	20
o Sexual	
- heterosexual	very low
- MSM and HIV+ve	20
o Immigrants 1st generation	1-20



# Recipients HCV positive Blood Components

## Blood Product

	HCV-RNA+ve anti-HCV+ve	HCV-RNA-ve anti-HCV+ve
Recipients	n/total (%)	n/total (%)
	26/32 (81%)	0/140

Vrielink, Reesink et al. Lancet 2005



# Sexual Transmission HCV

## Heterosexual partners

Couples	50
M/F	9/41
Median age, year (range)	38 (18-69)
Median duration	
Sex. relationship, year (range)	13 (0.25-46)
Sex. transmission, n, (CI)	0 (0-7%)

No HCV transmission in 50 couples with 713 person years of unprotected sexual intercourse!

# Incidence HCV Infection in MSM

## Amsterdam Cohort Studies

Period	Incidence per 100 PY	
	HIV+ve	HIV-ve
1984-1999	0.08	0.00
2000-2003	0.87	0.00

10 fold increase!

Van de Laar et al. 2007



# HCV Prevalence Immigrants

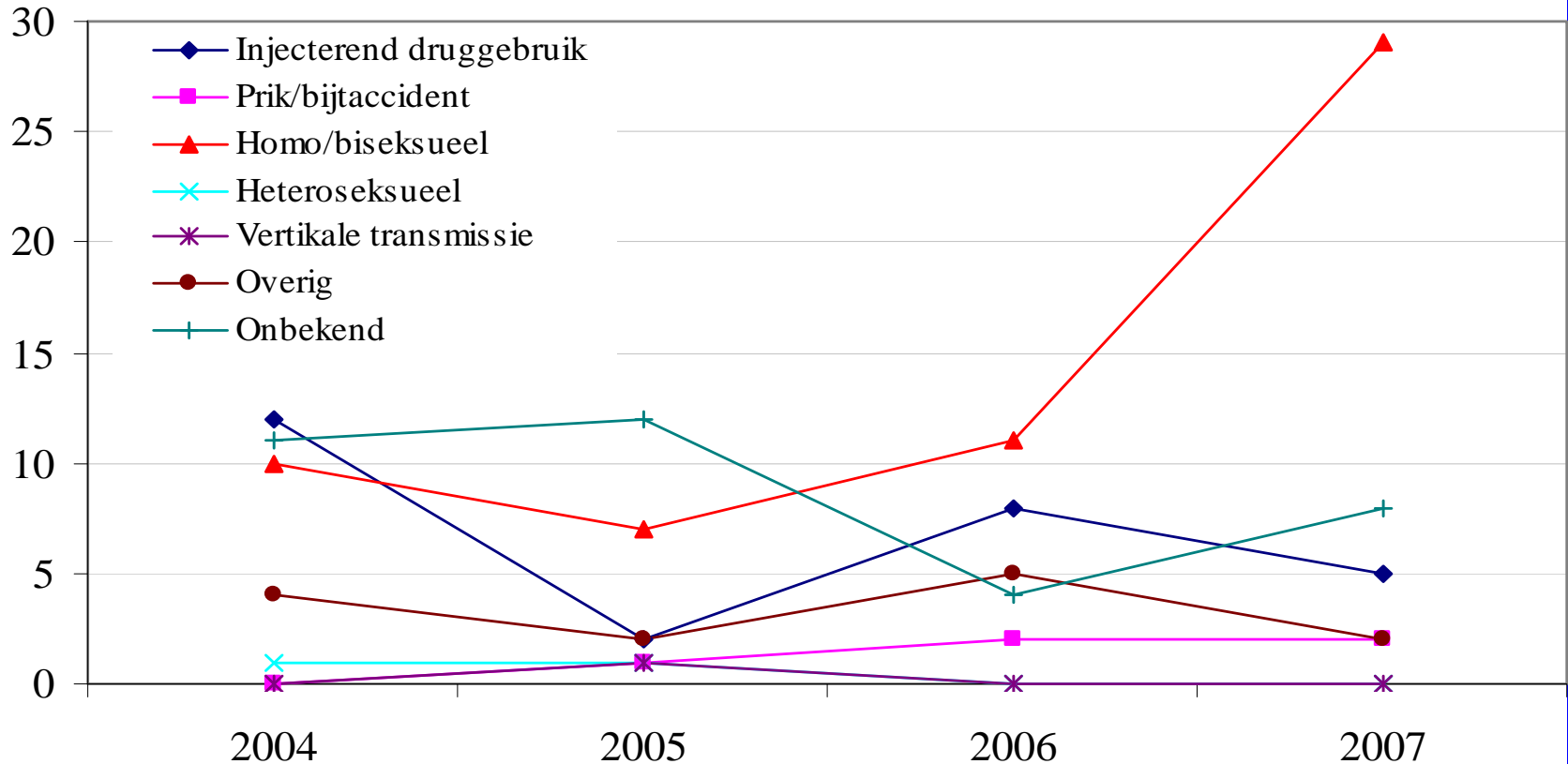
Country	First Generation (N)	Prevalence WHO (%)	HCV + ve (n)
Surinam	187,990	5.5	10,339
Turkey	194,319	1.5	2,915
Indonesia	133,503	2.1	2,804
Egypt	10,709	18.1	1,938
Morocco	166,464	1.1	1,831
China	29,422	3.0	883
Vietnam	11,901	6.1	726
Thailand	8,374	5.6	469
Congo (Dem.Rep)	5,723	6.4	366
USA	18,723	1.8	337
<b>Total</b>			<b>12,600</b>

# Surveillance HCV Netherlands

- o 1999 – 2003 obligated reporting \*
  - 600-700 cases per year
- o 2004 acute infections only
  - 25-45 cases per year
  - under reporting due to asymptomatic course ( 80%)

\* Op de Coul et al. 2005

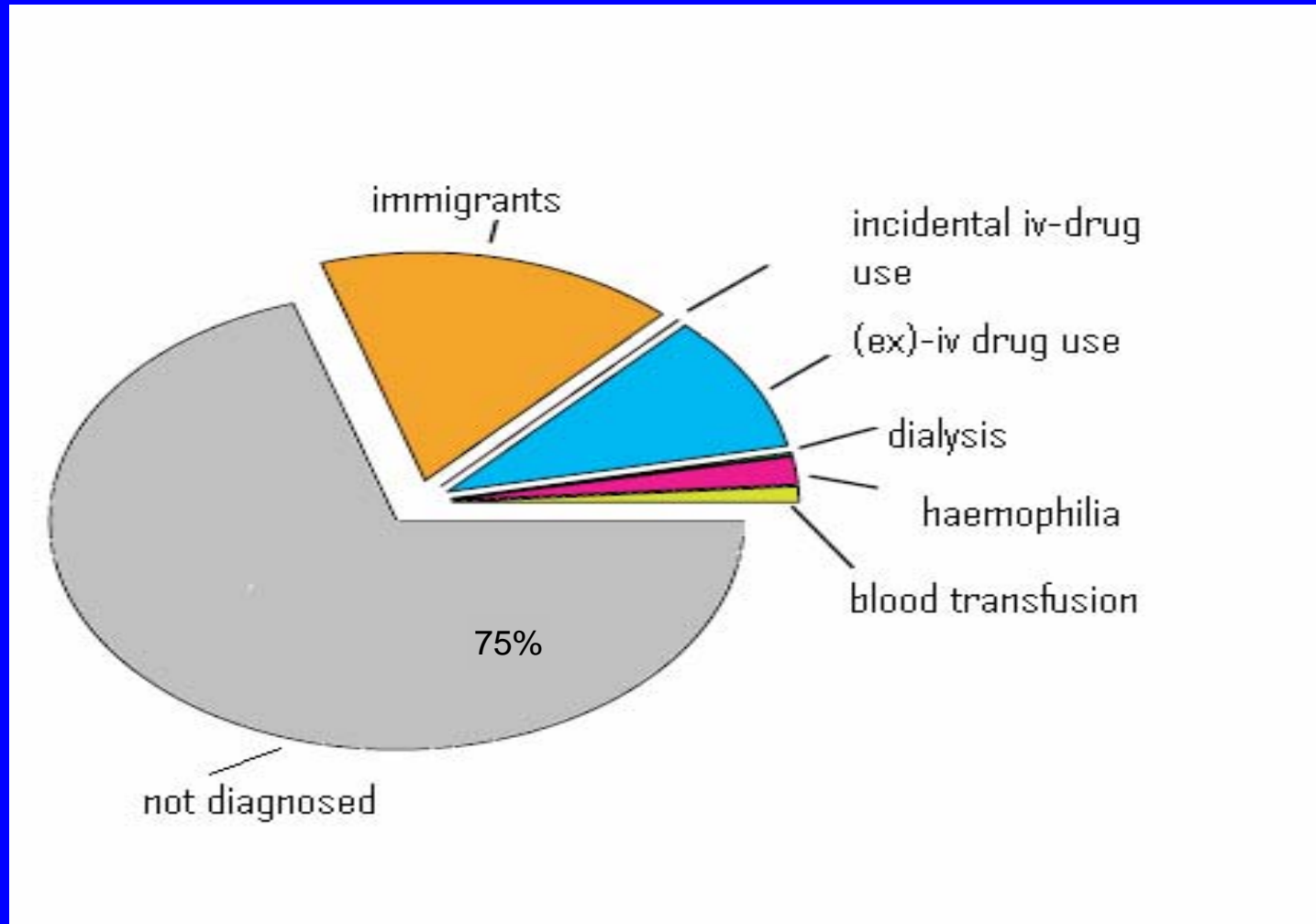
# Reported Acute HCV Infections



Source: RIVM, 2008



## 75% HCV patients in The Netherlands not yet diagnosed



Kretschmar et al. 2004



# Surveillance HCV Infections

## The Netherlands

- o Health Council 1997:
  - information general population (risk groups)
  - epidemiological studies
  
- o Health Council 2004:
  - improved treatment options
  - information risk groups
  - epidemiological studies



## National Hepatitis Centre

Objectives

Structural activities

Projects

past

current

ideas

# Objectives

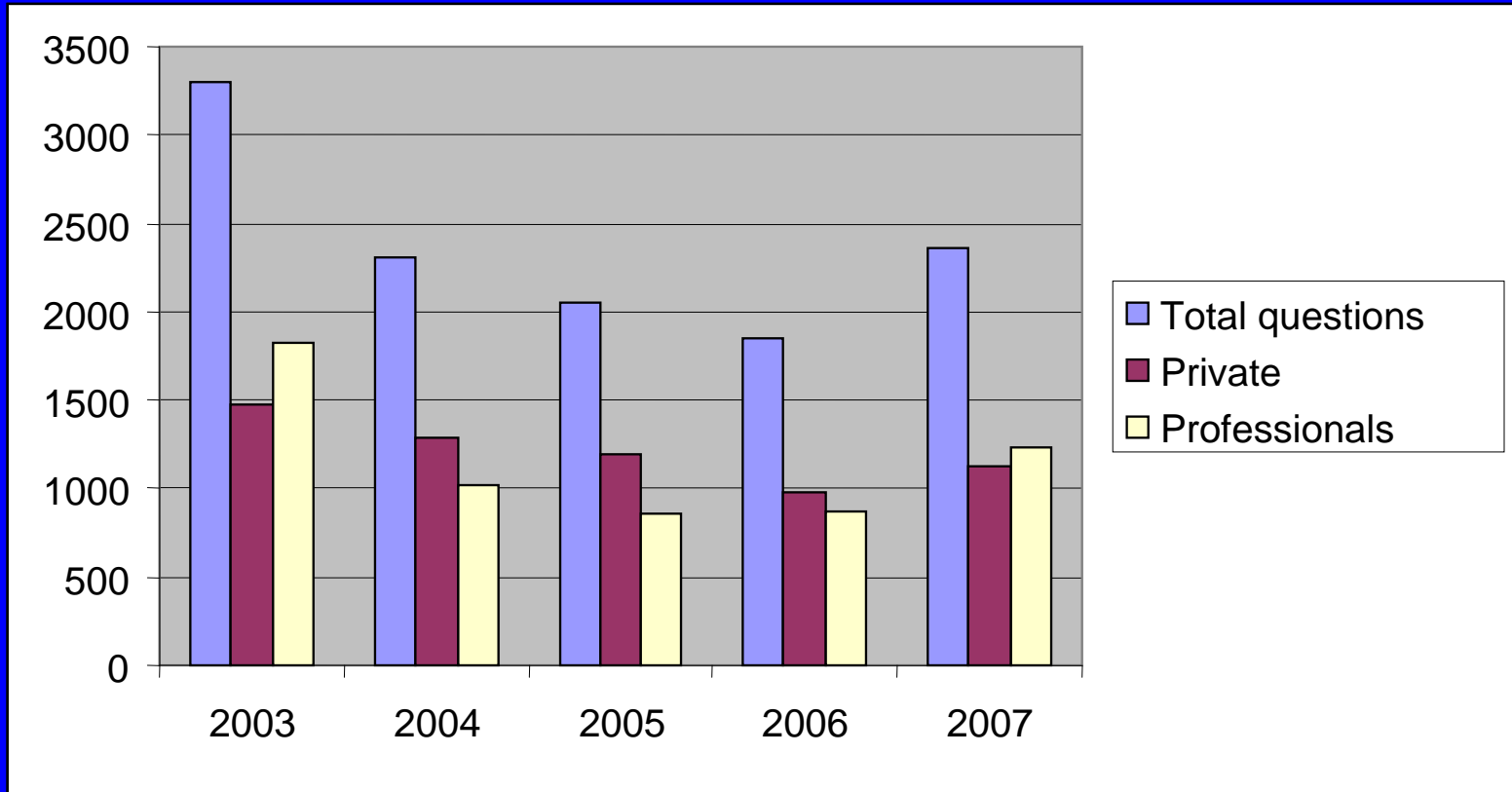
**Knowledge centre for viral hepatitis. Draw attention to hepatitis and its effects on individuals and the society**

1. Collect and spread scientific knowledge and information;
2. Counseling, activities for prevention and promotion of professionalism;
3. Coordination and encouraging of studies and projects.

# Media

- [www.hepatitis.nl](http://www.hepatitis.nl)
- Information telephone line
- Email
- Newsletter
- Brochures
- On request presentations
- Projects

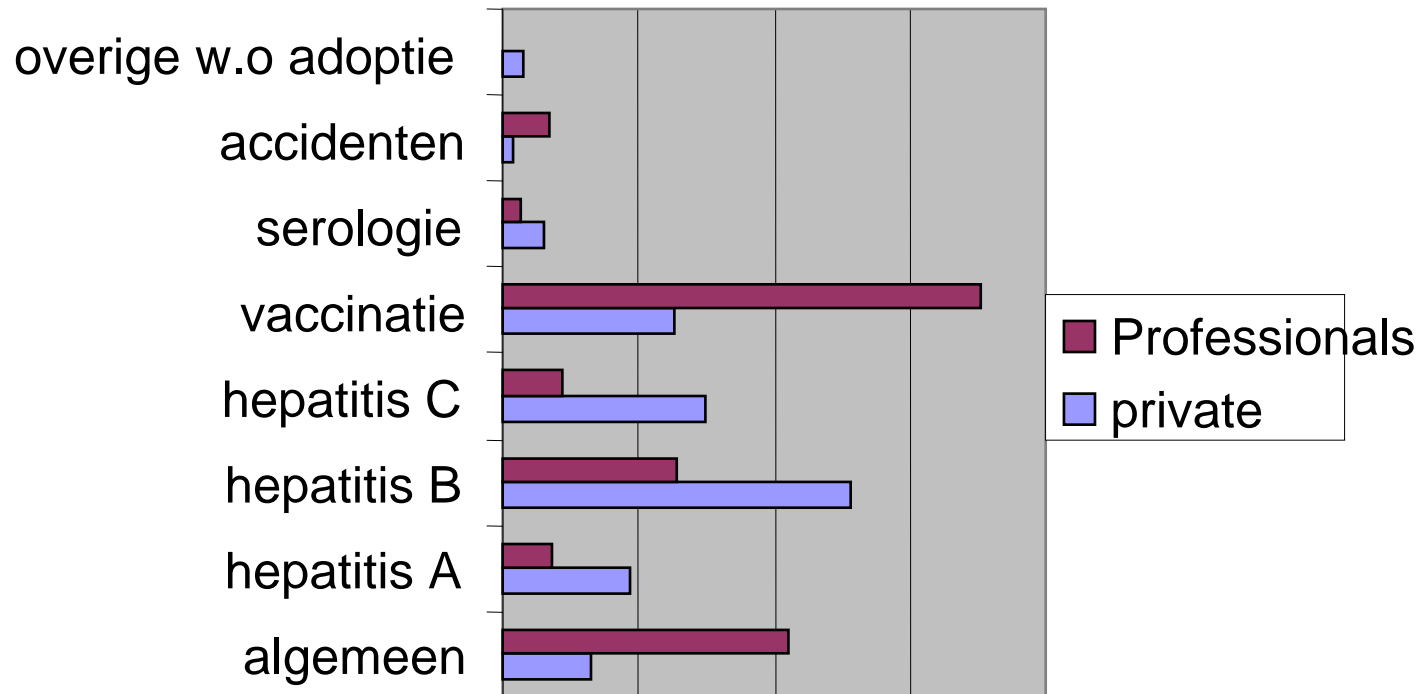
# Questions



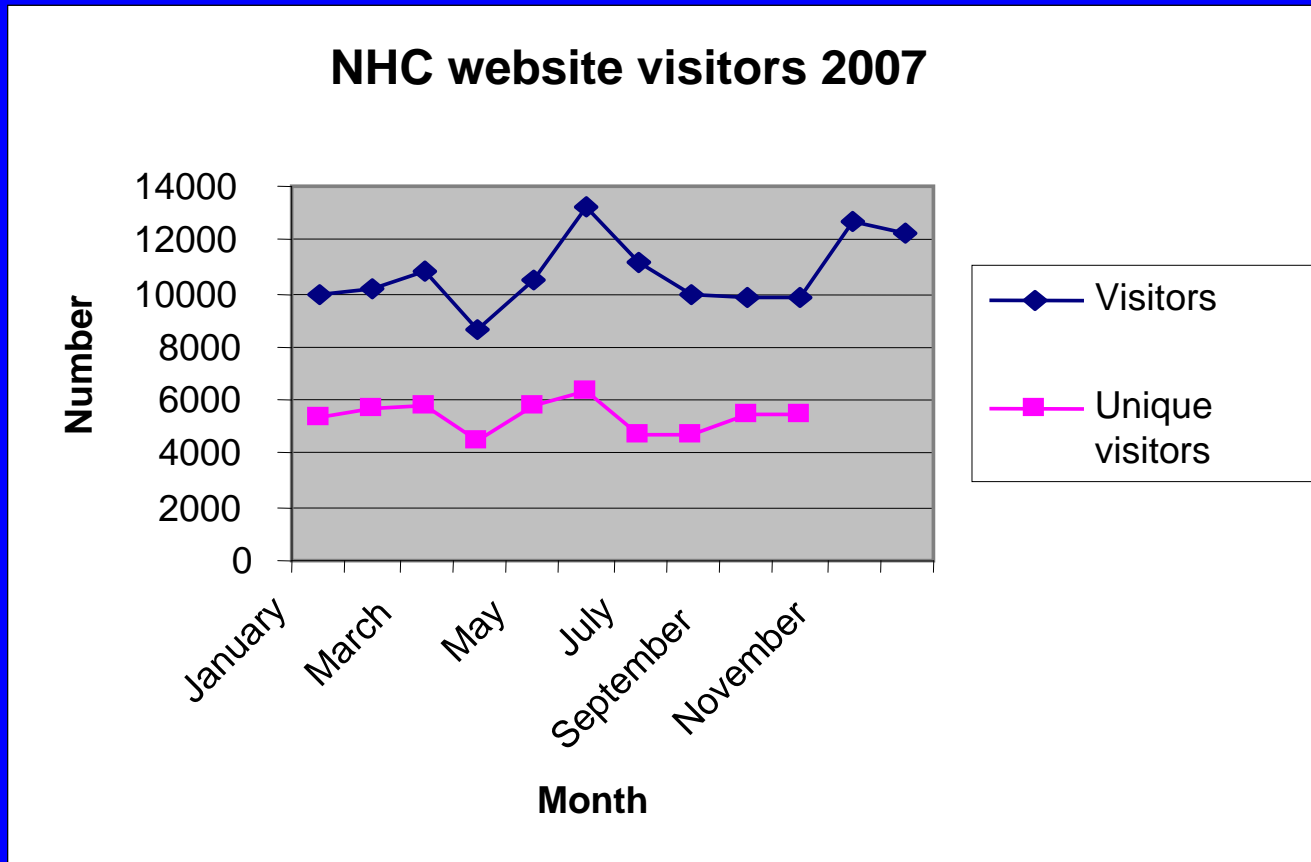
Number of questions by email and telephone

# Subjects

## Onderwerpen van vragen



# Number of visitors website



# Past projects

- Hep A and B vaccination liver patients
- Advise on student vaccination
- Hepatitis B in adoption children
- Inquiry hepatitis B awareness
- Organisation expert meetings hepatitis C
- Needle-stick accidents
- Professional risk for hepatitis A

# Ongoing Pilot Projects

## Surveillance HCV infections

- 2007 Hept.test Project  
(GGD Zuid Limburg/Amsterdam)
- 2007 a) Information general population and risk groups  
b) Training GP's about HCV  
(NIGZ, NHC, NHG, Julius Centre, Trimbos, Mainline,  
GGD's Rotterdam etc.)
- 2007 Prevalence studies  
- pregnant women  
- STD-clinics  
- Tatoing shops  
- immigrants (AMC/GGD Amsterdam)
- 2009 2nd Pienter Study (RIVM)



OOIT EEN  
BLOEDTRANSFUSIE  
GEHAD?

OOIT GEOPEREERD IN  
HET BUITENLAND?

WEL EENS  
GEPRIKT AAN EEN  
INJECTIENAALD?

HEEFT U  
EEN TATTOO OF  
PIERCING?



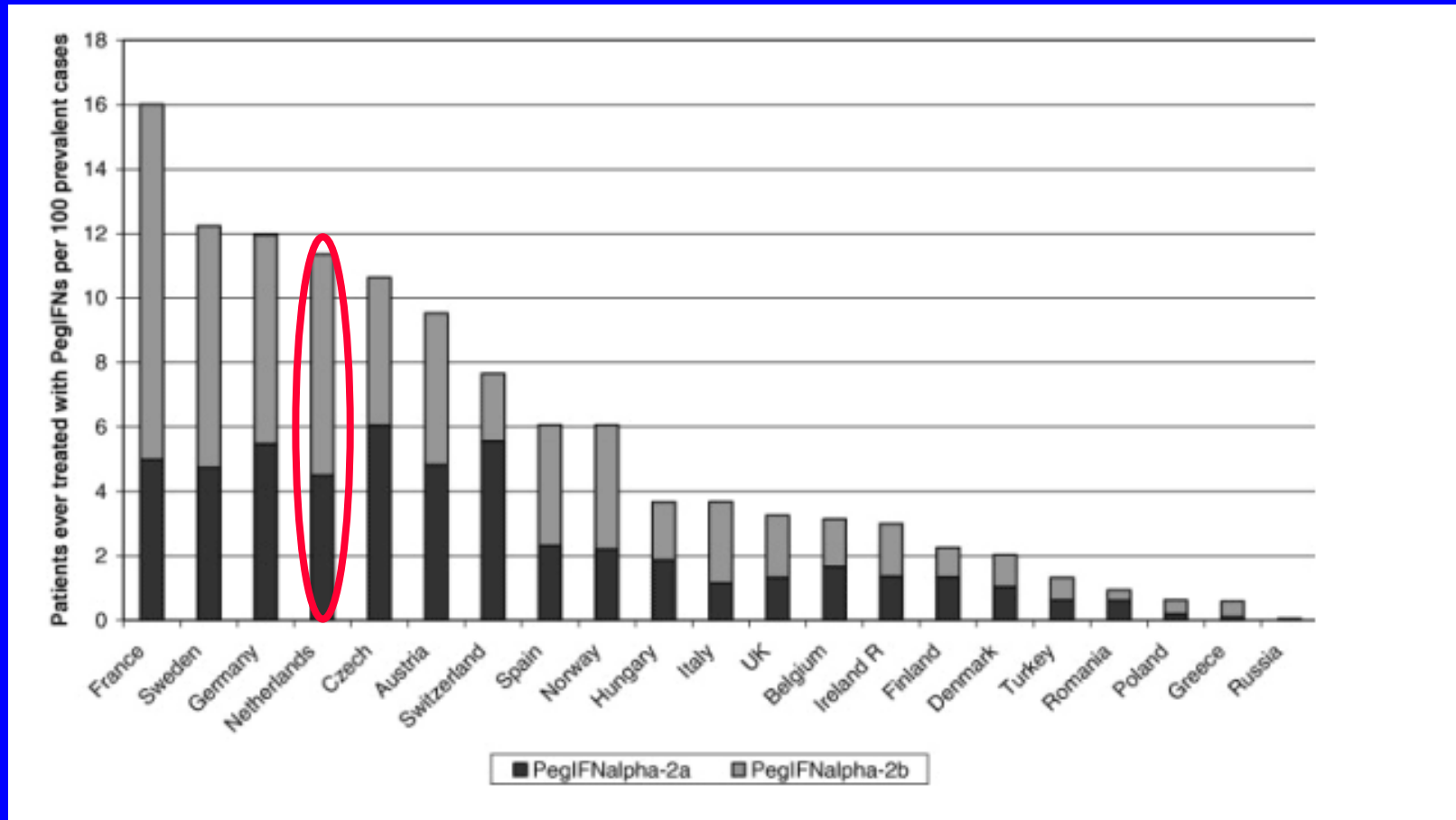
WEL EENS  
HARDDRUGS  
GEBRUIKT?

DAN HEEFT U  
MIJ MISSCHIEN  
OOK!

**LOOPT U RISICO?**

**DOE DE HEPTEST.NL >>**

# Percentage HCV patients treated with Inteferon



# Conclusions

- o 11,000 – 46,000 (0.1-0.4%) HCV infected in The Netherlands
- o 75% Not yet detected (immigrants)!
- o Acute HCV infections in HIV+ve MSM since 2000
- o Active surveillance necessary due to better treatment options.