

# Current trends in tuberculosis epidemiology in the Netherlands

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KNCV

TUBERCULOSIS FOUNDATION

What we do in ....

The Netherlands

The number of TB patients in the Netherlands has increased again in 2006, probably due to a reassessment of the number of TB patients.

16 million inhabitants

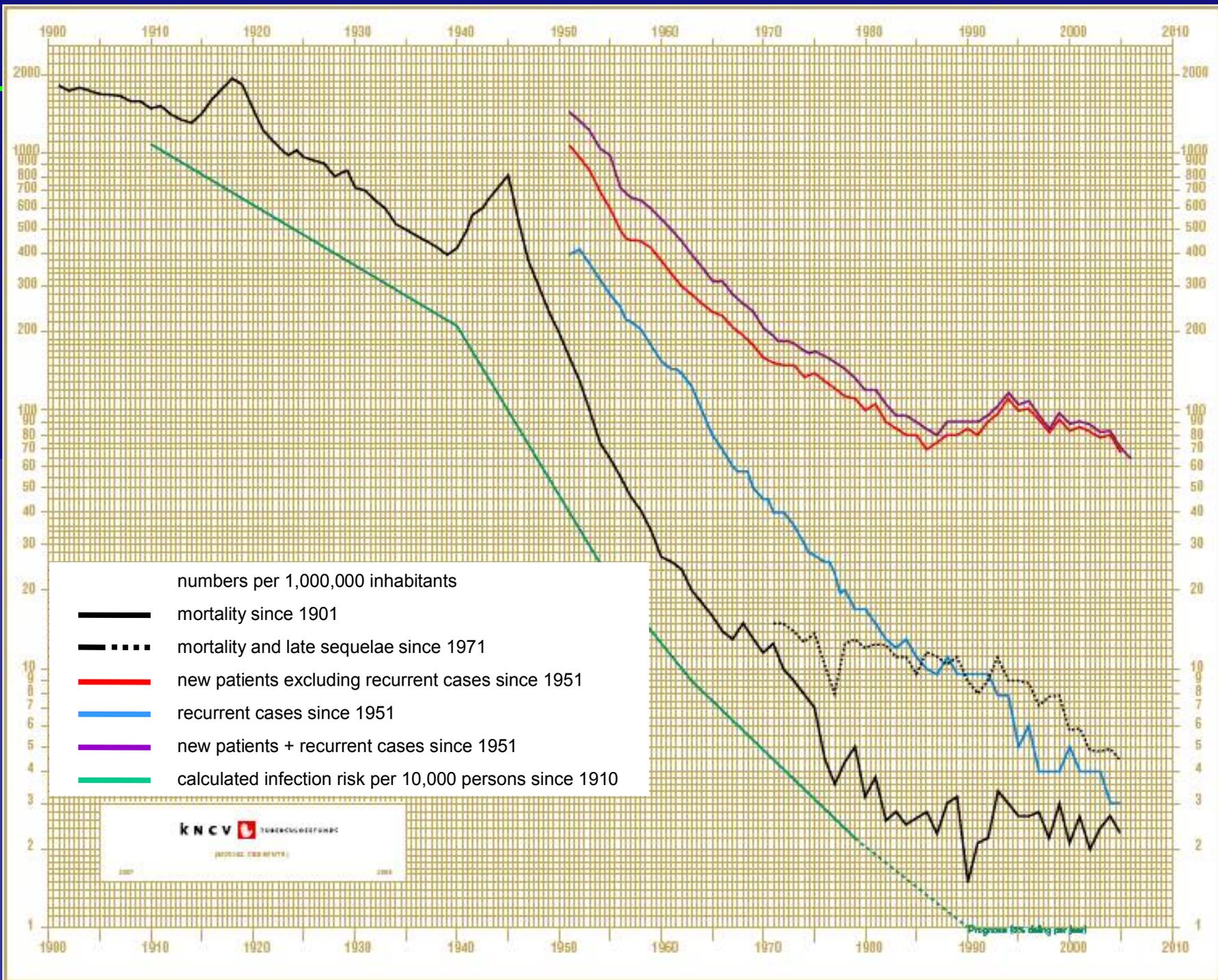
knowledge and data. We bundle efforts, and do educational efforts, and make use of the nationwide patient register in the Netherlands Tuberculosis Register (NTR).



- 1903 in Rotterdam: first “Dutch Society” for the fight against tuberculosis
- other cities quickly followed
- september 1903: “Dutch Central Society”
- 1918: government took responsibility and emphasized preventive measures → regional municipal health services
- 1953: → “Royal” = “Royal Dutch Central Society” or “KNCV”

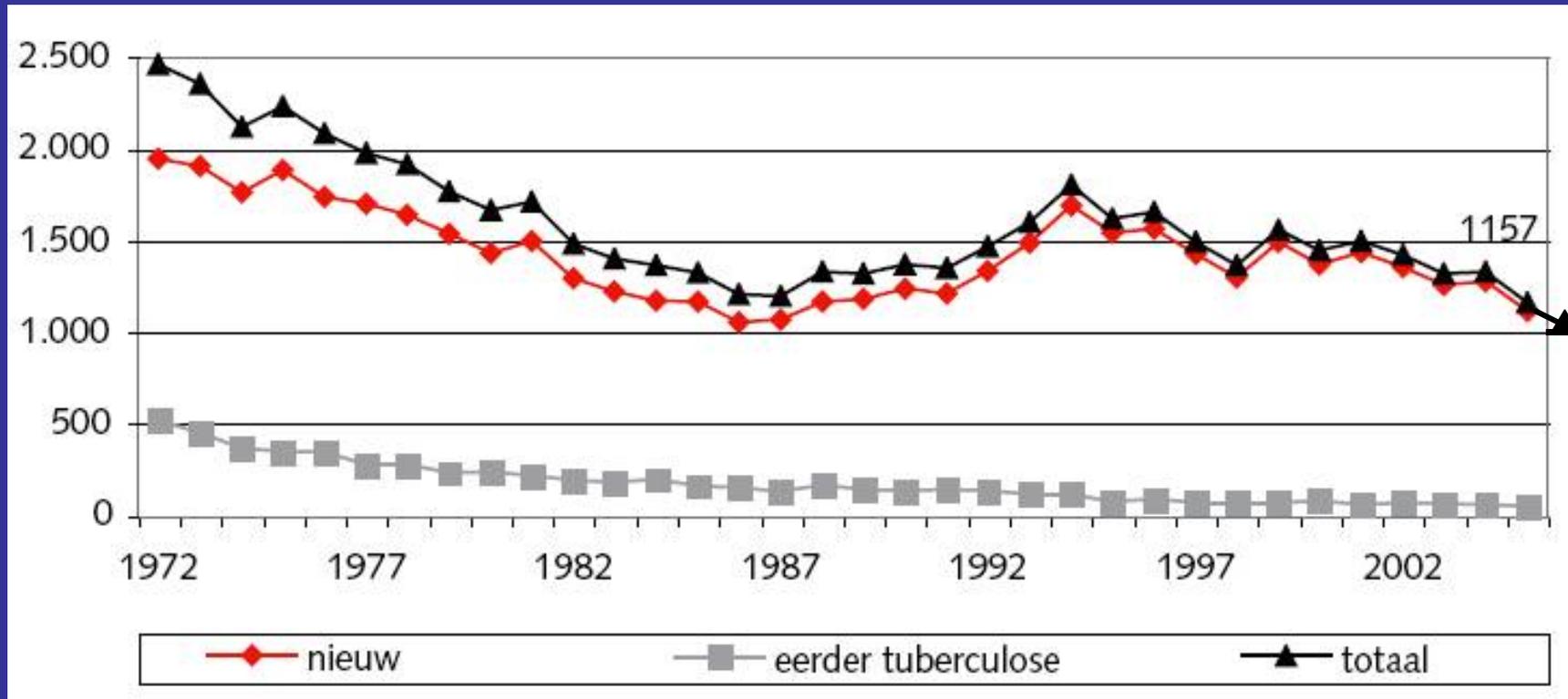
- The KNCV
  - ✓ collaborates with municipal health services for contact tracing and treatment of tuberculosis
  - ✓ maintains nationwide patient database in the Netherlands Tuberculosis Register
  - ✓ → impressive annual report

- The KNCV
  - ✓ is committed to reducing tuberculosis in the Netherlands and worldwide, in around forty countries.
  - ✓ policy development, technical assistance, advisory services, training programs, capacity building, as well as epidemiological and operational research.



# Netherlands Tuberculosis Register

## Number of cases 1972 -2005



Tuberculose in Nederland 2005, KNCV



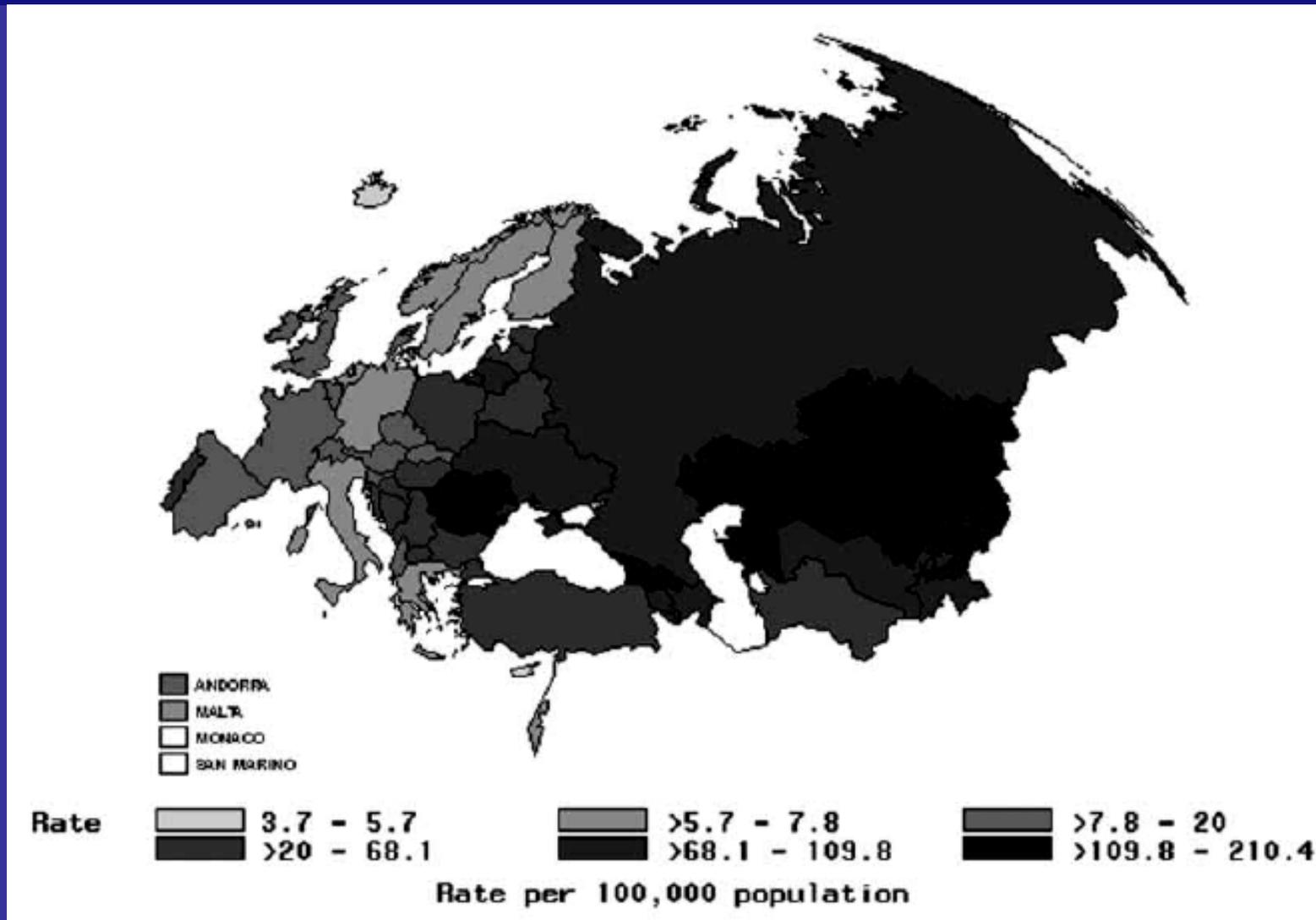
# Netherlands Tuberculosis Register

	Netherlands	EU and Western Europe
Total population (x 1.000.000)	16.3	509.8
Total nr patients	1,157	93,129
Incidence/100.000	7.1	18.3
Change incidence (2001 – 2005)	- 4,2%	- 2,5%
Born abroad	66%	20%
Mortality /100.000	0.5	0.7

Tuberculose in Nederland 2005, KNCV



# Incidence in Europe, 2005

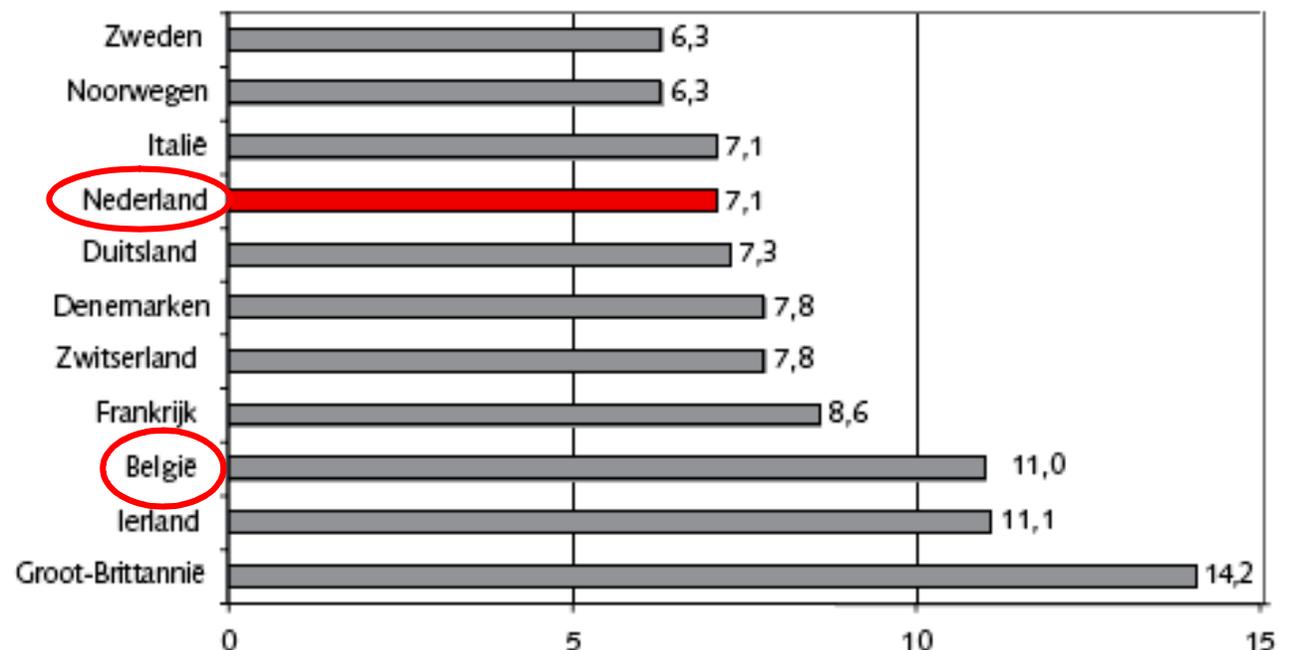
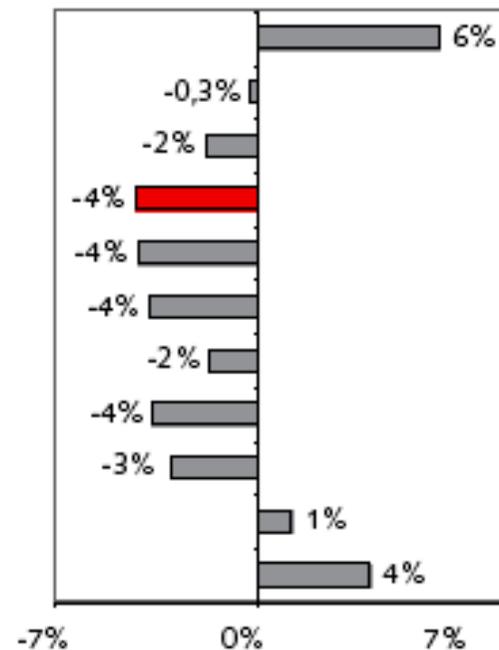


EuroTB and WHO Europe



mean change/year,  
2001-2005

incidence / 100,000  
2005

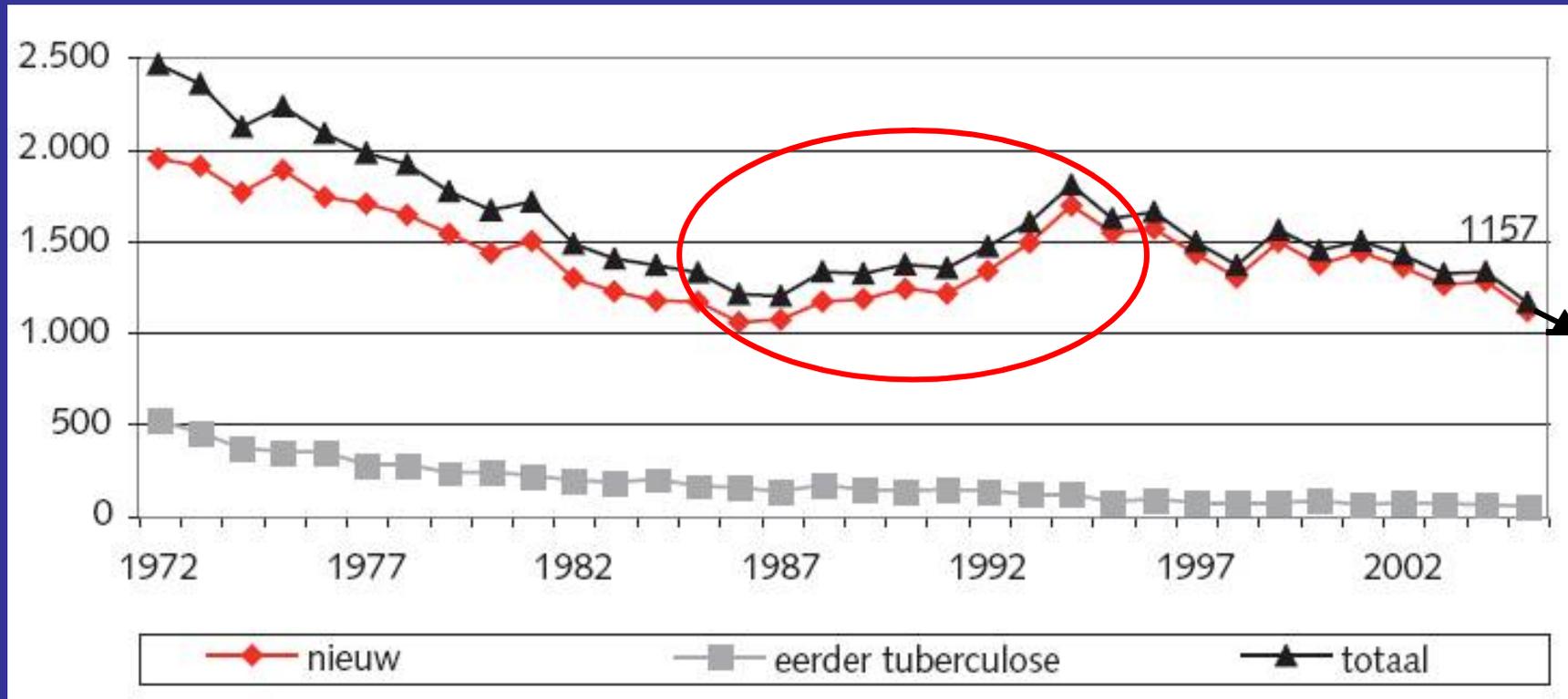


Tuberculose in Nederland 2005, KNCV



# Netherlands Tuberculosis Register

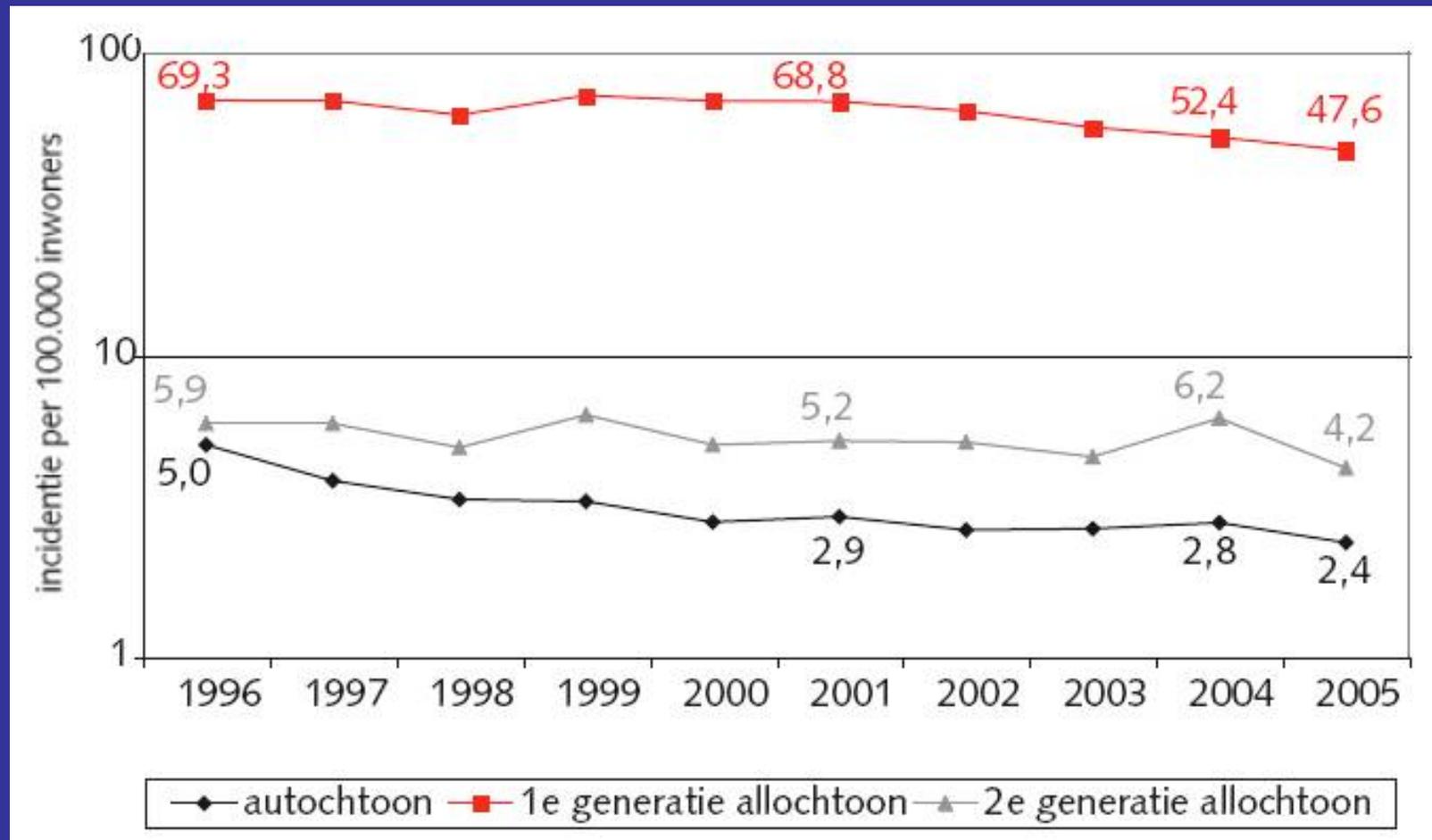
## Number of cases 1972 -2005



Tuberculose in Nederland 2005, KNCV



## Incidence / 100,000 by ethnic group



Tuberculose in Nederland 2005, KNCV





- Immigration in the Netherlands
  - ✓ large numbers in early 1990s
  - ✓ recently: smaller numbers, but shift to immigration from countries with higher TB rates
- Control measures:
  - ✓ TB screening obligatory at entry
  - ✓ offered every 6 months for 2 years



- Detection of new case of tuberculosis
  - reported to municipal health authority (Infectious Disease Law)
  - contact tracing
  - treatment follow-up

The logo for RIVM, featuring the lowercase letters 'rivm' in a white, sans-serif font on a yellow background.

National Institute  
for Public Health and  
the Environment

- since early 1990s: all strains of *Mycobacterium tuberculosis* sent to RIVM → molecular typing
- typing → clusters → outbreak management (contact tracing)

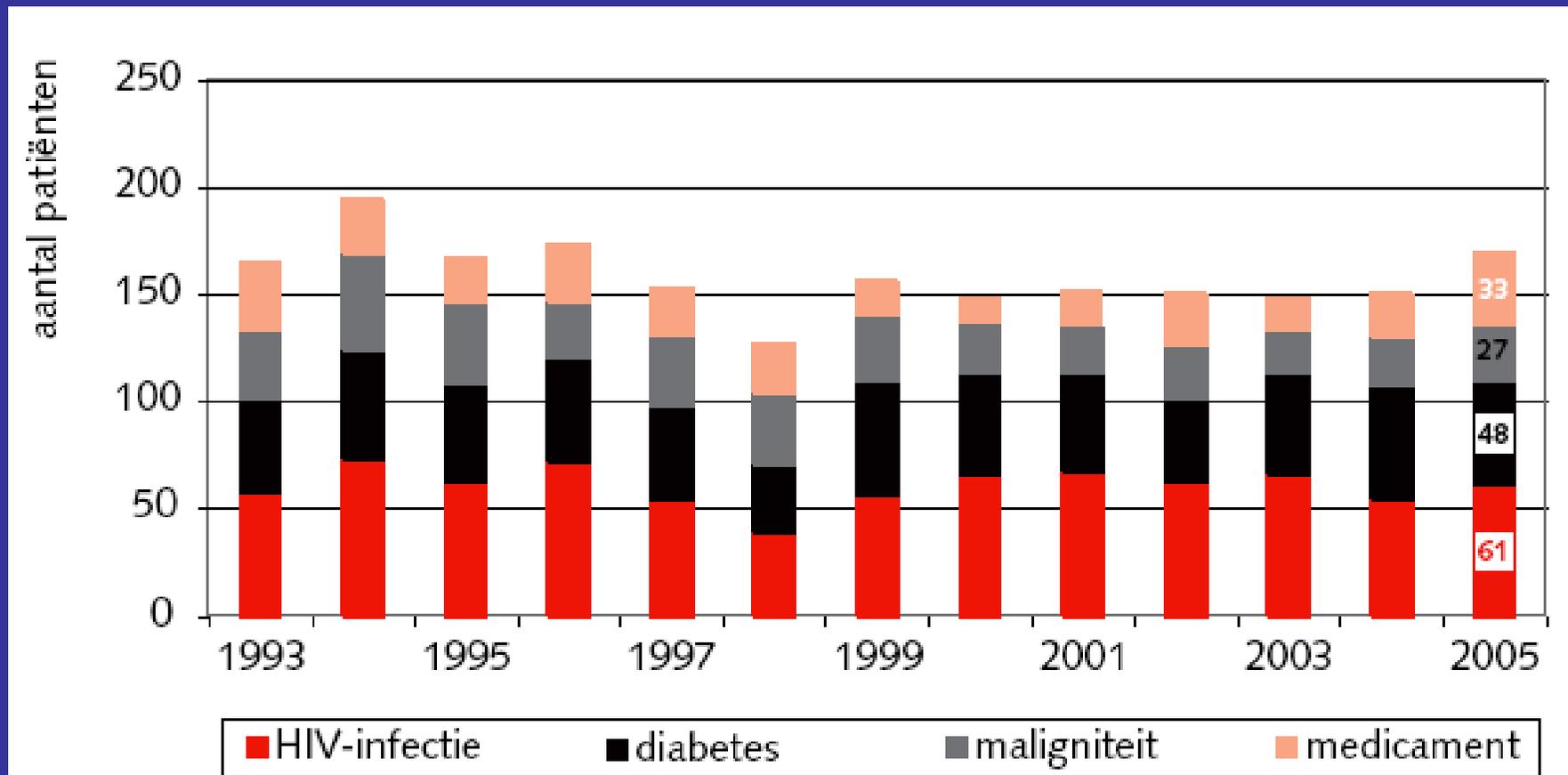


- DNA fingerprinting → TB trends from 1995 to 2002
- incidence of TB with new strains:
  - declined among Dutch
  - stable among non-Dutch
- increasing proportion of Dutch patients with secondary cases attributed to a non Dutch source patient

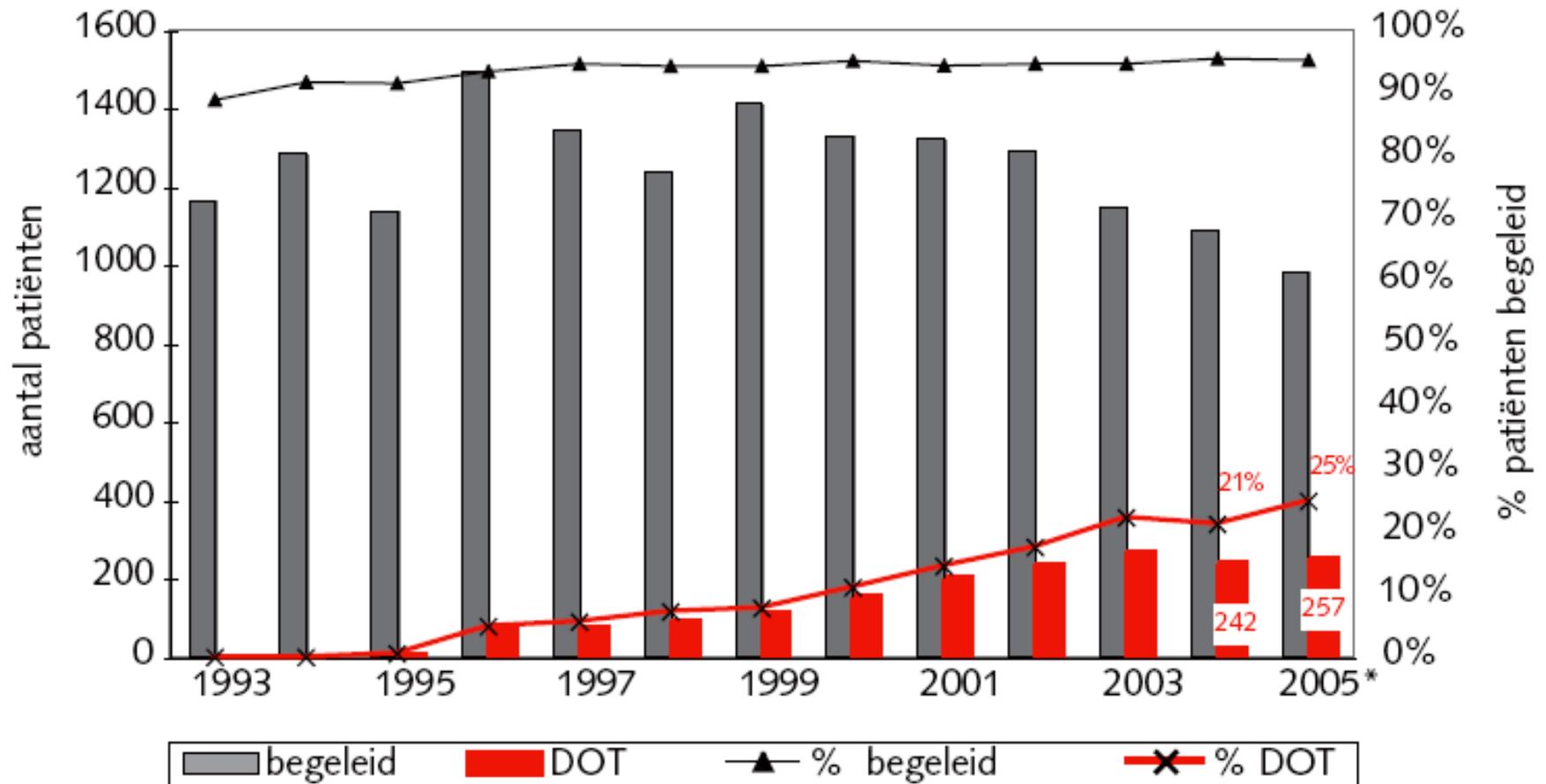
Borgdorff *et al*, Emer Inf Dis, 2005, 11:597

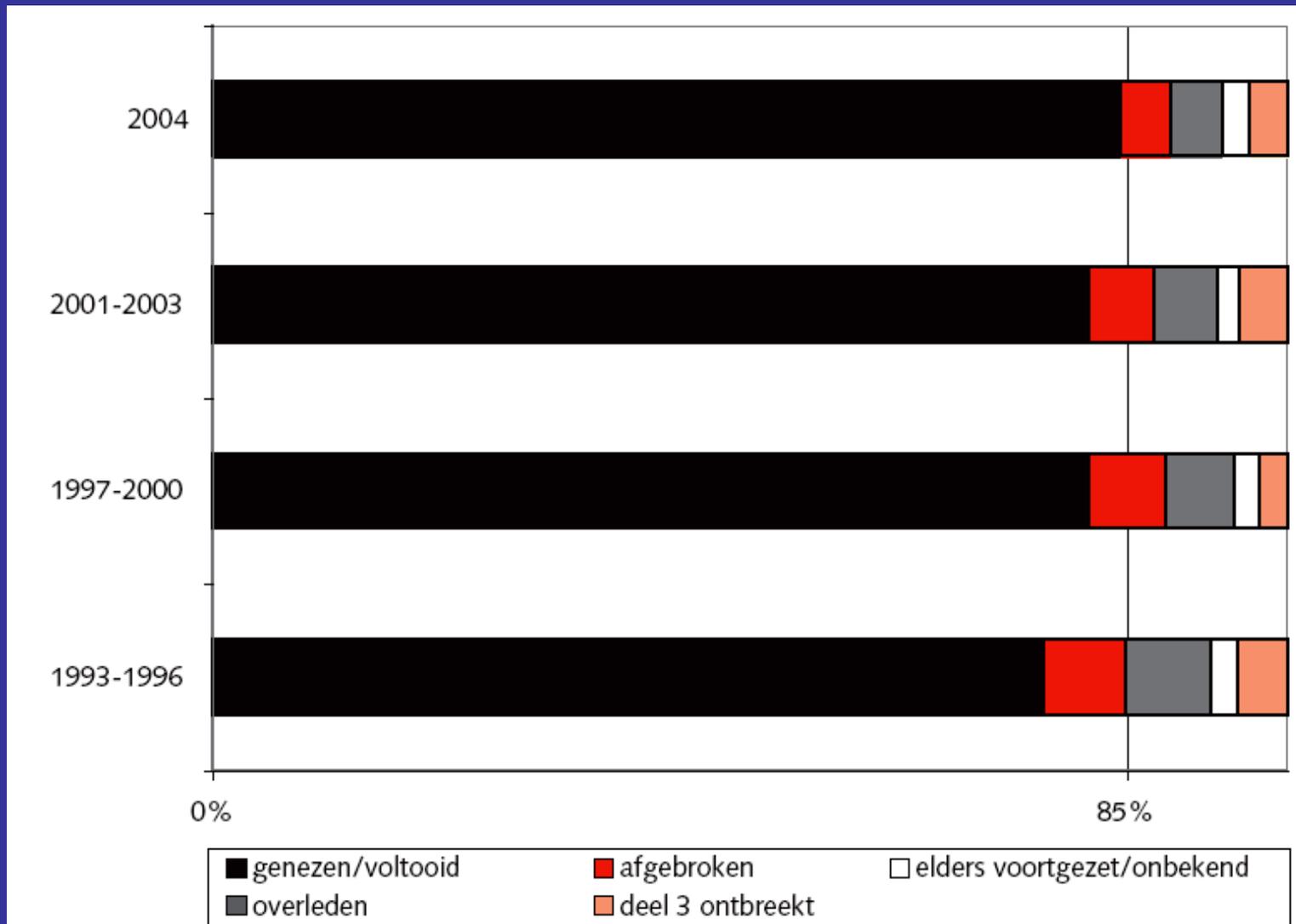


## TB and risk factors



## TB and treatment





# Netherlands Tuberculosis Register

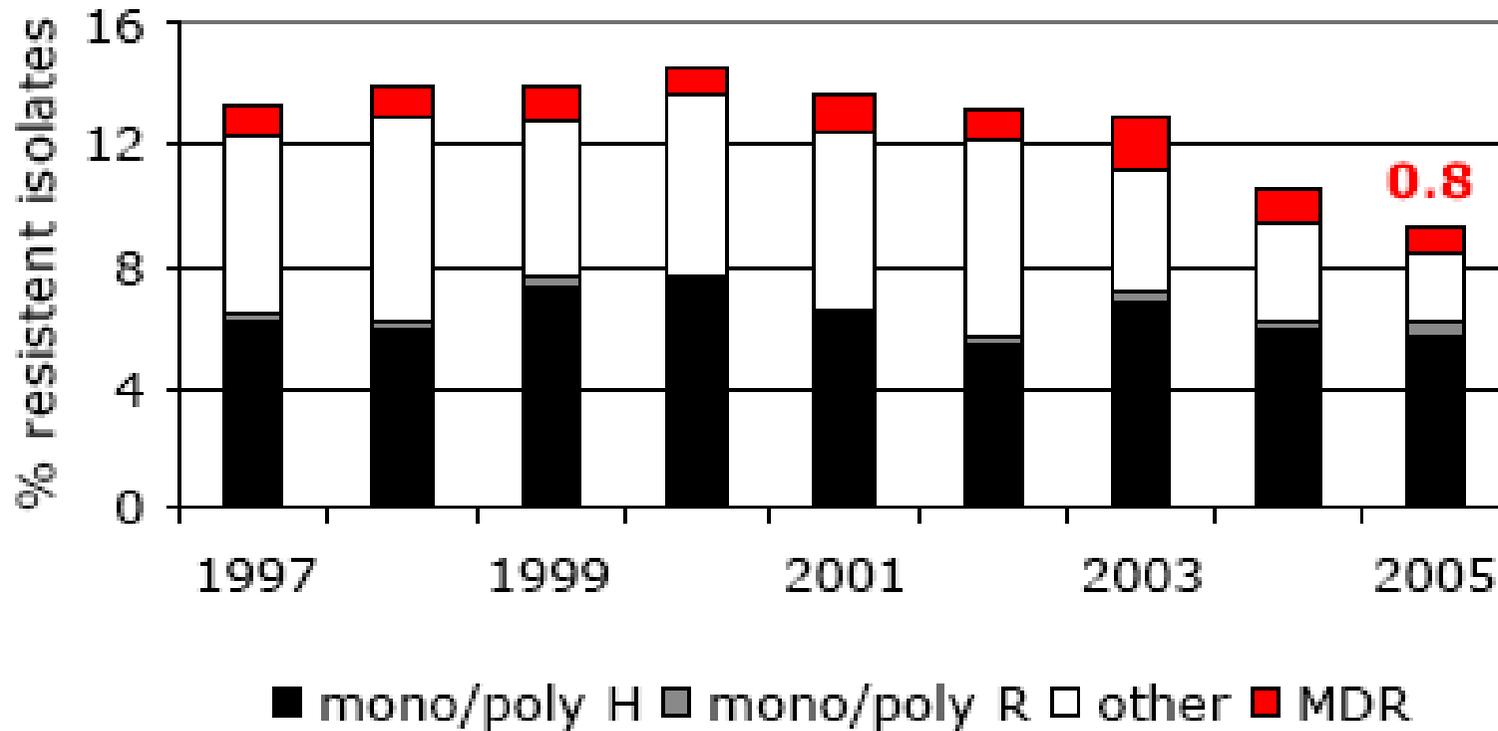
	Netherlands	EU and Western Europe
Pulmonary TB	66%	80%
AFB positive/100,000	1.5	7.1
INH resistance, new cases	4.9%	
INH resistance, previously treated	7.9%	
MDR, new cases	0.7%	1.2%
MDR, previously treated	2.9%	

Tuberculose in Nederland 2005, KNVCV





## % TB resistance in *M. tuberculosis* isolates, RIVM 1997-2006



# Conclusion

- Tuberculosis incidence in the Netherlands among lowest in Europe
- Multi-drug resistance is low
- 2/3 of cases in immigrants
- Very active system of case finding and treatment follow-up

