

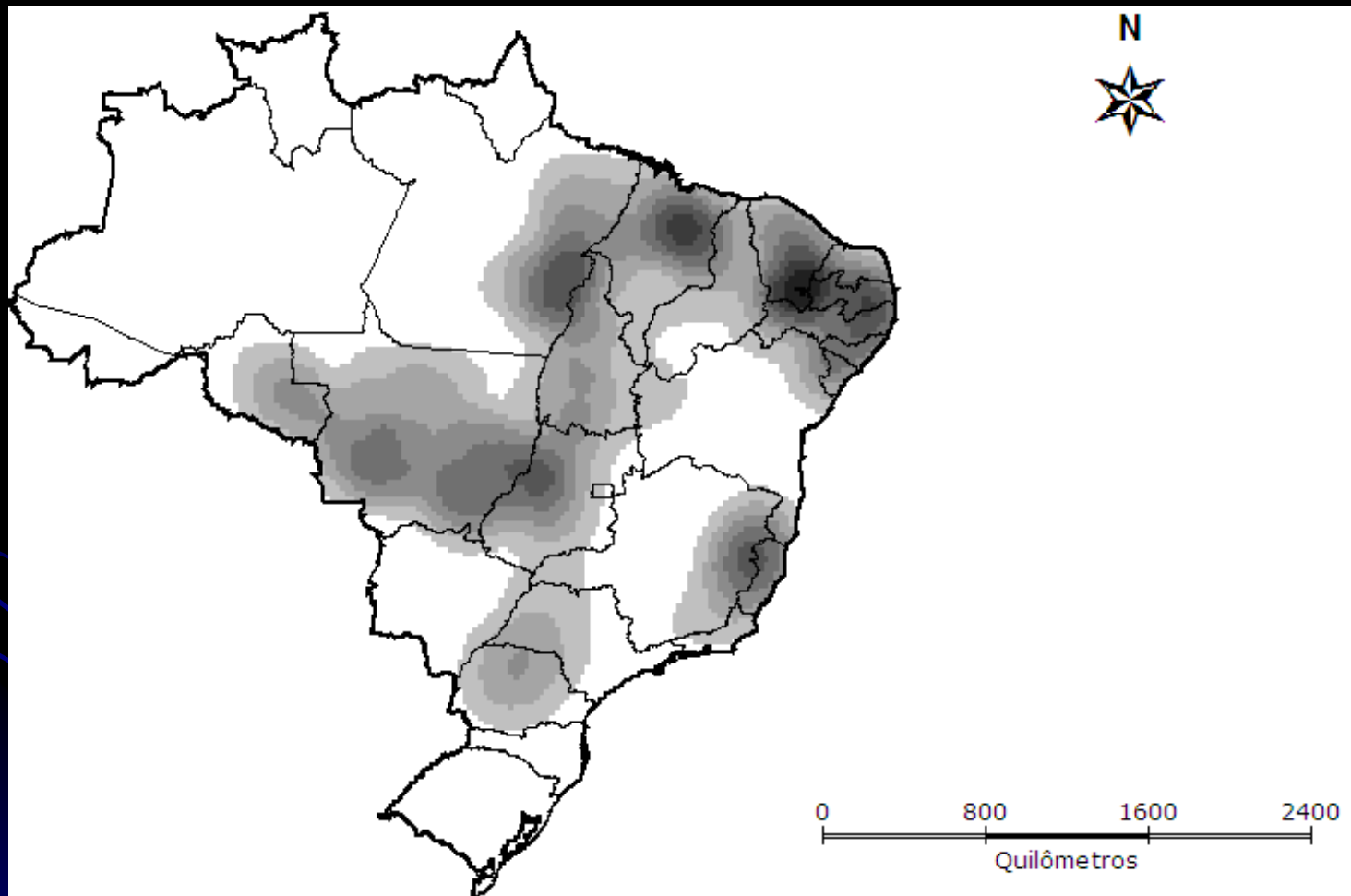
**XVIII CONGRESSO MUNDIAL DE EPIDEMIOLOGIA
VII CONGRESSO BRASILEIRO DE EPIDEMIOLOGIA**

***Secular trend of leprosy new cases
diagnosed in Brazil: 1987 - 2006***

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Spatial distribution of NCDR (10 thousand inhabitants) smoothing* by geographical micro areas (Brazil - 2006)



* Kernel method
Fonte: DATASUS

Introduction

The WHO has limited itself to comparing trends in the disease in various countries based solely on epidemiological indicators especially coefficient of prevalence and new case detection rate (NCDR).

New case detection trend during the period 2001–2005 by WHO region

WHO Region	New case detection during the year				
	2001	2002	2003	2004	2005
Africa	39,612	48,248	47,006	46,918	42,814
Americas	42,830	39,939	52,435	52,662	41,780
South-East Asia	668,658	520,632	405,147	298,603	201,635
Eastern Mediterranean	4,758	4,665	3,940	3,392	3,133
Western Pacific	7,404	7,154	6,190	6,216	7,137

Introduction

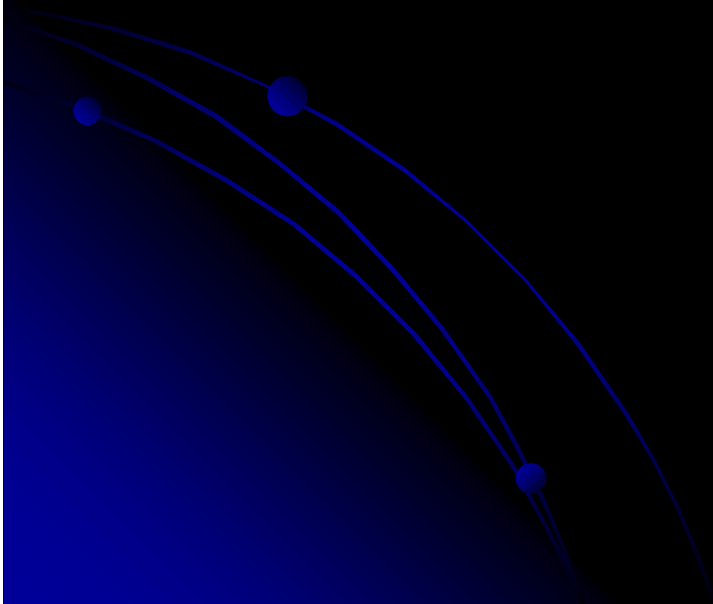
The indicator of NCDR reflects the risk of transmission, and depends on operational factors, in particular access to diagnosis and treatment.

By access is meant the local availability of diagnosis and treatment.



Objective

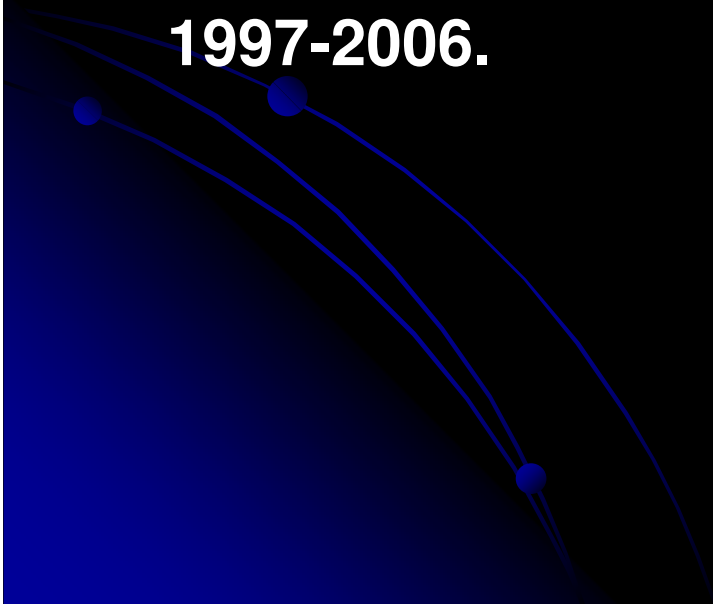
To analyze the trends in occurrence of new leprosy cases in Brazil, in the light of changes in public health policy in the period 1987-2006.



Method

Study of secular trends in NCDR for leprosy in Brazil between 1987 and 2006.

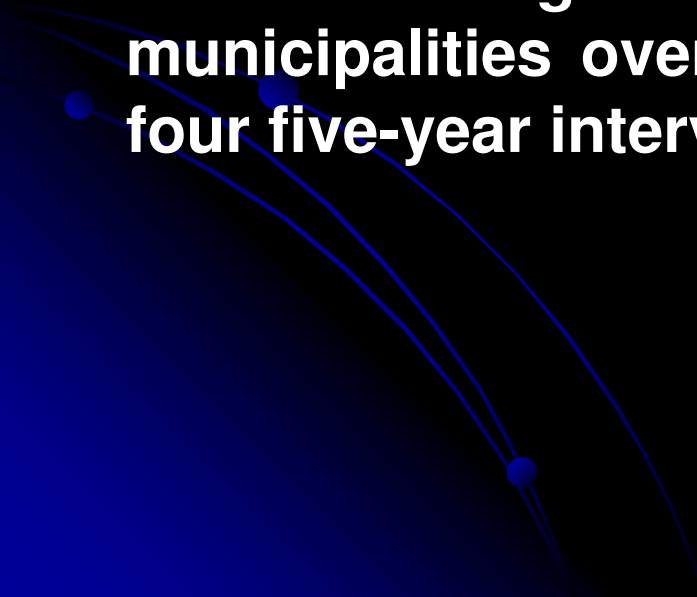
A linear trend was used to analyze separately the detection rate during the two decades 1987-1996 and 1997-2006.



Method

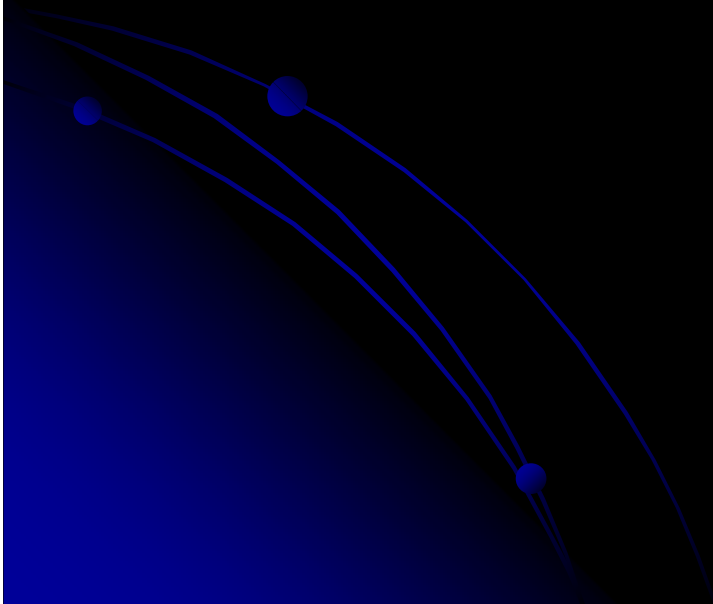
The cut-off point was the year with the peak detection rate: 1997.

To analyze the ***potential increase in accessibility to diagnosis and treatment***, we compared the proportion of cases diagnosed within the health services and municipalities over a twenty-year period split up into four five-year intervals.

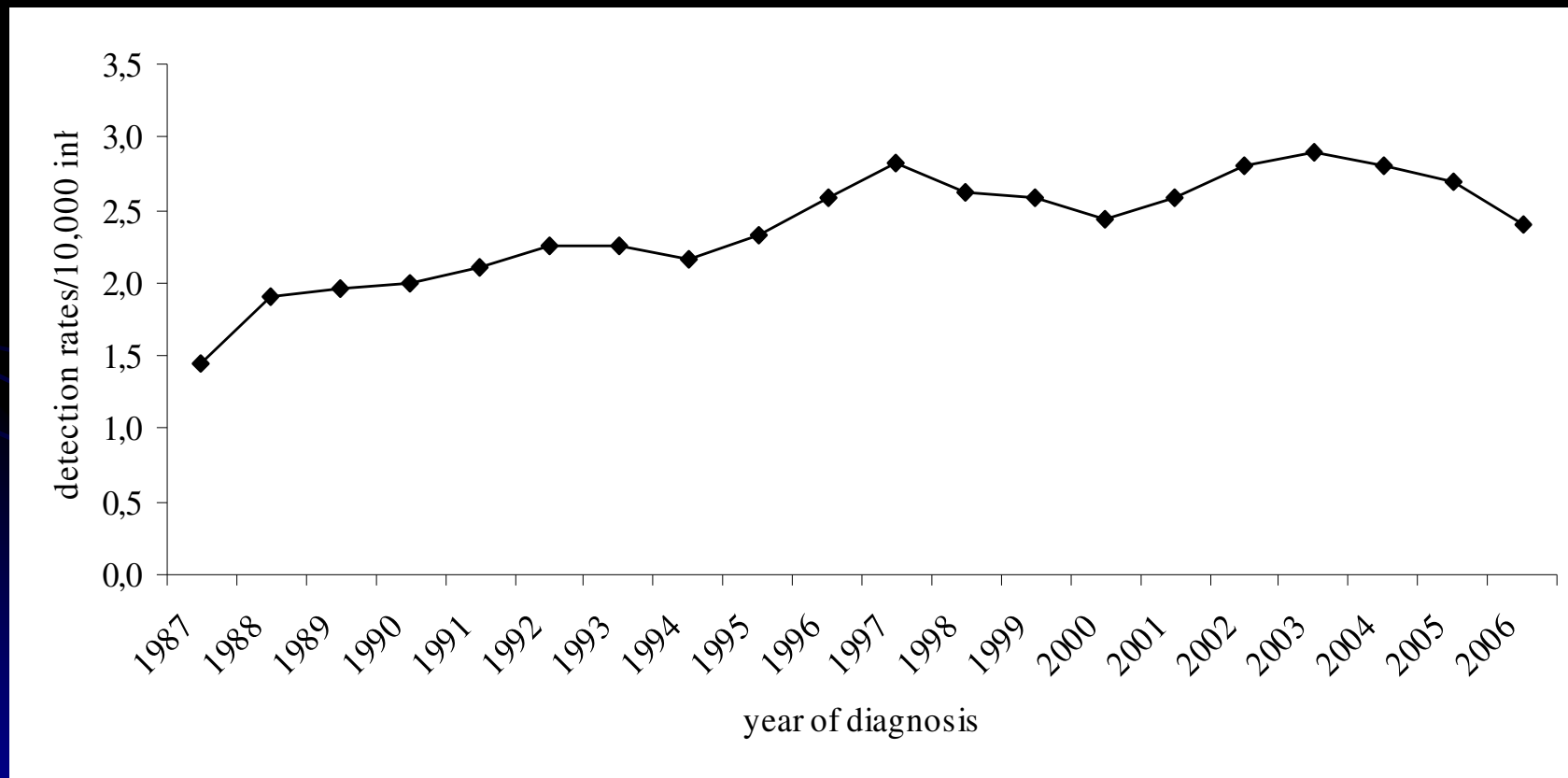


Results

The Brazilian NCDR over the last 20 years (1987 to 2006) showed an important increase until 1997, increasing more or less steadily from 1.4 (cases per 10,000 inhabitants) in 1987 to a peak of 2.8 in 1997.



From 1997 to 2000 there was a slight decrease, then a slight increase from 2001 to 2003, followed by a marked drop from 2.8 to 2.4 during 2004-2006.

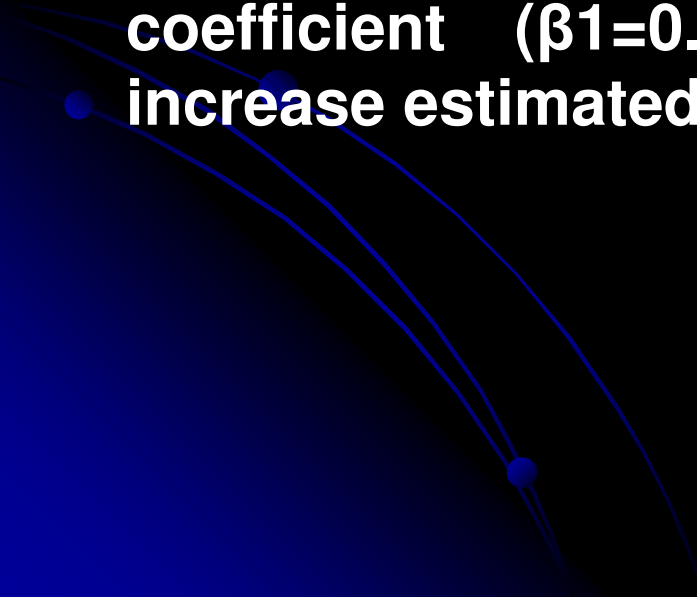


Source: 1987 to 2001 SES
2002-2006 SINAN/DATASUS/SES/MS

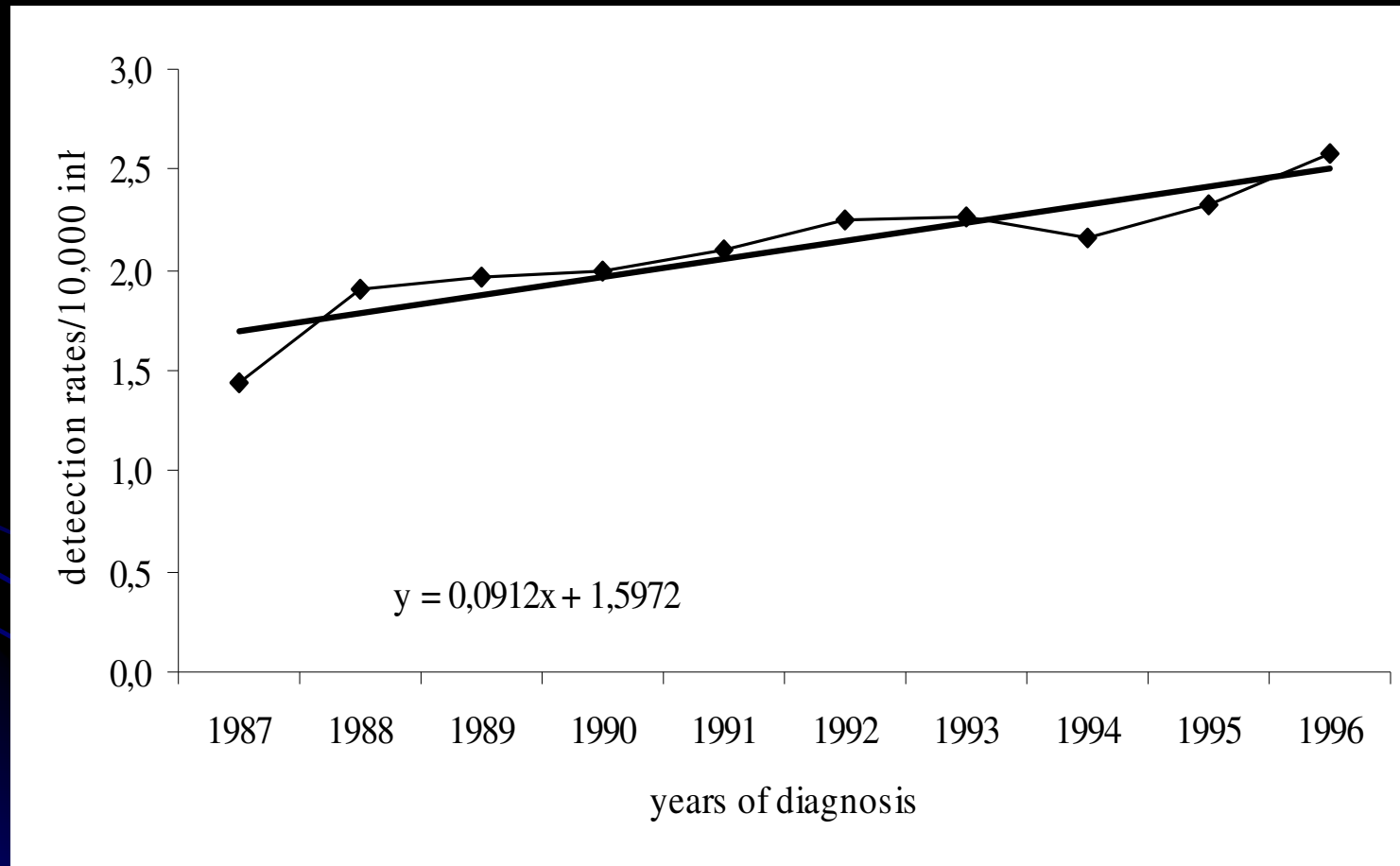
Results

Comparing NCDR for the two decades 1987-1996 and 1997-2006 and the corresponding trend lines.

The first one from 1987 to 1996 has a positive slope coefficient ($\beta_1=0.09$), characterizing an average increase estimated at 78.8 %.



Leprosy new case detection rate per 10,000 inhabitants for Brazil: 1987 to 1996



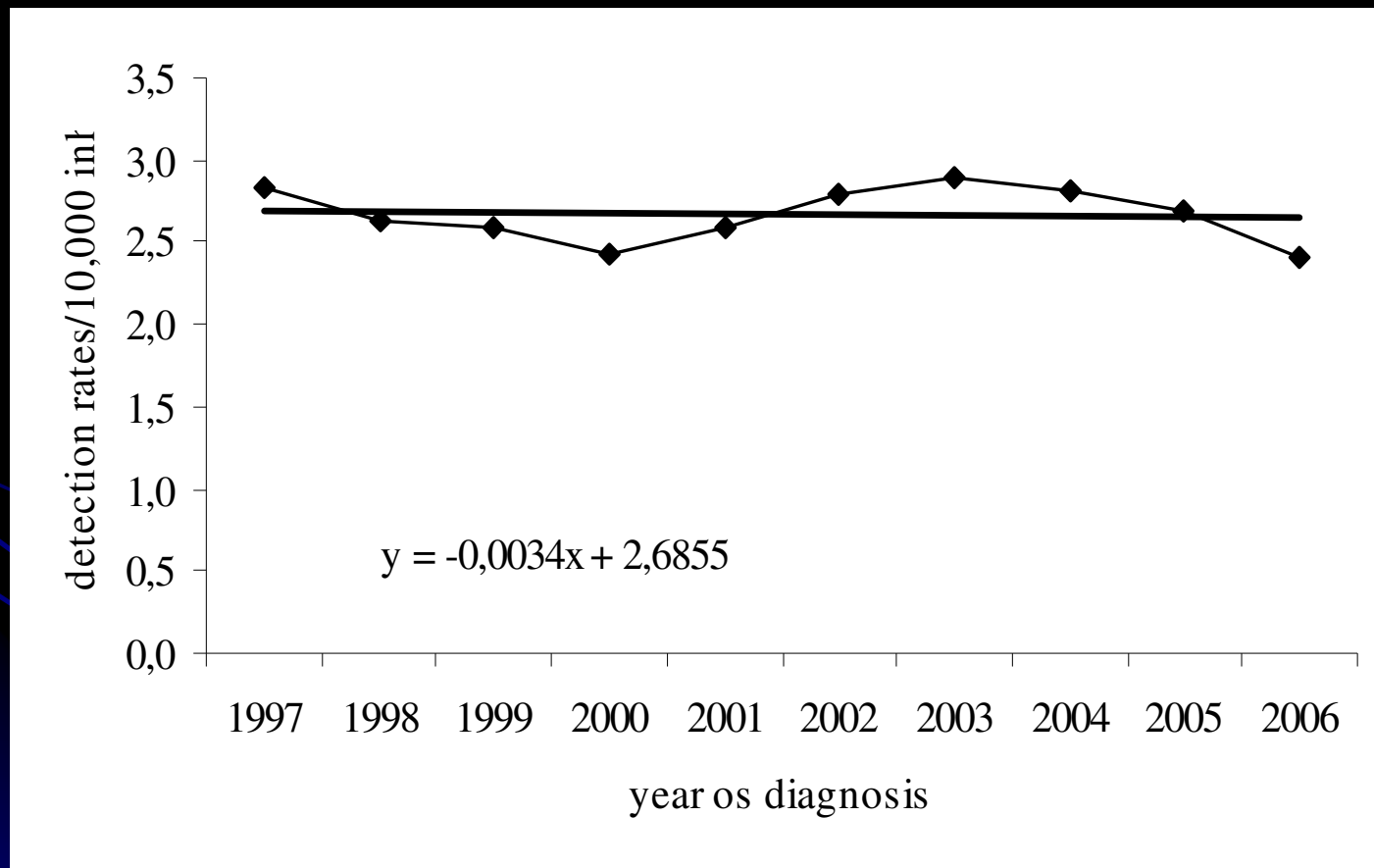
Source: 1987 to 2001 SES
2002-2006 SINAN/DATASUS/SES/MS

Results

The second period from 1997 to 2006 shows a negative slope coefficient ($\beta_1 = -0.003$), characterizing an average decrease estimated at 15.2 %, when the slope coefficient is applied at the first and last year of each 10 year period, respectively.

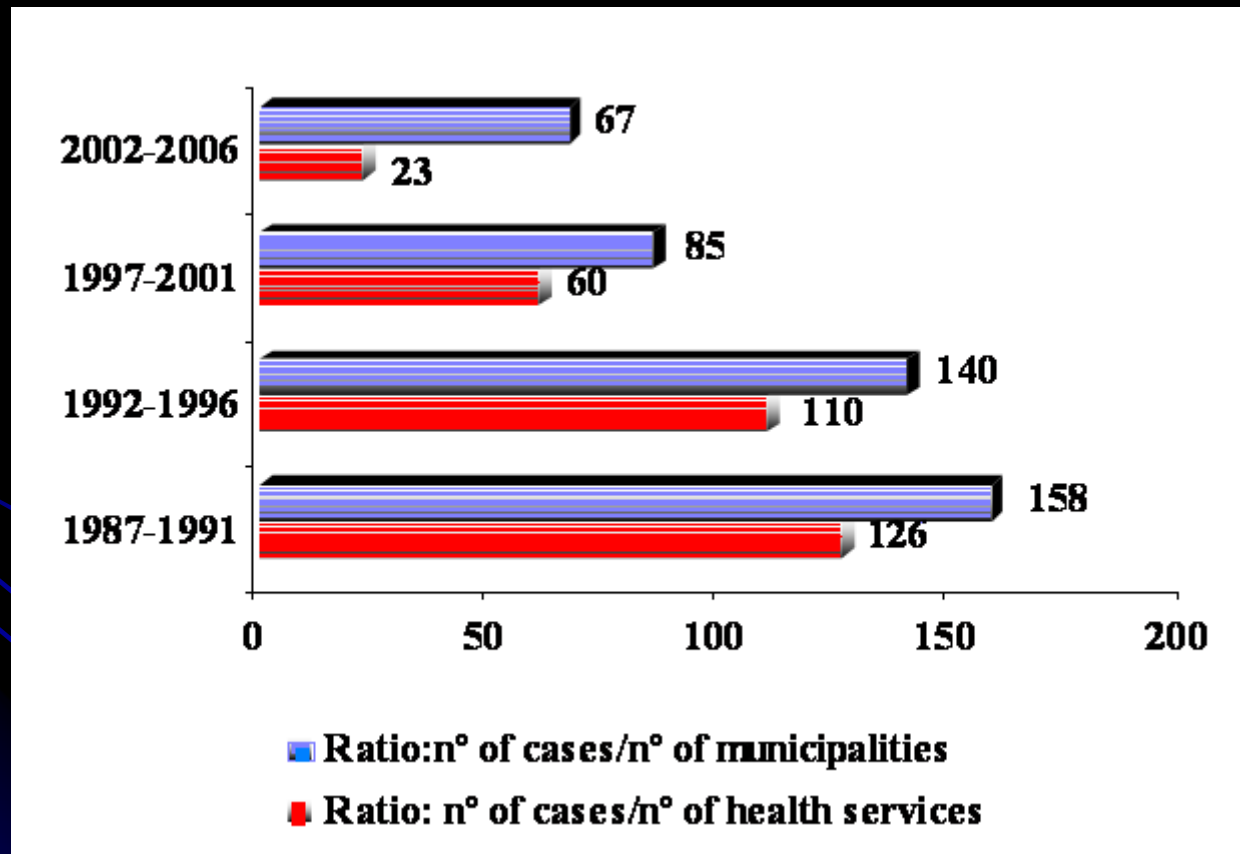


Leprosy new cases detection rate per 10,000 inhabitants for Brazil: 1997 to 2006



Source: 1987 to 2001 SES
2002-2006 SINAN/DATASUS/SES/MS

Ratio of number of cases of leprosy by number of health services and number municipalities regarding period of 5 years



Results

The Brazilian population increased by about 10% during each five- year period.

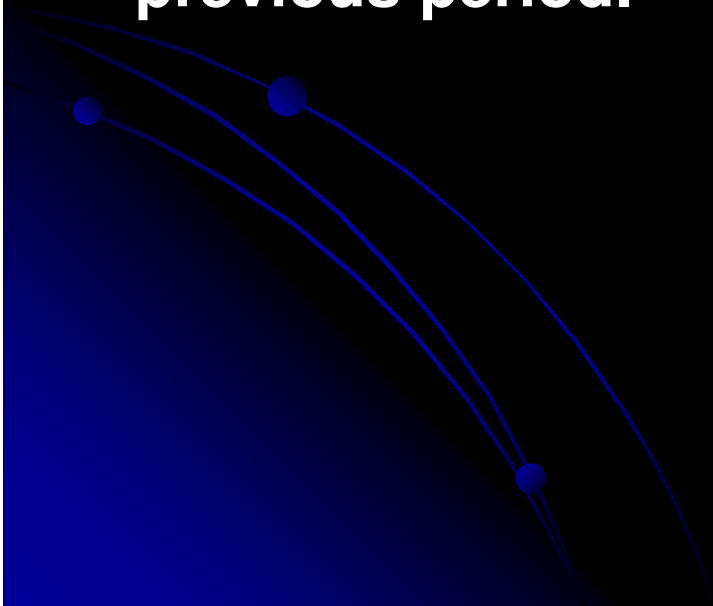
The number of new cases detected increased 32.7% between the first and second periods.

During the last period (2002-2006), the increase in the number of cases detected slowed down until it reached 3.6%.



Results

On the other hand, the number of health service providers increased greatly during each period (from 52% to 177.9 %). The number of municipalities also showed a significant increase during the period 1997 to 2001, being twice the number for the previous period.



Brazil: Total number (and average) of new cases of leprosy diagnosed over five yr period; total number of health services providers, and total number of municipalities. Increase in the percentage over the previous 5 year period (1987 -2006).

Five year period	Total nº of new cases	Percentage increase over previous 5-yr period	Total number of health services provider	Percentage increase over previous 5-yr period	Total number of municipalities	Percentage increase over previous 5-yr period
	Average of new cases					
1987-1991	133,824 26,765		1,063		846	
1992-1996	177,605 35,521	32.7	1,616	52.0	1,267	49.8
1997-2001	215,871 43,174	21.6	3,569	120.9	2,538	100.3
2002-2006	223,711 44,742	3.6	9,919	177.9	3,338	31.5

Conclusion

- **The Brazil seems to have passed through the transition period to its target of a constant decline in the detection rate, that represents the limit of increase of incidence of leprosy.**
- **Even with continuous transmission in some areas of the country, the increase in diagnostic capability shows that the country is on its way to eliminating leprosy as public health problem.**

Obrigada!

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