continuous morbidity registration sentinel satations the netherlands

1996

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FOREWORD

Since 1994 the number of mammograms applied for by GPs outside the mass screening among women in the 50-70 age group has been declining. The 50-70 age group forms the target group of the mass screening for breast cancer.
It seems probable that the mass screening is causing the need for additional examination in this group of women to decrease.
Among the women in the 40-49 age group there is, however, in the absence of mass screening a clear need for an examination requested by the GP. In the last two years a 'first' mammogram has been requested for nearly 9% of these women; for another 4% plus a repeat mammogram was performed.

Long-term registration makes it possible to determine trends. Thus the question was whether the decrease in concern about AIDS determined in 1995 would be a lasting one. This proves to be the case in 1996; the number of consultations of the GP in which AIDS clearly comes up for discussion is the same as that number in 1995.

The registration of new diabetes mellitus patients by the spotter physicians with a ten-year interval (1980-1983 and 1990-1992) shows a clear increase in the number of new patients with this disorder. This may be the result of a real increase. However, earlier recognition of the first symptoms of the disorder and/or more active case-finding by the GP may cause the number of new cases to increase.
The research by the CMR Sentinel Stations suggests that there is earlier recognition of the disease and more active detection.

Prof. dr. J. Van der Zee
Chairman of the Sentinel Stations Counselling Committee

INTRODUCTION

Continuous Morbidity Registration is a method of registration based on general practice. A national network of general practices, the sentinel stations, covers 1% of the Dutch population. In the composition of this network allowance has been made for a geographical spread and for a spread over regions with a varying degree of urbanization (see p. 7-10).
The participating general practitioners, the spotter physicians, submit a form every week on which certain illnesses, occurrences and actions are reported, the weekly return. This weekly return comprises a distribution by age and where necessary a distribution by sex (see p. 148).
Every two years a census takes place of the practice populations concerned. In this way the population to which the collected data must be related is known.
On the whole frequencies are calculated according to age group per 10 000 men or women (see p. 17).
Every year the topics that are to be placed on the weekly return are selected by the Counselling Committee. Requests or suggestions from others are also taken into consideration. In order that a disease or occurrence may be placed on the weekly return, three conditions must be met:

1. a description of the importance of the subject is obligatory;
2. it must be possible to formulate strict and clear criteria with respect to the disease or occurrence;
3. application of these criteria may not be too time-consuming and it has to suit the practice of the general practitioner.

When a topic is included for the first time in the weekly return, some background information is given in this report; for the 'old subjects' it is necessary to consult one of the previous reports.
When considering the subjects that have been included during the years on the weekly return (see p. 149 and 150) the conclusion is reached that the name of the project, Continuous Morbidity Registration, does not in fact cover the whole work. After all, in part it is not diseases that are registered but actions or occurrences. The name sentinel stations is better: a watch is kept, sometimes for one year, sometimes longer or even continuously. That is why the name "Continuous Morbidity Registration, Sentinel Stations the Netherlands" is used.

In addition to the submission of weekly returns, a start was made in 1976 with incidental investigations. This entails the physicians being asked at the end of the year questions about diseases or occurrences that did not happen frequently in the past year.
The report gives neither an exhaustive (statistical) analysis of the collected material nor an extensive study; the aim of the project is to collect basic details on certain subjects and to pass them on.

Of the 43 sentinel stations, in the course of 1996 41 were personally visited either by the members of the Counselling Committee van der Zee and van der Velden or by the project leaders.
Feedback on the course of events was requested and received to a generous extent. Ideas were exchanged on future developments and the possibilities of automation ideas were exchanged. Several suggestions were made for subjects on the weekly return.
The visits again underlined the importance of personal contact with the co-workers in the sentinel stations.

The Eurosentinel project ended in June 1991. However, contacts have been maintained between the project leaders of the participating national networks that led to continuation of the joint activities in the registration of influenza(-like illnesses) and Aids-related consultations of the GP in 1995.

At the request of the Management Group of the European Early Warning and Surveillance Scheme for Influenza, Nivel submitted to DG V of the European Commission at the beginning of 1996 a simplified versus of the project proposal from 1994 for continuation and expansion of this international cooperation. The proposal was rejected.
In 1996 the name of this cooperation was changed into EISS (European Influenza Surveillance Scheme). Belgium, France, Germany, the United Kingdom, Spain, Portugal and the Netherlands, with the national influenza centres and the networks of sentinel stations, are combined in EISS. The Czech Republic and Switzerland have been invited to join EISS.

Between EISS and the global FLU NET of the World Health Organization collaboration has started to develop.

From 1 June 1994 to 1 June 1996, on behalf of NIVEL (CMR Sentinel Stations), J. Hutten participated in the project group of the European Denominator Project. The goal of this Biomed project is the study of solutions for the differences in denominator in a number of countries of the EU (see page 143).

COUNSELLING COMMITTEE

The subsidy arrangement with the Ministry of Public Health, Welfare and Sport lays down that the Counselling Committee for the implementation of the registration systems consists in principle of:

1. two representatives of the Ministry of Public Health, Welfare and Sport;
2. the Director of the Netherlands Institute of Primary Health Care (Chairman);
3. one representative of the Netherlands Institute of Primary Health Care;
4. two representatives of the Health Care Inspectorate;
5. two representatives of the spotter physicians;
6. one representative of the joint Institutes for General Practice of Dutch Universities;
7. two members on the basis of specific expertise.

In 1996 the committee functioned in the following composition:

F.K.A. Fokkema, M.D.[5]
Dr. R.R.R. Huijsman-Rubingh[4]
H.O. Sigling, M.D.[7]
J. van der Velden, epidemiologist[3]
Dr. H. Verkley, sociologist[7]
A.A.M. Vloemans, M.D,physician/epidemiologist[1]
J.K. van Wijngaarden, M.D.[4]
Prof. Dr J. van der Zee[2], chairman

Project leader: A.I.M. Bartelds, M.D.
Secretaries: Mrs M. Heshusius-van Valen

This committee met twice in 1996. It had three vacancies in that year.

MEETING OF SPOTTER CO-WORKERS 1996

Contact between the registering physicians and their co-workers, the counselling committee, the topic-holders and the project leaders is of great importance to a registration project like the CMR Sentinel Stations. Every year, at the beginning of a new registration period, a meeting is held for that purpose.

Every year a number of infectious diseases appear for registration on the weekly return of the CMR Sentinel Stations.
Dr. M. Sprenger, head of the Centre for Infectious Disease Epidemiology of the National Institute for Public Health and Environmental Protection (RIVM), discussed in his paper the surveillance of infectious diseases. He emphasized that in addition to the recently developed Infectious Disease Surveillance System (ISIS) a sentinel station network of GPs will continue to be necessary.
He explained the necessary role of a GPs' sentinel station network with the registration of gastro-enteritis by the GPs of the CMR Sentinel Stations in 1996 and 1997. In this registration the GPs will request the patients who have reported themselves to send faeces for examination on possible pathogens. Control persons will be asked by the GPs to do the same. Both the patients and the controls will be asked to complete a questionnaire on such matters as visits abroad, eating habits and the manner of preparing food.
In this research by a sentinel station network data are collected in this way on the care burden, on certain pathogens of gastro-enteritis and how often they occur and possible new pathogens. Information becomes available on behaviour that may lead to becoming infected and effects of preventive measures can be gauged.

The results of the registration of the incidence of diabetes mellitus in 1980-1983 and 1990-1992 are compared by D. Ruwaard, Public Health Prediction Division of the RIVM.[1] The conclusion of this registration is that there is a considerable increase in the incidence of diabetes mellitus in the 45-64 age category. However, the question is whether this is a real increase through changes in the risk factors for contracting diabetes mellitus or through an earlier recognition of the symptoms of the disease followed by determining the blood sugar. Possibly there is also a more intensive case-finding of

diabetes mellitus by GPs, inspired by the Netherlands Society of General Practitioners.

In 1990 the national screening for breast cancer started for women in the 50-70 age group.
Up to 1996 the national programme has been in a development phase: thus it cannot be said that screening has actually started everywhere in the Netherlands.
Mrs. P. Beemsterboer, Social Health Care Institute of Erasmus University. Rotterdam, is involved in the evaluation of this screening. A major assumption in the cost-effectiveness analysis is that having a mammogram made outside the screening in the target group would decrease. The registration by the spotter physicians of the mammograms requested by them - from 1988 onwards - could answer the question whether the above assumption was correct. On the strength of the data up to the end of 1993 Mrs. Beemsterboer cannot as yet give a definite answer. There seems to be a drop in the applications for mammograms more than 2 years after the start of the mass screening among 50-69 year-olds.
An increase is found in the number of applications for mammography among the 40-49 age group.

Dr. J. de Jong, Virology Division of the RIVM, gave in brief the most recent survey of the surveillance of the influenza-like illnesses. Taking early in the season throat and nose swabs yielded until the start of the influenza epidemic in November 1995 above all insight into the occurrence of rhinoviruses (see p. 26).

Dr. J. Kerssens, NIVEL, discussed at the end of the meeting registration of chronic benign pain disturbance. He dealt at length with the many questions about the difficulty of registering this item on the weekly return.

DISTRIBUTION OF THE SPOTTER PHYSICIANS OVER THE NETHERLANDS

Figure 1
SENTINEL STATIONS
Continuous Morbidity Registration
1996

The number of sentinel stations in 1996 was 43. The number of general practitioners in the sentinel station practices is 67.

In the processing and discussion the following abbreviations or codes are used:

- A for the Groningen, Friesland and Drenthe province group (northern provinces);
- B for the Overijssel, Gelderland and Flevoland province group (eastern provinces);
- C for the Utrecht, North Holland and South Holland province group (western provinces);
- D for the Zeeland, North Brabant and Limburg province group (southern provinces);
- 1 for the degree of urbanization 5 (rural municipalities);[2]
- 2 for the degree of urbanization 4-3-2 (urbanized rural municipalities together with municipalities with urban characteristics);
- 3 for the degree of urbanization 1 (municipalities with a population of 100 000 or more).

Appendix 1 (p. 146-147) gives a survey of the general practitioners who took part in the sentinel station project during 1996. In 13 sentinel stations there is cooperation between two or more general practitioners, viz 7 times 2, 4 times between 3 practitioners, once between 5 practitioners, and once between 6 practitioners. In January 1997 the percentage of general practitioners cooperating throughout the Netherlands was 52.8, and among the spotter physicians 56.7. There are 7 dispensing spotter physicians, 4 in degree of urbanization 1 and 3 in degree of urbanization 2, that is 10.4% of the total number of spotter physicians. For the Netherlands as a whole this percentage is 9.5.[3]

Tables 1 and 2 give a distribution of the number of spotter physicians and sentinel stations per province and degree of urbanization in the years 1987-1996. Adjustment to the standards applicable to the classification by degree of urbanization takes place where and when necessary.
Comparison with the number of general practitioners in the Netherlands in the various subgroups shows that the spotter physicians form a proportional representation.

Table 1: Distribution of the spotter physicians (general practitioners) and sentinel stations per province group in the years 1987-1996[4]

province group	A		B		C		D	
	Groningen, Friesland and Drenthe		Overijssel, Gelderland and Flevoland		Utrecht, North and South Holland		Zeeland, North Brabant and Limburg	
	number of GPs	sentinel stations	number of GPs	sentinel stations	number of GPs	sentinel stations	number of GPs	sentinel stations
1987	10	6	9	7	28	21	14	10
1988	10	6	10	8	28	21	14	10
1989	10	6	10	8	28	21	13	10
1990	10	6	10	8	28	20	13	10
1991	10	6	10	8	29	19	14	10
1992	10	6	10	8	29	19	14	10
1993	10	6	12	10	28	19	15	10
1994	10	6	13	11	26	18	15	10
1995	12	6	14	11	24	17	15	10
1996	12	6	14	10	26	17	15	10

Table 2: Distribution of the spotter physicians (general practitioners) and sentinel stations per degree of urbanization in the years 1987-1996

degree of urbanization	1 rural municipalities[1)]		2 urbanized rural municipalities together with municipalities with urban characteristics		3 municipalities with a population of 100 000 or more		Netherlands	
	number of GPs	sentinel stations	number of GPs	sentinel stations	number of GPs	sentinel stations	number of GPs	sentinel stations
1987	10	7	37	25	14	13	61	44
1988	9	6	39	26	14	13	62	45
1989	9	6	38	26	14	13	61	45
1990	10	6	37	25	14	13	61	44
1991	10	6	39	25	14	12	63	43
1992	10	6	37	24	16	13	63	43
1993	10	6	38	26	17	13	65	45
1994	9	7	41	29	14	9	64	45
1995	10	7	42	28	13	9	65	44
1996	10	7	43	27	14	9	67	43

1) From 1994 the new criterion of degree of urbanization as used by the CBS has been applied in the breakdown of the sentinel stations.

THE PRACTICE POPULATIONS

In 1995 a census of the practice populations took place; these details have been used for processing with effect from 1-1-1996. In 1997 a new census will take place.
When the project was set up the aim was to take a sample of about 1% of the Dutch population. A geographical distribution (the above-mentioned province groups) was taken into account, as also a distribution of regions with various degrees of urbanization (degree of urbanization). An enquiry was held as to whether this aim is still being met. This proved broadly, still to be so, as the following surveys demonstrate.
The Dutch population increased in 1995 by 69 767 inhabitants.

Table 3: Comparison of the population of the practices of the spotter physicians with the total population of the Netherlands

			number of inhabitants of the Netherlands[5]	number of patients of sentinel stations[6] (with percentages)	
province group		A	1 627 457	25 053	(1.5%)
		B	3 203 108	34 539	(1.1%)
		C	6 871 877	59 068	(0.9%)
		D	3 791 447	37 117	(1.0%)
degree of		1	2 707 766	21 930	(0.8%)
urbanization		2	9 873 553	102 289	(1.0%)
		3	2 912 570	31 558	(1.1%)
sex	men		7 662 289	77 060	(1.0%)
	woman		7 831 600	78 717	(1.0%)
total			15 493 889	155 777	(1.0%)

Province group A (the northern provinces) is relatively somewhat over-represented.
With effect from the statistical year 1992 the Central Bureau of Statistics introduced a new criterion of urbanization: the address density of the surroundings.[2] The rearrangement of the sentinel stations in accordance with this new criterion has resulted in an under-representation of the population in the rural municipalities (degree of urbanization 1).

The percentages of the men and women of the population of the Netherlands coming under the sentinel stations, per age group, province group and degree of urbanization, are as follows.

age in years	province group								degree of urbanization						Netherlands	
	A		B		C		D		1		2		3			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0- 4	1.5	1.4	0.9	0.9	0.7	0.8	1.0	0.9	0.7	0.6	0.9	0.9	1.1	1.1	0.9	0.9
5- 9	1.6	1.4	1.0	1.0	0.9	0.9	1.0	0.9	0.7	0.6	1.0	1.0	1.3	1.3	1.0	1.0
10-14	1.6	1.7	1.1	1.0	0.9	0.9	1.0	1.0	0.8	0.7	1.1	1.1	1.2	1.2	1.0	1.0
15-19	1.5	1.6	0.9	1.0	0.9	0.9	0.9	1.0	0.8	0.8	1.0	1.1	1.0	1.1	1.0	1.0
20-24	1.4	1.8	1.1	1.2	0.8	0.9	1.0	1.1	0.9	1.0	1.1	1.1	0.9	1.0	1.0	1.1
25-29	1.8	1.8	1.3	1.3	0.8	0.8	1.0	1.1	1.0	0.9	1.1	1.1	1.0	1.1	1.1	1.1
30-34	1.7	1.8	1.2	1.1	0.8	0.8	1.0	1.0	0.9	0.8	1.1	1.0	1.1	1.2	1.0	1.0
35-39	1.6	1.6	1.1	1.0	0.9	0.9	1.0	1.0	0.7	0.7	1.1	1.0	1.2	1.2	1.0	1.0
40-44	1.5	1.6	1.0	1.0	0.9	0.9	1.0	1.0	0.7	0.7	1.0	1.0	1.1	1.2	1.0	1.0
45-49	1.5	1.5	0.9	0.9	0.9	0.9	0.9	1.0	0.7	0.7	1.0	1.0	1.1	1.1	1.0	1.0
50-54	1.4	1.4	1.0	1.0	0.8	0.9	1.0	1.0	0.8	0.8	1.0	1.1	1.0	1.0	1.0	1.0
55-59	1.5	1.4	1.0	1.1	0.8	0.8	0.9	0.9	0.8	0.9	1.0	0.9	1.0	1.1	1.0	0.9
60-64	1.3	1.4	1.2	1.1	0.8	0.9	1.0	1.0	0.9	0.9	1.0	1.0	1.1	1.1	1.0	1.0
65-69	1.2	1.4	1.2	1.1	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.0	1.0
70-74	1.4	1.2	1.2	1.1	0.9	0.9	0.8	0.9	1.0	0.9	1.0	1.0	1.1	1.0	1.0	1.0
75-79	1.4	1.4	1.1	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80-84	1.3	1.4	1.5	1.1	0.8	0.8	0.9	0.9	1.2	1.0	1.1	1.0	0.9	0.8	1.0	1.0
≥ 85	1.4	1.4	1.9	1.2	0.9	0.8	1.1	1.0	1.5	1.3	1.2	1.0	1.1	0.9	1.2	1.0
total	1.5	1.5	1.1	1.1	0.8	0.9	1.0	1.0	0.8	0.8	1.1	1.0	1.1	1.1	1.0	1.0

It can be established that al presents there is an under-representation of province group C and degree of urbanisation 1. In both subgroups new sentinel stations will be recruited.

SCOPE AND CONTINUITY OF THE REPORTING

Since 1975 the number of days reported annually per sentinel station and the number of days per week of all sentinel stations together have been examined and processed. In this an effort was made to follow the scope and continuity of the reporting. In general the spotter physicians state - or have someone state - whenever they cannot report (vacation, personal circumstances). In the case of a weekly return not being submitted in time, telephone contact is made.

The maximum number of days that can be reported depends on the number of weeks in the year in question and the number of sentinel stations. In 1996 it was 11 180 (52 weeks x 5 days x 43 sentinel stations).
Table 4 shows the absolute numbers and the percentages.

Table 4: Maximum and actual number of reporting days per year

year	maximum number of days which can be reported	actual number of absolute	reported days percentage
1987	11 660	10 035	86.1%
1988	11 700	10 307	88.1%
1989	11 700	10 380	88.7%
1990	11 340	9 997	88.2%
1991	11 180	9 903	88 6%
1992	11 395	10 141	89 %
1993	11 700	10 269	87.8%
1994	11 700	10 227	87.4%
1995	11 400	9 900	86.5%
1996	11 180	9 663	86.4%

The percentage of reporting days is somewhat lower in 1996 than in previous years. Possibly there is a link with the continuing education of GP's, cohul was made obligatory in 1996.
A breakdown by province and degree of urbanization may be seen in the following table. No great differences prove to exist.

The reporting in municipalities with more than 100 000 inhabitants is with 84.5% the lowest of the degree of urbanization groups. In the northern provinces the reporting with 89.6% is the highest of the province groups.

Per province group	Per degree of urbanization
A 89.6%	1 88.7%
B 87 %	2 86.5%
C 85.2%	3 84.5%
D 86 %	

In Fig. 2 the weekly reporting in all sentinel stations can be found. This figure clearly shows the influence of public holidays. The average number of non-reporting days per week is 29 (maximum 43 x 5= 215).

Figure 2: The number of days registered in 1996 per week.

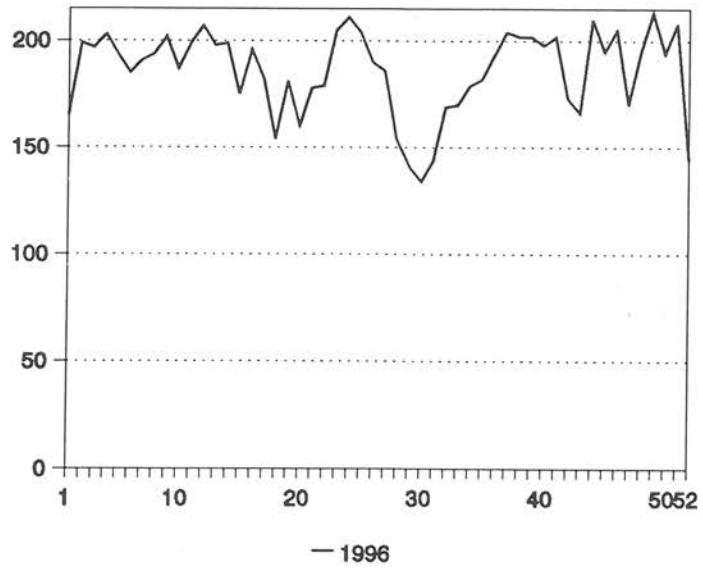


Table 5 presents the frequency distribution of the number of days not reported per sentinel station. The average number of non-reporting days per sentinel station in 1996 is 35 the same as in 1995.
A breakdown into single and group practices shows a clear difference here, viz 45 and 13 days respectively. This is in line with the frequent assertion that forms of cooperation of general practitioners increase the continuity of reporting.

Table 5: Frequency distribution of the number of days not reported on per sentinel station

number of days not reported on	number of sentinel stations									
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
≤ 0	0	1	1	2	1	2	3	4	3	4
1- 9	4	7	6	5	7	7	7	2	3	4
10-19	7	2	6	5	3	4	1	5	3	2
20-29	1	5	5	6	11	5	6	2	6	5
30-39	5	15	15	11	10	13	13	13	11	6
40-49	16	13	9	10	9	9	11	12	12	13
50-59	10	2	2	2	1	1	3	5	3	7
60-69	1	0	1	1	0	1	-	2	-	1
70-79	0	0	0	1	0	-	-	-	1	-
80-89	0	0	0	1	0	-	-	-	1	-
90-99	0	0	0	0	0	-	-	-	-	-
≥ 100	0	0	0	0	1	1	1	-	1	1
total number of sentinel stations	44	45	45	44	43	43	45	45	44	43
average	37	27	29	32	30	29	32	32	35	35
median	43	34	32	33	29	33	34	37	37	40

Further study of this table shows fairly constant reporting over the years. A major failure to report, i.e. more than 50 days per sentinel station, occurs in nearly 21% of the sentinel stations in 1996. This is a higher percentage than in 1995. Illness of the spotter physician is the reason for not reporting for a length of time.

THE WEEKLY RETURN (Appendix 2, p. 148)

The questions on the weekly return for 1996 were composed as follows; it is stated in brackets in which year the topics were added to the return.

1. New cases of influenza(-like illness) (1970);
2. Cervical smear (1976);
3. Liver, gall bladder and pancreas disease (1995);
4. Chronic benign pain disturbance (1995);
5. Sterilization of the man performed (1972);
6. Sterilization of the woman performed (1974);
7. Oestrogens prescribed (1994);
8. (Attempted) suicide (1979);
9. Out-patient mammography (1988);
10. P.I.D. (1993);
11. Urethritis of the man (1992);
12. Concern about AIDS (1988);
13. Physical violence (1996);
14. Gastro-enteritis (1996);

The basis in principle is weekly reporting, which means that patients seen by the locum in a "free weekend" are reported as well (influenza excluded). Diagnoses made or advice given by telephone are not entered in the weekly return in principle; here too influenza is an exception.

The subjects in alphabetical order can be found in Appendix 3 (p. 149-150) together with the years of registration.

PROCESSING OF THE DATA ON THE WEEKLY RETURN

This report contains the results of the weekly return for 1996. The data were processed by the Computer Centre of the Ministry of Public Health, Welfare and Sport as usual.

Three tables are produced on a routine basis:

1. the absolute number of patients by sex and age group;
2. the absolute number of patients by sex and province group;
3. the absolute number of patients by sex and degree of urbanization.

Tables 1, 2 and 3 are produced per week on behalf of the surveillance and per quarter and per year on behalf of the reporting. Moreover, Table 1 is also produced every quarter per sentinel station for the convenience of the participating physicians.

With the exception of the information furnished per sentinel station, the data are likewise expressed per 10 000 of the total practice population (relative frequencies). The frequencies are given in round figures. In the case of frequencies of under 0.5 per 10 000 inhabitants, the figure is rounded off to '0'. When no cases at all have been reported, this is indicated by '-'. A frequency that is based on fewer than 5 reports is put between brackets.
When the frequency of new cases of a disease in a given period is concerned, one speaks in epidemiology of incidence; if, on the other hand, all existing cases of that disease in a given period or at a given moment in time are concerned, that is designated as prevalence. There is also a subdivision into absolute and relative incidence or prevalence.
In this report the incidence or prevalence is in all cases calculated per 10 000 inhabitants or men or women. So as to be able, if desired, to calculate absolute numbers for the Netherlands, in Appendix 4 (page 151) the age structure as on 1 January 1996 is given.

When a sentinel station does not report over the whole week (sickness, vacation, etc.), this is mentioned. The data from the physicians who have reported on 0, 1 or 2 days of the week are not processed, while the populations of these practices are not included in the calculation of the frequencies.

The data from the practices that have reported on more than 2 days of the week are processed.
Until 1978 a correction factor was applied to this. Consideration of the number of times it was applied showed that the influence on the total was so small that this correction has been done away with effect from 1 January 1978. Moreover, enquiries among the spotter physicians revealed that in the cases of 1 or 2 days' absence the work was simply moved to a later date.
The returns are built up from the weekly return figures, the frequencies being calculated on the average population present in the quarter.
This annual report will not attempt to give a complete analysis of the material, as already mentioned in the introduction.

The following annual tables are included (page 136-139).

1. Cumulative, all sentinel stations standardized. Year 1996, week 01-52, p. 1-3.[7]
2. Province group standardized by syndrome. Year 1995, week 01-52, p.1-3.[7]
3. Degree of urbanization standardized by syndrome. Year 1995, week 01-52, p. 1-3.[7]

INFLUENZA(-like illness)

Influenza[8] is the only subject to have appeared on the weekly return since the start of the sentinel station project. The data on this subject are regularly distributed and used at international level. As soon as an increase in the incidence is noted, the numbers are reported weekly to the WHO in Geneva, together with virological and serological results. In this way the Netherlands participates in the worldwide influenza surveillance.

Influenza 1995-1996 and 1996-1997

1995-1996 season

Figures 3.1-3.3 give the number of new cases of influenza per 10 000 inhabitants per week for the Netherlands and by province group and degree of urbanization for the 1995-1996 season.[9] Figures 4.1-4.3 give the number of new cases of influenza for the 1996-1997 season. The progress of influenza in the first weeks of 1996 was already discussed in the 1995 report.

Figure 3.1 Number of patients with influenza(-like illness) per week and per 10 000 inhabitants, for the Netherlands, 1995-1996

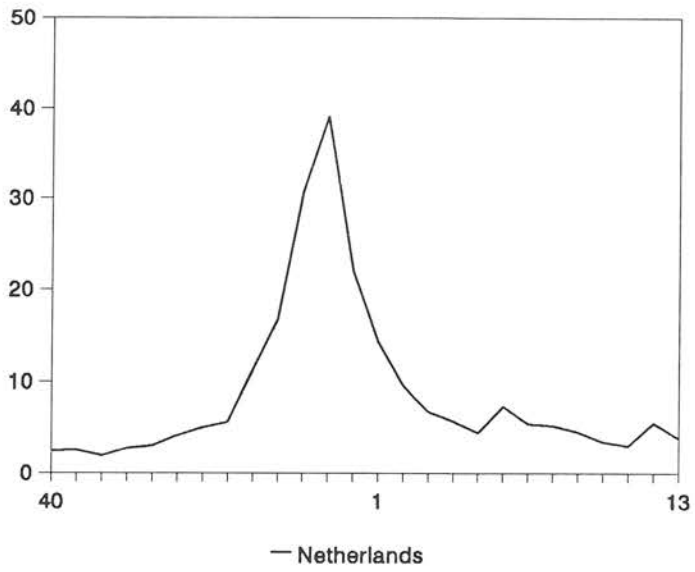


Figure 3.2 Number of patients with influenza(-like illness) per week and per 10 000 inhabitants, per degree of urbanization, 1995-1996

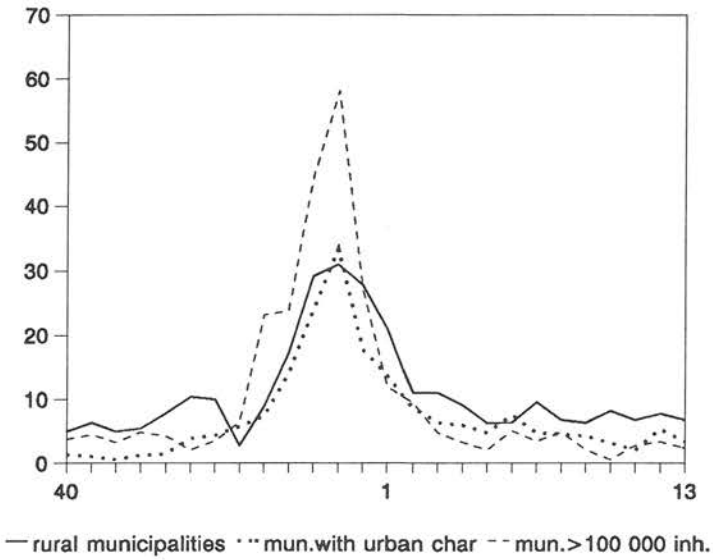
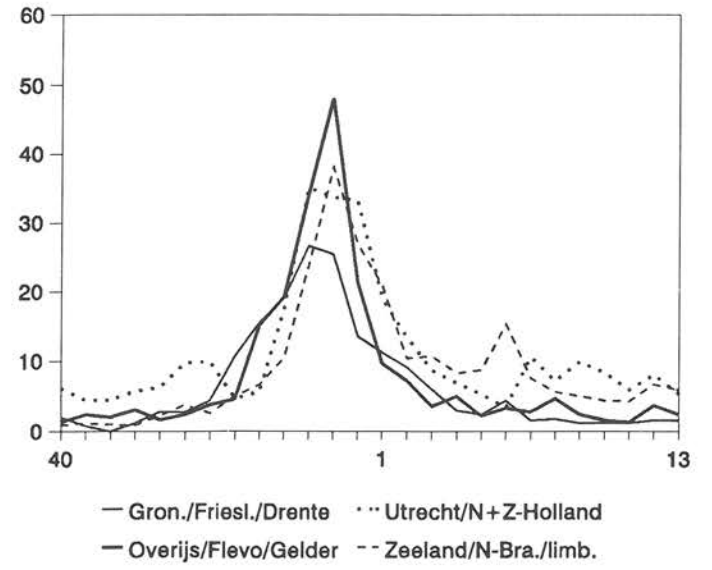


Figure 3.3 Number of patients with influenza(-like illness) per week and per 10 000 inhabitants, per province group, 1995-1996



1995-1996 season

On 7 November 1995 the first influenza virus of this season was isolated from an aspirate taken from a two-year-old girl in the Sofia Kinderziekenhuis in Rotterdam. It was an influenza A(H_3N_2) virus.
In the same week 45 two influenza A viruses were also isolated from throat/nose swabs sent in by spotter physicians.

In the two following weeks virus isolations were reported, but the number of influenza-like illnesses reported by the spotter physicians remained at a level normal for the time of the year. In week 48 there was for the first time a clear increase in influenza activity. The highest incidence was measured in week 51: 39 reports per 10 000 patients.

The western provinces display the highest incidence of the province groups (48 per 10 000 inhabitants); in the cities the incidence, at 58 per 10 000 inhabitants, is higher than in the two other degrees of urbanization.

In week 3, eight weeks after the start of this influenza revival, the level again fell to below 10 per 10 000 inhabitants. However, a somewhat increased IAZ incidence continued to exist until in week 10 of 1996.

Virological surveillance NIVEL/RIVM

The viruses isolated in the 1995-1996 season are very largely of the influenza A(H_3N_2) type (82%). A considerably smaller number of influenza A(H_1N_1) viruses (12%) were isolated and influenza B viruses (16%).

1996-1997 season

Figure 4.1 Number of inhabitants with influenza(-like illness) per week and per 10 000 inhabitants, for the Netherlands, 1996-1997 (up to and including week 11)

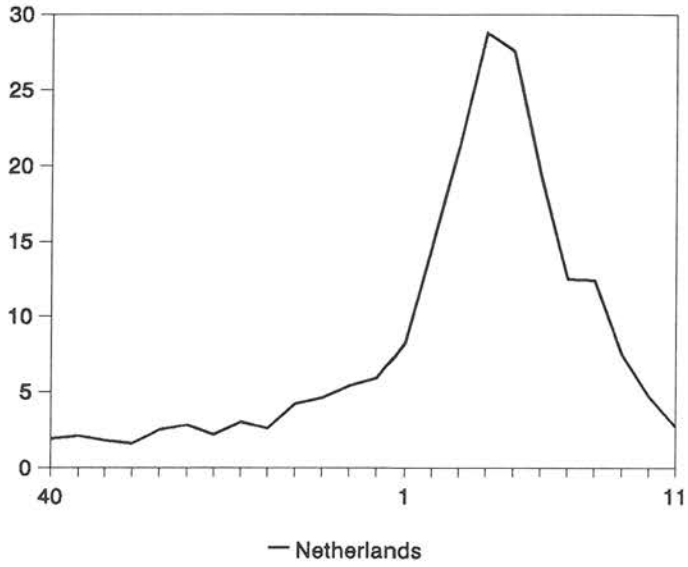


Figure 4.2 Number of inhabitants with influenza(-like illness) per week and per 10 000 inhabitants, per degree of urbanization, 1996-1997 (up to and including week 11)

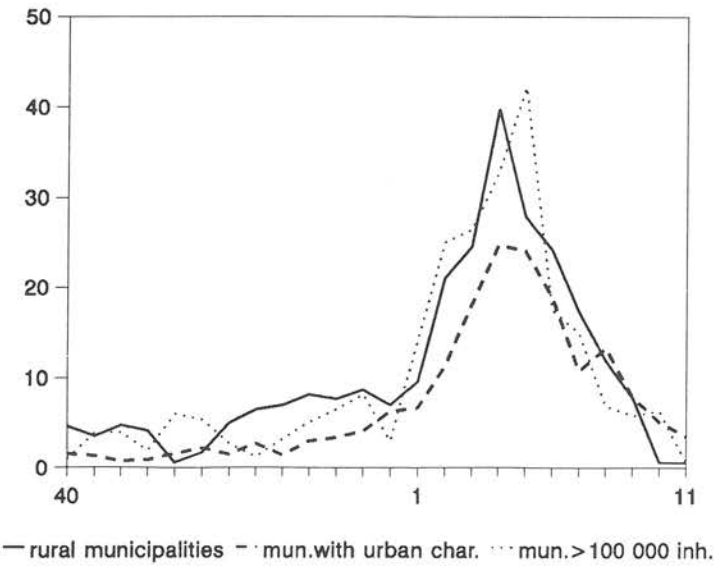
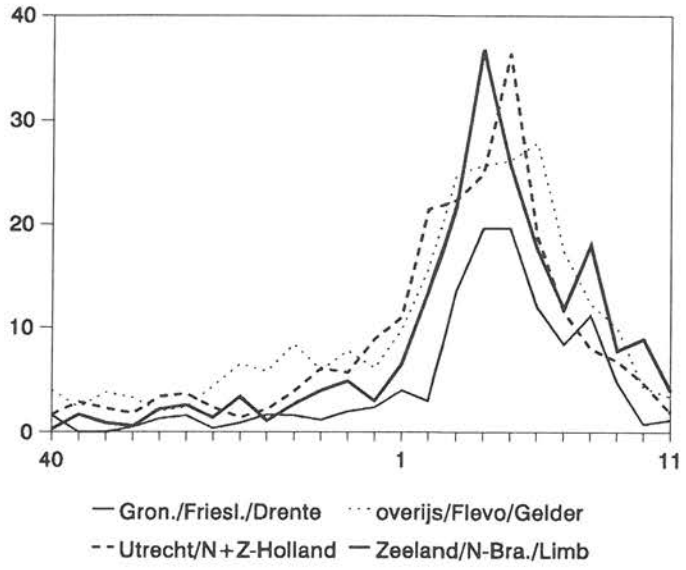


Figure 4.3 Number of inhabitants with influenza(-like illness) per week and per 10 000 inhabitants, per province group, 1996-1997 (up to and including week 11)



1996-1997 season

In the 1996-1997 season the first influenza virus was isolated in week 48. It was an influenza A H_3N_2 virus, of which it could be established that it displayed a close resemblance to the Wuhan variant, which was included in the vaccine.

As in the previous season, in a number of weeks, up to week 52, only sporadic influenza viruses were isolated.

From week 52 of 1996 the clinical activity of influenza, as recorded by the NIVEL sentinel stations, increased. The highest point was reached in weeks 4 and 5 of 1997: 29 and 28 per 10 000 inhabitants respectively.

The highest value was reached in week 4 in the southern provinces: 37 per 10 000 inhabitants. In the rural municipalities the incidence reached its highest value likewise in week 4: 40 per 10 000 inhabitants. The highest incidences in the cities was 33 per 10 000 inhabitants in week 4 of 1997.

After week 5 of 1997 the clinical activity of influenza clearly declined. Up to week 11, the week in which the base value for influenza-like illnesses was again reached, there was clearly increased activity.

Virological surveillance NIVEL/RIVM of acute respiratory infections
From week 48 sporadic isolations of influenza A were found for several weeks. From week 52, simultaneously with the increase in the clinical activity, more influenza viruses were isolated per week. The largest number of viruses was isolated in week 4: 18 influenza A H_3N_2 viruses and 8 influenza B viruses. It was then clear that, after a rise in the influenza A activity, the influenza B virus put in an appearance. While the maximum number of isolations of the influenza A H_3N_2 virus was performed in week 3 (20 isolations), the peak in the number of isolations of the influenza B virus fell in week 7 of 1997 (12 isolations). After week 8 of 1996 no further influenza A H_3N_2 viruses were isolated. In week 13 a further influenza B virus was found. There was thus an influenza A and an influenza B wave.

During the 1994-1995 season it had been established that in the network of the sentinel stations more influenza B had been found, whereas in the diagnostic circuit, in which the isolations often originate from patients who have been admitted to hospital, the number of influenza A viruses predominated. This was again established in the 1996-1997 season.
The influenza A H_3N_2 virus seems to have a greater pathogenic capacity than the influenza B virus.

Table 6: Number of patients with influenza(-like illness), per 10 000 inhabitants, 1987-1997

year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
total per calendar year	365	399	410	225	348	244	484	107	315	155	
highest weekly incidence per "season"	9	44	54	24	40	27	54	16	39	29	

If we examine the epidemics of the past ten years, those of the 1990-1991 and 1992-1993 seasons were the mildest. In the 1987-1988 season one may not speak of an influenza epidemic at all. In the 1988-1989 season an "influenza wave" occurred for the first time for years at the end of the calendar year. In the 1989-1990 season there was again an "influenza wave" at the

end of the calendar year. In the 1990-1991 season most activity was seen in the second half of the first quarter.
At the end of 1991 there was again influenza activity around Christmas and New Year. In the 1992-1993 season there was increased influenza activity in February and March 1993. In the autumn of 1993 there was again an epidemic going on at an unusually early time of the year. As a result the calendar year 1993 was concerned with two influenza epidemics. In 1994 no influenza prevailed; there was, however a slight revival at the end of February 1995.
At the end of 1995 there was a second wave of influenza in 1995.

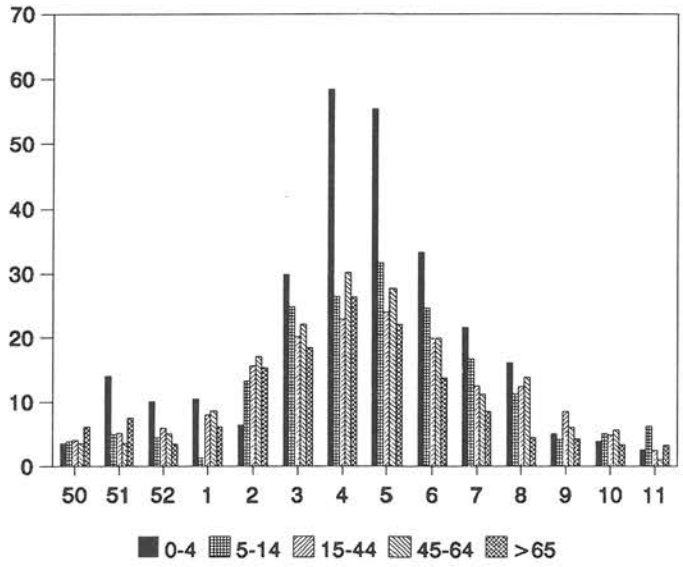
In the first quarter of 1996 there was for a time a slightly increased activity.
Not until the last week of 1996 was there for the first time a clear increase in the incidence of influenza-like illnesses. The peak of this influenza wave fell in January 1997.

Age and sex distribution
During the period of registration, no difference has ever been found in the frequency of influenza between men and women, so that a division is not included in the weekly return for this category.
The age distribution shows as in previous years that the general practitioner is consulted most frequently on influenza-like illnesses for the age group under 5 years. In the other groups the numbers are nearly identical.

In the 0-5 age group a phenomenon not unknown in itself is becoming clearly visible. After the Christmas and New Year period, once the child care facilities have opened again in week 2 the incidence then rises quickly to nearly 60 per 10 000 children of that age group.

For the 65-plus group the incidence of the influenza-like illnesses in the 1996-1997 season was lower than for the other age groups. Perhaps this is the result of the increased number of members of the 65-plus group vaccinated prior to that season. (58% of the newly indicated 'healthy' 65-plus group had themselves vaccinated. according to the Netherlands Influenza Foundation. Of the elderly with an indication, 83% were vaccinated,)

Figure 5: Number of inhabitants with influenza(-like) illnesses per age group, per week, per 10 000 inhabitants for the whole of the Netherlands, 1996-1997



This topic is to be maintained on the weekly return.

AS PUBLICATIONS ON THE BASIS OR PARTLY ON THE BASIS OF DATA FROM THE CONTINUOUS MORBIDITY REGISTRATION

BESTEBROER, T.M., A.I.M. BARTELDS, A.C. ANDEWEG, K. BIJLSAMS, E.C.J. CLAAS, T.G. KIMMAN, C. VERWEIJ EN J.C. DE JONG.
Virologische NIVEL/RIVM-surveillance van respiratoire virusinfecties in het seizoen 1995/96.
RIVM, 1996, Rapport nr. 254607003

The purpose of the NIVEL/RIVM surveillance of respiratory virus infections is to clarify the etiology of acute respiratory illnesses (ARI) at the level of patients who consult their family doctor. Since the season of 1992/93, the general practitioners (GPs) participating in the nation-wide sentinel network of the Netherlands institute of primary health care (NIVEL) sent nose/throat swabs from their patients with ARI to the RIVM. At RIVM, these swabs were examined for the presence of viruses by virus culture. This surveillance provides more accurate information on the etiology of ARI in the general population than the results of the diagnostic laboratories, which are mainly dealing with specimens from hospitalized patients.

From week 31 of 1995 until week 23 of 1996, 484 specimens from their patients with ARI were examined by virus isolation. In 170 (34%) of the samples a respiratory virus was detected (table 1). Influenza virus, comprising 71% of the positive samples, was the predo-

minant virus, followed by rhinovirus (14%), adenovirus (5%), parainfluenzavirus (5%), respiratory syncytial virus (2%), and enterovirus (2%) (table 2). From each of two positive samples two agents were isolated.

A temporary increase of the rate of positive samples - especially yielding rhinoviruses - was noted in September, coinciding with the opening of schools at the end of August (figure 1).

The influenza epidemic of the season of 1995/96 started early (figure 2)and was of a moderate size (figure 3).In the Netherlands and in a number of other countries, subtype A(H3N2) virus predominated. In the NIVEL/RIVM surveillance, this subtype composed 67% of the strains; 14% belonged to subtype A(H1N1) and 19% to type B. Based upon the registration of clinically diagnosed influenza-like illnesses by NIVEL, and corrected for the proportion (estimated in other studies) of influenza patients who seek medical advice and for the proportion of samples found positive for influenza virus in this study, we estimate the incidence of laboratory-proven influenza to have been 191 per 10 000 inhabitants to about 300 000 cases of laboratory-proven influenza in the Netherlands in the season of 1995/96.

CLAAS, C.J. ERIC, JAN C. de JONG, AAD I.M. BARTELDS et al.
Influenza types and patient population. Letter to the Lancet: 1995, Vol 346, No. 8968, p. 180.

BESTEBROER, T.M., A.I.M. BARTELDS, K. BIJLSMA, H. BOSWIJK, C. VERWEIJ, M. VERWEIJ and J.C. DE JONG.
Surveillance of respiratory pathogens in general practices in the Netherlands in 1994/95.
RIVM, 1995; poster for the meeting of the Federation of European Microbiological Societies

Introduction
The Netherlands Institute of Primary Health Care (NIVEL) is running a registration network of 46 sentinel general practices (GP), spread over the country in proportion to the population density (Figure 1). Since 1970 NIVEL has calculated weekly the incidence of influenza-like illness from the data from this network. In 1992/93 this system was supplemented by RIVM with virus isolation from these patients and in 1994/95 with the PCR for several viruses and bacteria. Compared with virological surveillance based on virus isolations from hospital-admitted patients the RIVM/NIVEL surveillance gives a better insight in the etiology of acute respiratory infections in the general population.

Materials and Methods
The GP of the NIVEL network sent nose/throat swabs from some of their patients with respiratory illness. During the period of week 40 of 1994 to week 19 of 1995 551 respiratory specimens were examined by virus isolation and PCR.

Results
In 195 (35%) of the samples a virus or bacterium was detected by either technique. Almost half of the agents were only recognized by PCR. Influenza B virus (9%) and rhinovirus (9%) were the predominant viruses, H_1N_1 (1) (3%), RS virus (3%), and adenovirus (2%) (Table 2 and Figure 2). In 9 (4%) of the positive samples two etiologic agents were detected. From 69 PCR-positive patients a second sample could be obtained, taken on

average 24 days after the first specimen. In only four (3x Chlamydia pneumonia) of these second samples could the agent still be demonstrated (Table 3).
When comparing the results of the surveillance among patients in GP with those of the data from virus diagnostic laboratories, the main differences were the higher proportion of influenza virus isolations and the lower proportion of RS virus isolation in the GP system. Among the isolated influenza viruses, type B prevailed in the GP system and type A(H_3N_2) in the diagnostic framework (Figure 3).

Conclusions

- The proportions of at least part of the virus species isolated from patients with respiratory complaints in a GP network differ considerably from those isolated in virus diagnostic laboratories, the samples of which are mainly derived from hospitalized patients.
- Illness from infections with influenza B virus appears to be less severe compared to influenza A(H_3N_2) virus.
- Application of the PCR technique enhances considerably the rate of positive results with respiratory specimens.
- The clinical relevance of the PCR technique appears to be high for most respiratory viruses.

SPRENGER, M.J.W., P.G.H. MULDER, W.E.P. BEGER and N. MASUREL.
Influenza: Relation of Mortality to Morbidity Parameters-Netherlands, 1970-1989.
International Journal of Epidemiology, 1991, vol. 20, no. 4, p. 1118-1124

The purpose of this study is to investigate the relationship between the number of influenza-like illness cases (ILI), registered weekly by the general practitioners (sentinel stations), and the monthly overall influenza mortality in people over 60 years of age, provided by the Dutch Bureau of Statistics during the period July 1970 to June 1989.
The quantitative impact of influenza morbidity is expressed by three summary parameters, calculated from the 52 (53) weekly ILI figures per season-year, (i) their sum (i.e. global extent of an epidemic), (i) their standard deviation, and (iii) their maximum (i.e. peak number of ILI during an epidemic). In the analysis influenza A subtype is also included. These four parameters are mutually compared with respect to their predictability for yearly total influenza mortality in the 19 season-years available.
In most cases, the standard deviation and the peak number of ILI are more powerful for prediction of mortality than the global extent of the epidemic.
The peak number of ILI is of special interest. It is particularly useful for estimating the effect on current influenza mortality during an ongoing epidemic. From the model it is possible to calculate a threshold (of week ILI) beyond which mortality increases proportionately more than the number of illness episodes.
By using the peak value of morbidity it is possible to calculate the minimal impact of epidemic mortality.
This study indicates that the weekly number of influenza-like illness cases has a certain prognostic value for the real impact of influenza. An electronic surveillance system could detect immediately the threshold above which influenza mortality increases more than proportionally. When this level is reached electronic bulletins could stress the importance of prophylactic measures or, especially for the high-risk patient, the use of amantadine to reduce excess mortality.

The benefits of such an electronic surveillance system are not restricted to the epidemic. We believe that such a system could improve the involvement of general practitioners and in this way improve the awareness of the consequences of influenza. This might result in greater vaccination coverage.

CERVICAL SMEAR

Taking of a cervical smear was placed on the weekly return for the first time in 1976. The initial aim was to obtain insight into the extent of this work outside the mass screening for cervical cancer.

The question is subdivided into the indication for taking a cervical smear, i.e. following complaints and/or symptoms, on 'preventive' grounds at the initiative of the spotter physician or the woman, and a separate column in the case of a repeat smear, irrespective of the indication for taking the previous smear. Three years has been adhered to as the period within which a second or following smear has to be reported as a repeat smear. For 1996 that therefore means that a smear is reported as a repeat smear when the spotter physician himself has already taken a smear from the woman in question after 1 January 1994. This period is identical with the then valid interval between two mass screenings.

This topic has acquired a somewhat changed objective, since in March 1982 the then Minister of Public Health and Environment announced the intention to amend the policy regarding mass screening for cervical cancer. On 25 August 1988 agreement was reached between the Association of Netherlands Health Insurance Funds and the professional organizations of general practitioners on reimbursement for the taking of cervical smears from patients covered by a health insurance fund (provisionally directed towards women of 35-54 years, and with a screening interval of three years). This made it possible to start the mass screening for cervical cancer throughout the Netherlands in 1989.
Enquiry among the spotter physicians revealed that mass screening for cervical cancer was in fact a reality in 1996 in all of the 43 sentinel stations. In 1988 mass screening was a fact in only 22 of the 45 sentinel stations.
In 1996 a number of changes in performance of the mass screening for cervical cancer were introduced: the target group is now women of 30-60 years and the screening interval 5 years.

In Table 7 the total number of smears taken has been subdivided by indication for taking the smear, including the repeat smears.

Table 7: Number of smears taken by spotter physicians by indication for taking a smear, per 10 000 women, 1987-1996

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
complaints and/or symptoms	59	76	72	55	73	72	70	60	59	61
"preventive"	345	369	521	577	537	523	485	474	467	560
repeat smear	211	246	237	273	239	233	225	268	267	267
total	615	691	830	905	849	828	780	802	793	888

The total number of smears (888 per 10 000 women) was considerably higher in 1996 than in the previous year.

In 1989 the new-style mass screening started at many places in the country. In 1990 this programme developed further. When considering these tables, as remarked in the previous reports, one must make allowance for the fixed period of three years within which a smear counts as a repeat smear.
The total number of first smears made on preventive indication, i.e. on the initiative of both the GP and the woman, nearly doubled in the period 1983-1990, from 294 to 577 per 10 000 women (see Table 8). In 1990-1995 the number of smears made on preventive indication decreased again, to 467 per 10 000 women. At the end of this chapter this remarkable fall is further considered. The clear increase in 1996 will also be discussed.

The number of smears on account of complaints and/or symptoms has since 1980 been at a level of some 65 per 10 000 women. The years 1988-1989 and 1991-1993 displayed a higher level: over 70 per 10 000. In 1994-1996 the number of smears on account of complaints and/or symptoms was 60 per 10 000. As regards this category, the arrangement to register each smear taken from one and the same woman within a certain period as a repeat smear should be borne in mind. The actual number of smears taken on account of complaints and/or symptoms will therefore be higher.
The number of repeat smears increased in the eighties to 273 per 10 000 women in 1990. From 1991 onwards this number falls. In 1994-1996 a higher number of repeat smears was again taken every year: 267 per 10 000 women. Since 1987 the subcategory repeat smear has also been subdivided into:

smears on account of complaints and/or symptoms, preventive on the initiative of the GP and preventive on the initiative of the woman. In 1987-1989 a practically constant number of approx. 60 repeat smears per 10 000 women were taken on account of complaints and/or symptoms. In 1990-1991 70 repeat smears per 10 000 women were taken on account of complaints and/or symptoms. In 1992-1995 this number was again some 60 per 10 000 women. In 1996 it was lower: 46 per 10 000 women. The greater part of these repeat smears were taken among women in the 30-54 age group.

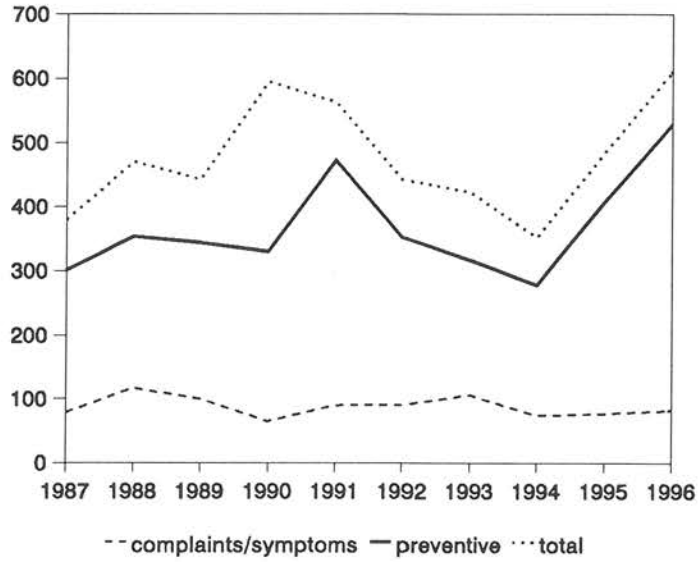
In Table 8 only the number of first smears per 10 000 women is included, with a subdivision by indication for taking the smear and by province and degree of urbanization (see also Figs. 6 and 7). The table shows that that national fall after 1990 in the number of 'preventive' smears was convected into a rise in 1996. The rise has been established in every region of the country, both in the rural municipalities, the smaller towns and commenter municipalities and the cities.

Table 8: Number of **"first"** cervical smears taken per province group and degree of urbanization, by indication for taking a smear and for the Netherlands, per 10 000 women, 1987-1996

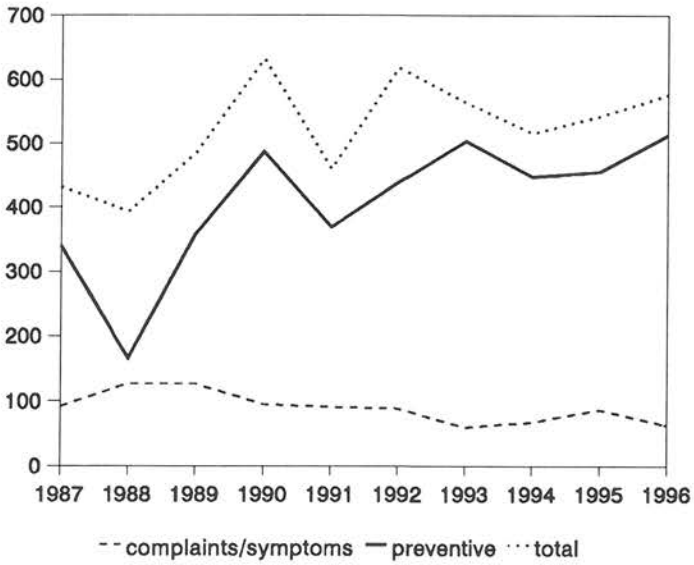
		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
complaints	1987	79	92	46	48	79	49	69	59
and/or	1988	117	127	56	51	118	58	96	76
symptoms	1989	100	127	54	48	102	57	90	72
	1990	65	95	43	41	66	52	56	55
	1991	90	91	57	79	72	64	102	73
	1992	91	89	65	59	42	68	93	72
	1993	106	60	60	73	45	71	81	70
	1994	74	68	51	57	47	58	71	60
	1995	77	87	47	42	59	58	64	59
	1996	82	63	40	61	53	65	53	61
"preventive"	1987	301	340	383	303	342	294	472	345
	1988	354	166	412	385	265	335	553	374
	1989	343	358	657	472	365	523	611	521
	1990	530	487	656	540	511	554	689	577
	1991	473	369	572	634	391	535	618	537
	1992	352	439	586	582	455	511	585	525
	1993	317	504	519	519	601	420	567	485
	1994	278	448	490	600	482	402	627	475
	1995	408	456	487	506	298	499	493	467
	1996	529	513	588	561	343	538	784	560
total	1987	380	432	429	351	421	343	541	404
	1988	471	393	468	436	383	393	649	450
	1989	443	485	711	520	467	580	701	593
	1990	595	632	699	581	577	606	745	632
	1991	563	460	629	713	463	599	720	610
	1992	443	618	651	641	487	579	678	597
	1993	423	564	579	592	646	491	648	555
	1994	352	516	541	657	529	460	698	535
	1995	485	543	534	548	357	557	557	526
	1996	611	576	628	655	396	603	837	621

Figure 6: Number of cervical smears taken per province group by indication for taking a smear, per 10 000 women, 1987-1996

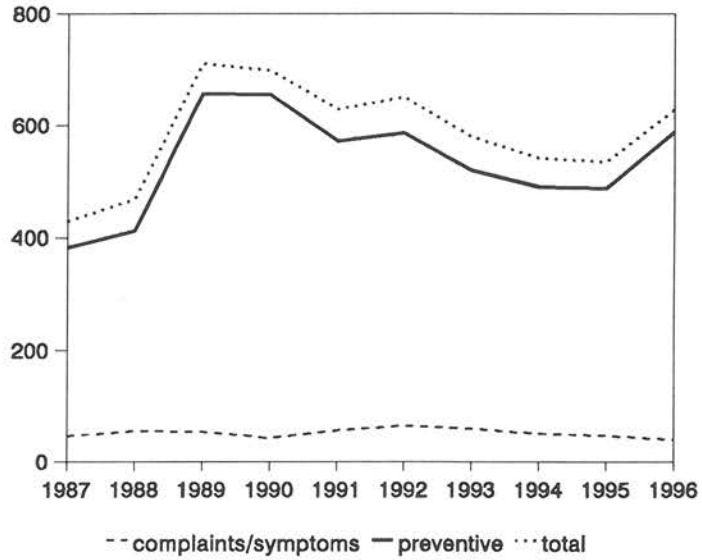
province group A



province group B



province group C



province group D

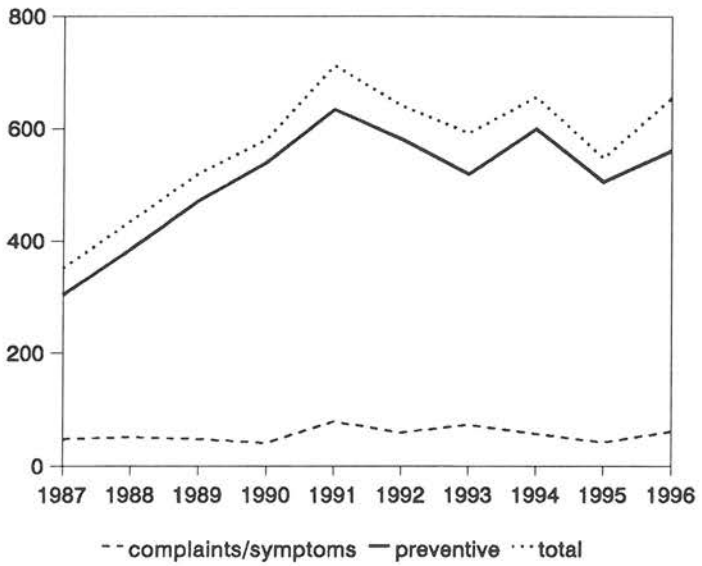
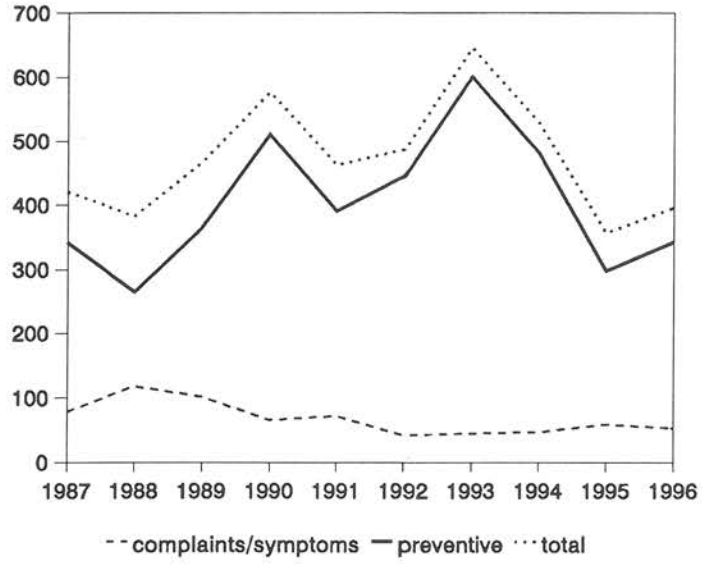
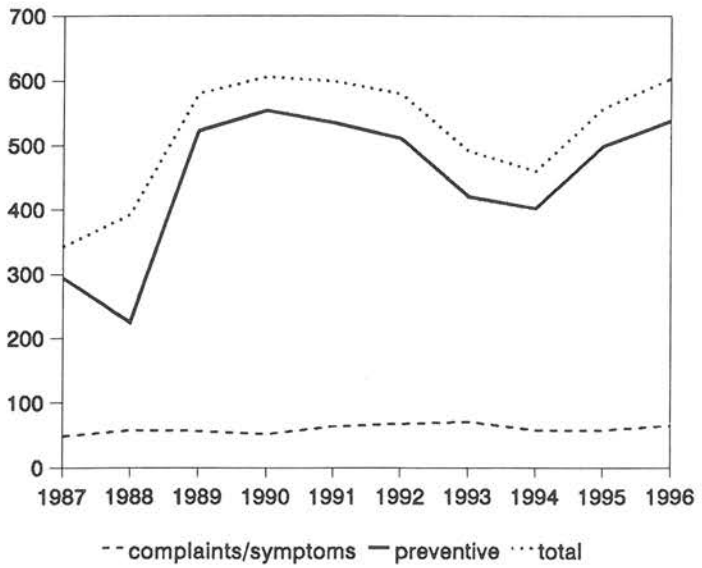


Figure 7: Number of cervical smears taken per degree of urbanization and for the Netherlands, by indication for taking a smear per 10 000 women, 1987-1996

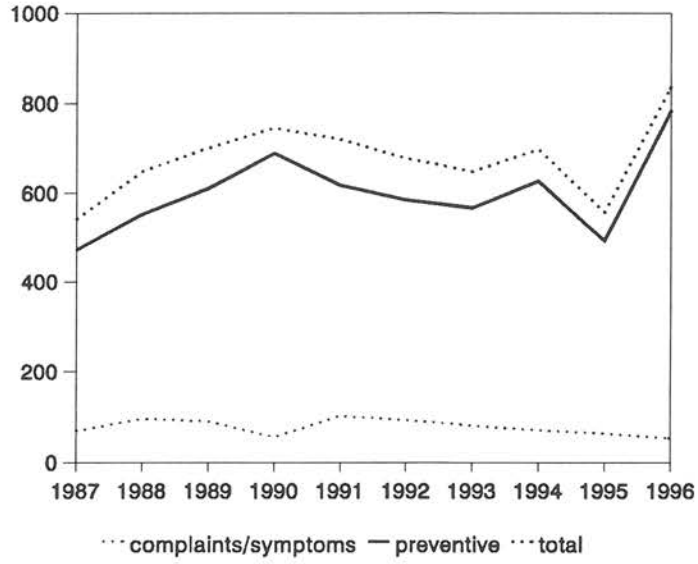
degree of urbanization 1



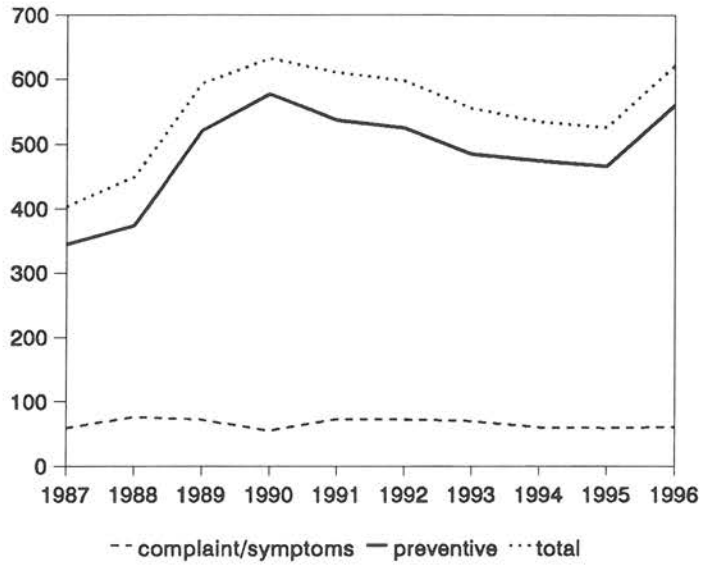
degree of urbanization 2



degree of urbanization 3



Netherlands



Age distribution

Tables 9A and 9B gives a survey of the number of **"first"** smears by age group per 10 000 women (cf. Figs. 8A and 8B).

Table 9A: Number of **"first"** smears taken by spotter physicians by age group, per 10 000 women, 1987-1996

	age group							
	10-14	15-19	20-24	25-34	35-44	45-54	55-64	≥65
1987	-	57	323	845	943	634	236	24
1988	(2)	33	319	777	1050	612	292	38
1989	(2)	32	353	919	1616	1187	253	32
1990	(2)	61	306	797	1805	1487	279	34
1991	(5)	20	270	760	1782	1459	229	34
1992	-	16	237	753	1739	1262	288	39
1993	(3)	23	188	674	1607	1353	179	40
1994	(2)	26	196	592	1588	1196	220	29
1995	-	35	186	570	1505	1240	300	29
1996	-	19	144	983	1354	1188	839	25

After the increase in the number of 'first' smears taken after 1988 in above all the 35-54 age group, from 1991 a continuing fall may be established in the number of 'first' smears made in this target group of the mass screening.
In 1996 too this number fell further. However, in that year this could have been the result of adjustment of the interval between two smears, through which fewer women in this age group were called up.
A striking, but not entirely unexpected rise was established in the 25-34 and 55-64 age groups. These age groups overlap the above-mentioned expansion of the mass screening for cervical cancer.
Table 9B gives a survey over the last three years of the number of 'first' smears per 5-year age group per 10 000 women. The result of the expansion of the target group for the mass screening are then more clearly visible; above all in the case of the women called up for the first time, the 30-34 age group, a considerably larger number of first smears were taken, and also for women of 55-59 years and of 60-64 years.

Table 9B Number of 'first' cervical smears taken by age group, per 10 000 women, 1994-1996

	age group								
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
1994	196	437	752	1601	1575	1178	1220	308	134
1995	186	437	707	1464	1548	1272	1196	410	190
1996	144	388	1593	1400	1308	1146	1242	1183	477

Although somewhat influenced by the changed call-up policy, Table 9A makes it possible to calculate the percentage of women who are reached by the GP at least once every three years. For the 35-44 age group that is for the period 1994-1996 45% and for the 45-54 age group 36%. Around 1983, when the old-style mass screening was still in full swing, for the same groups the percentages of women that were reached were 21 and 15 respectively. The GP therefore apparently reaches the older group less well. That can in part be explained by the number of women increasing with age with a total uterus extirpation. This number is estimated for the total 35-54 age group at 14%, of which the 45-54 age group accounts for the majority.

Figure 8A: Number of **'first'** smears of the cervix uteri taken by age group, per 10 000 women, 1987-1996

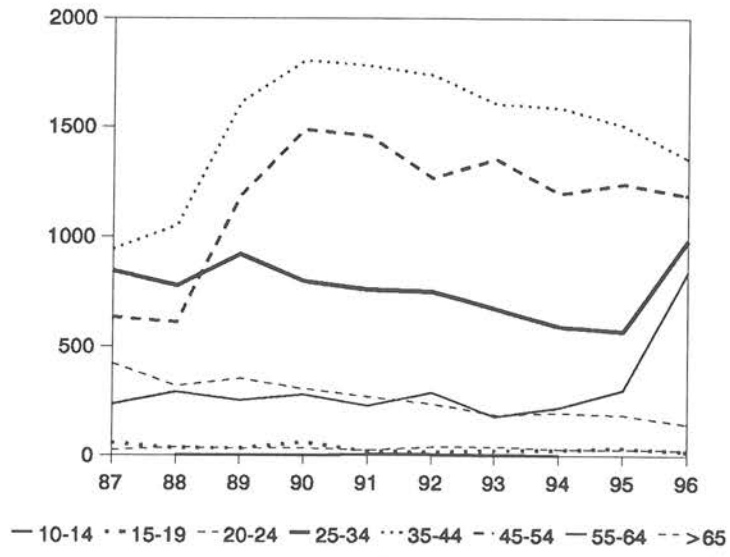


Figure 8B: Number of 'first' cervical smears taken by the sentinel stations by age group, per 10 000 women, 1994-1996

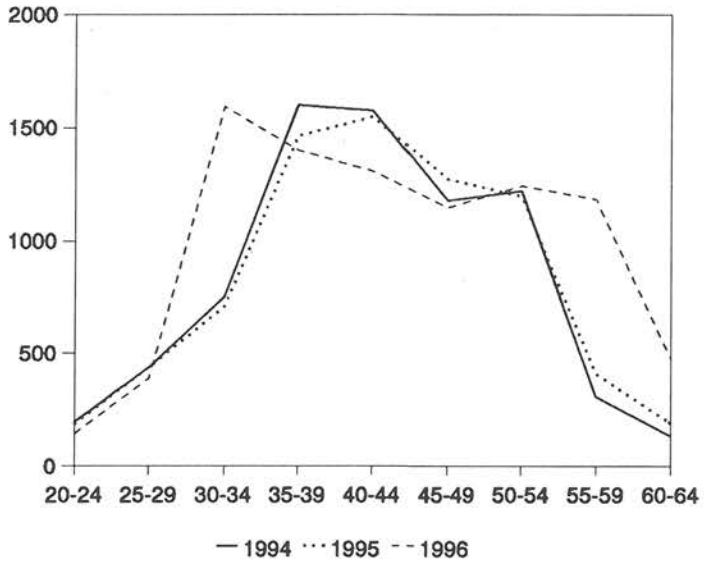


Table 10 gives a breakdown by age and indication for taking a smear, including the repeat smear (see also Figure 9).

Table 10: Number of smears taken by spotter physicians by age group and by indication for taking the smear, per 10 000 women, 1987-1996

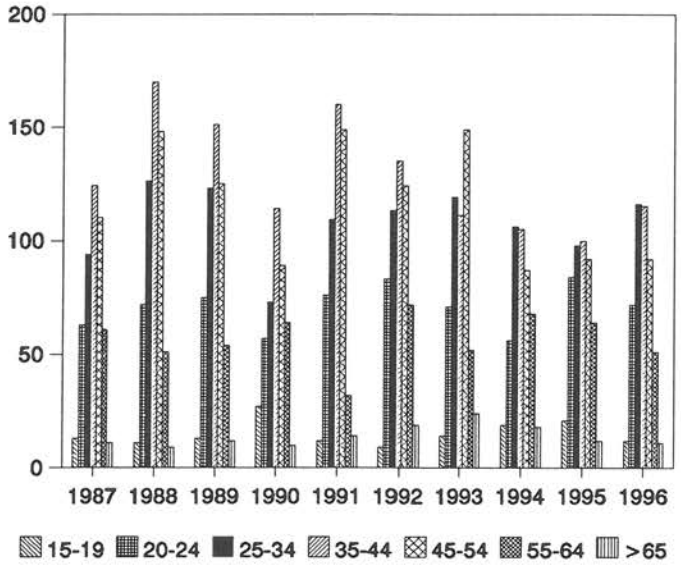
		age group						
		15-19	20-24	25-34	35-44	45-54	55-64	≥65
complaints and/	1987	13	63	94	124	110	51	11
or symptoms	1988	11	72	126	170	148	51	9
	1989	13	75	123	151	125	54	12
	1990	27	57	73	114	89	64	10
	1991	12	76	109	160	149	32	14
	1992	(9)	83	113	135	124	72	19
	1993	14	71	119	111	149	52	24
	1994	19	56	106	105	87	68	18
	1995	21	84	98	100	92	64	12
	1996	12	72	116	115	92	51	11

Table 10: Number of smears taken by spotter physicians by age group and by indication for taking the smear, per 10 000 women, 1987-1996 (continuation)

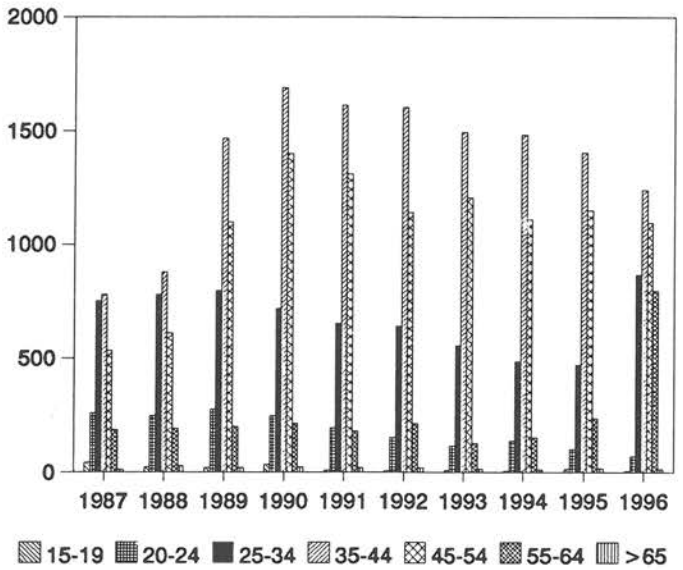
		age group						
		15-19	20-24	25-34	35-44	45-54	55-64	≥65
preventive	1987	44	260	751	776	534	185	13
	1988	23	247	776	877	608	193	29
	1989	19	278	796	1466	1098	200	21
	1990	34	249	715	1690	1398	216	23
	1991	(8)	194	651	1612	1310	181	20
	1992	(7)	154	640	1604	1138	216	21
	1993	(9)	117	555	1495	1204	127	15
	1994	(7)	140	486	1483	1109	152	11
	1995	14	103	471	1405	1147	236	17
	1996	(7)	72	866	1239	1093	796	14
repeat smear	1987	(8)	79	353	532	483	154	15
	1988	(6)	78	408	612	607	123	12
	1989	12	86	282	657	624	137	13
	1990	(5)	79	293	789	734	143	17
	1991	-	63	244	746	614	104	11
	1992	(2)	46	226	699	622	106	10
	1993	(11)	44	182	643	706	92	11
	1994	-	34	246	803	709	121	8
	1995	7	31	197	771	796	148	14
	1996	(1)	21	236	643	771	413	16
total	1987	65	402	1198	1432	1127	390	39
	1988	40	397	1310	1659	1363	367	50
	1989	44	437	1201	2274	1847	391	46
	1990	60	385	1081	2593	2221	423	50
	1991	20	333	1004	2518	2073	317	45
	1992	18	283	979	2438	1882	394	50
	1993	34	232	856	2249	2059	271	50
	1994	26	230	838	2391	1905	341	37
	1995	42	218	766	2276	2035	448	43
	1996	21	165	1218	1997	1956	1260	41

Figure 9: Number of smears taken by spotter physicians by age group and by indication for taking the smear, per 10 000 women, 1987-1996

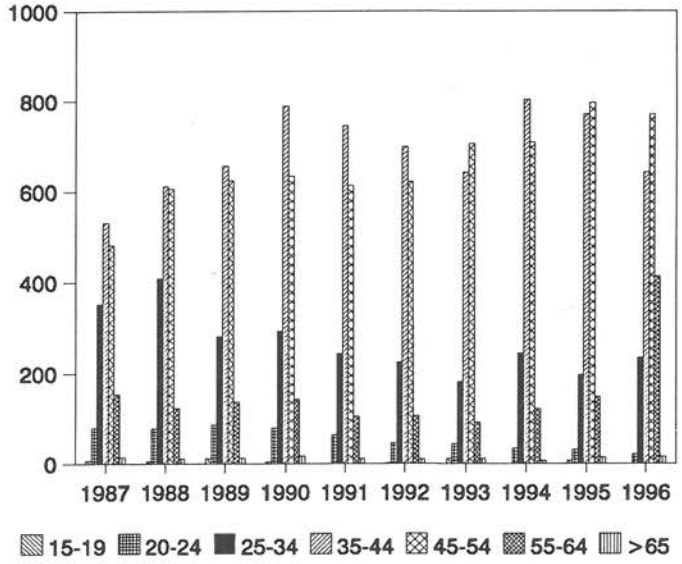
complaints and/or symptoms



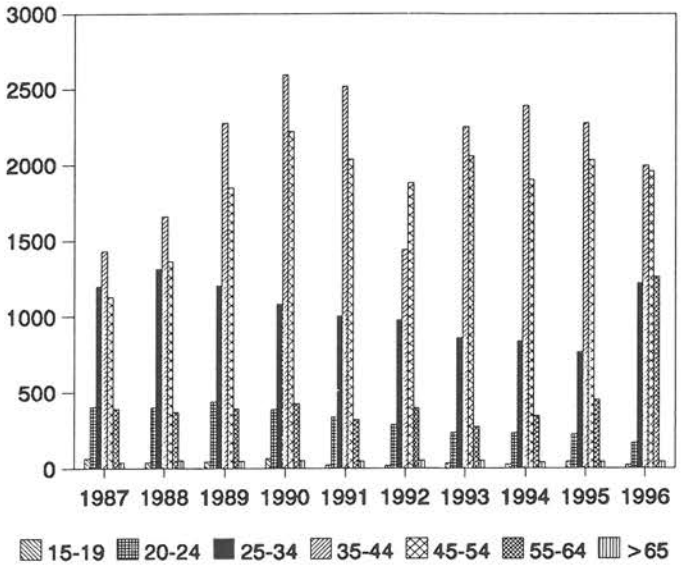
preventive



repeat smear



total



There are no great changes in the number of smears taken on account of complaints and symptoms.
In the case of the first smears made on first indication the numbers in the 35-54 age group are without change the highest. In the younger age groups up to 30 years the number of first preventive smears is still falling. In 1996 too practically no smears were taken on preventive indication under 20 years.

As expected, a clear shift has occurred in the proportional distribution of the smears taken by age group.
The proportion of the target group of mass screening, which was 35-54 years and now is 30-59 years, has now become nearly 90%. Previously that was a maximum of 75% (in 1995).

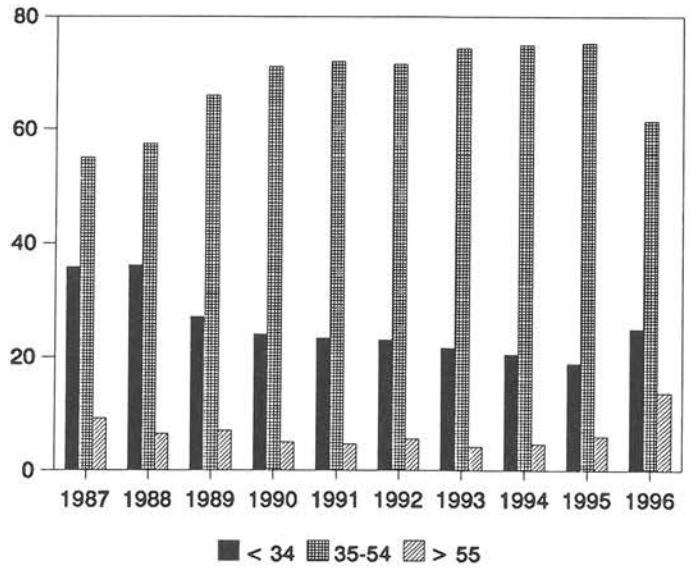
Table 11A: Proportional distribution of smears taken per age group for all sentinel stations (as percentages), 1987-1996

	per age group total number of smears			
year	< 34	35-54	> 55	total
1987	35.8	55.0	9.2	100
1988	36.1	57.4	6.5	100
1989	27.0	66.0	7.0	100
1990	24.0	71.0	5.0	100
1991	23.4	72.0	4.6	100
1992	23.0	71.5	5.5	100
1993	21.5	74.3	4.2	100
1994	20.4	74.9	4.7	100
1995	18.8	75.2	6.0	100
1996	24.9	61.5	13.6	100
	per age group "first smear"			
1987	40.0	51.5	8.5	100
1988	39.7	53.6	6.7	100
1989	29.7	63.8	6.5	100
1990	25.0	70.0	5.0	100
1991	25.0	70.6	4.4	100
1992	24.8	69.5	5.7	100
1993	23.8	72.1	4.1	100
1994	22.3	73.0	4.7	100
1995	21.6	72.3	6.1	100
1996	29.2	57.9	12.9	100

Table 11B: Proportional distribution of smears taken per age group for all sentinel stations (as percentages), 1995-1996

	≤29	30-59	≥60	total
	per age group total number of smears			
1995	8.7	88.9	2.3	100
1996	6.4	89.5	4.1	100
	per age group "first smear"			
1995	10.4	87.0	2.5	100
1996	7.4	88.6	4.0	100

Figure 10A: Proportional distribution of smears taken by age group for all sentinel stations (in percentages) 1987-1996



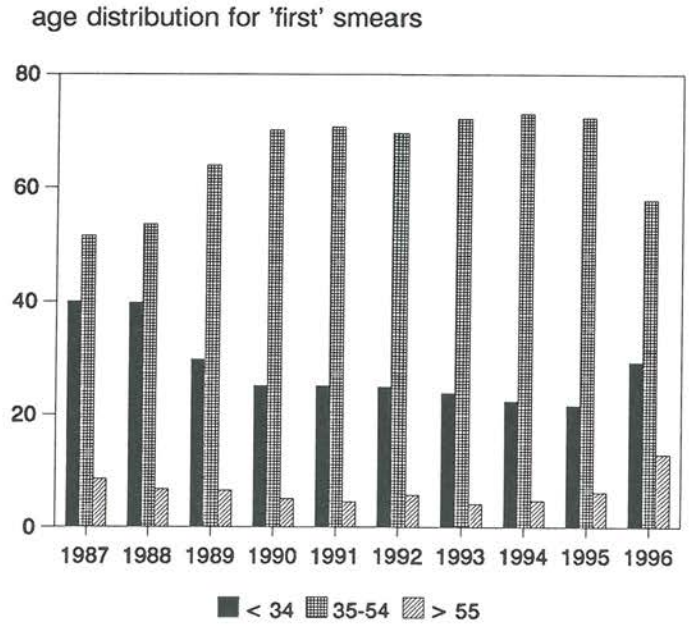
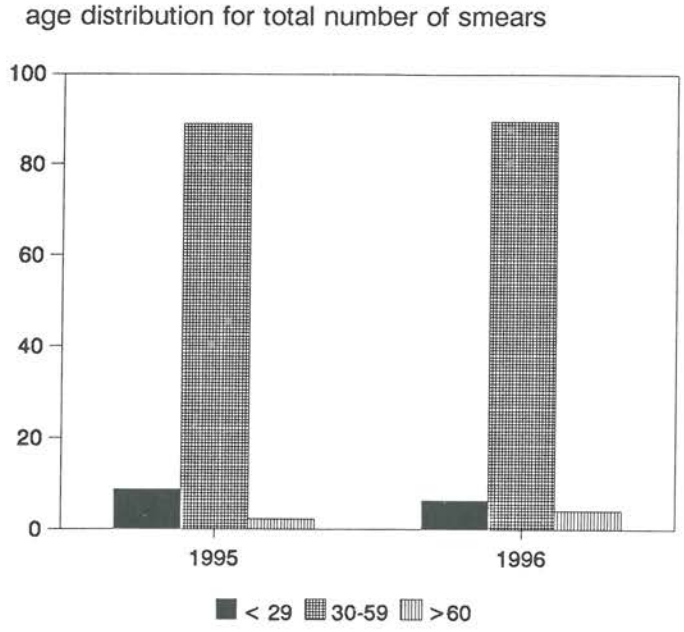
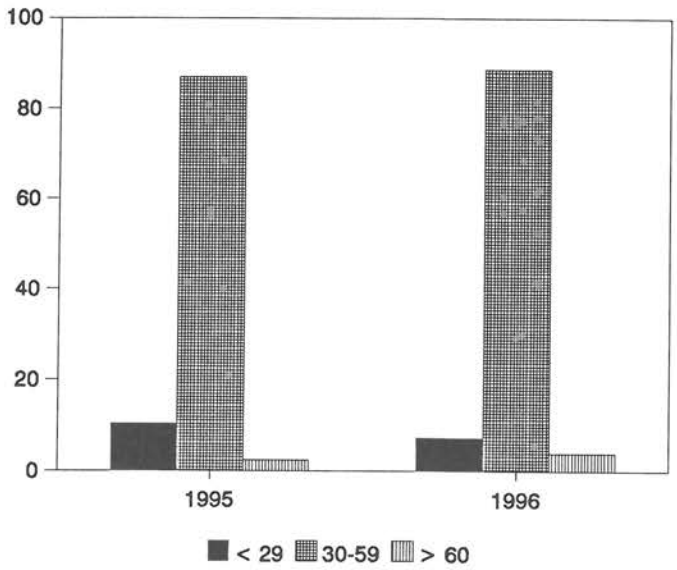


Figure 10B: Number of 'first' cervical smears taken by the sentinel stations by age group, per 10 000 women, 1995-1996



age distribution for first smears



Conclusion.

The principal developments may be summarized as follows. In the five -year period 1983-1987, when the old-style mass screening was ended, the number of preventive smears in the sentinel stations in the 35-54 age group gradually increased, by in total 30 percent. Thereafter the number doubled in the period 1988-1990, when the new-style mass screening began.

It is striking that after the peak year 1990 the number of preventive smears in the 35-54 age group steadily fell, returning in 1995 to the 1989 level. This development, which also applies to the repeat smears, is difficult to interpret. Is this a disturbing decrease in the interest in screening? Or is more selective use being made of screening, and for instance the extension of the screening interval from 3 to 5 years, which has been meanwhile decided upon by the professional groups, being anticipated? An indication of a more selective use of screening can be derived from the constant, considerable decrease in the number of preventive smears in the age groups below 35 years, and above all below 25 years (Table 10). The number of smears among women younger than 35 years was lower in 1995 than has ever been registered since 1978.

The data for 1996 confirm the impression that there has been more selective screening to an increasing extent.

The results of this topic will continue to be important until introduction of the national information system on mass screening for cervical cancer, which has been developed on the instructions of the Ministry of Public Health, Welfare and Sport.

This topic has been maintained on the weekly return in 1997.

A PUBLICATION ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM CONTINUOUS MORBIDITY REGISTRATION

Veen van W.A. (Commentary)
General Practitioner and Cervical Screening: achieving more with fewer smears.
Huisarts en Wetenschap, 1994, 337(6); 226-9.

Practically everywhere in the Netherlands mass screening for cervical cancer was resumed in 1989. As a rule local authorities with the Municipal Medical and Health Service attend to the invitation system, while the GP performs the smear and supervises the follow-up of considerably differing smears. A high reach, above all for the older women in the target group, is by far the most important condition for effective mass screening.
What are the experiences so far with this mass screening? Do these already occasion the choice of a certain invitation system?

MAMMOGRAPHY

The results of the H.I.P. (Health Insurance Plan) study that started in New York in 1963, which became available from 1971, displayed a clear decline in mortality from breast cancer in the group of women older than 50 years. These results were a reason to set up trial projects in Utrecht and Nijmegen and elsewhere outside the Netherlands. Data resulting from the two projects confirm that a well-organized mass screening for breast cancer for women 50-69 years old can have a favourable effect on mortality from this disorder.

In 1987 both the Health Council and the National Council for Public Health made a positive recommendation on the acceptability of national mass screening for breast cancer by means of mammography. Thereupon the State Secretary of Public Health took a positive decision in principle on national introduction of the screening from 1990 onwards. On 29 April 1993 the definitive decision likewise proved positive. By the beginning of 1994 40 of the in total 43 planned screening centres had started or were already engaged for some time in the mass screening. By the spring of 1998 the mass screening will cover the whole country.

The number of mammograms made annually in the Dutch hospitals is not properly known. Even less is known about the indications on the basis of which examinations have been requested.
The Ministry of Public Health, Welfare and Sport and the Health Insurance Fund Council consider it important from a policy point of view to be well informed about the present number of mammograms and above all too about shifts that may occur in these when the mass screening is introduced in phases.

The phased introduction of national screening means that during a period of several years screening will be performed at one place but not at another. Where screening does take place, women younger than 50 and those older than 69 will for the time being not be enabled to participate in the screening, in anticipation of the results of further research. This is in anticipation of the results of further scientific research into the effects of the mass screening for the age group.
These two circumstances may lead to an additional call on the available

capacity. Both women in areas where screening is not yet being performed and women below the age of 50 or above the age of 69 may be of the opinion that they too should qualify for mammography. Such an effect is considered undesirable, because screening can be justified only if special requirements are met. In addition to the quality, the (considerable) costs also play a part.

In this registration the issue is the extent of the mammographic diagnosis requested by the general practitioner. A breakdown has been made into first and repeat examination. In the mass screening for breast cancer an interval of two years between two scanning rounds has been adhered to. This is also the case with the present registration. With a view to this the criterion for the distinction between first and repeat examination is formed by the question whether a mammogram has been made for the woman in question at any time after 1 January 1995. If at any time after 1 January 1995 a mammogram has been made for a woman and such an examination is performed **again**, this should be registered under the subgroup "repeat examination".

It is not important whether during the examination photographs are taken in different directions along with any supplementary enlargements or close-ups. The total examination is registered as one examination. Nor is it important whether a mammogram is made of one or both breasts.

The data of this registration are made available to the group that in 1987-1990 performed the investigation into the costs and effects of mass screening for breast cancer for the Ministry of Public Health, Welfare and Sport (Project leader Prof. Dr P.J. van der Maas, Social Health Care Institute, Erasmus University, Rotterdam.)[10] The same group is evaluating the actual cost and effects.

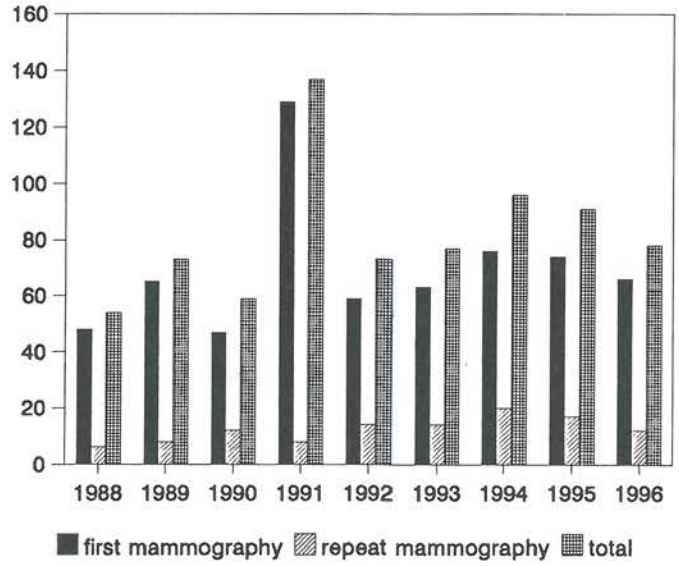
Table 12 gives the numbers of mammograms per province and degree of urbanization and for the Netherlands (cf. Figs 11 and 12).

Table 12: Number of mammograms requested by the GP per province and degree of urbanization and the Netherlands per 10 000 women in 1988-1996

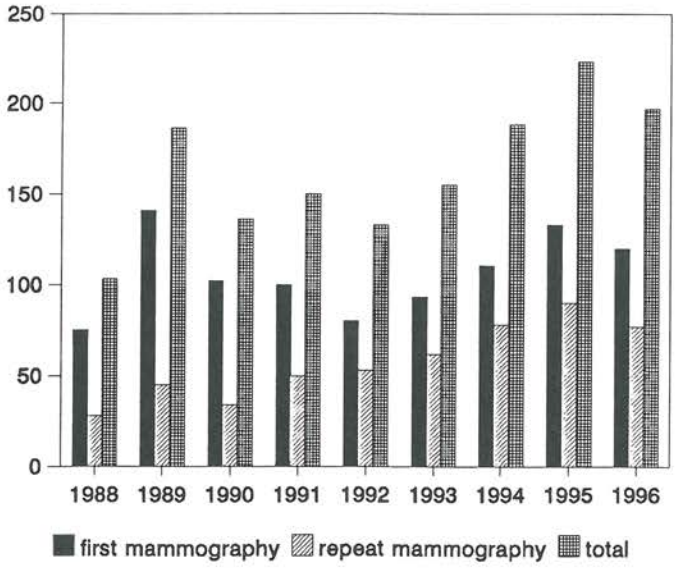
		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
first mammography									
	1988	48	75	92	81	80	79	81	80
	1989	65	141	77	84	154	71	87	87
	1990	47	102	88	125	102	87	101	92
	1991	129	100	93	112	103	92	142	105
	1992	59	80	105	101	87	95	90	93
	1993	63	93	155	106	105	129	96	117
	1994	76	110	116	128	97	119	101	111
	1995	74	133	104	104	124	96	124	104
	1996	66	120	70	97	104	87	73	87
repeat mammography									
	1988	6	28	9	17	26	11	8	12
	1989	8	45	6	15	41	10	11	15
	1990	12	34	14	16	43	13	10	17
	1991	8	50	25	20	54	22	20	26
	1992	14	53	34	18	61	25	28	30
	1993	14	62	99	17	72	72	23	59
	1994	20	78	45	32	67	44	34	45
	1995	17	90	30	23	63	36	35	39
	1996	12	77	21	25	45	33	22	32
total	1898	54	103	101	98	106	90	89	92
	1989	73	186	83	99	195	80	98	102
	1990	59	136	102	141	145	100	111	109
	1991	137	150	118	132	157	114	162	131
	1992	73	133	139	119	148	120	118	123
	1993	77	155	254	123	177	201	119	176
	1994	96	188	161	160	164	163	135	156
	1995	91	223	134	127	187	132	159	143
	1996	78	197	91	122	149	120	95	109

Figure 11: Number of mammograms requested by the GP per province group, per 10 000 women, 1988-1996

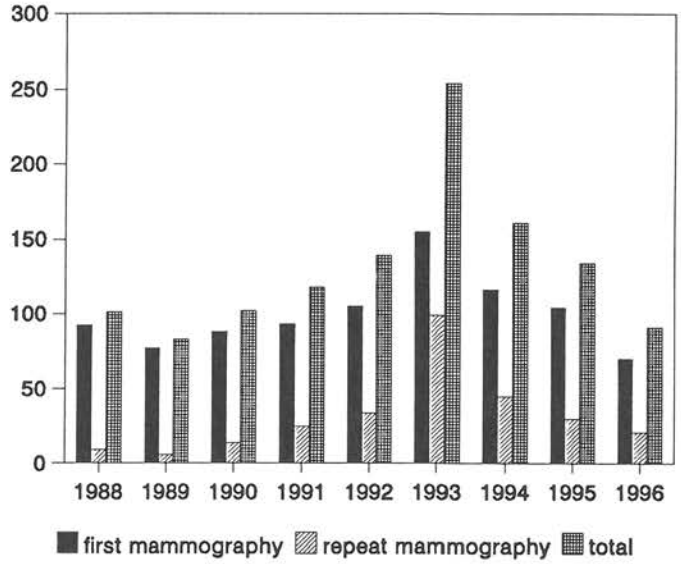
province group A



province group B



province group C



province group D

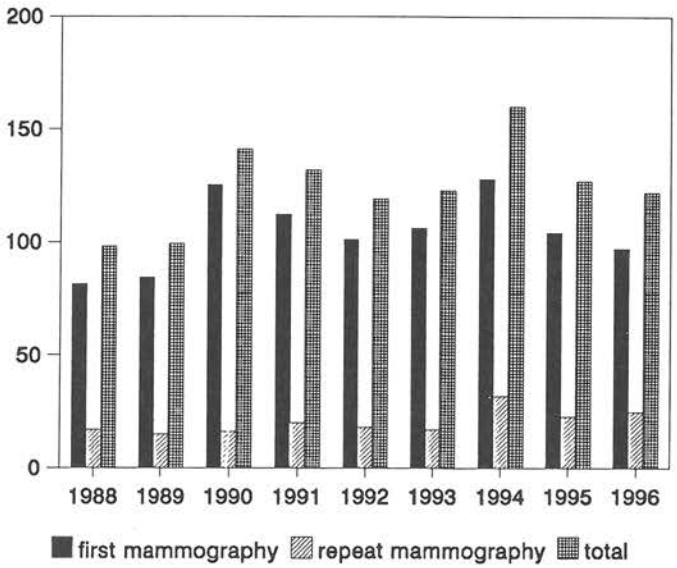
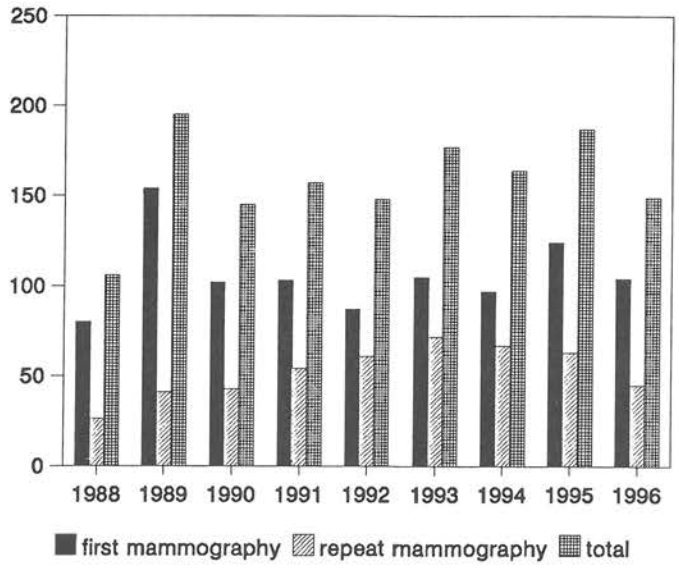
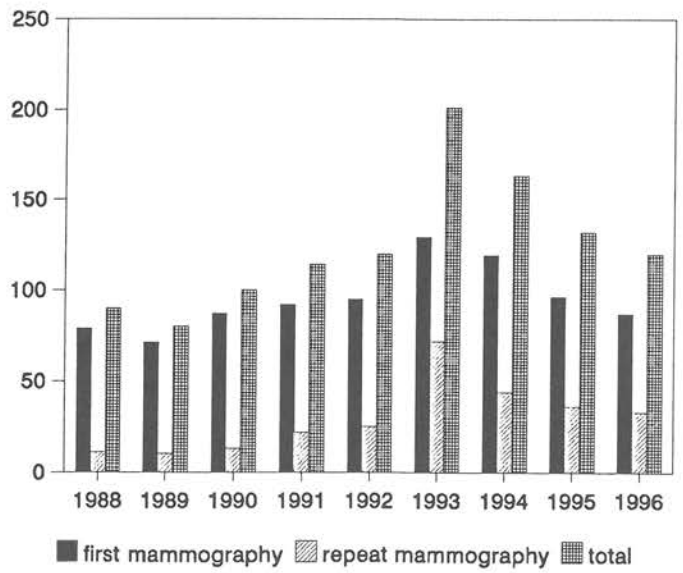


Figure 12: Number of mammograms requested by the GP per degree of urbanization and for the Netherlands per 10 000 women, 1988-1996

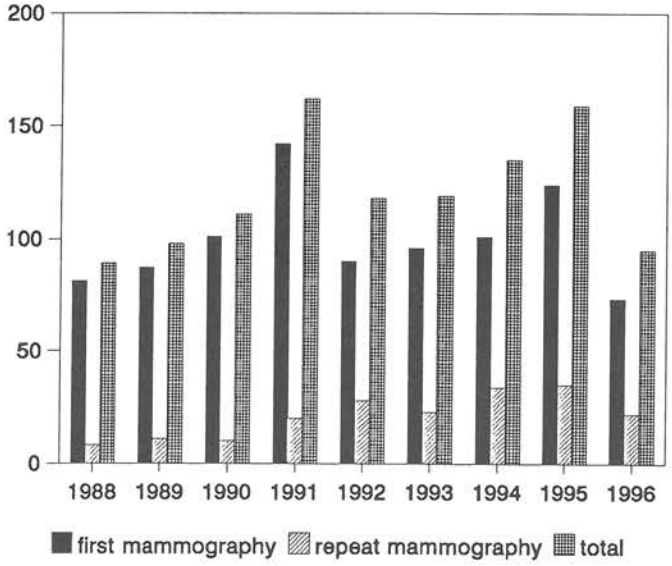
degree of urbanization 1



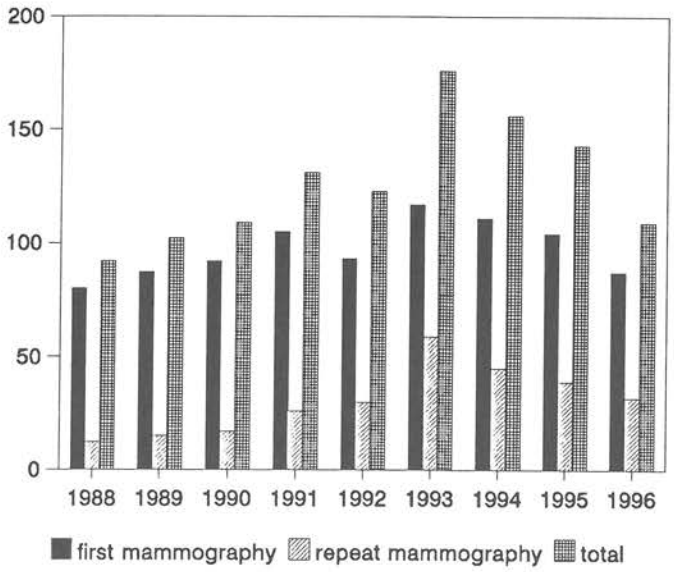
degree of urbanization 2



degree of urbanization 3



Netherlands



The number of mammograms in 1996 was for the third year lower, and now considerably so, than in the previous year. Moreover, the decrease in 1996 was clearly greater than in the preceding years.
It is being investigated whether the local start of the mass screening for breast cancer affects these results (Dr H.J. de Koning, Erasmus University).

In Table 13 the number of mammograms is stated by age group per 10 000 women.

Table 13: Number of mammograms requested by the GP by age group per 10 000 women for 1988-1996

	Age group									
	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79
first mammography										
1988	144	170	195	179	124	95	96	71	37	15
1989	124	189	223	213	159	127	102	46	34	31
1990	104	186	230	189	204	174	115	66	83	26
1991	140	170	253	226	229	166	147	117	75	54
1992	119	187	260	201	162	121	117	58	51	39
1993	153	190	214	227	255	242	174	139	98	53
1994	149	246	260	234	216	131	122	162	90	57
1995	142	207	225	221	208	179	94	89	84	48
1996	126	158	211	200	173	90	60	33	69	54
repeat mammography										
1988	16	25	30	34	23	21	12	(4)	(8)	(10)
1989	17	34	42	37	28	31	18	8	(8)	(10)
1990	14	30	46	36	42	33	39	18	-	-
1991	15	35	89	70	67	50	41	20	25	(10)
1992	43	59	65	76	78	53	60	6	12	(15)
1993	27	69	85	114	132	159	235	159	79	43
1994	32	57	104	108	137	111	98	58	29	(10)
1995	22	69	105	115	104	76	57	26	33	(5)
1996	27	59	87	100	56	51	57	20	29	(14)

Table 13: Number of mammograms requested by the GP by age group per 10 000 women for 1988-1996

	Age group									
	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79
total										
1988	160	195	225	213	147	116	108	75	45	25
1989	141	223	275	250	187	158	120	54	42	41
1990	118	216	276	225	246	207	154	84	83	26
1991	155	205	342	296	296	216	186	137	100	64
1992	162	246	325	277	240	174	177	64	63	54
1993	180	259	299	341	387	401	409	298	177	96
1994	181	303	364	342	353	242	220	120	119	67
1995	164	276	330	336	312	255	151	115	117	53
1996	153	217	298	300	228	141	117	53	98	68

In the past years the majority of the mammograms have always been requested for women who fall outside the age group for which the screening is organized. It is above all the women in the 35-49 age group on whom mammography is performed. Among women older than 70 years this examination takes place to a relatively small extent. The percentage of repeat mammograms is clearly higher among the younger women than among the women of 70 years and older (among the 40-50 year-olds 45%, among the women of 70-74 years 42% and among the women of 75-79 years 26%). There therefore seems to be periodical screening occurring outside the mass screening, above all among the women of 40-50 years (about 10% of this age group). The occurrence of complaints about the breasts in this group will play a part here.

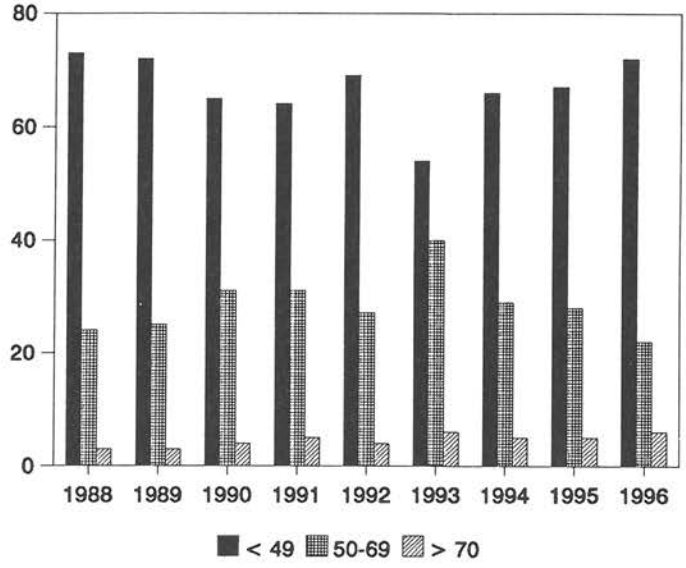
Table 14: Proportional distribution of all mammograms requested by the GP by three age groups. Percentages, 1988-1996

year	≤49	50-69	≥70	total
	age distribution, total number of mammograms			
1988	73	24	3	100
1989	72	25	3	100
1990	65	31	4	100
1991	64	31	5	100
1992	69	27	4	100
1993	54	40	6	100
1994	66	29	5	100
1995	67	28	5	100
1996	72	22	6	100
	age distribution, "first" mammograms			
1988	74	24	2	100
1989	73	25	2	100
1990	65	30	5	100
1991	64	31	5	100
1992	71	25	4	100
1993	61	33	6	100
1994	71	25	5	100
1995	69	26	5	100
1996	74	21	5	100

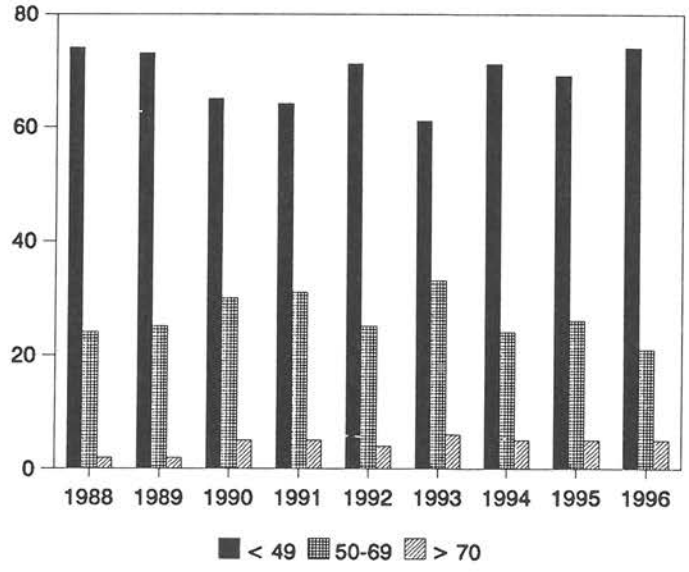
In 1996 there was a lower percentage of mammograms than in any year before among women in the 50-69 age group, who form the target of the screening.

Figure 13: Proportional distribution of all mammograms requested by the GP in three age groups (percentages), 1988-1996

age distribution total number of mammograms



age distribution for 'first' mammograms



In 1997 the topic is maintained on the weekly return.

STERILIZATION OF THE MAN

Sterilization of the man has been a topic on the weekly return since 1972. The data obtained on this subject, together with those on the subject sterilization of the woman, are being used inter alia for the compilation of a Dutch contribution to the Council of Europe's report: "Country Report of the Netherlands" and for computing the population trend.
The annually published data form a partial but as yet indispensable instrument for assessing developments in the field of birth control behaviour.

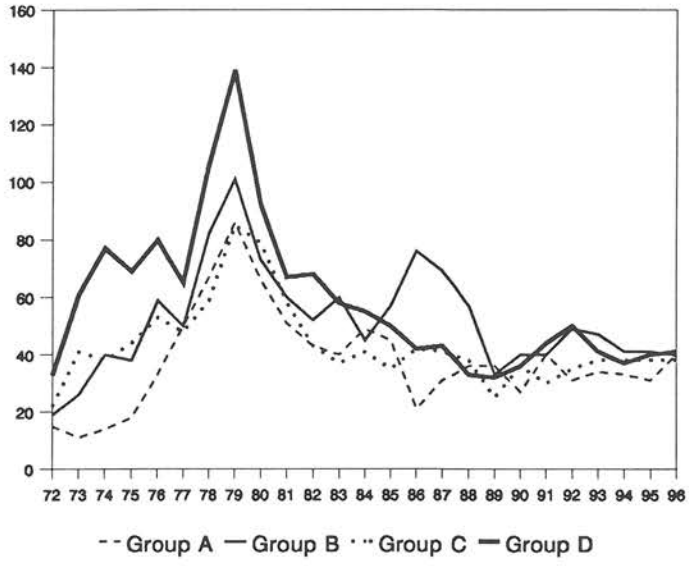
The number of sterilizations of men performed per 10 000 of all men and per province group and degree of urbanization is given in Table 15 (cf. Fig. 14).

Table 15: number of sterilizations of men performed, per province group and degree of urbanization per 10 000 men, 1987-1996

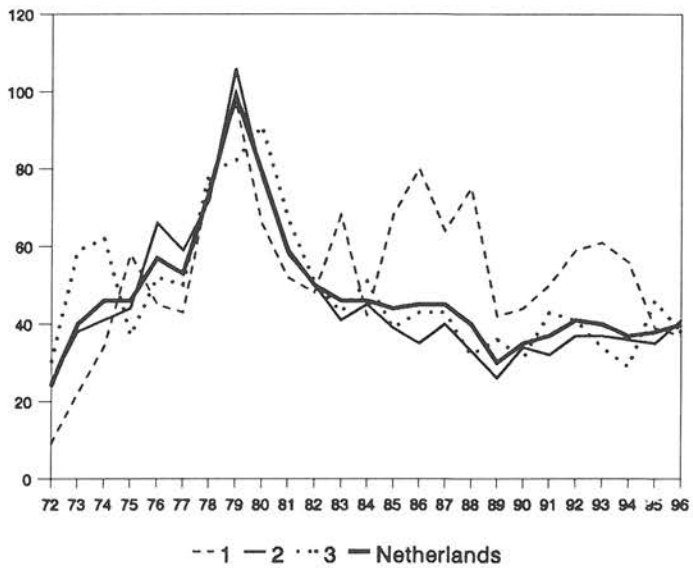
	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1987	31	69	41	43	64	40	43	45
1988	36	57	38	33	75	33	32	40
1989	36	33	25	32	42	26	36	30
1990	27	40	36	36	44	34	31	35
1991	40	40	30	44	50	32	43	37
1992	31	49	35	50	59	37	41	41
1993	34	47	38	41	61	37	34	40
1994	33	41	38	37	56	36	29	37
1995	31	41	38	40	39	35	46	38
1996	40	40	38	41	37	41	38	40

Figure 14: Number of sterilizations of men performed, per province and degree of urbanization and for the Netherlands, per 10 000 men, 1972-1996

province group



degree of urbanization and the Netherlands



After peaks around 1979 the number of sterilizations stayed around 45 per 10 000 men for five years. In 1988 a fall in this number occurred; this development continued in 1989. In that year 30 sterilizations per 10 000 men still took place. However, in 1990 and 1991 the number was higher again: 35 per 10 000 men. In 1992 and 1993 the number again exceeded 40 per 10 000 men. In 1994 and 1995 the number was slightly below 40: 37 and 38 per 10 000 men.

The considerable differences in number of sterilizations among men between the three degrees of urbanization that existed in previous years practically disappeared in 1996. Among women these differences barely existed or exist (see the following chapter, p. 65).

After extrapolation a figure of 30 500 sterilizations is arrived at for the whole of the Netherlands in 1995. There is little difference between the quarters.
As also stated in the previous reports, it was to be expected that in the course of time, and after an initially strong increase, a stabilization would occur at a lower level. This would be the result of a short-lived 'historical catching-up effect'. This effect did in fact occur.
The number of sterilizations performed in 1996 was as high as the replacement factor. This 'replacement factor' indicates the number of sterilizations that have to be performed in a year to allow the percentage of those sterilized at some time to remain the same. It is the resultant of two factors, viz population growth and the fact that those sterilized at some time disappear through ageing from the fertile age group (in a statistical sense this means: become 52 years).
As a result, the percentage of men sterilized at some time remained the same in 1996 as in 1995. The percentage of men sterilized at some time who statistically speaking belong to the fertile age group (17-51 years)[11] was 12.2% in 1996. This percentage has already been practically constant since 1986. For women it is, however. falling (see below).

In Figure 16 (see p. 67) the number of sterilizations per 10 000 men per year of all subgroups together is compared with that of women. It is clear to see that in the past decade sterilization of the man in comparison with sterilization of the woman has become increasingly popular. In 1996 the sterilization ratio of men to women was 65:35. There may be some change occurring in the appreciation of sterilizations by women and men.

Age distribution

The age-specific distribution of the number of sterilizations performed per 10 000 men is given in Table 16 (cf. Fig. 17, see p. 68).

An interesting development is that the percentage of men in the younger age group who have had themselves sterilized at some time has displayed a clear decline in recent years. In 1981 5.5% of the men between 22 and 31 had been sterilized, whereas that was only 2% in 1991, and in 1996 only 0.7%.

Table 16: number of sterilizations performed on men by age group, per 10 000 men, 1987-1965

	age group						
	20-24	25-29	30-34	35-39	40-44	45-49	50-54
1987	(2)	32	139	219	111	66	(3)
1988	(2)	27	128	166	111	66	-
1989	-	20	92	149	75	37	-
1990	(2)	15	98	175	94	49	(9)
1991	(4)	28	110	153	108	53	(3)
1992	-	12	108	200	114	51	25
1993	-	23	101	158	124	73	20
1994	-	(2)	62	186	139	61	21
1995	-	11	74	209	101	66	13
1996	-	8	78	200	121	50	27

Sterilizations of men are performed above all between the ages of 35 and 45; the largest number of sterilizations has since 1987 been performed between 35 and 39.

In 1990 an end seemed to have come to the declining trend in the number of sterilizations performed on men. In the 30-44 age group there was again an increase, for the first time in years. However, from 1993 the numbers are decerly lower than before.

A striking feature is the larger number of sterilizations of men of 50-54 years. However, in absolute terms a relatively small number is involved.

A cumulative calculation shows that in the Netherlands since 1971 at least 850 500 sterilizations of the man have been performed, that is among 9% of the present male population. For a further study see the next section, in which the topic 'sterilization of the woman' is dealt with.

The question has been maintained on the 1997 weekly return.

STERILIZATION OF THE WOMAN

Sterilization of the woman performed was placed on the weekly return in 1974 (of the man performed in 1972). In 1996 21 sterilizations per 10 000 women were performed, about equal to preceding years. Extrapolation of these figures to the whole of the Netherlands yields a number of 16 500 sterilizations in 1996.
The number of sterilizations of women performed per 10 000 of all women and per province group and degree of urbanization is given in Table 17 (cf. Fig. 15).

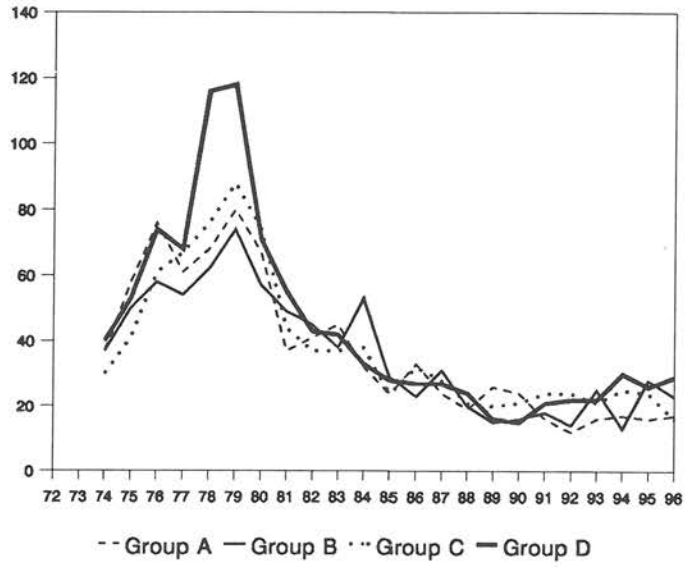
Table 17: number of sterilizations of women performed, per province group and degree of urbanization, and for the Netherlands per 10 000 women, 1987-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1987	24	31	28	27	37	24	31	28
1988	19	20	21	24	27	20	21	22
1989	26	15	20	16	22	17	23	19
1990	24	16	21	15	24	16	24	19
1991	16	18	24	21	26	13	41	21
1992	12	14	24	22	22	16	28	20
1993	16	25	21	22	29	18	25	21
1994	17	13	25	30	20	23	22	22
1995	16	28	24	27	34	19	35	24
1996	17	23	16	29	21	21	19	21

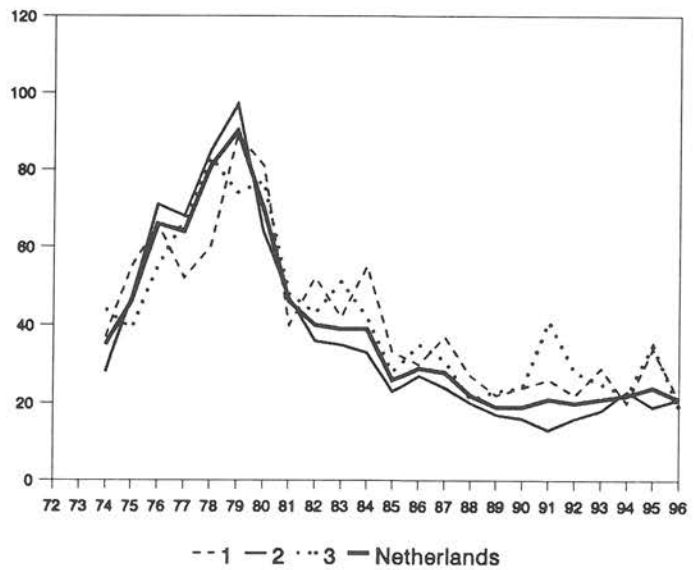
The eastern and southern province groups display the highest numbers above all among women. That is less pronounced among men.

Figure 15: Number of sterilizations of women performed, per province and degree of urbanization and for the Netherlands, per 10 000 women, 1974-1996

province group



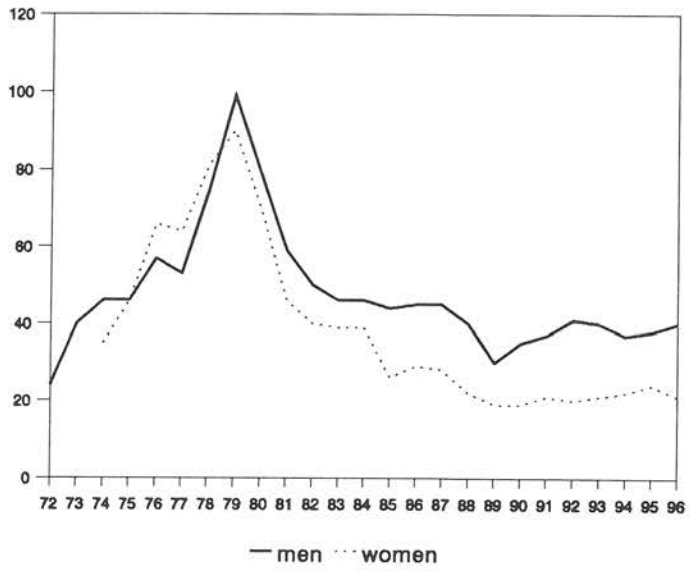
degree of urbanization and the Netherlands



Since 1988 the number of sterilizations of women has remained at the same level. In the various subgroups a number of fluctuations do occur, but without an obvious trend.

Figure 16 gives a comparison between the number of sterilizations of women and of men per year. The curves display a great deal of similarity up to 1985. The remarks that were made on the trend in the previous chapter also apply here. From 1985 onwards the curves for men and women have diverged.

Figure 16: Number of sterilizations performed per 10 000 men and 10 000 women, for the Netherlands, 1972-1996

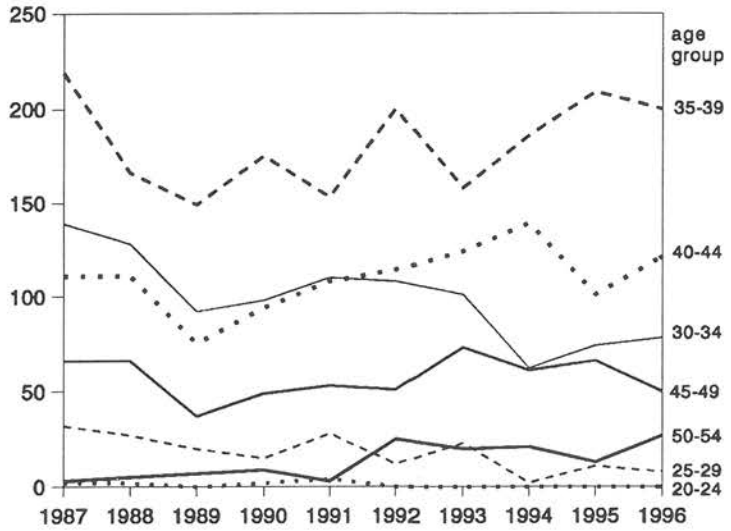


Age distribution

The age-specific distribution of the number of sterilizations performed per 10 000 women is given in Table 18 (cf. Fig. 17).

Figure 17: Number of sterilization performed by age group, per 10 000 men and women, 1987-1996

men



women

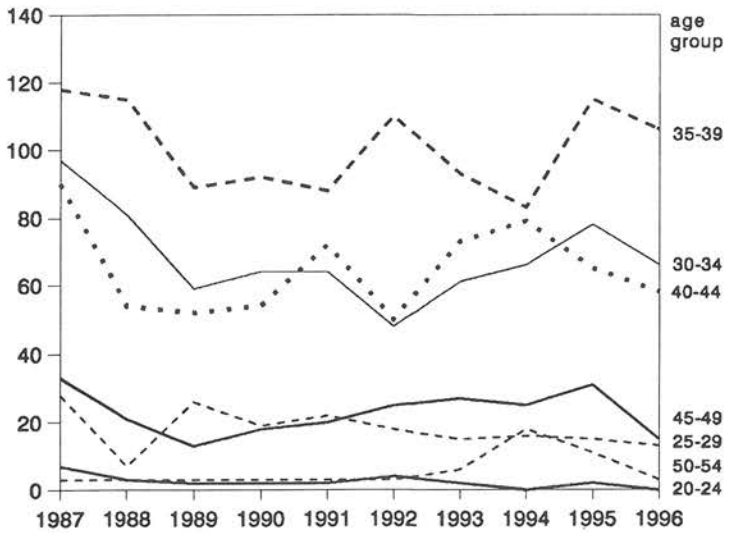


Table 18: number of sterilizations performed on women by age group, per 10 000 women, 1987-1996

	age group						
	20-24	25-29	30-34	35-39	40-44	45-49	50-54
1987	(7)	28	97	118	90	33	(3)
1988	(3)	7	81	115	54	21	(3)
1989	(2)	26	59	89	52	13	-
1990	(2)	19	64	92	54	18	-
1991	(2)	22	64	88	72	20	(3)
1992	(4)	18	48	110	50	25	(3)
1993	(2)	15	61	93	73	27	(6)
1994	-	18	66	83	79	25	18
1995	(2)	15	78	115	65	31	11
1996	-	13	66	106	58	15	(3)

Sterilization of women is performed above all between the ages of 30 and 45; the largest number of sterilizations is -as with men- performed between 35 and 39.

A cumulative calculation shows that in the Netherlands since 1973 in total sterilization has been performed on at least 638 500 women, i.e. 8.1% of the present-day total female population. However, it is more realistic to relate the figures only to women of fertile age (15-49) and at the same time to bring in the sterilization pattern of the man. In that case it proves that in 1975 the woman or the man had been sterilized in approx. 6% of (married) couples. This percentage later rose from 18.5 in 1980 via 22.7 in 1985 to 23.0 in 1986. In 1987 it fell slightly for the first time. This fall continued. In 1990 this percentage was 22.1, 1995 20.9 and in 1996 20.6%. The number of sterilizations (of men **and** women) that ought to have been performed in 1996 on the basis of this calculation to keep the total percentage equal to that of 1995 was 58 000. In reality this number was (47 000 men and 16 500 women).

Table 19: percentage of women and men belonging to the fertile age group that have undergone sterilization at some time, 1980-1996.

Year	women per 100 15-49 y	men per 100 17-51 y	total m+f per 100 15-49 y
1980	9,3	9,2	18,5
1981	9,8	10,0	19,8
1982	10,2	10,6	20,8
1983	10,6	11,1	21,7
1984	10,9	11,5	22,4
1985	10,8	11,9	22,7
1986	10,8	12,2	23,0
1987	10,6	12,3	22,9
1988	10,4	12,4	22,8
1989	10,2	12,3	22,5
1990	9,9	12,2	22,1
1991	9,6	12,2	21,8
1992	9,4	12,2	21,6
1993	9,1	12,2	21,3
1994	8,8	12,2	21,0
1995	8,7	12,2	20,9
1996	8,4	12,1	20,6

Since 1985 there has been a fall in the percentage of sterilized women in the fertile age group. In 1984 this percentage reached its peak with 10.9, after which it gradually declined to 8.4 in 1996. Among men the percentage of those sterilized has remained constant since 1986. The percentage of sterilized women and men together has been falling since 1986 (see table 19). One can therefore speak of a decreasing popularity of sterilizations as a method of birth control. According to Dr E. Ketting, who made these calculations, the above is probably bound up with two factors. In the first place women want to have (further) children at a steadily later age, as a result of which a decision concerning sterilization is increasingly postponed and often also put off indefinitely. And in the second place objections to still using oral conception at a later age have clearly lessened in recent years, partly through the introduction of types containing a lighter dose, as a result of which the need for sterilization is decreasing.

Much more clearly even than among men, the popularity of sterilization among young women has consequently been declining quickly in recent years. In 1980 6.9% of women aged between 25 and 29 had been sterilized, as against 0.6% in 1996. Since 1984 there has now also been a considerable decline among the 30-34 age group of women (from 13.8% in 1984 to 4.0%

in 1994). In the 35-44 age group the decline is much less (from 21.2% in 1985 to 14.5% in 1996).
By far the highest percentage of sterilized women may now be found in the 45-49 age group: nearly 24%. This is caused above all by the fact that the large numbers of women who had themselves sterilized around 1980 at the age of approx. 35 are now nearing 50.
Incidentally, it is interesting that the Netherlands, as far as is known, is the only country where clearly more men than women have been sterilized. This ratio is at present 59% men to 41% women. (In the fertile age group 513 000 men and 338 000 women has been sterilized by 1996.)

The topic sterilizations has been maintained on the weekly return for 1997.

OESTROGENS PRESCRIBED

Oestrogenic substances (whether or not combined with a progesterone) have a shifting field of application particularly around and after the menopause.

The pressure to prescribe oestrogens for women in the menopause is growing. Women are being informed via the mass media. It is conceivable that, just as with the pill, the use of oestrogens will increase under pressure from women.

However, Moors established earlier in 1992 that the reticence of GPs with regard to hormone replacement contrasts with the enthusiasm with which they almost simultaneously introduced the large-scale use of oral contraception in the Netherlands.[12] GPs are reserved and divided about the general introduction of hormone replacement, as are specialists, including gynaecologists and internists.

The demographic structure of the female population means that in the years to come the number of women in the target group will considerably grow.

The physicians were asked to register when they issue for the first time even to a woman a prescription for oestrogens (whether or not combined with a progesterone).

In the complementary questionnaire which the (spotter) physician has to fill in, is asked on whose initiative the prescription will start, whether the woman has endured a uterusextirpation and the exact motive for the prescription: existing complaints and/or proven osteoporosis, or the wish to perpetrate prevention (with reference to the development of osteoporosis and cardiae diseases).

Table 20 shows the number of first prescriptions and repeats for oestrogen by province group and degree of urbanization and for the Netherlands per 10 000 women in the 40-60 age group.

Table 20: number of first prescriptions for oestrogens by province group and degree of urbanization and for the Netherlands, per 10 000 women of 40-60 years in 1994-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1st prescription								
1994	83	297	236	150	153	161	273	180
1995	71	163	135	199	235	114	193	145
1996	26	130	104	93	134	76	146	88

The number of times that a first prescription for oestrogens was issued in 1996 was 88 per 10 000 women.
A comparison with registration in 1994 and 1995 is not feasible. In those years spotter physicians report the first prescription in that year even when a woman had already begun with the treatment earlier. Under the denominator 1st prescription therefore both incident and prevalent cases are reported in 1994 and 1995.
From 1996 spotter physicians have been asked to report only incident cases, i.e. when a woman is given hormone supplementation for the first time.

In the eastern province group the number of times that oestrogen supplementation is started is the highest. In the north this number is smaller by a factor of five: 130 as against 26 per 10 000 women in the age of 40-60.
The differences are less great when the degree of urbanization is examined. There is here a difference of a factor of nearly 2 between the group with the highest degree of urbanization (the cities) where the largest number of reports is made and the group with degree of urbanization 2, the smaller towns, and the urbanized rural municipalities and the commuter municipalities: 146 as against 76 per 10 000 women of 40-60 years.

Age distribution
The age-specific distribution of the number of first and repeat prescriptions per 10 000 women appears in Table 21.

Table 21: Number of first prescriptions for oestrogens by age group per 10 000 women in 1994-1996

age group	1st prescription 1994	1995	1996
40-44	57	53	44
45-49	185	170	85
50-54	381	277	168
55-59	119	106	57
60-64	36	63	41
65-69	23	56	(13)
70-74	22	40	36
75-79	24	24	42
80-84	(13)	(6)	32
>85	(22)	(30)	(14)

Up to an advanced age women are still started on hormone supplementation with oestrogens. Most frequently this treatment is started with women between 45 and 55 years. The number of reports declines quickly from the age of 55. This distribution suggests that the substitution with oestrogens is directed above all to the complaints during and shortly after the menopause.

The topic in maintained on the weekly return in 1997.

CHRONIC BENIGN PAIN DISTURBANCE

The term chronic benign pain disturbance (CBPD) is used when no explanation is found for a patient's complaints of pain. The concept refers to a phenomenon with several dimensions, both physical and psychosocial. In that sense chronic benign pain disturbance is not a medical diagnosis with a corresponding method of treatment.
Chronic benign pain is a problem at individual level and socially. The patient is fettered by pain and limited in his functioning. The Health Council[13] pointed out in 1986 that per year 10 000 persons qualify for benefit on the basis of complaints of pain. The present size of the problem is unknown.

The registration of patients with CBPD is part of a study of the incidence and prevalence of CBPD and the medical consumption and functional restrictions as a consequence of CBPD in the Netherlands.

The study is being performed by NIVEL in cooperation with the Clinical Psychology and Health Psychology Department of the University of Utrecht. It is under the direction of Professor Dr. J.M. Bensing, director of NIVEL and professor at the University of Utrecht.

Patients who are involved in this study must comply with the following characteristics. They have had pain complaints for at least six months. An essential aspect is that pain is the most prominent aspect of the clinical presentation. The pain leads for at least a month to obvious discomfort and restrictions in daily life.
Patients are not meant for whom it has been proven that the pain is caused by malignant, rheumatic or neurological disorders.
Patients are meant with uncomprehended pain, also including pain syndromes whereby a symptom diagnosis can be made, such as intercostal neuralgia, rectal pain syndrome, trigeminal neuralgia, brachialgia, meralgia paresthetica and other symptom diagnoses.

The GP completes a registration form for each patient. This form asks about the reason for the consultation, the location of the pain, the organic system involved and the course of the pain over time. The GP reports possible reasons for the occurrence of the pain, makes a symptom diagnosis and sta-

tes his assessment of the probability of a physical explanation for the pain complaints.

Finally the GP asks the patient to cooperate in the follow-up investigation and issues the patient with a questionnaire. These patient questionnaires are also available in Turkish and Arabic.

After extensive preparations the registration by the GPs and the requesting of patients to participate in the investigation started with effect from 1 October 1995.

The above method of inclusion proved to be problematic. Many spotter physicians experienced resistance to discussion of the pain and the related investigation during the GP's surgery. The number of patients coming forward after the first six months therefore remained far below expectations. It was therefore decided after the end of the year of inclusion personally to visit all the spotter physicians and to go through the patients' records with the GPs in search of patients who met the above criteria. These patients were then written to again by the GP with a request to participate in the investigation. In this way over 500 patients were involved in the investigation.

At this time no prevalence estimate of Chronic Benign Pain Disturbance can be given. From the data input so far it can be seen that the greater part of the patients (73%) belong to the female sex. The average age is 47. Patients often have been suffering pain for a very long time: more than half of the patients for longer than 7 years. 58% of the patients suffer continuous pain, whether or not fluctuating, while 33% have regularly or irregularly returning pain. The pain is usually located at more than one place. Nearly 20% of the patients even have pain in more than three places. Of the various localities, the shoulders (16%) and the lower back are most mentioned. As was to be expected, the cause of the pain is unknown in the great majority of cases. Only in 11% is a reason recorded; those cases then usually relate to posttraumatic pain. The organic systems most often mentioned are the locomotor system (77%), the nervous system (32%) and the gastro-intestinal tract (8%).

Insofar as the patients have promised their cooperation, they will be followed by NIVEL for three years with the aid of questionnaires, in order to collect data on the course of the pain, the medical consumption with which it is accompanied, the costs that their pain problem entail, and psychosocial comorbidity.

The results of the study into incidence and prevalence will be reported by the investigators next year.

The subject has been removed from the weekly return for 1997.

(ATTEMPTED) SUICIDE

In consultation with the Health Care Inspectorate, formerly the Chief Medical Office for Mental Health the topic was included in the weekly return in 1979 and is still on it.
In other fields too (hospitals), research into suicide is being performed at present. In this way it is being attempted to get an insight into the extent, the trend and other aspects of the problem. The name of the topic is also the definition.
The Chief Office of the same time requested that supplementary data be collected on the cases reported. For this purpose a questionnaire has been compiled in cooperation with Professor R.F.W. Diekstra, clinical psychologist, Leiden. On this form the question whether the attempt was successful or not and how the attempt was made appears. At the same time questions are asked about contacts with the medical sector prior to the (attempted) suicide. However, the essential aspect here is not whether the attempt was successful; the primary concern is the patient's intention, with the possibility that suicide is a consequence of the action.

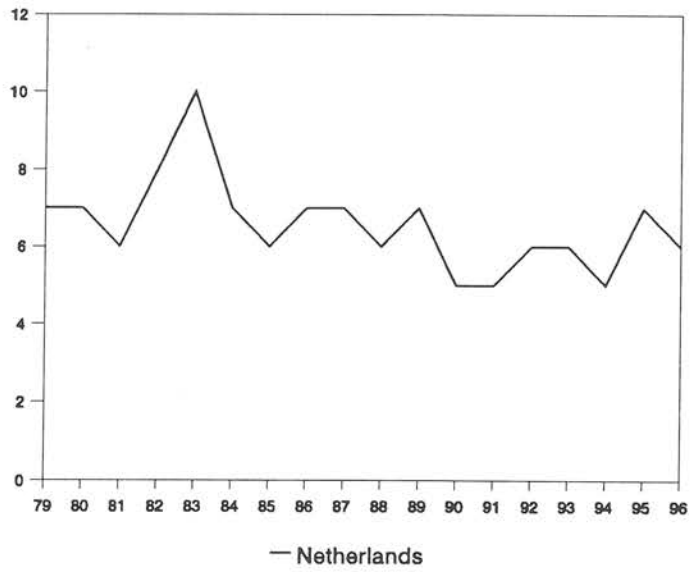
The absolute number of reports (which is not equal to the number of patients, since recidivists are not uncommon) was 60, 84, 73 74, 95 and 80 in 1991-1996.
The number of attempts per province and degree of urbanization per 10 000 inhabitants may be found in Table 22. This breakdown into subgroups is of limited value, because of the relatively small frequencies.
When the degree of urbanization is considered, most suicide attempts are consistently reported in the cities; two to three times as many as in rural municipalities.
The distribution by province group displays a less consistent picture, possibly on account of the small numbers.

The figures do **not** support an increase that some suspect in the incidence of (attempted) suicide in the Netherlands.

Table 22: Number of reports of (attempted) suicide per province and degree of urbanization and for the Netherlands, per 10 000 inhabitants, 1987-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1987	6	6	8	7	5	5	14	7
1988	9	4	7	5	3	5	12	6
1989	6	9	6	8	7	6	10	7
1990	5	6	4	7	4	5	7	5
1991	5	6	5	4	4	3	10	5
1992	12	4	6	5	3	7	7	6
1993	6	4	5	8	3	5	9	6
1994	5	6	5	5	3	4	9	5
1995	5	5	7	10	3	7	10	7
1996	6	5	4	9	1	6	7	6

Figure 18: Number of reports of (attempted) suicide for the Netherlands, per 10 000 inhabitants, 1979-1996



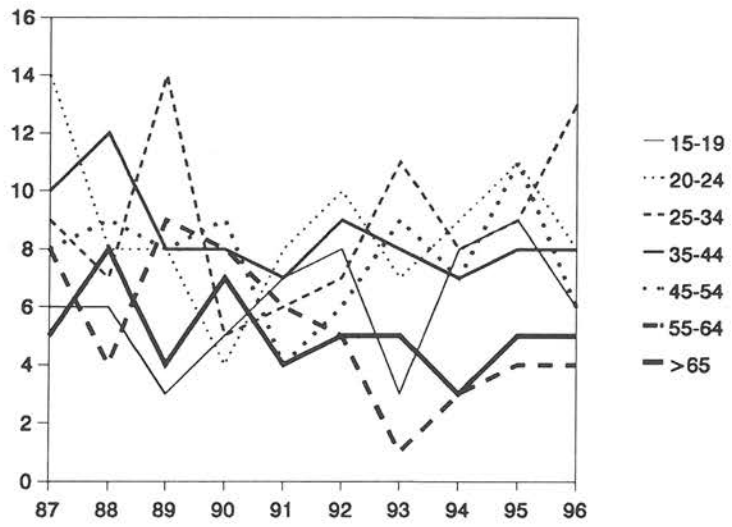
Age distribution

Table 23 gives the frequency of (attempted) suicide per 10 000 inhabitants by age group (see also Fig. 19).

Table 23: Number of reports of (attempted) suicide by age group, per 10 000 inhabitants, 1987-1996

	age group							
	10-14	15-19	20-24	25-34	35-44	45-54	55-64	>64
1987	-	6	14	9	10	8	8	5
1988	-	6	8	7	12	9	4	8
1989	-	(3)	8	14	8	8	9	4
1990	(1)	5	(4)	5	8	9	8	7
1991	(1)	7	8	6	7	4	6	4
1992	(1)	8	10	7	9	6	5	5
1993	-	(3)	7	11	8	9	1	5
1994	(1)	8	9	8	7	7	3	3
1995	-	9	11	9	8	11	4	5
1996	(1)	6	8	13	8	6	4	5

Figure 19: Number of reports of (attempted) suicide by age group, per 10 000 inhabitants, 1987-1996



With regard to age groups too the breakdown is of limited value on account of the small absolute numbers and the ease with which oscillations can occur. No clear preferential age emerges from the registration.

In 1995 Prof. Dr. R.F.W. Diekstra and Mrs. M. van Egmond Ph.D., associated with the Clinical, Health and Personality Psychology Department of Leiden State University, started an analysis of the data on the total period over which registration has taken place (from 1979 to the present). In this analysis a comparison will also be made with a data source that wholly or partly overlaps with that of the CMR Sentinel Stations. The data source that seemed to be the most appropriate for this is the data collected by the Foundation for the Provision of Information on Health Care on discharges from general hospitals after a suicide attempt.
The differences and similarities, both in trends and in characteristics between both data sources, will be commented on.

This topic has been maintained on the weekly return for 1997.

A PUBLICATION ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM CONTINUOUS MORBIDITY REGISTRATION

DIEKSTRA, R.F.W., M. VAN EGMOND.
Suicide and attempted suicide in general practice, 1979-1986.
Acta Psychiatrica Scandinavica; 79, 1989, p. 268-275

Using data from Continuous Morbidity Registration, Sentinel Stations over the period 1979-1986, the authors tried to determine the incidence and the characteristics of patients in general practice who attempted or committed suicide. Almost half of the suicide attempters and suicides had contacted their general practitioner (GP) shortly before the suicidal act. A minority of these cases were recognized by the GP as having a high suicide risk. In almost 70% of the suicides and 58% of the suicide attempters the GPs reported the existence, currently or previously, of a depressive episode. About half of both suicides and the suicide attempters had been treated or seen by mental health professionals or social workers. Given the fact that suicide and suicide attempts are relatively rare events in general practice, and given the fact that for the patients who contact their GP shortly before the suicidal act it is not at all certain whether they present clearly recognizable signs of suicide risk at that time, the authors conclude that GPs cannot play an important role in the prevention of suicidal behaviour.

PELVIC INFLAMMATORY DISEASE (P.I.D.)

Most cases of pelvic inflammatory disease (P.I.D.) are caused by a sexually transmitted agent (Chlamydia trachomatis or Neisseria gonorrhoea).
P.I.D. may have a number of consequences that call for more intensive medical counselling: infertility on account of a tubal closure, ectopic pregnancy and chronic abdominal complaints.[14]

The topic has been placed on the weekly return with the intention of intensifying the epidemiological research into the occurrence of 'new sexually transmittable diseases'. This policy was formulated by the former State Secretary Simons in a letter to the President of the Second Chamber (letter of 17 December 1991).

It is requested that every patient with acute P.I.D. (including salpingitis) be reported.

It has been elected to use the definition maintained in the Amsterdam Sentinel Station Project.
It relates to a patient with acute abdominal pain. The patient is clearly ill. Physical examination reveals pressure pain in the abdomen and in vaginal touch oscillating pain and painful adnexa. Fever (>38°C), leucocytosis (>12-15 000) and an increased sedimentation (>30 mm) support the diagnosis.
The criterion for counting the patient is that antibiotics are prescribed, either by the GP or by a gynaecologist if the patient has been referred for further examination.

The number of women with P.I.D. per 10 000 women per province group and degree of urbanization is given in Table 24 with the number for the Netherlands.

Table 24: Number of women with P.I.D. per province and degree of urbanization and for the Netherlands per 10 000 women, 1993-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1993	9	4	8	7	8	5	10	7
1994	4	10	9	10	10	6	12	9
1995	3	10	10	8	11	7	10	8
1996	4	10	7	6	8	7	8	7

The national incidence of P.I.D. is about one third of the incidence that was registered in Amsterdam in 1990: 8 and 24 per 10 000 women respectively.[14] In the northern province group considerably fewer patients with P.I.D. were reported in 1994-1996. The number in the eastern province group were constantly high in those years.
In 1996 little difference was found between the groups with different degrees of urbanisation.

Seasonal influences
Major differences between the quarters were not found in 1996.

Age distribution
Table 25 gives the age distribution of the patients with P.I.D. reported by the spotter physicians.

Table 25: Number of women with P.I.D. per age group per 10 000 women, 1993-1996

age distribution	women 1993	1994	1995	1996
< 15	(1)	-	-	-
15-19	9	7	5	(5)
20-24	14	10	10	13
25-29	13	16	15	11
30-34	11	20	(12)	15
35-39	13	14	18	14
40-44	15	13	19	11
45-49	(5)	8	10	11
50-54	(9)	18	13	(8)
> 54	(1)	(2)	(2)	(6)

P.I.D. proves to be a disease above all of women in the 20-50 age group. This finding tallies with the results of the registration by the Amsterdam GPS in the period 1983-1990.

The topic will be continued in 1997.

URETHRITIS OF THE MAN

Sexually transmitted diseases (STD) are, after influenza-like illnesses, the most common infectious diseases in the Netherlands. There are some 20 different pathogens that lead to a variety of complaints. Chlamydia, gonorrhoea, syphilis, herpes, H.P.V. infection, hepatitis B and H.I.V. infection are the principal ones.

The epidemiology of STD in the Netherlands is unclear, despite a large number of small-scale studies.
Hepatitis B and scabies (B diseases) and gonorrhoea and syphilis (C diseases) are notifiable diseases. Under-reporting is a recognized problem with the notifiable diseases. It is further the question whether gonorrhoea can still be used as a tracer disease for all STD. There is also a registration system in existence for STD cases with the social nurses of the Municipal Health Services.

Insight is desired into the occurrence of STD in the Netherlands. Studies on a small scale can give only partial insight. Registration in the sentinel stations can provide a useful supplementation of such studies.

The general practitioner is asked to report every patient with a (sub)acute discharge from the penis whereby dysuria usually occurs. This definition ties in with that used in the Amsterdam Sentinel Station Project.

When the disease AIDS comes up for discussion with a patient with urethritis during the consultation, the patient is also reported in the category 'concern about AIDS'.

The number of patients with urethritis per 10 000 men per province and degree of urbanization, along with the number for the whole of the Netherlands, is given in Table 26.

Table 26: Number of patients with urethritis per province and degree of urbanization and for the Netherlands, per 10 000 men, 1992-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1992	16	40	45	10	46	14	65	31
1993	15	32	25	19	36	16	33	23
1994	20	32	28	14	26	18	39	25
1995	14	40	32	11	43	18	42	26
1996	9	41	21	11	47	15	22	21

The national incidence of urethritis is about one third of that in Amsterdam: on average 26 and 99 per 10 000 respectively.[15]
In all years urethritis is clearly reported more in the eastern and western provinces.
From 1992 to 1994 most men with urethritis were seen by GPs in the cities. Compared with 1992, in 1993-1996 a drastic fall in the number of registered men with urethritis occurred in the cities. In the rural municipalities the number of reports of urethritis in 1995 and 1996 precisely increased. The number of reports of urethritis in 1995 and 1996 was the highest in the rural municipalities.

The most striking finding in the registration of urethritis of the man is, however, its consistently low occurrence in the smaller towns and commuter municipalities. A good explanation cannot be found for this.

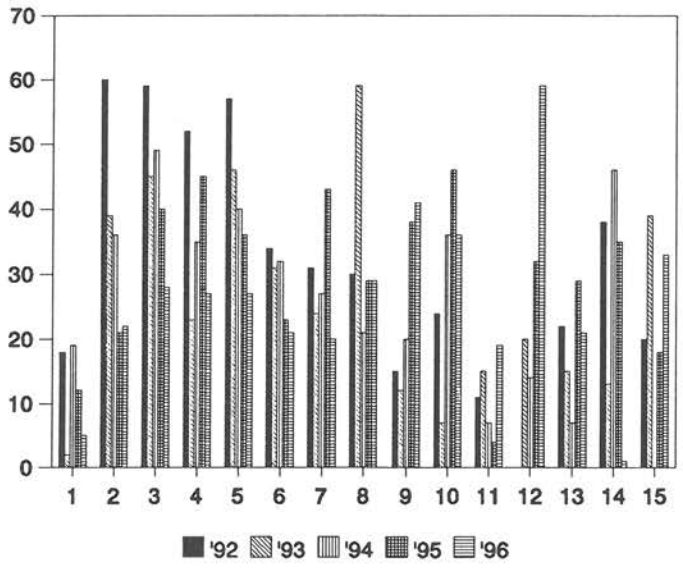
Seasonal influences
Major differences between the seasons were not found.

Age distribution
In Table 27 the age distribution is given of the patients with urethritis reported by the general practitioner (see also Figure 20).

Table 27: Number of patients with urethritis per age group per 10 000 men, 1992-1996

age group	men 1992	1993	1994	1995	1996
< 15	(0)	-	-	(2)	-
15-19	18	(2)	19	12	(5)
20-24	60	39	36	21	22
25-29	59	45	49	40	28
30-34	52	23	35	45	27
35-39	57	46	40	36	27
40-44	34	31	32	23	21
45-49	31	24	27	43	20
50-54	30	59	21	29	29
55-59	15	(12)	20	38	41
60-64	24	(7)	36	46	36
65-69	(11)	(15)	(7)	(4)	19
70-74	-	(20)	(14)	32	59
75-79	(22)	(15)	(7)	(29)	(21)
80-84	(38)	(13)	(46)	(35)	-
> 85	(20)	(39)	-	(18)	(33)

Figure 20: Number of patients with urethritis per age group per 10 000 men, 1992-1996



Age group
1=15-19 2=20-24 3=25-29 4=30-34 5=35-39 6=40-44 7=45-49 8=50-54
9=55-59 10=60-64 11=65-69 12=70-74 13=75-79 14=80-84 15=> 84

Urethritis is seldom reported under the age of 15.
The majority of the patients are aged between 20 and 40. These results tally with those of the Amsterdam Sentinel Station Project.[15]

The topic will be repeated in 1997.

CONCERN ABOUT AIDS

General practitioners are confronted in their practice with AIDS patients and seropositivity to only a limited extent. The experience of GPs with care for seropositive patients and patients suffering from AIDS is limited.

Nevertheless, it is expected that among the population, despite or because of the extensive publicity campaign, there exists a certain degree of anxiety about this disorder. Publicity campaigns are often general in nature and do not give an answer to every question.
The present pattern of (sexual) relationships, often comprising various partners, whether or not simultaneously, may be a reason for questions being asked about the risks of infection with H.I.V.
It is considered important to obtain insight into these phenomena.

In 1988 the topic "Concern about AIDS" started. In the Eurosentinel project sentinel station networks from various European countries are simultaneously registering a number of data that relate to the anxiety among the population about AIDS, insofar as this leads to a visit to a general practitioner.

The aim of the registration is to take stock of the requests for help from which concern about or fear of AIDS emerges. These include the requests by patients who do not suffer from AIDS or are not proven seropositive. In addition to insight into the extent to which general practitioners are confronted with these requests, the aim is to obtain a picture of those making the requests and of the action undertaken by the general practitioners in response to them.

The spotter physicians are asked to register each consultation in which either the patient or the general practitioner brings up the subject of AIDS. In the supplementary questionnaire a number of supplementary data on the patient are recorded, the reasons for the patient's visit to the general practitioner, whether a request for determination of H.I.V. antibodies is made and whether that request is granted, whether the physician for other reasons than the patient's request proposes that such a test be performed and, if an examination has been made, what the result is.
Finally, the general practitioners are asked to specify the action that they

further undertake in relation to the patient's questions and whether a follow-up contact is arranged. Extensive reporting on this supplementary examination is being done elsewhere[16] (M. Moons and L. Peters, Netherlands Institute of Primary Health Care).

Table 28 lists the number of consultations in which AIDS comes up for discussion, by province and degree of urbanization and for the Netherlands, per 10 000 inhabitants, 1988-1996.

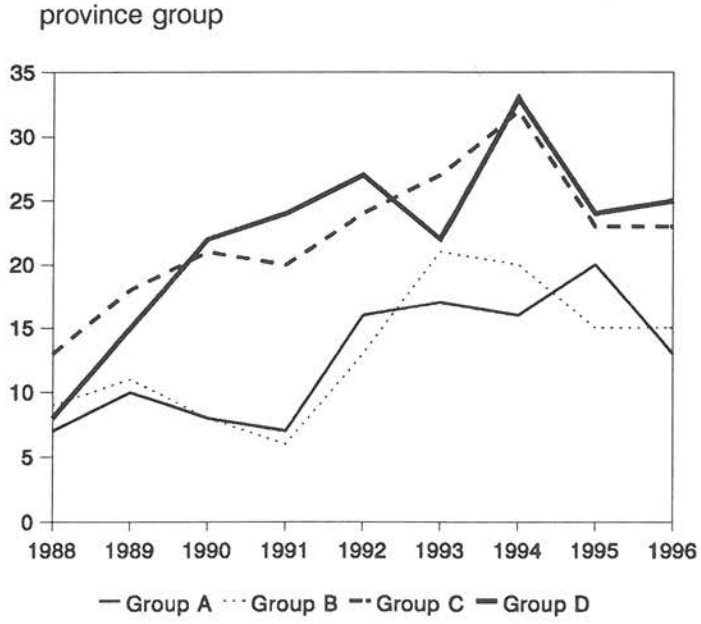
Table 28: Numbers of consultations in which AIDS comes up for discussion, by province and degree of urbanization and for the Netherlands, per 10 000 inhabitants, 1988-1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1988	7	9	13	8	5	8	21	10
1989	10	11	18	15	4	13	27	15
1990	8	8	21	22	4	15	30	16
1991	7	6	20	24	2	15	29	16
1992	16	13	24	27	7	19	35	22
1993	17	21	27	22	11	18	39	23
1994	16	20	32	33	8	22	50	27
1995	20	15	23	24	9	18	37	21
1996	13	15	23	25	7	20	29	20

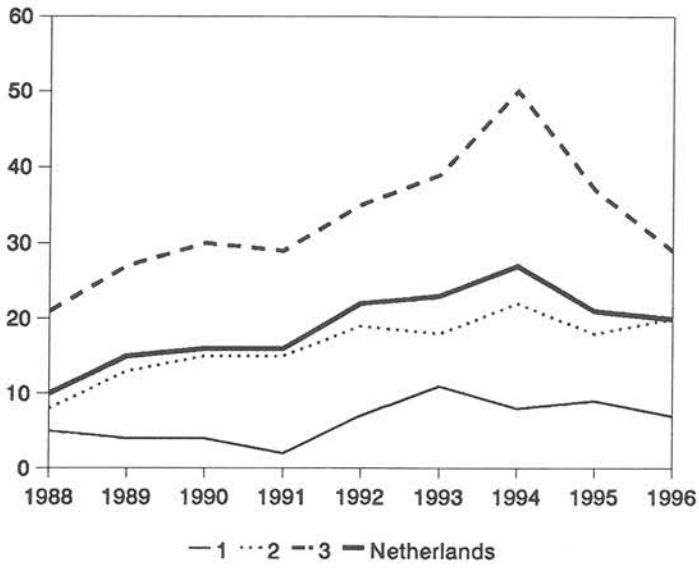
Initially, the number of consultations about AIDS was constant for several years. From 1992 an increase occurs, which also continued into 1994. In 1995 a considerable fall occurred: in 1996 the number is at the same level as in 1995. However, the GPs in the cities clearly have more consultations in which AIDS comes up for discussion than elsewhere (cf. Fig. 21).
The supplementary data show that the number of consultations in which a request for a test on H.I.V. antibodies is made initially steadily increased: from 131 in 1990 to 321 in 1994. In 1996 this number fell to 243 requests for a test.
Although not every request for a test is granted, the number of tests performed also initially increased: from 121 in 1990 to 259 in 1994. In 1996 this number fell again to 219. In a small number of these cases the GP himself or herself takes the initiative for making a test.

The decline in the number of consultations for AIDS is the most pronounced in the western and southern provinces, where in 1994 the numbers were the highest. In the northern provinces there was a slight increase in the number of consultations in 1995; in 1996, however, the number fell again.

Figure 21: Number of consultations in which AIDS comes up for discussion, per province and degree of urbanization and for the Netherlands, per 10 000 inhabitants, 1988-1996



degree of urbanization and Netherlands



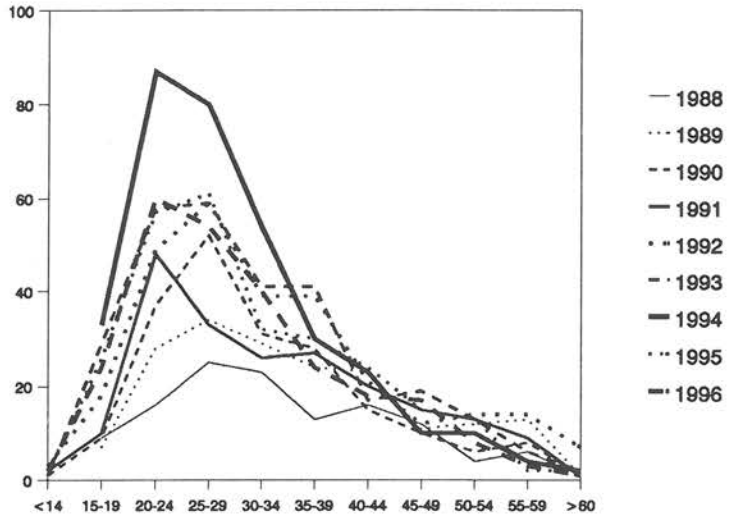
Age distribution

Table 29 gives the number of consultations in which AIDS comes up for discussion per 10 000 inhabitants per age group, for both sexes together (cf. Fig. 22).

Table 29: number of consultations in which AIDS comes up for discussion per age group, per 10 000 inhabitants, 1988-1996

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996
< 14	-	-	(1)	(2)	(3)	(1)	-	(1)	(2)
15-19	9	7	9	10	18	29	33	26	24
20-24	16	28	37	48	49	58	87	57	60
25-29	25	34	52	33	59	59	80	61	54
30-34	23	29	31	26	39	41	54	32	40
35-39	13	24	28	27	39	41	30	30	24
40-44	16	23	15	20	21	17	23	24	18
45-49	12	11	10	15	12	19	10	15	17
50-54	(4)	12	(6)	13	14	13	10	13	8
55-59	6	13	8	9	14	6	4	2	(3)
> 60	(1)	(1)	(1)	(1)	7	(2)	(2)	(2)	(1)

Figure 22: Number of consultations in which AIDS comes up for discussion per age group, per 10 000 inhabitants, 1988-1996



The majority of the questions about AIDS put to the GP are asked in the 20-49 age group. The annual report of the AIDS info line for 1988-1990 likewise gives a high percentage; about 70% of those ringing this line are between 20 and 50 years.[17] In the sentinel station registration 89% of the persons who come to talk about AIDS are between 20 and 50. Up to the end of 1994 in all age groups between 15 and 35 years the number of consultations in which AIDS comes up for discussion to increased. In 1995 a sharp fall occurred precisely with this age group. This fall did not continue in 1996.

The topic has been maintained on the weekly return for 1997.

LIST OF PUBLICATIONS ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM THE CONTINUOUS MORBIDITY REGISTRATION

CASTEREN, Viviane van, Henk van RENTERGHEM, Joachim SZECSENYI.
Data collection on Patterns of demands for HIV-testing and other HIV/AIDS-related consultations in general practice. Surveillance by Sentinel Networks in various European Countries.
DG V Project "Europe Against AIDS", September 1995.

Part A: Patterns of demands for HIV-testing and other HIV/AIDS-related consultations in general practice

Between 1990 and 1994 the sentinel networks of general practitioners, collaborating in the project, registered on a weekly basis the prescription of HIV-antibody tests. The number of networks providing data increased from six in 1990 to nine in 1994. Along with the prescription of the HIV tests were recorded: the initiator of the prescription, patients' characteristics such as age, sex and main risk factor, reasons for testing and outcome of the HIV test. The registration covered an estimated total of 4000 GP-working years. This resulted in the collection of data concerning 36,467 HIV test prescriptions.

Analysis of the data revealed that in the areas covered by the sentinel networks very distinct patterns exist in the prescription of HIV tests and that these patterns show important evolutions over time. It was found that the number of prescribed HIV tests/GP/year is a valuable indicator for monitoring these patterns. The number of prescriptions/GP/year ranged from 1 (Spain) to 17 prescriptions/GP/year (France). In the Netherlands the number of prescribed HIV tests more than doubled between 1990 and 1994, whereas in Switzerland a decrease in the number of prescriptions was observed.

Although the number of prescribed HIV tests/GP/year is a valuable indicator, one needs to study the distinct patterns in more detail both geographically and over time. It was found that important differences exist in the initiator of the HIV test prescriptions, the characteristics of the patients and in reasons for testing. In the Netherlands more than 90% of all HIV test prescriptions are initiated by the patients, in Portugal this is only 35%. In Switzerland 60% of all prescriptions involved men, in Portugal the same figure is found for women. In Belgium approx. 30% of all prescriptions related to patients older than forty. In Spain and Portugal 60 to 70% of the prescriptions concern patients younger than thirty. The presence of a risk factor for being infected with HIV was highest in the Netherlands (about 80%) and lowest in France and Portugal. In Spain the use of intravenous drugs is the most important reason for testing; in France most HIV tests are prescribed for patients getting married, in Belgium and the Netherlands 'heterosexual behaviour risk' is the most frequent reason for prescribing an HIV test.

From this heterogeneity it was possible to identify several factors determinative for the prescription of HIV tests. It was found that mass media, AIDS-prevention campaigns, public health policy, both the GP,s 'and the patients' attitude towards HIV testing, the epidemiological conditions of the AIDS epidemic and legal and administrative measures were all important single factors influencing how, when and why HIV tests are prescribed in a given context and period of time.

An important finding in some networks was the steadily increasing number of patients who had been tested for HIV at least once before. Together with the growing numbers of HIV tests initiated by the patient these are indications of the fast-changing attitude of the general public towards the HIV test whereby having passed an HIV test is, inappropriately, seen as a preventive measure.

The finding about the patterns of how HIV tests are prescribed in general raised some new questions. (1) Are consultations during which an HIV test is prescribed only a fraction of all AIDS-related consultations in general practice? (2) How do HIV testing and counselling or

AIDS prevention go together? In order to answer these questions the registration was extended to all AIDS-related consultations in general practice in 1994. Additionally to initiator, patients' characteristics and reasons for consulting it was recorded what actions were taken by the GP and which AIDS-related items were discussed.

Part B: Survey on counselling for HIV/AIDS-related problems by general practitioners in European sentinel networks

In order to better understand and interpret the results of the continuous recording of HIV-testing and other HIV/AIDS-related consultations in general practice, a questionnaire survey was conducted with the participating doctors.

817 questionnaires from 8 networks (response rate : 91.5%) were analyzed. It was concluded that despite a possible selection bias due to voluntary participation, sentinel general practitioners are a feasible and valuable source of information on demands for HIV-tests and they provide valuable indications on e.g. general-practitioners' knowledge of HIV, attitudes towards HIV/AIDS-patients and counselling behaviour.

When counselling a patient about HIV-tests, a wide range of topics can be discussed. Owing personal attitudes of the doctors regarding HIV/AIDS the educational potential of these consultations might be underused.

Gender can be an important factor triggering the attitudes and counselling of general practitioners. Women GPs are more likely to discuss sexual practices with their patients, especially with adolescents. They can therefore play a significant role in the prevention of the further spread of HIV.

Doctors who have some experience with HIV-positive persons are more likely to have a positive attitude in this area to take over more responsibility in this field.

In some countries lack of knowledge, wrong attitudes against patients with HIV/AIDS and serious lack of security against professional risks for infection were detected.

Patterns of attitudes and knowledge about HIV/AIDS were quite different between countries. Training programmes for general practitioners should consider the specific needs, habits and attitudes of doctors in their country that are described in this study.

MOONS, MARIAN A.W., LOE PETERS, AAD I.M. BARTELDS, JAN J. KERSSENS
Concerns about AIDS in general practice.
BMJ, 1996; 312: 285-6

General practitioners are regarded as well placed to help prevent the transmission of HIV infection. In 1988 a study was started in the Netherlands to gain more information on concern about AIDS among the non-infected population and on the general practitioner's role in providing advice and health education about AIDS. In this paper we present the results after five years (April 1988-April 1993).

ROS, C.C., J.J. KERSTENS, M. FOETS, L. PETERS
Questions about AIDS put to the general practitioners in the period 1988-1996
NIVEL, April 1997, Utrecht

The prevention of sexually transmitted diseases (STD) and the human immunodeficiency virus (HIV) has attracted interest for years now. The prevention of STD is one of the major weapons in their control, and as regards HIV, prevention is still the only means. Information and advice play an important role in this.
In addition to large-scale publicity campaigns, considerable attention is also devoted to individual counselling. Though the goal of these programmes is to make people aware of the risks of infection by HIV, they can at the same time also bring about uncertainty and fear. In principle the GP is in a favourable position to make a contribution to prevention and counselling in the field of HIV. In personal contact between doctor and patient he can react to individual questions and to anxiety regarding AIDS and seropositivity. After all, a GP is frequently familiar with a patient's background, and there is often a confidential relationship between doctor and patient. Notably for the questions and concern of the patients not known as HIV-seropositive, the 'worried well', the GP could play a significant role. In addition, with early treatment the results of therapy have been improved, which is why it is important that the GP makes a proper estimation of the need to have the patient tested. This investigation aims at giving insight into the part played by the GP when it is a matter of giving information with regard to AIDS to non-seropositive patients.

Research into the functioning of the GP in the field of AIDS has been directed in the Netherlands in particular to knowledge and attitude of GPs with regard to HIV/AIDS (Veehof, 1994) and to the working load and care given to seropositive and AIDS patients (Meijman, 1990). The functioning of the GP as regards the 'worried well' has received too little attention in both Dutch and international literature. This is in spite of the fact that the contacts with this group are the most important part of their work: two English investigations, that by Naji et al. (1989) and that by Gallagher et al. (1990), showed that 67% and 88% respectively of the contacts in connection with HIV/AIDS come from this group. Little attention is paid to this 'hidden' side of the AIDS epidemic.

Since 1988 the sentinel stations, a national network of GPs, have been collecting data on contacts between GPs and patients in which questions about AIDS or concern about it have been discussed. The aim of this registration is to gain insight into the AIDs-related requests for help made to GPs by patients who are not suffering from AIDS and are not (proven) seropositive.

In 1994 the data over the period from 1 April 1988 to 31 March 1993 were analyzed. The results of this analysis are published in the NIVEL report 'Questions about AIDS put to the GP' (Moons & Peters, 1994; Moons, Peters, Bartelds & Kerssens, 1996). In the past three years (1 April 1993 to 31 March 1996) the registration of contacts in which AIDS came up for discussion has been continued as part of the monitoring function of the sentinel stations project. The data of the total eight years' registration period will be analyzed in this report, largely in the same way as was done in the earlier report. The present report therefore replace the first one. In addition to patient characteristics, the request for help, the action by the GP and the number of contacts per practice, changes in time are described.

Discussion

The results of eight years' registration of AIDS-related contacts with the GP lead to two general conclusions. There is to an increasing extent an attitude that AIDS is a commonplace and the role of the GP is widening from reacting and reassuring to a more active part in applying for an HIV test.

There are a number of developments visible that point to AIDS being regarded as a commonplace. After an initial growth in the number of contacts since 1988, after 1995 the number of contacts stabilized at five per standard practice. The growing number of requests for tests was the main reason for the increase in the number of contacts. An important finding is that at the end of the registration period about as many women as men consult their GP with questions about AIDS, whereas in the beginning the proportion of women was only one third. Striking, too, is the fall in the proportion of traditional at-risk groups (men with homosexual and bisexual contacts, intravenous drug-users): in 1988 responsible for 23 percent of the consultations, in 1996 seven percent. Nor is this only a percentage fall; in absolute terms, too, the number of contacts by traditional at-risk groups has decreased. On the one hand this is connected with the increase in other groups of patients; on the other, it might indicate that these 'at-risk' patients seek aid elsewhere. For instance, they go less quickly to their GP with their questions and applications for tests, but rather to for example the Municipal Health Service, an STD out-patient clinic, or a homo-specific facility. As regards the demand for 'general information', it may be that there is so much attention and information specifically for this group, outside the GP, that these people go less often to their GP with questions about AIDS.

As regards the content of the consultations, it may be noted that the request for help nearly always relates to risky sexual contacts of the patient himself or herself; unrealistic fear of infection seldom forms a reason to consult the GP. AIDS is increasingly regarded as a disease that can happen to anyone and not as a specific 'homo disease' or dangerous only to drug-users. An explanation of this development is self-evident. Considerable attention has been and is being devoted in the media to AIDS; large-scale publicity campaigns have been held that in the course of time have become more specific and concentrated on more target groups. AIDS seems at present less of a taboo than in 1988, when registration began. Probably people talk more easily about it with their GP, are better informed about risks of infection and often come to the surgery with a clear goal in view: an HIV test.

Although there is considerable attention in general for AIDS, it is apparently difficult for people to relate this information to themselves. A discrepancy still exists between what people know and what they ultimately do, as witness the research among students on the use of pill and condom (Coenders et al., 1996). The GP has an opportunity in a consultation to give 'tailor-made' advice.

Right from the start the HIV test is the principal subject of discussion, usually raised by the patient. Nevertheless, it seems that the GP is more and more often giving a recommendation for a test himself or herself. In the investigation it is found for instance that in 1995 the number of test applications proceeded to exceed the number of test requests, which can be ascribed only to a more active role by the GP. In over a third of the tests in which the patient proved seropositive, the GP applied for a test, although the patient had not requested this in the first instance. In these situations the GP has therefore rightly recognized the seriousness of the situation.

This development is in step with changing views about testing. Until recently - at least in the Netherlands - a reticent test policy was propagated. Meanwhile this policy has been modified

under the influence of improved possibilities of early treatment and people who have run that risk are advised, after gaining expert advice, to think about a test. The data described in this investigation are based on consultations up to and including the first quarter of 1996. Whether the publicity about medicines that have recently become available and the positive results of combined therapy have since led to more requests for tests by patients and/or to more situations in which the GP takes the initiative for a test cannot yet be investigated in this reporting.

The GP still plays an important part as regards AIDS-related problems. In addition to applying for an HIV antibodies test, the supplementary information and advice are of importance. GPs' knowledge of AIDS proves among other things from research by Veehof (1994) to be high enough to handle AIDS problems well. Moreover, constant attention is paid to further training of the GP. An important example is the project for furthering the expertise of GPs with regard to HIV/AIDS that has been running since 1995. In this project GPs are trained by region as HIV consultants (meanwhile 25 spread over the whole country), whom other GPs can contact with questions and who give additional training to the GPs in their region (Van Bergen, 1996). However, the investigation gives reason to continue to follow the present developments in the field of early treatment on the consequences for the possible and desirable role of the GP. In those cases where patients have run the risk of infection, weighing up whether to test or not can result more often in a positive test recommendation by the GP and the GP may be more easily inclined to bring up the subject of AIDS himself or herself. Alertness seems called for particularly in those general practices that have little to do with AIDS-related problems. This investigation shows that it is above all rural practices in which the GP is concerned with AIDS-related contacts not only much less than elsewhere, but also to a steadily less extent.

Finally, a remark on this registration project itself. It has already been remarked that this project does not give a total survey of developments with regard to questions about AIDS from patients of whom no seropositive status is known. It is limited to those patients who turn to their GP about this or whose GP brings up the subject himself or herself. Comparative data from other institutions that are concerned with questions about AIDS, notably requests for tests, are not available, except in some cases on a single aspect. On the one hand this makes it difficult to gain an overall picture at population level; on the other, it is not sufficiently possible to estimate the actual role of GPs and other institutions dealing with AIDS-related problems on its value and to make desirable changes to the aid given.

LIVER, GALL BLADDER AND PANCREAS DISEASE

The degree of occurrence of liver, gall bladder and pancreas disease is of importance both to the curative sector of health care and to policy. For specific prevention and information insight into the occurrence of these diseases is desired. The same applies to the estimated of needs for liver transplant or future therapeutic interventions.

The ideal situation is when a population study can be made into the occurrence of a disease. However, before such an expensive project is set up, it is useful to utilize existing sources of information.
The Liver Epidemiology Working Group Groningen for this reason asked the CMR Sentinel Stations also to register diseases of the liver, gall bladder and pancreas from 1995.

The spotter physician is asked to report on the weekly return each patient with a liver, gall bladder or pancreas disease.
In a supplementary questionnaire data are sought on the length of time that the disease is known, on the nature of the disease, on the way in which the diagnosis has been made and by whom (GP or specialist), and who (GP, paediatrician or internist) is treating the patient.
The results of this supplementary study are being reported elsewhere.

Table 30 gives the data on the numbers of reports of liver, gall bladder and pancreas disease per province group and degree of urbanization and for the Netherlands in 1995. No distinction is being made here by the nature of the disease or the organ involved.

Table 30A presents the data for 1996. In that year above all incident patients were reported.

Table 30: Number of patients with an existing or new liver, gall bladder or pancreas disease per province group and by degree of urbanization and for the Netherlands per 10 000 men and 10 000 women in 1995

		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
men	1995	9	19	22	36	19	23	23	22
women	1995	7	25	28	30	35	20	32	24
total	1995	8	22	25	33	26	21	28	23

For the Netherlands as many women as men were reported in 1995 with a liver, gall bladder or pancreas disease (22 per 10 000 men and 24 per 10 000 women respectively).
The highest number of patients was reported in the southern province group: 33 per 10 000 inhabitants. In the northern provinces the number of reports amounts to only 8 per 10 000 inhabitants.
The degree of urbanization of the place of residence of the reported patients is of less influence on the occurrence of liver, gall bladder and pancreas disease.

Table 30A: Number of above all incident patients with a liver, gall bladder and pancreas disease per province group and by degree of urbanization and for the Netherlands per 10 000 men and 10 000 women in 1996

		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
men	1996	5	14	9	17	17	12	6	12
women	1996	8	15	7	17	21	12	4	12
total	1996	6	15	8	17	19	12	5	12

Also for the above all incident patients reported in 1996 no difference is found in the numbers for women and those for men. Once again most

patients were reported in the southern provinces. In 1996 the number of reports in rural municipalities was strikingly higher than in the cities.

Age distribution

Table 31 shows the age-specific distribution of the reports of liver, gall bladder and pancreas disease.

Table 31: Number of patients by age group with a liver, gall bladder or pancreas disease 1995-1996

age group	men		women	
	1995	1996	1995	1996
< 1	0	-	-	-
1- 4	(3)	-	(6)	-
5- 9	16	(2)	(5)	-
10-14	(2)	(2)	(10)	(5)
15-19	19	(2)	(9)	(5)
20-24	(7)	(4)	(3)	(8)
25-29	8	-	11	(6)
30-34	18	11	8	10
35-39	14	8	22	7
40-44	13	19	25	13
45-49	43	6	22	4
50-54	47	20	69	25
55-59	20	23	24	15
60-64	36	26	63	32
65-69	41	31	46	33
70-74	82	32	44	22
75-79	65	28	82	14
80-84	58	79	57	32
≥ 85	(35)	(16)	(30)	(14)

At a younger age, below 25 years, liver, gall bladder and pancreas disease occurs little. The supplementary data show that at younger age the disease is in by far the majority of cases of an infectious nature.

The occurrence of liver, gall bladder and pancreas disease rises from the 50th year.

Distribution by nature of the disease

In 1996 a total of 161 patients with an existing or recent liver, gall bladder or pancreas disease were reported. On the strength of the supplementary data

a distinction can be made by the nature of the disease. It is also often reported when the disease was diagnosed.

In 1995 315 patients were reported, of whom 55% incident patients. In 1996 161 patients were involved, of whom 31 were already known with a liver, gall bladder or pancreas disease on 1 January 1996. The number of incident cases is therefore lower in 1996 than in 1995: 130 as against 170 patients. The number of reports of viral liver inflammations in 1996 is considerably lower than in 1995. The number of patients with complaints occurring for the first time in 1996 varies per quarter from 28 to 35.
Half of the reports (50%) relate to gallstones, which do or do not give rise to inflammation reactions or liver function disturbances. Liver function disturbances on the basis of alcohol abuse are reported for 10% of the patients. Recent, but also old infections of the liver by viruses occur in 14% of the reports; mononucleosis infectiosa and other viral liver inflammations have been included here.
All forms of cancer, including metastases in the liver, are responsible for 9% of the reports. In 4% of the reports rare liver diseases are reported, but also the side-effects of medicines (including the contraceptive pill). 9% of the forms are lacking in information on the possible cause or this is unknown.

The topic is maintained on the weekly return for 1997.

Viral hepatitis (part of liver, gall bladder and pancreas disease)
Every viral hepatitis can proceed asymptomatically or subclinically. With the hepatitis A virus this percentage is estimated at 50%; with hepatitis B and C this is probably lower. These non-diagnosed patients are, however, infectious at any moment.

Hepatitis A and B occur scattered throughout the world. In the Netherlands hepatitis A was in the past a disease of schoolchildren. Under the influence of improved hygiene the incidence among children has declined sharply in the last 20 years. The prevalence of anti-HAV antibodies is lower in the younger age groups than among older people: about 20% of the 20-year-olds have antibodies against the hepatitis A virus and some 50% of the 50-year-olds.
The chance of epidemics is increasing through the low degree of protection and increasing contacts with (sub)tropical countries.

Nobody in the Netherlands will come into quick contact with the hepatitis B virus. Estimates of the prevalence of antibodies against the hepatitis B virus in the western world vary from 3 to 10%.
Worldwide, millions of people are asymptomatic carriers of the hepatitis B virus. The virus is parenterally transmitted, notably via the blood. Sexual contact and the common use of infected needles form the principal transmission routes in the Netherlands. In health care transmission, above all via accidents with injections, is a real risk.

Viral hepatitis is a notifiable disease. In 1994 978 cases of hepatitis A were notified; in 1995 998 and in 1996 735. Hepatitis B is of less frequent occurrence: in 1994 213 notifications, in 1955 236 and in 1996 235. Under-notification of these disorders is a problem.

In 1995 and in 1996 the spotter physicians were asked to report each case of infectious hepatitis diagnosed by him or her as part of the topic liver, gall bladder and pancreas disease. They were asked to make a distinction between hepatitis A, hepatitis B and other forms.
Serological confirmation of the diagnosis is nearly always necessary for this.

Table 32 gives the numbers of reported patients with hepatitis A, hepatitis B and other forms of hepatitis for the Netherlands per 10 000 inhabitants.

Table 32: Number of cases of hepatitis A, hepatitis B and other forms of hepatitis for the Netherlands, per 10 000 inhabitants in 1994-1996

	Netherlands 1994	1995	1996
hepatitis A	1.4	1.6	(0.2)
hepatitis B	(0.6)	(0.2)	(0.1)
others forms	1.1	0.4	0.5

Viral hepatitis occurs in the whole country to a limited extent. Most cases are reported in the western provinces.

The incidence of the viral hepatitides found in the registration by the spotter physicians is higher than the incidence calculated on the basis of the notified cases (at the end of 1995).

For hepatitis A the GHI incidence is 0.64 per 10 000; the CMR Sentinel Stations registers 1.6 per 10 000.
For hepatitis B the GHI incidence is 0.15 per 10 000; the CMR Sentinel Stations registers 0.2 per 10 000.

The incidences calculated in Table 32 must be treated with caution. The absolute numbers on which the calculation is based are very small. In 1996 only three cases of hepatitis A were reported, one of hepatitis B and seven other forms (hepatitis through the Epstein-Barr virus and the cytomegalovirus excepted).

In 1997 too the registration of viral hepatitis is included in the topic liver, gall bladder and pancreas disease.

UNILATERAL PHYSICAL VIOLENCE AGAINST PERSONS

Until recently unilateral physical violence against persons was considered above all under the denominators child abuse and violence against women. Of more recent date are the themes violence at school, brutality in sport and (sexual) intimidation at work.

In the discussion on these subjects the question is inevitably asked what the extent of the phenomenon is. It is therefore urged to investigate this further.

In 1985, on the instructions of the then Ministry of Welfare, Public Health and Culture, a national investigation was started into the nature, extent, background and consequences of violence against women in heterosexual relationships. Of the women interviewed 9% proved to have suffered incidental unilateral physical violence and 11.4% repeated times.[18] In view of the culture in which 'ordinary violence' indoors against adult women is concealed and denied, these results in the opinion of the researcher indicate only a lower limit to the extent of the problem.

The Counselling Committee has received repeated requests to include some form of unilateral violence against persons on the weekly return. That was introduced in 1996.

Physical violence is interpreted as actions whereby against the will of the other party his/her physical integrity is violated and/or pain or injury is caused.
It expressly relates only to forms of unilateral violence; fights between two persons fall outside the definition.

The GP is asked to report the victims of unilateral physical violence. A distinction should be made by age and sex.

In the supplementary questionnaire question are asked whether incidental or repeated physical violence is involved, about the nature of the injury and the physical consequences and who the perpetrator was.

The number of reports of victims of unilateral physical violence per province group and by degree of urbanization is shown with the number for the Netherlands per 10 000 men and per 10 000 women in Table 33.

Table 33: Number of reports of victims of unilateral physical violence per province group and degree of urbanization and for the Netherlands per 10 000 men and women in 1996

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
men	7	4	5	7	7	6	2	6
women	3	6	5	4	5	5	4	5
total	5	5	5	5	6	6	3	5

In 1996 more male victims of unilateral physical violence were reported than female ones. It is striking that the number of reports in each of the province groups is equally high.
In the breakdown by degree of urbanization the cities, with half of the number of reports of the other two degrees of urbanization, are not in keeping with the others. The GPs in the cities are possibly less confronted with these problems because in the cities patients go direct to the Accident and Emergency department of a hospital.

Seasonal influences

There are few differences established in the number of victims of unilateral physical violence between the quarters of 1996. Only in the second quarter is the number of reports somewhat higher than in the other quarters.

Age distribution

Table 34 gives the age distribution of the number of victims of unilateral physical violence for the Netherlands.

Table 34: Number of victims of unilateral physical violence per age group per 10 000 men and per 10 000 women in 1996

age group	men	women	total
1- 4	0	(3)	(1)
5- 9	(4)	(2)	(3)
10-14	9	(2)	6
15-19	31	14	23
20-24	10	(4)	7
25-29	(3)	(5)	4
30-34	8	12	10
35-39	0	(7)	(4)
40-44	(6)	(8)	7
45-49	(2)	(4)	3
50-54	(5)	(3)	4
55-59	(3)	(3)	3
60-64	0	0	0
65-69	(4)	0	(2)
70-74	0	(4)	(2)

Above all the 15-24 age group proves to become the victim of unilateral physical violence. Boys are clearly more often the victim than girls.
In the 25-50 age group women are more often the victim than men.

The analysis of the supplementary questionnaires shows that, although there are practically as many men and boys as girls and women among the victims, the perpetrators are almost exclusively men.
In over half of the situations women are the victim of violence by the partner or ex-partner (14 times the partner and 4 times the ex-partner).
Only a fifth of the women are the victim of violence by an unknown person; among the men that is three fifths (22 of the 36 reports of male victims).

The subject is maintained on the weekly return for 1997.

ACUTE GASTRO-ENTERITIS

Gastro-enteritis belongs to the top ten of disorders in the Netherlands as regards incidence, and it contributes towards a considerable burden on primary health care.[19]
In 1996 gastro-enteritis was again included in CMR Sentinel Stations the Netherlands. It appeared on the weekly return in 1992-1993 also.

The aim of the investigation is:
1. to follow trends in the incidence and care burden of gastro-enteritis;
2. to follow trends in the incidence of campylobacteriosis and Salmonellosis in connection with implementation of the National Zooonoses Plan;
3. to determine the extent of the care burden ascribable to specific pathogens.

The spotter physician is asked in this registration to report a person with a new episode of gastro-enteritis. A new episode entails that the patient is seen for the first time during this episode and after a possible earlier report has been free from complaints for at least 14 days.
Patients who consult the GP exclusively by telephone need not be reported on the weekly return.

The following definition of gastro-enteritis is used:
- three or more times a day thin motions, differing from normal for this person or;
- thin motions and two of the following symptoms (fever, vomiting, nausea, stomach-ache, stomach cramps, blood or mucus in the motions) or;
- vomiting and two of the following symptoms (fever, nausea, stomach-ache, stomach cramps, blood or mucus in the motions).

Supplementary to the registration on the weekly return patients are asked to complete a questionnaire and to send in a faeces sample. The GPs also ask a control person to complete this questionnaire and send in a faeces sample. Both the faeces samples of the patients and those of the control persons are examined at the RIVM. The questionnaires are processed at the Centre for Infectious Diseases Epidemiology by Mrs. M.A.S. de Wit and Dr. M.W. Burgdorff.

Table 35 lists the numbers of reports of acute gastro-enteritis per province group and degree of urbanization and for the Netherlands.

Table 35: Number of cases of acute gastro-enteritis per province group and degree of urbanization and for the Netherlands, per 10 000 men and per 10 000 women, 1992-93 and 1996

		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
M	1992	38	40	52	112	38	59	82	62
	1993	32	53	49	88	31	53	80	56
	1996	39	47	49	66	40	51	56	51
F	1992	35	53	52	97	43	57	74	60
	1993	34	55	42	69	34	45	71	50
	1996	43	79	63	88	81	69	62	69
T	1992	37	47	52	104	41	48	78	62
	1993	33	54	46	78	32	48	76	53
	1996	41	63	56	77	60	60	59	60

The number of reports of gastro-enteritis is approximately at the level of 1992-1993. In 1996 more women than men were reported with gastro-enteritis: 69 as against 51 per 10 000 women and 10 000 men respectively.
The number of reports is in each of the years the highest in the southern provinces. Differences in numbers of reports between the cities and the other groups in the degree of urbanization are no longer found in 1996.

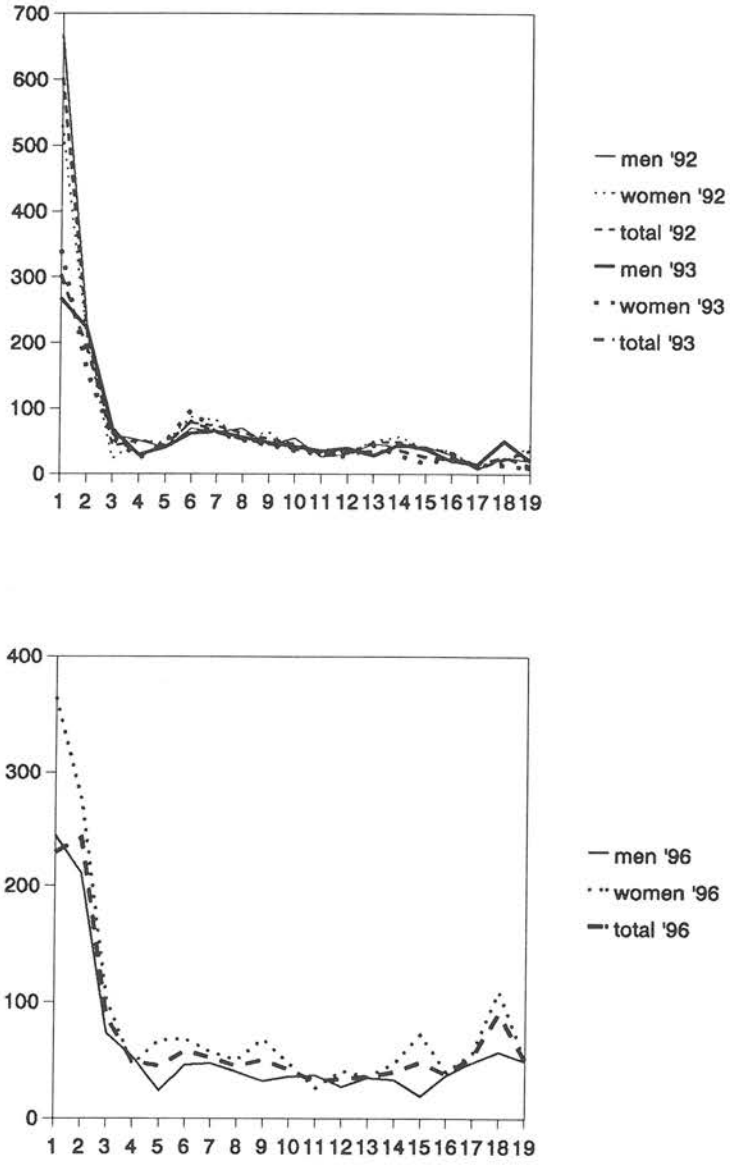
Age distribution

In Table 36 the data on the gastro-enteritis patients reported by the GP by age group are stated (see Figure 23).

Table 36: Number of reports of acute gastro-enteritis per 10 000 men and per 10 000 women, 1992-1993 and 1996

age group	M			F			T		
	1992	1993	1996	1992	1993	1996	1992	1993	1996
≤ 1	667	268	244	530	341	364	602	303	229
1- 4	228	222	211	201	159	276	215	191	242
5- 9	60	68	73	23	54	102	42	61	87
10-14	51	29	53	50	23	46	51	26	49
15-19	40	41	24	48	48	67	44	44	45
20-24	69	62	46	87	97	68	78	80	58
25-29	64	65	47	81	62	57	73	63	52
30-34	69	56	40	55	51	50	62	53	45
35-39	44	48	32	64	44	68	54	46	50
40-44	55	42	36	36	35	47	46	38	42
45-49	26	35	37	36	30	26	31	33	32
50-54	30	39	27	34	26	41	32	33	34
55-59	46	28	35	50	43	36	48	35	36
60-64	41	45	33	57	28	47	49	36	40
65-69	42	38	19	39	(16)	72	40	26	48
70-74	29	(20)	37	35	24	40	33	22	38
75-79	(7)	(15)	48	(10)	(15)	56	(9)	15	53
80-84	(25)	50	57	(20)	(13)	109	22	26	90
≥ 85	(20)	(20)	49	43	(9)	51	36	(12)	50

Figure 23: Number of reports of acute gastro-enteritis by age group per 10 000 men and per 10 000 women, 1992-1993 and 1996



1=≤1 2= 1- 4 3= 5- 9 4=10-14 5=15-19 6=20-24 7=25-29 8=30-34
9=35-39 10=40-44 11=45-49 12=50-54 13=55-59 14=60-64 15=65-6916=70-74
17=75-79 18=80-84 19=≥85

In both registration periods most cases of acute gastro-enteritis are diagnosed among babies and 1-4 year-olds.
In 1996, otherwise than in 1992-1993, there is among 5-9 year-olds a clearly higher incidence compared with the 10-80 age groups.
In 1996 there is likewise a considerably higher incidence among the 80-85 year-olds in comparison with the other age groups from 10 years onwards.
In the age groups between 10 and 80 years the incidence differs little: between 32 and 58 per 10 000 persons of any age group.

Seasonal influences
In the first quarter of 1996 there are clearly more reports of acute gastro-enteritis than in the other quarters: 21 as against 13, 14 and 11 per 10 000 inhabitants.
In the southern provinces in particular there was in the first quarter of 1996 a relatively high number of reports: 33 per 10 000 inhabitants.

The registration in the virological laboratories reported in weeks 5-16 of 1996 a clearly increased number of rotaviruses compared with the rest of the year. And compared with the same period in 1995. (Infectious Diseases Bulletin 1996, p.89, p. 155, p. 221 and p. 285).

Results of the faeces cultures
The results of the examination of the faeces samples of both patients and control persons will be reported on in detail by the RIVM (Mrs. M.A.S. de Wit).

The subject appears on the weekly return in 1997 too.

PUBLICATIONS ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM THE CONTINUOUS MORBIDITY REGISTRATION

GOOSEN, E.S.M., A.M.M. HOOGENBOOM-VERDEGAAL, A.M.I. BARTELDS, M.J.W. SPRENGER, M.W. BORGDORFF.
Incidentie van gastro-enteritis in huisartsenpeilstations in Nederland, 1992-1993.
RIVM, 1995, Rapport nr. 149101012.

In the Netherlands gastroenteritis belongs to the ten diseases with the highest incidence rates. A sentinel study on the incidence of gastrointestinal complaints and the occurrence of the investigated pathogens (**Campylobacter, Salmonella** and **Shigella)** was carried out in about 40 general practices in 1992 and 1993. The sentinel stations were as representative as possible of the Dutch population. The study was undertaken by the National Institute of Public Health and Environmental Protection (RIVM) and the Netherlands Institute of Primary Health Care (NIVEL) in cooperation with the general practitioners who participated in the Dutch Sentinel Practice Network and 24 laboratories. Age and sex of patients who met the

case definition were reported to the NIVEL. These patients were asked by their GP to provide a stool sample and to complete a questionnaire. The number of patients that were either reported to the NIVEL or have been given a questionnaire by their GP was estimated at about 2370. A completed questionnaire was received from 58.9% (1400/2370) of the these patients. Eighty percent (1400/1744) of the cases completed the questionnaire they received. Results of microbiological analysis were obtained for 89.1% (1248/1400) of patients who completed the questionnaire. The crude incidence rate of acute gastrointestinal complaints was 55.3 per 10 000 person years, after correction for non response it was 89.9 per 10 000 persons years The incidence was lower in 1993 than in 1992. Between men and women no differences have been found. The highest incidence have been found in the age groups under five. The incidence rate **Campylobacter** was 6.9 per 10 000 persons years (182 samples positive), for **Salmonella** 2.2 (55 samples positive) and for **Shigella** 0.4 per 10 000 persons years (10 samples positive). After correction for non response these incidences were 11.7 and 3.5 and 0,6 per 10 000 persons years. The **Salmonella** incidence rate was higher in 1993 than in 1992 and higher in men than in women. The highest incidence rates for **Campylobacter** and **Salmonella** were found in the age groups under five. The (late) summer months as expected, showed the highest incidence rates. Incidence rates for gastroenteritis as well as for microorganisms were lower than incidences found in other sentinels. To follow trends in incidence rates microorganisms it is necessary to undertake sentinels repeatedly with the same methodology and population. However results cannot be generalised to the general population and consequently it remains necessary to carry out a population cohort study every 5 to 10 years.

WIT DE M.A.S., L.M. KORTBEEK, W.J. VAN LEEUWEN, M.P.G. KOOPMANS, A.I.M. BARTELDS, I.A. VAN ASPEREN, M.W. BORGDORFF.

Interim-rapportage van onderzoek naar gastro-enteritis in huisartsenpeilstations (NIVEL) 1996-1997

Methoden en resultaten van de eerste vijf maanden.

RIVM, 1997, Rapport nr. 216852001.

In 1996 a study into gastroenteritis started in sentinel practices in the Netherlands. The objectives of this study were to determine the incidence of consultations of gastroenteritis and to identify risk factors and micro-organisms associated with gastroenteritis. This research is being continued in 1997. In this report the study and results until September 1996 are presented. Since 1 January 1996 all sentinel practitioners report weekly all patients that consults them with gastroenteritis. In addition 33 out of the 43 practices taken part in a case-control study that started on 10 May 1996, by handing out research forms and containers for collection stool samples to patients with gastro enteritis and control-patients without gastro-enteritis. Stool samples are examined for pathogenic bacteria, viruses and intestinal parasites. The incidence of gastro-enteritis, based on the sentinel registration from January until September 1996 was 0.8 per 100 persons years. Of 64% of the patients registered between May and September a stool sample was received. In the analyses 152 patients and 115 controls are included. In 53% of stools of patients and 53% of stools of controls a pathogenic micro-organism was found. **Salmonella** and **Campylobacter** were isolated from the stools of 4% and 13% of patients respectively and not from the stools of controls. Rotavirus-antigen was detected in the stools of 5% of the patients and 13% of the controls. **Giardia lamblia** was detected in stools of 5% of the patients and 6% of the controls, **Blastocystis hominis** in 24% of patients and 29% of controls and **Dientamoeba fragilis** in 10% of patients and 17% of

controls. Others micro-organisms were found only incidentally. The studied bacteria were isolated only from stools of patients. Parasites are known to occur in the stools of healthy persons as well. A number of important gastroenteral viruses (rotavirus and SRSV) occur mainly in the first months of the year. Since this period was not included in the case-control study no conclusions can be drawn from viral results yet.

EXTRAPOLATION OF FREQUENCIES FOUND TO THE DUTCH POPULATION

The following survey gives an approximate impression of the number of patients, consultations, actions and occurrences in the Netherlands, on the basis of the frequencies calculated from the results of the Continuous Morbidity Registration by Sentinel Stations. As was remarked in the previous reports, it must be borne in mind, when studying the following tables, that although the population of the sentinel stations is a reasonably good representation (see also p. 11-12) the spotter physicians are a select group. Consequently, it cannot be automatically established to what extent the results differ from the actual situation; the differences can vary depending on the nature of the question. Particular caution should be observed regarding those topics for which there is intervention by a general practitioner. As an example one may think of the topic 'cervical smear'; it is quite feasible that the spotter physicians differ from the typical general practitioner in this respect. In the '(attempted) suicide' topic there proves to be a difference in respect of registrations from elsewhere, as a result of the fact that this event is presumably not always reported to the general practitioner.[20]
With regard, too, to registration in itself it may be stated almost with certainty that the spotter physicians act as a select group. However, this can only be to the benefit of the project. Nevertheless, the reader is advised not only to look at the extrapolated numbers but also to consult the relevant chapters.
For a correct interpretation of the extrapolated numbers first the total Dutch population per year is given, in thousands.

Dutch population by sex in thousands, 1987-1996 (Central Bureau of Statistics)*

year	men	women	total
1987	7 224	7 391	14 615
1988	7 273	7 441	14 714
1989	7 317	7 488	14 805
1990	7 358	7 535	14 893
1991	7 419	7 591	15 010
1992	7 480	7 649	15 129
1993	7 535	7 704	15 239
1994	7 586	7 755	15 341
1995	7 627	7 797	15 424
1996	7 662	7 832	15 494

* The numbers as on 1 January of the year in question.

Extrapolation of frequencies found to the Dutch population

	frequency* incidence (per 10 000)				Netherlands** (absolute numbers)		
category	year	M	F	total	M	F	total***
influenza	1987			365			533 000
	1988			399			591 000
	1989			410			607 000
	1990			225			335 000
	1991			348			522 000
	1992			244			370 000
	1993			484			772 500
	1994			106			162 500
	1995			315			480 000
	1996			115			178 000
cervical smear	1987		59			43 500	
-with complaints	1988		76			56 500	
and/or symptoms	1989		72			54 000	
	1990		55			41 500	
	1991		73			55 500	
	1992		72			55 500	
	1993		70			55 500	
	1994		60			46 500	
	1995		59			46 000	
	1996		61			47 500	
-preventive	1987		345			255 000	
	1988		369			274 000	
	1989		521			389 500	
	1990		577			434 500	
	1991		537			407 000	
	1992		524			400 000	
	1993		485			370 500	
	1994		474			367 500	
	1995		467			364 000	
	1996		560			438 500	

* see page 121

Extrapolation of frequencies found to the Dutch population (continuation)

	frequency* incidence (per 10 000)				Netherlands** (absolute numbers)		
category	year	M	F	total	M	F	total***
-repeat examination (within 3 years)	1987		211			156 000	
	1988		246			183 000	
	1989		237			177 000	
	1990		273			205 000	
	1991		239			181 500	
	1992		233			178 000	
	1993		225			173 000	
	1994		268			208 000	
	1995		267			208 000	
	1996		267			209 000	
cervical smear total	1987		615			455 000	
	1988		691			514 000	
	1989		830			622 000	
	1990		905			682 000	
	1991		857			645 000	
	1992		829			632 500	
	1993		780			599 500	
	1994		802			622 000	
	1995		793			618 000	
	1996		888			695 000	
sterilization	1987	45	28		32 500	20 500	53 000
	1988	40	22		29 500	16 500	46 000
	1989	30	19		22 000	14 000	36 000
	1990	35	19		26 000	14 000	40 000
	1991	37	21		27 500	16 000	43 500
	1992	41	20		30 500	15 500	47 000
	1993	40	21		30 000	16 000	46 000
	1994	37	22		28 000	17 000	45 000
	1995	38	24		29 000	19 000	48 000
	1996	40	21		30 500	16 500	47 000
cumulative					850 500[1]	638 500[2]	

* see page 121

1) from 1972

2) from 1974

Extrapolation of frequencies found to the Dutch population (continuation)

	frequency* incidence (per 10 000)				Netherlands** (absolute numbers)		
category	year	M	F	total	M	F	total***
(attempted) suicide	1987			7			10 250
	1988			6			9 000
	1989			7			10 250
	1990			5			7 500
	1991			5			7 500
	1992			6			9 000
	1993			6			9 000
	1994			5			7 500
	1995			7			10 750
	1996			6			9 250
first mammograms	1988		80			59 500	
	1989		87			65 000	
	1990		92			69 000	
	1991		105			80 000	
	1992		92			75 500	
	1993		117			88 500	
	1994		111			86 000	
	1995		104			81 000	
	1996		87			68 000	
repeat mammo-grams	1988		12			9 000	
	1989		15			11 000	
	1990		17			13 000	
	1991		26			19 500	
	1992		30			23 000	
	1993		59			21 000	
	1994		45			35 000	
	1995		39			30 500	
	1996		32			25 000	

* see page 121

Extrapolation of frequencies found to the Dutch population (continuation)

	frequency* incidence (per 10 000)				Netherlands** (absolute numbers)		
category	year	M	F	total	M	F	total***
mammograms	1988		92			68 500	
total	1989		102			76 000	
	1990		109			82 000	
	1991		131			99 500	
	1992		122			93 500	
	1993		176			109 500	
	1994		156			121 000	
	1995		143			111 000	
	1996		119			93 000	
P.I.D.	1993		7			5 500	
	1994		9			7 000	
	1995		8			6 200	
	1996		7			5 500	
urethritis	1992	31			23 000		
of the man	1993	23			17 500		
	1994	24			18 500		
	1995	26			20 000		
	1996	21			16 000		
concern about	1988			10			15 000
aids	1989			15			22 000
	1990			16			24 000
	1991			16			24 000
	1992			22			33 500
	1993			23			35 000
	1994			27			41 500
	1995			21			32 000
	1996			20			31 000
liver-, gall bladder and pancreas disease (incident and prevalent)	1995	22	24	23	17 000	19 000	36 000
(incidenton)	1996	12	12	12	9 000	9 500	18 500

* see page 121

Extrapolation of frequencies found to the Dutch population (continuation)

	frequency* incidence (per 10 000)				Netherlands** (absolute numbers)		
category	year	M	F	total	M	F	total***
hepatitis A	1994			1.4			2 200
	1995			1.6			2 500
	1996			0.2			300
hepatitis B	1994			0.6			1 000
	1995			0.2			300
	1996			0.1			150
other hepatitis	1994			1.1			1 700
	1995			0.4			600
	1996			0.5			750
unilated physical violence	1996	6	5	5	4 250	3 750	8 000
gastro-enteritis	1996	51	69	60	39 000	54 000	93 000

* Number of patients, consultations etc. per 10 000 men and/or women (sentinel station data).

** Extrapolation of the incidences to the Dutch population (of the year in question), in round thousands.

*** As a result of rounding-off, small differences may have occurred in the totals.

INCIDENTAL INVESTIGATIONS

Since 1976 the "incidental investigations" have existed as part of the Sentinel Station Project. These are investigations into relatively uncommon diseases or occurrences. For a list of the subjects thus treated see the second part of Appendix 3. Here the data accordingly collected for 1996 are reported. These differ from the weekly return subjects in that they are asked for only once a year, in principle immediately at the end of the year. This makes it possible to collect retrospectively data on subjects for which registration is requested in the course of the year. However, one condition in that case is that it must be something that is firmly implanted in the physician's memory.

Euthanasia (request for application)

In 1976 attention was devoted for the first time to requests made to the general practitioner for the application of euthanasia. In this registration the question is not asked whether the GP granted such a request.

The spotter physicians are informed at the beginning of the year of the coming investigation. A form is sent to all spotter physicians at the end of the year with the request that they report whether the question was asked of them in the past year by a patient himself or herself for the application of active euthanasia directly or indirectly and, if so, what the motive was for this. In addition, information is sought on the age, sex, disease, place of care or nursing and the use or otherwise of a 'euthanasia declaration'[21].
The results per patient can be found at the end of this section.
This table does not require much explanation.
In 1996 the number of requests was 40. Of the patients making a request for application of euthanasia, 80% have a malignity.
The number of patients nursed at home is 37; three patients live in a nursing home.

In 35 cases the request was supported by a written 'euthanasia declaration'. Requests for euthanasia were made by 38 patients; seven patients likewise asked for assistance with suicide. Two patients asked only for assistance with suicide. In 30 of the 40 requests the general practitioner consulted another physician. In the case of a number of reports whereby no other physician was consulted, it is indicated that the patient already died naturally before the

possible application of euthanasia.
It also happened that no other physician was consulted because that had not yet come up for discussion.

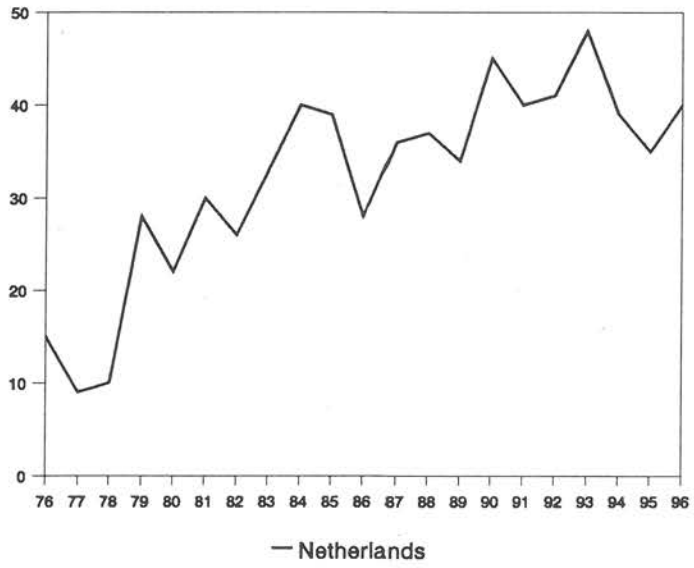
Requests for application of euthanasia 1976-1996.

The distribution of the number of requests per province and degree of urbanization and per sex may be found in Table 37 (cf. Fig. 24).

Table 37: absolute number of patients who requested the general practitioner to apply active euthanasia by sex, per province and degree of urbanization and for the Netherlands 1987-1996

absolute	M	F	province group				degree of urbanization			Netherlands
			A	B	C	D	1	2	3	
1987	19	17	1	8	22	5	3	17	16	36
1988	19	18	3	1	22	11	1	23	13	37
1989	21	13	7	1	21	5	6	17	11	34
1990	28	17	14	2	22	7	4	24	17	45
1991	21	19	7	5	23	5	2	21	17	40
1992	22	19	7	8	20	6	4	20	17	41
1993	23	25	2	9	23	14	5	19	24	48
1994	26	13	4	14	14	7	10	18	11	39
1995	18	17	5	8	12	10	2	16	17	35
1996	24	16	8	9	19	4	7	20	13	40

Figure 24: Absolute number of patients who requested the general practitioner for the application of active euthanasia or assistance with suicide, for the Netherlands, 1976-1996



Over the whole period 1976-1996 per sentinel station (i.e. not per general practitioner) the average number of requests for euthanasia and the distribution per province and degree of urbanization appears in Table 38 and Table 39.

Table 38: average number of requests per sentinel station by province group 1976-1996*

	province group			
	A	B	C	D
number of sentinel stations	6	7	16	10
average number of requests	14,8	12,6	18,8	10,7
scatter	0 - 31	3 - 37	0 - 46	2 - 23

* only sentinel stations that have reported over the whole period.

Table 39: average number of requests per sentinel station by degree of urbanization 1976-1996*

	degree of urbanization		
	1	2	3
number of sentinel stations	6	20	13
average number of requests	12.5	12.8	20
scatter	3 - 24	0 - 31	2 - 46

* only sentinel stations that have reported over the whole period.

These data show that requests for application of euthanasia are made more in the western provinces and in the cities.

Age distribution

The age distribution may be found in Table 40.

Table 40: absolute number of patients who requested the general practitioner for application of active euthanasia or assistance with suicide by age group, 1987-1996

	≤54	55-64	65-74	75-84	≥85	total
1987	6	9	8	9	4	36
1988	6	7	11	10	4	37
1989	4	6	12	11	-	34
1990	7	5	13	16	4	45
1991	9	5	11	10	5	40
1992	7	7	9	12	6	41
1993	10	5	17	13	3	48
1994	4	7	15	11	2	39
1995	14	5	12	2	2	35
1996	5	10	14	7	4	40

Survey of the reported requests

Meanwhile the data are known on 675 requests for application of euthanasia. Of these requests, 372 were made by a man (55%).

Insight into the disorders for which application of euthanasia is requested has been obtained by using the International Classification of Diseases (1975, 9th version) as a guide. One of the problems in classification is the multiple pathology that is inherent in old age. Another problem is that sometimes there is no question of known pathology: the group symptoms and incompletely described disorders includes the request of a 92-year-old lady suffering from the disorder "old age".

Five groups of disorders are used:
- malignant neoplasms,
- cardio-vascular disease,
- chronic obstructive pulmonary disease,
- symptoms and incompletely described disorders,
- other diseases, including neurological and endocrinological disorders and AIDS.

The classification of the disorders from which the patients who request euthanasia are suffering proceeded in general without difficulty, despite the above-mentioned problems; the general practitioner indicated in the questionnaire what in his or her opinion was the relevant disorder within the framework of the request.
The disorders for which euthanasia was requested are stated in Table 41.

Table 41: disorders for which euthanasia was requested, 1976-1996

	n	%
malignant neoplasms	494	73
cardio-vascular disease	43	6
chronic obstructive pulmonary disease	31	4.5
symptoms and incompletely described diseases	34	5
other diseases	73	11
total	675	99.5

The distribution of the disorders for which euthanasia was requested by age is given in Table 42.

Table 42: percentage of requests per disorder of the total number of reports by age (n=absolute numbers of requests), 1976-1996

	≤54 %	55-64 %	65-74 %	75-84 %	≥85 %
malignant disorders	76	89	87	61	23
cardio-vascular disease	0	1	3	13	23
chronic obstructive pulmonary disease	1	3	3	9	10
symptoms and incompletely described diseases	3	2	1	5	31
other diseases	20	5	7	12	15

Below the age of 85 it is above all the malignant disorders that form a reason to ask the general practitioner for euthanasia. Below the age of 55 the group other diseases forms an extremely heterogeneous group: cystic fibrosis, multiple sclerosis and AIDS are mentioned, but also vital depression.

At a later age final stages of endocrinological disorders like diabetes mellitus and terminal renal insufficiency and advanced stages of rheumatoid arthritis are given as reasons for a request.

When someone with a poor vascular system does not die from a myocardial infarction or a cerebro-vascular accident, the quality of life can be seriously impaired at a later age. Chronic obstructive pulmonary disease can also entail serious infirmity and suffering and lead to a request for euthanasia.

Table 43 gives the percentage distribution of the number of requests for application of euthanasia by patients younger and older than 65 per disorder.

Table 43: percentage of requests for application of euthanasia by patients younger and older than 65 by disorder, 1976-1996 (n=absolute numbers of requests)

	n	≤ 64 %	≥ 65 %
all disorders	675	36	64
all malignancies	494	41	59
cardio-vascular disease	42	2	98
chronic obstructive pulmonary disease	31	16	84
symptoms and incompletely described diseases	34	17	83
other diseases	73	41	59

A further subdivision of the malignancies by localization of the tumour and the age of the patient displays the following picture (Table 40).

Table 44: percentage of requests for application of euthanasia by patients younger and older than 65 with a malignancy by localization of the tumour (n=absolute numbers), 1976-1996

	n	≤ 64 %	≥ 65 %
all malignancies	494	41	59
stomach	50	38	62
colon/rectum	71	34	66
trachea/lung	137	36	64
breast	52	58	42
other	184	43	57

In the age distribution no major changes occur. When breast cancer is the motive for the request, the percentage of female patients below the age of 65 clearly differs from the percentage for the other localizations.
The use of a "euthanasia declaration" has increased in recent years: from 15% in 1984 to 87.5% in 1996.

Discussion

Until the beginning of the nineties it was barely possible to compare the data collected in the CMR Sentinel Stations on requests for euthanasia and help

with suicide with the results of other registrations and research (Bartelds 1989[22]).

Since then important large-scale investigations have been performed into the practices by GPs and other doctors in the Netherlands with regard to euthanasia, help with suicide and decisions around the end of patients' lives (Van der Maas et al. 1991[23], Pijnenborg et al. 1994[24], Van der Wal et al. 1994[25]). Recently a large-scale investigation has again been performed into euthanasia and other medical practices involving the end of life (Van der Maas et al. 1996[26]). In that context the notification procedure for euthanasia and help with suicide laid down in 1991 has also been evaluated (Van der Wal et al. 1996[27]).

The methodological differences between the above investigations and the registration by the spotter physicians are considerable. It would take us too far to discuss them here. One difference must, however, be mentioned: unlike the recent other investigations mentioned above the data of the Sentinel Stations originate exclusively from GPs.

In 1990 the difference in the average number of requests for euthanasia that a GP receives per year does not prove to be great: in the CMR-Sentinel stations 0.74 and in the investigation by the CBS and Erasmus University 0.8 on average per GP.

The number of more explicit requests for euthanasia at a given moment in the disease process rose between 1990 and 1995 by 9% (Van der Maas, 1996). The number of deceased increased by somewhat more than 5%.
The registration of the number of explicit requests for euthanasia by the spotter physicians likewise displays an increase in the period 1990-1995, though a slighter one that the 9% determined by Van der Maas et al. The number of requests for euthanasia seems to reach a 'natural' ceiling of approx. 3 per 10 000 patients, i.e. on average 0.75 requests per GP per year. The relatively small absolute numbers of requests to the spotter physicians may display considerable differences, so that it is necessary to work with progressive averages

A striking difference, one of the few, between the interview study and the death certificate investigation performed by Van de Maas et al. concerns the sex distribution of the patients for whom the request for euthanasia has been granted.

In 1995, according to the death certificate investigation, euthanasia was applied more to women than to men. In the interview study of 1995 and in the 1990 research the sex ratio is the opposite.
The registration of the requests for euthanasia or help with suicide by the Sentinel Stations consistently displays a greater proportion of men than women: 55% as against 45% in the period 1976-1996.

In the investigations so far one result is consistently present: it is above all patients with a malignant disorder who request euthanasia and for whom such a request is granted (approx. 80%). It is likewise established that this proportion of the patients with a malignancy decreases with greater age.

Reguest by the patient for active euthanasia, 1996

age request	sex	disease reported	motive for the request
92	F	recurrent decompensatio cordis	hopelessness
86	F	carcinoma of the mamma	pain
85	M	carcinoma of the prostate	increasing pain and disablement through vertebral metastases
85	M	adenocarcinoma	general decline, hopelessness
82	M	Hodgkin's lymphoma	shortness of breath
82	M	carcinoma of the colon	lacklustre, did not want to go on
80	M	terminal chronic non-specific lung disease	
77	F	carcinoma of the pancreas with metastases	decay
75	M	throat tumour	threatening suffocation
75	M	carcinoma of the lung	great pressure from suffering
74	M	carcinoma of the lung	progressive dyspnoea
74	M	metastasized carcinoma of the lung	lacklustre, pain, dependence
73	F	carcinoma of the ovary	pain, enormous tumour, threatening obstruction of the urinary tract
72	M	carcinoma of the lung	pain, cachexia
71	M	carcinoma of the prostate	gradual cachexia
69	F	Parkinson's disease	decline
68	M	non-Hodgkin's lymphoma	pain
68	F	carcinoma of the mamma with metastases	
66	M	ALS	dyspnoea attacks, fear
66	M	progressively growing mesothelioma	increasing dyspnoea attacks and pain

Request by the patient for active euthanasia, 1996 (continuation)

age request	sex	disease reported	motive for the request
66	M	carcinoma of the lung	dyspnoea
65	M	emphysema and non-Hodgkin's lymphoma	severe dyspnoea
65	M	carcinoma of the lung	hopelessness of the disease. increasing dyspnoea
65	F	carcinoma of the sigmoid	malaise
65	F	Parkinson's disease	no further point
64	M	carcinoma of the prostate	disablement, increasing pain, heart condition
64	M	carcinoma of the pancreas head	hopelessness
63	M	carcinoma of the mamma with metastases	hopelessness
63	F	non-Hodgkin's lymphoma	fear of pain and suffering
62	M	carcinoma of the colon with metastases	
60	M	carcinoma of the lung with metastases	
59	F	metastasized carcinoma of the mamma	
57	F	ALS	decline, aware of miserable course of disease
56	F	metastatic process in brain	
56	F	depression	hopelessness
49	F	terminal phase metastasized carcinoma of the mamma	unbearable suffering
48	M	carcinoma of the lung with metastases	unbearable pain, cachexia
46	F	carcinoma of the mamma	cerebral metastases, acute decline
38	F	carcinoma of the mamma with metastases	
32	M	carcinoma of the lung	dyspnoea

The investigation is being continued in 1997.

EATING DISORDERS

Anorexia nervosa and bulimia nervosa are serious eating disorders of which it is not clear whether the degree of occurrence is increasing. From 1985 to 1989 both eating disorders were registered by the spotter physicians in an incidental investigation. By means of a new registration in 1995 and following years the question whether there is an increase in these eating disorders can possibly be answered.

Retrospectively, in 1995 but also again all the end of 1996 the spotter physicians were asked a number of questions per patient suffering from an eating disorder. Did this relate to an eating disorder diagnosed for the first time in 1996 and was the patient referred to another aid worker on account of the disorder? Other questions concerned the composition of the family from which the patient came and a number of physical aspects of the disorder.

As in the first registration period from 1985 to 1989 the investigation is taking place under the direction of Dr. H.W. Hoek, psychiatrist/epidemiologist and chairman of the steering group Eating Disorders the Netherlands.

Table 45 presents the distribution of the number of patients regarding whom the GP has diagnosed an eating disorder (absolute and per 10 000 inhabitants) by province group and degree of urbanization and for the Netherlands in 1985-1989 and 1995-1996.

Table 45: Absolute number of patients regarding whom the GP has diagnosed an eating disorder, by province group and degree of urbanization and for the Netherlands in 1985-1989 and 1995 and the numbers per 10 000 women

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
absolute year average:								
1985-1989	7	10	35	10	6	33	24	61
1995	11	11	26	16	5	49	10	64
1996	6	8	22	9	3	37	5	45
per 10 000 women 1995[1)]	8.9	6.4	8.1	9.1	5.2	10.5	6.9	8.1
1996	4.7	4.7	8.9	4.8	3.0	8.9	3.3	6.2

1) In the 1995 report the occurrence was wrongly calculated over the whole population (men and women).

Eating disorders are reported most in the western provinces and in the medium-sized places and towns.

In Table 46 the distribution of the eating disorders by age group follows.

Table 46: Absolute number of reports of patients regarding whom the GP has diagnosed an eating disorder, by age for 1985-1989 and for 1995-1996

women	1985-1989 aver.	1995	1996
10-14	1	1	1
15-19	8	13	15
20-24	12	14	9
25-29	14	10	7
30-34	6	9	4
35-39	7	8	6
40-44	4	2	2
45-49	1	4	1
50-54	1	2	-
55-59	1	-	-

In 1996 one boy of 14 years with an eating disorder was reported.

In 1997 too an incidental investigation into eating disorders will be held.

A PUBLICATION ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM THE CONTINUOUS MORBIDITY REGISTRATION SENTINEL STATIONS

HOEK, W.HANS, AAD I.M. BARTELDS JACQUOLINE J.F. BOSVELD, YOLANDA VAN DER GRAAF, VERONIQUE E.L. LIMPENS, MARGO MAIWALD, CAROLINE J.K. SPAAIJ.
Impact of Urbanization on Detection Rates of Eating Disorders.
Am J Psychiatry, 1995; 152:1272-1278.

Objective: The purpose of this study was to examine the incidence of anorexia nervosa and bulimia nervosa among patients in primary care and to evaluate the impact of urbanization, age and sex differences, and changes over time. **Method:** During 1985-1989, 58 general practitioners, trained in diagnosing eating disorders, registered all of their patients who had diagnoses of anorexia nervosa and/or bulimia nervosa according to strict criteria. The study population (N=151,781) was 1% of the population of the Netherlands; the distribution of sexes, ages, geographical locations, and degrees of urbanization in the study group was representative of the Dutch population. Main outcome measures were rates of newly detected cases and age-adjusted rates ratios. **Results:** The crude annual incidence rate of detected cases in primary care per 100,000 person-years was 8.1 for anorexia nervosa and 11.5 for bulimia nervosa. The incidence of bulimia nervosa was lowest in rural areas, intermediate in urbanized areas, and highest in the cities (6.6, 19.9, and 37.9, respectively, per 100,000 females per year); no rural-urban differences for anorexia nervosa were found. Pronounced sex and age differences in incidence rates were observed. Over the 5-year period, there was no time trend in the incidence of anorexia nervosa, but the incidence of bulimia nervosa tented to increase. **Conclusions:** The incidence rates of eating disorders-as defined by detection rates in primary care-are higher than previously reported. Urbanization seems to be a risk factor for bulimia nervosa but not for anorexia nervosa.

GENERAL REMARKS

1. The weekly return for 1997 has been compiled as follows by the Counselling Committee.

   a. Influenza(-like illness);
   b. Cervical smear;
   c. Liver, gall bladder and pancreas disease;
   d. Herpes Zoster;
   e. Sterilization of the man performed;
   f. Sterilization of the woman performed;
   g. Oestrogens prescribed;
   h. (Attempted) suicide;
   i. Out-patient or clinical mammography;
   j. P.I.D. (pelvic inflammatory disease);
   k. Urethritis of the man;
   l. Concern about AIDS;
   m. Physical violence;
   n. Gastro-enteritis;
   o. Prostate trouble.

2. The incidental investigations for 1997 relate to the subjects euthanasia, eating disorders and aggression towards GP and assistant.

3. Suggestions relating to the questions on the weekly returns will be gladly received by the Counselling Committee.

4. Data from this report may be reproduced with acknowledgment of the source.

A.I.M. Bartelds M.D., General practitioner/project leader.

LIST OF REPORTS ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM CONTINUOUS MORBIDITY REGISTRATION SENTINEL STATIONS

Survey as per 1 January 1997 (from 1 January 1991)

CASTEREN, V. van, DECLERCQ, E, et al Study of the use of some selected groups of laboratory tests in general practice Brussel: Eurosentinel, Instituut voor Hygiëne en Epidemiologie, 1991

NIEUWSBRIEF Influenza Surveillance 1992-1993. Uitgave NIC, NIVEL, RIVM en GHI. Uitgebracht door NIC, 1992-1993

NIEUWSBRIEF Influenza Surveillance 1993-1994. Uitgave NIC, NIVEL, RIVM en GHI. Uitgebracht door NIC, 1993-1994

NIEUWSBRIEF Influenza Surveillance 1994-1995. Uitgave NIC, NIVEL, RIVM en GHI. Uitgebracht door NIC, 1994-1995

NIEUWSBRIEF Influenza Surveillance 1995-1996. Uitgave NIC, NIVEL, RIVM en GHI. Uitgebracht door NIC, 1995-1996

NIEUWSBRIEF Influenza Surveillance 1996-1997. Uitgave NIC, NIVEL, RIVM en GHI. Uitgebracht door NIC, 1996-1997

LIST OF PUBLICATIONS ON THE BASIS OR PARTLY ON THE BASIS OF THE DATA FROM CONTINUOUS MORBIDITY REGISTRATION SENTINEL STATIONS

BARTELDS, A.I.M., J. FRACHEBOUD, J. VAN DER ZEE.
The Dutch Sentinel Practice Network; relevance for public health policy.
Nivel, Utrecht, 1989

The Dutch sentinel practice network; relevance for public health policy, Nivel 1989, considers the now 20-year history of the Continuous Morbidity Registration Sentinel Stations the Netherlands.

The book consists of two parts.

In the first part general aspects are discussed: the origin of the project at the end of the sixties and the objectives, organization and procedure. For a number of characteristics (age and sex, size of practice etc.) a comparison is made between the spotter physicians and the total population of Dutch general practitioners. On other aspects, including the attitude of the physicians with regard to a number of facets of the work of the GP, the spotter physicians are compared with populations of GPs who have participated in other Nivel studies. Finally, the results are discussed of the analysis of the registration pattern of the spotter physicians over five years.

Topics varying from influenza(-like) illness to requests for application of euthanasia are discussed in the second part. A choice has been made among the long series of topics that have appeared on the weekly return during the existence of the sentinel stations or have been the subject of an incidental investigation.

The authors of the chapters in the second part of the book are often also the applicants for registration of a certain topic. One of the questions that is discussed in the chapters is what the importance has been of registration of the topics by the CMR Sentinel Stations.
The results of registration of topics are presented in a number of chapters in a different way from that usual in the annual reports, of which to date 18 have been published (1970 to 1987 inclusive).

In several respects this publication is therefore an extension of the usual publication policy of the CMR Sentinel Stations.
The book has been published in English to meet the need that exists in other countries for information on both Dutch health care and more specifically, the functioning of the Dutch general practitioner. The CMR Sentinel Stations is one of the projects in which information is collected on a continuous basis on problems and diseases submitted to the GP and action taken by the GP.

BARTELDS, A.I.M.
Validation of Sentinel Data.
Das Gesundheitswesen. 55 (1993) 3-7. Sonderheft 1.

The Dutch Sentinel Practice Network "de Peilstations" started in 1970. The purpose of this network is to gain a better insight into the epidemiology of a number of illnesses and conditions as they are presented to the general practitioner. The network is sponsored by the Ministry of Welfare, Public Health and Culture. Value was attached to the distribution of the spotter physicians over the country and by degree of urbanisation. The presence of 1% of the population of the four province groups and the three urbanisation groups has been observed in the practices of the spotter physicians. The completeness of the registration, the internal and the external validity of the data collected by the physicians are discussed.

FROOM, J., L. CULPEPPER.
Otitis Media in Day-Care Children.
A Report From the International Primary Care Network. Journal of Family Practice, Vol 32, no. 3 1991 p. 289-294

The relationship between day care and acute otitis media and its adverse consequences was analyzed as part of a collaborative multinational study. Data from primary care research networks in eight countries were collected on 1335 children, aged 0 to 60 months, at the time of initial visits to their primary care physicians for acute otitis media. A history of recurrent acute otitis media, poor hearing, and tonsillectomy or adenoidectomy were all more evident in day-care children aged 25 to 60 months, compared with those cared for at home. Day-care children were brought to their physicians more promptly after the onset of symptoms and received more referrals to the otolaryngologist at the time of the index visit for acute otitis media. Day care may pose a significant risk for otitis media and its adverse consequences.

CULPEPPER, L., J. FROOM,
Acute Otitis Media in Adults.
Journal of the American Board of Family Practice, 1993.

Background: Of 22 million visits annually to United States physicians for acute otitis media (AOM), almost 4 million are by patients 15 years or older. Yet the clinical spectrum and variables related to recovery have not been reported for adults.

Method: Data originated from 3,224 primary care patients with AOM, of whom 500 were 15 years and older, enrolled in a prospective study in eight countries. At initial visit, past history, symptoms, physical findings, and treatment were recorded. Follow-up at two months identified changes in treatment and recovery.

Results: Compared with children, adults sought care more quickly after symptoms onset, were more likely to have a tonsillectomy and/or adenoidectomy, and to complain of ear pain, decreased hearing, sore throat, and ear discharge. Children were more likely to have a history of recent upper respiratory infection, serous otitis, and ear tubes; symptoms of fever, diarrhoea and vomiting; and tympanic membrane (TM) findings of redness, bulging, and ear tubes in place.
History of reduced hearing, allergy, prophylactic antibiotics, and TM findings characterized as opaque or dull, fluid, draining pus, perforation, and not visualized were equally frequent in

both age groups. For adults, neither type nor duration of antibiotic affected outcome. Patients receiving antibiotics had lower rates of recovery than those who did not. The likelihood of a poor outcome increased with an increasing number of past episodes of AOM and with increasing age.

Conclusion: Although past history and symptoms differ in adults and children, the similarity of TM findings probably indicates similar pathophysiological mechanisme in both groups. Recovery is more related to individual patient characteristics and past history than to antibiotic therapy.

DEKKER, J., J.M. DRIESSEN, H. STUMPEL et al.
Referrals by general practitioners to speech therapists
Huisarts en Wetenschap; 35, 1992, No. 11, p. 425-427

For two years the participants in the Continuous Medical Registration the Netherlands kept a record of the patients who were referred to the speech therapist, for which disorders this happened and which persons had been the first to point out that referral was called for. On average 1.7 per 1000 patients were referred per year; however, there was a great interdoctor variation. A minority (38 percent) of the patients were identified by the general practitioner, the patients themselves or parents/guardians. The majority were identified by the school doctor, the school advisory service, other speech therapists, teaching staff or others. General practitioners identified above all voice/respiratory disorders. Language disorders were identified above all by school advisory and speech therapy services; patients themselves and general practitioners played a less great role in identifying these disorders. Stuttering was identified above all by patients themselves and by parents/guardians, less by school advisory services.

HOEK, H.W.
The incidence and prevalence of anorexia nervosa and bulimia nervosa in primary care.
Psychological Medicine, 1991, 21, p. 455-460

General practitioners using DSM-III criteria have studied the incidence and prevalence of anorexia nervosa and bulimia nervosa in a large (N=151,781) representative sample of the Dutch population. The incidence rate for anorexia nervosa is 6.3 and for bulimia nervosa 9.9 per year per 100 000 population. The prevalence of bulimia nervosa is three times higher in larger cities than in smaller urbanized or rural areas, while anorexia nervosa is found with almost equal frequency in areas with a different degree of urbanization.

HOEK, H.W., M. MAIWALD, A. BARTELDS, J. BOSVELD.
The incidence of eating disorders and the influence of urbanization.
1992. Abstract Fifth International Conference on Eating Disorders, New York

From 1985-1989 general practitioners using DSM-III criteria studied the incidence of anorexia nervosa and bulimia nervosa in a large (N=151,781) representative sample of the Dutch population. The first results (prevalence at 1-1-1985 and the incidence 1985-1986) have been published recently (Hoek, Psychological Medicine, 1991, 21, 455-460).
During 1985-1989 the mean incidence of anorexia nervosa was 8.1 per year per 100 000 population and 11.4 for bulimia nervosa. The period 1987-1989 shows an increase of the

incidence rates compared to 1985-1986, which will be discussed.
The prevalence of bulimia nervosa is four times higher in larger cities than in rural areas. Anorexia nervosa is found about equally frequently in areas with a different degree of urbanization. The question will be discussed, whether there is a causal relation between degree of urbanization and bulimia nervosa. There seems more evidence for a causal theory than a drift hypothesis, which has been put forward before (Hoek, 1991). Possible causal factors may be more social control in rural areas and more provoking stimuli in cities.

LINN, F.H.H., E.F.M. WIJDICKS, Y. VAN DER GRAAF, F.A.C. WEERDESTEYN-VAN VLIET, A.I.M. BARTELDS, I. VAN GIJN.
Prospective study of sentinel headache in aneurysmal subarachnoid haemorrhage.
The Lancet 1994; 344: 590-593.

Retrospective surveys of patients with subarachnoid haemorrhage suggest that minor episodes with sudden headache (warning leaks) may precede rupture of an aneurysm, and that early recognition and surgery might lead to improved outcome. We studied 148 patients with sudden and severe headache (possible sentinel headache) seen by 252 general practitioners in a 5-years period in the Netherlands.
Subarachnoid haemorrhage was the cause in 37 patients (25%) (proven aneurysm in 21, negative angiogram in 6, no angiogram done in 6, sudden headache followed by death in 4). 103 patients had headache as the only symptom, 112 of whom proved to have subarachnoid haemorrhage (6 with a ruptured aneurysm). Previous bouts of sudden headache had occurred in only 2. Other serious neurological conditions were diagnosed in 18. In the remaining 93, no underlying cause of headache was found; follow-up over 1 year showed no subsequent subarachnoid haemorrhage or sudden death. In this cohort, acute, severe headache in general practice indicated a serious neurological disorder in 37% (95% CI 29-45%), and subarachnoid haemorrhage in 25% (18-32%). 12% (5-18%) of those with headache as the only symptom.
The notion of warning leaks as a less serious of subarachnoid haemorrhage is not supported by this study. Early recognition of subarachnoid haemorrhage is important but will probably have only limited impact on the outcome in the general population.

RIJN, O.J.L. van.
Burn injuries among young children.
Thesis Maastricht, 1991 (hoofdstuk 2)

During the period of January 1988 to December 1989, medically treated burn injuries in the Netherlands were recorded prospectively by three registration systems. These systems cover patients treated in burns units, in general and university hospitals, and by general practitioners. Incidence rates and 95% confidence intervals were calculated, and basic epidemiologic data about severity and localization of the burns and about accident circumstances were collected. The overall incidence rate of medically treated burns over all levels of medical care is estimated to be about 280 per 100 000 persons per year. This overall incidence figure appeared to be about 34 times as high for 0-4 year old children: 775 per 100 000 persons per year. At all levels of medical care, scalds are the most frequent type of burns, resulting in an overall incidence rate among 0-4 year old children of 430 per 100 000 persons per year. Incidence rates are lowest among the elderly (55+), but this age group suffers a higher mortality from burns. Furthermore, it turned out that males are more prone to serious burns than females, whereas females are more often treated for less severe burns. Most of the

accident circumstances for serious burns were related to profession, whereas most of the circumstances for less severe burns were related to household activities.

VEER, M. VAN DER, L.M. VAN NOORLE JANSEN, J. NAGEL, G. VAN STEENIS, A.D. PLANTINGA, H.C. RUMKE.

Antistofpatronen in een doorsnee van de Nederlandse Bevolking.

Onderzoek Peilstations in 1980-1985. RIVM, 1993, rapportnummer 927901007.

An age-stratified investigation of antibody levels against diphtheria, tetanus, poliomyelitis, measles and rubella was carried out in 1980 and 1985. This selection of antigens was made because they are relevant to the Dutch National Immunization Programme. A nation-wide network of sentinel physicians collected 798 and 679 sera respectively in 1980 and 1985 from healthy visitors to their office aged between 10 to 65 years and over. The 46 respectively 36 sentinel practices were distributed all over the country in such a way that the collected samples could be considered representative of the Dutch population.

Generally, persons born after 1950-1955 are well protected against the vaccination target diseases. This most likely is the effect of the introduction of the National Immunization Programme in the fifties, with the exception of measles and rubella. The results of the investigation of the serum samples collected in 1985 confirmed the antibody pattern found in the sera collected in 1980.

With regard to tetanus, in all age groups older than 20 years, men are better protected than women. This difference was less pronounced with regard to diphtheria. In the elderly the prevalence of protective antibodies against diphtheria and tetanus was low. Antibodies to tetanus only develop after vaccination. Most of the elderly are not vaccinated against tetanus because in the National Immunization Programme tetanus vaccine was first used in 1953.

No difference in the sexes was found in the protective level of antibodies against poliomyelitis. This may be explained by the fact that vaccination against poliomyelitis in military service started in 1973. Among those born between 1930 and 1950, most of the persons lacking antibodies to poliomyelitis were found. This was true of the three types of poliovirus.

Vaccination against measles was included in the National Immunization programme in 1976. The participants in the present investigation are generally not vaccinated against measles. Thus, the study results were hardly influenced by these vaccinations. Antibodies against measles were shown in almost all the serum samples tested, and are likely to be acquired by natural infection. In total only 13 (1.6%) out of 798 samples were negative in 1980, and 15 (2.2%) out of 679 samples collected in 1985 were negative. It seems that people from the countryside are better protected against measles than those in urban communities. Even in these populations, in general, women are less protected against measles than men. There was no explanation for this phenomenon.

Everybody has antibodies against rubella with poor exceptions in the younger population. Rubella vaccination was incorporated in the National Immunization Programme in 1974. Similar to the situation in measles, its effect can therefore not yet be recognized in the serological responsiveness to rubella.

GOOSEN, E.S.M., A.M.M. HOOGENBOOM-VERDEGAAL, A.I.M. BARTELDS, M.J.W. SPRENGER, M.W. BORGDORFF.

Incidence van gastro-enteritis in huisartsenpeilstations in Nederland, 1992-1993

RIVM, 1995, Rapportnummer 149101012.

In the Netherlands gastro-enteritis is among the ten diseases with the highest incidence rates. A sentinel study on the incidence of gastro-intestinal disorders and the occurrence of the investigated pathogens (Campylobacter, Salmonella and Shigella) was carried out in about 40 general practices in 1992 and 1993. The sentinel stations were as representative as possible of the Dutch population. The study was undertaken by the National Institute of Public Health and Environmental Protection (RIVM) and the Netherlands Institute of Primary Health Care (NIVEL) in cooperation with the general practitioners who participated in the Dutch Sentinel Practice Network and 24 laboratories. Age and sex of patients who met the case definition were reported to NIVEL. These patients were asked by their GP to provide a stool sample and to complete a questionnaire. The number of patients that were either reported to the NIVEL or have been given a questionnaire by their GP was estimated at about 2370. A completed questionnaire was received from 58.9% (1400/2370) of these patients. Eighty percent (1400/1744) of the cases completed the questionnaire they received. Results of microbiological analysis were obtained for 89.1% (1248/1400) of patients who completed the questionnaire. The crude incidence rate of acute gastro-intestinal complaints was 55.3 per 10,000 person years, after correction for non-response it was 89.9 per 10,000 person years. The incidence was lower in 1993 than in 1992. Between men and women no differences have been found. The highest incidences have been found in the age groups under five. The incidence rate for Campylobacter was 6.9 per 10,000 person years (182 samples positive), for Salmonella 2.2 (55 samples positive) and for Shigella 0.4 per 10,000 person years (10 samples positive). After correction for non-response these incidences were 11.7 and 3.5 and 0.6 per 10,000 person years. The Salmonella incidence rate was higher in 1993 than in 1992 and higher in men than in women. The highest incidence rates for Campylobacter and Salmonella were found in the age groups under five. The (late) summer months, as expected, showed the highest incidence rates. Incidence rates for gastro-enteritis as well as for microorganisms were lower than incidences found in other sentinels. To follow trends in incidence rates and microorganisms it is necessary to undertake sentinels repeatedly with the same methodology and population. However, results cannot be generalized to the general population and consequently it remains necessary to carry out a population cohort study every 5 to 10 years.

RUWAARD, DIRK, RONALD GIJSEN, AAD I.M. BARTELDS, REMY A. HIRASING, HARRY VERKLEIJ, DAAN KROMHOUT.

Is the Incidence of Diabetes Increasing in All Age-groups in the Netherlands?

Diabetes Care, volume 19, number 3. March 1996.

OBJECTIVE: To assess possible changes in the incidence of diabetes in all age-groups in the Netherlands during a 10-year period (1980-1983/1990-1992).

RESEARCH DESIGN AND METHODS: Since 1970, a network of sentinel stations (the Dutch Sentinel Practice Network) consisting of 1% of the Dutch population has been in operation to gain insight into the morbidity patterns of the Dutch population as recorded by general practitioners. One of the items recorded from 1990 to 1992 was the incidence of diabetes. The first study with a similar design that registered the incidence of diabetes was conducted from 1980 to 1983.

RESULTS: The overall incidence of diabetes increased significantly by 12.1% in the period between the two studies. This overall increase can largely be attributed to a statistically significant increase in the age-group 45-64 years (30.5%). although not statistically significant, the 36% increase of diabetes in the age-group 0-19 years is in accordance with the increase of type I diabetes based on the first and second nationwide retrospective studies covering the total Dutch population.

CONCLUSION: There is a marked increase in the incidence of diabetes in the age-group 45-64 years. This selective increase is probably not due to a real rise caused by changes in exposure to risk factors but to an earlier recognition of symptoms and signs of diabetes followed by blood glucose measurements and/or to more intensive case finding in general practice.

SCHWARTZ, F.W. PROF. Dr. e.a.

The European Denominator Project.

Comparison and Harmonisation of Denominator Data for Primary Health Care Research in Countries of the European Community.

Hannover, 1996.

1 Summary

In most European countries, sentinel practice networks been established as an epidemiological tool in the health care system. In such networks, data are gathered from office-based physicians to monitor defined events among their patients (e.g., influenza and mumps). After adequate analysis, these data indicate spatial and temporal trends in event frequencies.

The areas covered by such sentinel practice are communities, counties, or in some cases countries. Though surveillance systems can be very useful in small regions, national differences or global trends in the frequency and distribution of health problems can be demonstrated only by joining the results of single sentinel networks. Obtaining comparable data is vital to primary care research between different regions or different countries.

1.1 Approaches to the Denominator in Sentinel Research

The goal of sentinel practice networks is to provide some information on the epidemiology of disease in the general population. Since the target population would be "probed" by a network of medical practices, there is uncertainty concerning whether the frequencies and rates observed in the network may be regarded as an unbiased reflection of the true epidemiology. Use of appropriate denominator at different levels of complexity. The more complex the denominator, the more the uncertainty may be overcome. Approaches to the denominator include: crude numbers of cases, number of sentinel practice, number of consultations, yearly or qauterly contact group, and total population (most desirable denominator).

1.2 The Denominator Problem

Chapter 4 of this report presents a review of literature, published over the last two decades, related to the denominator problem. Articles are presented in relation to the two major approaches to estimating the practice denominator, patient register methods and mathematical models. This review shows that there is no single method for solving the denominator problem. Well-kept practice lists and well-maintained age-sex registers seem to be the most

reliable approach. Mathematical models have been developed to estimate the population at risk in health systems where no practice list of other registration is available.

1.3 Current Denominator Concepts in European Countries

The current approaches to the denominator in the subject are examined in Chapter 5. In Belgium, there are two sentinel networks with GPs. However, since there are no patient lists in Belgium, the best way to estimate the size of the denominator population for Belgium seems to be by means of the number of patient contacts per practitioner.

In France, all data collected by the Sentinel General Practitioners (SGPs) are analyzed weekly and automatically returned to them through electronic bulletins. Because the French are free to choose the GPs and to visit specialists by themselves, information about one SGP's practice is difficult or impossible to collect routinely. For this reason, a direct approach to estimating the population under surveillance cannot be used, and mathematical approaches seem warranted.

In Germany, no overall sentinel system exists, but insurers could (in theory) supply data on encounters. However, since there are more than 100 insurers covering subgroups of the population (mostly based on professions), it would be difficult to obtain information on all encounters in a given area. The MORBUS sentinel practice network was set up to remedy this situation and to regularly report the absolute number of physicians with patients having a specified condition (e.g., asthma in children aged 0-8 years). Several approaches to the denominator are possible with MORBUS: contact denominator, patient denominator, served population denominator, and total population denominator.

In the Netherlands, nearly inhabitants are registered with a specific general practice, and in general specialist or hospital care is accessible only after referral by a GP. Therefore, most epidemiological calculations are based on the formal registration of patients in the participating practices. The population at risk is, in general, comparable with the total Dutch population with regard to age and sex distribution.

Similarly, in the United Kingdom, primary health care is provided by a system in which persons are registered with a specific GP who is responsible for providing total and comprehensive care regardless of the disease. The denominator is given, by age and sex, for each of the practice recording units as the population registered in the practice at the midpoint of the week reported.

1.4 Utilisation of Health Service-Key Determinants

Chapter 7 examines the relationship between the epidemiology of a disease and health service utilisation, which is heavily influenced by other factors. Literature from health psychology, health economics, medical sociology, and anthropology contributes to the current knowledge of the variables that influence health care utilisation.

1.5 Comparisons of Sentinel Data Related to Different Denominators

In Chapter 8, comparisons of sentinel data denominators are examined to help determine their relative utility under different conditions. The trend of suicide attempts was reviewed, comparing Dutch and Belgian data and the results expressed by two types of denominators: GP and population. In that study, incidence aligned more closely with population than the denominator.

In a second study, examining time-series data on HIV testing different countries, direct and indirect estimation of the population under surveillance was compared. Another study examined whether a comparison between time series of measles data in four different countries could argue for external validity of two denominator approaches (direct and indirect estimation of the population under surveillance). Again, data from sources were compared (two German, a United Kingdom and a French source) as to the consultation rate for adult asthmatics, to determine the optimum denominator for this epidemiological problem. Finally, a fourth study calculated contact for different periods of the year to assess the strength of variation among rates for different seasons. The purpose was to determine the interpretability of contact data, as a dominator, if incidence is measured at different times of the year.

1.6 Potential Ways of Harmonising Denominators

Chapter 9 reviews potential ways to harmonise the denominators for international comparisons. Four studies were undertaken for this purpose and emphasised: indicator disease, reference population, the physician as denominator, and the yearly contact group.

In the second study, "Estimation by Utilisation Rates from a Reference Population", the number of patients consulting for any reason in an unknown population is compared with patients consulting rates in a reference population. The period covered is at least one year; and the number of patients who consulted for any reason is the numerator (not the number who consulted for a particular illness).

Appendix 1

CONTINUOUS MORBIDITY REGISTRATION, SENTINEL STATIONS
Participating General Practitioners in 1996

Name:	Residence:	Province:
A.A.E.E. Brockmöller	't Zand	Groningen
J.Th. Ubbink	Groningen	Groningen
Y. Wapstra/K. Tanis (group practice)	Franeker	Friesland
S. Vriesinga	Oostermeer	Friesland
F.M. van Soest/R.F. Sparenburg/ H.D.W.A. van Gysel/Ms. J.Kappert/ Ms. J. Sanders/S.A. van Dijk (group practice)	Assen	Drenthe
H.E. Maillette de Buy Wenniger*)	Schoonoord	Drenthe
H. Nap*)	Gramsbergen	Overijssel
S. Kranenborg	Deventer	Overijssel
Th.J. van Dam/P.P.A. Kemps/B. Jansen (group practice)	Swifterbant	Flevoland
E.J. van Apeldoorn	Heerde	Gelderland
D. de long*)	Laren	Gelderland
D.G. de Jong	Barneveld	Gelderland
J.H. de Boer/Mw. I. Bruin-van Ingen/ Mw. M. Burger (group practice)	Zelhem	Gelderland
B.G.W.M. Arts	Nijmegen	Gelderland
M.A.J. Janssen	Nijmegen	Gelderland
W.J.A. Besselink	Doesburg	Gelderland
Ms. I.K.I. de Jongh-Killian/F.K.A. Fokkema (group practice)	Amersfoort	Utrecht
P.J. Kromeich	Utrecht	Utrecht
W.J. van Bodegom*)	Linschoten	Utrecht
M.M. Spoor	Alkmaar	Noord-Holland
A.I.M. Bartelds	Huizen	Noord-Holland
C.W. Willeboordse	Heiloo	Noord-Holland
H.R. Neijs*)	Broek in Waterland	Noord-Holland
D.E. Kuenen	Haarlem	Noord-Holland
Ms. Y.E.V. van Hazel/P. Olie (group practice)	Amsterdam	Noord-Holland
J. Hoornweg/Ms. E. Hoornweg-Sleeboom/ J. Schinkelshoek (group practice)	Voorhout	Zuid-Holland

Appendix 1 (continuation)

Participating General Practitioners in 1996

Name:	Residence:	Province:
A.M. van Meurs	The Hague	Zuid-Holland
R. Kanters	The Hague	Zuid-Holland
J.C.B.M. Rensing	The Hague	Zuid-Holland
D. Pasman	Maassluis	Zuid-Holland
B. Adèr	Rotterdam	Zuid-Holland
G.C.J.M. van Rooy/C.J.J. Kloos/ P. van Dijk/Ms. B. Hart/W. van Dijk (group practice)	Schiedam	Zuid-Holland
A. Lagendijk	Dordrecht	Zuid-Holland
R.R. Lankhorst	Middelburg	Zeeland
P.R.L. Vercauteren/H.J.W.A. Meijerink/ J.A.P.A. Warringa(group practice)	Terneuzen	Zeeland
A.F.A. van der Reepe/W.L.M. Rijnders (group practice)	Etten	Noord-Brabant
J.A.M. Keulers/Ms. W. van der Laan (group practice)	Ravenstein	Noord-Brabant
S.H.H.M. van der Meer	Rosmalen	Noord-Brabant
M.G.A.M de Gouw	Rosmalen	Noord-Brabant
C.H.G.M. van Moorsel	Uden	Noord-Brabant
A.M.P. Linsen	Oirschot	Noord-Brabant
S.P.F. van Rijn/M.L.F. Klomp (group practice)	Eindhoven	Noord-Brabant
R.A.M. de Jong	Maastricht	Limburg

*) With dispensary

Weekstaat t.b.v. centrale registratie
CONTINUE MORBIDITEITSREGISTRATIE, PEILSTATION 1996

Proj. no.			verslagjaar		Code peilstat.	Week no.	
4	0	0	9	6			

	Leeftijdsgroep	Influenza (-achtig) ziektebeeld[2]	Cervixuitstrijkje[3] 1e maal: Klachten/ symptomen	Cervixuitstrijkje[3] 1e maal: Louter preventieve overwegingen[4]	Cervixuitstrijkje[3] herhaling: Klachten/ symptomen[5]	Cervixuitstrijkje[3] herhaling: Louter preventieve overwegingen	Lever-, galblaas- en pancreasziekte[6]		Chronische benigne pijnstoornis[7]		Sterilisatie verricht[8]		Oestrogenen voorschrift 1e maal[9]	Suïcide(poging)[10]	Mammografie: Na 1-1-1995 voor 1e maal	Mammografie: Herhalingsonderzoek	P.I.D.	Urethritis bij man	C.A.I.D.S.[11] (concern about AIDS)	Fysiek geweld[12]		Gastro-enteritis[13]		Leeftijdsgroep	
		M+V	V	V	V	V	M	V	M	V	M	V	V	M+V	V	V	V	M	M+V	M	V	M	V		
1	< 1																							< 1	
2	1-4																							1-4	
3	5-9																							5-9	
4	10-14																							10-14	
5	15-19																							15-19	
6	20-24																							20-24	
7	25-29																							25-29	
8	30-34																							30-34	
9	35-39																							35-39	
10	40-44																							40-44	
11	45-49																							45-49	
12	50-54																							50-54	
13	55-59																							55-59	
14	60-64																							60-64	
15	65-69																							65-69	
16	70-74																							70-74	
17	75-79																							75-79	
18	80-84																							80-84	
19	≥ 85																							≥ 85	

Week nummer:_____ Opgemaakt d.d.:_____

Aantal dagen gerapporteerd (zie voetnoot 1) 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Zie ommezijde voor voetnoten

Appendix 3a

Subjects on the weekly returns in alphabetical order 1970-1997

subjects	
abortion (spontaneous)	1982-1983
abortion (request)	1970-1975
abortus provocatus	1971-1979
accidents	1971
accidents in the private sector	1981-1983
acute unusual headache	1988-1993
admission of psychiatric patient	1988
AIDS (concern about)	1988-1997
alcoholism	1975
anti-hypertensivum or diuretic (prescription)	1976
battered child syndrome (suspicion of)	1973-1974
bee or wasp sting	1992-1993
bites by pets	1986
burns	1988-1989
cervical smear	1976-1997
cerebrovascular accident	1986-1987
chronic benign pain disturbance	1995-1996
dementia	1987-1988
depression	1983-1985
diabetes mellitus	1980-1983 and 1990-1994
diarrhoea e causa ignota (acute)	1970
discharged psychiatric patient	1986-1988
dog bites	1987
drug-use (consultation)	1972-1973 and 1979-1981
dwelling (certificate for another)	1975
echography applied for	1988
exanthema e causa ignota	1970
family planning (consultations)	1970-1976
gastro-enteritis	1992-1993 and 1996-1997
hay fever	1978-1982
hepatitis	1994
herpes zoster	1997
influenza (-like illness)	1970-1997
liver, gall bladder and pancreas disease	1995-1997
malignancies	1984-1986
measles	1975-1979
measles/mumps	1990
mononucleosis infectiosa	1977-1979 and 1991

Subjects on the weekly returns in alphabetical order 1970-1997 (continuation)

subjects	
morning-after pill (prescription)	1972-1991
musculo-skeletal system (trauma of)	1984
myocardial infarction (suspicion of and/or confirmed)	1978 and 1983-1985 1991-1994
oestrogens prescribed	1994-1997
otitis media acuta	1971 and 1986
out-patient or clinical mammography	1988-1997
Parkinson's disease	1980-1985
partus immaturus	1982-1983
partus at gravidity ≥28 weeks	1982-1983
penicillin (prescription and side-effects)	1982-1983
physical violence	1996-1997
p.i.d. (pelvic inflammatory disease)	1994-1997
pregnancy (despite contraception)	1987-1991
prescription of Rohypnol	1987-1988
prostaat trouble	1997
psoriasis	1976-1977
referrals	1984
referrals for physiotherapy	1985
referrals for psycho-social problems	1986-1988
referrals for logopedics	1989-1990
rubella (-like illness)	1971
side-effect of cosmetics (suspicion of)	1992-1993
skull traumas in traffic	1975-1977
smoking (consultation with regard to addiction)	1974
sport traumas	1979-1983 and 1992-1993
sterilization of the man performed	1972-1997
sterilization of the woman performed	1974-1997
suicide (attempted)	1970-1972 and 1979-1997
tonsillectomy or adenotomy	1971
tranquillizer (prescription)	1972-1974
ulcus ventriculi/duodeni	1975
ulcus pepticum	1985-1986
urinary tract infection (prescription of medicine)	1977
urethritis of the man	1992-1997

Appendix 3b

Incidental investigations and other extra investigations, 1977-1997 (alphabetical)

subjects	
acute intoxication in the work situation	1994-1995
aggression towards GP and assistant	1997
alternative forms of treatment (registration feasible?)	1980
anorexia nervosa and boulimia	1985-1989 and 1995-1997
euthanasia (request for application)	1976-1997
incest	1988
influenza (vaccination against)	1992
Lyme disease	1991-1994
malignancies	1982-1983
mastitis puerperalis	1982
multiple sclerosis	1977-1982
serum collection	1980 and 1985
regretting sterilization	1980-1984

Appendix 4

Age structure of the population of the Netherlands by sex, in thousands, 1 January 1996 (C.B.S.)

age	men	women	total
0- 4	502	479	981
5- 9	493	471	946
10-14	461	442	903
15-19	473	451	924
20-24	547	533	1 080
25-29	663	634	1 297
30-34	677	645	1 322
35-39	630	608	1 238
40-44	586	568	1 154
45-49	614	589	1 203
50-54	460	440	900
55-59	390	385	775
60-64	338	354	692
65-69	291	337	628
70-74	237	315	552
75-79	155	244	399
80-84	91	183	274
≥ 85	54	154	208
total	7 662	7 832	15 494

(As a result of rounding-off, small differences may have occurred in the totals.)

LEEFTIJDS-GROEP	POPULATIE			"INFLUENZA"	CERVIXUITSTRIJKJE				LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
				"INFLUENZA"	1.1.94 1E MAAL WEGENS	1.1.94 1E MAAL PREVENT	HERHAL. WEGENS	HERHAL. PREVENT	LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
	M	V	T	M+V	V	V	V	V	M	V	T	M	V	T
<1 JR	576	497	1073	365	0	0	0	0	0	0	0	0	0	0
1-4 JR	3652	3408	7060	221	0	0	0	0	0	0	0	0	0	0
5-9 JR	4516	4223	8739	149	0	0	0	0	2	0	1	0	0	0
10-14 JR	4363	4153	8516	98	0	0	0	0	2	6	4	0	0	0
15-19 JR	4205	4158	8363	114	12	7	0	2	2	6	4	0	0	0
20-24 JR	4995	5275	10270	130	72	72	8	13	4	8	6	0	0	0
25-29 JR	6421	6312	12733	149	94	295	38	62	0	6	3	8	13	10
30-34 JR	6311	6046	12357	166	136	1460	83	289	11	10	11	78	66	72
35-39 JR	5955	5567	11522	180	117	1283	76	460	8	7	8	200	106	155
40-44 JR	5298	5312	10610	149	113	1195	102	573	19	13	16	121	58	90
45-49 JR	5424	5293	10717	146	79	1067	142	538	6	4	5	50	15	33
50-54 JR	4095	3936	8031	147	114	1128	112	668	20	25	22	27	3	15
55-59 JR	3430	3337	6767	157	54	1129	60	545	23	15	19	6	0	3
60-64 JR	3045	3171	6216	200	32	445	28	183	26	32	29	0	0	0
65-69 JR	2601	3074	5675	152	23	29	13	29	31	33	32	0	0	0
70-74 JR	2190	2756	4946	166	11	10	11	4	32	22	26	0	0	0
75-79 JR	1453	2139	3592	151	9	5	0	0	28	14	20	0	0	0
80-84 JR	882	1564	2446	172	0	0	6	0	79	32	49	0	0	0
>85 JR	612	1386	1998	50	0	0	0	0	16	14	15	0	0	0
TOTAAL	70024	71607	141631	155	61	560	46	221	12	12	12	40	21	30

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

BLAD 2

CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD

26-06-97

ALLE PEILSTATIONS

JAAR: 1996 WEEK: 01 T/M 52

LEEFTIJDS-GROEP	POPULATIE			OESTROGENEN	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	MAMMOGRAFIE		FYSIEK GEWELD			P.I.D.
				OESTROGENEN IL MAAL	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	1-1-95	HERHAL	FYSIEK GEWELD			P.I.D.
	M	V	T	V	M	V	T	M+V	V	V	M	V	T	V
<1 JR	576	497	1073	0	0	0	0	0	0	0	0	0	0	0
1-4 JR	3652	3408	7060	0	0	0	0	0	0	0	0	3	1	0
5-9 JR	4516	4223	8739	0	0	0	0	0	0	0	4	2	3	0
10-14 JR	4363	4153	8516	0	0	0	0	1	0	0	9	2	6	0
15-19 JR	4205	4158	8363	0	0	2	1	6	10	0	31	14	23	5
20-24 JR	4995	5275	10270	0	4	4	4	8	46	0	10	4	7	13
25-29 JR	6421	6312	12733	0	0	13	6	6	70	10	3	5	4	11
30-34 JR	6311	6046	12357	0	5	17	11	12	127	27	8	12	10	15
35-39 JR	5955	5567	11522	11	12	38	24	4	158	59	0	7	4	14
40-44 JR	5298	5312	10610	43	4	36	20	11	211	87	6	8	7	11
45-49 JR	5424	5293	10717	85	15	21	18	8	200	100	2	4	3	11
50-54 JR	4095	3936	8031	168	7	36	21	5	173	56	5	3	4	8
55-59 JR	3430	3337	6767	67	20	15	18	4	90	51	3	3	3	6
60-64 JR	3045	3171	6216	41	10	10	10	3	60	57	0	0	0	0
65-69 JR	2601	3074	5675	13	0	16	12	2	33	20	4	0	2	0
70-74 JR	2190	2756	4946	36	9	18	14	4	69	29	0	4	2	0
75-79 JR	1453	2139	3592	42	0	5	3	11	52	14	0	0	0	0
80-84 JR	882	1564	2446	32	11	0	4	8	13	13	0	0	0	0
>85 JR	612	1386	1998	14	0	0	0	0	29	7	0	0	0	0
TOTAAL	70024	71607	141631	28	6	15	10	6	87	32	6	5	5	7

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD

ALLE PEILSTATIONS

JAAR: 1996 WEEK: 01 T/M 52

LEEFTIJDS-GROEP	POPULATIE			URETHRI-TIS	CAIDS	GASTRO-ENTERITIS			/M 52 /M 52
				URETHRI-TIS	CAIDS	GASTRO-ENTERITIS			/M 52 /M 52 /M 52
	M	V	T	M	M+V	M	V	T	/M 52
<1 JR	576	497	1073	0	0	244	364	299	
1-4 JR	3652	3408	7060	0	0	211	276	242	
5-9 JR	4516	4223	8739	0	0	73	102	87	
10-14 JR	4363	4153	8516	0	2	53	46	49	
15-19 JR	4205	4158	8363	5	24	24	67	45	
20-24 JR	4995	5275	10270	22	60	46	68	58	
25-29 JR	6421	6312	12733	28	54	47	57	52	
30-34 JR	6311	6046	12357	27	40	40	50	45	
35-39 JR	5955	5567	11522	27	24	32	68	50	
40-44 JR	5298	5312	10610	21	18	36	47	42	
45-49 JR	5424	5293	10717	20	17	37	26	32	
50-54 JR	4095	3936	8031	29	8	27	41	34	
55-59 JR	3430	3337	6767	41	3	35	36	36	
60-64 JR	3045	3171	6216	39	2	33	47	40	
65 69 JR	2601	3074	5675	19	2	19	72	48	
70-74 JR	2190	2756	4946	59	0	37	40	38	
75-79 JR	1453	2139	3592	21	0	48	56	53	
80-84 JR	882	1564	2446	0	4	57	109	90	
>85 JR	612	1386	1998	33	0	49	51	50	
TOTAAL	70024	71607	141631	21	20	51	69	60	

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS — BLAD 1

PROVINCIFGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD — 17-07-97

JAAR: 1996 — WEEK: 01 T/M 52

PROVINCIE-GROEP	POPULATIE			"INFLU-ENZA"	CERVIXUITSTRIJKJE				LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
				"INFLU-ENZA"	1.1.94 1E MAAL	1.1.94 1E MAAL WEGENS PREVENT	HERHAL. WEGENS	HERHAL. PREVENT	LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
	M	V	T	M+V	V	V	V	V	M	V	T	M	V	T
GR+FR+DR	11784	12054	23837	78	82	529	52	178	5	8	6	39	17	28
OV+GLD+FLE	15914	15613	31527	245	63	513	60	186	14	15	15	40	23	32
UTR+NH+ZH	25547	26848	52392	113	40	588	36	263	9	7	8	38	16	27
ZLD+NB+LIM	16770	17081	33851	185	77	578	46	214	17	17	17	41	29	35
TOTAAL	70015	71596	141607	155	61	561	46	221	12	12	12	40	21	30

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS — BLAD 2

PROVINCIEGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD — 17-07-97

JAAR: 1996 — WEEK: 01 T/M 52

PROVINCIE-GROEP	POPULATIE			OESTRO-GENEN	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	MAMMOGRAFIE			FYSIEK GEWELD			P.I.D.
				OESTRO-GENEN 1E MAAL	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	1-1-95	HERHAL		FYSIEK GEWELD			P.I.D.
	M	V	T	V	M	V	T	M+V	V	V	M	V	T	V
GR+FR+DR	11784	12054	23837	5	0	3	1	6	66	12	7	3	5	4
OV+GLD+FLE	15914	15613	31527	33	6	11	9	5	120	77	4	6	5	10
UTR+NH+ZH	25547	26848	52392	31	8	24	16	4	70	21	5	5	6	7
ZLD+NB+LIM	16770	17081	33851	37	6	12	9	9	97	25	7	5	6	6
TOTAAL	70015	71596	141607	28	6	15	10	6	87	33	6	5	5	7

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

PROVINCIEGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD

JAAR: 1996 WEEK: 01 T/M 52

PROVINCIE-GROEP	POPULATIE			URETHRI-TIS	CAIDS	GASTRO-ENTERITIS			/M 52 /M 52
				URETHRI-TIS	CAIDS	GASTRO-ENTERITIS			/M 52 /M 52 /M 52
	M	V	T	M	M+V	M	V	T	/M 52
GR+FR+DR	11784	12054	23837	9	13	39	43	41	
OV+GLD+FLE	15914	15613	31527	41	15	47	79	63	
UTR+NH+ZH	25547	26848	52392	21	23	49	63	56	
ZLD+NB+LIM	16770	17081	33851	11	25	66	88	77	
TOTAAL	70015	71596	141607	21	20	51	69	60	

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

URBANISATIEGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD

JAAR: 1996 WEEK: 01 T/M 52

STEDELIJK-HEIDSGRAAD	POPULATIE			"INFLU-ENZA"	CERVIXUITSTRIJKJE				LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
				"INFLU-ENZA"	1.1.94 1E MAAL WEGENS	1.1.94 1E MAAL PREVENT	HERHAL. WEGENS	HERHAL. PREVENT	LEVER-, GALBLAAS EN PANCREASZIEKTE			STERILISATIE		
	M	V	T	M+V	V	V	V	V	M	V	T	M	V	T
A1+A4	10227	9965	20191	291	53	343	37	244	17	21	19	36	21	29
B1-B3,C1-C4	46420	47228	93646	131	65	538	49	238	12	12	12	41	21	31
C5	13368	14403	27770	134	53	784	42	146	6	4	5	38	19	28
TOTAAL	70015	71596	141607	155	61	561	46	221	12	12	12	40	21	30

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

BLAD 2

URBANISATIEGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD

17-07-97

JAAR: 1996 WEEK: 01 T/M 52

STEDELIJK-HEIDSGRAAD	POPULATIE			OESTRO-GENEN	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	MAMMOGRAFIE	FYSIEK GEWELD				P.I.D.
				OESTRO-GENEN 1E MAAL	CHRONISCHE BENIGNE PIJNSTOORNIS			SUICIDE (POGING)	1-1-95 HERHAL	FYSIEK GEWELD				P.I.D.
	M	V	T	V	M	V	T	M+V	V	V	M	V	T	V
A1+A4	10227	9965	20191	38	7	14	10	1	104	45	7	5	6	8
B1-B3,C1-C4	46420	47228	93646	25	5	11	8	6	87	33	6	5	6	7
C5	13368	14403	27770	32	7	28	18	7	73	22	2	4	3	8
TOTAAL	70015	71596	141607	28	6	15	10	6	87	33	6	5	5	7

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS

BLAD 3

URBANISATIEGROEP NAAR ZIEKTEBEELD GESTANDAARDISEERD

17-07-97

JAAR: 1996 WEEK: 01 T/M 52

STEDELIJK-HEIDSGRAAD	POPULATIE			URETHRI-TIS	CAIDS	GASTRO-ENTERITIS		/M 52 /M 52
				URETHRI-TIS	CAIDS	GASTRO-ENTERITIS		/M 52 /M 52 /M 52
	M	V	T	M	M+V	M	V	T /M 52
A1+A4	10227	9965	20191	47	7	40	81	60
B1-B3,C1-C4	46420	47228	93646	15	20	51	69	60
C5	13368	14403	27770	22	29	56	62	59
TOTAAL	70015	71596	141607	21	20	51	69	60

FOOTNOTES

1. Ruwaard Dirk Ronald Gijsen, Aad I.M. Bartelds, Remy A. Hirasing, Harry Verkley, Daan Kromhout. Is the incidence of Diabetes Increasing in All-groups in the Netherlands? Diabetes Care, volume 19, number 3 March 1996.

2. Dulk C.J. den, Stadt H. van de, Vliegen J.M. Een nieuwe maatstaf voor stedelijkheid: de omgevingsadressendichtheid. Mnd. stat. bevolk, (CBS) 92/7.

3. Beroepen Extramurale Gezondheidszorg. Per 1 Januari 1996. NIVEL,Utrecht.

4. The tables indicated only by figures are text tables.

5. 1-1-1996, Central Statistical Office. Persons who are entered in the Central Register of Vital Statistics (CPR) have been left out of consideration.

6. Practice census 1995.

7. In these tables and the tables in the text derived from them frequencies are given in all cases per 10 000 men, women or inhabitants, unless stated otherwise.

8. This must satisfy the following criteria (Pel, 1965):
   a. An acute beginning, i.e. at most a prodromal stage of three to four days (including pre-existent infection of the respiratory organs at a non-pathogenic level);
   b. The infection must be accompanied by a rise in rectal temperature to at least 38°;
   c. At least one of the following symptoms must be present: cough, coryza, sore throat, frontal headache, retrosternal pain, myalgia.
   Pel, J.Z.S. (1965) Proefonderzoek naar de frequentie en de aetiologie van griepachtige ziekten in de winter 1963-1964. (Huisarts en Wetenschap 8, 321).

9. Here and elsewhere in the text incidence or frequency means the frequency per 10 000 inhabitants (either men or women).

10. De Koning H.J., Van Ineveld B.M. Van Ootmarsum G.J. De kosten en effecten van bevolkingsonderzoek naar borstkanker. Rotterdam: Instituut Maatschappelijke Gezondheidszorg, 1990.

11. The calculations made in this chapter have been performed by Dr E. Ketting, now employed by the Netherlands Institute for Socio-Sexological Research

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13. Gezondheidsraad (1986). Advies inzake pijnbehandeling. Den Haag.

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15. Amsterdam Sentinel Station Project, Annual Report, 1990. Municipal Medical and Health Service, Amsterdam, p. 10-12.

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17. National Committee for AIDS control, AIDS info line, annual report. 1989-1990, Amsterdam 1991.

18. Römkens Renée: Onder ons gezegd en gezwegen. Geweld tegen vrouwen in man-vrouw relaties. Rijswijk, 1989.

19. Rijksinstituut voor Volksgezondheid en Milieuhygiene Volksgezondheid Toekomst Verkenning. SDU Ruwaard, D., Kramers, P.G.M. Den Haag. Sdu Uitgeverij, 1993: 42-47.

20. Diekstra, R.F.W., en M. van Egmond. Suicide and attempted suicide in general practice. In The Dutch Sentinel Practice Network; relevance for public health policy, blz. 202. Nivel, Utrecht 1989.

21. Een euthanasieverklaring is een schriftelijk verzoek tot euthanasie onder bepaalde voorwaarden.

22. Bartelds A.I.M. Request for application of euthanasia. In: Bartelds A.I.M. Fracheboud J, van der Zee J. (eds). The Dutch Sentinel Practice Networks; relevance for public health policy. Utrecht, NIVEL, 1989.

23. Van der Maas P.J., J.J.M. van Delden, L. Pijnenborg, C.W.N. Looman. Euthanasia and other medical decisions concerning the end of life. The Lancet 1991; 338: 669-74

24. Pijnenborg L., J.J.M. van Delden, J.W.P.F. Kardaun, J.J. Glerum, P.J. van der Maas. Nationwide study of decisions concerning the end of life practice in the Netherlands. BMJ 1994; 309: 1209-9.

25. Van der Wal G., R.L.M. Dillmann. Euthanasia in the Netherlands. BMJ 1994; 308: 1346-9.

26. Van der Maas Paul J., Gerrit van der Wal, e.a. Euthanasia, physician-assisted suicide, and other medical practices involving the end of life in the Netherlands, 1990-1995. Special report from the Netherlands, Volume 335, number 22, 1699.

27. Van der Wal Gerrit, Paul J. van der Maas, e.a., Evaluation of the notification procedure for physician-assisted death in the Netherlands. The New England Journal of Medicine, 1996, 1706.

Explanatory notes pertaining to:

Bijlage 1	
Bijlage	- Appendix
Continue morbiditeits registratie,	- Continuous morbidity registration,
peilstations	- sentinel stations
Deelnemende artsen	- Participating general practitioners
Naam	- Name
Plaats	- Residence
Provincie	- Province
Comb.-praktijk	- Group practice
Apotheek-houdend	- With dispensary
Bijlage 2	
Bijlage	- Appendix
Weekstaat t.b.v. centrale	- Weekly return for central
registratie	registration
Continue morbiditeits registratie,	- Continuous morbidity registration,
peilstations	- sentinel stations
Proj. no.	- Project number
Verslagjaar	- Year under review
Code peilstations	- Code number sentinel stations
Week no.	- Number of the week
Rapport. dagen	- Number of days over which reporting took place
Regel no.	- Line number
Leeftijdsgroep	- Age group
Influenza (-achtig ziektebeeld)	- Influenza (-like illness)
Cervixuitstrijkje	- Cervical smear
Na 1-1-1994 voor de eerste maal	- Taken for the first time after 1-1-1994
afgenomen op grond van	on the ground of
Klachten/symptomen	- Complaints/symptoms
Louter preventieve overwegingen	- Purely preventive considerations
Lever-, galblaas- en pancreas ziekte	- Liver, gall bladder and pancreas diseases
Chronische benigne pijnstoornis	- Chronic benign pain disturbances
Sterilisatie verricht	- Sterilization performed
Oestrogenen voorschrift	- Oestrogens prescribed
Suïcide(poging)	- (Attempted) suicide
(Poli) klinische mammografie	- mammography
na 1-1-1995 voor eerste maal	- Taken for the first time after 1-1-1995
Herhalingsonderzoek	- Repeat examination
P.I.D.	- P.I.D.
Urethritis bij man	- Urethritis of the man
C.A.I.D.S.	- Concern about AIDS
Fysiek geweld	- Physical violence
Gastro-enteritis	- Gastro-enteritis

Weeknummer
Opgemaakt d.d.
Aantal dagen gerapporteerd
(zie voetnoot[1])
Zie ommezijde voor voetnoot

1. Door vakantie, ziekte en andere oorzaken zal deze rapportage zich echter ook over minder dan 5 dagen kunnen uitstrekken. Het wordt van belang geacht om, zo mogelijk, ook tijdens het weekeinde waargenomen patiënten te rapporteren. (M.u.v. influenzapatiënten.)
2. Betreft uitsluitend nieuwe patiënten, ook telefonisch consult melden
3. Betreft rapportering van vrouwen bij wie na 1-1-1994 om welke reden dan ook een cervixuitstrijkje heeft plaatsgevonden. Indien bij een vrouw na 1-1-1994 opnieuw een cervixuitstrijkje wordt gemaakt, dient dit altijd onder de subrubriek "herhalingsonderzoek" geboekt te worden (zie ook voetnoot 5).
4. Bijvoorbeeld in het kader van pilcontrole, op verzoek van de vrouw zonder dat ze klachten heeft of in het kader van het bevolkingsonderzoek.
5. Bijvoorbeeld wegens verdacht preparaat of wegens technische onvolkomenheden bij onderzoek vorig preparaat.
6. Per melding S.V.P. apart formulier voor de aanvullende gegevens invullen en bij de weekstaat voegen
   Code
   Geboortedatum .....
   Geslacht
7. S.v.p. een apart formulier voor de aanvullende gegevens invullen en bij de weekstaat voegen,

- Number of the week
- Completed on
- Number of days over which reporting took place
- (See footnote number[1])
- For footnotes see reverse

1. As a result of vacation, sickness and other causes this reporting may extend over fewer than 5 days. It is considered to be of importance to report, if possible, patients observed during the weekend as well. (Influenza patients excluded.)
2. Relates solely to new patients. Report telephone calls as well.
3. Concerns reporting of women on whom a cervical smear was taken after 1-1-1994 for whatsoever reason. If a cervical smear was taken again of a women after 1-1-1994 this should always be entered under the subheading "Repeat examination" (see also footnote 5).
4. For example as part of check-up for the pill, of the woman's request without for having complaints or as part of the mass screening.
5. For example on account of suspect preparation or technical imperfections in the examination of the previous preparation.
6. Please complete a separate form and attach to the weekly return

   Code
   Date of birth
   Male/female
7. Please complete a separate form and attach to the weekly return

8. Indien het een patient(e) betreft uit een van de leeftijdgroepen, waarvan het vak gerasterd is, dus jonger dan 20 jaar en ouder dan 49 jaar, tevens exacte leeftijd hierachter vermelden.
   Leeftijd:.....
9. S.v.p. apart formulier invullen en bij de weekstaat voegen.
10. S.v.p. apart formulier invullen en bij de weekstaat voegen.
11. S.v.p. apart formulier invullen en bij de weekstaat voegen.
12. S.v.p. apart formulier invullen en bij de weekstaat voegen.
13. S.v.p. faeceskoker en enquêteformulier aan patiënt uitreiken

8. If a patient is concerned in one of the age groups whose box is filled in, younger than 20 years and older than 49 years, also give the exact age here.

   Age:.....
9. Please complete a separate form and attach to the weekly return.
10. Please complete a separate form and attach to the weekly return.
11. Please complete a separate form and attach to the weekly return.
12. Please complete a separate form and attach to the weekly return.
13. Please haand out questionnaire and faeces transport material to the patients

Tables (p 153 - p 158)

Continue morbiditeits registratie peilstations	- Continuous morbidity registration sentinel stations
Kwartaal	- Quarter
Leeftijdsgroep	- Age group
Influenza (-achtig ziektebeeld)	- Influenza (-like illness)
Cervixuitstrijkje	- Cervical smear
Klacht/symptoom	- Complaint/symptom
Herhalingsonderzoek	- Repeat smear
Lever-, galblaas- en pancreas ziekte	- Liver, gall bladder and pancreas diseases
Chronische benigne pijnstoornis	- Chronic benign pain disturbances
Sterilisatie verricht	- Sterilization performed
Oestrogenen voorschrift	- Oestrogens prescribed
Suïcide(poging)	- (Attempted) suicide
(poli) klinische mammografie	- (Clinical) mammography
na 1-1-1995 voor de eerste maal	- Taken for the first time after 1-1-1995
Herhalingsonderzoek	- Repeat examination
P.I.D.	- P.I.D.
Urethritis bij man	- Urethritis of the man
C.A.I.D.S.	- Concern about AIDS
Fysiek geweld	- Physical violence
Gastro-enteritis	- Gastro-enteritis
Provinciegroepen	- Province group
Gr + Fr + Dr	Groningen, Friesland, Drenthe
Ov + Gld + Fl	- Overijssel, Gelderland, Flevoland
Utr + NH + ZH	- Utrecht, North Holland, South Holland
Zld + NB + Lim	- Zeeland, North Brabant, Limburg

Stedelijkheidsgraad	- Degree of urbanization
5	- Rural municipalities
4-3-2	- Municipalities with urban characteristics and urbanized municipalities
1	- Municipalities with a population of 100 000 or more

Voetnoot

N.B. Als gevolg van het afronden bij het berekenen van de relatieve frequenties kunnen kleine verschillen in de totalen zijn ontstaan

- Footnote

N.B. As a result of rounding off when calculating relative frequencies, small differences may have occurred in the totals