Continuous Morbidity Registration at Dutch Sentinel Stations in 2001

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Contents

Foreword

In 2001 a large-scale study into the incidence of intestinal infections conducted by general practitioners' practices in cooperation with the RIVM was rounded off. The study investigated not only the pathogens that play a part in patients visiting their GP with an intestinal infection but also the intestinal flora of 'healthy' control patients.
The study showed that, among patients visiting their GP, bacteria, not viruses, caused intestinal infections in most cases where pathogens could be detected. For individuals **not** reporting to their GP, the pathogens were more often viral in nature (Norwalk-like virus, Sapporo virus). However, no specific pathogen could be detected in the large majority of cases.

Besides the studies into acute gastro enteritis, the Ariel study commenced in late 2000 with the cooperation of the RIVM. This is a patient-control study into acute respiratory infections in primary care. Respiratory infections place an even greater burden on health care than stomach and intestinal infections in primary care. This report, and other sources, include preliminary results of the first year of the Ariel study, which is scheduled to continue at least through September 2002.
Contrary to what has been reported on acute gastroenteritis, the past two winter seasons have been fairly quiet for acute respiratory infections.

Chronic patients form another group of patients demanding a great deal of care in primary care. After a six-year lull, the incidence of diabetes mellitus was once again a topic of registration in 2000.
The registration confirms a 30% increase in diabetes mellitus for 2000-2001 in comparison with 1990-1993. A likely explanation for this increase is the more advanced detection methods used in general practitioners' practices.

At the time CMR Sentinel Station participation in European projects has become a fact. Contributions are made to the surveillance of influenza-type disorders (EISS) and the European Union's Health Indicator Project via the Health Information from Primary Care subproject.
In the EU, gradual progress is being made with the integration of information collected on health problems in the member states.

Professor J. van der Zee
Chairman Counselling Committee

1. Introduction

Continuous Morbidity Registration is a method of gathering data by means of records kept by general practitioners. A national network of general practices, called sentinel stations, covers approximately 1% of the Dutch population. The network structure makes allowance for the geographical distribution of the population and its distribution over areas with different degrees of urbanization (see pp 15-18).
The GPs in the network, called sentinel physicians, submit a weekly form to report certain illnesses, occurrences and procedures. The form is called the weekly return. A weekly return gives a breakdown by age and, when necessary, by gender (see p. 145).
A census is held every two years among the practice populations to determine the size and make-up of the population to which the gathered data must be related. Frequencies are generally calculated by age group per 10,000 men or women (see p. 29).
Each year the Counselling Committee selects the topics to be placed on the weekly return. The committee also considers requests and suggestions received from other parties. At least five conditions must be met for a disease or occurrence to be placed on the weekly return:

1 The importance of the topic must be described.
2 Strict and unambiguous criteria must be definable for the disease or occurrence to be registered.
3 Application of these criteria must not take too much time and must fit in with the GP's work.
4 A need must exist for representative information at the national level.
5 The CMR Sentinel Stations must be the best source of information.

The recording of data for a topic is discontinued if the topic 'owner' feels that data has been collected for a sufficiently long period of time, or if a different registration system is going to gather more or less the same information, or if insurmountable problems have arisen in the recording of data.

This report gives background information on each topic included in the weekly return for the first time. Refer to previous reports for information about "old" topics. See pages 140-142 for an overview of the years when topics were first included in the weekly return.

An examination of the topics placed on the weekly returns over the years leads to the conclusion that Continuous Morbidity Registration is a name that fails to cover all aspects of the work. Some of the topics covered are interventions or occurrences rather than illnesses. The name sentinel stations is a more apt as it refers to the monitoring task which lasts for at least one year or even permanently.
Therefore this report is called Continuous Morbidity Registration, Sentinel Stations.

Besides completing the weekly returns, sentinel physicians have been providing data for "incidental studies" in the Netherlands since 1976. Doctors are questioned at the end of a year about illnesses or occurrences that occurred infrequently in the past year. This report contains neither an exhaustive statistical analysis nor a detailed discussion of the data. The purpose of the report is to compile and disseminate basic data on certain subjects.

1.1 International cooperation

The CMR Sentinel Stations have been participating in international projects since 1985.

The oldest project at present is the European Influenza Surveillance Scheme (EISS). The network of spotter GPs and the national influenza centres of the participating countries cooperate with each other in EISS. The participating countries are Belgium, Czech Republic, England, France, Germany, Italy, Netherlands, Portugal, Scotland, Spain and Switzerland. The European Commission has provided funds for the Netherlands Institute for Health Services Research (NIVEL) to coordinate EISS (www.eiss.org).

In 1998, NIVEL and Dr Douglas Fleming (UK), project leader of the British Sentinel Networks (Weekly Returns Service), jointly requested and obtained a grant for a project to harmonize health information from sentinel networks in European Union member countries. The Dutch sentinel stations are participating in the project and gathered data for it in 2000.

At the end of 2001, the 'Health Monitoring Project' was followed up by the 'Health Information from Primary Care', which enables the cooperation with other sentinel networks in the EU to continue in 2002 and 2003.

2 Counselling Committee

A condition of the grant received from the Ministry of Health, Welfare and Sport is that the Counselling Committee that oversees the registration system must in principle consist of:

1 two representatives of the Ministry of Health, Welfare and Sport;
2 the Director of the Netherlands institute for health services research (Chairman);
3 one representative of the Netherlands institute for health services research;
4 two representatives of the Health Care Inspectorate;
5 two representatives of the sentinel physicians;
6 one representative of the joint Institutes for General Practice of Dutch Universities;
7 two members with special expertise.

The committee members in 2001 were:

Counselling Committee:	Mw. G.D. van Dijk, psychologist[1]
	Dr Y.T.H.P. van Duynhoven,[7] epidemiological medical researcher
	F.K.A. Fokkema, general practitioner[5]
	R.C. Sardeman, doctor of medicine[4] from 010901
	Dr F.G. Schellevis, general practitioner/epidemiologist[3]
	Dr H. Verkleij, sociologist[7]
	J. Vesseur, doctor of medicine[4] to 010501
	A.A.M. Vloemans, doctor of medicine/epidemiologist[1]
	J.K. van Wijngaarden, doctor of medicine[4]
	Prof. J. van der Zee, Chairman[2]
Project leader:	A.I.M. Bartelds, general practitioner
Secretary:	Ms M. Heshusius-van Valen

Dr D.M. Fleming, Director of the Birmingham Research Unit of the Royal College of General Practitioners, was engaged as an adviser to the Dutch sentinel stations in 1997.

The committee met twice in 2001. There is one vacancy (for a representative of the sentinel physicians). The joint Dutch universities were not represented on the committee in 2001.

3 Sentinel station staff seminar in 2001

A project such as CMR Sentinel Stations relies heavily on contacts between the participating general practice staff, the Counselling Committee, the topic owners and the project leaders. A meeting is held annually at the start of each new registration period, which runs from 1.1 to 31.12, to promote these contacts.

The collection of data for the population study into acute gastroenteritis was concluded in December 1999. Dr M. de Wit, an epidemiologist affiliated with the Centre for Infectious Disease Epidemiology of the Netherlands Institute of Public Health and Environmental Protection, discussed the initial results of the study and made comparisons with the results of the patient-control study of patients reporting to their general practitioner.
In comparison with the study of patients seeking help from their general practitioner, the population study indicates a notably higher number of viral pathogens causing stomach flu. The accompanying symptoms are less intense and certainly of a shorter duration than stomach flu caused by bacterial pathogens in particular.

The information on eating disorders compiled by the sentinel station physicians comprise a special chapter, which Dr H.W. Hoek, psychiatrist-epidemiologist affiliated with the Parnassia Psycho-medical Centre, emphasised again in his presentation of a number of results for the period 1995-1999. At the same time, he also took the opportunity to meet with sentinel station physicians to discuss organising a follow-up study of the patients involved in the period concerned.

During 2000 data was collected for the sake of the EU-financed Health Monitoring Project. Dr R. Schellevis, a GP-epidemiologist affiliated with NIVEL, discussed the preliminary results of this registration of chicken pox and diabetes mellitus in Belgium, England and Wales, Portugal, Spain and the Netherlands.

The patient-control study into acute respiratory infections was christened ARI-EL, after the airy spirit in Greek mythology. The study commenced in week 40 of 2000 and is scheduled to continue for 2-3 years. Dr M.L. Heijnen, ARI-EL project leader and member of staff at the Centre for Infectious Disease Epidemiology of the Netherlands

Institute of Public Health and Environmental Protection, discussed the state of affairs with sentinel station physicians and assistants and reviewed the initial results of the nose and throat swabs. Although no influenza viruses were isolated on the nose and throat swabs at the time, a number of other viruses, particularly rhinoviruses, and bacteria were identified.

Distribution of sentinel stations in the Netherlands

Figure 4.1
SENTINEL STATIONS
Continuous Morbidity Registration
2001

Province group border

degree of urbanization

5: rural municipalities

4-3-2: urbanized rural municipalities and municipalities with urban features

1: municipalities with 100,000 or more inhabitants

There were 45 sentinel stations in the Netherlands in 2001. The number of general practitioners working in the sentinel station practices was 66.

The following breakdown and codes are used in processing and discussing the data:
- A: stands for the Groningen, Friesland and Drenthe province group (northern provinces);
- B: stands for the Overijssel, Gelderland and Flevoland province group (eastern provinces);
- C: stands for the Utrecht, North Holland and South Holland province group (western provinces);
- D: stands for the Zeeland, North Brabant and Limburg province group (southern provinces);
- 1: stands for urbanization degree 5 (rural municipalities)[1];
- 2: stands for urbanization degrees 4-3-2 (urbanised rural municipalities and municipalities with urban features):
- 3: stands for urbanization degree 1 (municipalities with 100,000 or more inhabitants).

Appendix 1 (pp 137-138) contains a list of the GPs who participated in the sentinel station project in 2001. Two or more GPs cooperate at fifteen of the sentinel stations (two GPs cooperate in 11 cases, three in 3 cases and six in 1 case). The percentage of GPs working in group practice nationwide was 58.9% in January 2001; the figure was 56% for the sentinel stations. There were five dispensing sentinel physicians, i.e. three in places with urbanization degree 1 and two in places with urbanization degree 2, or 7.5% of the total number of sentinel physicians. The figure for the Netherlands as a whole is 7.6%[2].

Tables 4.1 and 4.2 show the distribution of the number of sentinel physicians and sentinel stations in each province group and urbanization group in the 1992-2001 period. Adjustment to the criteria for classification according to urbanization occurs as and when necessary. A comparison with the number of GPs in the Netherlands in the different sub-groups shows that the sentinel physicians form a proportional representation.

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1 Dulk C.J. den, H. Van der Stadt, J.M. Vliegen. Een nieuwe maatstaf voor stedelijkheid: de omgevingsadressendichtheid. Mnd, stat. Bevolk, (CBS) 92/7.

2 Occupations in Extramurale Healthcare as of 1 January 2000. Nivel, Utrecht.

Table 4.1 Distribution of sentinel physicians (GPs) and sentinel stations per province group in the 1992-2001 period[3]

	A; Groningen, Friesland and Drenthe		B; Overijssel, Gelderland and Flevoland		C; Utrecht, North and South Holland		D; Zeeland Noord-Brabant and Limburg	
province-group	GPs	Sentinel Stations	GPs	Sentinel Stations	GPs	Sentinel Stations	GPs	Sentinel Stations
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
1997	12	6	15	11	19	15	18	10
1998	12	6	16	12	23	16	14	9
1999	12	6	17	12	24	16	14	9
2000	13	6	17	12	27	21	12	8
2001	13	6	15	10	23	19	14	10

[3] Tables indicated only by figures are text tables.

Table 4.2 Distribution of sentinel physicians (GPs) and sentinel stations per urbanization degree in the 1992-2001 period

	1; Rural Municipalities[4]		2; urbanised rural municipalities together with municipalities with urban characteristics		3; municipalities with 100 000 or more inhabitants		total	
urbanization degree	GPs	Sentinel Stations	GPs	Sentinel Stations	GPs	Sentinel Stations	GPs	Sentinel Stations
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
1997	10	7	43	27	11	8	64	42
1998	11	8	44	28	10	7	65	43
1999	10	7	47	29	10	7	67	43
2000	10	7	46	29	13	11	69	47
2001	10	7	43	27	13	11	66	45

[4] The new CBS criterion for degree or urbanization has been used since 1994 for the classification of sentinel stations.

5 Practice populations

A census of all practice populations was held in 2001. The results of the census have been used in the processing of CMR Sentinel Station data since 1 January 2002. A new census was held in 2003. The CMR project was organised with the aim of achieving a sample of approximately 1% of the population of the Netherlands. The structure of the project takes geographical distribution (the 'province groups' referred to above) and distribution over areas with differing degrees of urbanization ('urbanization degree') into account. A check confirmed that this objective was by and large still being met, as the tables below show.
The population of the Netherlands increased in 2000 by 123,125 and stood at 15 987,075 on 1 January 2001.

Table 5.1 Comparison of the population of the sentinel practices with the total population of the Netherlands

	Population of the Netherlands[2]	Number of Sentinel Stations patients[1] (with percentages)
province group:		
A	1,671,543	24,584 (1.5%)
B	3,349,530	34,020 (1.0%)
C	7,448,216	56,524 (0.7%)
D	3,517,795	34,569 (1.0%)
sex:		
men	7,909,855	73,272 (0.9%)
women	8,077,220	76,425 (0.9%)
total (1-1-2001)	15,987,075	149,697 (0.9%)

Province group A (the northern provinces) is over-represented. Province group D is under-represented. The representation of the various degrees of urbanization was more equal up to and including 2000. In 2001 the representation of various degrees of urbanization was not monitored. The different degrees of urbanization are more evenly represented. Statistics Netherlands (CBS) introduced a new urbanization criterion at the start of the 1992 statistics year. The criterion is the density of addresses in an area[2].

The table below shows the percentages of men and women in the Dutch population who are registered with the sentinel practices, with a breakdown according to age group, province group and degree of urbanization.

1 Praktijktelling 1999.

2 1-1-2001, Centraal Bureau voor de Statistiek, Personen, die zijn ingeschreven in het centraal persoonsregister (CPR) zijn buiten beschouwing gelaten.

Table 5.2 Percentage of men and women in the Dutch registered with sentinel practices by age province group and the Netherlands

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

5 Scale and continuity of reporting

The number of days per year that each sentinel station reports and the combined number of reporting days per week of all sentinel stations have been checked and processed since 1975. This check is made to monitor the scale and continuity of reporting. The sentinel physicians generally let it be known when they are unable to report due to holidays or personal circumstances. A sentinel physician is contacted by telephone if a weekly return is not received on time.

The maximum number of days on which reporting is possible depends on the number of weeks in the year and on the number of sentinel stations. The figure in 2001 was 11.700 (52 weeks x 5 days x 45 sentinel stations). Table 6.1 shows the absolute numbers and the percentages.

Table 6.1 Maximum number and actual number of reporting days per year

year	maximum number reporting days	actual number of reporting days	absolute number of percentage
1992	11,395	10,141	89.0%
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%
1997	10,920	9,340	85.5%
1998	11,395	9,733	85.4%
1999	11,180	9,500	85.0%
2000	12,220	10,217	83.5%
2001	11,700	9,455	80.8%

The percentage of reporting days in 2001 was slightly lower than in previous years.

The table below contains a breakdown by province group and urbanization degree and shows that no major differences exist.

Reporting in the major cities of the Netherlands (75.7%) is the lowest in the urbanization degree groups. Reporting in the northern provinces (86.3%) is the highest in the province groups.

Table 6.2 Reporting by province group and degree of urbanization

province group		degree of urbanization	
A	86.3%	1	83.5%
B	82.8%	2	82%
C	77.8%	3	75.7%
D	81.4%		

Figure 6.1 shows the weekly returning of all sentinel stations. The influence of public holidays is clearly visible. The average number of non-reporting days per week is 43 (maximum 45 x 5 = 225).

Figure 6.1 Number of days in 2001 that data was recorded

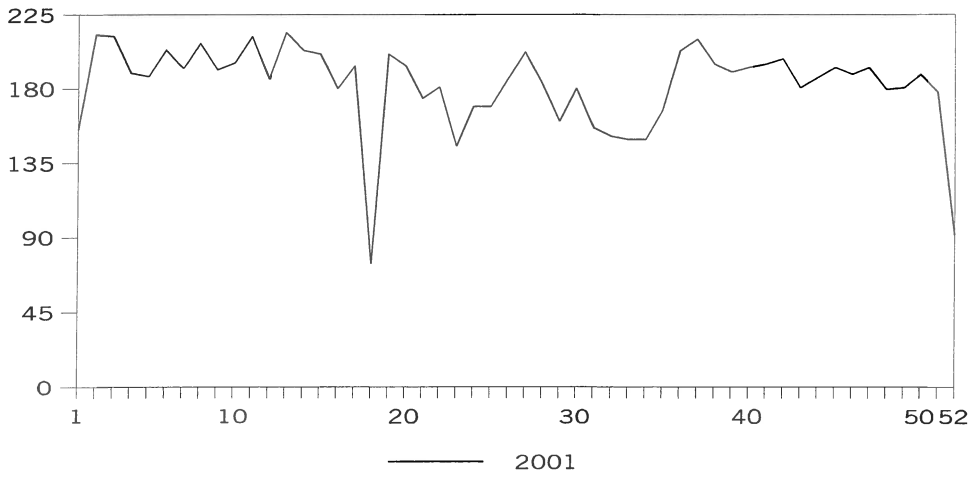

Table 6.3 shows the frequency distribution of the number of non-reporting days at each sentinel station. The average number of non-reporting days per sentinel station was 49, slightly higher than in 2000.
A breakdown into single and group practices reveals a significant difference, i.e. 58 and 30 days, respectively. This reflects the frequently voiced opinion that collaboration enhances the continuity of reporting.

Table 6.3 Frequency distribution of the number of non-reporting days per sentinel station

Number of days with no reporting	number of sentinel stations									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
0	2	3	4	3	4	3	3	3	3	3
1- 9	7	7	2	3	4	4	5	4	4	1
10-19	4	1	5	3	2	2	2	1	1	2
20-29	5	6	2	6	5	6	4	3	1	1
30-39	13	13	13	11	6	6	7	10	4	3
40-49	9	11	12	12	13	12	9	14	16	14
50-59	1	3	5	3	7	6	5	3	11	7
60-69	1	-	2	-	1	1	6	1	2	5
70-79	-	-	-	1	-	1	-	-	4	3
80-89	-	-	-	1	-	-	-	1	1	3
90-99	-	-	-	-	-	-	1	1	-	2
≥ 100	1	1	-	1	1	1	1	2	-	1
total number of sentinel stations	43	45	45	44	43	42	43	43	47	45
average	29	32	32	35	35	37	39	39	43	49
median	33	34	37	37	40	40	40	40	46	48

Closer examination of this table reveals a decrease in reporting over the years. A major failure to report – i.e. no reporting by a sentinel station on more than 50 days per year – occurred at almost 47% of the sentinel stations in 2001. Illness of the sentinel physician and changes of GP staffing at a sentinel station are the most frequent reasons for non-reporting over a prolonged period of time. A physicians 'strike' contributed to the increased failure to report in 2001.

Weekly return (Appendix 2, page 139)

The topics contained in the weekly returns for 2001 are listed below. The year in brackets is the year the topic first appeared on the weekly return:

1 Influenza (and influenza-like illnesses) (1970);
2 Zanamivir prescription (2000);
3 Walking aids (prescription of) (2001);
4 Chickenpox (2000);
5 Depression (2000);
6 Herpes zoster (1997);
7 Diabetes mellitus (2000);
8 Suicide (and attempted suicide) (1979);
9 GGZ (2001);
10 Urethritis in men (1992);
11 Fear of AIDS (1988);
12 Gastroenteritis (1996);
13 Prostate complaints (1997);
14 Whooping cough (1998).
15 Acute respiratory infections (2001)

A report covering one week is the norm. Consequently, a sentinel physician also reports patients seen on his/her 'weekend off' by a locum (with the exception of influenza and influenza-like illnesses). Diagnoses and advice given by telephone are not recorded on the weekly returns, with the exception of those concerning influenza.

An alphabetical list of all topics since 1970 can be found in Appendix 3 (pp 140-142) together with the years in which data was recorded.

Data stated on weekly returns

This report contains the results of the weekly returns for 2001. The data from the returns were processed by NIVEL.

Three tables are produced routinely:
1 absolute number of patients by sex and age group;
2 absolute number of patients by sex and province group;
3 absolute number of patients by sex and degree of urbanization.

Tables 1, 2 and 3 are printed out each week for surveillance purposes, and each quarter and each year for reporting purposes. For the convenience of the sentinel physicians, the first table is also produced every quarter for every sentinel station.

With the exception of the information provided per sentinel station, the data is also presented per 10,000 of the total practice population (relative frequencies). Frequencies have been rounded off. A frequency below 0.5 per 10,000 inhabitants is rounded off to '0'. '_' denotes that no cases were reported.
A frequency based on fewer than five reported cases is stated in brackets. A frequency of new cases of a disease in a certain period of time is referred to as 'incidence' or 'incidence rate' in epidemiology. The term 'prevalence' refers to all cases of the disease that exist in a certain period of time or at a certain moment in time. There are also absolute and relative incidences and prevalences.
The cumulative incidence or period prevalence is calculated in this report in all instances per 10,000 inhabitants, men or women. Appendix 5 (p 144) shows the age structure of the Dutch population on 1 January 2000 to allow the calculation of absolute numbers for the Netherlands.

The tables state instances where a sentinel station did not report over a full week because of circumstances such as the illness or holiday of a GP.
Data from practices that reported 0, 1 or 2 days of the week were not processed and their populations were disregarded in the calculation of frequency. Data from practices

that did report on more than 2 days per week were processed. A correction factor used to be applied for this situation until 1978. An examination of the number of times that a correction was applied revealed that its influence on the total was negligible. Therefore, the correction was dropped with effect from 1 January 1978. Moreover, enquiries among sentinel physicians revealed that an absence of 1 or 2 days merely resulted in the work being shifted to a different time.
The tables were produced using the weekly returns, with frequencies being calculated on the basis of the average population present in the period concerned.

As mentioned in the introduction, the purpose of this report is to present data, not to provide a complete analysis of that data.

The following annual tables are included (pp 145-153).

1 Cumulative, i.e. all sentinel stations in a standardised format, year 2001, weeks 01-52, pp 1-3[1].
2 Province group standardised according to clinical picture, year 2001, weeks 01-52, pp 1-3[1].
3 Degree of urbanization, standardised according to clinical picture, year 2001, weeks 01-52, pp 1-3[1].

[1] Unless stated otherwise, these tables and related text tables are based in all instances on frequencies per 10,000 men, women or inhabitants.

Influenza(-like illness)

Influenza[1] is the only topic to have appeared on the weekly returns since the start of the sentinel station project. The data on this subject are regularly disseminated and used internationally. As soon as an increase in the incidence is detected, the numbers, as well as the virological and serological results, are reported weekly to the WHO in Geneva. This is the Netherlands' contribution to the worldwide influenza surveillance effort.

Each year the incidence of influenza-like illnesses (ILI) is reported to the European Influenza Surveillance Scheme (EISS, www.eiss.org) on a weekly basis starting in week 40. The RIVM reports to EISS the results of its study of influenza viruses in the nose and throat swabs taken by the sentinel physicians.

Influenza 2000/2001 and 2001/2002

9.1.1 2000/2001 season

Figures 9.1-9.3 show the number of cases of influenza-like illnesses per 10,000 inhabitants per week for the Netherlands and by province group and degree of urbanization for the 2000/2001[2] season. Figures 9.4-9.6 show the same data for the 2001/2002 season. The progress of influenza-like illness in the first weeks of 2001

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1 This must satisfy the following criteria (Pel, 1965):
- a An acute initial stage, 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).

2 Here and elsewhere in the text, incidence is defined as the relative frequency per 10,000 inhabitants (both men and women).

was covered in the report on 2000.

The 2000/2001 season was the mildest since CMR sentinel physicians began registering influenza-like illnesses (see table 9.1). The first influenza virus of the season was isolated by NIVEL/RIVM surveillance in week 48. The virus detected was of the influenza A/H_1N_1 strain.
The clinical incidence of ILI rose insignificantly in the first weeks of 2001. The highest rate of activity was observed in weeks 4 and 5 with respectively 6.7 and 6.5 cases per 10,000 inhabitants. The highest incidence in the province groups was registered in the northern provinces in week 5: 13.4 per 10,000 inhabitants. Among the urbanization categories, the large cities showed the most activity, reporting 11.2 cases per 10,000 inhabitants in week 4 of 2001.

The influenza A/H_3N_2 virus was largely absent and influenza B was spotted only sporadically (twice). Influenza A/H_1N_1 was the dominant strain during the 2000/2001 season.

Figure 9.1 Number of patients with influenza(-like illness) per week and per 10,000 inhabitants in the Netherlands, 2000/2001

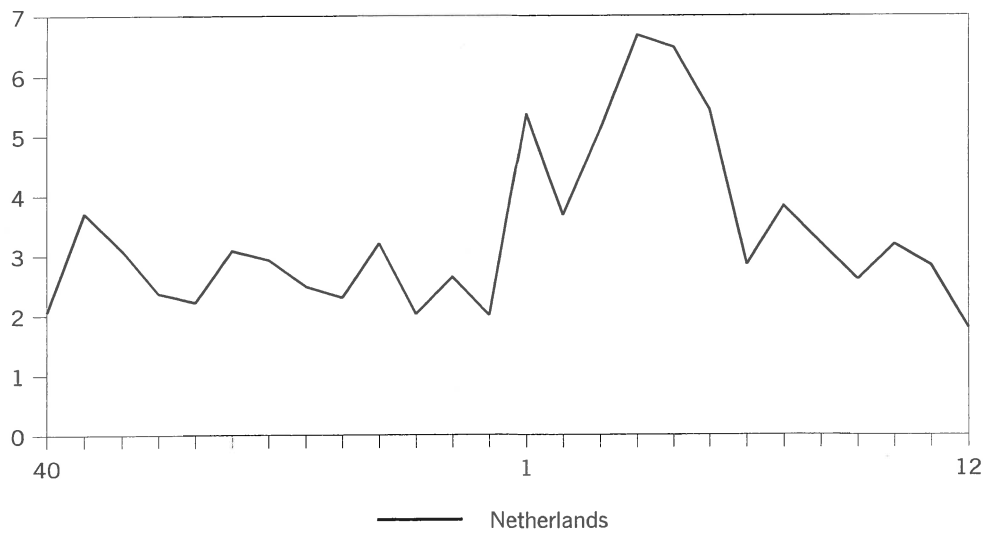


Figure 9.2 Number of patients with influenza(-like illness) per week and per 10,000 inhabitants, by degree of urbanization, 2000-2001

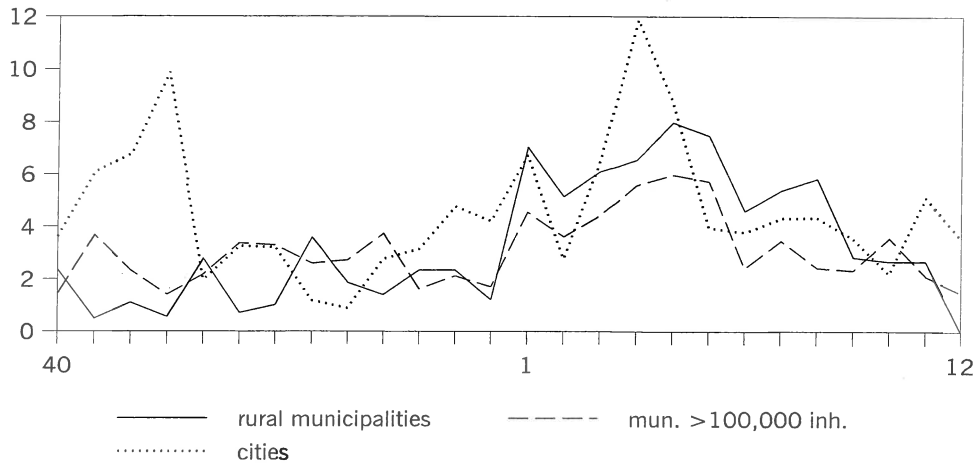
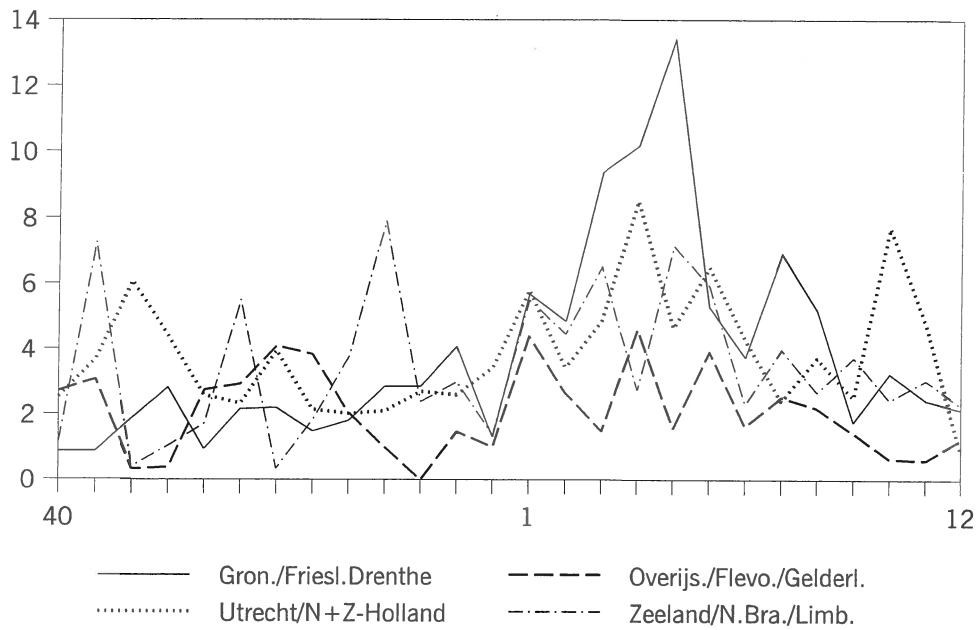


Figure 9.3 Number of people with influenza(-like illness) by province group per week per 10,000 inhabitants, 2000-2001



9.1.2 2001/2002 season

Similar to the previous season, the 2001/2002 influenza season was mild. There was an indication of a slight increase in influenza activity in week 2 of 2002 but it wasn't until week 4 that when the number of reports from general practitioners increased significantly. Week 9 of 2002 had the highest number of incidents: 12.7 per 10,000 inhabitants.
The southern provinces experienced the most influenza activity during this season; the highest rate of activity was observed in week 7 with 27 cases per 10,000. The western provinces were affected to a lesser degree, with no more than 14 cases reported per 10,000 in week 10. The eastern and northern provinces showed little influenza activity this season.
Influenza A/H_3N_1 (93%) was the dominant strain, while and influenza B viruses were also isolated. The influenza A subtype identified is closely related to the vaccination strain from the 2001/2002 season, which was not the case for the influenza B virus (see also www.nl/influenza/influenza.html).

Figure 9.4 Number of people with influenza(-like illness) in the Netherlands per week per 10,000 inhabitants, 2001/2002

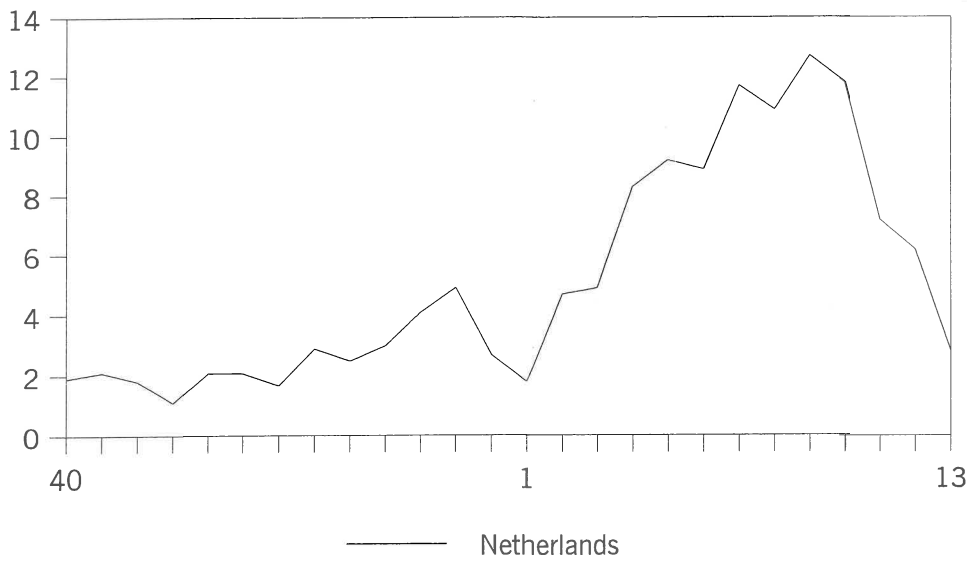


Figure 9.5 Number of people with influenza(-like illness) by degree of urbanization per week per 10,000 inhabitants, 2001/2002

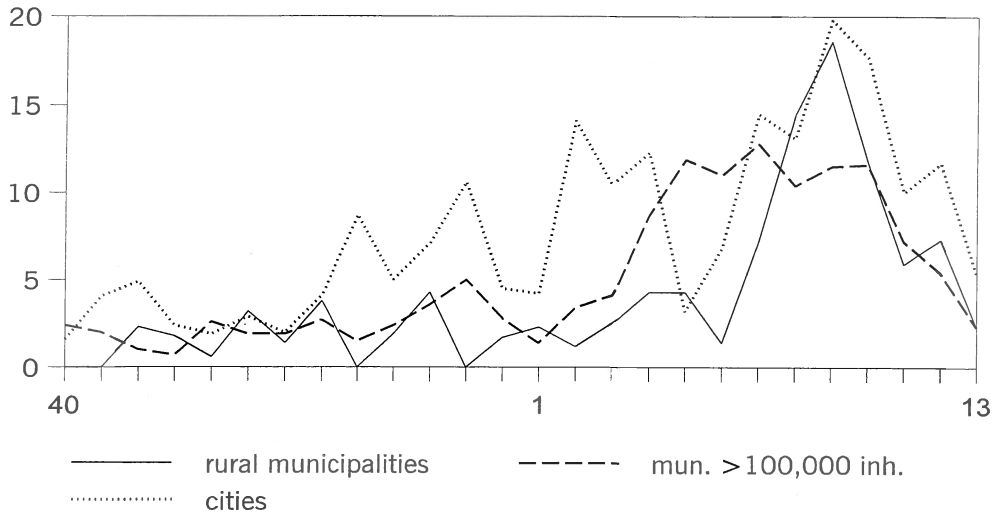


Figure 9.6 Number of people with influenza(-like illness) by degree of urbanization per week per 10,000 inhabitants, 2001/2002

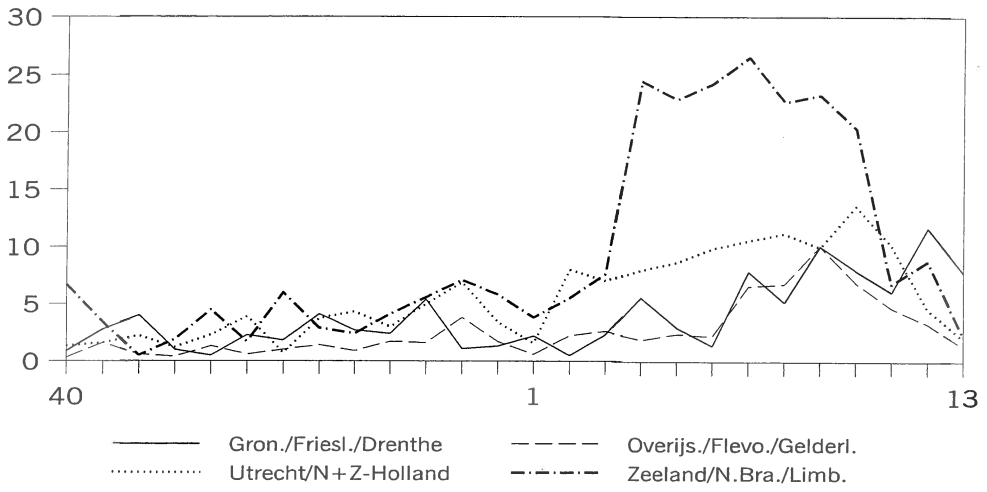


Table 9.1 Number of patients with influenza(-like illness), per 10,000 inhabitants, 1992-2002

year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
total calendar year	244	484	107	315	155	233	248	254	197	113	
highest weekly incidence per 'season'	27	54	16	39	29	17	23	32	7	13	

9.2 Influenza(-like disorders) in Europe in the 2001/2002 season (www.eiss.org)

The year 2001/2002 proceeded differently for the participating countries in the European Influenza Surveillance Scheme (EISS), which was also the case in 2000/2001. In France, the first sporadic influenza B viruses were isolated in week 47, followed by influenza A viruses as of week 48 in Romania and France, with the influenza A(H_1N_1) isolated in the former and the influenza A(H_3N_2) in the latter. The influenza A(H_1N_1) was also discovered in Slovenia in week 49. Starting in week 50, activity increased in the countries mentioned as well as in Belgium.
Influenza really took hold in Europe after the New Year. France was the epicentre from which influenza activity spread across West Europe: Belgium, Spain and somewhat later Switzerland, Italy and Portugal. Week 3 of 2002 was still very quiet in England, Ireland, Scotland and Wales, as well as Germany. In these countries, the season either remained quiet (the UK and Ireland) or got underway somewhat later (Germany, Italy, Poland, the Czech Republic and Slovakia). Both influenza A and B viruses were active, with influenza A(H_3N_2) the dominant strain.
The isolation of influenza A(H_1N_2) and discovery of a variant of the influenza B deviating from the vaccine strain were notable achievements for this influenza season.

This topic will remain on the weekly return.

Publications based fully or partly on continuous morbidity registration data

HEIJNEN M.L.HA., G.F. RIMMELZWAAN, A.I.M. BARTELDS, J.C. DE JONG, B. WILBRINK
Winter 2001/2002 in the Netherlands: a quiet season.
Stand van zaken op 19 maart 2002.
Infectieziekten Bulletin, 2002, volume 13, nr. 4; 156-157

Up until now it has been a relatively quiet influenza season. The influenza activity is caused mainly by influenza A viruses. All influenza A virus isolates typed until now are the A/H3N2-subtype and are closely related to the vaccination strain for this subtype. Of the 10 types of already analysed influenza B virus isolates in the Netherlands there are 3 deviations from the vaccination culture for this type. In Europe, a new influenza virus subtype, A/H1N2, was detected in the UK and France. This virus has no pandemic potential.

HEIJNEN M.L.A., A.I.M. BARTELDS, J.C. DE JONG, G.F. RIMMELZWAAN, M.F. PEETERS, B. WILBRINK.
Influenza en RS-virusinfecties in winter 2000/2001 stand van zaken op 12 februari 2001.
Infectieziekten Bulletin, 2001, volume 12 nr. 2; 50-51.

Until now it has been quiet concerning influenza this winter in the Netherlands, but possibly we are at the verge of the yearly epidemic. All but one Dutch influenza virus isolated characterised so fair are of the A(H1N1) subtype and are related closely to the strain for this subtype in the vaccine. Until now, one influenza B virus has been isolated. The peak of the yearly epidemic of RS-virus infections was in week 1; the number of RS-virus infections reported started to decrease in week 2.

WILBRINK B., P. LEXMOND, H. VAN DER NAT, W.E. VAN DE BRANDHOF, H. BOSWIJK, M.L.A. HEIJNEN.
Influenzavirus-detectie; PCR versus viruskweek.
Infectieziekten Bulletin, 2001, volume 12 nr. 10; 365-367

During influenza surveillance nose/throat swabs from patients are routinely analysed by virus culture to detect influenzavirus. The swabs from 2 winters were also analysed by CPR resulting in a 21% increase in the detection of influenzavirus. However, the early warning of influenza being present was not advanced. Inf Bull; 12-10:365-367.

BRANDHOF VAN DEN W.E., A.I.M. BARTELDS, B. WILBRINK, C. VERWEIJ, K. BIJLSMA, H. VAN DER NAT, H. BOSWIJK, J.D.D. PRONK, J.W. DORIGO-ZETSMA, M.L.A. HEIJNEN.
Surveillance of acute respiratoire infections in general practice - The Netherlands, winter 1998/1999 and 1999/2000.
RIVM, 2001, report 217617003.

TJHIE JEROEN H.T., J.W. DORIGO-ZETSMA, R. ROOSENDAAL, A.J.C. VAN DER BRULE, T.M. BESTEBROER, A.I.M. BARTELDS, C.M.J.E. VANDENBROUCKE-GRAULS.
Chlamydia pneumoniae and Mycoplasma pneumoniae in Children with Acute Respiratoire Infection in General Practices in the Netherlands.
Scan J Infect Dis, 2000, 13-17.

MEIJER A., C.F. DAGNELIE, J.C. DE JONG, A. DE VRIES, T.M. BESTEBROER, A.M. VAN LOON, A.I.M. BARTELDS, J.M. OSSEWAARDE.
Low prevelance of Chlamydia pneumoniae and Mycoplasma pneumoniae among patients with symptoms of respiratory tract infections in Dutch general practices.
European Journal of Epidemiology, 2000, 16; 1099-1106.

HEIJNEN M.L.A., J.D.D. PRONK, A.I.M. BARTELDS, B. WILBRINK.
Respiratoire infecties in Nederland: voorlopige resultaten NIVEL/RIVM surveillance winter 1999/2000.
Infectieziekten Bulletin, 2000, jaargang 11 nr. 6; 97-98.

HEIJNEN M.L.A., A.I.M. BARTELDS, G.F. RIMMELZWAAN.
Influenza in winter 1999/2000.
Infectieziekten Bulletin, 2000, jaargang 11 nr. 2; 24-26.

FLEMING, D.M., M. ZAMBON, A.I.M. BARTELDS.
Population estimates of persons presenting to general practitioners with influenza-like illness in sentinel practice networks in England and Wales, and in the Netherlands
Epidemiol. Infect. 2000, 124, 245-253

FLEMING, D.M., M. ZAMBON, A.I.M. BARTELDS, J.C. DE JONG.
The duration and magnitude of influenza epidemics: A study of surveillance data from sentinel general practices in England, Wales and the Netherlands
Eur. J. of Epid., 1999; 467-473

WILBRINK, B., J.D.D. PRONK, A.I.M. BARTELDS, J.W. DORIGO-ZETSMA, M.L.A. HEIJNEN.
Surveillance of respiratory pathogens and influenza-like illnesses in general practices in The Netherlands, winter 1999/2000.
European Society for Clinical Virology, Glasgow, Sept. 2000.

BARTELDS, A.I.M., J. VAN DER ZEE.
Geen paniek door griep.
Medisch Contact, 2000, nr. 18

ALBERT, J. DE NEELING, WILFRID VAN PELT, CEES HOL, ERIC E.J. LIGTVOET, LUC J. M. SABBE, AAD BARTELDS AND JAN D.A. VAN EMBDEN.
Temporary Increase in Incidence of Invasive Infection Due to Streptococcus pneumoniae in the Netherlands
CID 1999; 29, December; 1579-80

WILBRINK, B., J.W. DORIGO-ZETSMA, A.I.M. BARTELDS, M.J.W. SPRENGER, M.L.A. HEIJNEN.
Surveillance of respiratory pathogens and influenza-like illnesses in general practices in the Netherlands in winter 1998/'99.
European Society for Clinical Virology, Budapest, Sept. 1999.

DORIGO-ZETSMA, J.W.
Respiratory infections in Nederland: voorlopige resultaten NIVEL/RIVM surveillance winter 1998/99.
Infectieziekten Bulletin, 1999, volume 10 no. 6; 119-120

WILBRINK, B., J.W. DORIGO-ZETSMA.
Respiratory infections in Nederland: Moleculaire diagnostiek.
Infectieziekten Bulletin, 1999, volume 10 no. 4; 75-78

HEIJNEN, M.L.A., A.I.M. BARTELDS, G.F. RIMMELZWAAN, J.W. DORIGO-ZETSMA, J.C. DE JONG, M.J.W. SPRENGER.
Respiratory infections in Nederland: Update influenza en respiratory syncytial virus in winter 1998/99.
Infectieziekten Bulletin, 1999, volume 10 no. 2; 81-84

HEIJNEN, M.L.A., J.W. DORIGO-ZETSMA, A.I.M. BARTELDS, B. WILBRINK, M.J.W. SPRENGER.
Surveillance of respiratory pathogens and influenza-like illnesses in general practices. The Netherlands, winter 1997/98.
Eurosurveillance 1999, 4: 8-4

HEIJNEN, M.L.A., A.I.M. BARTELDS, B. WILBRINK, C. VERWEIJ, K. BIJLSMA, H. VAN DER NAT, H. BOSWIJK, A.S. DE BOER, M.J.W. SPRENGER, J.W. DORIG-ZETSMA.
Surveillance of acute respiratory infections in general practices - The Netherlands, winter 1997/98.
RIVM, 1999, Report no. 217617 001

BESTEBROER, T.M., A.I.M. BARTELDS, M.F. PEETERS, A.C. ANDEWEG, J.J. KERSSENS, K. BIJLSMA, G.F. RIMMELZWAAN, T.G. KIMMAN, C. VERWEIJ EN J.C. DE JONG
Virological NIVEL/RIVM surveillance of respiratory virus infections in the 1996/97 season
RIVM, 1999, Report no. 245607 005

NIEUWSBRIEF Influenza Surveillance 1996-1997. A publication of NIC, NIVEL, RIVM and GHI. Published by NIC, 1996-1997
NIEUWSBRIEF Influenza Surveillance 1997-1998. A publication of NIC, NIVEL, RIVM and IGZ. Published by NIC, 1997-1998
NIEUWSBRIEF Influenza Surveillance 1998-1999. A publication of NIC, NIVEL, RIVM and IGZ. Published by NIC, 1998-1999
NIEUWSBRIEF Influenza Surveillance 1999-2000. A publication of NIC, NIVEL, RIVM and IGZ. Published by NIC, 1999-2000
NIEUWSBRIEF Influenza Surveillance 2000-2001. A publication of NIC, NIVEL, RIVM and IGZ. Published by NIC, 2000-2001
NIEUWSBRIEF Influenza Surveillance 2001-2002. A publication of NIC, NIVEL, RIVM and IGZ. Published by NIC, 2001-2002

Epidemiologics reports

JONG DE J.C., G.F. RUMMELZWAAN, A.I.M. BARTELDS, B. WILBRINK, R.A.M. FOUCHER, A.D.M.E. OSTERHAUS
Het influenzaseizoen 2000/'01 en vaccinsamenstelling voor het seizoen 2001/'02.
Ned. Tijdschr Geneesk 2001, 145(40); 1945-1950.

RIMMELZWAAN, G.F., J.C. DE JONG, A.I.M. BARTELDS, J.W. DORIGO-ZETSMA, R.A.M. FOUCHIER, A.D.M. OSTERHAUS.
Het influenzaseizoen 1999/2000 en de vaccinsamenstelling voor het seizoen 2000/'01.
Ned Tijdschr. Geneesk. 2000, 144(41) 1968-1971

RIMMELZWAAN, G.F., J.C. DE JONG, A.I.M. BARTELDS, J.W. DORIGO-ZETSMA, R.A.M. FOUCHIER EN A.D.M.E. OSTERHAUS.
Het influenzaseizoen 1998/'99; vaccinsamenstelling voor 1999/2000
Ned. Tijdschr. Geneeskunde, 1999; 143(40): 2015-18

CLAAS, E.C.J., A.I.M. BARTELDS, J.W. DORIGO-ZETSMA, G.F. RIMMELZWAAN, J.C. DE JONG EN A.D.M.E. OSTERHAUS.
Het influenzaseizoen 1997/'98 en de vaccinsamenstelling voor 1998/'99.
Ned Tijdschr Geneeskunde, 1998; 142(44) : 2423-7

RIMMELZWAAN, G.F., J.C. DE JONG, A.I.M. BARTELDS, E.C.J. CLAAS, J.K. VAN WIJNGAARDEN EN A.D.M.E. OSTERHAUS.
Influenza in het seizoen 1996/'97; vaccinsamenstelling voor het seizoen 1997/'98.
Ned Tijdschr. Geneesk., 1997, 141: 1743-7

EISS publications

MANUGUERRA, J.C., A. MOSNIER.
On a behalf of EISS (European Influenza Surveillance Scheme).
Surveillance of influenza in Europe from October 1999 to February 2000. Eurosurveillance 2000; 5: 63-68

MANUGUERRA J.C., A. MOSNIER, W.J. PAGET.
Monitoring of influenza in the EISS European network member countries from October 2000 to April 2001.
Eurosurveillance 2001; vol. 6 no. 9; 127-135.

Zanamivir (prescription of)

The availability of neuramidase inhibitors, the new influenza medications, was expected to have an affect on GPs and their practices[1].

The results of the registration of influenza-like illness (ILI) were also expected to be affected. It is conceivable that if a rise in influenza activity was registered for the 'influenza' season, Zanamivir would attract public attention. This publicity might encourage people with an influenza-like illness who normally would not have consulted their GP before, because no specific treatment was available, to do so.

This would distort the results of the registration in comparison to previous years. Consequently GPs were asked to register every request for Zanamivir so that this distortion could be measured.

The aim of the questionnaire is to obtain information about the background of the request and whether the request was granted.

Table 10.1 gives the number of persons in 10,000 who requested a prescription for Zanamivir by province group and by degree of urbanization.

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[1] Cox N.J., K. Subbaro. Influenza, The Lancet Vol. 354, October 9, 1999, pp. 1277-1282.

Table 10.1 The number of persons in 10,000 who requested a prescription for Zanamivir by province group, by degree of urbanization and for the Netherlands as a whole, 2001-2002

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
2000	1	2	3	1	2	2	4	2
2001	0	0	0	2	1	1	0	0

Requests for Zanamivir prescriptions were seldom reported in 2001. All requests were made during the first quarter of 2001. The absolute number of reports was 6. Additional information was obtained regarding 5 of the requests, all of which were granted.

The majority of requests involved a practical reason: an upcoming exam, holiday plans or the death of a parent.

It appears that the availability of Zanamivir had no effect on the registration of ILI during the 2000-2001 season.

This topic will remain on the weekly return in 2002.

Acute respiratory infections in primary care (ARI-EL study)

Since 1970, the CMR Sentinel Station physicians have been registering the patients they receive with influenza-type symptoms by week and age. However, based on the clinical symptoms it is not possible to unequivocally pinpoint the pathogen causing the illness. This explains in part why approximately two-thirds of the sentinel station GPs started in the 1992-1993 influenza season taking nose and throat swabs from a select group of patients who report an ARI (including ILI). The nose and throat swabs are tested for viruses (including *M. pneumoniae* and *C. pneumoniae*) at the RIVM's Laboratorium voor Infectieziekten Diagnostiek en Screening (Infectious Diseases Diagnostics and Screening Laboratory). A submission form containing information on the patient's first day of illness, age and gender, symptoms, diagnosis, influenza vaccination status and a number of risk factors accompanies each sample.

The NIVEL/RIVM surveillance of respiratory infections is an important contribution to the early-warning system for influenza in the Netherlands. Influenza-like illnesses are registered clinically so that their spread among the population can be charted. Virological surveillance confirms whether an influenza virus is causing the reported influenza-like illnesses.

The current surveillance system also provides information about the type and frequency of respiratory viruses (including *M. pneumoniae* and *C. pneumoniae*) detected in patients who consult their physician in the case of influenza-like illness or other acute respiratory infections. These data are important for the effective prevention and control of acute respiratory infections. They provide indications of possible target groups for new and existing vaccines (e.g. to prevent RS virus or rhinovirus) and antiviral medications (e.g. to control influenza and rhinovirus).

Although the surveillance of respiratory infections provides much information, there are still a number of questions that the current surveillance cannot answer. These questions include the following:

1 What is the incidence of respiratory viruses (including *M. pneumoniae* and *C. pneumoniae*) associated with ARI (acute respiratory infections) other than

influenza-like illnesses (ILI) among GP patients by age and sex?
2 What is the incidence of various respiratory infections in the population?
3 What is the annual and seasonal incidence of respiratory viruses (including *M. pneumoniae* and *C. pneumoniae*) associated with ARI (including ILI) among GP patients and in the population by age and sex
4 What is the incidence of respiratory bacteria associated with ARI (including ILI) among GP patients and in the population by age and sex?
5 What type of medical consumption is coupled with having an ARI (including ILI), what is the burden of illness of ARI (including ILI) and how often does ARI (including (ILI) occur asymptomatically?

To answer these questions, the RIVM's Centre for Infectious Diseases Epidemiology together with the RIVM's Diagnostics and Screening Laboratory, the Public Health regional laboratory in Tilburg and the CMR Sentinel Stations set up the Ari-el = acute respiratory infections in primary care study. Ari-el is a case-control study (patients with and without acute respiratory complaints).
The NIVEL/RIVM surveillance of influenza-like illnesses forms part of the ARI-EL study for the duration of the study.

The GPs register consultations for influenza-like illnesses and other acute respiratory infections according to age and week. Nose and throat swabs are taken and questionnaires are handed out to a select group of patients with an ARI (including ILI). Data compilation commenced in week 40 of 2000.

The nose and throat swabs are tested for viruses (including *M. pneumoniae* and *C. pneumoniae*) at the RIVM's Laboratorium voor Infectieziekten Diagnostiek en Screening (Infectious Diseases Diagnostics and Screening Laboratory), using a virus culture and PCR (RIVM-LIS). The regional laboratory for public health in Tilburg tests the second nose and throat swabs for a number of bacterial pathogens. The RIVM's Centrum voor Infectieziekten Epidemiologie (Centre for Infectious Diseases Epidemiology) collects all the data and analyses the questionnaires.

Detailed reporting will appear elsewhere; a report of preliminary results for the first year of the study has already been issued[1].

The number of patients with an acute respiratory infection (not including influenza-like illnesses) is illustrated in table 11.1 per 10,000 inhabitants per province group and degree of urbanization and for the Netherlands in 2001.

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[1] Heijnen MLA, WE van den Brandhoff, AIM Bartelds, etc. Infectieziekten Bulletin (13) 3, 2002, pg. 104.

Table 11.1 Number of patients per 10,000 with an ARI by province group and by degree of urbanization for the Netherlands in 2001

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
ARI(-ILI)	118	384	296	667	231	429	275	374
ILI	144	59	116	136	109	100	166	113
ARI(+ILI)	262	443	412	803	340	529	441	487

The southern provinces by far reported the most patients with an ARI (+ILI) while the northern provinces reported the fewest least. The differences are not as striking when divided according to degree of urbanization.

Age distribution

Table 11.2 lists data on patients with an ARI (excluding ILI) or ILI reported by GPs according to age group.

Table 11.2 Number of patients with an ARI (-ILI) or ILI by age group, per 10,000 people, in 2001

Age	IAZ	ARI(-IAZ)	total
≤1	356	2715	3071
1-4	212	1199	1411
5-9	112	528	640
10-14	87	318	405
15-19	101	350	451
20-24	119	352	471
25-29	103	266	369
30-34	124	309	433
35-39	138	335	473
40-44	96	286	382
45-49	108	274	382
50-54	107	245	352
55-59	109	283	392
60-64	97	278	375
65-69	90	263	353
70-74	99	320	419
75-79	73	302	375
80-84	70	307	377
≥85	27	216	243

The majority of acute respiratory infection registrations concerned young patients. This is not to say that acute respiratory infections either do not occur or occur in significantly lower numbers at other ages. This registration involves patients who consulted their GP. This is to be expected to a certain degree; further population studies would shed more light on this problem.

11.2 Seasonal influences

Table 11.3 shows the number of patients with acute respiratory infections (-ILI) and influenza-like illnesses reported by GPs per 10,000 inhabitants in the Netherlands for each quarter of 2001.

Table 11.3 number of registrations by quarter of patients with an ARI (-ILI) and ILI by 10,000 patients in 2001

quarter	1	2	3	4
IAZ	54	15	8	33
ARI(-IAZ)	128	70	57	114
total	128	85	65	147

The highest number of incidents appeared in the first and final quarter of the year. This corresponds to expectations, given the seasonally-influenced presence of respiratory pathogens.

Registration of acute respiratory infections will continue in 2002.

Publications based entirely or in part on data from the continuous morbidity registration data

BRANDHOF VAN DEN W.E., A.I.M. BARTELDS, M.F. PEETERS, B. WILBRINK, M.L.A. HEIJNEN.
ARI-EL: a case-control study of Acute Respiratory Infections in primary care
Interim report on oct. 2000- sept. 2001.
RIVM, 2002, report 217617006

HEIJNEN M.L.A., W.E. VAN DEN BRANDHOF, A.I.M. BARTELDS, M.F. PEETERS, B. WILBRINK.
ARI-EL: Acute Respiratory Infections in primary care study.
Infectieziekten Bulletin, 2002, volume 13 nr.3; 104-110

In October 2000 the ARI-EL study started: a case-control study on acute respiratoire tract infections (ARI) in general practitioner (GP) patients. Aim is to gain insight in the incidence and aetiology of ARI, in risk factors for ARI and in health care demand and burden of illness due to ARI. GPs register visits for ARI weekly, and sample a maximum of 1 case and 1 control per week. The samples are analysed for respiratory pathogens by culture and PCR. Participating patients fill in a questionnaire at home. Part of the results of the first study year are presented. It appears the study is feasible, despite the burden for the GP's. The ARI-EL study continues until at least September 2002 to obtain sufficient data for statistical analyses with sufficient power to draw conclusions. The loss of data by applying the precise case and control definitions plus the fact that winter 2000/2001 was an extremely calm influenza season emphasize the need for data collection during a sufficiently long period. Then this unique study will provide information on the yearly and seasonal incidence of ARI and associated pathogens, the burden of illness of ARI and health care demand and risk factors for ARI.

HEIJNEN M.L.A., et al.
ARI-EL-study commencement.
Infectieziekten Bulletin, 2000, volume 11, nr. 9, blz. 178-180

Chickenpox

The request to place chickenpox on the 2000 weekly return came from the project leaders of the 'Health Monitoring in Sentinel Practice Networks' project (Dr D.M. Fleming and Dr F.G. Schellevis). This project is a component of the large-scale EU undertaking: the European Community Health Indicators Project.

The aim of the Health Monitoring in Sentinel Practice Networks project is 'to contribute to the establishment of a Community health monitoring system with information from primary care by studying the feasibility of providing information about health indicators from primary care based sentinel practice networks'. GP networks from six European Member States are participating in this project (B, F, S, P, UK, NL).

The point of departure is that primary health care is in an ideal position to provide information on the following three topics:
- the public health risk of transmittable infectious diseases;
- the incidence and prevalence of chronic diseases; and
- health problems that have significant economic consequences (absence through illness).

Chickenpox is one of the infectious illnesses that can be treated by primary health care providers, in cases where people are unable to handle the situation themselves. Specialised hospital care is only required in cases in which dangerous complications arise, such as Varicella pneumonia or Varicella meningitis, especially among adults.

The registration of chickenpox at CMR Sentinel Stations involves three elements in 2000:
- the registration of patients with chickenpox in the weekly return;
- the collection of information about the incidence of index patient-related cases of chickenpox, in the dwellings of index patients, for which the GP is not consulted;
- the collection of information about the incidence of chickenpox cases for which the GP is not consulted.

In 2001 only patients consulting the gp are recorded; no additional research is performed.

This report exclusively contains information about the results of the registration of chickenpox on the weekly returns. Information on the other research questions is published elsewhere (Dr D.M. Fleming and Dr F.G. Schellevis).

The number of chickenpox patients per 10,000 inhabitants is shown in Table 12.1 by province group, by degree of urbanization and for the Netherlands as a whole.

Table 12.1 Number of chickenpox patients per 10,000 inhabitants by province group, by degree of urbanization and for the Netherlands as a whole in 2000-2001

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
2000	11	17	23	29	21	21	19	20
2001	17	28	25	22	17	24	27	24

In 2001 the highest incidence of chickenpox was recorded in the eastern provinces and in the larges cities.

12.1 Seasonal influences

Patient numbers per 10,000 persons reported by GPs per quarter are given in Table 12.2.

Table 12.2 Number of patients with chickenpox per 10,000 persons per quarter in 2000-2001

	week 1-13	week 14-26	week 27-39	week 40-52
2000	6	7	4	3
2001	9	8	5	3

The incidence of chickenpox was noticeably higher in the first 26 weeks of 2000 than in the second half of the year.

Age distribution

The incidence of chickenpox in the Netherlands per 10,000 persons is given by age group in Table 12.3.

Table 12.3 Number of cases of chickenpox per 10,000 persons by age group and for the Netherlands as a whole in 2000-2001

age group	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49
2000	298	253	64	5	3	4	4	5	(1)	(1)	(1)
2001	320	281	70	12	(4)	6	7	4	(3)	(3)	-

Chickenpox occurs predominately in children under 10, and particularly under 5.

This topic appears on the weekly return for 2002.

Publications based fully or partly on continuous morbidity registration data

FLEMING, D.M., F.G. SCHELLEVIS, W.J. PAGET.
Health Monitoring in Sentinel Practice Networks.
Final Report to the EU, Nivel, 2001

Prescriptions for medical aids for walking disorders by general practitioners

In recent years interest in medical aids has grown considerably under the influence of demographic, social and technological developments. The government is exploring the possibilities of replacing hospital care with home-based care. Medical aids can help people live longer independent lives in the home environment. As a result of technological developments ever more new and improved aids are becoming available on the market.

The costs of medical aids have risen at a higher rate in recent years than the total cost of health care. The cost of extramural medical aids increased by more than 11% between 1990 and 1995. Policy measures are needed to control soaring costs. The lack of numerical data, particularly regarding diagnoses, and information on the effects of using medical aids is a problem.

GPs have an important role to play in prescribing medical aids in extramural health care. Gaining insight into that role would provide invaluable information about the scope of and variation in the use of medical aids. In most cases, the Regeling Hulpmiddelen 1996. (Medical Aids Regulations) govern the provision of medical aids by general practitioners. These regulations stipulate the conditions and grounds that determine whether a patient has a right to a particular medical aid. In many cases health insurers, by virtue of these regulations, require the prescribing physicians to provide a description of the diagnosis.

In many cases a GP may not be the one who initiates the prescription. Requests may come from patients, their family or other carers, such as district nurses, hospital carers, physiotherapists or occupational therapists.

The research questions below were drawn up in 1999 in order to obtain insight into the general practitioner's role:

1 What medical aids are prescribed by general practitioners and how often do they prescribe them?
2 What conditions do general practitioners prescribe medical aids for and what devices do they prescribe?

3 On whose initiative are medical aids prescribed?
4 Do GPs justify prescriptions by stating the diagnosis on the prescription, and if so, for which medical aids?

The following categories of aids were distinguished on the weekly returns in 1999:
- aids worn on the body (prostheses/ortheses, wigs, support, stockings, shoe accessories, hearing aids and other care articles);
- medical aids in support of regular daily activities (rollators and other walking equipment, adapted furniture etc.);
- medical aids required for medical treatment/care (syringes, portable external infusion pumps, nutritional preparations, diabetes aids, exhalation equipment etc.).

GPs are asked to report the name of the patient to whom a medical aid is prescribed and to fill in the supplementary questionnaire.

The answers to the research questions from 1999 are addressed in another, extensive report (Nivel, M. Biermans and Dr E. van den Ende).

In 2001 GPs were asked to register authorisations issued for walking aids only.

Table 13.1 gives the number per 10,000 people for whom a prescription was issued for a walking aids, by province group and by degree of urbanization and for the Netherlands as a whole, 2001.

Table 13.1 Number per 10,000 for whom a prescription is issued for walking aids, by province group and by degree of urbanization and for the Netherlands as a whole, 2001

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
prescription walking aids	7	14	22	15	15	16	17	16

Prescriptions for walking aids for medical disorders are issued predominately in the western provinces and clearly less frequently in the northern provinces areas. The difference is less marked between rural areas and major cities.

13.1 Age distribution

Table 13.2 gives the number for whom a prescription was issued for medical aids for walking disorders by age group.

Table 13.2 Number of persons for whom a prescription is issued for walking by aids, by age group, per 10,000 people, 2001

age group	Age distribution of patients who received prescriptions for walking aid
40-44	(0)
45-49	(0)
50-54	6
55-59	(0)
60-64	10
65-69	22
70-74	41
75-79	65
80-84	50
≥ 85	82

The majority of prescriptions for medical aids prescribed for walking disorders were are written for patients of advanced years (> 60). From the age of 75 there is a clear rise in the number of prescriptions.

The topic of medical aids does not appear on the 2001 weekly returns.

Publications based fully or partly on continuous morbidity registration data

BIERMANS MARION, JOOST DEKKER, AAD BARTELDS, ELS VAN DEN ENDE.
Het voorschrijven van hulpmiddelen door de huisarts
Nivel, 2000.

Depression

In the Netherlands a great deal of research has been done into the incidence of complaints of depression in general practices. In the course of various research projects GPs have been asked to register the incidence of depression among their patients (e.g. during the CMR Sentinel Stations studies from 1983 to 1985) and interviewed about their attitudes concerning the treatment of depressive patients[1]. In addition the interaction between the patient and the GP has been recorded on videotape and studied.

The GP's diagnosis was the focus of the registration of depression on the weekly returns since 2000. The question was to what extent the NHG Standard for Depression was applied by GPs in diagnosing, supervising and treating patients with symptoms of depression. This means that the registration concentrated on incident cases, i.e. cases in which the application of the guidelines in the standard can be monitored from the beginning.

The sentinel physicians were asked to report each new patient diagnosed with

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[1] Sigling, H.O. Depression: a medical problem for the general practitioner? In: Bartelds A.I.M., J. Fracheboud, J. van der Zee (eds). The Dutch Sentinel Practice Network; relevance for public health policy. Utrecht, Nivel, 1989.

Brink WVD, Ommel J. Depressie in de huisartspraktijk. Consequenties voor onderwijs onderzoek en beleid. Tijdschrift voor Psychiatrie, 1993; 35:94-109.

Marwijk HWJ, Zwan AAC, Mulder LDD. De huisarts en depressiviteit van ouderen. Tijdschrift Gerontol Geriatr., 1991, 22:129-33.

Ommel J, Koeter MWJ, Brink WVD, Willege G. Recognition, Management and courses of anxietly and depression in general practice. Arch Gen Psych, 1991, 48:700-6.

Ommel J, Tiemens BG, Os TWDPV, Meer KVD, Jenner RHSVD. Betere herkenning en behandeling van depressie en soms sneller herstel na nascholing van huisartsen. Ned. Tijdschrift. Geneesk., 1998; 142:252-7

Tiemens BG, Brink WVD, Meer KVD, Ommel J. Diagnostiek van depressie en angst in de huisartspraktijk. H&W, 1998, 41:109-16

depression, providing information about the severity of the depression, further diagnostic tests performed and the supervision method and treatment selected. Each patient was to be registered once.

This report gives information about the incidence of new patients suffering from depression. An extensive report on the data collected about diagnostics, supervision and treatment is published elsewhere (Dr P. Verhaak, Nivel).

Table 14.1 gives the figures for new patients suffering from depression per 10,000 men and per 10,000 women by province group, by degree of urbanization and for the Netherlands as a whole.

Table 14.1: Number of new patients suffering from depression by province group, by degree of urbanization and for the Netherlands as a whole per 10,000 men and per 10,000 women in 1983-1985 and 2000-2001.

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
men								
1983-85	56	48	39	53	42	37	72	46
2000	20	28	21	38	19	28	25	26
2001	19	36	18	35	17	32	13	26
women								
1983-85	109	89	75	102	81	73	145	90
2000	25	33	63	56	31	50	54	48
2001	21	42	40	61	27	47	33	42
total								
1983-85	83	69	60	74	61	57	110	69
2000	23	31	43	47	25	39	40	37
2001	20	39	29	48	22	40	24	34

In comparison with the period 1983-1985 fewer patients were diagnosed with depression throughout the country and in all subgroups in 2000-2001.

Nearly twice as many women were newly diagnosed with depression in 2000-2001 than men. This corresponds with the data from the period 1983-1985. In 2000-2001 the highest number of new patients diagnosed with depression was reported in the southern provinces. In the northern provinces half as many new patients diagnosed with depression were reported. Just over 15 years ago the northern provinces reported the highest number, and the western provinces the lowest.

GPs reported the lowest number of new patients diagnosed with depression in rural areas. The numbers of patients in the large cities and in urban areas were comparable and clearly higher than in rural areas. In the years 1983-1985 significantly more new patients were reported in the large cities. The numbers for the countryside were lower then and comparable with commuter communities and small cities.
It is outside the scope of this report to compare the registration systems applied in the 1983-1985 period and in 2000-2001. The aim of registration in 1983-1985 differed from that in 2000-2001. Considering that registration took place in the 1983-1985 period only when the severity of the depression moved the GP to take some form of action, the difference in the reported number of new patients diagnosed with depression in the two registration periods is large.

Seasonal influences

Table 14.2 gives the numbers of new patients diagnosed with depression by quarter.

Table 14.2 Number of new patients diagnosed with depression per 10,000 men and per 10,000 woman, by quarter for all of the Netherlands in 2000-2001

	Week 1-13	week 14-26	week 27-39	week 40-52
men				
2000	8	5	5	8
2001	7	6	7	6
women				
2000	14	13	10	12
2001	13	11	7	11
total				
2000	11	10	8	10
2001	10	9	7	9

Generally speaking, the fluctuations by quarter are limited. Identical to 2000, the highest number of new patients diagnosed with depression was reported in the first quarter of 2001, and the lowest in the third quarter (respectively 10 and 7 per 10,000 inhabitants).

14.2 Age distribution

Table 14.3 gives the numbers of new patients diagnosed with depression by age group and sex for the Netherlands in 2000-2001.

Table 14.3 Number of new patients diagnosed with depression per 10,000 persons by age group and sex for the Netherlands in 2000-2001

Age group	men		women		total	
	2000	2001	2000	2001	2000	2001
0- 9	0	0	0	0	0	0
10-14	3	0	5	3	4	1
15-19	23	16	24	20	23	18
20-24	18	21	44	22	32	21
25-29	29	35	63	42	47	39
30-34	23	16	59	62	41	40
35-39	36	33	57	51	46	42
40-44	29	43	74	53	51	48
45-49	32	54	62	77	47	66
50-54	45	39	75	62	60	50
55-59	28	32	38	51	33	42
60-64	42	37	45	58	48	48
65-69	32	24	61	51	48	38
70-74	19	21	38	50	30	37
75-79	44	27	61	28	54	27
80-84	46	62	77	61	66	61
≤ 85	59	31	78	51	72	45

The age groups 45-49 and 80-84 show the highest figures reported for new patients diagnosed with depression in 2001. No new cases of depression involving children under the age of 10 were reported in 2001. The number of new patients in the 10-14 age group was once again low. Above the age of 19 consistently more women are diagnosed with depression than men. The number of female patients reported is relatively high in the age group 30-74. Men aged 40-64 also show a high incidence of depression.

This topic appears on the weekly return for 2002.

Herpes Zoster

In a number of European countries sentinel station networks aid epidemiological research in health care. The sentinel physicians collect data in order to monitor defined problems among their patients. After appropriate analysis these data indicate a trend in the incidence of the problem.

The objective of sentinel station networks is to provide some degree of insight into the epidemiology of disease in the population. In this respect it is important to ask whether the data registered by a network of sentinel practices does, in fact, provide an accurate representation of the incidence of disease and problems among the population. Using accurate data about the size of the population in the sentinel practices (i.e. the denominator) can reduce uncertainties on this point.

Carefully maintained practice populations and age and sex records are universally accepted as the most desirable denominator. However, these records are not available in every health care system. To obviate this problem, mathematical models have been developed for estimating the 'population at risk'.

Despite the availability of these models other methods are being sought to assess the population at risk. One of the options is to use an indicator disease. The idea behind this is that when a disorder has a constant incidence rate it is probably possible to use this rate to infer the population at risk.

This idea was developed by D.M. Fleming and K.W. Cross of the Weekly Return Service of the Royal College of General Practitioners in Birmingham (UK)[1]. The next step is to find a disorder that nearly always leads to a visit to the GP, has a relatively constant incidence rate and is simple to diagnose. The study of data collected by the Weekly Return Service over 27 years show that herpes zoster meets these criteria. The next step in determining whether herpes zoster is suitable for use as an indicator

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[1] Fleming, D.M. Cross, Estimating the Population at Risk by Indicator Disease in Comparison and Harmonisation of Denominater Data for Primary Health Care Research in Countries of the European Community. Ed. M. Schlaud, 1999, Amsterdam; pp. 199-121.

disease is to register its incidence in a sentinel station network outside England.

The Dutch CMR Sentinel Stations Network was asked to perform this task. Consequently herpes zoster was added to the weekly return on 1 January 1997. The sentinel physicians were asked to report patients diagnosed with herpes zoster on the weekly returns. The disease is so distinctive that no further description was considered necessary.

Table 15.1 gives the incidence rate of Herpes zoster by province group and degree of urbanization and for the Netherlands as a whole per 10,000 men, per 10,000 women and per 10,000 persons.

Table 15.1 Number of new cases of Herpes zoster by province group and degree of urbanization and for the Netherlands as a whole per 10,000 men, per 10,000 women and per 10,000 persons in 1997-2001

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1997 M	7	32	31	23	24	23	35	24
1998	11	33	36	26	32	30	33	28
1999	18	28	36	23	19	29	31	27
2000	21	25	35	41	18	32	40	31
2001	24	33	30	31	26	30	33	30
1997 F	12	39	37	29	29	29	40	30
1998	22	32	44	46	41	24	45	37
1999	28	46	43	28	36	36	46	37
2000	26	37	32	46	36	36	31	35
2001	18	28	31	55	17	36	36	33
1997 T	10	35	34	26	27	26	38	28
1998	16	32	40	36	36	22	39	33
1999	23	37	39	26	28	32	39	32
2000	23	31	34	43	27	34	36	33
2001	21	30	31	43	22	33	35	32

GPs reported slightly more cases of herpes zoster among women than men. This concurs with the findings of the English sentinel practices. At first the number of cases reported by GPs in the northern provinces was remarkably low. The figure increased in 1999 in contrast to the other province groups, and levelled out in 2000-2001. The most densely populated areas report a higher incidence of herpes zoster than rural areas.

Age distribution

Table 15.2 gives the age distribution of the number of new cases of herpes zoster per 10,000 men and per 10,000 women.

Table 15.2 Number of new cases of herpes zoster by age per 10,000 men and per 10,000 women in 1998-2001

age group	Men				Women				Total			
	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001
≤1	-	-	-	-	-	(17)	(18)	-	-	(8)	(9)	-
1- 4	(9)	(9)	(6)	13	(16)	(7)	(12)	7	(12)	(8)	(9)	10
5- 9	12	12	16	15	22	23	10	24	17	17	15	19
10-14	13	8	18	16	10	24	13	23	12	16	15	19
15-19	20	28	20	19	23	5	24	11	21	17	22	15
20-24	14	15	35	16	13	17	13	19	14	16	23	18
25-29	12	16	20	21	24	24	16	14	18	20	18	18
30-34	30	23	20	18	23	22	22	24	27	22	21	21
35-39	20	30	20	27	13	13	14	13	17	22	17	20
40-44	24	21	34	37	27	27	48	33	25	34	41	35
45-49	41	19	22	45	34	42	31	35	38	30	26	40
50-54	32	28	31	28	43	39	56	55	37	33	44	42
55-59	39	46	45	44	64	74	54	74	51	60	49	59
60-64	55	66	58	27	98	105	55	62	77	86	56	44
65-69	41	57	75	72	71	92	61	44	57	76	68	57
70-74	92	67	53	57	99	102	84	33	96	87	71	44
75-79	59	48	75	60	83	82	91	69	73	66	84	65
80-84	54	94	116	50	90	41	77	102	78	58	91	83
≥85	120	58	74	94	92	36	60	57	160	42	64	68

This registration confirms the known fact that the incidence of herpes zoster increases with age. This finding concurs with that of the English sentinel stations.

The provisional conclusion of the five-year registration is that the incidence rate of herpes zoster is not constant over time. In the first year the rate was lower than in the four subsequent years, when the rate more or less stabilized.

Herpes zoster was removed from the weekly return for 2002.

Diabetes Mellitus: incident patients (NIDDM and IDDM)

The incidence of new patients diagnosed with diabetes mellitus has been a registration topic on the weekly returns of the CMR Sentinel Stations[1] on two other occasions.

Intermittent registration of the incidence rate of a chronic disease is an alternative when, due to space limitations on the weekly return, the incidence of new cases of the disease cannot be monitored continuously.

The third period of monitoring new diabetes mellitus patients began in 2000. The purpose of resuming the registration of this disease was twofold. Not only does the registration of diabetes mellitus fit in the policy of the CMR Sentinel Stations, the data collected in 2000 were also used for the benefit of the EU-funded project 'Health Monitoring in Sentinel Practice Networks'. (See Chapter 12 on Chickenpox).

Sentinel physicians registered new diabetes mellitus patients since 2000 on the weekly return. For each incident patient the physician is asked to provide additional information about diagnostics and the treatment of the patient and supervision of diabetes mellitus patients in primary health care.

Table 16.1 gives the numbers of new diabetes mellitus patients per 10,000 men and per 10,000 women by province group and by degree of urbanization and for the Netherlands as a whole in 1990-93 and 2000-2001.

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1 Ruwaard D., R. Gijsen, A. Bartelds, R. Harising, H. Verkley, D. Kromhout. Is the Incidence of Diabetes Increasing in all age group? Diabetes Care, vol. 19, number 3, 1996

Table 16.1 Number of new diabetes mellitus patients per 10,000 men and per 10,000 women by province group and by degree of urbanization and for the Netherlands as a whole in 1990-93 en 2000-2001

	province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
men								
1990-93	13	13	18	17	12	15	24	16
2000	16	26	18	35	30	23	17	23
2001	15	28	26	24	23	24	25	24
women								
1990-93	13	17	20	17	16	16	24	17
2000	14	21	21	32	26	19	29	22
2001	9	22	19	34	20	21	23	24
total								
1990-93	13	15	19	17	14	15	24	17
2000	15	24	20	33	28	21	24	23
2001	12	25	22	29	22	22	24	23

In 2000-2001, 30% more new cases of diabetes mellitus were reported than in the 1990-1993 period. In 2000-2001, virtually the same number of men as women was reported to have recently been diagnosed with diabetes mellitus in the statistics for the Netherlands as a whole, the province group and degree of urbanization group numbers painted a different picture.
Contrary to the three other province groups, in the southern provinces significantly more women than men were reported to have been diagnosed with diabetes mellitus in 2001.

In 2001, the number of incident diabetes mellitus patients was significantly higher in the southern province group than in the other three province groups; the fewest new diabetes mellitus patients were reported in the northern provinces.

There are fewer differences in the number of new diabetes mellitus patients between the three urban areas.

Age distribution

Table 16.2 gives the numbers of new diabetes mellitus patients per 10,000 men and per 10,000 women by age group.

Table 16.2 Numbers of new diabetes mellitus patients per 10,000 men and per 10,000 women by age group in 1990-93 and 2000-2001

age group	M	F	T	M		F		T	
		1990-1993		2000	2001	2000	2001	2000	2001
≤9	(1)	(1)	(1)	(2)	(4)	(0)	-	(1)	(2)
10-19	(2)	(2)	(2)	(1)	-	(0)	(4)	(1)	(2)
20-29	(3)	(3)	(3)	6	(2)	(3)	(1)	5	(2)
30-39	(7)	(3)	(4)	5	4	7	7	6	5
40-49	15	14	14	18	26	22	16	20	21
50-59	37	33	35	52	51	35	26	43	39
60-69	46	49	48	61	70	53	58	57	64
70-79	70	71	71	95	99	77	83	85	90
≥80	61	57	59	71	28	68	75	69	60

The increase in the number of new diabetes mellitus patients begins in the 45-49 age group. It is remarkable that the number of new patients with diabetes is highest among 70-79-year-olds. The number for the next age group, 80 and older, is significantly lower than the number of 70-79 year olds.

Diabetes mellitus appears on the weekly return for 2002.

(Attempted) suicide

In consultation with the Health Care Inspectorate, this topic was added to the weekly return in 1979 and has remained there ever since. Research on suicide is also carried out in other areas (e.g. hospitals) in order to gain insight into the scope, trend and other aspects of suicide and attempted suicide. The name of the topic is also its definition.

At the same time the Health Care Inspectorate made a request for additional data to be collected about the reported cases. The form included questions about whether the attempt had been successful and about the method employed. Other questions covered contacts with health care institutions prior to the suicide (attempt). For the purposes of this study the primary question is not whether the patient's attempt was successful, but whether the patient intended to commit suicide.

The absolute number of reported cases (which exceeds the number of patients as recurrence is not rare) was, respectively, 80, 76, 71, 61, 87 and 93 in the years from 1996 to 2001.

The number of attempts by province group and degree of urbanization per 10,000 inhabitants is given in Table 17.1. Breaking down the numbers into subgroups is of limited value in view of the low incidence. With regard to the degree of urbanization the highest number of suicide attempts were reported in the large cities consistently until 1999; in 2000 few differences remained.

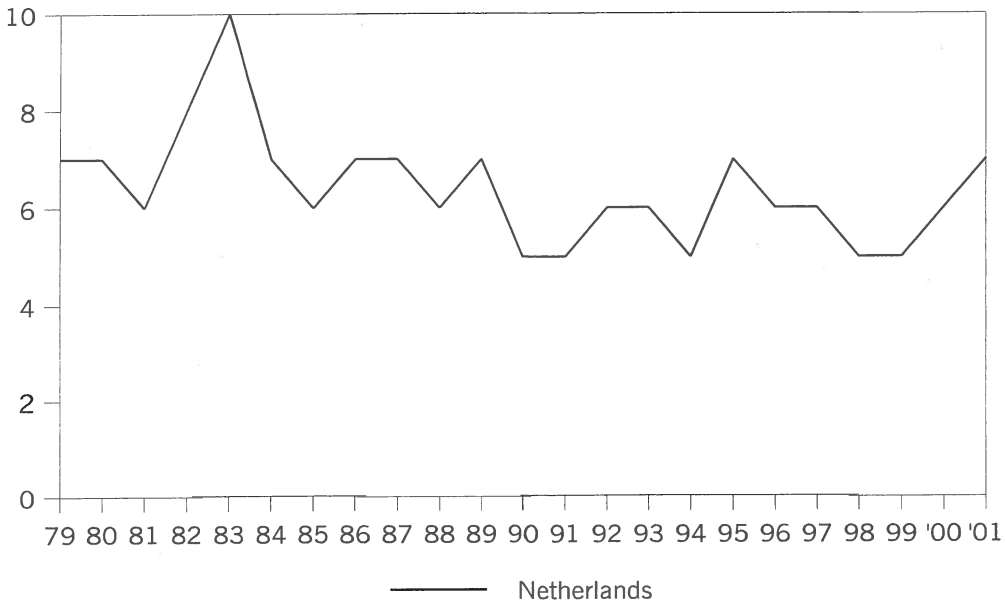
The distribution by province group paints a less consistent picture, possibly due to the small number of cases. In 6 of the last 10 years the southern provinces shows the highest numbers of suicide (attempts).

The numbers lend no support to the presumption among some that the incidence of suicide and attempted suicide is rising in the Netherlands.

Table 17.1 Number of (attempted) suicide cases reported per 10,000 inhabitants, by province group, degree of urbanization and for the Netherlands as a whole, 1992-2001

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
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
1997	3	3	9	8	3	6	12	6
1998	5	4	6	7	4	4	11	5
1999	2	5	4	7	5	4	8	5
2000	6	7	6	7	7	6	6	6
2001	6	5	7	11	5	7	10	7

Figure 17.1 Number of (attempted) suicide cases reported per 10,000 inhabitants for the Netherlands as a whole, 1979-2001



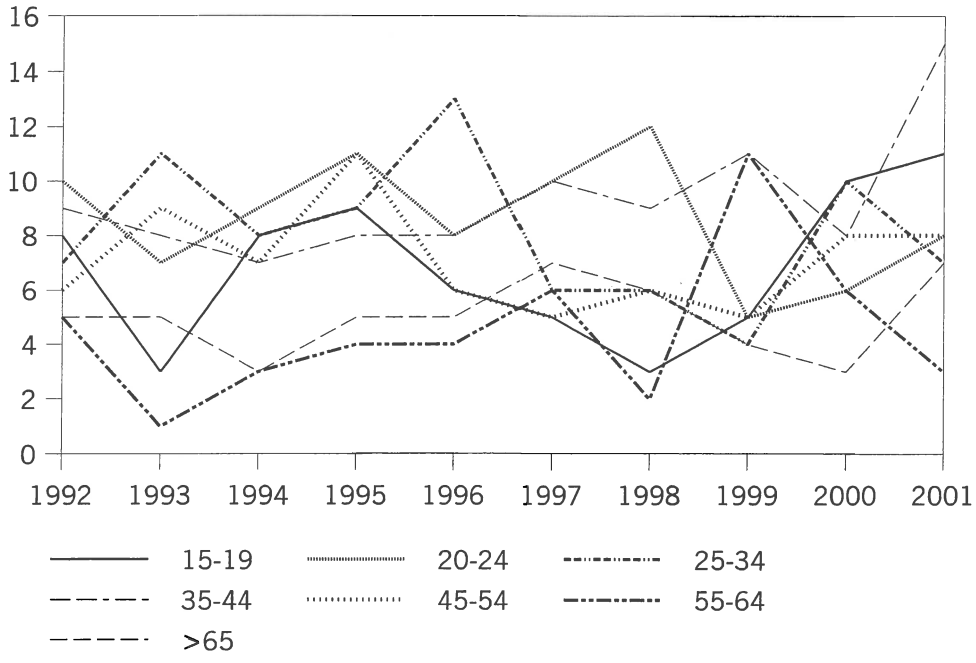
Age distribution

Table 17.2 gives the frequency of suicide and attempted suicide per 10,000 inhabitants, by age group (see also Figure 17.2).

Table 17.2 Number of (attempted) suicide cases reported per 10,000 inhabitants, by age group, 1992-2001

Age group	10-14	15-19	20-24	25-34	35-44	45-54	55-64	≥65
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
1997	(1)	(5)	10	6	10	5	6	7
1998	-	(3)	12	6	9	6	2	6
1999	(1)	(5)	5	4	11	5	11	4
2000	(5)	10	6	10	8	8	6	3
2001	(3)	11	8	7	15	8	3	7

Figure 17.2 Number of (attempted) suicide cases reported per 10,000 inhabitants by age group, 1992-2001



The breakdown by age groups is also of limited value due to the small absolute numbers, which are susceptible to large fluctuations. The registered data shows that there is no age group in which the incidence rate is particularly high. It is notable, however, that the number of suicides and suicide attempts is consistently low among people aged 65 and older.

This topic appears on the weekly return for 2002.

3 Referrals and Consultations for Mental Disorders (GGZ)

The minister of Public Health, Welfare and Sport has implemented a policy to reinforce primary mental health care: the idea is to increase general social work capacity, provide more money to facilitate cooperation among GPs, social workers and primary care psychologists, and that additional means should be available to offer consultations from specialised mental health care to primary care.

Whether the policy will effect the desired changes remains to be seen. Studies will be conducted made to determine whether a cohesive primary mental health care with sufficient capacity has been achieved.
One crucial aspect is the procedure GPs follow for making referrals and consulting with specialised mental health care professionals on patients with mental disorders.

The CMR Sentinel stations started registering mental disorder referrals and consults in 2002 with a view to answering the following questions:

- On an annual basis, how often do GPs refer patients with mental disorders/psycho-social problems to a social worker, primary care psychologist, private psychotherapist, private psychiatrist, the RIAGG (regional institute for mental welfare) or the psychiatric outpatient clinic?
- On an annual basis, how often do GPs consult with the above-mentioned institutions/individuals on patients with mental disorders/psycho-social problems?
- During the three-year registration, are there any notable developments related to referrals and consultations?
- Are there regional differences regarding mental disorder-related referrals and consultations?

GPs are requested to register patient referrals involving mental problems as well as consultations with a mental health care (GGZ) professional.

This report presents indicates the referral and consultation frequency. Detailed information on data collected regarding place of referral/consultant, GP diagnosis (ICPC-code) and whether a case involves recidivism, the severity of the most important

disorder and the motivation behind the referral/consultation appears elsewhere (P. Verhaak, Nivel).

Table 18.1 gives the numbers of referrals and consultations per 10,000 inhabitants per province group and degree of urbanization in the Netherlands.

Table 18.1 Number of patient referrals for mental disorders and number of consultations on patients with mental disorders per 10,000 inhabitants per province group and degree of urbanization and for the Netherlands in 2001.

	Province group				Degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
2001								
GGZ consultations	3	3	18	7	3	5	31	9
GGZ referrals	24	53	103	67	52	57	128	69

The highest number of referrals and consultations occurred in the western provinces, which exceeded the northern provinces by a factor of almost 5. The northern provinces had the lowest number.

A clear gradient exists between the rural and urban areas. Consultations with a GGZ professional are ten times more frequent in the big cities than in rural areas. Twice as many referrals are made in big cities.

18.1 Seasonal influences

Table 18.2 shows the number of referrals and consultations for patients with mental disorders per quarter.

Table 18.2 Number of patient referrals for mental disorders and number of consultations on patients with mental disorders per 10,000 inhabitants per quarter in 2001

	week 1-13	week 14-26	week 27-39	week 40-52
2001				
GGZ consultation	3	3	2	1
GGZ referral	24	16	14	14

More patients with a mental disorder were referred in the first half than the second half of 2001 (40 versus 28 per 10,000 per 26 weeks) and more consultations were requested for patients with a mental disorder in the first half of the year.

.2 Age distribution

Table 18.3 gives the number of referrals and GGZ consultations for patients with a mental disorder per 10,000 inhabitants.

Table 18.3 Number of GGZ patient referrals and consultations per 10,000 per age group in 2001

Age group	GGZ consultation 2001	GGZ referral 2001
≥5	-	-
5-9	-	31
10-14	6	39
15-19	8	73
20-24	10	124
25-29	13	109
30-34	8	103
35-39	19	82
40-44	11	91
45-49	16	92
50-54	17	68
55-59	4	67
60-64	2	31
65-69	4	30
70-74	5	23
75-79	5	35
80-84	26	53
≤85	9	50

One notable result is that no referrals or consultations were made for patients younger than 5 years.
The number of GGZ referrals and consultations rapidly increases starting with the 20-24 age group.
The highest number of consultations was for patients aged 80-84, followed by the 35-55 age group. Relatively few referrals and consultations were made for patients aged 55-79.

This topic appears on the 2002 weekly return.

Urethritis in men

In addition to acute respiratory infections, gastroenteritis and urinary infections, sexually transmitted diseases (STDs) are the most common infectious diseases in the Netherlands. Approximately 20 different pathogens cause a variety of symptoms. The principal illnesses are chlamydia, gonorrhoea, syphilis, herpes, HPV infection, hepatitis B and HIV.

Despite numerous small-scale studies, the epidemiology of STDs in the Netherlands remains partially obscure. Hepatitis B (group B disease) is a notifiable disease, as were gonorrhoea and syphilis (group C diseases) until 1 April 1999. It is recognized that notifiable diseases are frequently under-reported and under-diagnosed. It is debatable whether gonorrhoea is still usable as a tracer disease for all STDs. For chlamydia trachomatis, for example, there appear to be risk groups in addition to the traditional ones.

Insight needs to be acquired into the occurrence of STDs in the Netherlands. Small-scale studies are often of a regional nature and only uncover part of the picture. Sentinel station registration can provide useful additional information. Registration of the clinical picture circumvents the problem of under-diagnosis inherent in pathogen-specific data registration.

In 2002 a new surveillance system for STD and HIV infections will be implemented in the Netherlands.

General practitioners are asked to report every patient with an acute or sub-acute discharge from the penis accompanied by dysuria. This definition is in line with the one used during the Amsterdam sentinel station project.

GPs may also report under the 'Fear of AIDS' topic any urethritis patients with whom they discussed AIDS during a consultation.

Table 19.1 shows the number of men with urethritis per 10,000 men by province group and degree of urbanization and also the number in the Netherlands as a whole.

Table 19.1 Number of patients with urethritis per 10,000 men, by province group, degree of urbanization and for the Netherlands as a whole, 1992-2001

	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
1997	12	23	22	11	33	10	34	17
1998	15	16	23	12	18	17	20	17
1999	9	29	25	12	5	20	39	20
2000	19	24	23	17	10	21	31	19
2001	12	24	26	24	13	23	32	23

After a decrease in the first half of the 1990s, the national incidence of urethritis has remained fairly constant since 1996. An increase was noted in 2001.
In all years prior to 2001, more cases of urethritis were reported in the eastern and western provinces than in other parts of the Netherlands. The difference was less pronounced in 2001 than in the previous years. The fewest number of cases were reported in the northern provinces.
The decrease in the occurrence of urethritis in rural areas stopped in 2000.

The most noteworthy finding to emerge from the registration of urethritis among men is its initially consistently low occurrence in smaller towns and commuter towns. A change occurred in 1999 when, for the first time, its occurrence was the lowest in rural areas. No explanation has as yet been found for this statistic. Urban areas consistently have the highest number of registrations.

19.1 Seasonal influences

No significant seasonal differences have been observed.

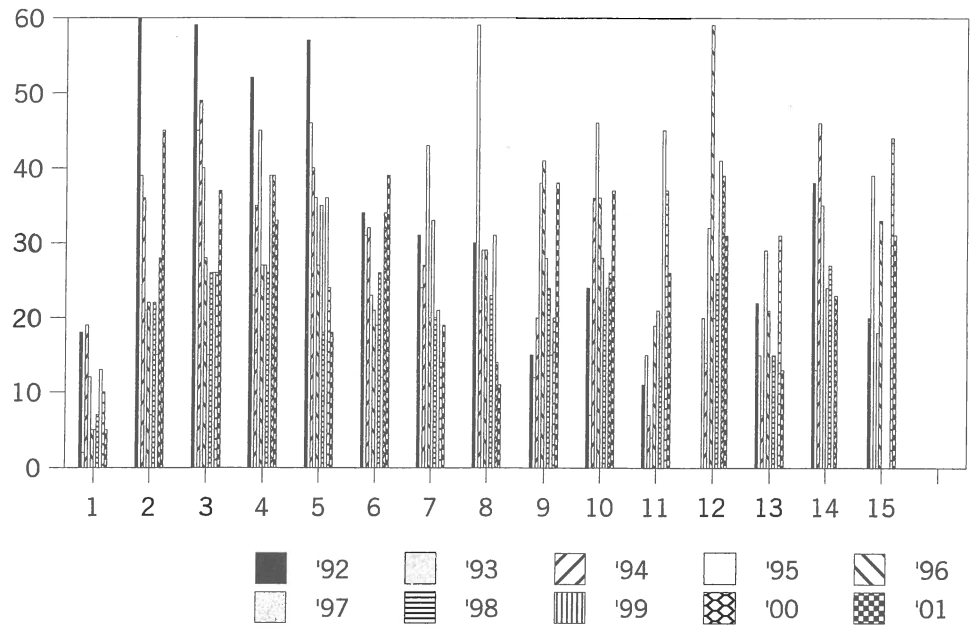
Age distribution

Table 19.2 shows the age distribution of urethritis patients reported by GPs (also see figure 19.1).

Table 19.2 Number of urethritis patients per 10,000 men, by age group, 1992-2001.

Age group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
≤ 15	(0)	-	-	(2)	-	-	(0)	-	(0)	(0)
15-19	18	(2)	19	12	(5)	(5)	(7)	13	(10)	(5)
20-24	60	39	36	21	22	(7)	22	15	28	45
25-29	59	45	49	40	28	15	26	26	26	37
30-34	52	23	35	45	27	27	26	39	39	33
35-39	57	46	40	36	27	35	18	36	24	18
40-44	34	31	32	23	21	19	26	12	34	39
45-49	31	24	27	43	20	33	20	21	14	19
50-54	30	59	21	29	29	19	23	31	14	11
55-59	15	(12)	20	38	41	28	24	15	20	38
60-64	24	(7)	36	46	36	28	21	24	26	37
65-69	(11)	(15)	(7)	(4)	19	21	12	45	37	26
70-74	-	(20)	(14)	32	59	(20)	26	41	39	31
75-79	(22)	(15)	(7)	(29)	(21)	0	15	-	31	(13)
80-84	(38)	(13)	(46)	(35)	-	(24)	27	-	(23)	0
≥ 85	(20)	(39)	-	(18)	(33)	0	0	-	(44)	(31)

Figure 19.1 Number of urethritis patients per 10,000 men, by age group, 1992-2001.



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 among males below the age of 15.
The majority of patients fall into the 20-44 age bracket. The highest incidence is registered in the 20-24 age group.

This topic appears on the weekly returns for 2002.

Fear of AIDS

As general practitioners in the Netherlands are not often confronted with cases of AIDS and seropositivity, they have little experience of dealing with patients who are seropositive or suffering from AIDS.

Nevertheless some concern about this illness is likely to exist among the Dutch population, despite or perhaps because of the extensive public information campaign. Such campaigns tend to be of a general nature and do not answer every question. One of the reasons why people have questions about the risk of HIV infection may be that many modern relationships involve sexual contact with more than one partner, sometimes concurrently. There is a need to gain insight into these phenomena. The "Fear of AIDS" topic was put on the weekly returns in 1988.

The registration objective is to identify patients' requests for help that indicate concern about or fear of AIDS. The sentinel physicians register only requests made by patients not suffering from AIDS or not confirmed as seropositive. Besides ascertaining to what extent GPs are faced with such requests, the aim is to obtain a picture of the people who make the requests and what action GPs take in response to them

Sentinel physicians are asked to keep a record of each consultation in which they or a patient raised the subject of AIDS. They use a questionnaire to record some additional data about the patient, the reason for the patient's visit, whether the patient requested a test for HIV antibodies, whether the GP granted the request, whether the GP suggested a test for reasons other than the patient's request and, if a test is performed, the result.

GPs are also asked to state any further action they took in relation to the patient or whether a follow-up appointment was scheduled. A detailed report on this additional study is published elsewhere.

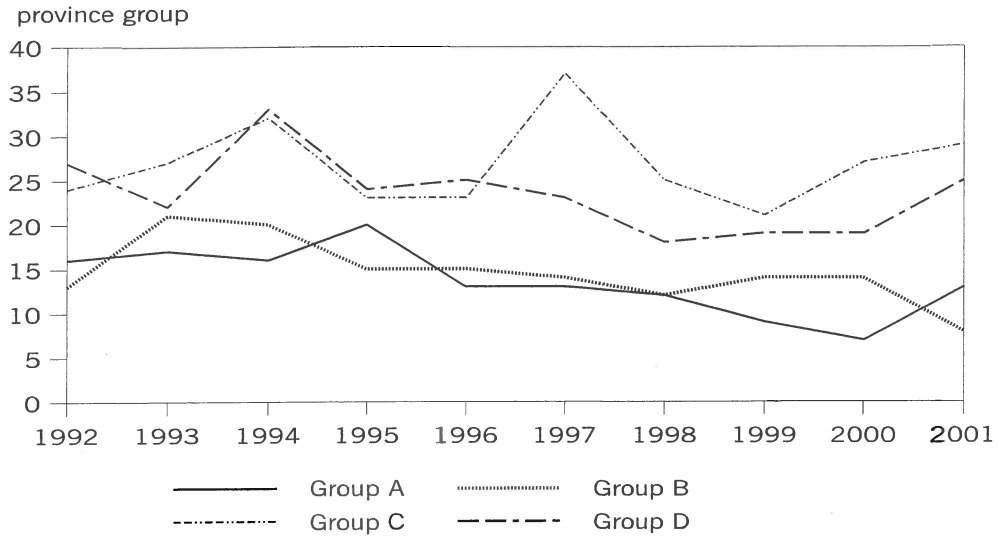
Table 20.1 Numbers of consultations in which AIDS was discussed, by province group and degree of urbanization and for the Netherlands as a whole, per 10,000 inhabitants, 1992-2001

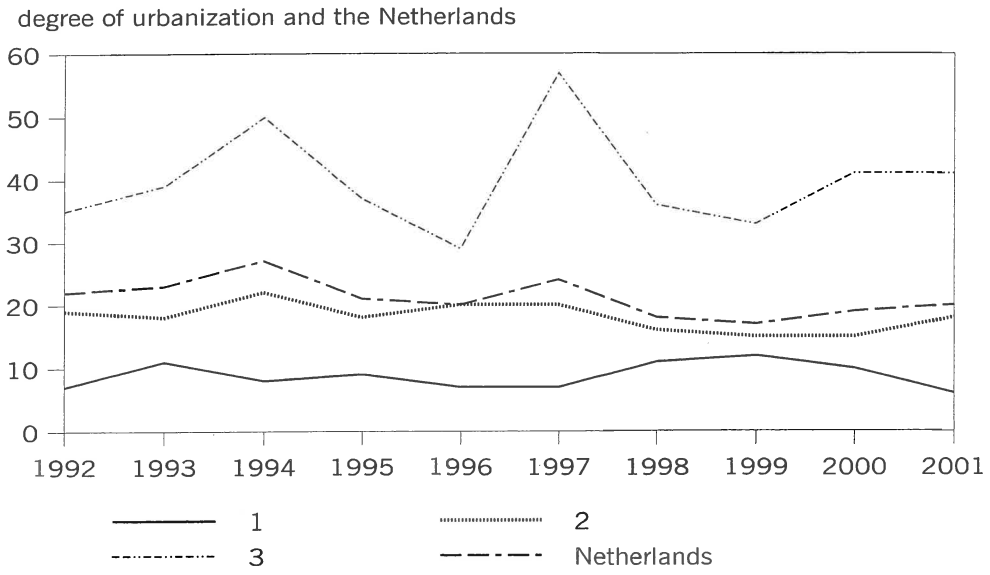
	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1992	16	13	24	27	7	19	35	22
1993	17	21	27	22	11	18	39	23
1994	16	20	32	33	8	22	50	27
1995	20	15	23	24	9	18	37	21
1996	13	15	23	25	7	20	29	20
1997	13	14	37	23	7	20	57	24
1998	12	12	25	18	11	16	36	18
1999	9	14	21	19	12	15	33	17
2000	7	14	27	19	10	15	41	19
2001	13	8	29	25	6	18	41	20

There has been a downward trend since 1995. The number has again been constant since 1998. However, compared with colleagues elsewhere in the country, GPs in the major cities have significantly more consultations in which the subject of AIDS is raised (cf. Figure 20.1). The highest numbers of reports continue to occur in the western provinces and to a lesser extent the southern provinces. The additional data recorded by the GPs show that the number of consultations that included a request for a test for HIV antibodies increased from 131 in 1990 to 321 in 1994. In 2001 a test was requested on 231 occasions.

Although the GPs did not grant every test request, the number of tests performed increased from 121 in 1990 to 259 in 1994. The number in 2001 was 230. The GP was the one who suggested the test in a small number of these cases.

Figure 20.1 Numbers of consultations in which AIDS was discussed, by province group and degree of urbanization and for the Netherlands as a whole, per 10,000 inhabitants, 1992-2001





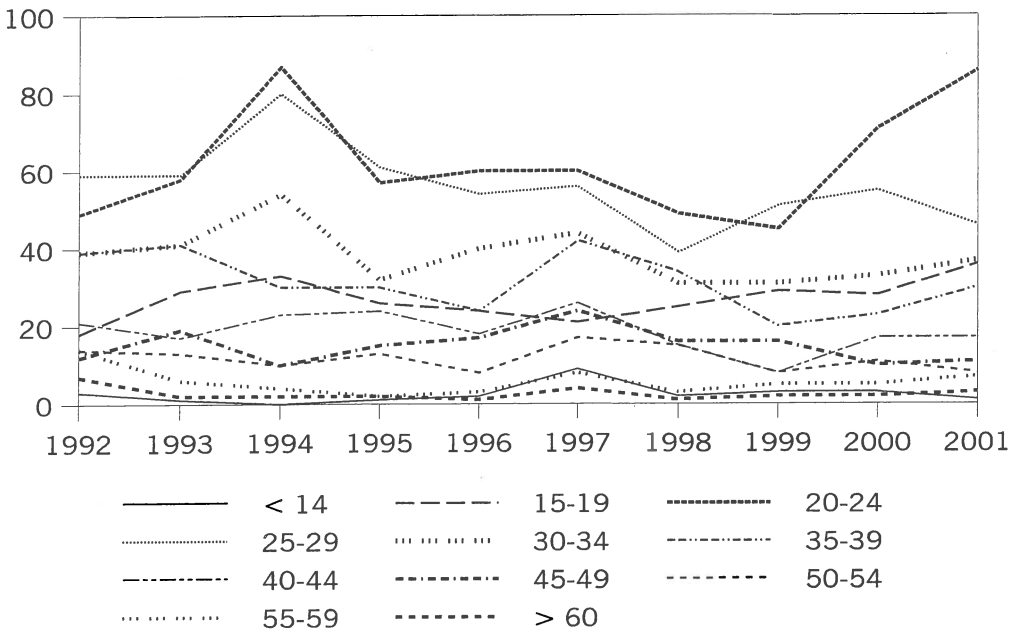
20.1 Age distribution

Table 20.2 shows the numbers of consultations in which AIDS was discussed, per 10,000 inhabitants by age group, for both sexes together (cf. Figure 20.2).

Table 20.2 Numbers of consultations in which AIDS was discussed, by age group, per 10,000 inhabitants, 1992-2001

age group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
≤ 14	(3)	(1)	-	(1)	(2)	9	(2)	(3)	(3)	(1)
15-19	18	29	33	26	24	21	25	29	28	36
20-24	49	58	87	57	60	57	49	45	71	86
25-29	59	59	80	61	54	56	39	51	55	46
30-34	39	41	54	32	40	44	31	31	33	37
35-39	39	41	30	30	24	42	34	20	23	30
40-44	21	17	23	24	18	26	15	8	17	17
45-49	12	19	10	15	17	24	16	16	10	11
50-54	14	13	10	13	8	17	15	8	11	8
55-59	14	(6)	(4)	(2)	(3)	(8)	(3)	5	(5)	7
≥60	7	(2)	(2)	(2)	(1)	(4)	(1)	(2)	(2)	(3)

Figure 20.2 Numbers of consultations in which AIDS was discussed, by age group, per 10,000 inhabitants, 1992-2001



The majority of AIDS-related questions were raised by people in the 20-29 age group. As in 2001 more than 73% of people who went to their GPs to discuss AIDS were in the 20-40 age group. Up to and including 1994 the number of consultations in which AIDS was discussed increased in all age groups between 15 and 35. Starting in 1995 there was a sharp decrease among these age groups. Contrary to this downward trend, there has been a sharp rise in incidence among people in the 20-24 age group.

This topic appears on the weekly returns for 2002.

Publications based fully or partly on continuous morbidity registration data

KERSSENS, J.J, I. PEETERS.
Angst voor AIDS: hulpvragen bij de huisarts in de periode van 1988 tot en met 2000.
Utrecht, NIVEL, 2001

KERSSENS, J.J., L. PETERS.
Angst voor AIDS: hulpvragen bij de huisarts in de periode van 1988 tot en met 1999.
Utrecht, NIVEL 2000

KERSSENS, J.J., L. PETERS.
Hulpvragen bij de huisarts in de periode 1988 tot en met 1998.
Utrecht, NIVEL 1999

ROS, C.C., J.J. KERSSENS, M. FOETS AND L. PETERS.
Trends in HIV-related consultation in Dutch general practice.
International Journal of STD & AIDS, 1999; 10: 294-299

KERSSENS, J.J., L. PETERS.
Tien jaar vragen over HIV en AIDS bij de huisarts.
Aidsbestrijding, 1998, No. 42, p. 10-12

KERSSENS, J.J., L. PETERS.
Angst voor AIDS: hulpvragen bij de huisarts in de periode van 1988 tot en met 1997.
Nivel, July 1998, Utrecht

ROS, C.C., J.J. KERSSENS, M. FOETS, L. PETERS.
Vragen over AIDS bij de huisarts in de periode 1988-1996
Nivel, April 1997, Utrecht

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

Acute gastroenteritis

Gastroenteritis is among the top ten illnesses in the Netherlands in terms of incidence. It is an illness that places a considerable burden on the primary health care system[1]. Gastroenteritis was put back on the weekly returns in the Netherlands in 1996. It had previously been a topic in 1992 and 1993.

The objectives of the research up to and including 1999 were to:

1 follow trends in the incidence of gastroenteritis and the strain it places on the health care system, based on additional patient checks carried out between May 1996 and May 1999;
2 follow trends in the incidence of campylobacteriosis and salmonellosis in connection with implementation of the National Zoonoses Plan;
3 determine the extent of the burden on the health care system caused by specific pathogens.

The topic was placed on the weekly returns in 2000 to pursue the first of the objectives mentioned above. The results of the research into objectives 2 and 3 are reported elsewhere (Centre for Infectious Diseases Epidemiology, of the National Institute of Public Health and the Environment (RIVM) Dr M.A.S de Wit and Dr Y. van Duijnhoven).

Sentinel physicians are asked to report on persons with a new episode of gastroenteritis. A new episode is defined as the patient being seen for the first time during the current episode and who had no complaints for at least 14 days following an earlier report. Patients who consult their GP solely by phone are not reported on the weekly returns.

Physicians are asked to report when investigation of stool is ordered.

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1 Rijksinstituut voor Volksgezondheid en Milieugyiëne Volksgezondheid Toekomst Verkenning. SDU Ruwaard D., Kramers P.G.M. Sdu Uitgeverij, 1993: 42047.

The sentinel physicians adhere to the following definition of gastroenteritis:
- thin bowel movements three or more times a day, differing from the normal situation for the person concerned, or;
- thin bowel movements and two of the following symptoms: fever, vomiting, nausea, stomachache, stomach cramps, blood or mucus in the motions;
- vomiting and two of the following symptoms: fever, nausea, stomach ache, blood or mucus in the stool.

Table 21.1 shows the number of reports of acute gastroenteritis, by province group and degree of urbanization and for the Netherlands as a whole.

Table 21.1 Numbers of cases of acute gastroenteritis by province group and degree of urbanization and for the Netherlands as a whole, per 10,000 men and per 10,000 women, 1992-1993 and 1996-2001

		province group				degree of urbanization			Netherlands
		A	B	C	D	1	2	3	
1992	Men	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
1997		26	54	68	51	29	51	85	52
1998		27	89	81	46	55	61	97	64
1999		26	111	67	53	52	65	95	67
2000		41	197	102	85	66	85	131	90
2001		76	98	78	122	102	90	95	93
1992	Women	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
1997		25	64	68	59	48	52	89	57
1998		24	79	85	56	61	60	99	65
1999		22	109	84	66	76	66	117	74
2000		46	104	97	106	77	90	112	92
2001		55	108	97	169	100	106	127	109

Table 21.1 Numbers of cases of acute gastroenteritis, by province group and degree of urbanization and for Netherlands as a whole, per 10,000 men and per 10,000 women, 1992-1993 and 1996-2001 (cont.)

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1992 Total	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
1997	26	59	68	55	38	51	87	54
1998	26	84	83	51	58	60	98	65
1999	24	110	76	59	64	66	107	71
2000	44	105	99	96	71	87	121	91
2001	65	103	88	145	101	98	112	101

The reported number of gastroenteritis cases in the 1996-1999 period was approximately at the same level as recorded in 1992-1993. A higher number of gastroenteritis patients were reported in 2000 and 2001. In 1996-2001 more women than men were reported with gastroenteritis, i.e. 57-109 versus 51-90, respectively, per 10,000 women and per 10,000 men. In 2000, as in 1992 and 1993, this difference was less pronounced in 1998 and 2000.

The highest number of gastroenteritis reports in 2001 came from the southern provinces, where the number of registrations has been on the rise: 145 new patients with gastroenteritis per 10,000 inhabitants in 2001 compared to 96 in 2000.
Although the major cities have reported faster rising numbers of cases of gastroenteritis than the other two urbanization groups over all years, the sharp increase in the rural regions and smaller cities and suburbs and a simultaneous temporary decrease in major cities have served to even out the differences.

Age distribution

Table 21.2 shows the data on gastroenteritis patients reported by the GP (see figure 21.1).

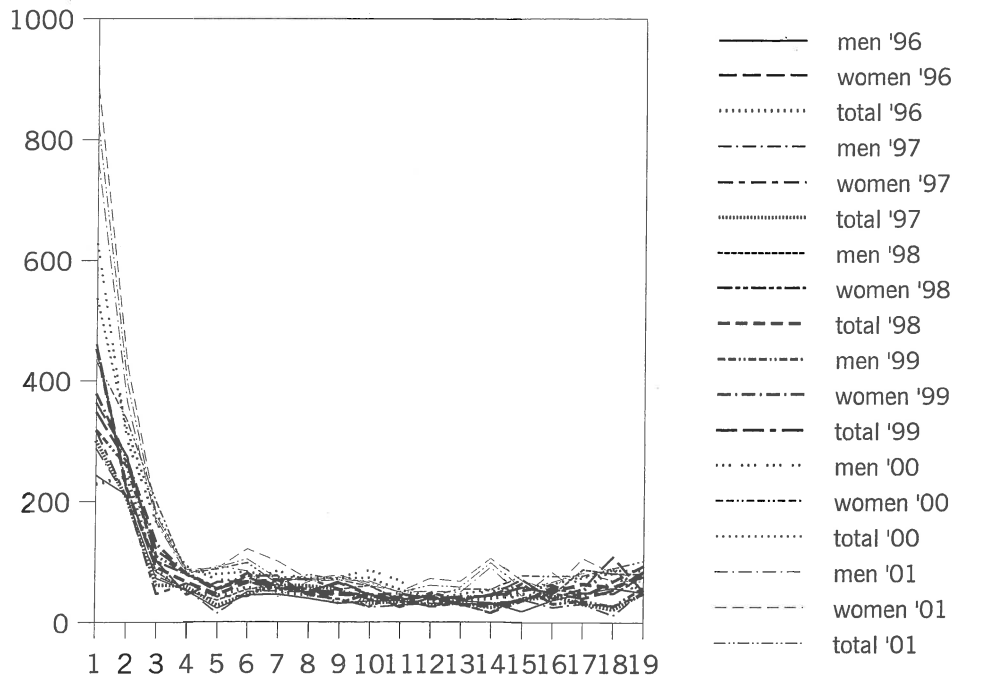
Table 21.2 Numbers of reports of acute gastroenteritis, per 10,000 men and per 10,000 women, 1996-2001

	Men						Women					
age group	1996	1997	1998	1999	2000	2001	1996	1997	1998	1999	2000	2001
≤1	244	288	447	319	628	765	364	317	460	379	432	886
1- 4	211	206	226	259	302	365	276	208	217	271	335	428
5- 9	73	77	84	110	164	164	102	47	101	130	198	176
10-14	53	55	53	82	93	81	46	65	80	80	82	88
15-19	24	16	37	57	71	94	67	43	57	53	89	90
20-24	46	51	55	69	68	85	68	44	77	82	99	122
25-29	47	53	63	54	86	43	57	71	78	60	64	101
30-34	40	50	49	60	69	68	50	72	45	52	80	72
35-39	32	54	55	32	75	71	68	56	39	66	71	79
40-44	36	26	62	48	87	69	47	38	27	46	61	62
45-49	37	29	37	28	70	50	26	42	47	48	39	51
50-54	27	32	46	49	35	52	41	27	40	39	44	73
55-59	35	31	30	39	37	50	36	32	30	43	56	68
60-64	33	32	17	45	55	92	47	16	31	44	55	106
65-69	19	38	41	65	37	44	72	36	36	53	78	70
70-74	37	25	46	31	48	83	40	60	56	63	77	54
75-79	48	31	88	36	75	47	56	31	49	43	78	106
80-84	57	(12)	81	27	81	58	109	28	48	68	90	82
≥85	49	54	80	58	44	47	51	47	77	94	102	76

Table 21.2 Numbers of reports of acute gastroenteritis, per 10,000 men and per 10,000 women, 1996-2001 (cont.)

age group	1996	1997	Total 1998	1999	2000	2001
≤ 1	229	301	453	348	536	823
1- 4	242	207	222	265	318	397
5- 9	87	62	92	120	180	170
10-14	49	60	67	81	87	84
15-19	45	29	47	55	80	92
20-24	58	47	67	76	84	105
25-29	52	62	71	57	75	73
30-34	45	61	47	56	74	70
35-39	50	55	47	49	73	75
40-44	42	32	44	47	74	66
45-49	32	35	42	38	55	50
50-54	34	30	43	44	39	62
55-59	36	32	30	40	47	59
60-64	40	25	28	45	55	99
65-69	48	37	38	59	59	57
70-74	38	45	51	49	64	67
75-79	53	31	64	40	77	82
80-84	90	22	59	54	87	70
≥ 85	50	49	78	84	85	68

Figure 21.1 Numbers of reports of acute gastroenteritis by age group, per 10,000 men and per 10,000 women, 1996-2001



Age group

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=65-69	16=70-74	17=75-79	18=80-84
19= ≥85					

In both registration periods, most cases of acute gastroenteritis were diagnosed among babies and 1-4 year olds. A striking increase in incidence occurred in 2001 in the number of babies below age 1. The number of 1-4 year-olds rose to a less degree.
In contrast with 1992 and 1993, a significantly higher incidence occurred among 5-9 year olds than among the 10-80 age groups in the 1996-2001 period.
Although a slight decrease in incidence occurred among 5-9 year olds in 2001, the figure remains higher than in 1996-1999.

Seasonal influences

Table 21.3 shows the numbers of cases of acute gastroenteritis by season of the year.

Table 21.3 Numbers of reports of acute gastroenteritis by quarter, per 10,000 inhabitants, 1997-2001

quarter		1	2	3	4
1997	Men	10	13	20	10
1998		20	10	17	17
1999		17	14	18	18
2000		22	25	20	25
2001		29	20	24	19
1997	Women	12	15	19	11
1998		20	12	16	18
1999		21	17	22	15
2000		24	25	21	24
2001		32	26	30	21
1997	Total	11	14	19	11
1998		20	11	16	17
1999		19	15	20	16
2000		23	25	20	25
2001		30	23	27	20

The highest incidence usually occurs in the first or third quarter of a year. Differences between the seasons are generally small.

This topic appears on the weekly returns for 2002.

Publications based fully or partly on continuous morbidity registration data

WIT DE M.A.S.
Epidemiology of gastroenteritis in the Netherlands
Thesis 2002.

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Comparison of gastroenteritis cases in a general practice-based study and a community-based study.
Epidemiol. Infect. 2001; 127(3): 389-97

WIT DE M.A.S., M.P.G. KOOPMANS, L.M. KORTBEEK, W.J.B. WINNET, J. VINJE, F. VAN LEUSDEN, A.I.M. BARTELDS, Y.T.P. VAN DUYNHOVEN
Sensor, a Population-based Cohort Study on Gastroenteritis in the Netherlands: Incidence and Etiology.
American Journal of Epidemiology, 2001, Vol, 154 No (7): 666-674

WIT DE M.A.S., M.P.G. KOOPMANS, L.M. KORTBEEK, N.J. VAN LEEUWEN, J. VINJE, Y.T.P.H. VAN DUYNHOVEN.
Etiology of Gastroenteritis in Sentinel General Practices in the Netherlands.
Clinical Infectious Diseases, 2001; 33:280-8

WIT DE M.A.S., M.P.G. KOOPMANS, L.M. KORTBEEK, N.J. VAN LEEUWEN, A.I.M. BARTELDS, Y.T.H.P. VAN DUIJNHOVEN.
Gastroenteritis in Sentinel General Practices, the Netherlands
Emerging Infectious Diseases, January 2001, Vol. 7, No. 1.

WIT DE M.A.S., M.P.G. KOOPMANS, L.M. KORTBEEK, W.J. VAN LEEUWEN, J. VINJE, A.I.M. BARTELDS, Y.T.H.P. VAN DUIJNHOVEN.
Interim report of a study on gastroenteritis in sentinel practices in the Netherlands (NIVEL) 1996-1999.
Results of the first two years.
RIVM, Bilthoven, January 1999 Report No. 216852003.

Prostate complaints

Early detection of common forms of cancer is desirable as prompt treatment may avert further deterioration. Although prostate cancer occurs frequently among men, screening for this form of cancer remains a controversial subject. The effects of early detection need to be studied before introducing mass screening for cancer.
The Social Health Care Institute of Erasmus University in Rotterdam is helping to evaluate a randomized study into the effects of detecting prostate cancer at an early stage. Early detection is possible through rectal touch, transrectal ultrasonography by a urologist and a PSA blood test.

A GP can perform a rectal touch and may request a PSA test. For proper evaluation of the effect of early detection of cancer, it is necessary to chart how often a GP performs a rectal touch or requests a PSA test in a situation without screening. The recording of data by CMR sentinel stations is a good way of obtaining insight into these matters.

Sentinel physicians are asked to report all rectal touches that they perform and all PSA tests that they request for the purpose of determining prostate problems. They are also asked to report instances where these steps result in the referral of a patient with suspected prostate cancer.

Table 22.1 shows the number of times that GPs performed a rectal touch, requested a PSA test and (based on the results of these actions) referred a patient with suspected prostate cancer to a urologist. The figures are presented per 10,000 men by province group and degree of urbanization and for the Netherlands as a whole.

Table 22.1: Numbers of rectal touches, requested PSA tests and referrals for suspected prostate cancer by province group and degree of urbanization and for the Netherlands as a whole, per 10,000 men, 1997-2001

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
rectal touch								
1997	64	144	147	97	164	100	147	116
1998	45	120	167	105	124	107	170	117
1999	46	102	124	99	84	91	153	98
2000	44	75	89	105	62	34	84	80
2001	80	77	95	106	96	91	87	91
PSA test								
1997	26	113	85	90	134	70	78	81
1998	33	109	103	69	121	71	105	83
1999	42	111	108	62	151	63	123	84
2000	35	130	84	92	184	69	90	89
2001	56	129	85	102	185	82	63	94
referral								
1997	7	12	11	7	15	8	12	9
1998	7	19	20	7	24	12	14	14
1999	3	18	14	5	15	11	17	11
2000	5	16	12	8	8	12	11	11
2001	10	15	12	10	16	12	8	12

Each year the northern provinces reported the lowest numbers of rectal touches and PSA tests. They also had a lower number of referrals. Likewise in the southern provinces fewer number of referrals for suspected prostate cancer. Each year, considerable differences arise among the southern provinces and the degree of urbanization groups.

Significant differences exist between the degree of urbanization groups as regards the numbers of rectal touches and PSA tests. A shift has occurred in the examination of prostate complaints, i.e. rectal touches were performed less frequently in the 1997-2001 period, while the number of requested PSA tests increased. The number of referrals for suspected prostate cancer is relatively constant.

Age distribution

Table 22.2 shows the age distribution of men who underwent a rectal touch, for whom a PSA test was requested and who were referred with suspected prostate cancer.

Table 22.2 Numbers of men who underwent a rectal touch, for whom a PSA test was requested and who were referred, per 10,000 men by age group, 1997-2001

age group	rectal touch					PSA test				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
≤15	-	(5)	-	(5)	(0)	-	-	-	-	-
15-19	(3)	7	(3)	(3)	-	(3)	(2)	-	-	-
20-24	11	7	-	(3)	(51)	-	-	-	(3)	-
25-29	15	(2)	(5)	7	(4)	-	-	(3)	-	(6)
30-34	27	21	28	20	18	(2)	(5)	(4)	6	(2)
35-39	39	31	21	15	24	12	(4)	11	7	(7)
40-44	59	52	48	32	33	17	18	23	25	27
45-49	112	94	61	58	86	62	53	28	64	80
50-54	252	151	101	105	98	138	101	94	136	111
55-59	326	281	254	200	227	245	194	260	219	257
60-64	347	419	372	282	313	333	357	316	380	317
65-69	453	523	438	366	390	381	365	421	444	433
70-74	505	672	526	304	351	308	477	397	420	444
75-79	428	374	380	342	392	321	440	416	299	392
80-84	390	578	442	301	458	463	349	416	277	470
≥85	144	321	155	236	205	162	361	214	281	268

Table 22.2 Numbers of men who underwent a rectal touch, for whom a PSA test was requested and who were referred, per 10,000 men by age group, 1997-2001 (cont.)

age group	referral 1997	1998	1999	2000	2001
≤15	-	-	-	-	(0)
15-19	-	-	-	-	-
20-24	-	-	-	-	-
25-29	-	-	-	-	-
30-34	-	-	-	-	-
35-39	-	-	-	-	(2)
40-44	-	-	(2)	(4)	-
45-49	(4)	(2)	(2)	-	-
50-54	(3)	(2)	(2)	12	(9)
55-59	16	33	18	17	27
60-64	25	48	49	26	41
65-69	55	81	45	67	40
70-74	86	103	72	96	72
75-79	69	103	93	50	86
80-84	61	134	54	58	111
≥85	(0)	20	78	44	(31)

Examination of prostate complaints occurs more systematically from the age of 45-49 upwards. The initial examination is usually in the form of a rectal touch. From the 55-59 age group upwards, there are relatively more requests for a PSA test. Referral of patients with suspected prostate cancer increases notably from the 60-64 age group upwards.
In 1997 approximately 4.5% of men in the 60-80 age bracket underwent a rectal touch. The corresponding figure in 1998 was 5% and in 1999 it was 4.3%. In 2001 GPs reported significantly fewer patients (3.4%) who had undergone a rectal touch. In 1997 approximately 3.4% of the men had a PSA test, compared with 4% in 1998 and 3.8% in 1999. The figure in 2001 was again 4%.The number of men in the 60-80 age bracket referred with suspected prostate cancer increased from 0.5% in 1997 to 0.8% in 1998. In 1999 the number decreased to 0.6%. In 2001 the percentage was again 0.6, which is the same as in 2000.

The prostate complaints topic appears on the weekly returns for 2002.

Publications based fully or partly on continuous morbidity registration data

BEEMSTERBOER, P.P.M.
Evaluation of Screening Programmes. Studies on breast cancer and prostate cancer
Dissertation, Rotterdam, 1999 (Chapter 6).

Whooping cough

Vaccination against whooping cough (Bordetella pertussis) is part of the national vaccination programme in the Netherlands, which has a degree of high coverage (>96%).

Surprisingly whooping cough re-emerged in a number of outbreaks in 1989-1990, 1993-1994 and 1996-1997. A detailed analysis revealed that the proportion of vaccinated persons among the indicated cases of whooping cough had increased[1]. The data used for the analysis consisted of mandatory notifications of the Health Care Inspectorate, hospital admissions registered by SIG Care Information, sera diagnosis by RIVM and Bordetella isolation recorded by the Regional Laboratories.

Information from general practice was unavailable or untraceable in other sources. However, general practice plays an indispensable role in the surveillance of infectious diseases by providing information supplemental to that obtained from other sources. Further research into the change in the epidemiology of whooping cough is desirable. Whooping cough was placed on the weekly returns in 1998.

Sentinel physicians are requested to record every case of whooping cough. The often atypical course of the illness among vaccinated individuals does not simplify case definition. The sentinel physicians adhere to the following definition of whooping cough:

- prolonged coughing complaints (longer than three weeks) with the more or less typical characteristics, and/or:
- confirmed Bordetella pertussis (as shown in the flow chart for optimum laboratory diagnosis issued by the National Coordination Structure for Infectious Diseases).

Table 23.1 shows the numbers of individuals with whooping cough per 10,000 persons, by province group, by degree of urbanization and for the Netherlands as a whole.

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[1] Melker H.E. de, M.A. Conyn-van Spaendonck, J.F.P. Schellekens, Pertussis surveillance 1989-1995, RIVM, 1996.

Table 23.1 Number of individuals with whooping cough by province group, degree of urbanization and for the Netherlands as a whole, per 10,000 persons, 1998-2001

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1998	2	4	2	12	2	6	1	5
1999	3	5	11	17	5	11	7	10
2000	3	7	10	33	4	13	17	12
2001	3	5	15	22	6	11	22	12

As in 1998-2000, there was an unequal distribution of whooping cough across the Netherlands in 2001. The number of whooping cough cases in the southern provinces was high at 22 per 10,000 persons compared with 3-5 per 10,000 in the northern and eastern province groups. A point that must be mentioned is that half of all reported whooping cough cases in 2000 originated from a sentinel station in the south of the country. In 2001, the same sentinel station represented an eighth of the total number of registrations.
In urbanization group 3 (major cities with more than 100,000 inhabitants), the number of cases of whooping cough was high in comparison with the incidence rate in the two other urbanization groups.

Table 23.2 shows the number of persons with whooping cough by province group and degree of urbanization and for the Netherlands as a whole, disregarding the data supplied by the sentinel station in province group D.

Table 23.2 Number of persons with whooping cough by province group, by degree of urbanization and for the Netherlands as a whole, per 10,000 persons, 1998-2001, disregarding the data from one particular sentinel station.

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
1998	2	4	2	8	2	5	1	4
1999	3	5	11	8	5	8	7	7
2000	3	7	10	4	4	5	7	7
2001	3	5	15	7	6	9	22	11

Clearly more cases of whooping cough were reported in 2001 than in previous years. After the correction for one sentinel station, the occurrence of whooping cough was highest in the western provinces. Once again, whooping cough was reported mainly in the major cities in 2001.

Age distribution

Table 23.3 shows the age distribution of persons with whooping cough.

Table 23.3 Number of individuals with whooping cough per 10,000 persons, by age group, 1998-2001

age group	1998	1999	2000[2]	2000[3]	2001[2]	2001[3]
≤1	(17)	(17)	85	54	46	29
1- 4	37	6	61	46	104	99
5- 9	22	36	51	38	56	15
10-14	6	27	22	9	19	19
15-19	(4)	7	8	(3)	10	9
20-24	(1)	(2)	0	0	0	0
25-29	(2)	7	4	(2)	(2)	(2)
30-34	(2)	(4)	4	(1)	4	4
35-39	(2)	7	8	(4)	7	6
40-44	-	5	7	(3)	(3)	(2)
45-49	(1)	5	3	(3)	7	6
50-54	(2)	(2)	7	(1)	(2)	0
55-59	-	(3)	8	(3)	(2)	(2)
60-64	-	(7)	10	(5)	(5)	(4)
65-69	(2)	(2)	(5)	0	-	-
≥69	-	-	(3)	(2)	(2)	(1)

Whooping cough occurred in all age groups. The highest incidence was recorded in the 1-4 years age group, followed by the 5-9 and infant groups.

The topic appears on the weekly returns for 2002.

[2] All sentinel stations.

[3] All sentinel stations excluding one particular practrice in province group D.

Extrapolation of observed frequencies to the Dutch population

This section of the report provides a general impression of the numbers of patients, consultations, actions and events in the Netherlands. The figures presented are based on frequencies calculated using data recorded by sentinel stations in the Continuous Morbidity Registration programme. As pointed out in previous reports, readers should bear in mind when examining the tables that while the populations of the sentinel stations represent the Dutch population as a whole with reasonable accuracy (also refer to pages 20-21), the sentinel physicians are a select group. Consequently it is impossible to determine conclusively to what extent the results vary from the situation that exists in reality. Variances may differ depending on the nature of the topic in the weekly returns. Special caution should be exercised when examining categories that include intervention by a GP. One example is 'prostate complaints', because the sentinel physicians may differ in their approach from the modal GP. Similarly, the 'suicide and attempted suicide' topic appears to differ from data recorded elsewhere, probably because these occurrences are not always reported to a GP[1]. As regards the registration of data in general, the sentinel physicians almost definitely act as a select group, but this circumstance must inevitably benefit the project. Nevertheless, readers should not examine only the extrapolated numbers, but should also refer to the chapters concerned. To allow correct interpretation of the extrapolated figures, this chapter starts with details of the total Dutch population per year, in thousands.

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[1] Diekstra R.F.W., and M. van Egmond. Suicide and attempted suicide in general practice. In the Dutch Sentinel Practice Networks; relevance for public health policy, blz. 202. Nivel, Utrecht 1989.

Table 24.1 Dutch population by sex, in thousands, 1992-2001 (CBS)*

year	men	women	total
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
1997	7,697	7,870	15,567
1998	7,740	7,914	15,654
1999	7,793	7,967	15,760
2000	7,846	8,018	15,864
2001	7,910	8,077	15,987

* Numbers as on 1 January of each year.

Table 24.2 Extrapolation of observed incidences to the Dutch population

	frequency incidence (per 10,000)*			Netherlands** (absolute numbers)		
topic year	men	women	total	men	women	total***
Influenza-like illnesses						
1992			244			370,000
1993			484			772,500
1994			106			162,500
1995			315			480,000
1996			115			178,000
1997			233			360,000
1998			248			365,000
1999			254			400,000
2000			197			312,500
2001			113			180,500
Zanamivir prescription						
2000			2			3,000
2001			0			
Acute respiratory infection						
2001			374			598,000
Walking aids (prescription of)						
2001			16			26,500
Chickenpox						
2000			20			32,000
2001			24			38,500
Depression						
2000	26	48	37	20,500	37,500	58,000
2001	26	42	34	20,500	34,000	56,500
Diabetes mellitus, new patients						
1990-93	16	17	17	12,250	13,250	25,500
2000	23	22	23	18,000	17,500	35,500
2001	24	21	23	19,000	17,000	36,000

* see page 112

Table 24.2 Extrapolation of observed incidences to the Dutch population (cont.)

Topic year	frequency incidence (per 10,000)*			Netherlands** (absolute numbers)		
	men	women	total	men	women	total***
Suicide and attempted suicide						
1992			6			9,000
1993			6			9,000
1994			5			7,500
1995			7			10,750
1996			6			9,250
1997			6			9,250
1998			5			7,750
1999			5			7,750
2000			6			9,500
2001			6			9,500
Referrals and consultation for psychiatric disorder (GGZ)						
– consultations			9			14,500
– referrals			69			110,500
Urethritis in men						
1992		31			23,000	
1993		23			17,500	
1994		25			19,000	
1995		26			20,000	
1996		21			16,000	
1997		17			13,000	
1998		17			13,000	
1999		20			15,500	
2000		21			16,500	
2001		23			18,000	

* see page 112

Table 24.2 Extrapolation of observed incidences to the Dutch population (cont.)

	frequency incidence (per 10,000)*			Netherlands** (absolute numbers)		
topic year	men	women	total	men	women	total***
Fear of AIDS						
1992			22			33,500
1993			23			35,000
1994			27			41,500
1995			21			32,000
1996			20			31,000
1997			24			37,500
1998			18			28,000
1999			17			27,750
2000			19			30,000
2001			20			32,000
Gastroenteritis						
1996	51	69	60	9,000	54,000	93,000
1997	52	57	54	40,000	45,000	85,000
1998	64	65	65	50,000	51,000	101,000
1999	67	74	71	52,250	59,000	111,250
2000	90	92	91	70,500	73,750	144,250
2001	93	103	101	73,500	83,000	156,500
Herpes zoster						
1997	24	30	28	18,500	23,750	43,000
1998	28	37	33	21,500	29,250	50,750
1999	27	37	32	21,000	29,500	50,500
2000	31	35	33	24,250	28,000	52,250
2001	30	33	32	24,750	26,750	51,500
Prostate complaints - rectal touch						
1997	116			89,250		
1998	117			90,500		
1999	90			76,500		
2000	80			62,750		
2001	91			72,000		

* see page 112

Table 24.2 Extrapolation of observed incidences to the Dutch population (cont.)

	frequency incidence (per 10,000)*			Netherlands** (absolute numbers)		
topic year	men	women	total	men	women	total***
PSA test						
1997	81			62,250		
1998	83			64,250		
1999	84			65,500		
2000	89			70,000		
2001	94			74,250		
- Referral to urologist						
1997	9			7,000		
1998	14			11,000		
1999	11			8,500		
2000	11			8,500		
2001	12			9,500		
Whooping cough						
1998			5			7,500
1999			10			15,750
2000			12			19,000
2001			12			19,500
1998****			4			6,250
1999			7			11,000
2000			7			11,000
2001			11			17,500

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

** Extrapolation of incidences to the Dutch population (in the year concerned), rounded off and in thousands.

*** Discrepancies may occur in the totals as a result of the rounding-off of numbers.

**** Minus the data from one sentinel station.

Confidence intervals

Reliability margins have to be applied when examining the incidence rates and prevalence rates estimated for the entire Dutch population. The table below provides an impression of the incidence rates and prevalence rates, for relative and absolute numbers.

The table should be read in the following way. If a frequency of 0.1 per 10,000 patients is observed in the sentinel stations' total population of approximately 144,000 patients (1st column), the 95% confidence interval is 0.011-0.5 per 10,000 (2nd column). It follows that the estimated absolute number in the Dutch population is 156 (3rd column) and that the 95% confidence interval is between 17 and 776. The table shows how these estimates relate to a found frequency at the sentinel stations of 0.1 to 1,000 per 10,000 patients with some intermediate 'steps'. The confidence intervals are particularly high at the lower frequencies.

Table 23.3 Confidence intervals of estimates of incidence and prevalence and sentinel station practices per 10,000 and the absolute numbers.

frequency per 10,000		Netherlands (absolute numbers)	
frequency	95%CI	frequency	95%CI
0.1	0.011-0.5	156	17-776
1.0	0.6-1.7	1,557	895-2,659
10	8-12	15,567	13,181-18,375
100	95-105	155,671	147,838-163,911
1,000	985-1016	1,556,711	1,532,761-1,580,992

For the total groups of men and women separately (which each form roughly half of the total population), the reliability margins are only a little wider than shown in the table. For separate 5 or 10-year age groups, the reliability margins are obviously far wider, because these groups are smaller in size. For example, the number of reported suicide attempts in 1997 was 6 per 10,000 persons (a reliability margin of 4.8-7.4 per 10,000). For the 25-34 age group, the number of suicide attempts was also 6 per 10,000 persons. However, the confidence interval (0.8-28) is far greater.

(With thanks to R. Gijsen and Dr H. Verkleij, RIVM).

Incidental studies

Incidental studies have been conducted since 1976 as part of the Sentinel Stations project. The studies focus on relatively uncommon diseases and occurrences. The second part of appendix 3 lists the subjects covered by the studies. This chapter reports on the data gathered in incidental studies in 2001. The difference compared with the weekly return topics is that the data is requested only once a year, usually immediately after the end of the year. This approach allows data to be gathered retrospectively on subjects for which the need for registration did not become apparent until after the start of the year.

Euthanasia requests

Euthanasia requests made to general practitioners were first included in the Sentinel Stations project in 1976. GPs are not asked to report on whether they complied with the requests.

At the start of the year, the sentinel physicians are informed that a study is going to be conducted. At the end of the year, all Sentinel Stations receive a form on which they are asked to state whether any patients have requested euthanasia or assistance in suicide in the past year and, if so, the reason for the requests. The physicians are also asked to state the age, sex, disease and nursing location and whether or not a 'euthanasia declaration'[1] was signed. The data on each patient can be found at the end of this section of the document. The table is largely self-explanatory.

There were 37 requests in 2001. Of the patients who requested euthanasia, 78% had a malignancy. The number of patients being nursed at home was 32. Five patients were in a hospital or nursing home.

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[1] A euthanasia declaration is a written document in which an individual requests that euthanasia be carried out under specific conditions.

All of the 37 requests were supported by a euthanasia declaration. Thirty-five patients requested euthanasia. Two requested assistance with committing suicide. For 28 of the 37 requests, the GP consulted another physician. In a few reported requests whereby another physician was not consulted, GPs stated that patient died naturally before euthanasia was applied. In other cases, GPs reported that they had not yet consulted another physician because it was not yet appropriate to do so.

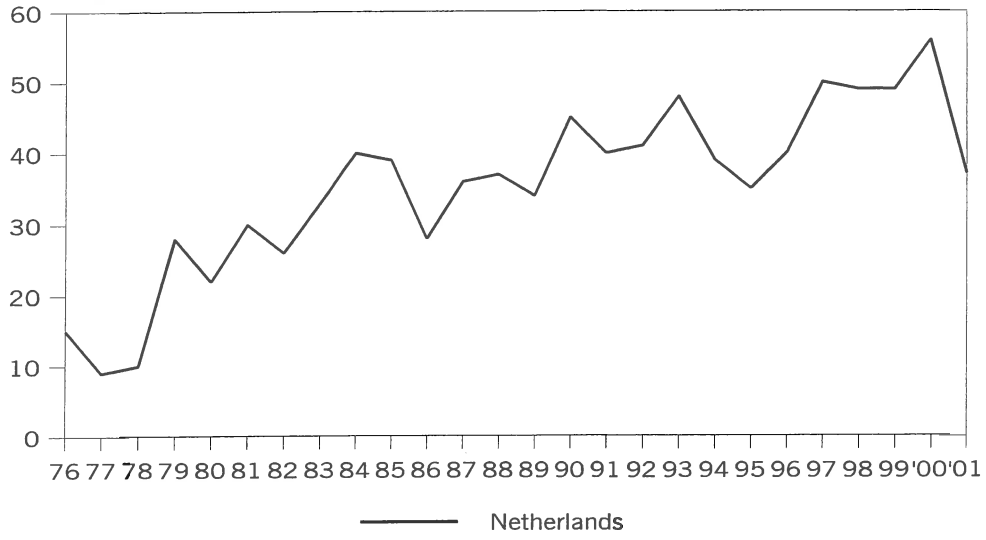
Requests for euthanasia 1976-2001.

Table 25.1 shows the distribution of the number of requests by province group and degree of urbanization and by sex (cf. Figure 25.1).

Table 25.1: Absolute numbers of patients who asked GPs to participate actively in euthanasia, by sex, by province group and degree of urbanization and for the Netherlands as a whole, 1992-2001

			province group				degree of urbanization			Netherlands
absolute	Men	Women	A	B	C	D	1	2	3	
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
1997	24	26	11	11	23	5	2	38	10	50
1998	27	22	3	14	25	7	5	32	12	49
1999	31	17	9	5	25	9	5	29	14	48
2000	30	27	7	10	30	9	9	34	13	56
2001	19	18	4	8	16	9	5	21	11	37

Figure 25.1 Absolute numbers of patients that asked a sentinel physician for euthanasia or help in committing suicide, for the Netherlands as a whole, 1976-2001



Tables 25.2 and 25.3 show the average numbers of euthanasia requests in the 1976-2001 period per sentinel station (not per GP) and the distribution by province group and degree of urbanization.

Table 25.2 Average numbers of requests per sentinel station by province group 1976-2001

	province group			
	A	B	C	D
Number of sentinel stations	6	6	12	7
Average number of requests	20.5	16	27.5	15
distribution	1 - 44	8 - 25	16 - 43	10 - 24

* Only sentinel stations that reported over the entire period.

Table 25.3 Average numbers of requests per sentinel station by degree of urbanization 1976-2001

	degree of urbanization		
	1	2	3
number of sentinel stations	5	19	10
average number of requests	21	17.6	26
distribution	12 - 30	0 - 44	12 - 43

* Only sentinel stations that reported over the entire period.

These figures show that most euthanasia requests continue to be made in the western provinces and in the major cities.

Age distribution

Table 25.4 shows the age distribution.

Table 25.4 Absolute numbers of patients that asked GPs for euthanasia or help in committing suicide, by age group, 1992-2001

	≤54	55-64	65-74	75-84	≥85	total
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
1997	12	7	17	9	5	50
1998	6	10	19	7	7	49
1999	5	6	16	15	6	48
2000	13	13	11	18	1	56
2001	8	3	9	12	5	37

Overview of reported requests

The sentinel stations project has now gathered data on 915 euthanasia requests, 472 (52%) of which were made by men.

The International Classification of Diseases (1975, 9th version) was used as a guide to obtain insight into the illnesses that occasion euthanasia requests. One of the classification problems that arises is the multiple pathology inherent in old age. Another problem is that sometimes no disease is reported at all. For example, the category of 'symptoms and insufficiently defined illnesses' included the request of a 92-year-old woman who was suffering from 'old age'.

Five groups of illnesses are used:
- malignant neoplasms;
- cardiovascular diseases;
- chronic obstructive pulmonary diseases;
- symptoms and insufficiently defined illnesses;

- other diseases, including neurological and endocrinological illnesses and AIDS.

Despite the problems outlined above, it was fairly simple to classify the illnesses that led to patients requesting euthanasia. In the survey, GPs stated the illness that, in their opinion, occasioned the request.

Table 25.5 Diseases that occasioned euthanasia requests, 1976-2001

	n	%
malignancies	684	75
cardiovascular diseases	55	6
chronic obstructive pulmonary diseases	40	4
symptoms and insufficiently defined diseases	44	5
other diseases	92	10
total	915	100

Table 25.6 shows the distribution of the diseases that occasioned a euthanasia request, by age.

Table 25.6: Percentage of requests per disease of the total number of reported cases, by age (n= absolute number of requests) 1976-2001

	≤ 54 %	55-64 %	65-74 %	75-84 %	≥ 85 %
malignancies	78	89	89	65	26
cardiovascular diseases	0	1	2	13	23
chronic obstructive pulmonary diseases	1	2	2	8	10
symptoms and insufficiently defined diseases	3	1	1	4	29
other diseases	19	7	6	11	13

Malignancies are the principal reason why people below 85 ask a GP for euthanasia. Below 55, the group of other illnesses represented is extremely heterogeneous and includes cystic fibrosis, multiple sclerosis and AIDS and also vital depression.

Reasons stated for euthanasia requests by the elderly include the final stages of endocrinological diseases such as diabetes mellitus, terminal renal insufficiency and advanced stages of rheumatoid arthritis.

Individuals whose vascular systems are in poor condition and who suffer a non-fatal myocardial infarction or cerebrovascular accident may have a seriously impaired quality of life. Chronic obstructive pulmonary disease can also lead to serious infirmity and suffering and occasion a request for euthanasia.

Table 25.7 shows the age distribution per illness (patients younger and older than 65).

Table 25.7 Percentage of euthanasia requests by patients younger and older than 65, by disease, 1976-2001 (n=absolute numbers of requests)

	n	≤ 64 %	≥ 65 %
all diseases	915	36	64
all malignancies	684	40	60
cardiovascular diseases	554	4	96
chronic obstructive pulmonary diseases	40	13	87
symptoms and insufficiently defined diseases	44	16	84
other diseases	92	45	55

Table 25.8 shows a further breakdown of the malignancies according to the location of the tumour and the patient's age.

Table 25.8 Percentage of euthanasia requests by patients younger and older than 65 with a malignancy, by tumour location (n=absolute numbers), 1976-2001

	n	≤ 64 %	≥ 65 %
all malignancies	684	39	61
stomach	63	40	60
colon/rectum	103	32	68
trachea/lung	184	36	64
breast	69	58	43
other	265	40	60

No major changes have occurred in age distribution. In cases where breast cancer is the reason for a euthanasia request, the percentage of patients below 65 differs significantly from the percentage for other localizations. In recent years, there has been an increase in reported euthanasia declarations, i.e. from 15% in 1984 to 87% in 2000.

25.4 Discussion

Until the early 1990s, hardly any possibilities existed to compare data gathered in the Dutch sentinel stations project on requests for euthanasia and assisted suicide with the findings of other data registration projects and research (Bartelds 1989)[2].

Since then, major studies have been carried out to determine the action taken by GPs and other doctors in the Netherlands with regard to euthanasia, assisted suicide and decisions concerning the end of patients' lives (Van der Maas et al 1991[3], Pijnenborg

[2] 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.

[3] 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.

et al 1994[4], Van der Wal et al 1994)[5]. In 1995, another large-scale study was conducted into euthanasia and other end-of-life medical practices (Van der Maas et al 1996[6]). As part of the same study, there was en evaluation of the notification procedure introduced in 1991 for cases of euthanasia and assisted suicide (Van der Wal et al 1996[7]).

Substantial methodological differences exist between the above studies and the registration of data by GPs participating in the sentinel stations project. A discussion of these differences falls outside the scope of this report. However, there is one difference that bears mentioning: unlike the recent studies mentioned above, the data in the sentinel stations project comes exclusively from GPs.

The difference in the average numbers of euthanasia requests received by GPs annually was not great in 1990, i.e. an average of 0.74 per GP in the sentinel stations project compared with 0.8 in the study conducted by the CBS and Erasmus University of Rotterdam.

The number of more explicit requests for euthanasia at a certain time during the illness process increased by 9% between 1990 and 1995 (Van der Maas, 1996). The number of deaths increased by slightly more than 5%.

The number of explicit euthanasia requests registered by sentinel physicians in the 1990-1995 period also increased, albeit by less than the 9% stated by Van der Maas et al. The number of euthanasia requests appears to reach a 'natural' ceiling of approximately 3 in 10,000 patients, or an average of 0.75 requests per GP per year.

The relatively small absolute numbers of requests made to sentinel physicians may exhibit significant differences from year to year. This circumstance necessitates the use of progressive averages.

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4 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 live practices in the Netherlands. BMJ 1994; 308: 1346-9.

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

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

7 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 Medicine, 1996, 1706.

One of the few striking differences between the interview study and the death certificate research performed by Van der Maas et al is the sex distribution of patients whose euthanasia request physicians granted. The death certificate research revealed that more women than men were given euthanasia in 1995. The sex ratio was the other way round in the interview study conducted in 1995 and in the research conducted in 1990.

The sentinel stations have consistently reported a larger proportion of men than women who request euthanasia or help in committing suicide, i.e. 55% versus 45% in the 1976-1999 period.

One finding is consistently present in all the studies conducted so far, namely that patients who request euthanasia usually have a malignancy and that such requests are usually granted (approximately 80%). Another common finding is that the proportion of patients with a malignancy decreases as age increases.

Table 25.9 Requests made by patients for active euthanasia, 2001

age	sex	disease reported	reason for request
96	M	macroglobulinemia	life weariness, bedridden
94	M	terminal kidney insuffiency	weariness, loss of perspective
94	F	none	life weariness, living independently
88	F	light CVA	life weariness
85	F	carcinoma of the rectum	pain
84	F	carcinoma of the stomach	pain
83	M	Hodgkin's disease	unbearable suffering
83	F	carcinoma of the colon and metastases	pain, loss of dignity
81	M	carcinoma of the bronchus	deterioration
80	M	collum fracture	cachexia
79	M	carcinoma of the lung with metastases	
78	F	COPD	exhaustion
77	M	carcinoma of the colon	vomiting, pain, ileus
76	M	carcinoma of the lung	weariness, fear, bedridden and dyspnoea
75	F	carcinoma of the mamma	unbearable pain, bone metastases
75	F	carcinoma of the colon with metastases	
75	F	carcinoma of biliary duct	suffering and decline, collum fracture

Table 25.9 Requests made by patients for active euthanasia, 2001 (contd.).

age	sex	disease reported	reason for request
74	F	M. Parkinson	completely dependent on others
73	M	carcinoma of the bowel with metastasis	hopelessness
73	M	carcinoma of the lung	fear, loss of dignity
72	F	carcinoma of the lung	
70	F	carcinoma of the lung	cachexia
70	F	COPD	severe dyspnoea, pain
67	F	carcinoma of the bronchus with metastases	
66	M	carcinoma	cachexia, dyspnoea
65	M	carcinoma of the stomach	
63	M	carcinoma of the stomach	
63	M	carcinoma	
62	M	carcinoma of the lung	dyspnoea, cachexia
54	M	astrocytoma stage VI	decline, afasie
53	M	carcinoma of the lung with metasases	cachexia, pain, loss of dignity
52	F	Grawitz tumour with metastases	unbearable suffering and pain
51	M	carcinoma of the colon with metastases	loss of dignity
49	M	carcinoma of the lung with metastases	pain
48	F	carcinoma of the mamma	metastases, spinal cord lesion
43	F	brain tumour	pain
39	M	progression Multiple sclerose	completely dependent on others

The study will be continued in 2002.

Eating disorders

It is unclear whether the rate of occurrence of serious eating disorders such as anorexia nervosa and bulimia nervosa is increasing. Sentinel physicians registered both of these disorders in an incidental study conducted between 1985 and 1989. The renewal of registration in 1995 and subsequent years may reveal whether these disorders are on the rise.

The sentinel physicians who reported eating disorders were asked a number of retrospective questions about each patient in 2001. The questions included whether the disorder was first diagnosed in 2001 and whether the patient was referred to a different care provider on account of the disorder. The sentinel physicians were also asked to report on the composition of the patient's family and on some physical aspects of the disorder.

As was the case in the first registration period of 1985-1989, the study was headed by Dr H. W. Hoek, psychiatrist/epidemiologist and Chairman of the Eating Disorders Steering Group of the Netherlands.

Table 26.1 shows the distribution of the numbers of patients that GPs diagnosed as having an eating disorder (absolute numbers per 10,000 inhabitants), by province group and degree of urbanization and for the Netherlands as a whole, in the 1985-1989 and 1995-2001 periods. These numbers have not yet been corrected for duplications and contain both incidents and prevalent numbers. Therefore, the numbers given should be interpreted cautiously.

Table 26.1 Absolute numbers of patients for which GPs diagnosed an eating disorder, by province group and degree of urbanization and for the Netherlands as a whole, 1985-1989 and 1995-2001, and the numbers per 10,000 women

	province group				degree of urbanization			Netherlands
	A	B	C	D	1	2	3	
absolute/year								
avg:								
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
1997	12	10	11	9	8	29	4	42
1998	10	17	15	9	5	36	10	51
1999	4	14	12	13	1	38	4	43
2000	4	9	13	9	3	26	6	34
2001	5	6	6	7	4	19	1	24
per 10,000								
women								
1995	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
1997	7.8	5.5	4.2	4.8	6.5	5.3	4.3	5.3
1998	7.2	9.1	6.7	5.6	8.6	7.1	11	7.1
1999	3.3	8.5	5.4	8.4	1.1	7.9	4.4	5.2
2000	3.2	4.6	3.9	6.1	2.3	4.9	3.8	4.2
2001	3.4	4.0	2.5	4.6	4.4	4.0	0.9	3.6

The number of reports in 2001 was low compared with previous years. Women accounted for 96% of the reported cases.

The reported number of female patients with an eating disorder was highest in the southern province group in 2001. Most cases of eating disorders were reported in urbanized areas and commuter towns.

Table 26.2 shows the distribution of reported eating disorders by age group.

Table 26.2 Absolute numbers of patients for whom GPs reported an eating disorder, by age, 1985-1989 and 1995-2001

women	1985-1989 avg.	1995	1996	1997	1998	1999	2000	2001
1- 4	-	-	-	1	-	-	-	-
5- 9	-	-	-	1	-	-	-	1
10-14	1	1	1	0	2	-	1	1
15-19	8	13	15	10	9	7	9	6
20-24	12	14	9	11	14	7	5	2
25-29	14	10	7	7	5	6	9	4
30-34	6	9	4	3	4	6	4	5
35-39	7	8	6	3	11	9	3	3
40-44	4	2	2	4	4	6	1	-
45-49	1	4	1	1	1	-	1	-
50-54	1	2	-	-	-	-	1	1
55-59	1	-	-	-	1	1	-	-

One male patient was reported in 2001.

Another eating disorder study will be conducted in 2002.

Publications based fully or partly on continuous morbidity registration data

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 tended 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.

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

General comments

1 The Counselling Committee has decided to include the following topics on the weekly returns in 2002.

   a Influenza and influenza-like illnesses
   b Neuraminidase inhibitor (prescribed)
   c Chickenpox
   d Depression
   e Diabetes Mellitus (new patient)
   f Suicide and attempted suicide
   g Mental health care
   h Urethritis in men
   i Fear of AIDS
   j Gastroenteritis
   k Prostate complaints
   l Whooping cough
   m Acute respiratory infection

2 Incidental studies on euthanasia and eating disorders will be conducted in 2002.

3 The Counselling Committee welcomes suggestions concerning the questions to be included on the weekly returns.

4 Data contained in this report may be reproduced provided that the source is acknowledged.

5 A Dutch version of the report is available on request.

A.I.M. Bartelds, GP/Project Leader

Publications based fully or partly on continuous morbidity registration data

General

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, 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 sentinel 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 sentinel 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 sentinel 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 Sentinel stations" 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 sentinel physicians over the country and by degree of urbanization. The presence of 1% of the population of the four provinces groups and the three urbanization groups has been observed in the practices of the sentinel physicians. The completeness of the registration, the internal and the external validity of the data collected by the physicians are discussed.

SCHWARTZ, F.W. PROF. DR. et al.
The European Denominator Project.
Comparison and Harmonisation of Denominator Data for Primary Health Care Research in Countries of the European Community.
Hanover, 1996

Chronic benign pain

KERSSENS, J.J. P.F.M. VERHAAK, A.I.M. BARTELDS, M.J. SORBI, J.M. BENSING.
The Epidemiology of Chronic Benign Pain Disorders in General Practice.
European Journal of Pain: Accepted

Diabetes Mellitus

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.

Myocardial infarction

VAN DER PAL-DE BRUIN, K.M., H. VERKLEIJ, J. JANSEN, A. BARTELDS, D. KROMHOUT.
The incidence of suspected myocardial infarction in Dutch general practice in the period 1978-1994.
European Heart Journal, 1998, 19, 429-434

Mammography
BEEMSTERBOER, P.P.M., H.J. DE KONING, C.W.N. LOOMAN, G.J.J.M. BORSEBOOM, A.I.M. BARTELDS AND P.J. VAN DER MAAS.
Mammography Request in General Practice During the Introduction of Nationwide Breast Cancer Screening, 1988-1995
European Journal of Cancer, 1999, vol. 35, no 3 pp. 450-454

BEEMSTERBOER, P.P.M.
Evaluation of Screening Programmes. Studies on breast cancer and prostate cancer
Dissertatie Rotterdam, 1999. Hoofdstuk 3.

Acute atypical headache

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.

Oestrogen, prescription of

DONKER G.A., P. SPREEUWENBERG, A.I.M. BARTELDS, K. VAN DER VELDEN, M. FOETS.
Hormone replacement therapy: changes in frequency and type of prescription by Dutch Gps during the last decade of the millennium.
Family Practice, 2000, vol. 17; no. 6

Appendix 1

Continuous Morbidity Registration, Sentinel stations
Participating physicians, 2001

Name:	Location	:Province:
A.A.E.E. Brockmöller	't Zand	Groningen
J.T. Ubbink/P. Strikwerda (group practice)	Groningen	Groningen
Y.Wapstra/K.Tanis (group practice)	Franeker	Friesland
P.S. Wiersema*	Oostermeer	Friesland
F.M. van Soest/H.D.W.A.van Gijsel/M. Schellens/		
I. Hummelen/C.A. Hoeksema-de Vries/		
S.A. van Dijk (group practice)	Assen	Drenthe
H.E. Maillette de Buy Wenniger*)	Schoonoord	Drenthe
S. Kranenborg	Deventer	Overijssel
T. J. van Dam/P.P.A. Kemps/B. Jansen (group practice)	Swifterbant	Flevoland
D. de long*)	Laren	Gelderland
D.G. de Jong	Barneveld	Gelderland
E.J. van Apeldoorn	Heerde	Gelderland
S. Verhoeven Heerde	Gelderland	
I. Bruin-van Ingen/M. Burger/		
J.G.B. van der Wielen (group practice)	Zelhem	Gelderland
B.G.W.M. Arts/M.W.M. van Loenen (group practice)	Nijmegen	Gelderland
N. Adamo	Doesburg	Gelderland
M.T.W. van der Velden	Dieren	Gelderland
F.K.A. Fokkema/I.K.I.de Jongh-Kilian (group practice)	Amersfoort	Utrecht
A.M.C. Raat (To 14-05-01)	Hoogland	Utrecht
A.M. Wesselius	Utrecht	Utrecht
P.B. den Hertog	Utrecht	Utrecht
C.J. Post Uiterweer	Utrecht	Utrecht
A.H.F. Eijgenstijn	Utrecht	Utrecht
G.B.A. Baars	Utrecht	Utrecht
A.I.M. Bartelds	Huizen	Noord-Holland

Appendix 1 (cont.)

Participating physicians, 2001

C.W. Willeboordse/A.M. Kruize-Mosch (group practice)	Heiloo	Noord-Holland
M.M. Spoor Alkmaar	Noord-Holland	
Y.E.V. van Hazel/P. Olie (group practice)	Amsterdam	Noord-Holland
D.E. Kuenen	Haarlem	Noord-Holland
H.R. Neijs*)	Broek in Waterland	Noord-Holland
A. Verdam-de Witte	Hilversum	Noord-Holland
A.M. van Meurs	The Hague	Zuid-Holland
J.C.B.M. Rensing	The Hague	Zuid-Holland
Ms S.G. Vreugdenhil/R.J. Kuiper (group practice)	Dordrecht	Zuid-Holland
C.M. Limburg	Rotterdam	Zuid-Holland
J. Hoornweg/E. Hoornweg-Sleeboom (group practice)	Voorhout	Zuid-Holland
D. Pasman	Maassluis	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
C.H.G.M. van Moorsel	Uden	Noord-Brabant
A.M.P. Linsen	Oirschot	Noord-Brabant
J.A.M. Keulers/W.H. van der Laan (group practice)	Ravenstein	Noord-Brabant
M.G.A.M. de Gouw	Rosmalen	Noord-Brabant
A.F.A. van de Reepe/W.L.M. Rijnders (group practice)	Etten	Noord-Brabant
J.J.J. Meulenberg	Eindhoven	Noord-Brabant
J.D.M. Schelfhout	Eindhoven	Noord-Brabant
R.A.M. de Jong (to 01-10-01) P. Smeets (from 01-10-01)	Maastricht	Limburg

*) With dispensary

Weekstaat t.b.v. centrale registratie
CONTINUE MORBIDITEITSREGISTRATIE, PEILSTATION 2001

Proj. no.			verslagjaar		Code peilstat.	Week no.	
4	0	0	0	1			

	Leeftijdsgroep	Influenza-(achtig) ziektebeeld[2])	Neuraminidaseremmer voorgeschreven[3])	Loopbuilpmiddel voorgeschreven[4])	waterpokken	Depressie[5]) 1e consult		Herpes Zoster		Diabetes mellitus[6]) (nieuwe patiënt)		Suïcide(poging)[7])	GGZ		Urethritis bij man	C.A.I.D.S.[10]) (concern about AIDS)	Gastro-enteritis[11])			Prostaatlijden			Kinkhoest[12])	Leeftijdsgroep	Acute respiratoire infectie	Incidenteel onderzoek
													Verwijzing[8])	Consultatie[9])			geen feces-kweek		feces-kweek	rectaal toucher	PSA	verwijzing verdenking prostaatca				
		M+V	M+V	M+V	M+V	M	V	M	V	M	V	M+V	M+V	M+V	M	M+V	M	V	M+V	M	M	M	M+V			M+V
1	< 1																							< 1		verzoek om euthanasie
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		anorexia/ boulimia
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 2

Appendix 3

Topics on the weekly returns 1970-2002 (in alphabetical order)

Topics	
abortion, spontaneous	1982-1983
abortion, induced	1971-1979
abortion requests	1970-1975
accidents	1971
accidents in a private setting	1981-1983
acute atypical headache	1988-1992
acute otitis media	1971 and 1986
acute respiratory infection (ARI)	2001-2002
addiction to smoking (consultation)	1974
AIDS (fear of)	1988-2002
alcoholism	1975
anti-hypertensives and/or diuretics (prescription of)	1976
bee or wasp stings	1992-1993
bites by household pets	1986
burns	1988-1989
cerebrovascular accident	1986-1987
cervical smear	1976-1998
chickenpox	2000-2002
childbirth (at ≥ 28 weeks)	1982-1983
child abuse (suspicion of)	1973-1974
chronic benign pain disturbance	1995-1996
dementia	1987-1988
depression	1983-1985 and 2000-2002
diabetes mellitus	1980-1983 and 1990-1994 and 2000-2002
diarrhoea of unknown origin (acute)	1970
dog bite	1987 and 1998-1999
drug use (consultation)	1972-1973 and 1979-1981
dwelling (certificate issued for another)	1975
echography requests	1988

Topics on the weekly returns 1970-2002 (alphabetical) (cont.)

Topics	
exanthema of unknown origin	1970
family planning (advice)	1970-1976
gastroenteritis	1992-1993 and 1996-2002
hay fever	1978-1982
hepatitis	1994
herpes zoster	1997-2001
infectious mononucleosis	1977-1979 and 1991
influenza and influenza-like illnesses	1970-2002
injuries to the skeletal and locomotor systems	1984-1985
liver, gall bladder and pancreas diseases	1995-1997
malignancies	1984-1985
mammography (outpatient)	1988-2000
measles	1975-1979
measles/mumps	1990
medical aids	1999-2002
mental health care (referral)	2001-2002
morning-after pill, prescription of	1972-1991
myocardial infarction	1978 and 1983-1985 and 1991-1994
oestrogen, prescription of	1994-1998
Parkinson's disease	1980-1985
penicillin, prescriptions and side effects	1982-1983
peptic ulcer (first time/relapse)	1985-1986
physical violence	1996-1999
p.i.d. (pelvic inflammatory disease)	1994-1998
pregnancy (despite contraception)	1987-1991
premature birth	1982-1983
prostate complaints	1997-2002
psoriasis	1976-1977
psychiatric patients	
- discharged	1986-1988
- admitted	1988
referrals to a specialist	1984
referrals to a speech-language pathologist	1988-1989
referral/authorization for physiotherapy	1985
referral for psychosocial problems	1986-1987
rohypnol prescriptions	1987-1988
rubella and rubella-like illnesses	1971
side-effects of cosmetics (suspected)	1992-1993
sports injuries	1979-1983 and 1992

Topics on the weekly returns 1970-2002 (alphabetical) (cont.)

Topics	
skull traumas in traffic accidents	1975-1977
sterilization of men (performed)	1972-1999
sterilization of women (performed)	1974-1999
suicide and attempted suicide	1970-1972 and 1979-2002
tonsillectomy or adenotomy	1971
tranquillizer prescribed	1972-1974
urethritis in men	1992-2002
urinary tract infection (medicine prescribed)	1977
ventricular/duodenal ulcer	1975
whooping cough	1998-2002
zanamivir (Relenza)	2000-2002

Appendix 4

Incidental studies and other additional studies 1977-2002 (alphabetical)

topics	
acute intoxication at work	1994-1995
aggression against GP and practice staff	1997-2000
alternative treatments (registration possible?)	1980
anorexia nervosa and bulimia	1985-1989 and 1995-2002
diabetes mellitus (prevalent cases)	2000
euthanasia (request for)	1976-2002
incest	1988
Lyme disease	1991-1994
malignancies	1982-1983
multiple sclerosis	1977-1982
puerperal mastitis	1982
regret after sterilization	1980-1984
serum collection	1980 and 1985
vaccination against influenza	1992

Appendix 5

Age distribution of the population of the Netherlands, by sex, in thousands, 1 January 2001 (CBS)

Age	men	women	total
0- 4	512	489	1.001
5- 9	509	487	996
10-14	501	479	980
15-19	477	454	931
20-24	487	476	963
25-29	564	555	1.119
30-34	672	646	1.318
35-39	677	651	1.328
40-44	626	610	1.236
45-49	578	564	1.142
50-54	601	581	1.182
55-59	444	431	875
60-64	369	374	743
65-69	306	337	643
70-74	248	310	558
75-79	181	275	456
80-84	99	189	288
≥85	59	169	228
total	7,910	8,077	15,987

(Minor differences may occur as a result of rounding off)

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 1

LEEFTIJDSGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

LEEFTIJDS-GROEP	POPULATIE			"INFLU-ENZA'	NEURAMINI-DASEREMMER	LOOPHULP-MIDDEL	WATER-POKKEN	DEPRESSIE			HERPES ZOSTER		
				"INFLU-ENZA"	NEURAMINI-DASEREMMER	VOORGE-SCHREVEN	WATER POKKEN	DEPRESSIE			HERPERS ZOSTER		
	M	V	T	M+V	M+V	M+V	M+V	M	V	T	M	V	T
<1 JR	575	519	1094	356	0	0	320	0	0	0	0	0	0
1-4 JR	3094	3034	6128	212	0	0	281	0	0	0	13	7	10
5-9 JR	4030	3811	7841	112	0	0	70	0	0	0	15	24	19
10-14 JR	3722	3510	7232	87	0	0	12	0	3	1	16	23	19
15-19 JR	3727	3565	7293	101	0	0	4	16	20	18	19	11	15
20-24 JR	3743	4181	7924	119	1	1	6	21	22	21	16	19	18
25-29 JR	5176	5651	10828	103	0	0	7	35	42	39	21	14	18
30-34 JR	6030	5842	11872	124	1	1	4	18	62	40	18	24	21
35-39 JR	5510	5287	10797	138	1	0	3	33	51	42	27	13	20
40-44 JR	4898	4866	9764	96	0	4	3	43	53	48	37	33	35
45-49 JR	4632	4526	9156	108	0	2	0	54	77	66	45	35	40
50-54 JR	4615	4532	9147	107	2	3	1	39	62	50	28	55	42
55-59 JR	3386	3511	6896	109	0	7	3	32	51	42	44	74	59
60-64 JR	2935	2926	5861	97	0	9	2	37	58	48	27	62	44
65-69 JR	2515	2732	5248	90	0	29	2	24	51	38	72	44	57
70-74 JR	1936	2413	4349	99	2	64	0	21	50	37	57	33	44
75-79 JR	1505	2173	3678	73	0	114	5	27	28	27	60	69	65
80-84 JR	808	1470	2278	70	0	259	0	62	61	61	50	102	83
>85 JR	635	1582	2218	27	0	185	0	31	51	45	94	57	68
TOTAAL	63470	66130	129599	113	0	16	24	26	42	34	30	33	32

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 2

LEEFTIJDSGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

LEEFTIJDS-GROEP	POPULATIE			DIABETES MELLITUSS			SUICIDE (POGING)	GGZ		URETHRI-TIS	CAIDS
				DIABETES MELLITUS			SUICIDE (POGING)	VERWIJ-ZING	CONSUL-TATIE	URETHRI-TIS	CAIDS
	M	V	T	M	V	T	M+V	M+V	M+V	M	M+V
<1 JR	575	519	1094	0	0	0	0	0	0	0	0
1-4 JR	3094	3034	6128	6	0	3	0	0	0	13	0
5-9 JR	4030	3811	7841	2	0	1	0	31	0	0	0
10-14 JR	3722	3510	7232	0	6	3	3	39	6	0	4
15-19 JR	3727	3565	7293	0	3	1	11	73	8	5	36
20-24 JR	3743	4181	7924	0	0	0	8	124	10	45	86
25-29 JR	5176	5651	10828	4	2	3	6	109	13	37	46
30-34 JR	6030	5842	11872	3	5	4	8	103	8	33	37
35-39 JR	5510	5287	10797	5	8	6	18	82	19	18	30
40-44 JR	4898	4866	9764	24	10	17	12	91	11	39	17
45-49 JR	4632	4526	9156	28	22	25	5	92	16	19	11
50-54 JR	4615	4532	9147	54	31	43	10	68	17	11	8
55-59 JR	3386	3511	6896	47	20	33	4	67	4	38	7
60-64 JR	2935	2926	5861	51	58	55	3	31	2	37	2
65-69 JR	2515	2732	5248	91	59	74	6	30	4	20	4
70-74 JR	1936	2413	4349	119	87	101	2	23	5	31	0
75-79 JR	1505	2173	3678	73	78	76	5	35	5	13	0
80-84 JR	808	1470	2278	25	95	70	4	53	26	0	0
>85 JR	635	1582	2218	31	57	50	14	50	9	31	0
TOTAAL	63470	66130	129599	24	21	23	7	69	9	23	20

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 3

LEEFTIJDSGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

LEEFTIJDS-GROEP	POPULATIE			GASTRO-ENTERITIS				PROSTAATLIJDEN			KINKHOES	ACUTE RES-PIRATOIRE INFECTIES
				GEEN FECESKWEEK			FECES-KWEEK	RECTAAL TOUCHER	PSA	VERWIJ-ZING		
	M	V	T	M	V	T	M+V	M	M	M	M+V	M+V
<1 JR	575	519	1094	765	886	823	64	35	0	0	46	2715
1-4 JR	3094	3034	6128	365	428	397	41	0	0	0	104	1199
5-9 JR	4030	3811	7841	164	176	170	14	0	0	0	50	528
10-14 JR	3722	3510	7232	81	88	84	7	0	0	3	19	318
15-19 JR	3727	3565	7293	94	90	92	11	0	0	0	10	350
20-24 JR	3743	4181	7924	85	122	105	13	5	0	0	0	352
25-29 JR	5176	5651	10828	43	101	73	8	4	6	0	2	266
30-34 JR	6030	5842	11872	68	72	70	13	18	2	0	4	309
35-39 JR	5510	5287	10797	71	79	75	11	24	7	2	7	335
40-44 JR	4898	4866	9764	69	62	66	9	33	27	0	3	286
45-49 JR	4632	4526	9156	50	51	50	13	86	80	0	7	274
50-54 JR	4615	4532	9147	52	73	62	16	98	111	9	2	245
55-59 JR	3386	3511	6896	50	68	59	12	227	257	27	1	283
60-64 JR	2935	2926	5861	92	106	99	12	313	317	41	5	278
65-69 JR	2515	2732	5248	44	70	57	10	390	433	40	0	263
70-74 JR	1936	2413	4349	83	54	67	11	351	444	72	2	320
75-79 JR	1505	2173	3678	47	106	82	8	392	392	86	3	302
80-84 JR	808	1470	2278	50	82	70	22	458	470	111	0	307
>85 JR	635	1582	2218	47	76	68	23	205	268	31	0	216
TOTAAL	63470	66130	129599	93	109	101	14	91	94	12	12	374

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 1

PROVINCIEGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

PROVINCIE-GROEP	POPULATIE			"INFLU-ENZA"	NEURAMINI-DASEREMMER	LOOPHULP-MIDDEL	WATER-POKKEN	DEPRESSIE			HERPES ZOSTER		
				"INFU-ENZA"	NEURAMINI-DASEREMMER	VOORGE-SCHREVEN	WATER-POKKEN	DEPRESSIE			HERPES ZOSTER		
	M	V	T	M+V	M+V	M+V	M+V	M	V	T	M	V	T
GR+FR+DR	11325	11672	22998	144	0	7	17	19	21	20	24	18	21
OV+GLD+FLE	15070	14843	29913	59	0	14	28	36	42	39	33	28	30
UTR+NH+ZH	22029	24398	46428	116	0	22	25	18	40	29	30	31	31
ZLD+NB+LIM	15046	15217	30263	136	2	15	22	35	61	48	31	55	43
TOTAAL	63470	66130	129601	112	0	16	24	26	42	34	30	33	32

PROVINCIEGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

PROVINCIE-	POPULATIE GROEP			DIABETES MELLITUS			SUICIDE (POGING)	GGZ		URETHRITIS	CAIDS
				DIABETES MELLITUS			SUICIDE (POGING)	VERWIJ-ZING	CONSUL-TATIE	URETHRITIS	CAIDS
	M	V	T	M	V	T	M+V	M+V	M+V	M	M+V
GR+FR+DR	11325	11672	22998	15	9	12	6	24	3	12	13
OV+GLD+FLE	15070	14843	29913	28	22	25	5	53	3	24	8
UTR+NH+ZH	22029	24398	46428	26	19	22	7	103	18	26	29
ZLD+NB+LIM	15046	15217	30263	24	34	29	11	67	7	24	25
TOTAAL	63470	66130	129601	24	21	23	7	69	9	23	20

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 3

PROVINCIEGROEP NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

PROVINCIE-GROEP	POPULATIE			GASTRO-ENTERITIS GEEN FECESKWEEK			FECES-KWEEK	PROSTAATLIJDEN RECTAAL TOUCHER	PSA	VERWIJ-ZING	KINKHOEST	ACUTE RES-PIRATOIRE INFECTIES
	M	V	T	M	V	T	M+V	M	M	M	M+V	M+V
GR+FR+DR	11325	11672	22998	76	55	65	5	80	56	10	3	118
OV+GLD+FLE	15070	14843	29913	98	108	103	16	77	129	15	5	384
UTR+NH+ZH	22029	24398	46428	78	97	88	16	95	85	12	15	296
ZLD+NB+LIM	15046	15217	30263	122	169	145	15	106	102	10	22	677
TOTAAL	63470	66130	129601	93	109	101	14	91	94	12	12	374

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 1

STEDELIJKHEIDSGRAAD NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

STEDELIJK-HEID	POPULATIE			"INFLU-ENZA"	NEURAMINI-DASEREMMER	LOOPHULP-MIDDEL	WATER-POKKEN	DEPRESSIE			HERPES ZOSTER		
				"INFLU-ENZA"	NEURAMINI-DASEREMMER	VOORGE-SCHREVEN	WATER-POKKEN	DEPRESSIE			HERPES ZOSTER		
	M	V	T	M+V	M+V	M+V	M+V	M	V	T	M	V	T
5	9392	9188	18581	109	1	15	17	17	27	22	26	17	22
4-3-2	43429	45292	88721	100	1	16	24	32	47	40	30	36	33
1	10649	11651	22300	166	0	17	27	13	33	24	33	36	35
TOTAAL	63470	66130	129601	112	0	16	24	26	42	34	30	33	32

CONTINUE MORBIDITEITSREGISTRATIE PEILSTATIONS BLAD 2

STEDELIJKHEIDSGRAAD NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

STEDELIJK-HEID	POPULATIE			DIABETES MELLITUS			SUICIDE (POGING)	GZZ		URETHRI-TIS	CAIDS
				DIABETES MELLITUS			SUICIDE (POGING)	VERWIJ-ZING	CONSUL-TATIE	URETHRI-TIS	CAIDS
	M	V	T	M	V	T	M+V	M+V	M+V	M	M+V
5	9392	9188	18581	23	20	22	5	52	3	13	6
4-3-2	43429	45292	88721	24	21	22	7	57	5	23	18
1	10649	11651	22300	25	23	24	10	128	31	32	41
TOTAAL	63470	66130	129601	24	21	23	7	69	9	23	20

STEDELIJKHEIDSGRAAD NAAR ZIEKTEBEELD CUMULATIEF ALLE PEILSTATIONS GESTANDAARDISEERD 03.06.2002

ALLE PEILSTATIONS EXCL.56 JAAR: 2001 WEEK: 1 t/m 52

STEDELIJK-HEID	POPULATIE			GASTRO-ENTERITIS				PROSTAATLIJDEN			KINKHOEST	ACUTERES-PIRATOIRE INFECTIES
				GEEN FECESKWEEK			FECES-KWEEK	RECTAAL TOUCHER	PSA	VERWIJ-ZING		
	M	V	T	M	V	T	M+V	M	M	M	M+V	M+V
5	9392	9188	18581	102	100	101	17	96	185	16	6	231
4-3-2	43429	45292	88721	90	106	98	13	90	82	12	11	429
1	10649	11651	22300	95	127	112	14	87	63	8	22	275
TOTAAL	63470	66130	129601	93	109	101	14	91	94	12	12	374

Appendix 7

Bijlage 1	
Bijlage	- Appendix 1
Continue morbiditeits registratie, peilstations	- Continuous morbidity registration, - 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 2
Weekstaat t.b.v. centrale registratie	- Weekly return for central registration
Continue morbiditeits registratie, peilstations	- Continuous morbidity registration, - 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)
Zanamivir voorschrift	- Zanamivir (prescription)
Loophulpmiddel voorgeschreven	- Walking Aids (prescription)
Waterpokken	- chickenpox
Depressie	- depression
Herpes zoster	- Herpes zoster
Diabetes Mellitus (nieuwe patiënt)	- Diabetes Mellitus (incidents patients)
Suïcide(poging)	- (Attempted) suicide
GGZ	- Mental health care
Urethritis bij man	- Urethritis of the man
C.A.I.D.S.	- Concern about AIDS
Gastro-enteritis	- Gastro-enteritis

Prostaatlijden
rectaal toucher
p.s.a.
verwijzing verdenking prostaatca
kinkhoest
Acute respiratoire infectie

- Prostate trouble
rectal touch
P.S.A.
referral to urologist
- whooping cough
- Acute respiratory infection

Weeknummer
Opgemaakt d.d.
Aantal dagen gerapporteerd

- Number of the week
- Completed on
- Number of days over which reporting took place

(zie voetnoot[1])
Zie ommezijde voor voetnoot

- (See footnote number[1])
- For footnotes see reverse

1 Door vakantie, ziekte en andere oorzaken zal deze rapportage zich echter ook over minder dan5 dagen kunnen uitstrekken. Het wordt van belang geacht om zo mogelijk ook tijdens het weekeinde waargenomen patiënten te rapporteren. (M.u.v.) influenzapatiënten.

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 Betreft uitsluitend nieuwe patiënten, ook telefonisch consult melden.

2. Relates solely to new patients. Report telephone calls as well.

3 S.v.p. apart formulier invullen en bij de weekstaat voegen.

3 Please complete a separate form and attach to the weekly return.

4 S.v.p. apart formulier invullen en bij de weekstaat voegen.

4 Please complete a separate form and attach to the weekly return.

5 S.v.p. apart formulier invullen en bij de weekstaat voegen.

5 Please complete a separate form and attach to the weekly return.

6 S.v.p. apart formulier invullen en bij de weekstaat voegen.

6 Please complete a separate form and attach to the weekly return.

7 S.v.p. apart formulier invullen en bij de weekstaat voegen.

7 Please complete a separate form and attach to the weekly return.

8 S.v.p. apart formulier invullen en bij de weekstaat voegen.

8 Please complete a separate form and attach to the weekly return.

9 S.v.p. apart formulier invullen en bij de weekstaat voegen.

9 Please complete a separate from and attach to the weekly return.

10 S.v.p. apart formulier invullen en bij de weekstaat voegen.

10 Please complete a separate from and attach to the weekly return.

11 S.v.p. geboortedatum noteren en 1e 3 letters achternaam.

11 Please record date of birth and first 3 characters of family-name.

12 S.v.p. geboortedatum noteren en 1e 3 letters achternaam.

12 Please record date of birth and first 3 characters of family-name.

Tables (p 145 - p 153)

Continue morbiditeits registratie peilstations

- Continuous morbidity registration sentinel stations

Kwartaal
Leeftijdsgroep

- Quarter
- Age group

Influenza (-achtig ziektebeeld)	- Influenza (-like illness)
Zanamivir (voorschrit)	- Zanamivir (prescription)
Loophulpmiddel (presription)	- Walking Aids (prescibed)
Waterpokken	- Chickenpox
Herpes zoster	- Herpes zoster
Dabetes mellitus (nieuwe patiënt)	- Diabetes Mellitus (incidents patients)
Suïcide(poging)	- (Attempted) suicide
GGZ	- Mental health care
Urethritis bij man	- Urethritis of the man
C.A.I.D.S.	- Concern about AIDS
Gastro-enteritis	- Gastro-enteritis
Prostaatlijden	- Prostate trouble
rectaal toucher	rectal touch
p.s.a.	P.S.A.
verwijzing verdenking prostaatca	referral to urologist
Kinkhoest	- Whooping cough
Acute respiratory infectie	- Acute respiratory infections
Pro vinciegroepen	- 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	- Footnote
N.B. Als gevolg van het afronden bij het berekenen van de relatieve frequenties kunnen kleine verschillen in de totalen zijn ontstaan.	N.B As a result of rounding off when calculating relative frequencies, small differences may have occurred in the totals