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GENERAL PRACTITIONER IN THE NETHERLANDS

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IN
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netherlands institute of primary health care

GENERAL PRACTITIONER IN THE NETHERLANDS

Morbidity and interventions in General Practice, a
cross national survey

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1.

Introductory remarks on the role of the General Practitioner

One need only glance through the 'TV Times', the daily newspapers and weekly magazines over the last few weeks to realize that although chronic disorders like rheumatoid arthritis, asthma and diabetes are being given wider press coverage, they are not the diseases and complaints to come in first in the popularity stakes.

Aids, cardio-vascular diseases, cancer and sport injuries are hogging the papers' leader columns almost to the exclusion of chronic disease. The patients' lobby influences and strengthens this publicity with their rallying motto which is 'the best for everyone'. When compared to disorders like rheumatoid arthritis, asthma, diabetes and senile dementia, the media toppers get more than their fair share of attention. Time and time again, the television coverage confronts the viewer with the latest novelties in the fields of diagnosis and treatment.

Will general practitioners still exist in the year 2000? Or let's say in 2050? Will the role of doctor as we know it - the Wailing Wall, the shoulder to cry on, the hurdle which must be overcome before a referral letter is issued, the dispenser of sought-after pills - not have been overtaken by pressures from society? Patients do not want to be held up and often desire direct referral to the best specialist in a particular field.

The decreasing numbers of young people and the increasing numbers of elderly people will mean that vast numbers of the old and chronically ill will have to be looked after by an ever-decreasing army of young helpers. We have already reached the stage where we are likely to encounter long waiting lists and waiting periods for the popular specializations. There will be a decreasing sum of money to share out among a

growing number of patients, whilst the demand will in no way be reduced. In fact quite the reverse would seem to be the trend, as it looks as if ever-increasing demands will be made on the care services both in terms of quantity and quality.

But what is to happen to the GP? In the Netherlands they are a well-established part of the daily scene. Is it conceivable that this institute will gradually succumb, deferring to the appeal of technology with its (false) promises of security? Or is the family doctor likely to carry on, stripped of his white coat, and acting as the organizer and implementor of home care, a role which increasing numbers of the old and chronically ill would wish to see fulfilled?

Will hospitals through mergers and agreements with insurance companies become so powerful that GPs and their practices will fall under their supervision? And is the same scenario to be the lot of the pharmacists in the future? Would it be feasible for small groups of highly specialized experts to tackle early diagnosis, diagnosis and treatment, possibly giving the internist control in what is now called general practice medicine?

Or ... will there be a drastic change in the other direction? In other words, will the value of the health professional with a more all-round view of people surpass the increasingly narrow approach to be found in hospitals? Are the Americans and Germans perhaps justified in being jealous of the Dutch system of checks and gauges - now exclusively reserved for the GP?

The GP can clarify the significance of the complaint in the eyes of the patient, can help to localize the moments at which it is most felt, can offer help to the patient in learning to control these moments and can pass on skills which will improve the patient's lot. In the hospital the line of reasoning adhered to by the specialized doctor is one of a totally different nature.

There they will do everything in their power to find out what the correct diagnosis should be. The patient will be subjected to a meticulous examination, which results in a metamorphosis: the somewhat tense person who entered the surgery has, by osmosis, changed into a patient.

However much GPs may be inclined to belittle the importance of their line of work, and no matter how often criticism is levelled at the great differences in medical performance in general practice, curiously enough, the therapeutic surplus value of the GP is a constantly recurring phenomenon in research findings. As Balint has already said 'The doctor is the drug'.

Much has changed since the Netherlands Institute of General Practitioners (NHI), the forerunner of the Netherlands Institute of Primary Health Care (NIVEL), first started gathering data for educational and research purposes. Compared to fifteen years ago, the results of the specialized general practice training courses can clearly be seen. The white coat has disappeared. The authoritarian attitude has gone with it. The length of each consultation has increased. The patients are no longer subjected to a cross-examination, instead they are given the opportunity to have their say. Their complaints are clarified and they are helped in the process of choosing between alternative forms of treatment. Patients are even encouraged to put forward their own alternatives.

Could it be even better? Of course it could. Although few serious mistakes are made in general practice medicine, there is room for improvement. Improvements are easily achieved by methods like systematic review, systematic refresher courses and additional training. Qualitative improvement could eventually come about by the performance of more interventions, as long as the conversation part of the

consultation, the root of the intervention in general practice medicine, does not suffer as a result.

The GP's chances of survival could be improved by exploiting the power which lies in an integral approach. The trade-mark of a GP is their easy-accessibility for major, minor, acute or chronic complaints which could not be dealt with in any other way, even if a technological approach was an option.

Ask the man on the street, inquire at social-gatherings, in waiting-rooms, in official surveys about what his main concerns are. It is usually the everyday cares and worries and the everyday pains and discomforts which are determinative for the quality of a person's life. Most contacts with doctors are about very ordinary things like tiredness, stress, high blood pressure and pains, for which there is no scientific solution, whilst the media only focuses on the technical, high-quality academic medicine which in our own country is more the exception than the rule.

Has the general practitioner a 'raison d'etre' in the future? They most certainly do, because time and time again it would appear that complaints about the present state of medicine focus on the reduced amount of time spent on patients, and advances in technology. The doctor most consulted in the field of medicine is still the general practitioner.

2.

Why was a cross-national study called for?

Since the appearance of Hendriks' 'structuurnota'(1974), a policy document on the structure of the health services, the strengthening of the position of the care services beyond the bounds of the hospital has been a central issue. The main figure in this branch of the care services is the GP.

Most contacts between the general populace and the health services are made in general practice. After all, the GP is the figure who weighs up requests for help and then decides who is to be referred for further types of treatment and who is not. Without the permission of the GP there are no appointments with medical specialists and without a referral note from the GP no reimbursement of the costs for physical therapy or other paramedical help, and no prescriptions.

General practice, for all the above-mentioned reasons, holds the key to a boundless store of information not only for finding out about morbidity-patterns in the general population, but above all for finding ways of handling these illnesses.

Registration exists, but is not well understood

The Central Bureau of Statistics (CBS) registers causes of death and keeps the General Household Survey up to date. From the National Service medical examinations and from the medical examinations required by the Law Governing Disablement (WAO) a great deal can be inferred about the condition of the health of certain groups of the population.

There are the diagnosis-statistics from hospitals as well. GPs and specialists are also familiar with the sentinel system (a collection of GPs spread throughout the country keep records of the incidence of disease); and statistics on obstetric help are also available.

Sick-funds register all referrals and all prescription information, it is true, but this data is not entirely suitable for research purposes.

That sort of information is registered with a view to controlling the everyday running of a sick-fund. The referral figures do not tell you a thing about the patient's motivation in seeking help and the type of patient involved nor do they tell you anything about health problem which led to the referral.

To put it bluntly, a great deal is registered, but as far as the content is concerned, all this information has very little to say about the state of affairs in medical circuits.

In the case of the GP you have the additional problem that there is no central registration system of the contacts between sick-fund patients and GPs. The GP receives a set annual salary according to the number of sick-fund patients registered in the practice, irrespective of whether they consult him or the number of times they consult him. This makes registration redundant.

Initiative

The Netherlands Institute of General Practitioners - nowadays the NIVEL - has taken the initiative in bridging the information gap. The idea was to create a continuous stream of information by using a network of automated general practices. At that time the idea seemed feasible, at least on paper, but the reality of hardware and software proved to be more of a problem than had been bargained for. Computerizing patient administrations and registering consultations in a way that might eventually prove useful to others, proved to be far from simple. Furthermore the speed at which GPs in the Netherlands are automating has proven considerably lower than the Netherlands Institute of General practitioners had envisaged.

Importance for the government

The need for a national survey that is both good and extensive has in fact grown with the years.

Government has tried in recent years to get an increasing hold on the autonomous growth of (the costs of) health care services, has tried (on paper) to create more coherence and cooperation, and finally has tried to shift the accent from expensive to less expensive help, from hospital (doctor) to GP, from 'cure' to 'care'.

But a simple measure like the introduction of a partial contribution towards the cost of medicine for all sick-fund patients was doomed to fail, because nobody knew what the influence of prescriptions written by specialists had on that of GPs and on the entire system.

After much internal and external deliberation, the NIVEL eventually presented a detailed research design in 1986. All parties were quite convinced of the need for research. The Ministry of Welfare, Health and Cultural Affairs and the National Council of Sick Funds were prepared to invest 10 million guilders on this research.

The original idea of a network of automated practices was dismissed. It was unlikely that all the GPs concerned would make their registrations in the same way nor was the quality likely to be consistent. Therefore they opted for a design which guarantees that the information is registered in an identical fashion, but whereby it is logged centrally and subjected to quality controls.

3. Method

The aims of the National Study are to obtain information on the functioning of general practice in the Netherlands, collecting data on the relations between the need for care, on supply and demand, and finally attempting to explain why there are so many differences between the individual practices. To sum it up in a few words, it is a study looking into the function of general practice within the Netherlands' health care system.

Not all research designs are capable of producing well-considered scientific answers to these questions. In the first place, it is important to know which areas of the population have health problems before one can determine which groups of people with problems do indeed consult their GP. It is important to find out whether the 'consulters' are different types of people from those who stay at home, and finally to register which complaints are presented and what action the GP takes.

The registration must cover a more extensive period of time and not just give a random indication of the situation at a given moment. An incidental visit to the doctor for wart removal can quite easily go hand in hand with a gall stone complaint or some other illness, which, it is true, is not active at that moment, and therefore not the reason for that particular visit to the doctor. What is even more important is the likelihood of the problem in question, let's say a headache, developing into something far more serious a month later and later still turning out to be a symptom of a tumour. A study which just looks at a given moment in time would not bring this process to light.

A study of a certain moment in time would only spot the wart or the headache, but would reduce the chances of registering a more long-term disease. For this reason it was clear from the start that the central variable of the registration would not be the health

problem presented or, the accompanying diagnosis, if any, but instead the episode of illness which can be reconstructed on the basis of more than one visit.

In other words, epidemiological research into general practice demands:

- the registration of **demographical and other data** from the **total** practice population of the practices participating in the study;
- a survey of the **health problems** in a section of the **practice population**;
- the registration of **health problems in the general practice**;
- the registration of **interventions** in the **general practice**.

Therefore, in the National Study, the decision was made to register and enter into an inventory **all** the relevant aspects in a consultation with a GP for **all** of the patients over a period of three months. This approach makes it possible to concentrate on the whole episode of illness instead of on a single complaint. In more scientific terms: the survey aimed at providing an epidemiological basis for general practice medicine, in such a way that the relation between the demand for care and the supply of care would be made visible.

General Practitioners Questionnaire

It is a well-known fact that doctors differ greatly in their approaches: in the extent to which they handle complaints, in their ways of arriving at a diagnosis and in their treatment methods. It was therefore essential that all the doctors participating in the National Study filled in an extensive questionnaire which would enable the NIVEL to put the differences in performance into the perspective of the ideas that GPs themselves have on certain subjects.

Assistants Form

One characteristic of general practice is that the assistant carries out a number of tasks in a fairly autonomous way. A good example of this is the writing out of repeat prescriptions. For this reason a second registration form was designed, to specifically serve the interventions of the assistant.

Organization

The material has been collected for the above-mentioned reasons with the aid of a well-tested set of research instruments, of which the four following are the most important:

1. Registration of contacts (consultations and visits) between GPs, assistants and patient; both a morbidity and an intervention register.
2. Registration of the characteristics of the entire practice population like year of birth, sex, marital status, nationality, ethnicity, profession, educational training, living conditions, form of insurance, communal relations and mobility.
3. Survey completed by the registering GP on job description and running of practice (collaboration, organization).
4. Survey with a sample of patients from the sample survey- practices with a view to gathering information on the perceived state of health, attitude towards illness and health, medical consumption, pro-healthy behaviour, and social networks.

Data collection

For ten million guilders it was possible to carry out a large national research project involving 335,000 patients, 161 established general practitioners, 193 assistants, 80 project staff and twenty-five researchers. After a good deal of preliminary work, 161 GPs were selected on the basis of a so-called stratified sample survey.

Because the participants were required to do so much, a small remuneration was promised.

The selected GPs were asked to register all contacts with patients over a three-month period in 1987-1988 and to do it in such a way that at the NIVEL the single contacts could be 'processed' into episodes of illness. In order to make episode-wise morbidity registration possible, the presented problems were phrased in diagnostic categories or in terms of other complaints, symptoms or reasons for encounter.

As already explained, the GP filled in the relevant consultation information on a registration form. The forms were collected by a permanent contact person, the so-called **fieldworker**, who checked and, where necessary, discussed it with the GP concerned. The complaints, symptoms, diagnoses and reasons for encounter were coded at the NIVEL, working with a specially adjusted version of the 'International Classification for Primary Care' and combined into episodes of illness.

Reliability test

During the registration period the doctors were asked to formulate a diagnosis on the basis of paper patients. This was necessary to get an idea of the extent to which participating GPs assign and name similar diagnoses. Here there was a reasonable degree of conformity (approx. 90%) which indicated that it was a reasonably reliable method of registration.

During the registration period, the forms -which in practice had already been checked by the fieldworker, but proved doubtful during coding -were sent back to the GP concerned. In other words, everything was done to ensure that the quality of the registration would be as high as possible.

Great demands were made on the fieldworkers too. They had to have completed a medical or paramedical form of training. The selection rounds resulted in a division: three-quarters were doctors and a quarter paramedical workers.

The fieldworkers were not permitted to leave before the end of the project in order to ensure the privacy of

practice information. It was quite obvious that during the registration phase the participating GPs were not going to give different fieldworkers access to their practice administration.

The fieldworkers also had to practice a great deal with paper registration models. All staff had to submit to periodical uniformity tests, in order to be sure that the coding would not produce doubtful cases. Of the group of GPs selected, one eventually dropped out. In the case of the fieldworkers the drop-out rate was a little higher, but nobody broke their agreement to collect and process information from one GP for three months at a stretch.

Specific research projects

The National Study is in fact made up of 12 specific research projects, these are:

- * morbidity in general practice.
- * the relationship between GP, patient and volunteers.
- * Referrals by GPs to specialists.
- * GPs and chronic disorders.
- * GPs and prevention.
- * use of diagnostic aids in the practice.
- * prescribing medicines.
- * obstetric help supplied by GPs.
- * GPs and physical therapeutic help.
- * psychosocial problems and the relation between GPs and ambulatory mental health care and general social work.
- * aftercare and continuity of care.
- * GP's workload.

The Total Sum

In all, 500 people were at work for 48 months, hundreds of kilos of paper were processed and the final result is:

4 basic data reports, 12 specific research projects, dozens of data bases and dozens of on-going dissertation-studies, a great number of lectures and

concept articles and a growing number of research projects in collaboration with other research institutes.

The research project running at the moment with the Nijmegen University Department of General Practice, on chronic disorders and the joint project with the Vrije Universiteit's Department of General Practice and Nursing Home Science on the use of diagnostic aids, are promising models for what might be possible in the way of future research (always bearing in mind that the distribution of the data files must be subject to very strict regulations).

In the meantime, a number of new studies and joint projects with other research institutes and institutions are underway. To mention just a couple: a research project with the Department of General Practice of the Erasmus University and the Sophia Children's Hospital, into pediatrics in general practice; a joint project with the Department of General Practice, University of Groningen and the Dutch College of General Practitioners on the role of the practice assistant; a screening project into psychiatric problems among children with the Department of Child Psychiatry, University of Utrecht; research into the side-effects of medicines in cooperation with the Netherlands Centre for the Monitoring of Adverse Reactions to Drugs; a project with the Dutch College of GPs (NHG), in which the use of NHG-standards is being tested and finally a project in collaboration with the Research Committee on Rheumatic Diseases, in which a follow-up on patients with chronic degenerative diseases of the musculo-skeletal system is taking place.

Finally one should mention that data bases from the National Study are available for use (subject to the strictest regulations) and at the present moment they are being used by the National Institute of Public Health and Environmental Sciences (RIVM), the Steering Committee on Future Health Scenarios, the Netherlands Economic Institute, the Department of

4.

How the data can be put to use

For Scientific Research

The total of one hundred million items in the data-base of the National Study, offers a great deal of potential for further scientific research.

The items are unique, when compared to similar studies in other countries, for the simple reason that the data on common diseases can be linked to the interventions undertaken and to characteristics of the population.

The same holds for the possible linking of data on diagnosis with that of assessing the psychosocial circumstances of the patient in question.

The next step in scientific research might be to investigate to what extent doctors take into consideration the results of the research. For example it has been shown that GPs usually treat people with the flu along established lines. At the same time it has been shown that a different line is followed when a patient with a heart condition is in question. The GP is the person most likely to be in possession of all the facts in this kind of situation. One might consider scientific research in which the assumed surplus value of the generalistic GP could be tested.

Another possible pretext is formed by the fact that the chronically ill often suffer from more than one illness at a time, comorbidity is almost always the rule. In a further study the (possible) importance of monitoring and guidance by a generalist and the quality of the care of the chronically ill might be brought to light.

Another fascinating and unexploited new terrain is the interdoctor variance. Up to the present moment, most scientists have had to accept the fact that whatever

was measured in general practice medicine, the result always brought to light a great deal of variety between doctors. The differences found between practices and doctors could not be traced back to the type of reasons normally relied upon for backing. These differences are related to the characteristics of the practice population, like the neighbourhood, differences between men and women itemized according to social-economic status or age. It is now possible that these 'risk' groups in general practice will be identified and that they will be able to receive more attention by the use of a different approach; which in turn could lead to a reduction in the frequency of consultations and medicinal consumption. If a possible explanation for the interdoctor variation is ever to be found, then it should be possible to find it with the help of the National Study material.

For government policy

Seeing as general practice care is to fall under the auspices of one common law (the AWBZ), the government could find out about the possible consumption-increasing effects of the new arrangement where privately insured patients are concerned, this information is at its disposal. The Study comprises data on the frequency of the contacts, the heaping up of problems per contact, and whether a person is a private patient insured for general practitioners' help or not. At the same time the patients' material can be consulted: do they visit the doctor more often when they are insured for this form of care and a great many more of these types of questions.

The data bases which are now available offer even more scope. Like for example a study to find out what influence social networks have on health, the relation between workload and the quality of the care provided, a study to investigate the contents of the diaries which both the doctors and patients kept; it would also be

possible to link the subjective perception of health complaints to the remarks made by the doctor and to his whole approach.

As far as medicines are concerned, a study could be undertaken to find better methods of quantification according to active constituents, the so-called 'prescribed daily dose'. A study is to be carried out to investigate the side-effects of certain medicines. The Ministry of Welfare, Health and Cultural Affairs is interested in this subject and the analysis has already begun.

The detection and treatment of psychosocial problems is the next subject for further study. The general practitioners who took part in the National Study made notes at each session about their assessment of the role played by psychosocial problems in the complaints brought before them.

It would be interesting to look at the data in relation to the place that psychosocial problems now have in the present training courses for general practice medicine. The outcome of a study like this might effect the level of financing for the relief of this type of complaint. It might be possible to develop a measuring instrument which relates the workload resulting from such problems with time and the accompanying remuneration.

The material is also suitable for finding out in what way government measures taken over recent years have been effective.

The policy for establishing practices, health centres, collaboration, adjustment of fees and the development of standards were all measures intended to make GPs more efficient, to upgrade the profession and to give them more job satisfaction.

Correct analyses of the data bases will be able to show which elements were advantageous in achieving these aims and which were not, and which decisions

should have been stimulated to produce a more powerful effect.

For the general practitioners'(organizations)

In contrast to the period before the National Study, the general practitioners and their organizations now have the use of data which could serve as a national statistical source of reference.

To take an imaginary case, if there are health problems or new information on prescribing antibiotics, the groups of doctors who take over one another's patients for weekends and holidays both as a group and as individuals could compare their performance to the national figures which are far more meticulously recorded than they used to be.

If they deviate from the norm, then they can carry on a fruitful discussion -on the basis of the information available- to try to get to the root of the deviations and see whether action is called for. It is far easier to compare one's own performance with the norm if reliable material is available.

For the patient

Finally, the National Study may serve the (derivative) interests of the patients (organization(s)).

The Study provides series of answers to existing questions. For example what exactly takes place in a general practice, what the doctor thinks of the patients and vice versa, what the influence of the practice organization is on the quality of the work and the satisfaction of the patient, how 'controlled' the prescribing of medicine actually is, how people think about their health problems and the reaction of the doctor to them, how both parties judge the result of the treatment, prevention, or referral.

In short, if the Dutch Consumers Organization and the National Patients/Consumers Platform would like to find out about, for example, the rationale behind prescription-writing and consumption levels of certain

medicines, the opportunity of making a reliable analysis is available at present.

5.

First Results

With the data already accumulated, a great number of questions can be answered in 1990 and 1991. Some analyses are already underway; others have the material all ready and waiting. Because the data files must first be prepared for further analysis, those not yet underway may be somewhat delayed. This is the reason why at the moment, spring 1990, only the first global count can be made public. The analyses answering the questions concerning morbidity and interventions will only become available at a later date.

Quantity and Quality

Quantatively speaking, general practices are accommodating the 'demand for care' on the part of the patient very well. Within a period of three months, the people with important somatic chronic disorders have practically all been seen. However, large cities would appear to be the exception, where a number of socially determined risk-groups, like single people and Moroccan and Turkish patients are not often seen.

As far as the quality of the care is concerned, one can say that the diagnosis of somatic chronic disorders is reasonably valid. Furthermore, it appears that the GP is reasonably careful in requesting diagnostic material. To illustrate, in the case of the women for whom they requested mammography, 50% had malignity diagnosed.

If one takes a look at the way in which standard treatments were carried out, it would appear that GPs seem to follow the protocol fairly well. An example is the method of treatment for diabetes mellitus. Most GPs carry out the interventions set out in the protocol, although the patient is seen 3.75 times in three months instead of once in three months. On the other hand, only one of the contacts is used for standard diabetes control, at least in the case of 71% of the registered type 2 diabetes patients, where the GP or assistant

called the contact a check-up contact. It was however shown that the 'prescribed' follow-up appointment was not made explicitly in half the cases.

Morbidity

A comparison of the health problems in the population at large and the health problems presented to the GP, reveals great discrepancies. That is to say, as is already known from other research, many more health problems are to be found among the general population than are brought to the GP. As a consequence when the health problems are ordered according to prevalence they supply a different 'top-ten' from the episodes of illness presented to the GP. The survey among the population produced the following ten most common health problems:

table 1.

The ten most common health problems among the population per 1000 persons, ordered according to prevalence. Population survey among a random sample of 100 patients per participating general practitioner.

N = 13.000.

1. headache	(288)
2. fatigue	(282)
3. cough	(206)
4. nasal congestion	(200)
5. feeling nervous	(174)
6. back complaints	(158)
7. feeling agitated	(151)
8. sleeplessness	(147)
9. neck/shoulder complaints	(134)
10. complaints of the lower extremities	(128)

In general approximately 10% of all health problems are brought to the GP. The illnesses or disorders, expressed in episodes which the GPs in the Netherlands are confronted with present a quite different picture:

table 2.

The ten most common complaints presented to the GP, expressed in episodes of illness per 1000 persons, ordered according to prevalence. Registration of all GP-contacts in 103 practices over a period of 3 months, 1987-1988. N = 300,000.

1. Hypertension	(56.3)
2. Contraceptive pill checkup	(36.8)
3. Upper respiratory tract infections	(34.4)
4. Eczema	(22.7)
5. Feeling anxious and nervous	(22.3)
6. Sleeping disorders	(22.0)
7. Muscular pain	(20.0)
8. Sprains/strains	(19.8)
9. No disease	(18.8)
10. Lower urinary tract infection	(14.0)

This top-ten gives a number of episodes per thousand people in the population. To make matters quite clear: these figures are **not** incidental recordings of the complaint or diagnosis, but cover the entire episode of illness. Together these episodes form more than 25% of the total number of episodes.

Comorbidity

In the average general practice in the Netherlands, people do not arrive with one complaint, but on the whole, that is in at least 45% of all contacts, present more than one health problem to the doctor. It may be that the other health problems are connected to the most important complaint (in 20% of the cases) or that there is, in fact, an underlying disease, or that psychosocial problems are extra factors involved.

Morbidity in general practice specified

From the available information on **morbidity, specified to the patient's form of insurance**, it can be deduced that publicly insured patients in general

have more health problems than private patients (in particular cardio-vascular diseases/ psychological complaints/ diabetes and COPD) and that this group of patients is more troubled by non-specific complaints (general depression/muscular pain/headache).

In the case of the **privately insured patient** there is a greater incidence of 'hard' diagnoses (otitis media/prostate hypertrophy).

These findings have been standardized for age and sex. In other words the differences found cannot be explained by the size of the sex-division of the population under investigation.

If the **morbidity figures** are specified to **level of urbanization**, then it appears that the people living in the country and in the three largest cities have the highest incidence rates. What is also striking is the fact that the traumatology scores are lowest in the big cities: people steer clear of the GP apparently and know how to find their way to the hospital perfectly well on their own.

When the **morbidity figures for each region** are looked at, then one may conclude that the people in the North have the highest incidence rates in the sense of 'hard' somatic diagnoses (cardio-vascular diseases, chronic bronchitis, Parkinson's disease, epilepsy, diabetes).

In the middle of the country the picture varies without any significant peaks.

The south of the Netherlands scores highest in stress-sensitive disorders and in non-specific complaints.

As these are so-called "rough figures", that is they are not standardized for the age-structure of the population, it is possible that the regional differences thought to have been found can be explained by the differences in the composition of the population.

The National Study compared to other registrations

Compared to the morbidity registrations in the Continuous Morbidity Registration, Nijmegen (1978-1982) and the Monitoring Project (1980-1981), the National Study shows that GPs in the eighties were **more often** confronted with:

- * geriatric disorders (cancer, chronic cardio-vascular disorders, glaucoma, gall bladder disorders, rheumatoid arthritis, diabetes mellitus),
 - * psychiatric problems (schizophrenia, affective and other psychoses, senile dementia),
 - * sport injuries (infections of the soft tissues of the joints, knee injuries, sprains, strains)
- and quite surprisingly:
- * acute infections (mumps, measles, rubella, scarlet fever, whooping cough, sinusitis, cystitis, fungal diseases).

On the other hand the GP was **less often** confronted with:

- * gum and teeth disease
- * acute myocardial infarction
- * menstrual problems
- * prostatic problems

Prevention

The data from the National Study draws attention to the fact that the GP is not actively involved in prevention. There is hardly a GP to be found that looks for risk groups in the practice in a systematic and consequent way. People who belong in a risk group are only preventively screened in fewer than 5% of the contacts.

If we look at the GP in his function as an example of model conduct then the news is 'good' because many doctors have stopped smoking (the percentage of GPs who smoke dropped between '83 and '87 from 56% to 36%).

It is striking that the GP continues to carry out specific 'preventive' interventions - like taking blood-pressure readings - even though this more routine work would seem ideally suited for delegation to the assistant. They also continue to carry out 'contraceptive pill checkups' which are no longer recommended as active prevention measures.

Workload

The GPs in the National Study kept a diary to record the way they spent their time for a whole week (7 days). With this information - and of course the information from the registration of contacts between the GP and the patient - it is possible to study the workload of the general practitioner in the Netherlands.

On average GPs worked a good 48 hours a week. If one only takes into consideration weekdays and office hours (eight to five) the total amounts to 35 hours. Roughly 70% of the time is spent on patient-directed activities. The rest of the time is spent mainly on matters like practice organization, conferring, training and similar activities.

The final category, the non-patient directed activities - gives a similar pattern for all GPs, whilst the size of the patient-directed activities is linked to the size of the practice.

GPs with a large practice spend more time on patient-directed activities, but when looked at in proportion the relations are not ideal, due to the fact that patients belonging to larger practices visit their GP somewhat less often. Furthermore the length of the consultation is shorter in the larger practices (on average consultations within surgery hours last eight minutes).

The number of patients per GP is the most important gauge for the number of hours worked. The composition of the practice - whether or not there are a great number of elderly patients - is not so significant.

Whether practice organization and delegation of work to the assistant affects these workload figures has not been looked into as yet.

Aftercare

As part of the study of the relation between care given inside and outside of the hospital, an investigation was carried out as to the demand for care once people have been discharged from hospital. Of the patients surveyed, more than a half (56%) expressed a need for this type of care after being discharged. The greatest demand is for help with psychosocial problems (24%), activities of daily living (18%) and nursing activities (16%). The GP visits a third of the patients discharged from hospital.

A closer study is being made of the extent to which the guidance given fulfills patients' needs and expectations. It is now known that one in ten of those questioned who expressed a desire for help/care, says that they did not receive it.

Compared with the group that does receive care, it is more often men, young people and the less well-educated who do not receive the help they wish for.

Prescription behaviour

The research shows that, in principal, the quality of the prescribing is good, at least in as far as this can be deduced from research with paper patients. 'Good' here means: measured according to quality standards in which the criteria of pharmacological correctness, dosage and length of time prescribed are all weighed up and taken into consideration. The level of agreement on the remedy prescribed and the dosage was 85%. The doctor who performs well in prescribing medicine is usually young, having completed their studies fairly recently, is not in favour of symptom-directed prescription and prescribes placebos less often. The type of doctor to earn the badge of a good prescriber is a careful reader of the professional journals 'Huisarts en Wetenschap' (The

GP and Science), 'Geneesmiddelenbulletin' (The Medicine Bulletin), and the 'Nederlands Tijdschrift voor Geneeskunde' (The Netherlands Journal of Medical Science).

Referral

From the material on GP's referral patterns (on average 11.7% of all episodes of illness gave cause for referral to specialized care or physical therapy) it was found, after the first phase of the study, that women are more likely to be referred than men, that the elderly are more likely to be referred than the young, and if the initiative lies with the GP, the chance that a sick-fund patient will be referred is greater than that of a private patient being referred.

The relationship with the form of insurance will have to be further examined. The patients who are publicly insured in regional sick-funds are subject to so-called prolongation-referrals on the initiative of a medical specialist, when they have been having treatment from this specialist for more than a year; this is not the case for privately insured patients. This fact makes spotting differences and forging links laborious.

Assistant

It is striking that more than a quarter of all contacts in general practices are dealt with by assistants. It is particularly noticeable that the assistant has an independent role in writing out repeat-prescriptions of medicaments which have been prescribed by medical specialists for their patients, which means they are not subjected to any further check. Even the repeat-prescriptions issued by the GPs are sometimes written out by the assistant, sometimes admittedly after consulting the GP on the internal phone, but sometimes without his intervention. Of all the repeat-prescriptions issued, approximately 70% are written out by the assistant.

It is also a remarkable finding that the qualified assistant carries out more interventions than the unqualified assistant, this concerns matters like: telling the patient about the results of laboratory tests, giving

injections, taking blood-pressure measurements, removing sutures, taking care of wounds, wart removal and interventions on a similar scale.

Differences

General practices in the Netherlands vary considerably according to the number of contacts which take place, with an average of 32 contacts a day for each practice rising to a maximum of 100 contacts. These surprisingly high readings include the contacts with the GPs and those with the assistants. The contacts of GPs and assistants are in the proportion of 5:2. The number of episodes of illness also varies from practice to practice. The average number of episodes of illness amounted to 87 per 100 patients, whilst the number varied between 60 episodes per 100 patients to 113 episodes per 100 patients. It goes without saying that the number and the type of interventions on the part of the doctor shows the same sort of distribution.

The number of requests for additional diagnostic examinations varies just as much. The differences found (average number of requests: 85 per 3 months; minimum: 26; maximum: 213) will no doubt be linked to the style of the practice, including characteristics of the patient population and finally the doctors themselves.

The same variation was found in practice populations. That holds for the illness presented and the illnesses experienced, for the level of medical consumption as well as for other factors, even when the data is checked for the influences of variables like degree of urbanization, region, distance from the hospital. In general 50% of the population contacts their GP within a period of three months. On average per practice the figures are 115 contacts per 100 patients over a period of three months. This includes practices where 73 contacts per 100 patients and practices where 160 contacts per 100 patients are to be found.

It is blatantly obvious that the degree of medical consumption varies greatly per practice, further analysis of the material will provide possible explanations for this phenomenon.

6

Concluding remarks

Apart from the first general results as presented in chapter 5, the material will provide a wealth of extra information about the general practitioner. The question is whether this material makes it possible to map out the work and the GP's 'raison d'être' and whether criticism of the GP should be supported or dismissed?

Criticism

The average GP to emerge from the Study, is and works far more rationally than the figure the media critics describe (reasoning from the prevailing views within hospitals).

The fact that many patients suffer from not one but a number of illnesses, or that in many cases they present more than one problem at a time to their GP, possibly helps to strengthen the image of the irrational and inefficient care provider. The GP is not permitted the luxury of a specific and often specific complaint, which he can deal with in a standard way (case history, diagnosis, treatment etc.) but has to be prepared for comorbidity, weighing up which problem is the worst, always having the well-known 'bona fide or not bona fide' criterium at the back of his mind as he listens to the patient's entire story. What is more, he would to a certain extent, be neglecting his duty if he were to stick too strongly to rules and pay too much attention to one health problem.

Much of the criticism levelled at the GP can be traced back to the application of ideal types to everyday practice.

An illustration of this principle is to be found in the recent criticism from the Consumers association about prescription behaviour. As far as the GP is concerned one has to be aware of the fact that the responsibility for the prescription often begins at the

hospital. GPs must often - without any conferring - carry on with the medication started in hospital. The same applies for the criticism from the psychiatric side that GPs supposedly fail to spot such a great number of disorders. The so-called 'missed' diagnoses are not always mistakes, but can often be traced back to the simple fact that someone with psychological problems can also call in for wart removal treatment.

Efficiency

Of course it is possible with the aid of well-schooled paramedical personnel to arrive at a more efficient system of running practices and to take part in prevention more actively and systematically. An example is to be found in Great Britain which as far as general practice medicine is concerned is in the lead. The 'practice nurse' paid for by the Government for 75% takes a great deal of work off the hands of the British GP.

The General Practitioner's 'raison d'être'

For large groups of patients it is the GP who ultimately has an overview of all the vicissitudes covering a certain period of time in the life of an individual, and, as such, his position is unique in the field of health care. Perhaps the most significant difference between the GP and the specialist, is not just the fact that the GP knows the patient better, but he often knows about his personal situation and, even more important, the social network surrounding him. He knows the patient before a certain illness arises and during the course of the illness he has more of a total picture than the specialist does. The specialist, on the other hand, concentrates in particular on the patient's disorder. The GP's priority is talking to the patient about the complaint instead of referring them to someone else, and most patients greatly appreciate this service.

The surplus value which the GP represents it would seem is best found in his dealings with chronic patients. Not because a GP can do so very much more than a specialist, but what he can and does do demands a type of integral and continuous form of medical care, which is the GP's trademark.

Central role

Health care in the Netherlands is organized in such a way that the GPs have a central function and must select and weigh up the patients' complaints. This role is perhaps no longer appreciated without criticism as it once was in the past, but nevertheless this role greatly tips the scales in their favour in everyday life.

You can go to the GP when you are fed up and want a day off work, when things are not going very well on the home front and when something is really wrong or thought to be wrong with the body or mind.

The difficulty will be for this profession to find the right stimuli to keep the job attractive, to motivate the colleagues and to prevent the elements which are, and always have been appreciated, like talking with the patient, from disappearing,

The function of the Wailing Wall, the shoulder to cry on, indicator, the tranquillizer or the clairvoyant, should not be allowed to suffer.

On the contrary, just like in America, there is a tendency to long for a person who, amidst the advances in medical technology, still finds time to come around occasionally for a quiet talk and then to everyone's surprise appears to know the name of the family pet.

Facts and figures

Participants

General practices	(N = 103)
* doctors	(N = 161)
* practice nurses	(N = 177)
* population	(N = 335.000)

Instruments (+ response)

* registration of doctor/ nurse-patient contacts for 3 months in 4 groups of 40 doctors	(N = 386.000)
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Including:

- episodes of illness	(N = 300.000)
- diagnostic test (request for)	(N = 34.000)
- prescriptions	(N = 275.000)
- referrals	(N = 32.000)

* Registration of census data of practice - population	(N = 305.000)
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* Health interview + diary for 3 weeks among random
sample of 100 patients per participating doctor

- health interview	(N = 13.000)
- health diary	(N = 12.000)

* General questionnaire for doctors and practice
nurses:

- doctors	(N = 157)
- practice nurses	(N = 158)