1 Introduction and presentation of the problem

1.1 Introduction

The use of health care has been growing in the Netherlands in recent years. Medical diagnostics and therapeutic possibilities are increasing, and the same holds true of the demand. One of the reasons why the demand for health care is increasing is that patients, receiving ample information from, for instance, television and the internet, are more and more aware of what is technically possible in medicine. Moreover, it appears as if patients accept their physical discomforts less and less, and more and more often consult their family doctor or a specialist about them. Patients more rarely accept that the treating physician has no therapeutic solution to offer for these bodily discomforts. In that case patients sometimes 'take the matter higher up', hoping to find a physician who is capable of curing their symptoms. Other patients are dissatisfied with the result of the treatment by their physician, and want to learn the point of view of an independent third party. Health care insurers often encourage this, and for some years have been advertising with the slogan that their insured are entitled to a second opinion.

Internationally, the number of second opinions has increased greatly, and many specialists believe that the same is true of the Dutch practice. However, so far no Dutch studies have been published about the magnitude of the phenomenon of second opinions, and its causes and consequences.

The second opinion phenomenon is not new. In the seventies, health care insurers in the USA developed an extensive second opinion programme (Surgery Second Opinion Programs, SSOPs). In the USA a number of insurance companies request a second opinion from an independent specialist if the treating specialist proposes an elective intervention. Sometimes, this second opinion is obligatory if the patient is to be considered for indemnification of the costs of surgery; in other cases the second opinion is sought voluntarily. The introduction of SSOPs was prompted by the rise of the number of elective operations by 25% in the period 1972 -1978. The rationale behind such programmes is the assumption that some elective operations are probably unnecessary and that doctors differ considerably where therapeutic recommendations are concerned. If the second opinion physician does not endorse advice of the treating physician, this means in some cases that the health care insurer will not refund the costs of the operative intervention. In this way, the insurance companies hope to limit the rise of costs in health care. Meanwhile, the funding of health care in the USA has changed materially owing to the introduction of managed care, and the number of SSOPs is strongly decreasing. However, among the consumers the popularity of second opinions appears to be growing substantially: a recent American population survey showed that 16% of the total population had sought a medical second opinion in the preceding year. About this 'new' form of second opinions no studies have been published as yet.

The SSOPs are essentially different from the second opinions in the Netherlands where as a rule a second opinion or its lack has no financial consequences and where second opinions are always voluntarily.

In Europe, also, the popularity of second opinion programmes for elective surgery is rising. In Germany currently surgeons themselves are taking the initiative to develop second opinion programmes. In this way they try to avoid the risk that form and content of such programmes in the future will be determined by the medical insurers. In Switzerland, a number of major insurance companies in 1994 started a joint second opinion programme. If insured persons agree to an obligatory second opinion programme, the premium is reduced. These (obligatory) second opinions apply to a list of exactly defined operations. Orthopaedic operations are strongly represented on this list (36%), viz. hallux valgus operations, herniated disk surgery, arthroplasty of hip and knee, arthroscopies, ligament repair of knee and ankle, and removal of osteosynthesis material. In contrast
to the American programmes, Swiss patients are free in their choice of treatment; there are (as yet) no financial consequences to the administration of a treatment not endorsed by the second opinion doctor. In this way insurance companies hope to raise the quality of health care and to reduce costs. One important objective in these programmes is to provide the patient with independent information to enable him better to weigh pros and cons. However, so far not a single study has provided indications that second opinions actually improve the quality of medical care.

In the Netherlands, the initiative to seek a second opinion is virtually never taken by the insurance companies, but rather by the patient or the physicians in charge. In contradiction to the above-named programmes, second opinions are frequently being requested in our country by patients for whom the first opinion doctor had not recommended an operation at all. The number of second opinions in the field of orthopaedics appears to be rising strongly in our country over the last few years, mostly in university hospitals. So much of the health care capacity is taken up for second opinions that its general accessibility may become threatened.

1.2 Literature

Up to now, there has been little research into voluntary second opinions. To our knowledge, only a few publications on this subject have appeared. No unequivocal definition of the concept of second opinion is to be found in the literature. To the extent health care insurers in the USA use a definition, it does not apply to the Dutch situation. To date, there are no publications about the magnitude of the phenomenon and the composition of the group involved in the Dutch situation.

For the literature study use has been made of Medline and Pubmed, the relevant Dutch medical journals (such as the Netherlands Journal of Medicine, NTVG, and Medisch Contact) and doctoral theses from the period 1975 to 2000. Keywords used were: second opinion and doctor shopping.

1.2.1 MOTIVES FOR SEEKING A SECOND OPINION

The motives to seek a second opinion have been the subject of four publications. Sutherland and Verhoef (1989) reported a study of 20 patients who visited an outpatient clinic for gastroenterology for a second opinion. Most of the second opinions proved to have been initiated by the patients. The authors concluded that the patient’s need of a confirmation of diagnosis and/or treatment often prompted the request of a second opinion. Also, patients were often not satisfied about the communication with the treating specialist, particularly about the time and attention given by the specialist in question. Furthermore, patients sometimes did not accept the diagnosis and/or the treatment plan. Patients seeking a second opinion felt sicker and experienced less control of their own health than the reference group (first opinion patients). Also, they had longer-lasting complaints and a higher medical consumption than the regular new patients. With regard to the extent of functional complaints, no difference could be demonstrated between the two groups.

According to Sutherland and Verhoef (1994) the motives of patients visiting an alternative healer differ from those of patients seeking a second opinion. A Japanese study (1999) of primary care patients showed that second opinion patients are often more alarmed about their symptoms than first opinion patients. This study also distinguishes between patients seeking one second opinion and patients seeking additional opinions. Patients who had sought more than two opinions were defined as doctor shoppers. Doctor shopping proved to be associated with chronic complaints and with psycho social or psychiatric problems (as appeared from high scores on the General Health Questionnaire (GHQ-30)).

Wagner et al. (1999) carried out a study in the United States in which random persons were
approached by telephone. The trial subjects were asked if in the past year they had consulted a doctor for a second opinion. It was found that one out of five persons who in the preceding year had visited a doctor had received a second opinion as well. Multivariate analysis showed that patients who felt that they had been treated badly sought a second opinion 1.6 times more often than the average population. Patients who felt that they had been discriminated because of race, and patients whose health problems greatly impaired their normal functioning in job or school had received second opinions more than twice as often.

Mellink et al. (1998, 1999) investigated the results of voluntary second opinions in an oncological clinic in the Netherlands. In 1997, in the Daniël den Hoed Clinic in Rotterdam a special outpatient clinic was opened for patients with a malignancy desiring a second opinion. Essentially, these are all patient-initiated second opinions. The study showed that about one-quarter of these patients were not satisfied with the primary specialist, and especially about the communication with the latter. Patients who were satisfied with the first specialist were often looking for more certainty and/or more information about their disease or therapy.

1.2.2 Differences of opinion between the first and second opinion specialists

The first and second opinion specialists may disagree on the diagnosis, on the treatment or on both. The question whether or not the diagnosis was confirmed at a second opinion has not been studied much, and virtually only in connection with change of therapeutic advice.

In the seventies, second opinions imposed by the American insurance companies were studied for difference in therapeutic advice between the first and the second opinion specialist. However, in these studies the first opinion specialist was not always a board-certified specialist in the discipline in question. In a study by McCarthy and Finkel (1980) it was found that in 28% of the cases the second opinion specialist did not have the same level of expertise as the first opinion specialist. The first opinion specialists were often specialists in a different discipline (sometimes not surgical), hospital physicians or physicians of the Health Insurance Plan (these are medical examiners, sometimes specialized in various disciplines). Also, orthopaedic interventions were sometimes proposed by paramedics, for instance podiatrists, and this may affect the proportion of non-confirmations. Consequently, it is difficult to extrapolate the results to the Dutch situation. The question arises if consultations with physicians at a different level of expertise than the first opinion specialist should be regarded as second opinions at all (see Chapter 2).

Differences in diagnosis:

Bruner et al. (1997) investigated the diagnostic differences among second opinions of brain biopsy preparations. The authors distinguished four different results: serious disagreement, less serious but substantial disagreement, minor disagreement and no disagreement. A result was regarded as a serious disagreement when the change of diagnosis had pronounced consequences for the treatment to be used, or affected the survival and/or quality of life. Less serious but substantial disagreement in diagnosis had consequences for the short-term treatment, while not changing the long-term prognosis. Minor agreement was defined as changes of the diagnosis that had no consequences at all for the treatment. The disagreements found by Bruner were serious in 9%, less serious but substantial in 19% and minor in 10% of the reviews. The author recommended a standard review for brain biopsy samples that had been evaluated by less experienced pathologists.

Two more studies are known in which surgical pathological material was re-evaluated by a team of pathologist. These studies in 1.4% to 4.7% of the cases led to a different diagnosis that affected prognosis and treatment. Mellink et al. (1998, 1999) studied the agreement or disagreement in assessment between the first and second opinion specialists in oncological patients. The patients were re-evaluated by a multi-disciplinary team which included a pathologist. In reviewing the diagnosis, a distinction was made between identical diagnoses, divergent diagnosis without consequences for treatment and prognosis and divergent diagnosis with consequences for treatment and prognosis. A complete agreement
between the second opinion and the first opinion physicians was found in 79% of the cases, while in 18% there was a difference without consequences for the treatment and in 3%, a discrepancy that affected the treatment. In some cases it was impossible to decide whether the opinions did or did not differ.

Differences in treatment:
Non-confirmations in therapy at second opinions have been studied more extensively. Some of these studies revealed that the proportions of second opinions diverging from the first opinions differed rather more markedly for different specialisms and different operations. This applied in particular to the specialisms of Orthopaedics, Gynaecology, Urology and Ophthalmology. For instance, a divergent opinion was given in one-third of the indications for hallux valgus operation. In addition, the non-confirmation rate proved to vary considerably with the study design. As the main causes of these differences were listed:
- variation due to coincidence
- differences in availability of medical facilities
- differences in clinical assessment of the patient
- change of the symptoms over time
- differences in patients' wishes and expectations
- differences in consensus between hospitals
- inaccuracy of medical data.

The larger the number of surgeons involved, and/or the milder the disorder, the more often physicians disagreed. Experienced, well-trained surgeons experienced more agreement than less experienced surgeons, and there was more agreement about regular disorders than about rarities. McCarthy et al. (1981) found that in some specialisms, the non-confirmation rate was higher if the initially diagnosing physicians were not board certified. However, this difference could not be demonstrated where orthopaedic surgery was concerned. McCarthy and Finkel (1980, 1981) studied the reasons for disagreeing with the first opinion specialist’s opinion and found the following motives:
- symptoms are not sufficiently severe to justify a surgical intervention
- an operation is contraindicated
- another operation is proposed
- there were no obvious pathological findings
- conservative treatment is to be preferred to surgery
- further tests are indicated, preoperative consultation with another discipline necessary
- operation is suspended until further diagnostic results are in.

In orthopaedic patients the main reasons not to confirm elective surgery were: cast, brace, or footwear are preferable (27%), symptoms were not severe enough to warrant surgery (18%), physical therapy/exercise is preferable (18%).

Poggio et al. (1985) identified four factors that affect the (degree of) congruence in therapeutic recommendations between the first opinion and the second opinion specialist:
- the type of diagnosis (sometimes there is a general consensus about the correct indication for a particular therapy, in other cases this consensus is lacking and the indication is somewhat more controversial)
- the degree of unanimity in professional philosophy between the first opinion and the second opinion specialist (in what ‘school’ the physicians were trained)
- the financial gain for the first opinion specialist (owing to government-imposed production and income agreements this probably plays only a minor part in Dutch health care)
- the patient’s attitude in relation to the first opinion specialist, and particularly in relation to the (proposed) therapy.
Poggio et al. described three other important factors as well:
- consultation between the first and the second opinion specialist reduces the risk of interdoctor variation
- seniority: the more recently the second opinion specialist was registered, the higher the probability that he/she would agree with the first opinion specialist
- the patient’s age: proposed surgical interventions are confirmed less often in older than in younger patients.

Accurate interpretation of the discrepancies between first and second opinions in the American studies proved very difficult. ‘Non-confirmation’ was not defined identically in the various studies. McCarthy and Finkel (1978) for instance only defined a rejection of an operation proposed by the first opinion specialist as a non-confirmation, while Pauly (1979) regarded every difference of opinion as a non-confirmation. Also, the non-confirmation rate proved to depend strongly on the study design. Paris et al. (1979) made a very thorough analysis of the formulation of opinions interpreted as non-confirming and found that in certain cases the physicians’ judgements were in agreement but were nevertheless (incorrectly) reported as contrasting opinions. Yes/no questions to physicians led to a discrepancy between first and second opinions four times as high as when the nuances in diagnosis and therapeutic suggestions were entered into more profoundly. In the study of Paris complete rejection of the therapeutic proposal of the first opinion specialist occurred in only 8% of the cases. Poggio et al. (1985) also mentioned the weakness of a binary system for determining nuances in (non-)confirmation. Differences in opinion between the first and second opinion specialist may be minor or major. The discrepancy in diagnoses may or may not have repercussions on the indicated therapy and the prognosis.

1.2.3 INFLUENCE OF SECOND OPINIONS ON PATIENTS’ DECISIONS

The effects of the second opinion on patients’ decisions are described in a number of American studies. It was found that patients regularly failed to comply with the specialists’ recommendations. For instance, 25% of the patients advised by both the first and the second opinion specialist not to have an operation, nevertheless had themselves operated by a third specialist. On the other hand, patients urgently advised by both specialists to have an operation performed fail to do so in 25% of the cases. Patients’ motives to act or not to act on given recommendation so far have not been investigated in detail.

1.2.4 COSTS OF SECOND OPINIONS

In some studies it is concluded that the American second opinion programmes are cost-reducing, while the opposite appears from other publications. Allegedly one of the cost-reducing effects of second opinions is the ‘sentinel effect’. This term describes the phenomenon that when the first specialist is aware of the fact that his opinion will be checked by another, the former will be much more reserved in proposing an operation. Consequently, this effect probably occurs only if the first opinion physician knows or expects a second opinion will follow. In any case the American studies on cost (reduction) cannot be extrapolated to the Dutch situation since in the Netherlands not all second opinions are generated by proposals to perform elective surgery. According to Postmus (1998) in the Dutch situation second opinions are potentially highly profitable for the health care insurance companies. Second opinion patients occupy the places of new patients. Often they have already been examined extensively and need little additional investigation. Therefore, second opinion patients may cost less than genuine new patients. Although the time needed for second opinion patients is often longer than for other new patients, there is no extra reimbursement. Frequently, revision of histological material or imaging
examination is necessary, and this is not reimbursed either.

1.2.5 Conclusion

Neither the American nor the Dutch literature presents a clear definition of the concept of second opinion. What is regarded as a second opinion in the United States will not necessarily be so regarded in our view as well.
In the Netherlands, second opinions in general are requested out of a need for more information about diagnosis and treatment and because of problems in the communication with the first opinion physician.
It appears difficult to define adequately the concurrence of opinion between the first and the second opinion specialist. Also, specialists prove to vary greatly in confirming a treatment at second opinion; these variations depend inter alia on certain physician-related variables and the severity of the disorder. Physicians disagree more on elective than on life-saving operations.
No unequivocal answer can be given to the question whether second opinions increase or decrease costs.

1.3 Presentation of the question/problem

1.3.1 Objective

This study is intended as a first inventory of the phenomenon of ‘second opinions’, and has as its objective to investigate to what extent second opinions contribute to an appropriate and effective use of health care, and how further developments may be directed.

1.3.2 Background

The impression is gained that the demand for second opinions has risen in recent years. Little is known so far about which patients receive a second opinion, and about the motives of patients or physicians to seek the second opinion. There is also a lack of knowledge about the results of a second opinion, whether patients are satisfied with it in retrospect or whether the second opinion frequently results in abatement of symptoms.
If the demand for second opinions will indeed increase, it is important to find out how this will affect the accessibility of health care.

1.3.3 Presentation of the questions

This study is intended to increase our insight into the phenomenon of second opinions in orthopaedic practice, by way of answering the following questions:
a. What is meant by the term ‘second opinion’?
b. What proportion of the new patients visit the outpatients’ clinic of orthopaedics of the university hospitals for a second opinion, and how do these patients compare from the socio-demographic point of view with other patients?
c. Who usually takes the initiative to seek the second opinion, and for what reasons?
d. How often do first and second opinion physicians disagree on medical matters?
e. Is the patient satisfied with the second opinion, and what has been the ultimate effect of the second opinion?
f. What are the social consequences of a rising number of second opinions?

g. What guidelines may be given for requesting and dealing with second opinions?

Sub a: **What is a second opinion?**
There is no existing clear definition of a second opinion in the literature, nor do health care insurers use a standing definition.
Chapter 2 contains an attempt to formulate a definition that can be applied to the Dutch situation, making a distinction between tertiary referral and second opinion.

Sub b: **What is the extent of the phenomenon and what is the composition of the study group?**
Chapter 3 contains a survey of the size and composition of the group of second opinion patients in orthopaedics.
This refers among other things to possible differences between first opinion patients, second opinion patients and patients with a tertiary referral. Apart from socio-economic factors we shall take into account possible specific patterns of complaints, (such as duration and development of the complaints), which relatively more often cause a second opinion to be sought.

Sub c: **Who usually takes the initiative and for what reasons?**
The initiative to seek a second opinion may be taken by the patient, the family doctor, the first opinion physician or other further parties. Sometimes this distinction is not too clear, and a joint decision is involved. The motives that may lead to a request for a second opinion so far have received very little attention in the literature. In Chapter 4 patients’ and physicians’ reasons to seek a second opinion are inventoried.

Sub d: **How often do the first and the second opinion specialist differ in opinion?**
As known, physicians’ opinions differ greatly in diverse areas of medical activities. To some extent, these differences relate to the nature of the symptoms (specific or aspecific) and to the patient’s expectations. However, the differences are often also linked to the physician’s expectations and his/her possibilities, for instance in the hospital setting. Chapter 5 deals with the question to what extent the diagnosis, and more particularly the proposed therapy, are confirmed at second opinion.

Sub e: **Satisfaction about second opinions, which therapy is chosen by the patients**
Chapter 6 deals with some other results of the second opinion, such as the degree of patient satisfaction about the second opinion after one month and after one year. This chapter is also concerned with the evolution of the symptoms during the year after the second opinion, and the patient’s experience of his health. In cases in which the second opinion included a different proposed therapy, we investigated which opinion the patient followed in his choice of treatment.

Sub f: **What are the social consequences of a rising number of second opinions?**
The investigation of second opinions in orthopaedics revealed that a substantial part of the new patients in the outpatients’ department of a university hospital sought a second (or third, fourth or fifth) opinion. Orthopaedics is one of the specialisms with the longest waiting lists. These long waiting lists might have negative social consequences. In Chapter 7, we shall describe one aspect of the social consequences, viz. what part of the available capacity is taken up by second opinions, and consider to what extent measures aimed at controlling the number of second opinions might influence the amount of the resources taken up in this manner.

Sub g: **What guidelines may be given for requesting and dealing with second opinions?**
In Chapter 8, a start is made with the development of guidelines for second opinions, which should meet not only the individual patient’s need of care, but also conditions of efficiency and capacity control.
1.4 Bibliography

25. Rutkow IM, Gittelsohn AM, Zuidema GD. Surgical decision making. The reliability of clinical


