THE POSITION AND EDUCATION OF SOME PARAMEDICAL PROFESSIONS IN THE UNITED KINGDOM, THE NETHERLANDS, THE FEDERAL REPUBLIC OF GERMANY AND BELGIUM

Physiotherapy
Speech therapy
Occupational therapy
Orthoptics
Chiropody

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PREFACE

This report contains a description and comparison of the position and training of five paramedical professions in the United Kingdom, the Federal Republic of Germany, Belgium and the Netherlands. The five professions are those of physiotherapy, speech therapy, occupational therapy, orthoptics and chiropody. The background to this research is the unification of the European market and the coming into effect of the directive on the recognition of higher education diplomas including those for paramedical professions. The research was commissioned by the Ministry of Welfare, Health and Cultural Affairs.

The research is based on interviews with representatives of government and the professional groups in the four countries. A synopsis of the people who were consulted is included as an appendix to the report. We express our thanks to those who gave us their time.

Research was supervised by a committee comprising Mr F. Boon as a representative of the Ministry of Welfare, Health and Cultural Affairs, Mrs G. Orsini, representative of the Chief Medical Inspectorate, Mr D. Haaksman, on behalf of the NUFFIC (Netherlands organisation for international cooperation in higher education), Mrs M. Bronkhorst, representative of the Ministry of Education and Science, Mrs A. Kinébanian on behalf of the Consultative Body for the Health Care Professions in the Health Care (GOB) and Mrs M. Hovius, representing the Welfare, Health and Cultural Affairs educational training programmes (WVC/HGZO).
The authors want to express their thanks for the contribution of these commissioners.

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1. AIM AND CONTENT OF THE STUDY

1.1. Background and purpose of the study

In the context of the unification of Europe paramedicals acquire, like other professional groups, the option of practising their profession in the various countries of the European Community. With this option these professionals also have the opportunity of establishing themselves in practice in one of the member states of the Community. The host country is however not required to simply accept foreign practitioners. The immigrant may be required to demonstrate his ability or fulfil internship requirements. In order to determine whether additional requirements should be imposed upon the immigrant, information is required on the position and training of paramedicals in the various EC states. The objective of this research is to collect information in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium. The research will give background information on the position and training of the five groups. The research does not specify the circumstances in which an aptitude test or an adaptation period is required. It provides background information which can be used by the competent authorities in deciding whether and what sort of additional requirements must be imposed upon an immigrant. In each European country a competent authority is referred to which must determine the conditions under which an immigrant to that country can be employed. In the Netherlands this will be the Ministry of Welfare, Health and Cultural Affairs.

The research is motivated by the appearance of the general directive on the recognition of higher education diplomas for professional training of at least three years duration which came into force on 4 January 1991 and which applies among other things to most paramedical professionals. The research began on 1 May 1990 and continued for fifteen months.
In chapter I we shall look at the process of the unification of Europe and the role of the directive in this. The paramedical professions with which this research is concerned are physiotherapy, speech therapy, occupational therapy, orthoptics and chiropody. The first three professions have been chosen because they are the paramedical professions with the largest number of members in the Netherlands. Orthoptics and chiropody are chosen because they are relatively less well known. We examine the

position and training programmes of these five professions in the United Kingdom, the Netherlands, Germany and Belgium.
The United Kingdom, Belgium and Germany were chosen because it was assumed that migration from these countries to the Netherlands would be most frequent by reason of the geographical, cultural and linguistic proximity. The situation as described for Germany relates to the old Federal States. During the research Germany was reunited and it is not yet clear what the consequences of this will be for the paramedical professions.
Although before the directive came into effect there were agreements between the Netherlands and Belgium on the equivalence of diplomas for paramedical training, Belgium is included in the research because it is useful as far as Belgium is concerned to have background information on the training and practice of the paramedical professions. In addition to these practical reasons for doing research in the countries we have chosen there is a more content-based reason which resides in the fact that the countries represent different groups of health care systems. The basis for the European social security systems in the case of sickness and ill health was laid down in the previous century by Bismarck. Their development however differs from country to country. The German system of health insurance (and the Dutch system which obtained its present form during the German occupation) is based on compulsory insurance for salaried personnel below a certain level of income and voluntary insurance for salaried persons above this level and for the self-employed. The Belgian system (and the French system too) is based on universal insurance for virtually everyone but with different types of coverage for wage and salary earners and the self-employed. Both the German and the Belgian systems are based on the payment of premiums. Finally the United Kingdom has had a National Health Service since 1948 which includes the whole of the population and is financed virtually completely by taxation. These divergent systems of health insurance have no direct consequences for the position of the paramedical professions, but they do have indirect consequences. In contrast to the other countries studied, in the British National Health Service virtually all health personnel are in the service of the NHS. The insurance agreement in the German, Dutch and British systems are based on payment in kind, while in Belgium the patient first pays the person providing care and then afterwards receives (either partial or full) restitution. The British system has fixed budget limits on the costs of health care, determined by the government, while the three other countries have a more open system which is the result of negotiations on the premiums to be paid.

The issue with which this research is concerned relates to three aspects of the paramedical professional practice, these are the legal status of the profession, the training required for the profession and actual professional

practice. As regards paramedical professions, it has to be said that training and the actual practice are to a very considerable extent a process of on-going development. This process of professional development has to do with the process of professionalization. In section 1.3 we direct attention to professionalization.

The information which derives from this research is destined for the Ministry of Welfare, Health and Cultural Affairs as the competent authority in the Netherlands. The information is also important for the competent authorities abroad and for professional groups themselves, both in the Netherlands and abroad. It can also be an aid in giving a context to research that has been carried out abroad.

The structure of this report is as follows:
In chapter one the research questions are formulated and attention is devoted to the topics of European unification and professionalization.
In chapter two the methods followed are discussed and in chapter three the three general topics, i.e. the health care systems of the four countries, the various legal regulations in the area of paramedical professions and the education systems of the four countries are discussed. Chapters four through eight cover the discussions of the five professions in the four countries. In each chapter one profession is dealt with and at the end of each chapter there is a section comparing the profession in the four countries. Chapter nine finally gives a summary and a conclusion. Since the report is going to be used as a reference work in the assessment of individual requests, an attempt has been made to present the texts on individual professions so that they can be read separately. A consequence however is that the report contains a lot of repetition. In the report both the terms "United Kingdom" and "England" are used. They relate here to England and Wales.

1.2. Research questions

The object of the research is the collection of information on the position and training of five paramedical professions in the United Kingdom, the Netherlands, Germany and Belgium. The information from the research can be used by the authorities in the Netherlands as background information to decisions and on additional requirements to be required of paramedical professionals who want to practice their profession in the Netherlands. For this reason, the Ministry wants information on three aspects of paramedical

professions. These aspects are legal status, training and actual professional practice. The aspect of legal status brings us to the first question:

1. Is there in the United Kingdom, the Federal Republic of Germany and Belgium a law or regulations that are comparable with the Dutch Law on Paramedical Professions and the decisions taken on the basis of it. If there is, what is the content of these regulations?

The second question arises from the aspect of training:

2. What is the position of the training in the education system and what is the general content of the training for these professions in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium?

The aspect of professional training leads to the third question:

3. What constitutes the actual professional practice of these paramedical professions in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium?

Legal status and the professional training are of importance for decisions on supplementary requirements. Of indirect but no less importance is the actual professional practice in these countries. Legal requirements indicate what professionals may do; the content of the training indicates what professionals are able to do. Together, however, they do not tell us actually what they do. Within the limits given by the law and the options which professionals have as a result of their training, there is a great deal of room for manoeuvre in the actual professional practice. For this reason it is important to devote attention to actual professional practice in this report too.

In the report the term "paramedical" is used in the Dutch sense of the word. Dutch paramedical professions are only partly the same as the paramedical professions in the United Kingdom, the Federal Republic of Germany or Belgium. In the Netherlands the term paramedical is extensively used for these professions. In England they also speak of "professions allied to medicine" or "allied health professions". In Germany these professions are called "Medizinische Hillfsberufe", "nichtärztlichen Heilberufe" or "Heilhilfsberufe". In Belgium the term "paramedical" is used as it is in the Netherlands.

1.3. European unification

The general directive which provides paramedicals with the opportunity of practising their profession in the countries of the European Community fits in with the movement of the European Community towards the development of a common market for member states. Pursuant to articles two and three of the EEC-Treaty these are characterized by:
- free movement of goods:
- free movement of persons, services and capital;
- a communal policy in respect of competition;
- harmonisation of the legislation of the member states.

As far as the free market for professionals is concerned it is primarily the free movement of persons and services that is of importance. Free movement is brought about by the law on establishment (articles 52-59 EEC) and the right to free (private) services (articles 59-66 EEC). These rights relate in the first place to the prevention of discrimination on the grounds of nationality. In addition to discrimination on the grounds of nationality, particular provisions can also create restrictions for foreigners that are more stringent than those on the local population. In this respect for example, we are concerned with the establishment and residence requirements, requirements of professional competence and particular prescribed diplomas or titles. Article 57 EEC provides for mutual recognition of diplomas, certificates and other titles (paragraph 1) in the directives of the Council and for the coordination of prerequisites for access to and the implementation of these activities (paragraph 2). (Brinkhorst, 1984).

For a number of professions in the area of health care, the free movement of persons is regulated by means of specific directives. This is the case with GPs, dentists, midwives, pharmacists and nurses. This sort of specific directive is not available for the paramedical professions. These professions are included under a general directive.

The general directive that applies to the paramedical professions is the 'Council Directive of 21 December 1988 on a general system for the recognition of higher-education diplomas awarded on completion of professional education and training of at least three years' duration' (89/48/EEC). The Directive builds on rights already established by the EEC Treaty as interpreted by the European Court of Justice. For instance in the case of Heylens[1] in which the Court emphasized the importance of article

1 UNECTEF v. Heylens and Others, Case 222/86, The Times, 26 October 1987.

five of the EEC-Treaty, which requires member states to take all measures necessary to fulfil their Treaty obligations, and hinted that there was a right to recognition of equivalence with regard to professional qualifications (Lonbay, 1989).

Article 3 is the central article of the Directive. According to this article an applicant who holds a diploma required in another Member State cannot be refused by the host Member State, on the grounds of inadequate qualifications, to take up or pursue that profession (article 3, section a). This also applies if the applicant has pursued the profession in question full-time for two years during the previous ten years in another Member State which does not regulate that profession in the sense that a professional activity is subject to the possession of a diploma (article 3, section b). However, additional requirements are required, viz. the applicant must have successfully completed a post-secondary course of a least three years' duration and must have completed the professional training if this is required in addition to the post-secondary training. Evidence of these qualifications must have been awarded by a competent authority in a Member State. A candidate who fulfills these conditions cannot be refused on the grounds of inadequate qualifications. Article 7 regulates that the applicant has the right to use the host State's professional title.

Article 4 of the Directive permits member States to impose some safeguards. They may require evidence of professional experience, where the applicant's training period is one or more years shorter than in the host State, or they may require an adaptation period or aptitude test if the subjects covered by the foreign course of education and training "differ substantially" from those covered by the course in the host State. (Lonbay, 1989). The applicant has the right to choose between an adaptation period or aptitude test. Article 1f of the Directive defines the adaptation period as a period of supervised practice under the responsibility of a qualified member of the profession. According to article four the adaptation period may not be longer than three years. The adaptation period will be assessed. The aptitude test is defined as 'a test limited to the professional knowledge of the applicant ... with the aim of assessing the ability of the applicant to pursue a regulated profession in that Member State.' (article 1g). The aptitude test may only cover those subjects that are essential in order to be able to exercise the profession in the host member state and it must take into account the fact that the applicant is a qualified professional in the member state from which he comes.

1.4. Professionalisation

To understand and interpret differences in the position of paramedical professions within and between health care systems a broader view on the development of health care professions is necessary. This broader view is found in sociological theories about professionalisation.
Professionalisation can be defined in terms of the amount of control workers have over their own education and work and over their clients. The health care professions differ in the amount of control they have over their own work and terms of education and that of other health care providers. They also differ in the amount of control over clients: professional definitions of what constitutes a client's problem and the influence professionals have on the course of action of their clients.

The allied health professions have developed their field of work partly in response to delegation of tasks by the medical profession (e.g. orthoptists) and partly they developed out of non-medical fields, such as gymnastics, pedicure and singing teachers. Within the system of professions (Abbot, 1988) they have created their own position.
According to Abbot professions exist in a system and they compete within this system. A profession's success reflects as much the situations of its competitors and the system structure as it does the profession's own efforts. Every now and then tasks are created, abolished or reshaped by external forces which leads to readjustment within the system of professions. Professions compete by taking over each others tasks. (Abbot, 1988).

Within the system of health care professions the medical profession has a dominant position (Freidson, 1970). The relations between the medical profession and the paramedical professions vary from direct control and supervision, the paramedical professionals are allowed to do a number of delegated tasks as part of the treatment decided upon by the medical profession, to control at arms' length in which the paramedical professional receives diagnosed patients from the medical professions but has some discretion on the treatment, and to a more independent position where patients can directly consult a paramedical professional.

There are two important aspects with regard to professionalisation. One is professional autonomy, which is concerned with the position of a profession within the system of professions. Professional autonomy covers subjects like referral, prescription of treatment and the position in which someone works, which can be in employment or in private practice. The other aspect of

professionalisation is market control. Market control is concerned with the protection of the profession, the level of training for the profession and the cost reimbursement within the health insurance system.

Professional autonomy

The aspect of referral influences professional autonomy in that an obligatory and detailed referral from a dominant profession restricts the subordinate professional's autonomy. If referral is obligatory the professional cannot start working until he receives patients from a general practitioner or a medical specialist and if the referral is detailed, there is not much scope to decide on a plan of treatment. This aspect is closely linked to the next aspect, prescription of treatment. A professional's autonomy is restricted if a referring physician prescribes a certain treatment and if he is obliged to follow such a prescription. Another aspect which influences autonomy is the work situation of the professional, whether he works in employment or in a private practice. When working in employment the professional is less autonomous than he would be in private practice. In employed service the number of hours and the salary are fixed and often there is more supervision than in private practice.

Market control

Market control is concerned with the extent to which professions control the market for their services. One aspect of market control is the protection of the profession. If a profession has an obligatory registration for qualified professionals and a protection of title this effectively excludes others from that market. Only those who have the required education are eligible for registration and may use the protected title. The required level of training is also a way of controlling the market for a limited group. Another important aspect of market control is whether the costs of the treatment by a profession are reimbursed within the health insurance system. If health insurers only pay for treatments by registered professionals this limits the market for those professionals who are not registered.

Although there is seldom a prohibition for unqualified practitioners to pursue a profession, the regulations with regard to protection of profession and title, required level of training and cost-reimbursement in practice limit the possibilities for unqualified practitioners to pursue the profession (Lulofs, 1981).

The various aspects of professional autonomy and market control will return in the descriptions of the five professions.

2. METHOD

2.1. General

The research started with desk-research and interviews with experts in the Netherlands. On the basis of the information that was gathered in this way the questionnaire for the research was developed. This questionnaire was used as a basis for interviews in the United Kingdom, the Federal Republic of Germany and Belgium. Apart from the interviews, information was also gained through practice observations in the United Kingdom, the Federal Republic of Germany and Belgium. The information was then used to write the descriptions of the five professions. These descriptions were returned for comment to the contact persons and on the basis of these corrected descriptions the comparisons between the professions in the four countries were made. In the following sections the various aspects of the research method will be discussed in more detail.

2.2. Desk research

The first part of the research consisted of a search in the literature in the Netherlands to see what information was available about paramedical professions in the Netherlands, the United Kingdom, the Federal Republic of Germany and Belgium.
The Ministry of Welfare, Health and Cultural Affairs provided us with some of the legal texts with regard to the five professions in the four countries and some other information. They also provided us with a list of people in the Netherlands who could be contacted for further information.
The Nuffic (Netherlands organisation for international cooperation in higher education) provided us with information about the education of some paramedical professions in the four countries. With regard to the professions they had no information about, we were given adresses of people and institutions that could provide us with more information. Nuffic also had information available about the four different education systems.
Another source of information were the 'standing liaison committees' of the various professions. These committees consist of representatives of the European professional organisations for a certain profession and make up a coordinating professional organisation. They are concerned with the results that European unity could have for their profession. All five professions that

were studied have such committees and the Standing Liaison Committee of Physiotherapists in particular has already done a lot in the field of the comparison of the education and work of physiotherapists in Europe (Standing Liaison Committee of Physiotherapists within the E.E.C., September 1990).

2.3. Interviews in the Netherlands

Interviews in the Netherlands were held with those people we had contacted through the Ministry of Welfare, Health and Cultural Affairs. These people provided us with information about the paramedical professions in the Netherlands.
The Dutch professional organisations have so-called professional profiles[1] which describe the development of the profession, the education and its present status.
On the basis of these profiles and the interviews with the contact persons in the Netherlands the first draft descriptions of the five Dutch paramedical professions were written. The interviews in the Netherlands and the professional profiles also supplied the necessary information for the questionnaire.

2.4. Questionnaire

The questionnaire is subdivided in three parts, related to the three research questions. Thus the questions in section A are concerned with the legal status of a profession, section B is concerned with the education required to practice that profession and the questions in section C are concerned with the actual practice of the profession.
The status of the questions themselves varies. The most important questions are those that follow directly from the problems posed by the general directive. Such questions are the questions in section A.1 about legal regulations and in section A.2 about the recognition of a profession, the questions on the length of the course and its recognition in section B.1 and the content of the course in section B.3. Aside from these directly relevant questions there are also questions that were intended to discover important regulations that influence the profession and the professional training. Such questions are for instance the questions on financial regulations (section

1 Beroepsprofiel Logopedist, 1988; Beroepsprofiel Podotherapie, 1989; Beroepsprofiel Orthoptist, 1988.

A.3). These questions were added because it is often the case that financial regulations have a powerful impact on the actual practice of a profession even though such regulations are not legal regulations. Other important regulations to be discussed were the entrance requirements for a certain course (section B.1, question 1) because entrance regulations give an indication about the status of a course, in that very low entrance regulations can be an indication of the low level of the course itself. The question on the distribution of theory and practice in the training programme (section B.3, question 7) says something about the emphasis in the course. Additional information was requested in the questions on disciplinary law (section A.4) and refresher courses (section B.3, question 8). The section on the actual practice of the profession (section C) was designed to find instances where the legal status differed from the actual practice.
A copy of the questionnaire can be found in Annexe 2.

2.5. Interviews in the United Kingdom, the Federal Republic of Germany and Belgium

At the beginning of the project (June 1990) the Ministry of Welfare, Health and Cultural Affairs organized a Euroseminar to discuss the consequences of the implementation of the General Directive (89/48/EEC) on professions and training in the field of paramedical health care and to exchange information about the progress of the implementation of this Directive. The seminar took place at the Ministry of Foreign Affairs in The Hague. Delegations of most member states were present (there were no delegations from Denmark, Portugal and Greece). At this seminar many useful contacts were made with people at government level.
The names of the contact persons in the United Kingdom, the Federal Republic of Germany and Belgium were further supplied by the people we interviewed in the Netherlands. They also provided us with the addresses of the professional organisations in the United Kingdom, the Federal Republic of Germany and Belgium.

These contacts were approached first by letter, and later by telephone to ask if they would be willing to cooperate in the research. Except for two refusals, they responded positively. Those who refused referred us to other people. The next step was to make appointments with those people who wanted to cooperate. Some time before the appointments they were sent the questionnaire and the draft description of the profession in the Netherlands. The questionnaire and the draft descriptions of the Dutch professions were translated into English and German. The contact persons were also

sent an overview of the information that we had about their profession. This served not only to give the interview more structure ('filling the gaps') but it also functioned as a control of the accuracy of our information. The draft description of the profession in the Netherlands was added to give an indication of the kind of information that was needed. Aside from serving as an instruction for the questionnaire, it also supplied information about the profession in the Netherlands. The people who were interviewed found the description of the Dutch situation very helpful in answering the questionnaire. These conversations took place in September and October 1990.
In general we tried to find three kinds of contact relating to the three subdivisions of the questionnaire. People at government level were most knowledgeable about the legal status of the five professions (subdivision A). The training and actual practice of the professions (subdivisions B and C) were discussed with representatives of the professional organisations. The descriptions of the professions in the United Kingdom, the Federal Republic of Germany and Belgium are largely based on these interviews, unless stated otherwise. Annexe 1 gives a list of the people that were interviewed in the United Kingdom, the Federal Republic of Germany and Belgium.
The actual practice (section C) was then again discussed and observed during the visits to the various practices.

2.6. Practice observations

In December 1990 and January 1991 paramedical practices in the United Kingdom, the Federal Republic of Germany and Belgium were visited. The names of these practitioners were provided either by the professional organisations or by the first contact persons. The aim of these visits was to observe a paramedical practice and to discuss a shortened version of the questionnaire. The information that was obtained during these practice visits lead to a more profound knowledge of the actual practice of a profession. The information generally corresponded with the information obtained in the first interviews. It will therefore not be presented separately but be included in the various chapters.

2.7. Feedback

On the basis of the interviews and the practice visits, draft descriptions of the professions were written. To check whether all the information was interpreted correctly in the draft descriptions or whether important information was missing, the descriptions were returned to the contact persons who

provided the information. They were asked to read the text and add their comment. These comments and additions were then added to the texts.

3. THE HEALTH CARE SYSTEM, THE LEGAL SYSTEM AND THE EDUCATION SYSTEM IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM

3.1. General

When comparing professions in various countries it is important to be able to place these professions in the health care system as a whole. Knowledge of the legal system and the education system also contributes to a better understanding of the position of the professions. Therefore, the following chapters will give descriptions of the health care systems, the legal systems and the education systems of the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium.

3.2. Health care systems[1]

3.2.1 The health care system in the United Kingdom[2]

Introduction

The United Kingdom is a democratic monarchy consisting of four countries; England, Wales, Scotland and Northern Ireland. The four countries enjoy a considerable degree of autonomy in areas such as education, health, housing and social policy.

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1 co-author of this chapter is P. van der Heijden.

2
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The UK is populated by almost 57 million people of which over 25 million are employed. Fifteen percent of the population is over 65 years.

Table 3.1.: Demographic key-figures

Year	Popul.	Female	Male	Female	Male
	*1000	life exp. at birth	life exp. at birth	life exp. at 65	life exp. at 65
1980	56304	76.6	70.4	16.8	12.8
1987	56930	78.1	72.4	17.8	13.8

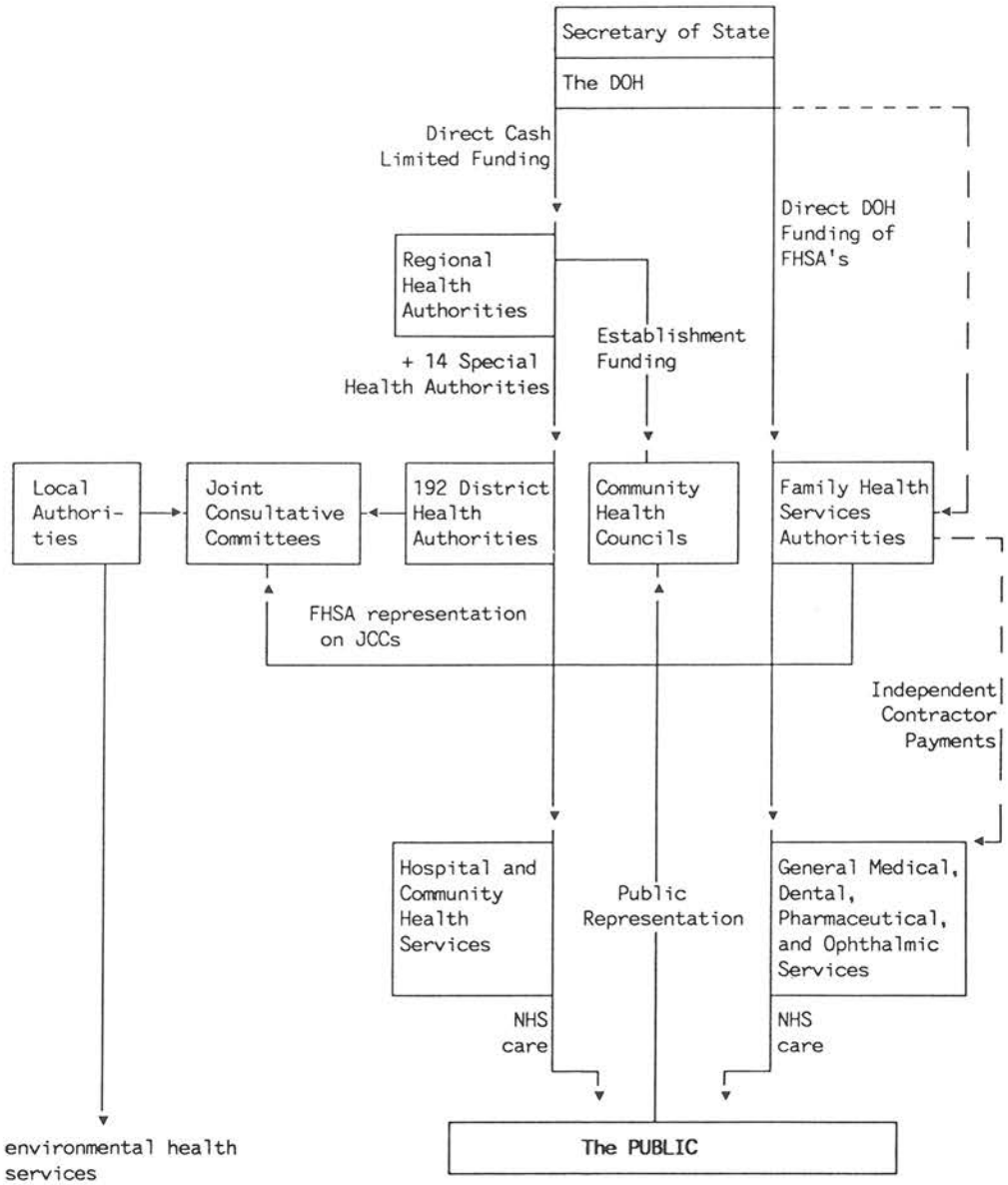
Source: Program ECO-SANTE by BASYS/CREDES

Structure of the health care system

- Health insurance
  All citizens of the UK have been covered by a National Health Service (NHS) since 1948. The NHS provides free primary and hospital care, although there are some patient charges for prescribed drugs, dental care and some appliances. There is a small private sector, providing mainly acute hospital service involving elective surgery, which is supplementary to the NHS.

- Ambulatory care
  The whole population has direct access to general medical and dental practitioners (GPs and GDPs), pharmacists and opticians. GPs (but not GDPs) maintain a list of patients for whom they are responsible; a patient may choose any practitioner subject to their being willing to take the patient on their list. GPs act as gatekeeper to specialist services, regulating access to non-emergency hospital services. They work mainly in group-practices or partnerships, as well as in multidisciplinary health centres. GPs, GDPs and pharmacists are not employed directly by the NHS, but are independent practitioners under contract with the NHS (they are called 'independent contractors').
  Ambulatory care also includes after care of patients discharged from hospitals, and is complemented by personal social services, for example support from social workers, meals on wheels and some home helps; these services are provided by local authorities. There is a sharp distinction between primary and secondary care: a GPs referral is required to obtain consultation with a specialist.

Chart 1: Organisational structure of the National Health Service (NHS) in England since 1982



Adapted from: Understanding the NHS in the 1980's

Financing

- Financing

  The English NHS is divided into 3 sectors: (1) the hospital and community health services (HCHS), (2) the family practitioner services (FPS) and (3) the local authority (government) social services (LASS).

  The HCHS budget is cash limited and divided amongst the RHAs of the English NHS by a formula (Resource Allocation Working Party, RAWP) based on population weighted by standardised mortality ratios. Each RHA has discretion as to how it distributes resources amongst their DHAs. Some use the RAWP formula at the sub-regional level and others augment with other indicators of social deprivation.

  The FPS budget finances ambulatory care. This budget is 'open-ended' and demand determined, i.e., expenditure is determined by the practices of GPs and other practitioners contracted to the FPS to provide services for patients. Furthermore, no attempt is made within the budgetary process to distribute FPS services across England in relation to 'need'.

  LASS are financed from local taxes and central government grants. Local government is controlled extensively by central government. The LASS budget is cash limited and there is an element of equalisation of financial capacity by central government in that their grants for LASS, the rate support grant, has a 'needs' element in it.

- Reimbursement/remuneration

  There are user charges for primary dental care, prescribed drugs and some appliances, although exemptions are made for priority groups such as children and those on low incomes. The full cost of ophthalmic care now has to be paid by all except a restricted group of exempted patients.

  GP remuneration is a mix of fees and practice allowances; most of these fees are, however, based on capitation rather than fee-for-service. A GP receives standard capitation fees based on the number of patients on his list and receives fees for new patients. Besides that, a GP can receive extra payments for childhood immunisation, cervical screening, minor surgery and some other items.

  Specialists are remunerated according to seniority and rank. In addition to the normal remuneration system of hospital doctors, consultants (the highest grade of specialization) have the distinction award system. The intention of this system is to reward the consultant individually for his contribution to his specialty or to the hospital. Consultants are allowed to have private patients. Specialists (consultants) can also work as fully private practitioners. As consultants have to retire at 65 from the NHS, they usually keep on working as private practitioners.

- Health care cost development

Table 3.2.: Total and public expenditure on health in Great Britain (percent of GDP)

Year	Total expend. % GDP	Public expend. % GDP	Expend. in £ per head
1980	5.78	5.18	237
1981	6.05	5.40	273
1982	5.94	5.22	292
1983	6.16	5.40	330
1984	6.11	5.33	349
1985	5.99	5.20	373
1986	6.02	5.22	400
1987	6.05	5.23	435

Source: Program ECO-SANTE by BASYS/CREDES

The tables show that in the last decade the expenditure on health as a percentage of the Gross Domestic Product has risen. When measured in nominal expenditures in £ per head of the population, the expenditures increased seriously between 1980 and 1987 (£237 in 1980, £435 in 1987). In comparison with other OECD countries however, the percentages of the GDP spent on health are one of the lowest.

Supply of health care providers and facilities

- Manpower
  In 1987 1,079,150 people were employed in the health sector in England of which 39,231 were employed as medical and dental staff in hospitals, 4,187[1] as medical and dental staff in the community health service (together this is ± 94 per 100,000) and 47,850 in the family practitioner service (± 102 per 100,000 of which 58 GPs). In whole time equivalents the nursing and midwifery staff totals 404,041 persons, of which 330,830 hospital staff, 37,284 Primary Health Care staff and 23,548 midwifery staff (together this is ± 849,5 per 100,000).

- Facilities

Table 3.3.: Inpatient medical care beds and personnel per bed

Years	Beds total	Beds per 1000	Personnel per bed
1980	458000	8.1	1.40
1981	455000	8.1	1.50
1982	453000	8.0	1.53
1983	446400	7.9	1.58
1984	430815	7.6	1.64
1985	421195	7.4	1.71
1986	409962	7.2	1.76
1987	388711	6.8	1.86

Source: Program ECO-SANTE by BASYS/CREDES

The number of beds declined not only since 1980 as the table shows but since 1951. Most of the decline in beds occurred in England and Wales in the mental illness and acute departments. Manpower per bed however continued its upward trend, which set in 1951.

3.2.2 The health care system in The Netherlands[4]

Introduction

The Netherlands is a constitutional monarchy with over 14,5 million inhabitants of which 6 million people are employed. Some 12,5 % is aged sixty-five or older.

4 - P.P. Groenewegen et al. Remunerating general practitioners in Western Europe. Aldershot: Gower 1991.
- A.B.M. Gloerich et al. Regional variations in hospital admission rates in the Netherlands, Belgium and the North of France: basic information and references. Utrecht: NIVEL 1989.
- D.L. Crombie et al. The interface study. London: The Royal College of General Practitioners 1990.
- A. van der Werff. European health systems. S.L.: Reseau d'information et de Communication Hospitalier Européen (RICHE) 1989.
- B. Abel-Smith. Eurocare: European health care analysis. Basle: HeathEcon s.a.
- A. Voskuilen. Thuisverpleging in Nederland en België. Utrecht: NIVEL 1991.
- A. Kerkstra. Community nursing in the Netherlands. In: Community nursing. Proceedings of the international conference on community nursing, 16-17 march 1989, 's-Hertogenbosch, The Netherlands.
- Centraal Bureau voor de Statistiek and Ministerie van Welzijn, Volksgezondheid en Cultuur. Vademecum gezondheidsstatistiek Nederland 1989. Den Haag: SDU 1989. (in Dutch and English)

Table 3.4.: Demographic key-figures

Year	Popul.	Female	Male	Female	Male
	*1000	life exp. at birth	life exp. at birth	life exp. at 65	life exp. at 65
1980	14150	79.2	72.5	18.7	14.0
1987	14715	80.1	73.5	19.3	14.4

Source: Program ECO-SANTE by BASYS/CREDES

Structure of the health care system

- Health insurance

  The health insurance system can be divided into two schemes:
  - A compulsory health insurance scheme applies to all employees below a fixed wage level, old age pensioners who were publicly insured prior to retirement, and persons in receipt of social benefits. In 1987 this insurance covered 61.5% of the population.
  - The rest of the population have to insure themselves against the cost of illness by private insurance. Privately insured persons have a range of options with varying coverage and co-payments, deductibles and so on.

  Insurance for exceptional medical expenses is covered by the Exceptional Medical Expenses Act ('Algemene Wet Bijzondere Ziektekosten'), which applies to all residents of the Netherlands without any restrictions. This supplementary scheme started as cover for 'heavy risks' not provided for under the health insurance scheme (stay in hospitals for over a year and stay in nursing homes and institutions for the mentally retarded from the first day), but is now gradually being extended to community nursing (1980), ambulatory mental health care (1985), all mental health care and family assistance (1989), and medical appliances (1990).

- Ambulatory care

  General practitioners function as 'gatekeepers' of the health care system. A patient has to consult a GP before consulting a medical specialist. The GP therefore determines access to other parts of the health care system and is the point of referral. For publicly insured patients the referral is mandatory. Private insurance carriers also usually require a referral. The GP is usually an independent entrepreneur. Most of them work alone but an increasing number is engaged in group practice and in multi-professional teams in health centres.

Ambulatory specialist care is only provided (after referral) by the out-patient departments of hospitals. Specialists do not work in the community.
In the Netherlands community based prevention is, separated from primary care, carried out under supervision of local authorities in collaboration with non-profit bodies like the so-called Cross Associations.

- Institutional care
  Most of the hospitals in the Netherlands are privately owned hospitals and they all are non-profit organisations. The Government has an important say in hospital financing. The hospital sytem is well developed, comprising a network of general, single-specialty and teaching hospitals. General (acute) hospitals provide the entire range of basic-specialties of medicine, surgery and maternity care. Between these three types of hospitals no hierarchical relations exist. All general hospitals provide outpatient care, and long stay hospitals are developing day care centres. Most specialists operate from private practices at the outpatient departments of hospitals.

- Community care
  Community care is provided by so called Acknowledged Cross Associations ('Erkende Kruis organisaties', EKO's) and is a mix of preventive and curative care for the whole population. Providing nursing care is however the most time consuming task. It takes about 40 to 50% of the working time of community nurses. Preventive home visits are made to the elderly, but also to mothers with babies. In addition to the preventive home visits to mothers with babies and young children, a team of health professionals hold child health sessions at a child health clinic ('consultatiebureau voor zuigelingen en kleuters'). The team consists of a general practitioner or a specialized medical officer and one or more community nurses.
  Community care is financed by a system of public insurance based on the Exceptional Medical Expenses Act. This means that basically everybody in the Netherlands can receive care from community nurses. However, you have to be or become a member of the local cross association to be able to use the services. The membership fee (about 50 Dfl. per year per family) can be considered as a kind of co-payment. No referral from a GP is required in order to obtain care. In 1988 their were 4715 (in FTE's) community nurses and 1360 community orderlys employed by the Cross Associations. A smuch smaller group are the medical officers (183 in 1988).

Organisation

Overall responsibility for statutory health insurance rests with the Minister of Welfare, Health and Cultural affairs ('Ministerie van Welzijn, Volksgezondheid en Cultuur'). The final decision regarding planning, charges, benefits and contribution rates rests with the Minister. The Health Inspectorate attached to the ministry supervises and monitors the standards of health care.

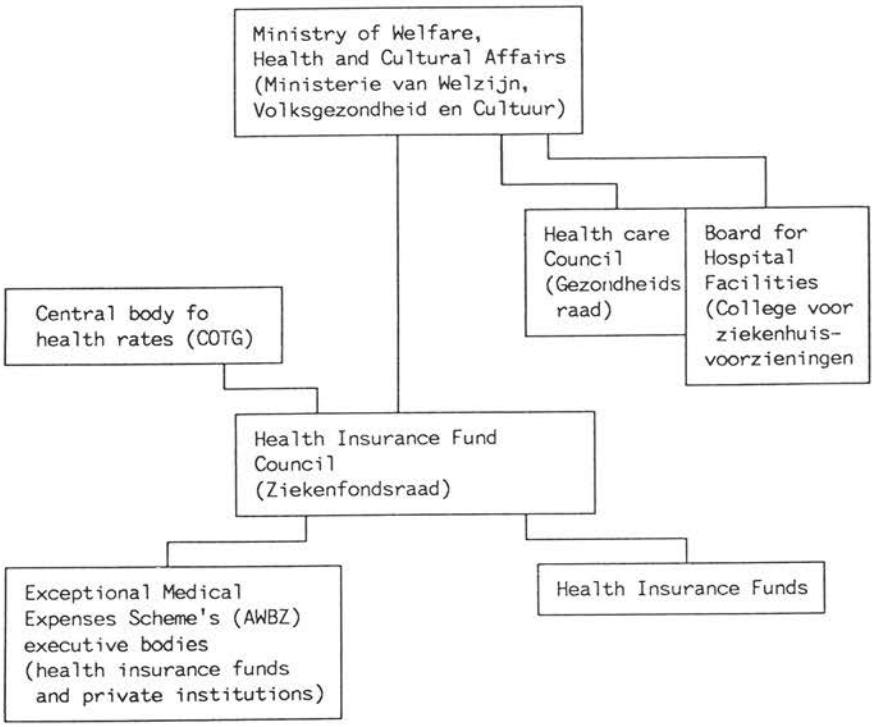
The National Health Care Council gives advice about planning, structure, provision, quality and efficiency of health care in general, and on the implementation of the two health insurance schemes.

The planning of hospital construction lies with the Board for Hospital Facilities

The Central Body for Health Rates is responsible for approving and laying down health service tariffs and establishes guidelines concerning the level, structure and method of calculation.

The Health Insurance Fund Council advises the Ministry on the administration and planning of statutory health insurance and on managing the funds.

Chart 2: Organisational structure of the statutory health insurance schemes in the Netherlands



Adapted from: Eurocare

Financing

- Financing
  The compulsory scheme is mainly financed by contributions of employees and employers. Deficits are subsidized by the government. The scheme is administered by approximately forty autonomous health insurance funds operating on a regional basis under supervision of the Health Insurance Fund Council ('Ziekenfondsraad'), an independent body that also advises on the contribution and premium levels.
  Private insurance is paid by premiums of the insured. The privately insured have a range of options with varying coverage and co-payments, deductibles and so on.
  The general scheme against high risk (Act on Exceptional Medical Expenses) is financed by general taxation.

- Reimbursement/remuneration
  GPs receive a capitation fee for each publicly insured patient on their list, a full tariff for the first 1,600 patients and a lower tariff for the rest. Fees are paid periodically to the GPs by the sick-funds. GPs are paid on a fee-for-service basis by privately insured patients or their insurance funds. Practically each GP has both publicly and privately insured patients. However, the actual balance differs according to the prosperity of the community.
  Almost two-third of all specialists work as independent professionals (generally within hospitals) and are paid on an item of service basis.
  For the publicly insured health care is free although dental care is only partly reimbursed.

- Health care cost development

Table 3.5.: Total expenditure on health in the Netherlands (percent of GDP)

Year	Total expend. % GDP	Public expend. % GDP	Expend. in DFL per head
1980	8.19	6.21	1949
1981	8.38	6.38	2076
1982	8.58	6.58	2206
1983	8.61	6.57	2279
1984	8.33	6.38	2308
1985	8.22	6.26	2365
1986	8.31	6.11	2445
1987	8.46	6.25	2484

Source: Program ECO-SANTE by BASYS/CREDES

As the table shows, the expenditure on health as a percentage of the GDP remains fairly stable, although the expenditure in DFL per head increases. In comparison with other OECD countries however the percentages spent on health care are one of the highest.

Supply of health care personnel and facilities

- Manpower
  In 1987 their were 33,330 physicians in the Netherlands, of which 6,243 General Practitioners, 11,612 specialists, 2,143 registered public health physicians and 13,332 other physicians (respectively 228, 43, 79, 15 and 91 per 100,000 inhabitants).
  Furthermore their were some 1000 midwives, this means 55 midwives per 10,000 births in the previous year. The Cross organisations employed 10,167 persons in full time equivalents (fte), of which 227 physicians and 4,572 district-nurses.
  The 198 hospitals employed 135,167 persons in fte, of which 57,404 nursing personnel[5].

- Facilities

Table 3.6.: Inpatient medical care beds and personnel per bed

Years	Beds total	Beds per 1000	Personnel per bed
1980	127481	9.0	1.43
1981	127206	8.9	1.45
1982	124039	8.6	1.52
1983	123736	8.6	1.50
1984	123522	8.5	1.51
1985	123320	8.5	1.51
1986	122702	8.4	1.54
1987	122353	8.3	1.55

Source: Program ECO-SANTE by BASYS/CREDES

In the 1980's the total number of beds declined with some 5,000 beds. The number of beds per 1000 inhabitants declined with 0.7 bed and the personnel per bed rose from 1.43 to 1.55 persons per bed.

5 - 40,119 qualified nursing and educative personnel
- 14,828 nursing and educative personnel in training
- other nursing and educative personnel

3.2.3. The health care system in the Federal Republic of Germany (situation before 1990)[6]

Introduction

The Federal Republic of Germany is a federate state. The FRG is populated by over 61 million people of which about 15 percent is aged 65 or older. Almost 30 million people are employed.

Table 3.7.: Demographic key-figures

Year	Popul.	Female	Male	Female	Male
	*1000	life exp. at birth	life exp. at birth	life exp. at 65	life exp. at 65
1980	61566	76.7	69.9	16.8	13.0
1987	61238	78.9	72.2	18.1	14.0

Source: Program ECO-SANTE by CREDES and BASYS

Structure of the health care system

- Health insurance

  There is a statutory scheme covering on a compulsory and voluntary basis 93% of the population. Seven percent is privately insured; these are high income self employed professionals etc. who do not want to take part in the statutory scheme on a voluntary basis. Eight percent have a private supplementary insurance.

  Within the statutory scheme, there is no restriction on who is eligible for membership. The GKV (Gesetzliche Krankenversicherung = Statutory health insurance) membership is compulsory for all workers and for all employees and for some categories of self-employed whose monthly income is below a certain amount of DM. The contribution is split in two between employers and employees. The voluntarily insured pay progressive contributions with the rate increasing as their income increases.

6
- M. Schneider et al. Gesundheitssysteme im internationalen Vergleich: laufende Berichterstattung für den Bundesminister für Arbeit und Sozialordnung. Augsburg: BASYS 1989.
- B. Abel-Smith. Eurocare: European health care analysis. Basle: HeathEcon s.a.
- E. Carrillo et al. Requirements & constraints for minimum data sets. S.L.: McAce 1989.
- D.L. Crombie et al. The interface study. London: The Royal College of General Practitioners 1990.
- Federal minister for youth, family affairs, women and health. The health care system in the Federal Republic of Germany. Kiel: Schmidt & Klaunig 1988.

- Ambulatory care
  Physicians strongly dominate German ambulatory care. These physicians are GPs as well as ambulatory specialists like pediatricians, specialists in internal medicine etc. There is free competition between all of them. That is why GPs in general are well-equipped. The ambulatory physicians are self-employed. All ambulatory physicians are formally directly accessible. Patients have a free doctors choice. Other health professionals often participate in ambulatory care as employees of a physician.
  Only a GP or an independently practising specialist can refer a patient to a hospital. After a preliminary examination, the decision to actually admit the patient is taken by the hospital physician. When a patient is admitted to a hospital all prior tests are in principle repeated The responsibility for discharge lies with the hospital specialist. The organisation of after care is the responsibility of the family doctor because there is no hospital care for discharged patients. This is the result of the very clear distinction between ambulatory and institutional care.

- Institutional care
  Ambulatory care and inpatient care are strictly divided. Hospitals dispense ambulatory care only on a limited scale and ambulatory physicians rarely treat their patients in hospitals.
  There are two kinds of hospitals: hospitals for acute cases and special hospitals. The acute hospitals are meant for patients whose illness requires only a short hospital stay, while the special hospitals serve the chronically ill.

The acute hospitals can be divided into three different types:
- hospitals providing standard care (they only have few specialty departments);
- major hospitals providing care for more than their own region (they have more specialty departments);
- central hospitals are frequently university clinics and teaching hospitals for physicians and medical research centres (they cover all aspects of medicine).

In contrast to ambulatory physicians, hospital physicians are salaried and hospital-based.

- Community care
  The health care provided by physicians and hospitals is supplemented by a variety of public health and social welfare services. By far the largest proportion of the services required are provided by family members and lay helpers.

Community care assistance for the sick, the handicapped and the aged is provided by some 3,800 establishments. The staff of these establishments, mostly trained nurses, visit the patients at home. An order from the family doctor is needed for certain forms of care. The statutory health insurance fund then takes over responsibility for paying the costs of home care.

Community services are the responsibility of welfare organisations and the municipalities. They are financed from public funds and fees.

For those who are no longer capable of living in the community inpatient care is available. In 1984 some 445,700 people were living in 6,100 inpatient establishments run by welfare associations, municipalities and private concerns. They have to pay for their board and lodging themselves, but those with inadequate incomes are supported with public funds.

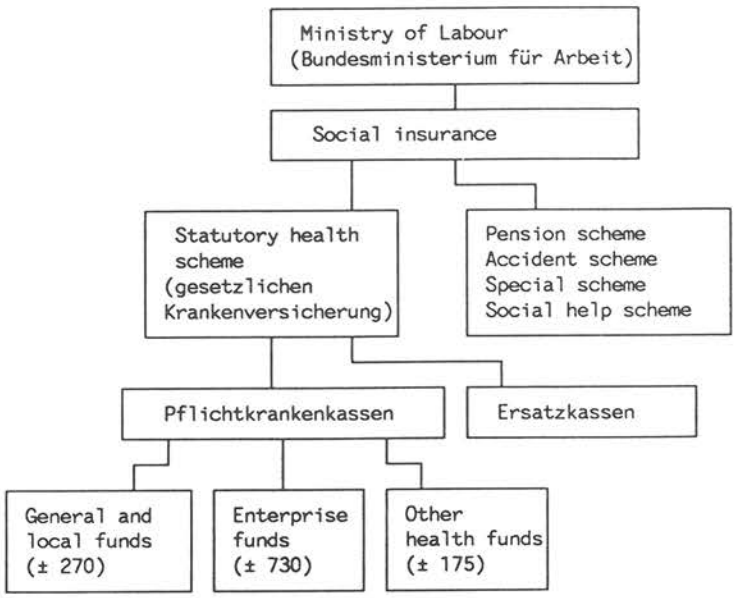
Organisation

The statutory scheme is regulated by law under the State Insurance Regulation ('RVO: Reichsversicherungsordnung'). The health insurance funds are independent with their own sovereignty and responsibility concerning the collection of contributions. The membership of the two main types of sick funds ('Pflichtkrankenkassen and Ersatzkassen') generally depends on type of employment. The 'Pflichtkrankenkassen' insure mainly blue collar workers and the 'Ersatzkassen' insure mainly white collar workers. The funds form associations at the provincial and federal level.

To work for the statutory scheme doctors have to join the Association of Health Insurance Funds Doctors (KV: Kassenärztliche Vereinigung). The global sum that has to be paid by sick funds to the doctors is, at provincial level, negotiated by the funds and the doctors. The same happens with the other health professions. At the national level, agreements are negotiated which serve as guidelines for the price negotiations at the provincial level.

Federal government has a minor role in health care management. Since 1977, however, the federal government enacted a series of cost-containment laws that have stabilized spending. The considerable legislative power has been delegated to the states. The states have the planning function related to hospitals. Planning and management of ambulatory care are tasks of private institutions and local authorities. By government regulation all self employed farmers, the physically or mentally diseased or disabled, students, unemployed and pensioners and their dependents have become compulsorily insured within the statutory scheme.

Chart 3: Organisational structure of the statutory insurance schemes in Germany



Adapted from: Eurocare

Financing

- Financing
  Main source are the contributions of the compulsory and voluntary scheme (executed by the sick funds). Other sources are means of private (insurance) organisations, public funds and private payments. Public funds (taxation) is just a modest part of the total amount. The statutory health scheme (GKV) is almost fully financed by contributions from insured members (some 95% in 1982). The rest is financed by revenues from interest and property. There are no government subsidies. About 84% of the contributions are paid for by the economically active and 16% by the pensioners. As the expenditures on the retired are higher than their contributions the economically active have to help pay for the older members.

- Remuneration/reimbursement
  GPs and other ambulatory physicians have a fee for items of service (paid by the organisations of sick fund physicians (KV) that received money from the insurance funds). Fees are calculated according to official tariffs. Tariffs specify a number of points per medical act. Doctors can never be certain of how much they are going to be paid every three months. Public hospital specialists are salaried. Salaries vary according to qualification. Doctors with the highest grade are allowed to have private patients in the hospital. Salaries in private hospitals are determined by the market.
  Doctors fees are totally reimbursed, or better: payment in kind (except from private insurance: cost reimbursement). There are small co-payments for pharmaceuticals, in-patient hospital care and physiotherapy.

- Health care cost development

Table 3.8.: Total expenditure on health in the Federal Republic of Germany (percent of GDP)

Year	Total expend. % GDP	Public expend. % GDP	Expend. in DM per head
1980	7.92	6.29	1902
1981	8.20	6.50	2048
1982	8.06	6.35	2093
1983	7.97	6.20	2176
1984	8.09	6.31	2327
1985	8.16	6.37	2449
1986	8.11	6.32	2563
1987	8.06	6.33	2642

Source: Program ECO-SANTE by CREDES and BASYS

As the table shows, the expenditure on health as a percentage of the Gross Domestic Product remains fairly stable, although the expenditure in DM per head increases. This is due to the cost-containment laws which were enacted since 1977. In comparison with other OECD countries, however, the percentages of the GDP spent on health are one of the highest.

Supply of health care personnel and facilities

- Manpower
  As ± 93 per cent of the population are insured in the statutory health scheme, all ambulatory independent medical or dental practitioners have opted to apply for permission to provide medical care under the statutory scheme. In 1987 some 76,000 independent statutory health insurance physicians (1,1 per 1000 persons) practised in the Federal Republic, of which some 30,000 General Practitioners (Niedergelassene Allgemeinärzte), this means ± 0,5 GP per 1000 persons.
  In 1987 some 87,500 physicians and over 300,000 nursing personnel were employed by hospitals (respectively 1,4 and 5,3 per 1000)

- Facilities

Table 3.9.: Inpatient medical care beds and personnel per bed

Years	Beds total	Beds per 1000	Personnel per bed
1980	707710	11.5	1.08
1981	695603	11.3	1.11
1982	683624	11.1	1.14
1983	682747	11.1	1.16
1984	678708	11.1	1.17
1985	674742	11.1	1.21
1986	674382	11.0	1.23
1987	673687	11.0	1.25

Source: Program ECO-SANTE by BASYS/CREDES

In the 1980's the total number of beds declined with some 34,000, but the number of beds per 1000 persons only declined a little and the number of personnel per bed raised from 1,08 to 1,25.

3.2.4 The health care system in Belgium[7]

Introduction

Belgium is a constitutional monarchy with over 9.8 million inhabitants. Almost fourteen per cent of the population is aged 65 or over. In 1986 some 4.2 million people were employed, this is about 43% of the population. The country is divided between Flemings, the Dutch-speaking community and Walloons, the French-speaking community. There is also a small group of German-speaking Belgians. To some extend Belgium is a federative state, with three parts: Flanders, Walloon and Brussels.

Table 3.10.: Demographic key-figures

Year	Popul.	Female	Male	Female	Male
	*1000	life exp. at birth	life exp. at birth	life exp. at 65	life exp. at 65
1980	9847	75.7	69.8	16.8	12.9
1987	9862	77.7	70.9	17.8	13.6

Source: Program ECO-SANTE by BASYS/CREDES

Structure of the health care system

- Health insurance

  The compulsory health care costs and disability insurance covers ninety-nine per cent of the population. Two insurance schemes exist: the general scheme for all employees, their dependents and pensioners, and the independent scheme for the self-employed. The independent scheme intends to insure only hospital admissions, while the coverage of the general scheme is broader.

  The health insurance system is based on the principle of reimbursement. The patient pays the doctor and hands the bill at his local sick funds office, except for hospital bills which are usually paid directly by the sick funds to the hospitals.

  Another characteristic of the health insurance system is the existence of co-payments. Not the whole cost of health services' charges is

7 - D.L. Crombie et al. The interface study. London: The Royal College of General Practitioners 1990.
- M. Schneider et al. Gesundheitssysteme im internationalen Vergleich: laufende Berichterstattung für den Bundesminister für Arbeit und Sozialordnung. Augsburg: BASYS 1989.
- A.B.M. Gloerich et al. Regional variations in hospital admission rates in the Netherlands, Belgium and the North of France: basic information and references. Utrecht: NIVEL 1989.
- A. Voskuilen. Thuisverpleging in Nederland en België. Utrecht: NIVEL 1991.

reimbursed. Disabled persons, widows, pensioners and orphans are almost completely exempted from these co-payments. The sick funds offer, on a voluntary basis, additional insurance for co-payments.

- Ambulatory care
  Medical care outside the hospitals is provided by the numerous GPs as well as by private specialists both operating from their surgeries on a solo-practice basis. Group practices do exist but are still a minority. There is no sharp division of tasks between GPs and ambulatory specialists. Belgians are free to consult any physician inside or outside hospitals without referral. Nevertheless there may be referrals. For instance from a GP to an ambulatory or hospital-based specialist or unspecified to an outpatient department. The same goes for the ambulatory specialist. There is a free doctor choice for every consultation again.

- Institutional care
  In Belgium there are three types of hospitals: teaching hospitals linked to a university, general hospitals for acute care and specialized institutions. The patient has complete freedom of choice with regard to the institution. These institutions either belong to the public or to the private sector. All general hospitals have outpatient departments. Emergency cases are sent to public or private hospitals that run an emergency department.

- Community care
  Cross associations provide home nursing and health education. These private non-profit associations form together a network all over the country. Patients have to become a member of the Cross Association, which costs between 500 and 1000 Bfr per year. Community care is financed by the social insurance system. Patients have to be referred by a general practitioner in order to receive care.

Organisation

Execution of the statutory scheme is the responsibility of the private, autonomous decentralized Sickness Funds. At a higher level the three communities (Flanders, Walloon and Brussels) are responsible for health care provision, management of social services, care for the aged, health education and home-care. At national level there are tasks on health insurance, hospital legislation, professional education and quality of care in general. Furthermore, the municipalities have certain duties with regard to sanitation and some social services.

Financing

- Financing
  The main sources of funding of the social insurance system are contributions by employees (no wage limit) and employers (sixty per cent in 1985) and government subsidies and of course the co-payments. The level of contributions is fixed by the central government, which is also responsible for collecting them.
  The local health insurance funds are responsible for administering health care. At the national level the local health insurance funds are united in six organisations with differing religious, political and trade union affiliations. They are supervised by the National Sickness and Disability Fund (RIZIV).

- Reimbursement/remuneration
  It will be clear that in this scheme only a fee for service payment will do for physicians. For users of health care there is a cash refund system. After payment the patient will have 75% of the primary care costs refunded from the sickness fund. So there are considerable co-payments for ambulatory care. Hospital care is reimbursed totally, except for a co-payment of 189 Bfr per day and 25 Bfr for pharmaceuticals.

- Health care cost development

Table 3.11.: Total expenditure on health in Belgium (percent GDP)

Year	Total expend. % GDP	Public expend. % GDP	Expend. in Bfr. per head
1980	6.69	5.46	23461
1981	7.17	5.77	25982
1982	7.20	5.76	28391
1983	7.38	5.66	30873
1984	7.35	5.63	33019
1985	7.37	5.67	35332
1986	7.36	5.66	37188
1987	7.45	5.73	39108

Source: Program ECO-SANTE by BASYS/CREDES

As the table shows, the expenditure on health as a percentage of the Gross Domestic Product remains fairly stable, although the expenditure in Bfr per head increases. In comparison with other OECD countries the expenditure on health in Belgium is one of the lowest.

Supply of health care personnel and facilities

- Manpower
  The total number of physicians in 1990 was about 35,000 of which some 16,000 GPs and some 19,000 specialists[8]. Compared with the other three countries in this chapter Belgium has the highest number of physicians per 1000 (resp. 2.8 in Germany, 1.37 in the United Kingdom and 2.35 in the Netherlands in 1987).

Table 3.12.: Number of physicians Belgium

Year	Total Physicians	Physicians per 1000
1980	24536	2.49
1987	31718	3.21
1990	± 35000	± 3.5

Source: Program ECO-SANTE by BASYS/CREDES

- Facilities

Table 3.13.: Inpatient medical care beds and personnel per bed

Years	Beds total	Beds per 1000	Personnel per bed
1980	91889	9.3	1.04
1981	92436	9.4	1.06
1982	92686	9.4	1.10
1983	92138	9.3	1.12
1984	91638	9.3	1.13
1985	90790	9.2	1.15
1986	89589	9.1	1.21
1987	88554	9.0	1.25

Source: Program ECO-SANTE by BASYS/CREDES

In the 1980's the total number of beds declined, but the personnel per bed rose from 1.04 to 1.25.

3.3. Legal systems

The following paragraphs will describe the legal systems of the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium.

8 These figures were given by telephone, by the Belgian Ministry of Health.

After a short description of the general legal system of the country, the sections will describe the legislation with regard to the paramedical professions.

3.3.1. The legal system in the United Kingdom

The United Kingdom contains three separate legal systems, namely those of England and Wales, Scotland and Northern Ireland. Each system has its own courts, its own legal profession and, to some extent, its own separate laws. All three are common law systems, that is systems which are not wholly based on codes of law. While the legal systems of England and Wales and of Northern Ireland are very similar, Scots law and its legal system are different from the rest of the United Kingdom. But the highest court for all three systems is the same and all their legislations are enacted by the U.K. parliament. The descriptions in this report will only apply to England and Wales, unless stated otherwise. When the term "United Kingdom" is used in this report it will apply to England and Wales, unless stated otherwise.

The only important legislation with regard to any of the paramedical professions is the Professions Supplementary to Medicine Act of 1960. The Professions Supplementary to Medicine Act is an Act to provide for 'the establishment of a Council, boards and disciplinary committees for certain professions supplementary to medicine; to provide for the registration of members of those professions, for regulating their professional education and professional conduct and for cancelling registration in cases of misconduct; and for purposes connected with the matters aforesaid.' (preamble to the Professions Supplementary to Medicine Act, 1960). The Act does not regulate the relation between the paramedical and the doctor.
At present the following professions come under the scope of the Professions Supplementary to Medicine Act; Chiropodists, Dietitians, Medical Laboratory Scientific Officers, Occupational Therapists, Orthoptists (since 1966), Physiotherapists and Radiographers. Speech therapists are not included in the Professions Supplementary to Medicine Act. They excluded themselves from this Act on the grounds that they were a free-standing profession relating as much to education as to medicine.
The professions Supplementary to Medicine Act covers the whole of the United Kingdom. The Act establishes the Council for Professions Supplementary to Medicine (CPSM) which has the general function of co-ordinating and supervising the activities of the boards for each of the professions supplementary to medicine. Each board consists of representatives nominated by members of the profession concerned together with medical nominees and one or two educational nominees. The

chairmen of the boards are invariably members nominated by the professions concerned. The tasks of the boards are the following:

- registration of the names, addresses and qualifications of the professionally competent;
- approval and supervision of persons who attended approved courses of training at institutions approved by the boards concerned, of qualifications, examinations, training courses and institutions;
- publishing statements of "infamous conduct" and enforcing professional discipline sanctioned ultimately by striking-off. (CPSM, 1990).

The first task of registration of the professionally competent, means that each of the boards maintains a register of names, adresses and qualifications of all persons who are entitled to be registered by the board and who apply for registration in the appropriate manner.

A person who has registered or renewed registration with one of the boards is entitled to use the title that such registration entails, e.g. a physiotherapist can use the title 'state registered physiotherapist'. Any person who is not entitled to use such title or obtains it fraudulently commits a criminal offence. However, a physiotherapist who is not registered with the Physiotherapists Board may still call himself a physiotherapist. The Professions Supplementary to Medicine Act does not prevent unregistered members of the professions from practising, but it limits the use of the titles 'state registered', 'registered' and 'state' and it prevents the employment of unregistered members in the National Health Service, though not outside of it. (Raffel, 1984). The effect of registration for the individual professional is that it entitles him/her to employment in the National Health Service. For the public the benefit of registration is that it guarantees competence.

Because speech therapists are not included in the Professions Supplementary to Medicine Act a separate regulation is made for speech therapists working in the National Health Service. The National Health Service (Speech Therapists) Regulations 1974 state that no person shall be employed by a health authority as a speech therapist unless he or she holds a certificate issued by the College of Speech Therapists. The certificate must state that the person in question attended a course of training, and passed an examination approved by the Secretary of State. (Statutory Instrument 1974, No.495).

Certain professions are regulated by instruments of Royal Charter. Such a charter enables the members of the professions to control standards of practice, and entry into the profession and gives protection against the use of its title. The Chartered Society of Physiotherapists falls within this category and its title 'Chartered Physiotherapist' may only be used by its members.

Paramedical professions are further regulated by health circulars and health notices. These are issued within the NHS for a great variety of administrative and guidance purposes. Circulars and notices often explain recent legislation or case law as it is envisaged to apply to NHS activities and operations.
Codes of practice do not themselves impose legal obligations as such, but they are an important source of practical guidance as to what is, and what is not, acceptable practice in the particular areas of activity to which they relate.

3.3.2. The legal system in The Netherlands

The paramedical professions in the Netherlands are regulated by the Act on Paramedical Professions ('Wet op de Paramedische Beroepen'). There are plans for major changes in the legislation with regard to individual professional practitioners in health care which will also affect this Act on Paramedical Professions. The new legislation still has the form of a bill, called Professions in individual health care ('voorontwerp van Wet op de beroepen in de individuele gezondheidszorg'). An important difference with the regulations in the Act on Paramedical Professions will be that professionals under this law will only have protection of title whereas in the present legislation they have both protection of title and of the profession. Another effect of the bill would be an obligatory registration for people who want to use the protected title. However, the following description of legislation in the Netherlands is based on the existing Act on Paramedical Professions.

The Act on Paramedical Professions has the form of a legislative framework. This means that it only applies to those professions for which a separate Order in Council has been created. As long as such an Order has not been created for a certain profession it is not a paramedical profession in the sense of the law. The construction of the Act as a legislative framework also opens the possibility of classifying new professions under the law by way of a separate Order in Council. The minister decides, on the advice of the National Council for public health ('Nationale Raad voor de Volksgezondheid') whether a profession is a paramedical profession.
The following professions are regulated in this law:
Physiotherapist, Speech Therapist, Mensendieck Remedial Therapist, Cesar Remedial Therapist, Dietitian, Dental Hygienist, Orthoptist, Radiology Assistant, Occupational Therapist, Chiropodist.
The first article of the law gives a description, though not an accurate definition, of a paramedical profession:
'practice of a paramedical profession either includes carrying out treatments or giving advice as a professional and related activities in the field of medical practice under the guidance or upon the instructions of a doctor or

dentist by persons other than those to whom pursuant to the law, license was granted for independent practice of medicine either in whole or in part.'[9] This means that the relation between the paramedical professional and the doctor can be different in different professions, depending on the actual wording of the Order in Council for that profession. Both the work and the title of the professions covered in the Act on Paramedical Professions are protected. The profession is protected through article two of the Act on Paramedical Professions in which it is stated that only those who have successfully completed the examination and taken the vow of confidentiality are allowed to practise a paramedical profession. The protection of the profession can also be seen in the sanctions stated in article 436, subsection 1 of the Criminal Code. This article also applies to other professions. The Act on Paramedical Professions creates protection of title in article five, in which it is stated that only those who are qualified may use the title. (v.d. Mijn, 1989).
There is no disciplinary law for paramedical professions, though many of the professional organisations have created their own code of ethics. Such codes have no legal implications and they only apply to members of the professional organisation.

3.3.3. The legal system in the Federal Republic of Germany

The Federal Republic of Germany is a federal state, consisting of states ('Länder') which are integrated into the Federal Republic as a whole but also have their own national status. They have their own legislative powers and implement not only Federal laws but also their own laws. The legislation with regard to health care is also divided between the Federal government and the 'Länder'. Examples of federal laws are the laws with regard to the financing of hospitals ('Krankenhausfinanzierungsgesetz'), with regard to medication ('Arzneimittelgesetz') and with regard to the protection of titles of certain medical professions such as nurses, midwifes and physiotherapists. Most of the tasks of the states are carried out on the basis of the principle of complementarity, i.e. the states create legislation on all items which the federation has not claimed as their exclusive own area. The legislation of the states is concerned with for instance the public health services ('öffentlicher Gesundheitsdienst') or the housing of the mentally ill.

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9 'Onder uitoefening van een paramedisch beroep wordt verstaan het al dan niet in samenhang met aanverwante werkzaamheden als beroep verrichten van handelingen of verstrekken van adviezen, liggende op het terrein van de uitoefening van de geneeskunst, onder leiding van of op aanwijzing en onder controle van dan wel ingevolge verwijzing door een geneeskundige of tandarts, door andere personen dan degenen, aan wie ingevolge de wet de bevoegdheid tot zelfstandige uitoefening van de geneeskunst in volle omvang of gedeeltelijk is toegekend.'

The paramedical professions are regulated in law by the federation, while the states are responsible for, for instance, the vocational training. The minimum level of the education is regulated in the federal law, while the requirements of this law are implemented and supervised at the level of the states. The following professions are regulated by Federal law: occupational therapist (Beschäftigungs- und Arbeitstherapeut), assistant dietitian (Diätassistentin), midwife (Entbindungspfleger/Hebamme), children's nurse (Kinderkrankenpfleger/Kinderkrankenschwester), physiotherapist (Krankengymnast), assistant nurse (Krankenpflegehelfer), nurse (Krankenpfleger/Krankenschwester), speech therapist (Logopäde), masseur (Masseur), masseur and medical bath attendant (Masseur und medizinischer Bademeister), technical-medical laboratory assistant (Medizinisch-technischer Laboratoriumassistent), technical-medical radiology assistant (Medizinisch-technischer Radiologieassistant), technical-medical pharmaceutical assistant (Pharmazeutisch-technischer Assistent), technical-veterinary medical assistant (Veterinärmedizinisch-technischer Assistent), orthoptist (Orthoptist) and 'Rettungsassistent'. The profession of chiropodist (Medizinischer Fußpfleger) is not regulated at Federal level. At the moment it is only regulated in one state (Niedersachsen).

In the German health care system, doctors have the exclusive and comprehensive responsibility for diagnosis and treatment of patients. The specific and limited therapeutic responsibilities of the paramedical professions are derived from the doctors' overall responsibility. Allied health professionals only treat patients upon diagnosis and prescription by a doctor and within the confines of their specific field, such as massage, physiotherapy or speech therapy.
The allied health professions only have protection of title, there is no protection of the profession itself. Those who illegally use the title can be punished or their right to use the title ('Erlaubnis zur Führung der Berufsbezeichnung') can be taken from them. There is no obligatory registration for paramedical professionals. The professional organisations often have an ethical code ('Berufsordnung'). Such a code has no legal implications and only applies to members of that professional organisation. There is no disciplinary law as such.

In the Federal Republic of Germany there is a special law for people who practise medicine without a medical diploma. These people are called 'Heilpraktiker' and their work is regulated in the so-called 'Heilpraktikergesetz' from 1939. In this law it is stated that those who practise medicine without a diploma need to have a license from the local government. Before such a license is given, the local government, together with the local health authority examines whether the work of the 'Heilpraktiker' constitutes a

threat to the public health. The contents of such a verification varies per state. The law also states what they are not allowed to do. The 'Heilpraktikergesetz' does not regulate the education and there is no clear definition of what they do. There are only private schools for 'Heilpraktiker' and many of these teach homeopathy, acupuncture, herbal medicine and first aid. 'Heilpraktiker' only work in private practices and patients pay directly to the therapist.
The paramedical professions are not 'Heilpraktiker', but they are 'Heilmittelerbringer'. 'Heilmittel' are all remedies whose wholesome effect does not come from inside (like in the case of medicine) but work from outside like for instance massage, medical baths and physiotherapist treatments. (Schneider 1989).

3.3.4. The legal system in Belgium

At this moment there is no complete legal regulation for the paramedical professions in Belgium. There is a Royal Charter from 1967 which contains the principles with regard to the legal regulation of the professions of physicians, dentists, pharmacists, nurses and paramedicals.
On the basis of the Charter a National Council for the Paramedical Professions has been established. This Council is subdivided into divisions for each profession. The work of these divisions consists of determining the professional title for that profession, drawing up a professional profile, making lists of activities that are specific to that profession and that they can execute independently and drawing up an educational profile for that profession without determining the concrete content of the training. There will be both a protection of the title and of the profession.
Besides the National Council there will also be a Technical Commission which is concerned with the activities of the paramedical professions. An important aspect in the work of the Technical Commission is the dividing line between the doctor's work and the work of the paramedical professionals. The Technical Commission will make lists of activities of the paramedicals. On these lists is also stated whether a certain activity can be done independently or whether a medical referral is required.

The following professions are considered paramedical professions and are represented in the national council for the paramedical professions:
Laboratory technicians-human genetics, Audiology, Occupational Therapy, Orthesis, bandage and prosthesis, Dietetics, Dispenser's assistant, Orthoptics, Chiropody, Speech Therapy, Transport of patients, Medical Imaging and Physiotherapy.

The only regulation that exists at this moment is the regulation through the health insurance. The Public Institute of Illness and Handicap Insurance

(Rijksinstituut voor Ziekte- en Invaliditeitsverzekeringen, RIZIV) must have recognized a profession's work before reimbursement of the costs can take place. The basis for recognition by RIZIV is the possession of a recognized diploma.
The referring physician is responsible for the medical diagnosis. The paramedical professional makes his own plan of treatment on the basis of the medical diagnosis. Because the paramedical professions are not (yet) legally regulated there is no obligatory medical referral stated in law. However, RIZIV will usually require that there is a medical referral before reimbursement can take place.

Because there is no Act for the paramedical professions anyone can practice a paramedical profession as long as they do not illegally practice medicine. However, if a paramedical profession wants to be eligible for financial regulations it has to be recognized by RIZIV.
Although the professions are not recognized, the educations for the paramedical professions are recognized by the Ministry of Education. Also the title that is obtained with the recognized diploma is protected, e.g. 'Licentie in de Kinesitherapie' (licentiate in physiotherapy). The professional title is not protected, anyone can call himself a physiotherapist or a 'kinesitherapeut'.

There is no legal disciplinary law for the paramedical professions. Many professional associations have an ethical code but this only applies to members of that association. The measure that can be taken on the basis of such an ethical code is dismissal from membership.

3.4. Education systems

To be able to compare educations in different countries it is important to be aware of the position of an education in the total system of education of a country. The following paragraphs give a description of the education systems of the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium and the position of the paramedical training in that system.
One way in which the position of a certain education in an education system can be assessed is by counting the number of years of schooling that has been followed before the start of that education. Although this is not an accurate comparison it does give an indication of the position of a certain education. When numbers of years are counted in this report, we start counting from the age of six. This corresponds with the actual

situation in Germany and Belgium where compulsory education starts at six but not with the situation in the United Kingdom and the Netherlands where it starts at the age of five.

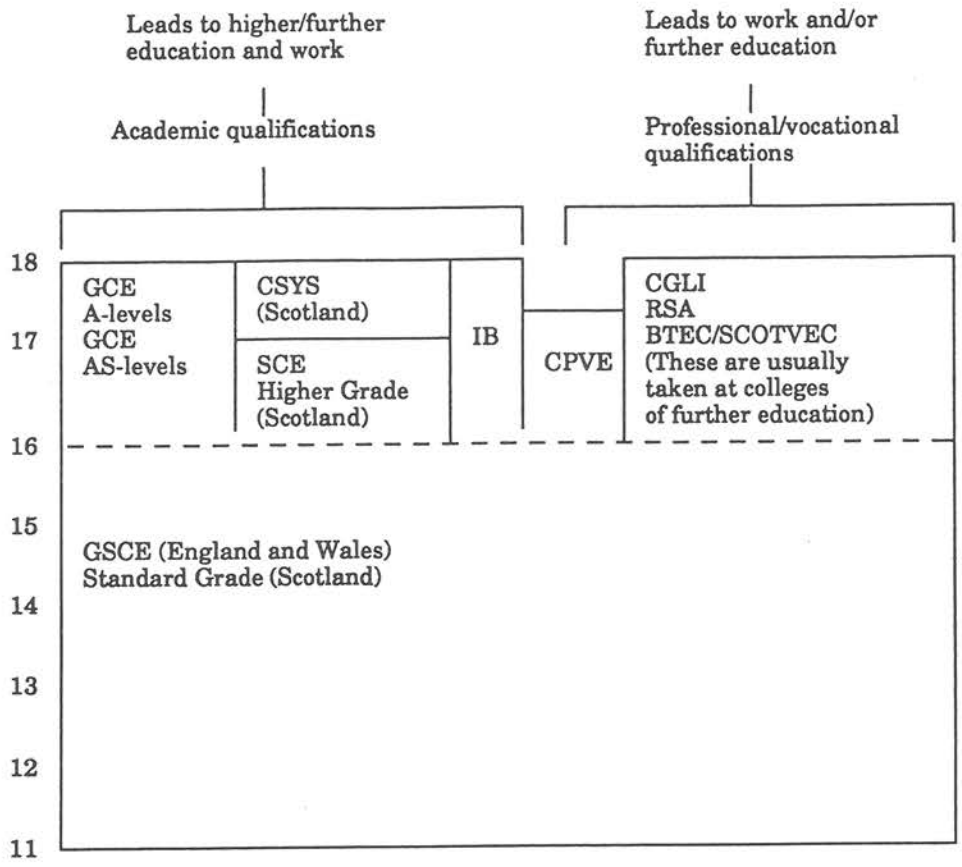
Diagrams of the education systems have been added to all four descriptions and the text will regularly refer to these diagrams.

3.4.1. The education system in the United Kingdom

Each of the four countries that form the United Kingdom have their own education systems. However, the system in Wales is very similar to that of England, with the exception that the Welsh language is an important part of the curriculum in Wales.

Education in all parts of the United Kingdom is compulsory between the ages of five and sixteen, and is controlled by Local Education Authorities, rather than central government.
In England and Wales the first level is known as primary education and generally caters for children between the ages of five and eleven at which point children move on to secondary education.
Secondary schools provide education up to the age of sixteen, or in many cases eighteen, although there is a certain degree of variation in some areas. From the ages of fourteen to sixteen most pupils will study for their GCSEs (General Certificate of Secondary Education) in a range of subjects. Pupils intending to 'stay on' after sixteen will generally sit examinations in at least eight subjects, sometimes more. From sixteen to eighteen such pupils will normally study three subjects at A (Advanced) level, although the more vocational-based BTEC (Business Technician Education Council) courses are becoming increasingly popular, as is the International Baccalaureate. Such studies may take place within the 'sixth form' of a secondary school, or at a sixth form, tertiary or further education college. See also diagram of the British school system (chart 4).

Chart 4: The education system in the United Kingdom



Key to acronyms

BTEC	British Technical Education Council
CPVE	Certificate of Pre-vocational Education
CSYS	Certificate of Sixth Year Studies
GCE	General Certificate of Education
CGLI	City and Guilds of London Institute
GCSE	General Certificate of Secondary Education
IB	International Baccalaureate
RSA	Royal Society of Arts
SCE	Scottish Certificate of Education
SCOTVEC	Scottish Vocational Education Council

Source: British Council

Students may next apply to continue their studies at further or higher education institutes. Further Education is the term used in the United Kingdom to describe any post-secondary education below degree level, and may be full-time or part-time, studies leading to nationally recognized qualifications. Higher Education in the UK is provided by Universities, Polytechnics, Colleges of Higher Education, and Central Institutions (Scotland only). The universities and colleges (except the colleges in Wales) are independent institutions mainly financed by Government through funding bodies. The rights and privileges of the universities are derived from Royal Charters or Acts of Parliament, and every change in their laws or statutes must come through the Crown via the Privy Council, on request of the universities themselves. They decide which academic degrees they grant, and under which conditions.
The other institutions also issue degrees, but these must be recognised by a university or (in the case of polytechnics) the CNAA (Council for National Academic Awards). It is illegal for any other bodies to issue degrees.

The minimum qualifications for British students applying for a first degree are normally three passes at GCSE and two a A level (or their Scottish or vocational equivalents), but these would not automatically guarantee a place at a higher education institution. Admission is highly competitive, interviews often being involved, with the institution making the final decision. In most cases academic requirements will be much higher than the minimum levels given here.

The qualifications to which undergraduate courses lead are usually given the title of Bachelor (eg. Bachelor of Arts, or BA), except in Scotland and at the universities of Oxford and Cambridge where such courses lead to the title of Master (eg. Master of Science, or MSc).

All universities and polytechnics, and an increasing number of other higher education institutions, provide facilities for advanced study and research, usually within the fields in which the first degrees are granted, leading to a doctorate (Phd) or, except at the institutions noted above where the designation refers to a lesser qualification, a Master's degree.

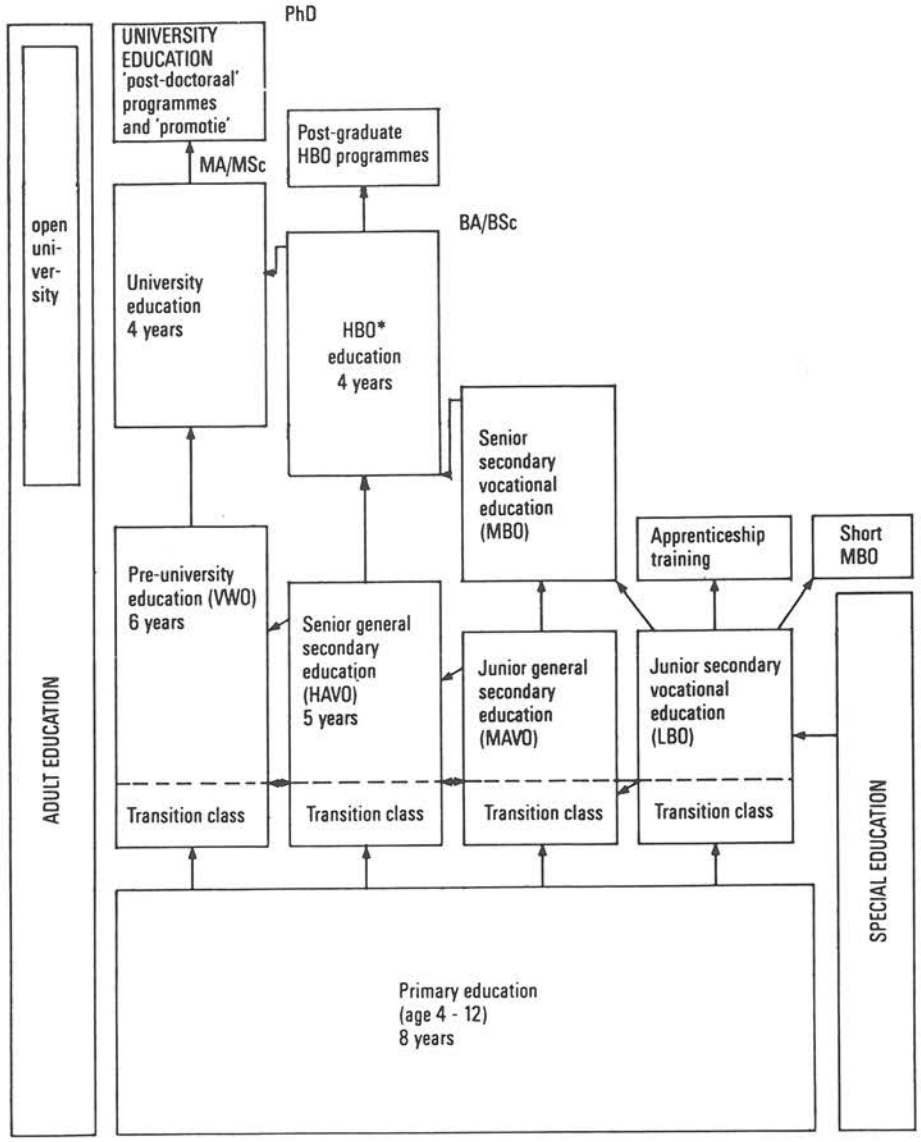
The education for the paramedical professions takes place in both further and higher education institutions. Courses take three or four years and usually include a period of supervised work.

3.4.2. The education system in The Netherlands

Compulsory education in the Netherlands starts at the age of five. This first level is called primary education and children stay in this level until they are

twelve years old. After that they can go to junior secondary education, either vocational ('LBO') or general ('MAVO'), senior general secondary education ('HAVO') or pre-university education ('VWO'). See also diagram of the Dutch educational system (chart 5).

Chart 5: The education system in the Netherlands



* Note: Dutch government publications in English refer to HBO (hoger beroepsonderwijs) as Higher Vocational Education. The HBO institutes themselves prefer the term Higher Professional Education.

Source: K. Kouwenaar, J. Stannard - Higher Education in the Netherlands

There are two streams in Dutch higher education, universities and higher professional education. The universities prepare students for independent scientific work in an academic or professional setting. The higher professional educations concentrate on applied science and provide their students with the knowledge and skills they will need for specific occupations.
To qualify for admission to universities in the Netherlands, students must have a diploma from a secondary school offering a pre-university programme. ('VWO'). Such a programme lasts six years.
To qualify for admission to higher professional education, students must have a diploma from the appropriate kind of general secondary or senior secondary vocational school. The minimum general secondary school diploma is the five-year 'HAVO'-diploma. Other entrance possibilities are an appropriate secondary vocational education diploma ('MBO') or a 'VWO'-diploma.
The education for the paramedical professions in the Netherlands takes place at institutes of higher professional education. There are seven main divisions or sectors viz. agriculture, technology, economics/administration, health, fine and performing arts, education/teacher training and welfare.

The education of Dutch paramedical professions falls partly under the responsibility of the Ministry of Welfare, Health and Cultural Affairs and partly under that of the Ministry of Education and Science. With regard to the professions that are studied here there are three that are under the responsibility of the Ministry of Education and Sciences, namely physiotherapy, speech therapy and occupational therapy and two that are under the responsibility of the Ministry of Welfare, Health and Cultural Affairs (orthoptics and chiropody). The division of responsibility has consequences for the educations. The educations that are under the responsibility of the Ministry of Welfare, Health and Cultural Affairs must adhere to strict educational programs while the other educations have more freedom in planning the curriculum, although these educations are also subject to rules. Another difference is in the granting of the certificate to practice ('bewijs van bevoegdheid'). Students from educations that are under the responsibility of the Ministry of Education and Science get a diploma after they qualify and with this diploma they can get their certificate to practice. Students from the educations that are under the responsibility of the Ministry of Welfare, Health and Cultural Affairs get their certificate to practice immediately after qualifying.

All paramedical educations have periods of supervised work-study ('stage'). Usually this takes place in the third year. A wide variety of examining methods is used. There are major exams at the end of the first and the fourth year, the latter consisting of either a major term paper, a final project,

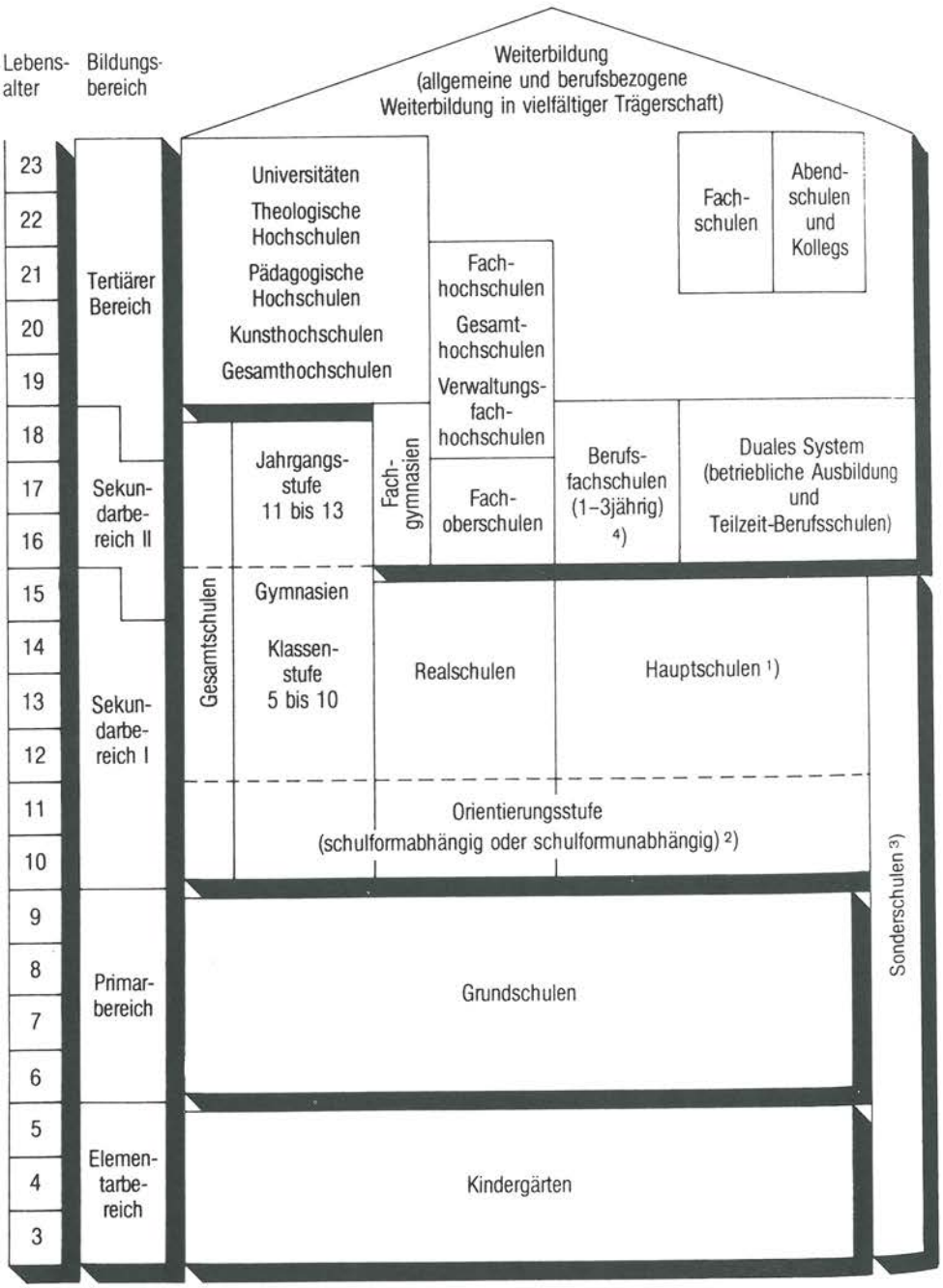
and/or final examinations. In theory, students with a higher education diploma are eligible for several types of advanced study, including university research programmes and the doctorate. In practice this does not happen very often.

Students who qualify in higher professional education may use the title 'baccalaureus'. This title is shortened to bc. and used after the name. For those who work abroad or have many contacts abroad it is also possible to use the title 'bachelor', which is shortened to B. and also used after the name.

3.4.3. The education system in the Federal Republic of Germany

Compulsory education in the Federal Republic of Germany starts at the age of six. Children start at elementary school ('Grundschule') which covers the first four years of schooling. After that they can go on to a secondary school, either a 'Hauptschule', a 'Realschule' or a 'Gymnasium'. See also diagram of the German education system (chart 6).

Chart 6: The education system in the Federal Republic of Germany



Source: B. Mohr - Hoger Onderwijs in de Europese Gemeenschap

'Hauptschulen' are secondary schools which cover the fifth to the ninth year of schooling. 'Realschulen' are secondary schools which continue up to the tenth year of schooling. The curricula differ from those of the Hauptschulen in that more language courses are provided and also because the subjects are taught at a more demanding level.
The 'Gymnasium' is the general-education secondary school which leads up to the thirteenth year of schooling and which offers a final examination ('Reifeprüfung/Abiturprüfung') at the end.
Students who have passed this final examination have the qualification to enter a university or equivalent institution ('Hochschulreife').

The entry requirement for an education for a paramedical profession is usually a 'Realschulabschluß'. The education itself takes place in so-called 'Berufsfachschulen', which are full-time vocational schools which end with a final examination. These 'Berufsfachschulen' are at a lower level in the education system than the 'Hochschulen' or the universities.

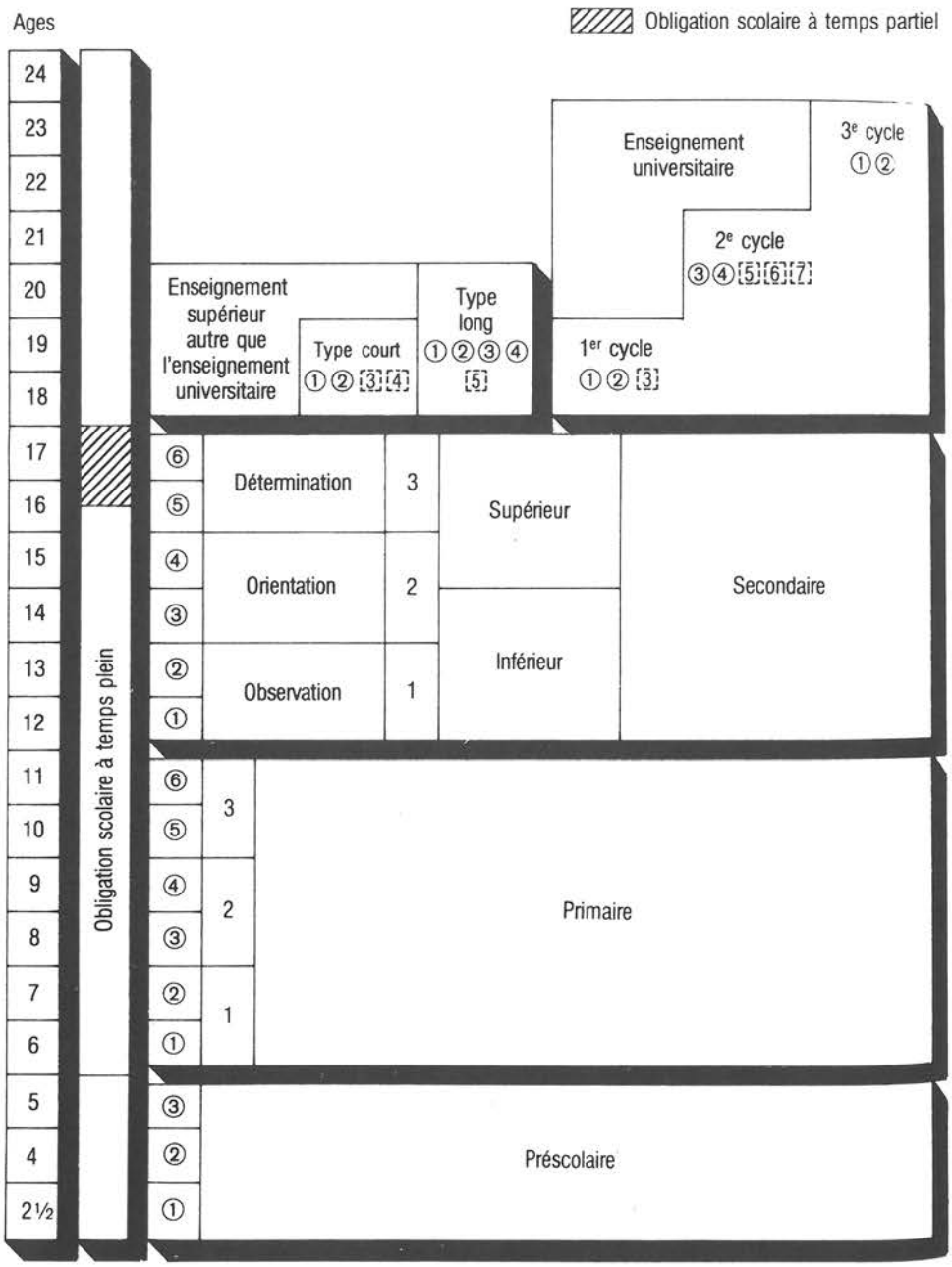
The length and structure of the paramedical educations is not the same for all paramedical professions in Germany. For instance, the education for occupational therapy and speech therapy takes three years including a period of supervised work. The education for physiotherapy also takes three years but is structured differently. A physiotherapy student has two years schooling followed by a year of supervised work, after which the 'Erlaubnis' is given. There are plans to change this and integrate the period of supervised work in the education. The education for the masseurs and chiropodists takes two years.

The responsibility for educational policy and educational planning in the Federal Republic of Germany is determined by the federal structure of government. As a result of this structure educational matters are predominantly the responsibility of the Länder. The Länder must work together and coordinate the school and higher education systems of the individual states with regard to the structures, institutions, curriculum and leaving certificates. For this purpose they work together in the Standing Conference of Ministers of Education and Cultural Affairs (Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland). This has led to comparability of the educational courses provided and the qualifications to be acquired in the educational institutions.

3.4.4. The education system in Belgium

Compulsory education in Belgium starts at the age of six. After six years of primary education, children go on to secondary education which also takes six years. See also diagram of the Belgian education system (chart 7).

Chart 7: The education system in Belgium



Source: B. Mohr - Hoger Onderwijs in de Europese Gemeenschap

There are two types of higher education in Belgium, university education and higher education outside the university. The latter type prepares students for professional activities and is subdivided in several types of education. To be admitted to university education a student must have an ability certificate and an approved diploma of completed upper secondary education. To be admitted to other forms of higher education, students only need the approved diploma of completed general or technical upper secondary education.
University education has several grades. The first is the grade of 'kandidaat' wich is obtained after two, sometimes three years of study. After that the student goes on to the 'licentiaat' which is obtained after another two or three years education. Students with this qualification can go on to the doctorate and to the grade of qualified highschool teacher ('geaggregeerde voor het hoger onderwijs').

Higher education outside the universities is subdivided in higher education of the long type in which the entrance qualifications are the same as those for a university education and higher education of the short type in which the entrance qualification is a diploma of secondary education of the high degree.[10] The paramedical training outside the universities belongs to the higher education of the short type.

The educations for the paramedical professions are regulated by law. The regulation concerns both the Ministry of Education and the Ministry of Health. The Ministry of Education is concerned with the education as a whole while the Ministry of Health recognizes the courses with regard to the practical training. The Ministry of Health keeps a register of qualified paramedicals.
For physiotherapy, speech therapy and occupational therapy there are two possibilities of education. There is the already mentioned higher education outside the university ('graduaat') which is called A-1 education. The other type of education is university education in physiotherapy, speech therapy or occupational therapy ('licentiaat'). Chiropody only has an education at A-1 level. The training of orthoptists has a different structure altogether. It is a two year part-time course which is open to people who already have an A-1 diploma in physiotherapy, speech therapy, occupational therapy or nursing.

10 Diplome/certificat d'enseignement secondaire du degré supérieur, diploma/getuigschrift van secundair onderwijs van de hogere graad.

Teaching is done in the language of the region involved, French in the Walloon region, Dutch in the Dutch-speaking region and both languages in the arrondissement of Brussels.

4. PHYSIOTHERAPY IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM

4.1. The legal status, education and actual practice of the profession of physiotherapy in the United Kingdom

A. LEGAL REGULATIONS

A.1. General

The profession of physiotherapy is regulated by the Professions Supplementary to Medicine Act of 1960 and by the Chartered Society of Physiotherapy under the terms of the charter. Chartered physiotherapists feel that the 1960 Professions Supplementary to Medicine Act has not provided the advantages that had been hoped for, in particular the protection of title is weak (being restricted to 'State Registered Physiotherapist').

There is an open referral system for physiotherapy. The government accepts that there can be direct referral. 'We .. wish to maintain the facility for direct referral by the professional who first identifies that a person may have a need for physiotherapy. This is particularly important where a person is living in the community and is identified by a community nurse, health visitor or others as requiring physiotherapy. Another important group who may benefit from direct referral systems are children in schools referred for physiotherapy through the Education Service.'[1]
In the National Health Service most patients are referred; self-referral mainly applies to private patients. Patients go to a private physiotherapist for specific treatment that they want urgently. If they want reimbursement from their private medical insurance, most private medical insurers will want a medical referral, though some will also give reimbursement for direct access. This depends on the private insurance policy. Such referral is a gate keeping operation for financial reasons but it is not required by the professional code of conduct.

A.2. Recognition

The profession is recognized by the Physiotherapists Board of the Council for Professions Supplementary to Medicine.

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1 Letter from the Minister for Health in Physiotherapy, September 1990, vol 76, no.9, p.533.

Physiotherapists who work in the National Health Service have to be registered by the Physiotherapists Board of the Council for Professions Supplementary to Medicine. Private practitioners need not be state registered.
The title physiotherapist is not protected. The only protected titles are state registered physiotherapist and chartered physiotherapist. There are also people who call themselves physiotherapists who have qualifications granted in non-recognized organisations.
There are at least two non-recognized organisations, based largely on correspondence courses, who grant qualifications in physiotherapy. One is the Swedish Massage and Electrotherapy Institute (SMAE); they give the qualification MSF (Member of the SMAE Foundation). The other is the London Counties Society of Physiologists which gives the qualification LCSP. People who have these qualifications cannot be registered by the CPSM and they cannot work in the National Health Service though they can work in private practices. They cannot be a Member of the Chartered Society of Physiotherapy.

The professional association is the Chartered Society of Physiotherapy. Membership is available only to those who have completed a three or four year degree or diploma course and have passed the exams approved by the Society. This includes physiotherapists who have taken approved courses abroad.
Membership of the Chartered Society is not obligatory. However, it is advisable to be a member of the professional association because it includes professional indemnity insurance and confers the status of Chartered Physiotherapist. Approx. 90 to 95% of eligible members who are in practice are members of the society. Membership of the society entitles physiotherapists to write MCSP (Member of the Chartered Society of Physiotherapy) after their name.

Professions that partly overlap with physiotherapy are sport therapists, who do first aid sport treatment, osteopaths and chiropractors. None of these have official recognition.

A.3. Finance
For patients who are treated in the NHS physiotherapy is free. Physiotherapists in the NHS are paid a salary.
There are also private physiotherapy practices. Approximately 5 to 10% of the population does have private medical insurance. This private insurance will usually pay for some physiotherapy but with a maximum amount in a year for out-patient physiotherapy.
For in-patients the private insurance will meet the in-patient associated costs. In general private medical insurance applies to physiotherapy in a

private hospital. Private insurance is only important for 'cold surgery', i.e. non-emergency surgery. In really urgent cases people go to the NHS where they will always be admitted. But if they have got, for example, a hernia they might have to wait two years in the health service in which case they might go to a private practice.
Physiotherapists in private practice are not obliged to be state registered but if they are they are exempt from VAT. This means that they do not have to charge their patients VAT (but they have to pay VAT on any purchases).

There is no control on entry into practice and there is no limitation on the number of private practices. Most physiotherapists work in the NHS so it is the willingness of the health authorities to hire more physiotherapists that matters.

A.4. Disciplinary rules
The Physiotherapists Board of the CPSM has a Disciplinary Committee which has made a statement as to the kind of conduct which the Committee considers to be infamous conduct in a professional respect. This statement was sent to every registered physiotherapist. The Chartered Society of Physiotherapy has its own disciplinary rules which are similar to those of the Physiotherapists Board.
These disciplinary rules do not govern physiotherapists who are not state registered or who are not a member of the Chartered Society.

The Chartered Society can strike physiotherapists off the register so they cease to be a Chartered Physiotherapist or they can admonish them, warn them or make them subject to conditions. The measures are written down in the operating rules. If someone is made subject to conditions they might be required to refrain from practising alone, be obliged to work under supervision or in a partnership. There is no limit on the conditions. The society can make any reasonable condition they think can be made to work.

B. EDUCATION

B.1. General
The entry requirements for a physiotherapy education are the standard university or polytechnic entry qualifications. These requirements are two A-level GCE and five GCSE passes, grades A to C, including at least two sciences, or equivalent. Recommended GCSE science subjects are physics, chemistry, and biology. Some schools stipulate a minimum height requirement of 5'2"/1.6m. Mature applicants (over 21) are welcomed at many schools and are considered individually if they do not have standard qualifications.

B.2. Position in the education system

The duration of the course is three or four years. Diploma courses are three years and lead of the Graduate Diploma in Physiotherapy (GradDipPhys). Degree courses are three or four years and lead to a degree (BSc) in Physiotherapy.

Courses are recognized by the Physiotherapists Board of the CPSM and by the Chartered Society of Physiotherapy. In most cases the examining board is the university or the polytechnic. The role of the Physiotherapists Board and the Chartered Society of Physiotherapy is to set up arrangements which check that the course is one that is suitable for the professsion. They have done so by establishing a Joint Validation and Recognition Panel, which sees the documents about the course and visits the course. They validate the degree in saying that anyone who passes this course is eligible for state registration or CSP membership. The university or the polytechnic will issue the degree.

There are 28 recognized training schools in England.[2] These schools are approved by the Chartered Society of Physiotherapy and by the Physiotherapists Board of the CPSM. With regard to education the CSP and the Physiotherapists Board work very closely together.

B.3. Content

There is a curriculum of study which sets out the curriculum which the CSP considers to be essential in any preregistration course.[3] This curriculum is organised into three groupings of subjects and skills, Foundation Studies which includes anatomy, physiology, pathology etc, Physiotherapy Studies which includes clinical interviewing, physiotherapy skills and Clinical Education. The schools are checked every five years.

With regard to practical training a typical pattern of a course is the following: The first year would be spent in the school, the first and third terms of the second year and the second term of the third year might be spent on clinical placement. Students spend three terms on clinical practice with a day or two back at the school. They spend three terms of the second and third year in the school. However, each course can design its own arrangements.

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2 MPAG, Physiotherapy, An examination of demand and supply issues, September 1989, paragraph 5.2. In the United Kingdom there are 33 schools (of which three are closing). There are 3 schools in Scotland, 1 in Wales and 1 in Northern Ireland.

3 Curriculum of Study 1984, The Chartered Society of Physiotherapy. This curriculum is being replaced by the 1991 version to be published shortly.

There is much supervision during the practical training. The typical arrangement is that there is one, at most two students, to one qualified physiotherapist. The students do get to handle patients but they are not part of the work force.
There are post-graduate courses to take students to a higher level of practice and there are also specializations. There are a number of separate validated courses which are approved courses for particular areas. The CSP is creating a structure for these courses so that they may lead to a Diploma in Advanced Physiotherapy Studies, which will be a higher diploma.
The CSP has encouraged physiotherapy managers to provide individualized refresher programmes for people who want to come back into practice. Their work is supervised for two to four four weeks.

C. PRACTICE OF THE PROFESSION

The CSP gives the following definition of physiotherapy. Physiotherapy is a "systematic method of assessing musculo-skeletal, cardio-vascular, respiratory and neurological disorders of function including pain and those of psychosomatic origin and of dealing with or preventing those problems by natural methods based essentially on movement, manual therapy and physical agencies."[4] The CSP emphasizes that this definition is not intended to be all inclusive.

Physiotherapists practice in a wide variety of settings including private practice. Within the National Health Service, physiotherapists may work in a hospital, in the community or in both.
In hospitals, physiotherapists work in out-patient departments where they treat back problems, arthritis, sports injuries etc, in intensive care units, with stroke patients, with people with mental illness and mental handicaps, with elderly people, in orthopaedic departments and in maternity clinics.
They also work in the community, in special schools, in industry, in sports clinics, in education and prevention and in the private sector.

There are about fourteen thousand physiotherapists working in the National Health Service (whole-time equivalent is ten or eleven thousand). The CSP estimates that there are about two thousand chartered physiotherapists in private practice. There are about two or three hundred teaching in the schools of physiotherapy. About the same number in areas like occupational health (working for a firm and providing physiotherapy service to the

4 The Chartered Society of Physiotherapy, Curriculum of Study 1984, p.2. There is a new definition in the 1991 curriculum.

staff of that firm) and private hospitals. The CSP has eighteen thousand UK-based members paying a full practising subscription.

Physiotherapists treat patients from a wide range of sources with musculoskeletal conditions such as spinal pain, arthritis, frozen shoulder etc. Physiotherapists treat many patients with neurological damage as a result of stroke, multiple sclerosis, parkinsons disease or car-accidents. Children are referred from the paediatrician. These include babies with congenital problems, with developmental problems, dislocated hip, chest conditions like cystic fybrosis and children with mental handicaps. Another group are patients who have had an amputation.
In private practice physiotherapists treat mostly sports injuries and acute neck and back problems. 50% of the patients who go to a private practice will have a neck or back problem. The others will mainly have injuries of the limb.
Physiotherapists mostly work in therapy and also in after care. Not much is done in the field of prevention and screening.

A physiotherapy consultation will begin with a full assessment. Possible treatment plans can include exercise therapy, application of physical agents, patient education, manual therapy, traction, bandage, strapping and acupuncture. Usually there is not much massage in a treatment. Physiotherapists often prescribe exercise and advice to make the prescription more active and less passive for the patient.

Physiotherapy is a relatively young workforce, 46% of qualified whole time equivalent staff in the NHS are aged below 30 years.[5] A significant proportion (43%, 6005 people) of total staff in-post are part-timers (27% of the total whole-time equivalent).[6] Only 8% of the qualified physiotherapist workforce in the NHS in England is male and the proportion has decreased over the period 1983-1987.[7]

Physiotherapists work indepently and make their own working diagnosis and proposal for treatment. In a health circular from the Department of Health and Social Security the relationship between remedial professions and the medical professions is defined:

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5 Manpower planning advisory group (MPAG), Physiotherapy, Trent RHA, September 1989, Chapter 2.

6 MPAG, paragraph 2.7

7 MPAG, paragraph 2.10.2

"In asking for treatment by a therapist the doctor is clearly asking for the help of another trained professional, and the profession of medicine and the various therapies differ. It follows from this that the therapist has a duty and a consequential right to decline to perform any therapy which his professional training and expertise suggest is actively harmful to the patient. Equally, the doctor who is responsible for the patient has the right to instruct the therapist not to carry out certain forms of treatment which he believes harmful to the patient."[8]

In such a relationship the doctor gives a diagnosis where possible and the physiotherapist decides on the appropriate treatment and if the physiotherapist considers treatment to be inappropriate he/she has the right to decline to give it.

In practice, physiotherapists make a functional diagnosis. They will take the medical diagnosis (e.g. multiple sclerosis) and then will need to reasses what effect that medical diagnosis is having on the musculoskeletal or the neuro-musculoskeletal system.

4.2. The legal status, education and actual practice of the profession of physiotherapy in the Netherlands

A. LEGAL REGULATIONS

A.1. General

The legal position of physiotherapists is regulated in the Act on Paramedical Professions (Wet op de paramedische beroepen) and in specific regulations, based on this act. The act gives a general framework which is valid for all professions under the act. The specifics for each profession are regulated separately in implementing orders (uitvoeringsbesluiten) The 'fysiotherapeutenbesluit' (July 1, 1977), the implementing order for physiotherapy, defines the profession of physiotherapy as: the professional application, after referral by a physician, of the following therapies:

- exercise therapy,
- massage therapy,
- application of physical agents (electro-therapy, ultrasound therapy, thermotherapy, hydrotherapy, balneotherapy).[9]

8 Health Circular 77/33. Department of Health and Social Security, 1977.

9 Fysiotherapeutenbesluit, article 2.

The expression 'after referral by a physician' points to a central aspect of the position of physiotherapists. Physiotherapists are not allowed to treat patients without a referral. And more or less by implication, they are not allowed to make a medical diagnosis, because that is supposed to be done by the referring physician. In the course of time the position of physiotherapists vis-a-vis the medical profession has changed in the direction of more independence. In the original edition of the 'fysiotherapeutenbesluit' it read 'ordered by a physician'. This expression allowed less room for the independent judgement of the physiotherapist. But even in the current situation, if the physician explicitly specifies which treatment has to be done, the physiotherapist is obliged to follow this order.

There has been a lengthy discussion about the boundaries between the practice of medicine and of physiotherapy. This discussion about the unqualified practice of medicine was closed in 1963 with the passing of the Act on paramedical professions. The act states that these professions are allowed to practice part of medicine under supervision or according to the orders of and controlled by qualified physicians. So there is no substantial delineation; physiotherapists are active in the field of medicine but only in a restricted part of it (only externally applied therapies, and in a defined relation to a physician.

Legally every physician (and now also dentists) is allowed to refer patients to a physiotherapist. Physiotherapists who are working in primary health care receive most of their patients (80%) on referral from a general practitioner and the rest from a diversity of medical specialists.[10]

A.2. Recognition

The profession of physiotherapy is legally recognized in the Act on Paramedical Professions ('Wet op de Paramedische Beroepen') and the implementing orders.

The license to practise physiotherapy is given when the final exams have been passed and the vow of secrecy taken. The profession of physiotherapy is recognized by the Minister of Welfare, Health and Cultural Affairs. Only those who have passed the final examinations and taken the oath are entitled to use the title of physiotherapist (fysiotherapeut). This means that the title of physiotherapist is protected by law. Every physiotherapist is obliged to register his/her diploma with the Chief Inspectorate of Public Health.

10 J.J. Kerssens e.a., Fysiotherapie in de Nederlandse gezondheidszorg; NIVEL, p.60.

The professional association is the Royal Dutch Association of Physiotherapy ('Koninklijk Nederlands Genootschap voor Fysiotherapie'). Membership of this society is not obligatory.

A related profession exists in the field of alternative medicine, namely chiropractic. There are not many chiropractors in the Netherlands. Other related professions are in the field of exercise therapy. These professions are Cesar exercise therapy and Mensendieck exercise therapy.

A.3. Finance

With regard to financial regulations it is important to distinguish between two groups of patients. Firstly the publicly insured patients. These are all employees and their dependents under a certain income ceiling and a number of groups of social security dependents. They form approximately 63% of the Dutch population. Premiums are paid partly by the employee and partly by the employer to the regional public health insurance funds (ziekenfondsen). Secondly, the privately insured patients; the rest of the Dutch population (37%). They choose their own insurance policy with one of the many private insurance companies. These two groups are subject to different financial regulations. Furthermore it is important to distinguish between the financial regulations for physiotherapy in the primary care setting and in the clinical setting of hospitals and rehabilitation institutes. We will start with the primary care setting.

Publicly insured patients in primary care

The patient and the employer pay premium to the health insurance fund. If a patient is referred by a physician, an authorization has to be requested by the physiotherapist before starting the treatment. This authorization states the reason for referral, proposed treatment, frequency of treatment and duration of treatment. There is a set of regulations, based on which the public health insurance funds pay the physiotherapists for their treatments. Physiotherapists are paid for each separate treatment according to an agreed schedule. If a physiotherapist is in salaried service of either another physiotherapist or a health centre the employer of the physiotherapist is reimbursed by the public health insurance fund according to the mentioned fee schedule.

Privately insured patients in primary care

These patients pay directly to the physiotherapist (maximum fees are set by the Ministry of Economic Affairs on the advice of the Central Body of Tariffs in Health Care). Reimbursement by the private insurance company depends on the policy of that company.

Physiotherapy in hospitals and institutions
Here the distinction between publicly and privately insured patients does not matter; both groups are insured for the cost of treatment and hospitalization, and the costs for privately insured patients are paid directly by the insurance company. Cost of treatment by physiotherapists is part of the lump sum per day of hospitalization. The physiotherapists are in salaried service of the hospitals and institutions.

Entry into the active profession
There are no formal barriers to entry into practice. Hospitals and institutions with a vacancy usually advertise. In primary care every physiotherapist is free to set up a practice, but to treat publicly insured patients one has to have a contract with the regional public health insurance fund. New contracts are only given when the ratio of physiotherapist to population does not exceed a certain limit. This regulates the number of physiotherapists rather effectively. Earlier, public health insurance funds were required to contract every physiotherapist who applied. The increase in the number of physiotherapists in primary care was very strong at that time. The option to regulate entry via legal regulations was not chosen, but the same result was reached via the restriction on the number of contracts. This, however, leaves open the possibility of establishing a physiotherapy practice if one only treats privately insured patients. The number of these practices is probably not very large.

A.4. Disciplinary law
There is no disciplinary law for physiotherapists. The Act on Paramedical Professions opens the possibility of disciplinary law in principle, but this possibility has thus far not been used in the implementing orders. There are plans to create a disciplinary law for physiotherapists. The Royal Netherlands Society of Physiotherapy has a code of ethics and their own disciplinary regulations. The ultimate sanction is dismissal from membership.

B. EDUCATION

B.1. General
Entry in the schools of physiotherapy is restricted to people who have at least finished 'HAVO' (i.e. eleven years of schooling). The education takes place as part of schools of higher professional education. Parts of the training are in the form of practice periods, either in private practice or in institutions. The Ministry of Education and Science is responsible for the education of physiotherapists. Until 1975 the schools of physiotherapy were under direct control of the Ministry of Public Health. The schools of physio-

therapy grant the diploma which together with the vow of secrecy gives the right to practice.
Apart from the recognized schools of physiotherapy there are no other, non recognized, schools or courses that prepare for physiotherapy.

B.2. Position in the education system
Physiotherapy education in the Netherlands is not university education, but higher professional training. Since 1986 it has been theoretically possible for graduates of higher professional training to defend a doctoral thesis, even if they have no university training. University training does not exist in physiotherapy proper, but physiotherapy graduates can enter university studies e.g. in the field of 'human movement sciences'. Before long an associate professor of physiotherapy will be nominated at the University in Utrecht.
There are eleven schools of physiotherapy in the Netherlands. The level of education for physiotherapists is the same for all schools. The schools compete with each other for students and therefore try to develop a specific profile for the training program. This leads to different accents in the training, but not to clearcut differences in level or quality.

B.3. Content
The individual schools have considerable room to fill in their own plan of training. There are, however, examination regulations which have to be followed by every school.
The training takes four years, divided in eight semesters.
The subjects in the course are:

1. PHYSIOTHERAPY
   - theory of physiotherapy
   - examination
   - treatment; exercise therapy
     physical therapy
     massage therapy

2. MEDICAL SCIENCES
   - anatomy
   - physiology
   - pathophysiology
   - neurology
   - orthopedics
   - traumatology
   - rheumatology
   - first aid/resuscitation

3. PHYSICS
   - physics/chemistry
   - biomechanics
   - information sciences

4. SOCIAL SCIENCES
   - psychology
   - psychiatry
   - sociology
   - research methods
   - methodical working
   - social skills

5. PRACTICAL TRAINING

6. CHOICE OF SUBJECTS

The discussion will be restricted to the first and most important topic - physiotherapy.
Exercise therapy includes the theory and practice of the use of movement to a therapeutic end; this may be increase of muscular power, regulation of tonus, relaxation, mobilization, increase of performance, correction of movement or posture and easing of pain. To achieve these ends students are educated in general methods of treatment as well as specific methods such as manual therapy and therapeutic methods of Bobath, Frenkel-Maloney, Bugnet, Becker, Niederhöffer and Klapp. Massage consists of the mastering and therapeutic application of manual skills. Apart from the general principles of massage special skills are taught (e.g. connective tissue massage, periosteum massage, manual lymph oedema drainage).
The use of physical agents consists of the application of high and low frequency electrotherapy, ultrasound, light-therapy, thermo-, cryo-, balneo- and hydrotherapy, myofeedback and different methods of traction.
The course in examination and treatment aims at teaching the student the principles of physiotherapeutic examination (on the basis of the diagnosis of the referring physician - the physiotherapist is not allowed to give a medical diagnosis). The students are taught to develop and apply a course of treatment on the basis of this examination.
The last half of the third and the first half of the fourth year of training are learning-in-practice-periods. Practical training is possible in the institutional setting (hospital, rehabilitation clinic, nursing home) as well as in private practices associated with the schools of physiotherapy. Students are examined upon physiotherapeutic examination and treatment, evaluation of the practice period, an essay and a concluding interview.

There is a broad spectrum of post-graduate courses in (aspects of) physiotherapy. A more or less official role in post-graduate education is played by the Organization of Post-higher Professional Training (based on the Act on Higher Professional Education) and by the Foundation of Research and Education in Physiotherapy (SWSF). The latter has a coordinating role and the courses organized by SWSF are recognized by the Royal Society of Physiotherapy.
There has been a long discussion about specialization in physiotherapy. The word specialization has been dropped in favour of 'particularizations'('verbijzonderingen'). There are presently four recognized specializations: physiotherapy in pre- and postnatal health care, manual therapy, sports physiotherapy, and physiotherapy in long stay hospitals. Preparations for the recognition of two other specializations are being made: physiotherapy in cardiovascular disease and physiotherapy with children. These specializations have no legal basis but they are recognized within the profession. To acquire a specialization physiotherapists have to follow specific courses as recognized by a committee of the Royal Society of Physiotherapy.
Apart from these courses leading to recognized specializations, there is a large number of other courses either on specific aspects of physiotherapy or on more or less peripheral aspects of physiotherapy or alternative medicine. In a recent survey 95 different topics of courses were mentioned by the 215 responding physiotherapists.
There are large differences in the length and intensity of the post-graduate courses, e.g. from 16 hours for a course in neurophysiology to 800 hours for a course in manual therapy.

C. PRACTICE OF THE PROFESSION

The Chief Inspectorate of Public Health (GHI) has done a study on the fields of work of physiotherapists (April 1986). A questionnaire was sent to all physiotherapists (18,300) who were registered at that time by the Chief Inspectorate. 16,402 answers were used. 79% of those (= 13,002) work as a physiotherapist. These 13,002 physiotherapists worked at 14,864 places. The following table gives an overview of the fields of work of physiotherapists.[11]

11 Beroepsuitoefening van fysiotherapeuten. Verslag van een onderzoek, 21 maart 1986, Geneeskundige Hoofdinspectie van de Volksgezondheid, Rijswijk, november 1990.

Lokaties	abs	%
Total	14864	100,0
of which in/with:		
- private physiotherapy practice	8936	60,1
- general/academic hospital	1757	11,8
- nursing home	1158	7,8
- education	633	4,3
- rehabiliation centre	526	3,5
- cross association	459	3,1
- nursing home/home for the elderly	447	3,0
- other	948	6,4

This table shows that the main place of work is in a private physiotherapy practice (60%) (primary care). The general and academic hospitals together take up twelve percent of the work places and the nursing homes eight percent.

The main task area of physiotherapists in primary care is in therapy. Prevention and patient education are supposed to be part of therapy sessions, but they are not separately valued in the payment schedule. Collective prevention e.g. in patient groups is not possible in the current fee schedules, with the exception of prenatal exercises.
The task area of physiotherapists in hospitals and institutions depends largely on the characteristics of that institution. Part of the tasks in general hospitals is e.g. preparation of the patient for a major operation to ameliorate the invalidating effects of surgery. In institutions for mentally and physically handicapped children the task areas are of course entirely different.
Apart from actively practising physiotherapists, a number of physiotherapists are engaged in fields such as teaching, government policy making, research and as advisory physiotherapists to health insurance funds.

The practice settings of physiotherapists should be divided in primary care settings and hospital and institutional settings in the first place. Within primary care settings the majority of physiotherapists is working in independent practice, either in individual or group practice. A smaller group of physiotherapists in primary care is in salaried service. They can be employed by another physiotherapist or by a health centre. In hospital and institutional settings physiotherapists are in salaried service.

Nearly all patients who are treated by a physiotherapist have been referred by a physician (98% in a large survey). However, some patients may visit the physiotherapist on their own initiative and try and get a referral afterwards.

The content of the referral of the physician and the amount of detail depends largely on the individual physician's habits and relation to the physiotherapist. Some physicians only state 'physiotherapy, please' as their referral, while others are very specific in indicating the diagnosis and in prescribing a certain therapy. General practitioners did not specify the treatment in 37% of newly referred patients.[12] Thus, physiotherapists are in many cases fairly independent in their choice of a therapy. Complementary to the medical diagnosis (if one is given) the physiotherapist makes his/her own physical therapy diagnosis. It depends on the relation between referring physician and physiotherapist whether or not the physiotherapist will contact the referring physician when his/her own ideas about diagnosis or treatment differ from the physician's.

An interesting development is that in some health centres where general practitioners and physiotherapists are working in the same premises, physiotherapists operate a free consultation hour. Here patients can consult a physiotherapist without prior referral. This possibility is mainly used by patients with prior experience with physiotherapy.
Many patients of physiotherapists in primary care are female (approximately 7% of the male population is referred to a physiotherapist and 9% of the female population). The percentage of the population, referred to a physiotherapist, increases with age: from 1.4% in the age group 0 - 14 to 14.2% in the over 65 group.
Musculoskeletal complaints represent 90% of the complaints presented to primary care physiotherapists. More than half of the complaints is located in the back or shoulder. The top-five diagnoses at the time of referral are:

1. Musculatory disorders of the back, excl. low back pain;
2. Myogenic low back pain;
3. Disorders of the shoulder joint;
4. Disorders of the nervous system;
5. Spondylosis

Together this top-five comprises 35% of all referral diagnoses.[13]

In a physiotherapy treatment the following therapies can be applied:

- Massage therapy (69% of the cases)
- Exercise therapy (62%)
- Application of physical agents (60%)
- Patient education (34%)

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12 Kerssens e.a., Fysiotherapie in de Nederlandse gezondheidszorg, p.57

13 Idem, p.42

- Manual therapy (14%)
- Traction (7%)
- Applying a bandage (2%).

Most therapy sessions are a combination of individual therapies; the most frequent combinations are massage, exercise and application of physical agents (14%) and massage and application of physical agents (11%).[14]
As a result of health insurance funds regulations an authorization for treatment of publicly insured patients may not exceed twelve sessions. After that a new authorization is needed. The length of treatment is therefore usually twelve sessions.

4.3. The legal status, education and actual practice of the profession of physiotherapy in the Federal Republic of Germany

A. LEGAL REGULATIONS

A.1. General

The legislation on physiotherapy is called the Act on the practice of the profession of masseur, and of masseurs and medical bath attendants and physiotherapists of 21 December 1985.[15] This law governs admission to the profession and professional training, though not the actual profession. Professional practice cannot be regulated by this law. It is, partly, regulated by another law in Part V of the Social Code. In this code there are provisions on the professional practice of associated medical professions. The paramedical professions are associated medical professions. Part V of the Social Code establishes the services and the regulations on the establishment of a practice.

The non-medical practitioners Act[16] contains regulations which differentiate between their professional practice and that of physicians. The non-medical practitioners Act allows a distinction to be made between what medical practice is and what it is not e.g. "determining the acuity of vision by an

14 Idem, p. 86-88.

15 'Gesetz über die Ausübung der Berufe des Masseurs, des Masseurs und medizinischen Bademeisters und des Krankengymnasten'.

16 'Heilpraktikergesetz'.

optician is not the practice of medicine".[17] All therapy is restricted to physicians and thereby to recognized medical practice. Accordingly physiotherapists practice medicine and they may only do so because they have received a prescription or doctor's orders that allows them to do so.
A doctor's prescription is required for physiotherapy. The physiotherapist is only able to practice medicine on the authority of a doctor's prescription. This is not a referral. A referral is made between professions of equal status, from doctor to doctor, for example when a general practitioner sends patients to a orthopedic specialist or an oculist, then he writes a referral.
In the prescription, the doctor has already given the medical diagnosis and prescribes a particular treatment. When the therapist wants to deviate from the treatment that the doctor has prescribed, he must contact the doctor and obtain a change in the prescription from him. He may not change it himself.
Doctor's prescriptions give the physiotherapist permission to practise his profession. In hospitals, these are called doctor's orders. But a physiotherapist may not act on his own responsibility in a hospital. He must wait for doctor's orders. The patient can choose his own therapist.

A.2 Recognition
The profession is recognized in law by the German Parliament.
The professional recognition of individual physiotherapists comes from the local inspectorate of health. The profession is not protected by law, only the professional designation or title is protected. This can be seen in section 1 of the act on the profession: "A person intending to practice under the designation of "masseur", "masseur and medical bath attendant" or " physiotherapist" requires permission.[18]
And in section 14 there is the penal provision: "Persons who without possessing permission pursuant to section 1 assume the titles specified in sections 1 and 6 are in breach of the law".[19] There is therefore only protection for the professional designation.

If a person, who is not a physiotherapist, wants to practice physiotherapy he must inform the patient that he is not a physiotherapist and that he

17 'Gesetz über die berufsmäßige Ausübing der Heilkunde ohne Bestallung (Heilpraktikergesetz), paragraph 1'.

18 Gesetz über die Ausübing der Berufe des Masseurs, des Masseurs und medizinischen Bademeisters und des Krankengymnasten, paragraph 1.

19 idem, paragraph 14.

needs a doctor's prescription. Working without a doctor's prescription makes the person criminally liable. This derives from the provisions which apply to competition, which also apply to business. No one may tout for business among the population and in so doing mislead people about their professional training. For example masseurs sometimes put up a plate on the door with "physiotherapy" and this is contrary to the regulations.

The professional title is 'Krankengymnast/Krankengymnastin' (physiotherapist m/f). It is now possible to use the title 'Physiotherapeut'. Before the reunification of Germany, the professional title 'physiotherapist' was not permitted. However in the former GDR the professional title of 'physiotherapeut' was used. Since reunification all physiotherapists from the GDR have received recognition as physiotherapists and they may also use the professional designation of physiotherapist. Because physiotherapists in the GDR and the physiotherapists in West Germany have been given equal status now, the West Germany 'Krankengymnasten' can also call themselves 'physiotherapists'. But this latter professional designation is not protected by law.

Related professions are for example physical training teachers with additional training when active in prevention or rehabilitation. They sometimes call themselves sports therapists, although they are teachers. This is an objectionable practice. They should also clearly point out that they are not 'Krankengymnasten' or 'physiotherapeuten' (physiotherapists) and that they are not licensed to practice under the health insurance agencies. Masseurs have their own professional regulations.

Physiotherapists are not required to register. Only physiotherapists who are in private practice have to register with the health authorities.
The professional association is the German Association for Physiotherapy - Central Association of Krankengymnasten/Physiotherapeuten (ZVK).[20] There is no compulsory membership in this professional association. Physiotherapists are recommended to join because the professional association negotiates on fees with the health insurance authorities and provides further training. The ZVK represents with its 18,500 members over 90% of physiotherapists. Over 5,000 members are physiotherapists in private practice.[21]

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20 Deutscher Verband für Physiotherapie-Zentralverband der Krankengymnasten/Physiotherapeuten.

21 'Die Krankengymnasten', ZVK, p.18.

A.3. Finance

The financing of physiotherapy is part of the system of health care. The patients have the right under the health insurance system to benefits in kind. Benefits in kind mean that the health insurance authority is obliged to provide all that is necessary for therapy to the insured person at no cost. This means that the patient does not need to pay when he goes to the doctor. The payment takes place between the doctor and the insuring authority; between the pharmacist and the insuring authority; between the hospital and the insuring authority or between the physiotherapy practice and the authority. The fact that there are some additional payments is not a breach in the system. The principle is the principle of payment in kind, the insurer provides the patient with all the necessary therapy. This applies to all patients covered by public insurance. Private patients pay their bills themselves.

Non-medical practitioners and doctors are a sort of sub-contractor to the public insurance authorities. The public insurance authorities have to conclude agreements on fee scales with the non-medical practitioners and in consequence non-medical practitioners undertake to treat the patients, in other words those insured.

The basis for payment is the doctor's prescription. Therapists receive their fee per treatment. There is no per capita system or salary. The therapist charges his fees on the basis of the doctor's prescription and sends a bill each month to the public insurers or to the patient, if it is a private patient.

The fee scale is determined by the professional association in negotiation with the public insurance authority. There are 'Ersatzkassen' (private insurers) and 'Primärkassen' (local health insurance authorities). In the case of the 'Ersatzkassen' negotiations are carried on at a federal level and in the case of the 'Primärkassen' at a provincial level.

There are special conditions that have to be met before a practice is granted a licence, for example, a practice must meet particular requirements, it must have a minimum size, it must have a minimum level of equipment, etc. This is investigated before the practice receives a licence. The professional association concludes what is called a framework agreement with all public insurers (not with the private insurers). This framework agreement regulates what the practice should look like, when it should be open etc. When the requirements are met the therapist receives the licence from the insurers. He may not start treatment before this has taken place. He only receives a licence when, in addition to an examination, he is able to prove two years of practical experience in a position as an employee. He can therefore not begin in private practice immediately after training. The therapist can, as soon as he has received state recognition, open a private

practice but can only treat publicly insured patients after he has had two years of professional experience as an employee.

An owner of a practice may employ trained personnel (other physiotherapists). These therapists then work as employees. A physiotherapist can also work for the public service or for a self-help organization or hospital. There are also businesses that employ physiotherapists in a preventive capacity.
There is no 'Bedarfsprüfung'. Anyone who meets the legal requirements and the requirements of the insurer has a legal right to a licence. Each year there are approximately 10% new practices. Access to them is without restriction.

A.4. Disciplinary rules
There are no disciplinary rules either from the side of the authorities or from the professional association. There are only general legal prescriptions, for example, where he causes bodily injury, the physiotherapist can be held criminally liable. There are however disciplinary measures from the official public insurance authorities. These are fines; when an established physiotherapist submits a false account, he can be subject to this sort of fine (in general between 500 and 5000 German Marks) and his licence can be removed.

There are professional regulations from the association (which can be compared with an ethical code). But the association has no possibilities to impose sanctions. It is a private agreement. The professional regulations cannot be enforced by law.

B. EDUCATION

B.1. General
The requirements for admission to a training course or school for physiotherapy is the successful completion of the 'Realschule' (ten years of schooling). The official standard is 'Realschule' but approximately 75% of the physiotherapists have taken the university entrance examination ('Abitur'). So the actual qualifications are better than the legal requirements.

The training of physiotherapists lasts for three years. Two years are spent following a course at a school. After these two years there is a state examination. Successful completion of the examination does not lead to the licence to use the professional title of physiotherapist. There is a third year of training which is called the practical, but this does not have to be followed at the school. During this year, the student has to spend at least

four months in an orthopedic or surgical department or work for at least four months in internal medicine. During this clinical practice, 100 class hours have to be taken.[22] The third year will, in future, be included in the education.
The certificate bears the title of 'Krankengymnast' in the old federal states, and in the new ones 'Physiotherapeut'.
The training and examination for physiotherapists is regulated by law by the Act on the practice of masseurs, masseurs and medical bath attendants and of physiotherapists of 21 December 1958 and the Training and Examination regulations for Physiotherapists of 7 December 1960 and the 'Order Changing the Training and Examinations for Physiotherapists of 25 June 1971'.

The training is recognized. The schools receive recognition from the German state (Bundesland) concerned and the school diplomas are also recognized there. The certificates are drawn up by the school but representatives of the inspectorate do take part.
There are no non-recognized training programmes. A person who calls himself a physiotherapist and has the diploma has as a consequence taken part in a recognized training.

B.2. Position in the education system
The training of physiotherapists is at vocational school level ("Berufsfachschule'). The content of the training is therefore not at university level.
There are 87 schools in the old German states of the Federal Republic of Germany with approximately 4,000 training places and 14 schools with about 800 training places in the new states or Länder. There are differences of level between these schools. The public institutions which are often attached to universities are generally of a higher level than the "commercial schools" which are run by commercial interests. The examinations are identical. All the schools follow the same curriculum, because it is regulated by law in the examination regulations. As there is a shortage of physiotherapists, physiotherapists from the poorer quality schools also have good professional prospects.

B.3. Content
The content of training is regulated by the Training and Examination Regulations for Physiotherapists (7 December 1960, amended by Order of 25.6.1971). In these training and examination regulations are stated the subjects that are included in the course in the first section. The practical

22 Ausbildungs- und Prüfungsordnung für Krankengymnasten, paragraph 20.

activities are to commence within one year of completing the examination. During the practical training there must be specialized supervision. In general there are two physiotherapists in the practical to one physiotherapist in the clinic. The practical training includes observation and work.
There are extensive options for further training for physiotherapists for example in the area of Bobath, Vojta and Manual Therapy. There are both specializations and short courses. They are, in part, offered by the professional association and in part by private groups. In the professional regulations for physiotherapists it is stated that the physiotherapist practising his profession is required to pursue further training within the area of his activity.[23]
The further training must in part be specially recognized by the professional organisation. Physiotherapists must for example have special training in Bobath or Vojta or manual therapy to receive fees for treatments using these therapies. These requirements are in part established by the insurers. The requirement to enable the physiotherapist to charge fees for Vojta or Bobath is proof to the professional association or the insurers of recognized special training.

C. PRACTICE OF THE PROFESSION

A definition of physiotherapy is: 'Movement therapy prescribed by doctors which is used in the case of development disorders, injuries or the consequences of injuries or breakdowns in organic and physical functions using special diagnostic and treatment techniques.'[24]

In the old Federal Republic of Germany there were 27,000 physiotherapists. Physiotherapists also work in prevention, curative medicine and rehabilitation. There are also physiotherapists who work as therapists in school service, for example in schools for the disabled. Most physiotherapists work in therapy.
Physiotherapists work in private practices, hospitals and social assistance centers. Social assistance centers are run by the social services, for example churches which have appointed district nurses. There is mobile care for the elderly or those needing care.

The physiotherapist works in therapy only on a doctor's prescription. This is under the indirect supervision of the doctor, it means that the therapist must follow the doctor's prescription. He must also collect information and

23 Berufsordnung der Krankengymnasten, ZVK, 1979.

24 Transparenzliste Krankengymnastischer Leistungen, ZVK, S.3.

examine the doctor's diagnosis from his point of view and then build his plan of treatment on his own findings. He does not have to discuss this further with the doctor. But when he wishes to deviate from the doctor's diagnosis he must return the patient to the doctor.

The physiotherapist treats all types of patients. There is also a great deal of assistance for babies. Physiotherapy uses movement to support the healing processes or to correct development disorders.

Physiotherapy treatment can comprise:
- Physiotherapy : an active form of therapy in which patients take part.
- Passive therapy: massage
- Thermotherapy - In which cold and heat are used as types of therapy
- Balneotherapy - e.g. medical baths
- Hydrotherapy - e.g. Water therapy, physiotherapy in the bath
- Electrotherapy - e.g. Short wave, ultra sound.

The physiotherapist's area of work comprises in terms of insurer's statistics 98% physiotherapy with its accompanying therapies. Accompanying therapies in this area are:
Heat,
Cold,
Fango,
Electrotherapy.
Only 2% of the treatment are passive treatments.
Preparatory massages are in general part of the physiotherapy treatment (that means part of the 98%, 2% are purely passive).

4.4. The legal status, education and actual practice of the profession of physiotherapy in Belgium

A. LEGAL REGULATIONS

A.1. General

There are in Belgium two separate kinds of training in physiotherapy that both give entrance to the profession. There is university training in physiotherapy and there is also higher education outside the university. These two kinds of education will be further discussed under section B.

At this moment there is no legal regulation of the profession of physiotherapy. The only regulation that exists is a Royal decree from 1967 which gives a legislative framework for further regulations. On the basis of this decree the Ministry of Health will regulate the paramedical professions. The first

step in this regulation has been the creation of the National Council for Paramedical Professions. This council will advise the minister about questions relating to the paramedical professions. The council has divisions for each profession. There is also a Technical Commission which will deal with financial matters.

At the moment the only recognition of paramedical professions is by RIZIV (Public Institute for Illness and Handicap Insurance/ Rijksinstituut voor Ziekte en Invaliditeitsverzekeringen). Recognition of paramedical professions by RIZIV is based on the health insurance act of 1963. In this legislation it is regulated which conditions must be fulfilled before reimbursement can take place. There are both conditions which must be met by patients (they must register with the health insurance fund) and by health care providers (possession of a recognized diploma). There are also lists of treatments that are eligible for reimbursement.
RIZIV recognizes physiotherapists with a diploma from a recognized school. This means that (part of) the costs of physiotherapy treatments is reimbursed. The recognition council for physiotherapists not only decides about reimbursements but it also judges the physiotherapist on deontological standards, e.g. with regard to the relation between the physiotherapist and the patient. If a physiotherapist does not conform to the deontological code RIZIV can decide to suspend the physiotherapist from reimbursement.

The referral to physiotherapists is mentioned in the Royal decree from 1967 which applies to physicians, nurses and paramedical professions. According to this decree the medical diagnosis is the prerogative of the physician. Because the decree is a legal framework the detailed regulations with regard to, for instance, referral must be regulated in other acts. For paramedical professions this has not yet been finished, which means that there is, as yet, no legal regulation with regard to the referral to paramedical professionals.

A.2. Recognition
The profession of physiotherapy is not (yet) legally recognized. Some form of recognition can be found in the regulations of RIZIV.
The title that is used is 'kinesitherapeut'. This title is not protected.
There is no obligatory registration for physiotherapists.

There are various professional associations. One is the General Physiotherapy Association of Belgium (Algemene Kinesitherapeutenvereniging van België, AKB). This association is open to those who qualified in higher education and to university graduates in physiotherapy. The AKB is a member organisation of the Standing Liaison Committee of Physiotherapists within

the EEC (SLCP). There is also a professional association which is only open to university graduates and doctors in physiotherapy.[25] Physiotherapist are not obliged to be a member of any of these organisations.

A.3. Finance

The profession of physiotherapy is recognized by RIZIV which means that patients of physiotherapists can get the costs of their treatment reimbursed. The patient pays premium to the public health insurance. On top of this obligatory public health insurance they can also be a member of a private insurance company.
With physiotherapists who work in private practice the patient first pays the costs of the treatment himself after which he can get it reimbursed by RIZIV. The patient needs a medical referral to get the costs reimbursed. In hospitals physiotherapy treatment is part of the overall sum which is paid directly by the health insurance.
RIZIV pays the physiotherapist a fixed amount per item of treatment. Physiotherapists in institutions are paid a salary.

The entry into the profession is completely open.

A.4. Disciplinary law

There is no disciplinary law for physiotherapists nor do the coming regulations provide for this. The General Physiotherapy Association ('AKB') has an ethical code which only applies to members of the association.

B. EDUCATION

B.1. General

The entrance regulation for physiotherapy training is a secondary education diploma. This means a total of six years of secondary education after primary school which also takes six years. Although for both kinds of education the secondary school diploma is required, university students also need a certificate from their secondary school which states that they are capable of attending a university education.

B.2. Position in the education system

As mentioned above there are two possibilities for physiotherapy training. One is higher education outside the university ('graduaat in de kinesitherapie') and the other is a university education in physiotherapy ('licentie in de motorische revalidatie en kinesitherapie'). The university course takes four years and the training outside the university (diploma course) takes three

25 Nationale Federatie der Doctors en Licentiaten in Kinesitherapie.

years. Both kinds of training are recognized by the Ministry of Education. The courses are also recognized by the Ministry of Health with regard to the practical training. The Ministry of Health gives the holder of the diploma a registration number with which he can be registered with the public health insurance.
There are no non-recognized courses in physiotherapy.

Although the two kinds of education have a different position within the education system, the content of the course is fairly similar. Also all students have to do the same amount of practical work. There are, however, differences in approach. The diploma courses are more practical while the university courses are more theoretical.

There are in Belgium 19 diploma courses and 6 university courses for physiotherapy. Another possibility to get a diploma in physiotherapy is through a state examination. The practical work must always have been done through a recognized school.

B.3. Content
For the diploma courses there is a required curriculum with a minimum amount of hours that must be included. For universities there is no obligatory minimum curriculum. Each university can design its own course.

The higher education and the university courses all have the same amount of practical work but in the higher education courses this amount is spread over three years while at the universities it is done in four years. This leaves the universities with more room for theoretical subjects.
During the practical work there is always supervision. There is both supervision from a qualified physiotherapist in the institution and there is supervision from the school. The practical work is always in clinics, never in private practices.

There are many possibilities for further education. Basically there are two kinds of further education. There are courses which are a continuation and expansion of the initial education, such as anatomy or x-ray diagnostics and there are specializations. Specializations include both techniques such as manual therapy or osteopathy and courses that are aimed at specific groups such as cardiovascular physiotherapy or prenatal exercises.

Further education is organised by the professional associations. There are also special courses at the universities, in for instance manual therapy or osteopathy. Since December 1990 a new law authorizes the Minister of Health to recognize specializations within the professional group.

C. PRACTICE OF THE PROFESSION

In Belgium there are approximately 19,000 qualified physiotherapists.[26] There is no registration of their fields of work. The only registration that takes place is of qualified physiotherapists. It has been estimated that from the total amount of physiotherapists approximately 50% work in private practices and 50% is employed.
The professional association does keep a registration of the fields of work of physiotherapists but not all physiotherapists are members of the association and especially the salaried physiotherapists are under-represented in the association (90 to 95% of the members of the association work in private practice).

Physiotherapists in Belgium work after a medical referral. In this referral the diagnosis must be included. This is regulated in the Medical Act which states that diagnosis is the prerogative of the doctor. The new act on paramedical professions will supplement this regulation by stating that the physiotherapist may make an additional diagnosis ('locomotorisch bilan').
Until January 1 1991 RIZIV regulations were such that the referring physician had to prescribe the plan of treatment and the techniques to be used. Since January 1 1991 physicians only have to give the diagnosis, which leaves physiotherapists with more room for independent work. It is still under discussion whether the physiotherapist must follow a plan of treatment if it is given by the referring physician. Thus the actual situation is that the physiotherapist works after referral and only if a plan of treatment is given together with the diagnosis he works on instruction of the physician.

The majority of the complaints that are presented to the physiotherapist are complaints of the joints and the muscular system. Other kinds of complaints that are presented are neurological pathologies, cardio-vascular-pulmonary problems and psychomotility problems. Approximately 60% of the patients are over 60 years old.
The majority of patients are referred by the general practitioner (67%).[27]

Although basically the work of physiotherapists in Flanders and the Walloon provinces is the same there are some differences between them.
Physiotherapy in the Walloon provinces consists of massage, exercises and the use of physical agents. Some osteopathy is done but manual therapy is not part of physiotherapy in this part of the country. In Flanders, physiothe-

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26 'Algemene Kinesitherapeutenvereniging van België', May 1991.

27 RIZIV, 9 April 1991.

rapy consists of massage, exercises, the use of physical agents, manual therapy and osteopathy. Manual therapy and osteopathy form a substantial part of many treatments. In private practice very little use is made of physical agents because this is not reimbursed by the health insurance. It is only reimbursed if a specialist in rehabilitation ('fysiotherapeut') is in the building.

4.5. A comparison between the position and education of physiotherapy in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium

A. LEGAL REGULATIONS

In Germany and the Netherlands physiotherapists only work after referral by a doctor or specialist in a hospital. This condition is not only stated in law, but it is also a precondition for reimbursement of costs by the health insurance funds. As opposed to this situation, in the United Kingdom there is no obligatory referral. Patients can refer themselves or they can be referred by other people such as other health care professionals, neighbours or family. In practice, however, there is often a medical referral.
In Belgium referral is, not yet, legally obligatory but it is a condition for reimbursement of the costs by the health insurance funds.
In England there is an obligatory state registration for physiotherapists who want to work in the National Health Service. Private practitioners need not be state registered. All physiotherapists in the Netherlands must register with the Health Inspectorate before they may start working. In Germany there is no obligatory registration for physiotherapists. In Belgium physiotherapists must be registered with the health insurance funds for the purpose of reimbursement.

In England physiotherapy in the National Health Service is free. Patients who go to a private practitioner either pay everything themselves or the costs are partly or wholly reimbursed by a private insurance company. In the Netherlands, Belgium and Germany physiotherapy treatment is usually reimbursed by health insurance funds. Patients need to have a medical referral before reimbursement can take place.

In Germany and the Netherlands there are related professions with their own legal recognition. In Germany these professions are the "Masseurs" and the "Masseurs und medizinischen Bademeisters" (Masseurs and medical bath attendants). In the Netherlands there are related professions in the field of exercise therapy. These professions are Mensendieck exercise

therapy and Cesar exercise therapy. There are no such related professions in England or Belgium.

Germany is the only country where a physiotherapist, before he may start a private practice, is obliged to have worked for someone else for two years. In the other three countries a physiotherapist can start a private practice immediately after qualifying.

The protected title in the United Kingdom is state registered physiotherapist or chartered physiotherapist. The title 'physiotherapist' in itself is not protected. In Germany the title "Krankengymnast" is protected but not the title "Physiotherapeut". The protected title in the Netherlands is 'fysiotherapeut'. Dutch physiotherapists not only have protection of title but also protection of the profession. In Belgium the title is not protected. However, because the education is recognized, the educational title is protected. This title is either that of "graduaat in de kinesitherapie" or licentiate in physiotherapy ("licentiaat in de motorische revalidatie en kinesitherapie").

Physiotherapists in the United Kingdom are subject to the Statement of Conduct from the Council for Professions Supplementary to Medicine and to the ethical code from the professional organisation. The disciplinary measure that can be taken on the basis of the Statement of Conduct is removal from the register. In such a case the physiotherapist ceases to be state registered and can therefore no longer work in the National Health Service. The ethical code only applies to members of the professional organisation and its sanction is to dismiss somebody from membership. In the Netherlands, Belgium and Germany physiotherapists are subject to the ethical code from their professional organisation. In Belgium the health insurance fund has also made up an ethical code. The sanction that can be taken on the basis of this code is that reimbursement of the costs will be stopped.
None of the four countries have a disciplinary law for physiotherapists.

B. EDUCATION

There are differences between the four countries in the minimum number of obligatory years of education before entry to physiotherapy education. This minimum amount of years is shorter in the Federal Republic of Germany (10 years) than it is in England (12 years), the Netherlands (11 years) or Belgium (12 years). Also the German physiotherapy education itself is at a different position in the education system than in the other three countries. In Germany training takes places in so-called 'Berufsfachschulen' (secondary vocational schools), in England and Belgium the education can take

place in universities or in higher education outside the university and in the Netherlands it is part of higher professional education, which is higher education outside the university. (See also the diagrams of the education systems). There are also differences in the duration of the education. In the Federal Republic of Germany it is three years which are subdivided into a two year course followed by one year's practice. In the United Kingdom and Belgium the training takes three or four years and in the Netherlands the training takes four years.

In Germany, Belgium and the Netherlands there are no non-recognized education possibilities for physiotherapists. In England such courses do exist. These courses are mainly four week correspondence courses with two weeks practical training at the end. Students of such courses are not eligible for state registration.
With the exception of Belgium, all countries have limits to the amount of students that can be admitted to the education. This leads to a competitive entry in which the actual entry requirements are often higher than the obligatory minimum requirements.

The courses are all full-time courses. All the courses consist of theory, practice and supervised clinical and professional experience. According to the report of the Standing Liaison Committee of Physiotherapists within the EEC the minimum number of hours of clinical practice is 1000 in England, 1172 in the Netherlands, 1200 in Belgium and 2942 in the Federal Republic of Germany (SLCP, 1990). The conclusion that can be drawn from this is that the German physiotherapy education is much more practice oriented than those in the other countries.

Although the precise content of the education in the four countries is difficult to compare without further research, there is, on the basis of the available information, no reason to assume that there are any major differences between the content of the courses. With regard to the other aspects of the education, in addition to the content, there are important differences. As stated above these differences exist in the entrance requirements for a physiotherapy course, the position in the education system, the duration of the training and the distribution between theoretical and practical training.

C. PRACTICE OF THE PROFESSION

Physiotherapists in the United Kingdom are mostly employed in the National Health Service. There are very few private practices. In the Netherlands 60% of the physiotherapists work in private practices. Physiotherapists in Germany work both in hospitals and in private practices. Approximately a

quarter work in private practices. In Belgium approximately 50% of the physiotherapists work in private practices and 50% are employed.

Although it is not legally obligatory, physiotherapy patients in England often have a medical referral. In the Federal Republic of Germany and the Netherlands a medical referral is legally obligatory. In Belgium, a medical referral is only obligatory for reimbursement of costs. With the new legislation in Belgium referral will also be obligatory by law.

Physiotherapy treatment in the Netherlands consists of massage, exercise therapy and the application of physical agents. These are the three main aspects of a treatment. In the United Kingdom treatment consists mainly of exercise therapy and the application of physical agents. The treatments usually contain little massage. Physiotherapy treatment in Germany consists of exercise therapy combined with additional treatment consisting of heat and cold therapy or electrotherapy. There is usually very little massage.
In Belgium the treatment consists of massage, exercise therapy and the application of physical agents. However, in private practices very little use is made of physical agents because this is not reimbursed by the health insurance funds. It is only reimbursed in private practice if it is applied under supervision of a specialist in rehabilitation. Another difference exists between Flanders and Wallonia. In Wallonia manual therapy is not part of the treatment, while in Flanders it is often used.

5. SPEECH THERAPY IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM[1]

5.1. The legal status, education and actual practice of the profession of speech therapy in the United Kingdom

A. LEGAL REGULATIONS

A.1. General

The profession of speech therapy is legally regulated by a statutory instrument. It is not covered in the 1960 Professions Supplementary to Medicine Act. During the negotiations on the Professions Supplementary to Medicine Act the speech therapists decided not to join. They consider themselves not as 'supplementary to medicine' but rather as an independent profession. Also, compared to the other allied health professions, a lot of the work of speech therapists is carried out with children in education.

The statutory instrument which regulates the profession says that no one shall be employed in the health service unless he has a certificate to practice issued by the College of Speech Therapists. "No person shall be employed as an officer of an authority to which this regulation applies, in the capacity of a speech therapist, unless he satifies one of the following conditions:

(1) He holds a certificate issued by the College of Speech Therapists (..),
   (a) certifying that he has attended a course of training and passed an examination, approved by the Secretary of State."[2]

The statutory instrument was amended in 1985 when the speech therapy training became a degree course. This statutory instrument only affects people in the national health service. There are no rules covering people who work outside the health service. Although the great majority of private practitioners are qualified speech therapists there are some who are not qualified as such working particularly in the field of stammering.

With regard to legal liability speech therapists employed by Health Authorities are insured by their Health Authority for actions which fall within the realm of their professional duties. Speech therapists who are a member

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[1] Co-author of this chapter is C.J. Buitenhuis.

[2] The National Health Service (Speech Therapists) Regulations 1974, No.495.

of the College of Speech and Language Therapists also have professional indemnity insurance.
There are no rules to separate the profession from the medical profession. Speech therapists, however, recognize that the patient's medical condition is entirely the responsibility of the doctor.

There is an open referral system for speech therapy. People can refer themselves or they can be referred by, for instance, health visitors, educational services, school nurses or social services. There are not many people referred by GP's, although the number is increasing. In hospitals the referral is often through doctors, but also the physiotherapist and the occupational therapist can refer patients to a speech therapist. 25% of patients are referred by consultants and only 5% are referred by general practitioners. Another important source of referrals are the health visitors (19%)[3].
A special situation arises for speech therapists working with patients with dysphagia (swallowing disorders). In some cases interventions can be life-threatening. According to the College of Speech and Language Therapists, "Speech therapists should only accept a patient with dysphagia for assessment, treatment and/or management when they have received a written referral from the doctor responsible for the patient. Dysphagia should be specified on the referral."[4] It is, however, not a legal duty that patients have a medical referral.

A.2. Recognition
Recognition of speech therapy is found in its work in the National Health Service. The College of Speech and Language Therapists grants the certificate of competence to practise to all those who qualified through an accredited course. Those who want to practise as speech therapists in the National Health Service must have this certificate.

There is no protection of title or profession. Anyone may call him or herself a speech therapist. Since the first of April 1990 the title one can use after qualifying is Speech and Language Therapist (this used to be Speech Therapist).
There are no related professions as such. People who work in the same field under the supervision of speech therapists are the speech therapy assistants.

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3 House of Commons Hansard, Thursday 16 November 1989, Vol. 160, No.176, Col. 426-431. Written Answers

4 Dysphagia, Position Paper, The College of Speech Therapists, April 1990, p. 7-8.

The professional association is the College of Speech and Language Therapists. Membership of this association is not obligatory. It is advisable to be a member of the professional association because of cheaper professional insurance, professional networks, journals and conferences. For non-members it is not more difficult to get a job, although some districts will only employ speech therapists who are members of the College, because members are supposed to follow the code of ethics and are subject to disciplinary rules. Membership of the College enables speech therapists to use MCSLT after their name. The College of Speech and Language Therapists lays down the academic and clinical standards for the accredited qualifying courses but it is no longer an examining body. Nor does it act as a trade union for speech therapists as with other professional bodies.
There is no registration of speech therapists. There is only a register of members of the College of Speech and Language Therapists.

A.3. Finance
For patients who are treated in the NHS, speech therapy is free. There is, however, sometimes a waiting list for speech therapy in some districts. If people do not want to wait that long for therapy they can if they wish go to a private practice. Then patients either pay everything themselves or they have an insurance policy that covers speech therapy. In Britain BUPA and PPP cover (part of) the costs of speech therapy. If you are a member of these organisations, it is possible to get speech therapy, but not for developmental disorders, it can only be for acute disorders. And usually only if a doctor has authorized it. This is the exception to the open referral system; the referral has to come through a doctor (or a physiotherapist) for BUPA or PPP to recognize it.
Speech therapists in the NHS get a regular salary. In private practice they are paid per hour.
There are no special conditions that must be fulfilled before payment can take place. Speech therapists who operate privately need not be qualified but will not be recommended by the College.

The National Health Service is entirely responsible for speech therapy in both the health service and in education. However, District Health Authorities are only obliged to provide speech therapy. A speech therapist working in education is paid by the health service, and is an employee of the National Health Service.

A.4. Disciplinary rules
The College of Speech Therapists has drawn up a Code of Ethics and Professional Conduct. This code is sent to every newly qualified speech therapist. The College has also drawn up disciplinary rules which, however,

only affect members of the College. The ultimate sanction is to dismiss somebody from membership. Speech therapists working in the NHS are also subject to the NHS' own disciplinary mechanism.

B. EDUCATION

B.1. General

The entry requirements for speech therapy education are different in each place of training. The minimum entry qualifications for training are normally five GCSE and two A-level passes. Some courses require specific GCSE and A-levels, for instance English or Biology. The new certificates, BTEC, will be allowed in place of one of the A-levels.
The duration of the education is three or four years. After qualifying, students have a university degree. There is one post-graduate course of two years. People take this course after qualifying in e.g. psychology or linguistics. Most districts also have in-service courses. These need not be recognized by the College.

With regard to recognition the academic visit is important. Every five years every course is visited by a panel appointed by the College of Speech Therapists consisting of a team of academics, who are both speech therapists and non-speech therapists. They must ensure that the course remains a good course for speech therapy. The course is then formally accredited for another five years. If a course does not come up to standard they are given a warning and are visited again within another two years. If after that time it is still not up to standard the course is suspended. By these inspections the College administers the statutory instrument.
Most of the courses have a route for somebody who is not able to become a speech therapist. They can take the degree without the same level of clinial practice. They then academically have the degree but they will not get their certificate to practice as a speech therapist.

B.2. Position in the education system

Speech therapy education takes place in universities, polytechnics and Colleges of Higher Education. There are 15 places of training. There are no considerable differences of standard between these places of training. After graduating students get a B.Sc or a B.A.

B.3. Content

Speech therapy courses all comprise a theoretical and a clinical element. Courses include the following subjects:

Psychology, including normal development from birth to old age, normal and abnormal developmental processes and behaviour and psycholinguistics;
Phonetics and linguistics, including the analysis and description of speech and language and its mechanisms, normal development of speech, voice, language and fluency;
Anatomy and physiology, including neuroanatomy, specialised anatomy and physiology of the organs used for oral communication and hearing;
Language pathology and therapeutics, including the description, assessment, diagnosis and treatment of disorders of communication.
Other subjects include acoustics, audiology, disorders of ear, nose and throat, education, neurology, orthodontics, plastic surgery, psychiatry, research methodology and statistics and sociology.[5]

The minimum requirements for a course are up to the university. A problem in comparing the various courses is that universities have different names for the same courses. What is called 'communication disorders' in one university may be called 'communication studies' in another. It is up to the inspectors at the visit to satisfy themselves what really happens.

The College of Speech and Language Therapists does not run refresher courses, nor do they control them. The College has developed a number of Advanced Study Courses which take six to nine months part-time and include courses in:
- hearing impairment,
- mental handicap,
- voice,
- learning difficulties,
- aphasia.

These courses are intended to develop specialist expertise. Students get a certificate or diploma at the end.

Every speech therapy course has to have a certain amount of professional practice by the students. All courses have clinical placements. The amount of clinical practice is up to the place concerned. Usually it is between 20 and 25% of the course. Every district should have a clinical supervisor who is responsible for arranging the students' practice at that clinic. The practical training starts with observation and goes on to working with patients but always under supervision of a qualified speech therapist.

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5 Speech Therapy as a Career, leaflet from the College of Speech Therapists.

Once students are qualified they become grade A speech therapists. Then they still have to have a certain amount of supervision. They remain grade A for about a year and then go on to grade B. Speech therapy grades range from a Grade A therapist to a Grade E therapist, Grade E being the most senior grade.[6] Grade A is a grade usually reserved for newly-qualified speech therapists. It may also be used for a therapist coming back into practice after a long break.

C. PRACTICE OF THE PROFESSION

An estimate of the number of speech therapists per April 1, 1990, would be: 3500 practising members of College, approx. 500 not members of College.

Speech therapists work both in hospitals and in community care. Community care includes schools, day centres and old people's homes. There are only a few speech therapists working in private practice full-time. There are approximately 1000 speech therapists with a private practice, and this private practice is then only for one or two days a week. Many speech therapists do not have a single specialism or work in just one area but may have a wide variety of cases.[7]

The work of speech therapists is to identify and treat all sorts of disorders of communication, both acquired and developmental. The speech therapist's role is also becoming increasingly consultative, advisory and educational.[8] A small part of the speech therapist's work is in screening in the field of mental handicaps.

The main medical problems associated with speech handicap are the following:
- mental handicap,
- stammering,
- cerebrovascular accident (CVA),
- deafness,
- cerebral palsy,
- facio-maxillary abnormalities,

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6 This system is in the process of change to three grades only.

7 Manpower Planning Advisory Group, Speech Therapy, An examination of staffing issues, 1989 (draft).

8 Yorkshire. Regional Health Authority, Speech Therapy, Staffing Requirements, January 1990, p.1

- parkinson's disease,
- multiple sclerosis,
- dysphonia,
- laryngectomy,
- head injury and neurosurgery,
- autism.[9]

The largest area of work for speech therapists is in working with children. The complaints in this category include problems in language and speech development, articulation troubles and problems with written language. Also a lot of work is done with deaf children. Another large area is working with the mentally handicapped, both children and adults. In the category of adult patients there are many people with acquired language problems (strokes, progressive illnesses, head injury, dysphonia/laryngectomy).

A speech therapy treatment starts with a detailed assessment of the patient on the basis of which a diagnosis and, when appropriate a treatment plan is made. The treatment can either be individual or within a group. The speech therapist might treat on a one-to-one basis or the speech therapist might advise parents, teachers or spouse. (Or a combination of these).
Treatment may involve communication aids. These include:
Charts,
Sign-language,
Computers,
Mechanical devices.

At the moment there is no real shortfall of speech therapists. With an 8% vacancy rate there are almost enough speech therapists to fill the posts that exist. Many districts however, have below recommended level of Speech Therapy Establishments and there is a need for more speech therapy and more speech therapists.

9 P. Enderby, R. Philipp, 'Speech and language handicap: towards knowing the size of the problem', The British Journal of Disorders of Communication, Volume 21, Number 2, August 1986, p.153-162.

5.2. The legal status, education and actual practice of the profession of speech therapy in the Netherlands

A. LEGAL REGULATIONS

A.1. General

The profession of speech therapy is regulated by law under the provision of the Act on Paramedical Professions pursuant to the Speech Therapy Decree (2 August 1980). The Speech Therapy Decree[10] understands the practice of the profession of speech therapy as: 'The external examination of the extent to which a patient's ability to speak is present and the hearing, voice and organs of speech are functioning. Furthermore investigating whether disabilities in respect of the use of language or speech are present. Speech therapy comprises treatment which, on the one hand, is directed at the restoration or improvement of the function of the organs of hearing, the voice or speech or the regulation of the patient's breathing as required for speech. On the other hand the removal of the patient's disabilities in speaking or using language.'
The treatment mentioned here does not include surgical intervention, the administration of injections or medicines or measurements with medical aids.[11] Activities which are directed at communication training without any question of disability in voice, speech, language and hearing are not paramedical activities but they do belong to the field of speech therapy.

Speech therapists can work in community health care, in ambulatory care (as independent practitioners or in a health centre), in institutions, in education and in business.
In community care, ambulatory care and in institutions the speech therapist works at the referral of a doctor or a specialist-dentist. In community health care there is not always a referral. The doctor does remain responsible for the medical diagnosis. Where information and communicative skills are involved, the speech therapist does not work on the basis of referral from a doctor. This is the case with speech therapists working for the media, professional education and business.

Pursuant to the Decree on Physiotherapy the referrers are doctors and dentists. In practice they include the following[12]:

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10 Logopedistenbesluit.

11 Logopedistenbesluit, 1980. Article 2.

12 J.H. Leenders, 'Logopedie en Foniatrie', 53, 1981, p.345-346.

- GPs for all sorts of patients;
- phoniatrists and ENT-specialists for patients with dysphonia, patients for post-operative therapy of laryngectomy, after removal of polyps, patients with stammer, patients with various types of articulatory disability and patients with hearing disabilities;
- pediatricians for patients with delayed speech and language development, language disabilities, stammering and problems of articulation;
- neurologists for patients with aphasia and dysarthria;
- psychiatrists for patients with psychogenetic dysphonia and aphonia, children with psychiatric patterns of behaviour and language problems, stammerers;
- plastic surgeons to optimalize oral motor function and the speech of schizis patients;
- dentists, orthodontists and oral surgeons for patients with articulation and swallowing problems;
- geriatrics.

A.2. Recognition

The profession of speech therapist is legally recognized within the Act on Paramedical Professions pursuant to the Speech Therapy Decree. Competence to practise as a speech therapist is granted by means of a speech therapist's certificate to practice. The certificate to practice is granted to those who have successfully passed the examination and taken the vow of secrecy. A person who has been granted the certificate to practice has the right to use the title of speech therapist. The Chief Inspectorate of Health maintains a register of qualified speech therapists.
The professional association is the Dutch Association for Speech Therapy and Phoniatry (NVLF)[13]. Membership of this association is not obligatory. On 31 December 1989 the number of members of the association was 4,293.[14] The NVLF is associated with the International Association of Logopedics and Phoniatrics (IALP) and the Commission Permanente Liaison Orthophoniste-Logopède (CPLOL).

A.3. Finance

Funding of speech therapy is closely related to the social sector in which the speech therapist operates. Within the health care system, speech therapy is paid for by the health insurers. The basic health services and independent speech therapy services are paid for by local government. In

13 Nederlandse Vereniging voor Logopedie en Foniatrie.

14 Annual Report 1989 of the NVLF.

special education, the speech therapist is paid by the Ministry of Education and Science, just as the speech therapist teacher at tertiary educations. Within private business the speech therapist is paid by the business itself.
Speech therapists are paid for a treatment unit of thirty minutes. In addition there is a separate rate for speech therapy research (diagnosis, research and establishing the problem) and for group treatment and an additional charge for treatment of a patient at home.

A.4. Disciplinary rules

The Act on Paramedical Professions creates the possibility of disciplinary measures but this has not yet been used.
The speech therapist works according to the Professional Ethical Code set up by the NVLF. In case of disputes on professional practice both the speech therapist and others can resort to the College for Supervision of the Adherence to Professional ethics.

B. EDUCATION

B.1. General

In order to be admitted to the education a 'HAVO'-diploma is required (this means eleven years of education).[15]

Most training programmes make use of research in the area of speech, voice, language and hearing with the objective of determining whether there are counter-indications among the student candidates which would make them unsuitable for the practice of the profession.
The duration of the training programme is four years. The programme falls under the supervision of the Ministry of Education and Science.

B.2. Position in the education system

Speech therapy training is a four-year full time period of training in higher professional education. There are schools of speech therapy in the Netherlands.

B.3. Content

The various speech therapy training programmes have a great deal of freedom in drawing up the syllabuses. In each institution the examinations are implemented in a different way. But all of them have the same point of departure that students must pass the course before the practical internship

15 In counting the assumption is that compulsory education starts at the age of six. However, account should be taken of the fact that in the Netherlands compulsory education starts one year earlier.

period, and a thesis has to be written and an examination taken in the principal subjects (speech therapy), which include four areas, voice, language, speech and hearing. Initial training in speech therapy does not include any special areas of graduation and/or specialisation. There is a national training profile in preparation based on the professional profile legitimized by the NVLF.
The following curriculum is the average curriculum for a speech therapy training programme.

Areas

1 SPEECH THERAPY
- professional orientation
- theory of speech therapy
- training speech therapy skills

2 MEDICAL SCIENCE
- anatomy
- physiology
- medicine
- neurology
- ENT surgery

3 SCIENCES
- acoustics
- electro-acoustics
- audiology
- audiometry

4 BEHAVOURIAL SCIENCES
- agogics
- psychology
- (ortho)pedagogy
- sociology

5 LINGUISTICS
- linguistics
- language development

6 CLINICAL PRACTICE

7 OPTIONAL PROGRAMME

An important component within the training programme is formed by the clinical practice and various training periods and practicals (including observing, testing, research and treatment). The average length of the clinical practice is eight to nine months. In addition to clinical practice in the normal professional field there are academic training periods possible in cooperation with university institutes.
Further training for speech therapists is primarily in the hands of tertiary educational institutes in cooperation with the regional departments of the Netherlands Association for Speech Therapy.
In the area of speech therapy there are three further courses of training: Voice therapy, stammering therapy and aphasia therapy. It will soon be possible to continue the initial training within the context of a university programme and to acquire a university degree in speech therapy. The professional association has been granted a request for the institution of a special university chair in speech therapy. In addition speech therapists can also follow the Advanced Training in Health Care and Dutch degree programmes in Phonetics, Speech and Language Pathology and Management in health care.

C. PRACTICE OF THE PROFESSION

The Chief Inspectorate of Public Health (GHI) carried out research into the professional practice of speech therapists. 4,242 speech therapists registered with the GHI were sent a questionnaire. 4,083 (96%) of the speech therapists responded. 4,009 questionnaires could be analysed. Of the 4,009 respondents 3,142 worked as speech therapists and 332 wanted to work as speech therapists. Research referred to the period 17-21 April 1989.

Speech therapists work in many different places. In the week of the GHI-questionnaire 3,142 speech therapists were working in 4,664 different places. Each week these 3,142 speech therapists worked 21,957 shifts. Half of these were in education including basic health care services. About a quarter of these periods were taken up by speech therapists working in their own practice and 20% by speech therapists in institutional care.[16]

16 Geneeskundige Hoofdinspectie van de Volksgezondheid. Beroepsuitoefening van logopedisten, Rijswijk, oktober 1990.

The working area of speech therapists[17]

working area	location	number of shifts per week	
		abs	pct.
Institutional care	747	3872	17.6
Ambulatory care	1566	5820	26.5
Education/BAGD/GGD	2028	10985	50.0
Day centres	220	841	3.8
Other	103	439	2.0
Total	4664	21957	100.0

Speech therapy is concerned with hearing, primary oral functions, breathing and vocalization, speech and use of language. The activities of the speech therapist are directed at restoring or improving the patient's communicative abilities.[18]

The activities of the speech therapist comprise both diagnostic research and advice and treatment. Disabilities where speech therapy treatment and/or advice is necessary include the following:

a. Hearing disabilities;
   including congenital and early acquired impairment of hearing or deafness, middle ear pathology, pathology of the inner ear, central hearing pathology (e.g. as a consequence of CVA) and pathology which is not easily localized.

b. Disabilities of voice and breathing;
   including incorrect breathing, singing in the wrong register, incorrect use of voice, voicelessness as result of laryngectomy, loss of voice or disabilities of various causes, nasality, constricted voice.

c. Speech disabilities;
   including speech development disabilities, articulation disabilities, disabilities in rhythm, tempo and fluency, stammering and disabilities which result from brain damage.

d. Language disabilities;
   including language development disabilities, disabilities and defects in the area of language understanding and language use in respect of

17 Idem.

18 Professional profile of the Speech Therapist, NVLF, 1989.

the immediate environment, language disabilities as a result of brain damage.

A description of speech therapy treatment with examples of many treatment options would lead to a fragmentary description that would not do justice to speech therapy treatment. There is no all-embracing description of speech therapy treatment.

5.3. The legal status, education and actual practice of the profession of speech therapy in the Federal Republic of Germany

A. LEGAL REGULATIONS

A.1. General

Legislation for speech therapists is to be found in the "Professional Speech Therapy Act" (7 May 1980) and the Training and Examination Regulations for Speech Therapists (1 October 1980).[19] The law provides protection for the title (Professional law), i.e. only those who have followed a recognized course of training may call themselves speech therapists. The training and examination regulations govern theoretical and practical training. The professional law is an outline legislation. It applies to the whole of the Federal Republic and specifies what speech therapists may do, not what they may not do. Thus far there have been no amendments or additions to this law.

Speech therapy is prescribed by physicians. The physician does not write a referral but a prescription for medication. In this prescription, the physician can refer to various other published material, for example an introductory reference work on voice, speech and language disorders, prepared by the joint project Working group of the health insurance association. These are physicians and insurers. No therapy can be provided for complaints that do not appear on its list of services. The financial regulations are given in the directives on drugs and other aids i.e. conditions governing the insurance organisation's payment of benefits. The health insurance agency may only reimburse the costs of speech therapy when they were prescribed by a doctor. The directives regulate when and by whom treatment may be given and the doctor prescribes speech therapy as treatment. In health care,

[19] Gesetz über den Beruf des Logopäden und Ausbildungs- und Prüfungsordnung für Logopäden.

there is also a law on paramedics ('Heilpraktikergesetz'). This law allows other people who are not physicians to establish themselves in practice and to be active in medicine. Speech therapists are not governed by 'Heilpraktikergesetz'.
Speech therapists are not paramedics, they provide voice and speech therapy and may only be reimbursed for treatment when this is prescribed by a physician. They can operate without prescription if the patient pays himself. They may do so as long as they do not advertise services which are provided by physicians. They may not infringe upon the competition laws.

A.2. Recognition
The profession is recognized in law, pursuant to the professional law. The professional title of speech therapist has been legally protected since 1980. This means that only those who have had the training prescribed by law for this paramedical profession may call themselves speech therapists ('Logopäde/Logopädin'). The actual work of speech therapists is however not protected.[20]

Professions related to speech therapy are recognized but not as speech therapy. It is only for speech therapy that there is a uniform national regulation. The following professions are related:
- State approved speech therapist ('Sprachtherapeut'). This title is legally protected)
- Breathing, speech and voice teacher ('Atem-, Sprech- und Stimmlehrer'). There is no professional law for these paramedics nor is the title protected by law. Such therapists are trained in the Schlaffhorst-Andersen school. There is one single institution in the Federal Republic where one can pursue this program for breathing, speech and voice teachers. (cf DelFerro in the Netherlands).
- Breathing therapist ('Atemtherapeut'). This title is not protected.
- Teaching diploma ("Diplompädagoge'). The diploma is protected. No one, who does not have one, can claim to have a teaching diploma. But anyone can call themselves a teacher of speech therapy ('Sprachheilpädagoge')[21]

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20 Verstehen und verstanden werden; 25 Jahre Zentralverband für Logopädie e.V., Zentralverband für Logopädie, Köln, 1989.

21 Teachers of speech therapy are special teachers for those with speech disorders. There are also teachers who specialize in learning difficulties and teachers who specialize in behavioural problems etc.

- Clinical linguists ('Klinische Linguisten'). They pursue a study in linguistics at a university and then take continuing education. The title is not protected by law.
- Speech teachers ('Sprecherzieher'). They are active in the non-pathological voice and speech area, e.g. schools of drama and radio stations. Speech teachers have a three year period of training. It is not a clinical profession.

Registration

Registration is at the local health authority. When a speech therapist establishes a practice he must register with the local health authority. If he is employed in a clinic, the institution will in any case be under the supervision of the health authority.

The professional association is the central association for speech therapy ('Zentralverband für Logopädie'). There is no compulsory membership in this organisation. It is however recommended because the organisation represents the interests of all members and also the interests of those who are not organised. Information is also given about further education activities and services at reduced costs are offered on the establishment of a private practice. The organisation also offers group insurance. The association also includes non-speech therapists among its members. There are 2,400 members of the professional association and almost another 200 speech therapists who are not members.

A.3. Finance

Medical benefits are regulated in the Social Service Code ('Sozialgesetzbuch'), Volume V. In general, the health insurance organisation pays; this is either the public insurance authorities or private insurance companies. Where the patient is a member of a public health insurance plan, he pays his premiums to the insurance plan. The public insurers then generally pay for the therapy. Where the patient is insured by a private insurance plan, he has to pay the therapist directly and submit the account to the private health insurance agency. Whether the patient receives reimbursement depends on the nature of the insurance. Private insurance plans often require the patient to make additional payments.
There is a list of benefits in which the types of therapy are specified. This includes the length of time that the treatment may continue with reimbursement. Therapy is not however merely a question of time. The length of time is dependent on the therapy.

Special conditions are agreed in medical insurance contracts. Speech therapists have to be on the insurers list. A number of other conditions are also attached. For example, if the speech therapist wants to open a private practice, he must be able to prove that he has two years professional experience in the service of someone else.

Speech therapists work in clinics, with health authorities, rehabilitation institutions, children's homes, out-patient centres, in the service of colleagues or in public service.

A.4. Disciplinary rules

There is no disciplinary code for speech therapists. The insurers may withdraw recognition if a speech therapist breaks his contract. His licence to practice will then be removed. It is also possible to cancel someone's professional title. The existing measures are either removal of the licence, effectively withdrawing the right to independent practice, or removal of the professional title so that the person in question can no longer call himself a speech therapist. There is no ethical code as such.

B. EDUCATION

B.1. General

The pre-requisites for the entry to training are completion of a secondary school ('Realschule') or another equivalent school or after a vocational training period, following lower secondary school, of at least two years and having reached the age of eighteen.[22]

The entry requirements are fairly low. Speech therapists are not satisfied with the law, because they want the entry requirements to be at university entrance level and they want training institutes to have polytechnic/university status. 90% of the students do have university entrance qualifications.

The period of training lasts three years. The training and examination regulations determine the nature of the training and also admission to examinations, etc. The basis is theoretical and practical training. There is a set minimum number of hours.

The training takes place in recognized schools, in hospitals and in private institutions. There are separate institutions which belong to hospitals, but are not integrated in the activity of the hospital, neither does the hospital have all the patients that are required for the training. There are also an increasing number of private institutions which offer training that also has to be paid for privately. Where a state institution is involved such institutions

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22 Law on the Speech Therapy Profession (Section 4).

cannot require fees because regulations require state education to be without financial participation of the trainees. The private schools must operate under the professional law. Pupils receive the same professional title. There may be no difference in level. The number of private schools is increasing.

The training is recognized by the State. There is a certificate and a professional diploma. The certificate comes from the school and the professional diploma from the Ministry or from the local government authority. The professional diploma grants the title.
There is also additional training for educationalists or for social education teachers. However, since they cannot call themselves speech therapists, they cannot sign contracts with the health insurance organizations. There is also a course for communication therapists. They may also have private practice. Many specialize in a particular disorder, e.g. aphasia and they may sign contracts with the health insurance organisations thus enabling them to be paid for their special treatment by the insurance organisation, but not for anything else.

B.2 Position in the education system
The training program is below university level. The training specifications differ from one German state ('Land') to another. Many are technical schools and many are special schools. They are called schools for speech therapy or technical schools. There are 26 state approved schools. There are a relatively large number of private schools for those changing professions because the local employment authority pays for their training. There are approximately 300 graduates each year (i.e. approx. 900 or 1000 training places).

B.3. Content
The minimum number of hours for theoretical and practical training are prescribed by law:

- Professional, legal and constitutional studies	60 hrs
- Anatomy and physiology	100 hrs
- Pathology	20 hrs
- Otorhinolaryngology (E.N.T.)	60 hrs
- Pediatrics and neuropediatrics	80 hrs
- Child and adolescent psychiatry	40 hrs
- Neurology and psychiatry	60 hrs
- Orthodontics and oral surgery	20 hrs
- Phoniatrics	120 hrs
- Aphasiology	40 hrs
- Audiology and Pediatric audiology	60 hrs

- Electro and hearing aid acoustics	20 hrs
- Speech Therapy	480 hrs
- Phonetics/linguistics	80 hrs
- Psychology and clinical psychology	120 hrs
- Sociology	40 hrs
- Pedagogy	60 hrs
- Special pedagogy	80 hrs
- Voice training	100 hrs
- Speech education	100 hrs
	1740 hours

Practical training comprises:	
- Clinical Practice	340 hrs
- Practice of speech therapy	1520 hrs
- Practice in cooperation with members of the therapeutic teams	240 hrs
	2100 hours

Training comprises at least 1740 hours of theoretical training and 2100 hours of practical training.[23]
There is considerable supervision during the practical training. At the beginning of the training in a pathology, there is a great deal of supervision and this is gradually reduced. The practical training involves observation and work, under continual supervision.

The central association for speech therapy offers continuing education. The association has a further and continuing education institute which offers courses. There is also an annual conference, and seminars on several occasions each year, for twenty to thirty participants. The state organisations of the national organization offer regional continuing education options. There are also many courses on the open market. There is no legally specified job description for teachers of speech therapy. The professional association has in cooperation with the German Society for Phoniatrics and Pediatric Audiology made joint recommendations for minimum requirements for speech therapy training centres.
There is also recommendation from the same committee for the training of teachers of speech therapy. It is also possible to follow continuing education courses in the area of stammering therapy. These courses count as additional training and are not protected by law.

[23] Notes on the profession of Speech Therapy, p.11.

When the speech therapist signs a contract with an insurance organisation, he undertakes to pursue further training and must also prove that he has done so. This is true for other paramedical professions in the Federal Republic. Continuing education does not mean higher charges on the insurance organisation.

C. PRACTICE OF THE PROFESSION

The speech therapist's job is the diagnosis and therapy of communication disorders. This involves both advising the patients and their relations and parents.[24]

Speech therapists do little in the area of prevention because the insurance organisations do not pay for it. They do not do much outpatient work either. They are principally involved in therapy. Advice is part of therapy. A great deal of advice is given to the immediate family and friends on the treatment particularly with patients liable to strokes or patients suffering of aphasia and with children. Aftercare is also part of the therapy particularly in the case of strokes.

The disorders that a speech therapist treats are many and varied. These are disorders of the voice (e.g. hoarseness), of language (e.g. speech disorders following a stroke and speech development disorders) and in speaking (e.g. stammering) and hearing.[25]

Speech therapists work in:
- Hospitals,
- Private practices,
- Special institutions for the disabled,
- Institutions for multiply disabled persons,
- Special schools, (few of them),
- Rehabilitation centres,
- Neurological institutions.

Approximately 30% (700-800) of the speech therapists are in private practice. There are few positions in the public service. Speech therapists are also employed by ENT specialists. A small number of doctors also have audiological-phoniatric assistants who carry out hearing tests. These assistants fall under the speech therapists. They are employed by the doctor

[24] Verstehen und verstanden werden, Zentralverband für Logopädie, September 1989.

[25] Zentralverband für Logopädie.

and the doctor charges for them as his service. This entails another scale of fees and a lower salary than that of speech therapists.

The relationship to a doctor is regulated by the drug and medical aids directives ('Heil- und Hilfsmittelrichtlinien'). Speech therapists only work on a doctor's prescription. They work under direct supervision only in cases where they are employed by someone else, and then too it is not continual supervision. The speech therapist makes his own findings and his own treatment proposal. Sometimes an interim report to the doctor and to the insurance organisation is required, for example with aphasia patients who require long term treatment.
Speech therapists collect data for a speech therapy diagnosis ('logopädische Befunderhebung'). As they belong to a paramedical profession which requires a doctor's prescription, they are not allowed to make their own diagnosis.

Speech therapists treat a wide range of disorders. Primarily from the following disability groups:
- Voice disorders with organic, functional or psychogenic causes (for example stress damage to the voice in professional speakers);
- Status after a laryngectomy (with training of an artificial voice);
- Centrally determined disorders of the speech development with children (for example after brain damage in early childhood);
- Delays in speech development from various causes;
- Centrally determined language and speech disorders with adults and children on the basis of neurological or internal disease (for example Aphasia, Dysarthria);
- Functional and organic disorders of nasality;
- Disorders in the flow of speech (for example stammering).[26]

5.4. The legal status, education and actual practice of the profession of speech therapy in Belgium

A. LEGAL REGULATIONS

A.1. General

At this moment there is no legal regulation of the profession of speech therapy in Belgium. The only regulation that exists is a Royal decree of 1967 which provides a legislative framework for further regulations. On the basis of this decree the Ministry of Health will regulate the paramedical

[26] Blätter zur Berufskunde Logopäde/Logopädin, pp.2-3.

professions. The first step in this regulation has been the creation of the National Council for Paramedical Professions. This council will advise the minister about questions relating to the paramedical professions. The council has divisions for each profession. There is also a Technical Commission which will deal with financial matters.

At the moment the only recognition of the profession is by RIZIV (Public Institute for Illness and Handicap Insurance/ Rijksinstituut voor Ziekte en Invaliditeitsverzekeringen). This institute recognizes certain paramedical professions. The basis for this recognition is the possession of a diploma that is recognized by the Ministry of Education. If a professional is recognized by RIZIV (part of) the cost of some treatments is reimbursed. A condition for reimbursement is a medical referral. Certain specialists are authorized to refer to speech therapy. There is a list of disorders that can only be treated on referral and for which reimbursement is possible. This list applies to both Flanders and Wallonia. No referral is needed for treatments that are not on this list. Patients pay such treatments themselves. There are also additional health insurances for complaints that are not covered by the regular reimbursements. These regulations only apply to speech therapists who work in health care as opposed to those who work in education where different regulations apply.

There are related professions that cover part of the field of speech therapy, e.g. neuro-linguists who are occupied with the relationship between neurological anomalies and speech-language disorders. Another, smaller, group is those of the neuro-psychologists. There are also certain fields of work on which both speech therapists and other professionals are working. An example of this is dyslexia which is not only the field of speech therapy but also of neurolinguistics, neuropsychology and remedial teaching.

There are two professional associations for speech therapists. The professional association for Flanders is the Flemish Association of Speech Therapists ('Vlaamse Vereniging voor Logopedisten') and the association for the Walloon provinces is the Professional Association of French-speaking Speech Therapists ('Union Professionelle des Logopèdes Francophones'). Speech therapists are not obliged to be a member of a professional association.

A.3. Finance

Financial regulations are different for the various fields of work. For speech therapists who work in the health sector the financial settlements are regulated through RIZIV. Speech therapists in education are paid by the Ministry of Education.

Speech therapists in private practices have two options with regard to financial settlements. Either the patient pays the whole amount to the speech therapist and then gets part of the costs reimbursed from the health insurance fund or the patient only pays a contribution and the rest is paid directly by the health insurance fund. There are two conditions that must be met before reimbursement can take place. The first condition is a medical referral from any of the recognized specialists, the second is the written assessment of the speech therapist. For disorders that are not part of the list of disorders for which the treatment is reimbursed the patient pays everything himself. The costs are calculated per treatment of thirty minutes.
Speech therapists who work in education, in rehabilitation centres or in hospitals are mostly salaried.

A.4. Disciplinary rules

There is no disciplinary law for speech therapists.
The professional associations have created an ethical code which only applies to members. Measures that can be taken on the basis of this ethical code are dismissal from membership and informing the authorities of irregularities.

B. EDUCATION

B.1. General

The entry requirements for a speech therapy training is a secondary education diploma ('diplome d'enseignement secondaire supérieure'). This means six years of secondary education after six years of primary education.

B.2. Position in the education system

For speech therapy there are two kinds of training. There is higher education outside the university which takes three years and leads to the title of 'gegradueerde in de logopedie'. After this training students can go on to university training in speech therapy ('licentiaat in de logopedie'). The entry requirement for this type of training is a diploma in speech therapy. It is also open to doctors, licentiates in medical sciences, licentiates in psychology and licentiates in educational sciences. This training takes three years and leads to the title of 'licentiaat in de logopedie'. The differences between the diploma and the degree courses are primarily in the theoretical training. The university training is more theoretical and it includes scientific research. It is also a preparation for the doctorate in speech therapy.

In Wallonia there are 5 diploma courses and 2 university courses and in Flanders there are 4 diploma courses and 1 university course.

The education in speech therapy is recognized by the Ministry of Education. The diploma's from the higher education outside the university are also recognized by the Ministry of Health with regard to the practical training.

B.3. Content

In the Royal decree from 9 November 1964 the minimum curriculum requirements for the diploma course in speech therapy is given. There is no minimum curriculum requirements for the university education in speech therapy.

The three year diploma course consists of 1600 hours theory on general and logopedic subjects, 1500 hours of practice and 600 hours training in residence. The practical training, i.e. actually working with patients takes up about one fifth of the training. During the practical training there is much supervision both from a qualified speech therapist at the hospital or clinic and from a teacher from the school. It is not possible to do the practical training in a private speech therapy practice. The university training in speech therapy also has obligatory practical training. There are no requirements as to the length and the place where this practical training must take place.

Both the professional associations and the paramedical educational institutes organise refresher courses. These short courses are not recognized by the Ministry of Education. There are also symposia on for instance neuropsychology or dyslexia. Except short courses there are also courses that are recognized as part of the so-called Social Promotion. These courses have a duration of one or two years part-time. For speech therapy there are courses in audiology and in the adapting of hearing aids. In Wallonia there is a one year full-time specialization for the deaf and blind. These longer specializations are organised by the educational institutes and are recognized by the Ministries of Education and Health.

C. PRACTICE OF THE PROFESSION

The number of qualified speech therapists in Belgium is 2700 in Flanders and 3300 in Wallonia. Of these speech therapists approximately 40% work full-time in the profession, 30% work part-time in the profession and 30% no longer practise speech therapy.

Speech therapists work both in salaried service and in private practice. Speech therapists in salaried service work in rehabilitation centres, medical-educational institutes, primary education, private primary education ('bijzonder lager onderwijs'), in hospitals and in homes for the elderly where they

work with aphasia patients. In Flanders approximately 20% work in rehabilitation centres and 14% work in schools. 22% of the speech therapists work part-time in a combination of forms of practice. The others (44%) work in a variety of practice forms such as in hospitals, in firms or in homes for the elderly.[27]
In Wallonia the majority of speech therapists work in private practice. There are three possibilities of private practice. The speech therapist can have a practice at home, he can visit the patients at their homes or he can go to schools. In the latter case the speech therapist is paid by the parents who can get these costs reimbursed by RIZIV. In special education the situation is different and there speech therapists are in salaried service.

The relation between the speech therapist and the physician still has to be regulated. With the present RIZIV regulations there are certain treatments for which a medical referral is required and others which can be done independently. The speech therapy division in the National Council for the Paramedical Professions is drawing up lists of speech therapy treatments with an indication whether a certain treatment requires a medical referral or whether it can be done independently.
At the moment there are also speech therapists who work under supervision of a physician, for instance in rehabilitation centres.

It is estimated that the kinds of patients that are treated by speech therapists is distributed as following:
25% young children (until 6 years old)
50% children of primary school age (6 to 12 years old)
10% adolescents (12 to 18 years old)
15% older than 18 years.

The kind of treatment that is given by speech therapists is very broad and there is no exhaustive description of it.

[27] Vlaamse Vereniging voor Logopedisten (inquiry).

5.5. A comparison of the position and education of speech therapy in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium

A. LEGAL REGULATIONS

Speech therapists in the Netherlands and in Germany need to have a medical referral before they may treat a patient. In the Netherlands they do not need such a referral if they only work in the field of advice and communication skills. In the United Kingdom there is an open referral system for speech therapy, which means that people can go directly to a speech therapist. The medical referral in the Netherlands and in Germany is not only a legal obligation, it is also a condition for reimbursement of costs by the health insurance companies. Because in Belgium the profession is not legally regulated there is no obligatory medical referral but it is a condition for reimbursement of the costs.

Speech therapists in the Netherlands must register with the Chief Inspectorate of Public Health. For German speech therapists there is no obligatory registration. Because speech therapists in the United Kingdom are not part of the Professions Supplementary to Medicine Act, there are no regulations with regard to registration. However, there is a statutory instrument which states that speech therapists who want to work in the National Health Service need a certificate from the College of Speech Therapists. For speech therapists working outside the National Health Service there are no such regulations. Speech therapists in Belgium are registered with the Ministry of Health. This registration is a precondition for recognition by the health insurance fund.

For speech therapy patients in England who are treated in the National Health Service, the treatment is free. If they go to a speech therapist in private practice it depends on their private medical insurance whether they get a reimbursement of (part of) the costs. In such cases a medical referral is often required and there is usually only reimbursement for acute treatment. In the Netherlands the costs of speech therapy treatment are reimbursed by health care insurers. A referral is usually required before payment of costs can take place. In Germany the health care insurers usually pay the costs of the treatment. If there is no medical referral, there is no reimbursement of costs. Patients who go to a private practice often have to pay a small contribution. In Belgium the list of disorders for which the treatment is reimbursed covers part of the speech therapy treatments.

In England, the Netherlands and Belgium there are no professions that are closely related to speech therapy. In Germany there are such related professions. These are not recognized as speech therapy but some do have their own recognition.
Speech therapists in England, the Netherlands and Belgium can start a private practice immediately after qualifying. In the Federal Republic of Germany they have to have worked for two years as a speech therapist in employed service.

Speech therapists in the United Kingdom, the Netherlands and Belgium are subject to the codes of ethics from their professional associations. These codes only apply to members of the association. In Germany there is no ethical code for speech therapists. None of the four countries has a disciplinary law for speech therapists.

In the Netherlands both the work and the title of speech therapists are protected. In Germany speech therapists only have protection of title while British speech therapists have no protection of title or profession. In Belgium there is no protection of the title or the profession. With the new law on paramedical professions both the title and the work itself will be protected.

B. EDUCATION

There are differences between the four countries with regard to the minimum number of obligatory years of education before starting a speech therapy education. In the Federal Republic of Germany this minimum number is ten years, in the Netherlands it is eleven years and in England and Belgium it is twelve years.[28]

In England the education of a speech therapist takes three or four years, in the Netherlands it is four years and in the Federal Republic of Germany it is three years. In Belgium the diploma course takes three years after which a university education in speech therapy can be done which takes another three years. There are also differences in the position in the education system. In the United Kingdom the education takes place in polytechnics or universities, in the Netherlands and Belgium it is higher education outside the university and in the Federal Republic of Germany it is usually a 'Berufsfachschule', which is secondary vocational education. (See also diagram of the education systems).

[28] We started counting from six years onward. However in the Netherlands and the United Kingdom obligatory education starts at the age of five.

In all four countries the training contains a period of practical work. In the United Kingdom and the Netherlands this practical work takes up about one quarter of the education, and in Belgium it is about one fifth of the education. According to the legal minimal requirements in the Federal Republic of Germany the practical training takes up about half of the education. Thus it seems that the education in the Federal Republic of Germany is much more practice oriented than those in the other three countries.

In the Netherlands, Belgium and England there are no non-recognized courses for speech therapists. In Germany there are courses that teach similar subjects but which are not regulated as speech therapy education.

Although an exact comparison of the content of the courses is difficult to make without additional research, there is, on the basis of the available information, no reason to assume that there are major differences between them. The major differences that have been found are the entrance requirements, the position in the education system, the duration of the training and the distribution between theory and practice in the training.

C. PRACTICE OF THE PROFESSION

Although there is no obligatory referral in England, in practice patients are often referred. In the Netherlands and Germany patients are almost always referred, as is required by law. In Belgium the referral is needed for reimbursement of the costs but it is not (yet) required by law.
In England speech therapists work both in hospitals and in the community, only a few work in private practice. In the Netherlands approximately half of the speech therapists work in education which includes community health care ('basisgezondheidsdienst'). The others either work in hospitals or in private practice. In the Federal Republic of Germany about 30% of the speech therapists work in private practices. The others work mainly in hospitals. In Belgium there is a difference between Wallonia and Flanders. In Wallonia the majority of speech therapists work in private practice which also includes working in schools. In Flanders fewer speech therapists work in private practices and many work in a combination of places, e.g. part-time in education and part-time in rehabilitation centres.

According to the professional profile of the speech and language therapists of the CPLOL ('Commission Permanente Liaison Orthophoniste-Logopède'), speech therapists work in the field of human communication disorders. In this context, human communication comprises 'all those processes associated with the comprehension and production of oral and written language,

as well as all forms of non-verbal communication' (Professional Profile of the Speech and Language Therapist).

In the four countries the largest group of patients are children. Other important groups of patients are those with communication disorders as a result of neurological damage and the group of the mentally handicapped, both adults and children.

6. OCCUPATIONAL THERAPY IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM

6.1. The legal status, education and actual practice of the profession of occupational therapy in the United Kingdom

A. LEGAL REGULATIONS

A.1. General

The profession of occupational therapy is regulated by the Professions Supplementary to Medicine Act (1960). In January 1962 the Council for Professions Supplementary to Medicine (CPSM) appointed the Occupational Therapists Board. It is the function of the Board to promote high standards of professional education and professional conduct among members of the profession. There is no other legislation specific to occupational therapy.

There is no obligatory referral but the code of ethics from the CPSM says that occupational therapists should only treat a patient if that patient 'has been referred to him/her for treatment by a registered medical practitioner' or if the occupational therapist 'has direct access to the patient's doctor'.[1]

Occupational therapists work both in the National Health Service and in the Social Service Departments (or Social Work Departments in Scotland) of Local Government, although the majority work for the National Health Service.[2] Occupational therapists have worked, in increasing numbers, in the Social Service/Work Departments since the creation of these departments in the early 1970s. Their work has been particularly focused on a piece of legislation passed in 1970, which requires local authorities to assess the needs of disabled people and provide for those needs where they are established.

Many of those who require the service of an occupational therapist do not require a doctor, e.g. people with handicaps or the disabled, who are not ill. They can either refer themselves or they can be referred by other people

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1 The Occupational Therapists Register, 1989-90, Council for Professions Supplementary to Medicine 1989.

2. The NHS is concerned with health care which is both in hospital and in the community but always related to health needs. Social services departments are concerned with social care (residential care for elderly people, child and family services, care and support of people with disabilities).

such as other health care professionals, neighbours, voluntary organisations etc. Occupational therapists will accept those referrals but they must have the information from the patient as to who the patient's doctor is, so that they can make contact with the doctor if necessary. The situation can be complex if the policy of a service is not to contact the patient's doctor without the patient's express permission. This occurs for instance, in some mental health facilities. Many of these centres have a consultant psychiatrist who gives sessions, so they claim that although they do not have access to the patient's doctor, they do have access to medical advice.
Occupational therapists also work in education, though not in the same numbers as speech therapists. Even when they work in education they are often employed by either the NHS or social services departments. There are very few who are employed by the educational department.
At least 20% of occupational therapists work in local authorities. In the community setting they work primarily with people with physical disabilities, including the elderly. An important part of their work is in relation to equipment and adapting peoples homes, putting in stairlifts etc. Treatment as practised in the NHS settings is not often practised in local authority work although therapeutic intervention does occur. The large waiting lists in most local authorities for occupational therapy assessment is one reason why more treatment in this area of work does not take place.

A.2. Recognition
The profession is legally recognized through the Occupational Therapists Board of the Council for Professions Supplementary to Medicine. For occupational therapists who want to work in the NHS or in Social Services Departments registration is mandatory. The registration must take place with the CPSM. The NHS and the Social Services Departments can employ people who are not state registered but they cannot call them occupational therapists and use their occupational therapy skills.

The Occupational Therapists Board of the CPSM accepts the following qualifications for state registration:
- DipCOT
- DipOT (Kent, or any other properly approved higher education institution).
- BSc (and Hons) in OT
- BA (and Hons) in OT.

The professional title is Occupational Therapist. This title is not protected, nor is the profession.

The professional association is the British Association of Occupational Therapists (BAOT). The College of Occupational Therapists is the charitable

and educational arm of the professional body and is a wholly owned subsidiary of the BAOT. Membership of the professional association is not obligatory. It is advisable though because it supplies professional indemnity insurance and accident cover and it keeps members up to date with the developments in the profession.

In occupational therapy there are no related professions as such. Art, music and drama therapists work very closely with occupational therapists but they are recognized in their own right. They are not registered by the CPSM. Part of the work of occupational therapists is carried out by unqualified staff, the so-called Helpers, Helper Technical Instructors or Technical Instructors. For every 100 qualified occupational therapy (whole-time equivalent, wte) posts in the NHS, there are 77 (wte) established posts for unqualified staff.[3] In Local Authority Social Service (LASS) Departments the ratio of unqualified to qualified is even greater.[4]

A.3. Finance

For patients who are treated in the NHS occupational therapy is free. Many NHS hospitals also have their own private wards. This private ward can use NHS staff in which case a rate per hour is charged to the patient for the service of that occupational therapist. Private patients can get charges reimbursed by their insurance.

Occupational therapists in the statutory services get paid a regular wage. In the NHS this is on the Whitley scales, in local government it may be Whitley or National Joint Council (NJC) rates. There are some occupational therapists in private practice in which case they charge per hour. They are employed directly by the patient.

The entry into active practice in the National Health Service is regulated by state registration. There is no statutory policy with regard to entry into private practice and private practitioners need not be state registered. There are very definite guidelines from the professional body that an occupational therapist should not go into private practice until they have done a certain amount of years of service of which a certain number should be within the area specialty in which they intend to practice.

There are two sets of disciplinary rules. One is the disciplinary code of the CPSM. If occupational therapists breache these rules they can be struck off

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3 Occupational Therapy, An emerging profession in health care, Report of a Commission of Inquiry (Louis Blom Cooper QC, Chairman), p.67, Duckworth, London, 1989

4 Louis Blom-Cooper, p.71

the register. In less severe cases the occupational therapist can be cautioned or disciplined. The disciplinary codes of the CPSM are enforced by Government. There is also the code of conduct (code of ethics) of the professional body which does not have the power to prevent or allow a person to work. However, should an occupational therapist infringe standards very substantially then it would be in the capability of the professional body to terminate their membership.

B. EDUCATION

B.1. General

Entry requirements for the schools of occupational therapy are university entry requirements, i.e. five O-levels or GCSE-equivalents, two of which must be at A-level.

There is a whole range of education possibilities for occupational therapy. The majority of the students train for three years full time. For those diplomates who have done the three year diploma course, there are an increasing number of courses available to achieve a degree. There are also some four year degree courses. (only Northern Ireland) and there are four-year in-service part-time courses. These are for people employed as OT Helpers/Assistants or Technical Instructors. At the end of the course they get the diploma of occupational therapy. The in-service courses are all based in schools of occupational therapy which may be in NHS premises or in colleges, polytechnics etc. They are not based in education department schools. There are two-year full-time accelerated courses for people who have an appropriate first degree (e.g. psychology).
The three year courses are either degree courses or diploma courses. Most of the diploma courses are now moving towards degree, except the four year inservice part-time courses.
A lot of the schools are in polytechnics or universities. Some are in private establishments but linked to a university or polytechnic.

The name of the diploma or degree is Diploma of the College of Occupational Therapists or Degree in Occupational Therapy.
The State Registration Board (CPSM) has to approve of the training of occupational therapists. They do that on behalf of the Privy Council through the Joint Validation Committee with the College of Occupational Therapists. There are no non-recognized courses.
There is a helpers course for people who work with occupational therapy. This course is recognized by the professional body. The course is currently being revised in order to fit in with the National Vocational Qualifications Scheme (NVQ)

B.2. Position in the education system

The education is at university or higher education level. Some of the schools are in higher education establishments. The differences between diplomas and degrees in terms of educational content are very small and there are no differences in terms of registrability to practice. In England there are 19 schools, including the in-service and the accelerated courses. This amounts to just over a thousand places a year. (Scotland has three schools and Northern Ireland has one). All existing three-year full-time courses are changing from diploma to degree.

B.3. Content

There are certain minimum requirements in the education. The schools plan their programmes based on nationally agreed guidelines which are about to be revised. The diploma that is currently validated allows for very substantial variation amongst the schools as to how it is taught.
All the schools in the United Kingdom are recognized by the World Federation of Occupational Therapy (WFOT) which means that the minimal amount of hours for for instance clinical practice is always adhered to. WFOT sets down standards that have to be reached by any school that it is going to recognise.

Clinical practice (where the student works in a service area either in the NHS or in a local authority) takes up about one third of the training. The clinical practice component has a minimum requirement of 1000 hours. The academic content of the course is substantial and there are also the practical aspects of the course in terms of craft activities, computing, horticulture and orthotics. There is continual supervision during the practical training. In clinical practice students will always be supervised by a clinical supervisor who is a practising therapist. They may do some activities without the supervisor being present but it will all be under the control of the clinical supervisor. The supervisor will have attended some clinical supervisor courses. He or she will be responsible for the students work. The requirement of 1000 clinical practice hours is the same for all courses including the accelerated course.

In occupational therapy there are many possibilities for further training and for refresher courses. The professional association sets up a whole range of courses including refresher courses in occupational therapy. There are in-service courses and post-registration courses. There are various voluntary bodies who put together courses. Local authorities also usually have a training unit and all put on courses on which occupational therapists can participate. These may not be OT-specific, but many local authorities do run courses especially for occupational therapists. There are no statutory cour-

ses in occupational therapy post registration which means that there is no course which you have to have done before you can work in a certain area (like midwifery in nursing).

C. PRACTICE OF THE PROFESSION

Most occupational therapists work in the NHS: just over 5,000. There are nearly 1,000 wte posts in local authorities which means that there are well over 1,000 people working in local authorities. Just over 500 work in the private sector.[5]
Occupational therapists work in virtually every field, with people with a mental illness including elderly mentally ill people, in specialist areas such as substance abuse, in companies making or supplying equipment and in voluntary bodies. The majority, however, works in the NHS, mostly in therapy.

Physicians and others refer the patient but the occupational therapist has to determine what occupational therapy that patient gets. The physician gives the diagnosis, some also specify the kind of treatment they wish the patient to receive. Occupational therapists are not obliged to follow such demands but if they do not they must inform the referring physician. Most doctors however will not specify and occupational therapists plan and are responsible for their own treatment. Occupational therapists make their own diagnosis, related to the profession, but not a medical diagnosis. They make their own proposal for treatment.

Occupational therapy treats patients of all ages who suffer from any condition which might benefit from their intervention, although the majority of the patients are elderly. The content of the treatment is determined by the patient's need, the skill of the therapist and the available resources. Therapists should not do anything for which their training has not prepared them. For instance, occupational therapists are trained to supervise drug taking but they may not prescribe drugs. That is the responsibility of the doctor.
The profession has expanded more than the other professions supplementary to medicine. A survey indicated that there were 1149.6 NHS (wte) funded posts unfilled at 31 March 1988 in the 192 districts which responded to the enquiry. Another 221 equivalent posts in the 86 responding local authority departments were unfilled. On a national level this amounts to approxi-

5 Louis Blom-Cooper, p.78

mately 10.3% vacancy of funded posts in the NHS and 11.9% in the Local Authority Social Service Departments.[6]

6.2. The legal status, education and actual practice of the profession of occupational therapy in the Netherlands

A. LEGAL REGULATIONS

A.1. General

The profession of occupational therapy is regulated by the Act on Paramedical Professions ('Wet op de Paramedische Beroepen') and a specific regulation ('Ergotherapeutenbesluit', June 25, 1981). This specific regulation defines the work of an occupational therapist as:

a. research as to whether and to what extent the patient, as a consequence of a complaint, is restricted in carrying out activities which are part of daily living and work and investigating the means to be used to remove this disability;

b. carrying out activities by the patient as meant under **a** which are directed at the removal of the disabilities meant under **a** with or without the aids provided to him;

c. giving advice to the patient in respect of a suitable living or working environment and the necessary facilities.'

Occupational therapists work after referral of a physician. Some examples of referring physicians are rehabilitation specialist, physician in nursing homes, psychiatrist or general practitioner. The form of the referral is a written order which has to contain the medical diagnosis.

A.2. Recognition

The profession is legally recognized on the basis of the Act on Paramedical Professions and a specific regulation. The professional title is 'Ergotherapeut'. The title and the profession are protected: only those who are in the possession of the certificate to practice may use the title and practice the profession.[7] The certificate to practice is given to those who have passed the examination and have taken the oath of confidentiality.[8] Occupational therapists who want to practice their profession have to register with the

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6 Louis Blom-Cooper, p.28/29.

7 Nota van Toelichting Ergotherapeutenbesluit.

8 Ergotherapeutenbesluit, article three.

Chief Inspectorate of Public Health. An employer may not hire a non-registered occupational therapist.
The professional organisation is the Netherlands Association of Occupational Therapists ('Nederlandse Vereniging voor Ergotherapie (NVE)'). There is no obligatory membership of this organisation. The NVE is member of the World Federation of Occupational Therapists (WFOT).

A.3. Finance
With respect to finance, a distinction should be made between treatment of patients staying in institutions and ambulatory patients.

Patients in institutions:
In certain institutions (so called "AWBZ-institutions"), occupational therapy can be part of the treatment package. In hospitals, occupational therapy can be financed on the basis of regulations applying to special budgets.

Ambulatory patients:
Occupational therapy is only reimbursed as part of a certain form of combined treatment (daytime-treatment in recognized nursing-homes or rehabilitation centres). Occupational therapy in primary health care is not reimbursed by the public insurance companies.

The public insurance companies do not have regulations that apply specifically to occupational therapy. Certain private insurance companies do reimburse occupational therapy. Occupational therapists primarily work in salaried service in institutions.

A.4. Disciplinary rules
Disciplinary rules with regard to occupational therapy do not exist. The Act on Paramedical Professions does allow disciplinary rules, but until now this possibility has not been used. Neither is there an ethical code.

B. EDUCATION

B.1. General
The condition of entry to the courses in occupational therapy is a secondary education diploma ('HAVO'), which means a minimum of eleven years schooling. There are no other conditions of entry. It is desirable that the applicant has taken biology, physics, chemistry, English and handicraft.
The training in occupational therapy falls under the Ministry of Education and Science. The regulations of this Ministry grant a high degree of autonomy to the courses. There are only broad regulations with respect to the structure and content of the education and with respect to the final exami-

nation. These regulations are laid down in the Curriculum Occupational Therapy ('Leerplan Opleiding Ergotherapie') and the Examination Rules ('Examenreglement HBO-Wet 1984')[9].

B.2. Position in the education system

The education in occupational therapy is higher education outside the universities. The education takes four years: 75% consists of theoretical training and practical work and 25% consists of supervised clinical practice. The clinical practice is both in general and in mental health care. In the Netherlands there are two institutes providing courses in occupational therapy which are both recognized by the World Federation of Occupational Therapists (WFOT). There are no other courses. Graduates of the courses in occupational therapy can go to the university, to study, for example, movement sciences, management in health care or one of the social sciences.

B.3. Content

The courses in occupational therapy consist of the following subjects: occupational therapy, medical sciences, behavioral and social sciences, choice of subjects and practical training.

The education consists of the following fields of learning:

OCCUPATIONAL THERAPY

a. work of the occupational therapist

- occupational therapy examination
- treatment
- prevention
- advice/information
- administration/management/organisation
- quality care/research

b. occupational therapy activities

- activities with regard to:
  self care
  productivity
  leisure
- activities with regard to:
  material/technical aspects
  design aspects

9 Studiegids Ergotherapie 1990-1991, Hogeschool van Amsterdam, p.11.

ergonomic aspects
skills
- activities with regard to:
adaptation and facilities in houses, work places etc.

MEDICAL SCIENCES
kinesiology
general pathology
specific pathology
rehabilitation
geriatrics
psychiatry

BEHAVIORAL AND SOCIAL SCIENCES
psychology
theory of social work
sociology
philosophy

CHOICE OF SUBJECTS

PRACTICAL TRAINING

Post-graduate courses are organised by the professional association in collaboration with the two institutes providing courses in occupational therapy.

C. PRACTICE OF THE PROFESSION

Occupational therapy is practised in health care, special schools for handicapped children and in the field of welfare.

Health care

Occupational therapy is practised in rehabilitation centres, psychiatric centres, nursing homes for general and mental (psychogeriatric) patients, institutions for mentally handicapped people, psychiatric departments and rehabilitation departments of general hospitals and departments for day-time treatment of nursing homes.

Special schools

Occupational therapists work in schools for somatically and/or mentally handicapped children.

Welfare

Occupational therapists work in homes and day rooms for people with a somatic or mental handicap and in homes for the elderly.

In the context of primary health care, occupational therapy could be practised in health centres, community nursing and ambulatory mental health care, but the actual number of occupational therapists in these places is rather low. A very limited number of occupational therapists work in private practice. Increasingly, occupational therapists are being involved in projects of home care, both in general and mental health care.

The Chief Inspectorate of Public Health has done a study on the fields of work of occupational therapists. A questionnaire was sent to all occupational therapists (1,615) who were registered in April 1989 with the Chief Inspectorate. 1,562 (97 %) of these occupational therapists responded to the questionnaire and the questionnaires of 1,507 occupational therapists could be analysed. 1,065 of these occupational therapists were actually practising the profession.[10] Altogether, these 1,065 occupational therapists worked 7,779 shifts (of approximately 4 hours) a week. Almost one third (31.8 %) of these shifts was practised in rehabilitation homes (including rehabilitation of children and special hospitals), 30 % in nursing homes and one sixth (16.5%) in general and academic hospitals. Overall 85% of all shifts occurred in institutions. The remaining 15 % occurred in ambulatory care, education and other locations[11]

field of work	location	% shifts per week
Institutional care	924	85.3
Ambulatory care	109	6.5
Education	102	4.9
Other	35	3.2
Total	1170	100.0

Occupational therapy is intended for people who - as a result of a disorder in their functioning - are no longer able to live or work as they used to do or prefer to do. The nature of their problems may be somatic, sensory, mental or emotional or a combination of these. The problems may be innate or acquired, acute or insidious, temporary or chronic.

10 Practice of the profession of occupational therapy. A research, 17-21 april 1989, Geneeskundige Hoofdinspectie van de Volksgezondheid, Rijswijk, October 1990.

11 idem, p.5-6.

As described in the professional profile of occupational therapists occupational therapy treatment is defined as:

'Optimalisation of the functioning of the person requiring help by activities that have been developed methodically with or without the aids provided for the purpose and either supported by advice or not.
The occupational therapist turns concrete everyday activities deriving from self care, housekeeping, relaxation, work and transport into a part of the therapy.'[12]

Process of occupational therapy
After observation and diagnostic testing, the occupational therapist determines the treatment goal and the treatment program, if possible in cooperation with the patient/client. People with whom an occupational therapist is concerned may have difficulties in moving, acting, organising or choosing; they no longer fulfil their own needs and wishes or the expectations of others. Occupational therapy aims at an optimal performance of the patient/client. This is achieved by means of training aimed at learning or improving specific acts of everyday life.

The work of an occupational therapist consists of the following aspects:

Training a patient to act "once again", for example:
- training of grasping and letting go,
- learning the order of acts,
- training of organisation and planning based on a specific choice,
- training of taking an initiative,
- training of the independent use of (public) transportation,
- training of self care,
- training of vacuum cleaning, doing the laundry,
- training of participation in the working process.

Training a patient to act "differently", for example:
- training of dressing/undressing using only one hand,
- training of cooking while being seated,
- training of a different pace,
- training of seeking solutions for problems,
- training of cooperation.

12 Deskundigheidsomschrijving Ergotherapeut (concept).

Counseling the patient/client on finding out and improving of (own) options and, if necessary, training of these possibilities, for example:
- jointly looking at options in self care and housekeeping,
- jointly looking at options of working and preparation for work,
- jointly choosing of and training of new activities as an alternative to work or sports, learning to choose a new study or volunteer work and learning to organise these activities, learning to use public facilities such as the library and the job centre.

Selecting, constructing and learning to use ortheses and aids, for example:
- take someone's measurements for and prepare an orthesis in order to (learn to) be able to grasp; training to use specially adapted materials such as cutlery and toys,
- take someone's measurements for a wheelchair and learning how to manoeuvre a wheelchair,
- draw up a list of required adaptations of houses and working environment; training to use these adaptations.

Providing instruction and advice to those who are concerned with the patient/client such as partners, parents, nurses, teachers or employers, for example:
- giving advice on how parents can carry their child, how to feed a child, learning how to play, learning rules of life,
- giving advice on how a to help a patient at going to the bathroom, cooking or hobbies,
- giving advice on which chair, which typing machine a patient/client needs; which kind of work, which work pace and which guidance a patient/client needs.

6.3. The legal status, education and actual practice of the profession of occupational therapy in the Federal Republic of Germany

A. LEGAL REGULATIONS

A.1. General

Since 1977 there has been a law governing occupational therapists in the Federal Republic of Germany. This law specifies who is authorized to use the professional title. The law also governs training and examinations. It does not however provide the detailed regulations. The Federal states ('Länder') can make their own individual implementation provisions. So far only Lower Saxony and Bavaria have done so and only for training. The

implementation provisions regulate the conduct of the examinations, for example, what subjects are to be examined in which year, resitting the examination, what conditions the school has to meet, etc. The training in Lower Saxony and Bavaria falls under the jurisdiction of the Ministry of Culture, in other federal states this is generally the province of the Ministry of Social Affairs.

Occupational therapists in private practice are only allowed to work on the prescription of a doctor. Failing this, the insurance organisation does not pay. In hospitals occupational therapists also require a medical prescription. There are many occupational therapists, for example in special schools, who work without medical supervision. They also often work in old peoples homes and nursing homes without supervision.

A.2 Recognition

The profession is legally approved by the state. The title of occupational and work therapist ('Beschäftigungs- und Arbeitstherapeut', BT/AT) is a protected one. The title 'ergotherapeut' which is used by many members of the profession is however not protected. The profession, as such, is not protected either.

Graduates of the school must officially apply with their certificate for permission to use the professional title. They must apply to use the title and must take a health certificate with them, indicating that they are not subject to any physical or mental disabilities or addiction which would prevent them from practising the profession. The certificate is signed by the local government authority. They also have to take with them a certificate of good conduct issued by the police.

There is no registration requirement.
The professional association is the association for occupational and work therapists ('Verband der Beschäftigungs- und Arbeidstherapeuten'). Membership of this association is not compulsory, but it is recommended. Members of the association can take part in continuing education at lower rates. It is estimated that there are between 8,000 and 9,000 occupational therapists of whom approximately 4,000 are members of the association.
Music therapy is a related profession but it has its own system of recognition.

A.3. Finance

Everyone who earns a salary below a particular level is required to be publicly insured. People who earn above this may be privately insured.

They do not have to be insured, it is possible to be without insurance. The publicly insured patients pay a small daily sum for hospital care.
Occupational therapists are employed in hospitals or other institutions like special schools, special kindergartens, old peoples homes or day clinics or they work in private practice. Patients have to be referred to private practice by their doctors. The doctor may not prescribe more than ten treatments. The therapists must then send the account to the health insurance organisation and receive their fee from them. The patient has to pay 10% himself. A treatment costs approximately DM 35 and patients have to pay 10% of this. The patient has to pay one hour (DM 35) himself for a prescription of ten hours.
In private practice, there is a contract between the association and the insurance organisation which sets particular conditions. One of these conditions is that an occupational therapist must have been employed for two years before he/she can start in private practice. The practice itself must meet particular conditions. The occupational therapist must spend at least one week each year in further training and he must be covered by particular forms of insurance. In private practice, payment is per treatment. A treatment unit lasts 45 minutes.
Hospitals receive a nursing fee per patient and this covers everything, the costs of the doctor and therapy and it depends on the hospital as to whether they regard it as necessary to employ occupational therapists or not. Occupational therapists are employed in public service and by private employers.

A.4. Disciplinary rules

There is no disciplinary code for occupational therapists. The law says however that a person who uses the professional title without permission is committing an offence. This offence may lead to a fine of up to DM 5000. Permission to use the title can also be removed when the conditions are not met.
The professional association wants to set up a code of ethics. Such a code has also been set up by COTEC (Committee of Occupational Therapists for the European Communities).

B. EDUCATION

B.1. General

Entrance requirements for training are secondary school graduation which means 10 years of schooling. That is 'Mittlere Reife', 'Hauptschule' or 'Realschule' and a period of professional training of at least two years duration.

The course in occupational therapy lasts three years and comprises 1820 hours of clinical practice (working with patients) and 2360 hours of theoretical training. The theoretical training also includes practical training (handicraft, manufacturing aids).
Training takes place in special schools which are either attached to a hospital or separate. Practical training takes place in hospitals or other institutions with an occupational therapy department. Graduates receive a certificate and permission to use the professional title (which says that they can call themselves occupational or work therapists). The certificates are drawn up by the state or the school with the signature of the state authority and the permit is drawn up by the supervisory authorities.
Training has been regulated federally since 1977 and is recognized by the state. All schools in Germany are recognized by the state. The World Federation of Occupational Therapists (WFOT) requires its members to register schools which meet the standards of the world federation. In Germany this organisation may however not go to schools and test them because this is the job of the state. The association only accepts those schools who invite the association to look them over and check them and when a school meets the requirements, the association registers them with the world federation. Many of the schools are not on the world federation list. Thus far there are approximately 45 schools and only 20 or 21 are recognized by the world federation.

B.2. Position in the education system
The training does not take place at university/polytechnic level but at a lower level ('Berufsfachschule'). Students do not need university entrance requirements. There is one school which insists on student attendance. The law says that students may be absent for a maximum of twelve weeks in three years. If this is exceeded then special permission has to be received from the authorities for the student to be admitted to the examination.

Training programs are formally all at the same level, but the quality of the schools differs considerably. There are commercial schools recognised by the state but not by WFOT. In terms of the federal law these schools must offer a certain number of hours. Whether these hours are actually given is not monitored by the state.

B.3 Content

Pursuant to the training and examination regulations for the BT/AT profession the following subjects are part of the training program.[13]

Theoretical Training

1.	Professional, legal and constitutional studies	60 hours
2.	Hygiene	60 hrs
3.	Biology, anatomy and physiology	180 hrs
4.	General pathology	60 hrs
5.	Special pathology	260 hrs
6.	Introduction to pharmacology	20 hrs
7.	Sociology	40 hrs
8.	Psychology	100 hrs
9.	Pedagogy and special pedagogy	60 hrs
10.	Handicraft and design technology	800 hrs
11.	Moving therapy, games and musical form	100 hrs
12.	Help in mastering every day activities (self help)	80 hrs
13.	Subject specific treatment techniques	240 hrs
14.	Language and writing	60 hrs
15.	Principles of occupational medicine	60 hrs
16.	Experience in working world	40 hrs
17.	Principles of work therapy	40 hrs
18.	Special work therapy assignments	60 hrs

Practical training

1	Practice in occupational therapy	1200 hrs
2	Practice in work therapy	500 hrs
3	Experience in various businesses and activities in various businesses to collect experience on working practices	600 hrs

Most important are what are called subject-specific treatment techniques. This is the direct theory for practical activity. Practical training is also very important. Students have to successfully take part in the training program to be able to take the examination. They must complete every course successfully.

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13 Ausbildungs- und Prüfungsordnung für Beschäftigungs-und Arbeitstherapeuten (Training and examination regulations for work and occupational therapists) vom 23.3.77. Published in the Federal Law Gazette Part I, Nr 19 31.3.1977.

The first phase of the practical training is always observation, the second is working under supervision, the third is extensive independent work. In federal regulations nothing is specified about supervision during the practical training.

There is no official further training program for BT/AT. There is specialisation in particular areas of work on the principles of the further training provisions, for example:
- Participation in a course on neurophysiological treatment measures in pediatrics or with hemiplegic patients (Bobath course),
- Participation in seminars for problems in perception disorders (sensory integration following the Ayres or Frostig Seminar).[14]

The professional association provides further training for occupational therapy teachers. This is not recognized by the state. There is also additional pedagogical training for teachers in the health care system.

C. PRACTICE OF THE PROFESSION

Occupational therapy has, as its objective, in cooperation with other therapeutical measures, the restoral or first line restoral of lost or absent physical, intellectual or mental functions. In this, the principal goal is reaching the highest level of independent activity in daily life.[15]

Occupational therapists work in all areas, prevention, therapy, advice and after care. The association does not have any record of numbers, because there are no registration requirements. BT/AT can be active[16]:
- In clinics and hospitals in the disciplines of orthopedics, rheumatology, traumatology, neurology, geriatrics, internal medicine, pediatrics, child and youth psychiatry, psychiatry and psychosomatic medicine;
- in institutions for disabled children, like special schools, kindergartens, homes and early treatment centres;
- in geriatric centres like old people's nursing homes and day clinics;
- in institutions for medical and social and professional rehabilitation;
- as principal teaching staff in training centres.

Since 1980, it has been possible to set up in private practice. There are approximately 300 private practices with approx. 380 therapists. There are

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[14] Blätter zur Berufskunde, Beschäftigungs- und Arbeitstherapeut, 1987, p.25

[15] idem, p.2.

[16] idem, p.4

no indications of the numbers employed in hospitals, or in schools or kindergartens.
The association must accept a private practice, and must ensure that it meets all the requirements. As a result the association knows who is in private practice. They are also registered with the medical insurance organisations because only approved private practices can bill the insurance organisations.
In hospitals, the physicians have official supervision and must prescribe the therapy. In practice it is rather different. In private practice a doctor gives a referral and afterwards the therapist operates independently and informs the doctor after ten treatments of the results.
The doctor sends a diagnosis, the occupational therapist makes his own therapeutic diagnosis because there are often other deficits in addition to the official diagnosis which need treatment. For that reason, the occupational therapist always collects his own data for diagnosis. The medical diagnosis is always on the treatment form. The doctor can insist that the occupational therapist follows this diagnosis.

The treatment differs according to the discipline, for example in functional treatment, joint mobilisation and muscle training take place, the provision of aids and training with aids, intellectual training and coordination exercises

- with children;
  observation training, self-help training, getting dressed, etc.
- psychologically ill patients;
  problem recognition, self esteem is generated, communication training, relearning of basic work skills.
- geriatrics;
  communication skill is maintained, intellectual training, joint protection training for rheumatism
- pediatrics;
  advice to parents, inspecting the facilities at home.

6.4. The legal status, education and actual practice of the profession of occupational therapy in Belgium

A. LEGAL REGULATIONS

A.1. General

At the moment there is no legal regulation of the profession of occupational therapy in Belgium. Occupational therapy is one of the professions that must be regulated under the Royal decree from 1967. This decree gives a legislative framework for further regulations. The first step in this regulation

has been the creation of the National Council for Paramedical Professions which will advise the Minister about questions relating to the paramedical professions. The council has divisions for each profession. There is also a Technical Commission which will deal with financial matters for all the paramedical professions. This Commission will describe the work of the professions and indicate for the different aspects whether it can be done independently or after a medical referral.

Because the profession is not (yet) legally regulated there is no obligatory referral. The basis for the recognition of occupational therapy is the possession of a diploma that is recognized by the Ministry of Education and registration with the Ministry of Health.
With regard to the reimbursement of the costs only certain specialists can refer patients to occupational therapy. These are specialists in rehabilitation and in physical medicine. When the profession is legally regulated there will be an obligatory referral for certain aspects of occupational therapy.

A.2. Recognition
The profession is not yet legally recognized although some form of recognition can be found in the RIZIV-regulations.

The title that is used in Belgium is 'ergotherapeut/ergothérapeute'. Neither the title nor the profession is protected.

The professional association is the Belgian federation for occupational therapists.[17] It is a national body which is subdivided in two associations, one for the French-speaking part of the country ('Association des Ergothérapeutes') and one for the Dutch-speaking part ('Vlaams Ergotherapeutenverbond'). Membership of the professional association is not obligatory.

In the field of occupational therapy there are certain aspects and techniques which they have in common with other professions, for instance with the 'psycho-motricité'.

A.3. Finance
Financial regulations for occupational therapy in hospitals or institutions are based on a lump sum for rehabilitation. The costs of occupational therapy are part of the sum of money which is used for the total amount of care. The condition for reimbursement is that there is a contract between

17 'Nationale Belgische Federatie van Ergotherapeuten/Fédération Nationale des Ergothérapeutes'.

the hospital or institution and RIZIV ('Public Institute for Illness and Handicap Insurance').
In private practice there is no reimbursement of the costs of occupational therapy. There are very few private occupational therapy practices and those who work in private practice only do so part-time.
There are in Belgium also occupational therapists who work privately in hospitals. They are paid a gross salary by the hospital and have to pay their own social costs. The gross salary depends on the amount of patients that require occupational therapy. This kind of private practice is diminishing.
Although everyone who has a recognised diploma and is registered with the Ministry of Health can start a private practice there are very few private practices. This is a result of the fact that occupational therapy in private practice is not reimbursed by the health insurance fund.

The disciplinary rules or code of ethics which will be applied, will be those of the Committee of Occupational Therapists for the European Communities (COTEC).

B. EDUCATION

B.1. General

The entry requirement for occupational therapy training is a secondary education diploma. Such a diploma can be obtained after six years of secondary education.

The duration of the training for occupational therapy is three years full-time. This leads to a diploma in occupational therapy ('graduaat in de ergotherapie'). The training is recognized by the Ministry of Education and by the Ministry of Health.
There are no non-recognized schools of occupational therapy.

B.2. Position in the education system

The course in occupational therapy is higher education outside the university. For those who have the diploma it is possible to continue with a university course in occupational therapy. This course takes two years and leads to the title of 'licentiaat in de ergotherapie'.

There are in Belgium 14 higher education courses, of which 10 are recognized by the World Federation of Occupational Therapy (WFOT) and there is one university course.
The Belgian school association invites all schools to follow at least the WFOT-Minimum Standards for the education of occupational therapists.

B.3. Content

The training in occupational therapy is a three year full-time course of 36 weeks per year based on 32 hours per week. The courses have a minimum of 1200 hours of guided clinical practice. However, the re-organisation of higher education will lead to a lower number of hours. WFOT still requires a minimum of 1000 hours. There is always supervision during the practical training both from a qualified occupational therapist at the hospital or institution and from teachers from the school.

There are possibilities for refresher courses. These courses are organised by the schools, the institutions or by the professional association. The courses are not recognised by the Ministry of Education.

C. PRACTICE OF THE PROFESSION

Since 1965 10,000 people have qualified as occupational therapists. These occupational therapists are registered with the Ministry of Health. It is not known how many actually practise occupational therapy. The professional association does keep a record of how many occupational therapists are working and where they work but this only applies to members of the association. Only a minority of qualified occupational therapists are members of the association.

According to the professional association the majority of occupational therapists work in hospitals and institutions, mostly in therapy. Institutions includes rehabilitation centres, homes for the elderly, psychiatric institutions, special education etc.

The occupational therapist always works in a team. The specialist in charge decides that a patient needs some form of occupational therapy. Which treatment is given is left to the occupational therapist. Reimbursement of the costs of treatment only takes place if the responsable physician is a specialist in rehabilitation or physical medicine.

Occupational therapists are not allowed to make a medical diagnosis; they should make their own working diagnosis from which they can develop an adequate treatment planning.
Occupational therapists in hospitals and institutions always work in a team. This is a result of the financial regulations which are such that occupational therapy is not paid separately but is part of the overall costs of treatment. The team in which an occupational therapist works may include a doctor, a nurse, a physiotherapist, a psychologist, a speech therapist and a social worker.

Occupational therapists work with all age groups and treat occupational dysfunction from whatever origin. The treatment of elderly people has developed rapidly over the last few years.

6.5. A comparison of the position and education of occupational therapy in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium

A. LEGAL REGULATIONS

In the Netherlands and in the Federal Republic of Germany occupational therapists only work after a referral from a doctor or specialist in hospital. In the United Kingdom there is no obligatory referral although the statement of conduct from the Occupational Therapists Board of the Council for Professions Supplementary to Medicine (CPSM) states that occupational therapists should seek a medical referral before treating a patient. Because the profession is not legally regulated in Belgium there is no obligatory referral. However, a referral is necessary for reimbursement of the costs.

Occupational therapists in the Netherlands must be registered with the Chief Inspectorate of Public Health. British occupational therapists must be state registered to work in the National Health Service, though not to work privately. In Belgium occupational therapists are registered with the Ministry of Health. This registration is a precondition for recognition by the health insurance fund. For occupational therapists in the Federal Republic of Germany there is no obligatory registration.
In the Netherlands, Belgium and the United Kingdom occupational therapists could start a private practice immediately after qualifying. In Germany occupational therapists have to have worked for two years in employed service before they may start a private practice.

In the United Kingdom occupational therapy is free for patients who are treated in the National Health Service. Private patients can get charges reimbursed through private medical insurance. In the Netherlands and Belgium occupational therapy is reimbursed for treatment in institutions where it is part of the lump sum for a treatment. In Germany reimbursement of the costs of occupational therapy only takes place if there has been a medical referral.

With regard to occupational therapy there are no related professions as such. In the United Kingdom the art, music and drama therapists work very closely with occupational therapists but they are recognized in their own right. Part of the work of occupational therapists is carried out by assistants and technical instructors. In Germany there are also musical therapists who have their own recognition. In Belgium the work of the so-called 'psychomotricians' partly overlaps with the work of occupational therapists.

The Netherlands, Belgium and Germany have no ethical codes or disciplinary rules for occupational therapists. Occupational therapists in the United Kingdom are subject to two sets of disciplinary rules. The Council for Professions Supplementary to Medicine has disciplinary rules with a sanction of removing people from the register, and the British Association of Occupational Therapists has disciplinary rules which only apply to members of the College. The ultimate sanction is dismissal from membership.

There are differences between the four countries with regard to the protection of title and profession. In the United Kingdom the professional title is 'occupational therapist'. Only the title 'state registered occupational therapist' is protected. There is no protection of the profession. In Germany the title "Beschäftigungs- und Arbeitstherapeut" is protected, but the title "Ergotherapeut" which is also used, is not protected. In the Netherlands the protected title is 'ergotherapeut' while the profession of occupational therapy is also protected. In Belgium the profession is not yet regulated which means that neither the title nor the profession are protected.
None of the countries have legal disciplinary rules for occupational therapists.

B. EDUCATION

The minimum number of obligatory years of education before starting an occupational therapy education is shorter in the Federal Republic of Germany (ten years) than it is in the Netherlands (eleven years) or the United Kingdom or Belgium (twelve years).[18] Another difference is found in the position in the education system. In the United Kingdom the education takes place in polytechnics or universities, in the Netherlands and Belgium it takes place in higher education outside the university, and in Germany it takes place in secondary vocational education ('Berufsfachschule'). (See also diagrams of the education systems). The duration of the education in

18 In calculating the number of compulsory years of schooling counting started from the age of six. However, in the United Kingdom and the Netherlands compulsory education begins at the age of five.

7. ORTHOPTICS IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM

7.1. The legal status, education and actual practice of the profession of orthoptics in the United Kingdom

A. LEGAL REGULATIONS

A.1. General

The legislation regulating the profession of orthoptics is the Professions Supplementary to Medicine Act of 1960, which was amended in 1966 to incorporate the orthoptists. The Professions Supplementary to Medicine Act 'provides for the establishment of a Council, boards and disciplinary committees for certain professions supplementary to medicine, for the registration of members of those professions, for regulating their professional education and professional conduct and for cancelling the registration in cases of misconduct..'[1].

The Council for Professions Supplementary to Medicine and the Boards were established under this Act. Each Board is an autonomous statutory body and not a committee of the Council. The Orthoptists Board was established in 1966. It consists of representatives elected by the profession's registrants and also of medical members who, in the case of orthoptics, are now nominated by the College of Ophthalmologists on behalf of the Royal College of Surgeons and Physicians. There is also an Educational Representative, nominated by the Department of Education and appointed by the Council.

Orthoptists are subject to the Statement of Conduct of the Orthoptists Board. According to the Statement of Conduct orthoptists must receive their patients from registered medical practitioners. "No registered orthoptist should undertake the examination or treatment of a patient unless that patient has been referred to him/her by a registered medical practitioner."[2] A proposal to change the Statement of Conduct and create a more open referral system is currently under discussion. Orthoptists also receive many patients through school medical referrals.

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1 The Orthoptists Register 1989/90. CPSM, p. iii

2 Statement of Conduct, The Orthoptists Register 1989/90, p. xii.

The patient can be referred by any registered medical practitioner. In hospitals the bulk of referrals comes from ophthalmologists but can come through any speciality, e.g. paediatrics or general medicine. Much of the work of an orthoptist is in community screening, in which case referral is direct from the general practitioner or community medical officers.

A.2. Recognition

The profession is statutorily the responsibility of the Orthoptists Board. Orthoptists who work in the National Health Service (NHS) are obliged to be registered by the Orthoptists Board. The qualification which provides eligibility for registration is currently the diploma of the British Orthoptic Society. The Board also recognizes the Australian diploma in orthoptics and the British diploma is recognized in Australia. These are the only diplomas that are mutually recognized.

Registration must be renewed with the Board each year. Orthoptists have to pay a retention fee which is twelve pounds per year and an initial fee for registration.

The professional title is orthoptist. This title is only protected for orthoptists who work in the National Health Service.

A profession in which overlap occurs with orthoptics is the optician. The optician's work is mainly confined to refraction. Within their degree course they only do a very short course in orthoptics. Opticians are recognized by the General Optical Act of 1957. Another related profession are the dispensing opticians. They can only dispense and order glasses but cannot refract. Overlap also occurs with the optometrists who work in refraction and glaucoma. Most of the optometrists who work in refraction, work outside hospitals (approx. 90%). Also with professionals who work in the low vision aid field, in fundusphotography and electrophysiological techniques, a considerable amount of overlap occurs.

The professional association is the British Orthoptic Society. 90 to 95% of practising orthoptists are members of the professional association. The professional association covers the negotiations for orthoptists and also continuing education. Membership of the professional association is not obligatory. It is, however, advised that orthoptists become a member because the Society covers the insurance for professional indemnity. This insurance is cheaper than an individual insurance. Orthoptists have to be a full member of the Society in order to be covered with insurance.

A.3. Finance

Orthoptist's work in the NHS is paid by government resources. Patients do not pay the treatment, other than through a levy on their salaries.

Orthoptists are paid a regular salary. There is no capitation system for orthoptists.

In private practice there are two different types of practice. In the one type the orthoptist is attached to a particular ophthalmic surgeon. He charges the patient and then pays the orthoptist a salary. In the other type the orthoptist is in private practice in his or her own right. The patients pay the orthoptist and get a reimbursement from their private insurance. In these cases the orthoptist is paid per item of service.
There is more private practice now than there ever was. This has to do with a shift in the cover of insurance. There are more possibilities of recovering the cost of orthoptic treatment. The general rule, however, is that without referral there is no reimbursement of costs.

According to the Board's Statement of Conduct orthoptists are not allowed to advertise in an "unprofessional way". Orthoptists in private practice are allowed to notify any registered medical practitioner in the area. This has to be within the medical group. Orthoptists may also work in the pay of another professional. They cannot work within an ophthalmic optician's practice doing orthoptic work if this would contravene the Board's Statement of Conduct which says that a registered medical practitioner must make the referral.

Separate from the Board is a manpower planning advisory group which is looking at the distribution of orthoptists over the country. This committee has only been in existence for three years and they do not yet have enough information. So there is, as yet, no policy in this field.

A.4. Disciplinary rules
The Statement of Conduct gives advice on what is considered infamous conduct in a professional respect. The Statement of Conduct is produced by the Board's Disciplinary Committee after consulting the Board and the Council and is revised from time to time. Neither the Board nor its Disciplinary or Investigating Committee can initiate actions against registrants. Complaints must be formally received either from an interested party who has made a statutory declaration or from a public official, or as a result of a court case. The Board's Investigating Committee considers whether the action complained of could bring the professions into disrepute. If the Committee considers that there is a case to be answered, it is referred to the Disciplinary Committee. The latter has regard to the facts of the case and assesses in a formal hearing whether the practitioner has brought the profession into disrepute by "infamous conduct". If the Committee comes to that conclusion, the registrant is disregistered. An exception to the above is

in negligence cases, where the plaintiff has recourse to an action in the civil courts for damages. Usually, these cases are not taken up by the Investigating and Disciplinary Committees.

B. EDUCATION

B.1. General

The entry requirements for the orthoptic training are university entry requirements, i.e. 2 A-levels and 5 O-levels. In 1992 the method of training orthoptists changes from being a diploma course in NHS training schools, of which there are ten, to two university centres (Liverpool and Sheffield) and one training school in Schotland in a Higher Education Collge. At present the 10 schools only produce 50 students a year. When the courses become degree courses the entry requirements will be set by the academic establishments responsible for the courses.

If a student has reached the level of university entrance he/she has completed primary education and at least 7 years (often 8) of secondary education, which means a total of 12 or 13 years full-time education.

The duration of the diploma course is three years (with a minimum of 120 full-time weeks). The degree courses will also be three years. In the degree courses the academic and theoretical side will expand. At present the teaching hours are 1000 to 1200 hours over three years. These hours vary from school to school. There is a 40 to 42 week year for the three years. In England and Wales teaching currently takes place in NHS hospitals, in Scotland in a College of Higher Education. The teachers in these schools have a clinical commitment as well as a teaching role. They also supervise the students' practical work. When the degree courses are established the academic staff will be separate from the service department. It is anticipated that the two English courses will then be offered in Departments of Orthoptics sited in the Faculties of Medicine of two universities and the Scottish course as a part of the Faculty of Health Studies at Queen's College Glasgow. The academic departments in the Faculties of Medicine and at the College in Scotland will have the same arrangements that are present in medical schools in that the teachers of medicine and the teachers in orthoptics also have honorary contracts in the NHS. In this way they will not only teach but also practise their subject. The Orthoptist Board will be inspecting these institutions in the next two years.

The name of the diploma is Diploma in British Orthoptics. In 1992 in England this will be an Honours Degree in Orthoptics awarded by the above two institutions. In Scotland it is proposed to offer an unclassified degree in

1991 or 1992. The Orthoptists Board of the CPSM is the registration body and is statutorily responsible for the standard of training and can withdraw approval from institutions which do not meet its standard. At present the diploma examinations are delegated to the British Orthoptic Society to carry out the actual examinations. They also award the diploma. The diplomas awarded by the British Orthoptic Society therefore provide eligibility for registration with the Board. When the degree courses are established they will be offered by the academic institutions. The Board will approve external examiners for the degree courses. These external examiners will be listed by the Orthoptist Board.

There are no non-recognized schools or courses. The ophthalmic opticians run a diploma in orthoptics which they recognize but which is not recognized as a state registration qualification.

B.2. Position in the education system

The present diploma of the British Orthoptic Society is considered to be the equivalent of an unclassified degree. Orthoptists can therefore enter post-university degree courses.

B.3. Content

The main subjects of the training are special anatomy and special physiology, which is ophthalmic and neuro-orientated. In the preliminary course students also do general anatomy and general physiology. (50 hrs).
Other subjects are:

- optics,
- ophthalmology,
- neuro-ophthalmology,
- other ophthalmic subjects:
  - refraction (orthoptists do test patients for glasses but they are, by law, not allowed to prescribe them),
  - biometry,
  - health service organisation,
  - professional organisation.
- optional:
  - behavioral sciences,
  - research projects.

There will be minimum requirements for the courses. These have been submitted to the CPSM.

There are post-diploma courses in:
glaucoma management,

biometry techniques,
fundus photography,
paediatric orthoptics.
These courses are done mainly by the British Orthoptic Society.

At the moment the distribution between practical and theoretical training is about 50-50. When the courses become degree courses, they will become more theoretical and less practical (approx. 2/3 - 1/3). The practical training consists of clinical work under supervision and observation. During the practical training, students work under supervision because legally whoever is supervising them is responsible.

There are annual refresher courses, held by the Society and there are short courses for special skills, e.g. glaucoma and in paediatrics. There are also relevant courses within the Health Service, e.g. management skills, information technology. Until two years ago there was also a demonstrator's course which qualified registrants for clinical training skills. This enabled them to have students attached to them in the service. This course has been discontinued now. There is also a teacher's qualification awarded by the British Orthoptic Society which has to be held by those involved in the orthoptic teaching programmes.

C. PRACTICE OF THE PROFESSION

On 30 September 1989 there were 620 (whole-time equivalent) orthoptists employed in the NHS in Great Britain.[3]

The orthoptist's work is mostly in diagnosis. They are concerned with all problems that relate to how the eyes work together, they evaluate vision with infants and are concerned with the overall management of squint patients.
In hospitals the work is different from that in the community. In hospital, orthoptists work with patients with all forms of strabismus, congenital and acquired, who are referred by registered medical practitioners. These include specialised cases, for instance neurological cases, head and face injuries, in accident and emergency clinics, paediatric clinics and general medical clinics which includes rheumatology, thyroid and diabetes.
In the community orthoptists work in pre-school screening, screening of elderly for instance in day centres and long-stay geriatric hospitals, they work with handicapped patients for instance in special schools and long-

[3] Staff Side Evidence, Demand, Shortages, Recruitment and Retention, Table 1, September 1990.

stay homes, in a paediatric assessment team or with patients with special learning difficulties.[4] Most orthoptists work in NHS hospitals. Only about 10% of the orthoptists work in private practice. 70% of those working in private practice work in salaried employment of an ophthalmologist, the others have their own private practice. In the Health Service, orthoptists work both in hospital and in the community.
Approximately 70% of the patients is younger than 8 years. About 10% of the patients is elderly. As a result of demographic changes this group is growing. The remaining 20% are adult patients.

The most common eye defects with children are strabismus and amblyopia. These are estimated to be present in 5-8% of children at school entry.[5] Most orthoptists and ophthalmologists would agree that the best improvement in these conditions can be achieved by early diagnosis and treatment. The best age for detecting these defects would be three and a half to four years.[6]

Orthoptists work independently after referral. The registered medical practitioners would claim that they have ultimate control over their patients. However, orthoptists do not work under supervision and they are expected to take full responsibility for their own actions as professionals. Orthoptists make their own diagnosis and proposal for treatment. The paediatricians or general practitioners would, in their referral, usually, merely ask for an orthoptic opinion, whilst an ophthalmologists may make some comment on the patient. 50% of the referrals come from general practitioners, after which the orthoptists will decide if the patient should be seen by the ophthalmologist.
If an ophthalmologist gives in his/her referral a diagnosis with which the orthoptist does not agree, the orthoptist states in the notes who ordered the treatment, to clarify the responsibility for that treatment.

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[4] Orthoptists Board, Requirements and guidelines; Three-year degree courses leading to state registration in orthoptics, Appendix II.

[5] as quoted in 'Orthoptists as pre-school screeners: a 2-year study', British Orthoptic Journal, 1989, 46, p.14.

[6] idem

7.2. The legal status, education and actual practice of the profession of orthoptics in the Netherlands

A. LEGAL REGULATIONS

A.1. General

The profession of orthoptics is legally regulated by the Act on Paramedical Professions (Wet op de Paramedische Beroepen) and a specific regulation (Orthoptistenbesluit (15 March 1975)), most recently amended on July 1, 1985.[7]

The orthoptist is concerned with the research, diagnosis and treatment of defects in the position and movement of the eyes, monocular and binocular functions and the anomalies in these functions relating to them or ensuing from them. The decree on orthoptics describes the work of the orthoptist as; on the one hand, examining whether and to what extent patients master these functions or whether they are subject to a disability and, on the other hand, carrying out activities directed toward the restoral of monocular and binocular functions by a non-surgical procedure.[8]

According to the present regulation the orthoptist works on instruction and under supervision of a practising ophthalmologist. In the new regulation the relation to the physician will be one of referral. The description 'on instruction and under supervision' will be replaced by 'after referral'. If the orthoptist only makes an examination the medical diagnosis is not obligatory. According to the present regulation the referral should contain the activities that must be performed. If this includes the use of eyedrops, the composition of the eyedrops must be stated. In actual practice the activities that must be performed are only stated in exceptional cases and also the composition of eyedrops is only seldom given.

A.2. Recognition

The profession is legally recognized on the basis of the Act on Paramedical Professions and a specific regulation. The certificate to practice is given to those who have passed the examination. Only those who have this certificate may practice the profession and use the title of 'orthoptist'.

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7 In 1991 a new regulation came into effect. The most important changes are incorporated in the text.

8 Wet op de Paramedische Beroepen, article 6.2b.

In the field of activities as described in the regulation the orthoptist is the only legally recognized paramedical professional. There are, however, activities that are also done by other professionals. Examples of this are the technical ophthalmic assistant ('technisch oogheelkundig assistent') who performs technical activities in the field of determining vision and refraction, the optometrist who performs activities in the field of visual aids and is concerned with subjective refraction and the optician who supplies glasses. A profession which is also concerned with the eye but from a totally different line of approach is the 'optoloog'. They are not part of regular medicine and not legally recognized.

Orthoptists who want to practice their profession must register with the Chief Inspectorate of Public Health.
The professional association is the Dutch Association of Orthoptists ('Nederlandse Vereniging van Orthoptisten'). Membership of this association is not obligatory. The Dutch association is a member of the International Orthoptic Association (IOA).

A.3. Finance
Orthoptic treatments are reimbursed by the public health insurance and by several private insurance companies as part of the activities op the ophthalmologist. Orthoptists work in salaried service. There are no orthoptists with a private practice.

A.4. Disciplinary rules
The Act on Paramedical Professions creates the possibility of a disciplinary law but this possibility has not yet been used. An ethical code is being developed.

B. EDUCATION

B.1. General
The entry requirement for the training in orthoptics is a secondary education diploma ('HAVO'), which means eleven years of schooling. It is desirable that the student has been educated in the following fields: mathematics, biology and physics or chemistry. Necessary qualities for an orthoptist are good vision in both eyes and good cooperation of the eyes. The management of the school judges these functions.

From September 1, 1991 the course in orthoptics will take three years (it used to be a two-year course). It is a full-time course. There are no specialisations or main subjects. The course consist of a theoretical component. The theoretical part takes place in the school. The practical

part consists of lessons in examination methods and practical training. It takes place at various orthoptic departments throughout the country. The duration of the practical training is one year. The final examination consists of three parts, a practical training, a written report and a paper.

The course in orthoptics is legally regulated in the specific regulation ('Orthoptistenbesluit') The course falls under the responsibility of the Ministry of Welfare, Health and Cultural Affairs. Further training for orthoptists is supplied by the professional association. Every four years the International Orthoptic Association organises a conference.

B.2. Position in the education system

In the Netherlands is one course in orthoptics. This course is higher education outside the university.

B.3. Content

The present curriculum of the course is the following:

- general anatomy
- physiology
- optics
- physiology and pathophysiology of binocular vision
- eye movements and motility disorders
- refraction
- amblyopia
- methods of examination, including visual assessment
- diseases of the eye
- psychology
- general health care
- various subjects (e.g. perimetry, ultrasonography)
- administration

C. PRACTICE OF THE PROFESSION

On January 1989 the number of qualified orthoptists was 319. At that moment 265 orthoptists were members of the professional association. According to the association, by the end of 1989, 78% of the orthoptists was working in a hospital, 12% in private practice and 10% were employed in another way (health centres, health services).

If the ophthalmologist works in a partnership in hospital, the orthoptist is employed by the partnership. If the ophthalmologist is employed by the hospital, the orthoptist is also in salaried service of the hospital.

It is estimated that squint occurs with approximately 5% of the population. It develops at a young age and should be treated early. Patients are mainly children with diminished vision in one or both eyes, squint and/or eye muscle paralysis. Another important group are adults. The patients mainly have disorders of the position of the eyes, the eye movement and/or the binocular function. These disorders often co-occur with diseases in the field of neurology and internal medicine.
With regard to eye movement the warning function of the orthoptist is very important because disorders in the eye movement can be an indication for an internal or neurological disorder.
Lately, orthoptists also work as counsellor in health centres in the field of screening of visual disorders in babies and young children. There are also orthoptists employed by Cross Associations or children's health centres.

Almost a quarter of all orthoptists also have the technical ophthalmic assistant diploma ('TOA'). The work of orthoptists depends on the nature of the organisation. Orthoptic activities include the following:
- investigating whether and to what extent eye functions are present or disturbed,
- diagnosing the disturbances,
- measuring vision, objective and subjective refractioning,
- formulating and supporting therapy in the case of amblyopia, squint and eye muscle paralysis,
- prescribing corrective glasses,
- determining fixation,
- exercising orthoptic patients,
- making proposals for, and stating the indication for strabismus operations.[9]

According to an inquiry by the professional association 63% of orthoptists also perform other activities than orthoptic activities.

9 Beroepsprofiel Orthoptist, gevalideerde versie, Enschede, december 1988, p.38.

These include:
- measuring range of vision,
- measuring eye-pressure,
- measuring colour view,
- measuring optical aids for the visually handicapped,
- instructing starting contact lense wearers.

7.3. Legal status, training and actual practice of the profession of orthoptics in the Federal Republic of Germany

A. LEGAL REGULATIONS

A.1 General

The profession of orthoptists is regulated by law in the Act on the Orthoptist profession[10] (28 November 1989). Training is regulated in the "Training and Examination regulations for Orthoptists"[11] (21 March 1990). This regulation is based on the orthoptist act. The orthoptist act only regulates who has state permission to use the professional title of orthoptist.
Orthoptists do not receive referrals but are employed by ophthalmologists.

A.2. Recognition

The profession is recognized in law. There is no official registration. The title of 'orthoptist' is protected. There are no related professions that are not recognized. There are of course opticians who primarily sell spectacles and contact lenses.
The professional association is the Professional Association of German Orthoptists ('Berufsverband der Orthoptistinnen Deutschlands', BOD). Membership of this association is not compulsory but it is recommended, because it provides the opportunity of taking part in continuing education. In addition to further and continuing education the professional association is concerned with scientific development of strabology and associated areas, the training, the status of the profession and the situation of the profession, the tariff grouping and the representation of the profession at international level. Members of the BOD are also members of the International Orthoptic Association.

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10 'Orthoptistengesetz'.

11 'Ausbildungs- und prüfungsordnung'.

A.3. Finance

For the publicly insured, payment is arranged between the ophthalmologist and the Insurance organisation. In other cases the patient pays the ophthalmologist and his costs can be reimbursed by the insurance organisation. Orthoptists only work as employees.

A.4. Disciplinary rules

There is no disciplinary code for orthoptists.
There is no ethical code.

B. EDUCATION

B.1 General

The entrance requirements for training as an orthoptist is secondary school graduation or an equivalent level[12] (10 years of training).
The training for orthoptists lasts three years and concludes with a state examination.[13] The training program is state recognized. There are no other, non-recognized training programs.

B.2 Position in the education system

The training level is lower than university level; the schools are professional training schools ('Berufsfachschule'). There is no opportunity for training at different levels. In the Federal Republic there are 11 schools for orthoptic training. There is no noticeable level of difference between them.

B.3 Content

In the note on training and examination regulations for orthoptists there are minimum requirements for training.

- General anatomy and physiology	100 hrs
- Special anatomy and physiology	180 hrs
- General pathology, pediatrics	60 hrs
- Pharmacology	40 hrs
- General ophthalmology	150 hrs
- Neuro-ophthalmology	100 hrs
- Orthoptics and Pleoptics	400 hrs
- Disorders of eye movement	250 hrs
- Physics, optics, optometry	200 hrs
- Hygiene	60 hrs
- Professional, legal and constitutional studies	60 hrs
	1700 hrs

12 Blätter zur Berufskunde Orthoptistin/Orthoptist, Bundesanstalt für Arbeit 5, Auflage 1990

13 idem, p.7

The practical training comprises at least 2800 hours and comprises:
- History and collecting data for diagnosis,
- Therapy planning and practice,
- Neuro-ophthalmology (including perimetrics),
- Consultation and advice,
- Use and care of orthoptics and pleoptics instruments,
- Photography,
- Guidance of the visually impaired and contact lens wearers.

Theoretical and practical education and practical training comprise a total of 4500 hours, 1500 in each of the three years of training.[14]
The state examination comprises a written, oral and a practical part. The subjects of the written part of the exam cover the fundamental areas of anatomy and physiology of the eyes and in the clinical area the disorders of eye movements, orthoptics and pleoptics as well as neuro-ophthalmology.[15]

The oral part of the examination covers the following subjects:
1. Human anatomy and physiology, in particular visual systems,
2. General ophthalmology including pharmacology,
3. Disorders of eye movements,
4. Orthoptics and pleoptics,
5. Neuro-ophthalmology,
6. Optics and optometry,
7. General hygiene and health care,
8. Professional, legal and constitutional studies[16].

The practical training includes diagnosis, therapy and practical work.
Continuing education to become a teacher of orthoptics is possible after a number of years of practice. It has been decided to appoint orthoptics teachers in future on the basis of regular continuing education and examination. Domestic and foreign associations for orthoptists all have further education programs alone or with ophthalmologists, such as confe-

14 W. Raps, Orthoptistengesetz und Ausbildungs- und Prüfungsordnung. Reha Verlag, Bonn, 1990, p.45

15 idem, p.54

16 idem, p.55

rences, seminars, courses lasting several days, etc. These meetings are also open to students.[17]
Continuing education comprises both specialization (teaching orthoptics) and short courses.

C. PRACTICE OF THE PROFESSION

The orthoptists work consists of examination (diagnosis) and treatment (therapy) of disorders of the single eye (pleoptics) and of disorders of the coordination of both eyes (orthoptic), as a result of short sight weak eyes (nystagmus).[18]
Orthoptics work above all in the area of diagnostics and therapy. Time is also spent on rehabilitation and prevention by examining children in whose families a squint arises.

In the Federal Republic, there are approximately 1400 orthoptists; 20 to 30% of them work in special institutions (departments of orthoptics, pleoptics, motility disorders and neuro-ophthalmology) or schools for seeing of clinics and hospitals, the large part in schools for seeing with established ophthalmologists. There are also places in institutions for visually handicapped and blind in the neurological clinics.
A "seeing school" is an institution at the university eye clinic, in departments of hospitals and ophthalmologist practices, in which orthoptists together with ophthalmologists treat and examine disorders of the eye movements and weakness of vision and all related pathology.[19] Such schools have been in existence for about 25 years. In general the ophthalmologist has made a diagnosis and prescribed the required spectacles for the problem. The orthoptist investigates the angle of the squint and the coordination between the two eyes.[20]
The treatment in the schools comprises visual exercises with the weak eye which should bring it to the required strength and coordination with the normal eye. The treatment of squint is a combination of four methods: spectacles, diagnosis, therapy and operation. All four are equally important.

Orthoptists are employed in an ophthalmologist's practice. There are no referrals. The orthoptist gives the treatment independently.

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[17] Blätter zur Berufskunde, p.11

[18] W. Raps, p.29

[19] Sehschule - was ist das? Berufsverband der Orthoptistinnen Deutschlands

[20] idem

The patients are mainly young children with squints. There are also adults with latent eye disorders which come to light as a result of working at the computer for considerable lengths of time.
The task of the orthoptist is largely concerned with rehabilitation, because, for example in brain damage, there is often damage of vision. Orthoptists also work with the visually handicapped of all age groups in optic rehabilitation. Another major area is neuro-ophthalmology. This covers disorders of eye movement (eye muscle paralysis) after accidents, brain damage, neurological illness which can lead to double vision.

7.4. The legal status, education and actual practice of the profession of orthoptics in Belgium

A. LEGAL REGULATIONS

A.1 General

At this moment there is no legal regulation with regard to the profession of orthoptics. The only regulation that exists is a Royal decree from 1967 which gives a legislative framework for further regulations. On the basis of this decree the Ministry of Health will regulate the paramedical professions. The first step in this regulation has been the creation of the National Council for Paramedical Professions. This council will advise the minister about questions relating to the paramedical professions. The council has divisions for each profession. There is also a Technical Commission which will deal with financial matters.

At the moment the only recognition of the profession is by RIZIV (National Institute for Illness and Handicap Insurance/ Rijksinstituut voor Ziekte en Invaliditeitsverzekeringen). This institute recognizes certain paramedical professions. The basis for this recognition is the possession of a diploma that is recognized by the Ministry of Education. If a profession is recognized by RIZIV (part of) the cost of their treatments is reimbursed. In the case of orthoptics, RIZIV has decided that the only recognised treatment which can be reimbursed is the orthoptic exercise treatment ('oefenreeks'). This is also the only treatment for which a medical referral is necessary. For the other orthoptic treatments there is no obligatory referral (because of the lack of regulation).

A.2. Recognition

Although the profession itself it not (yet) recognized the diploma is recognized by the Ministry of Education.

Because the profession is not recognized there is also no obligatory registration. The only registration that must take place is with RIZIV for the orthoptic exercise sessions. When the profession is regulated registration will have to take place at the Provincial Medical Commission ('Provinciale Geneeskundige Commissie').

The professional title is orthoptist. This title is not (yet) protected.
A related profession which is not recognized is developmental optometry. Opticians also work in related fields but they are not a paramedical profession.
The professional association is the Belgian Orthoptic Association ('Belgische Orthoptische Vereniging (VZW)/ Association Belges d'Orthoptie'). Membership of this association is not obligatory although it is recommended.

A.3. Finance

Except for the exercise sessions which are reimbursed by RIZIV, the orthoptists work is paid by the patient himself or the costs are part of the lump sum for eye care by the ophthalmologist.
Orthoptists can work in salaried service of an ophthalmologist or they can work independently in an ophthalmologists' practice. In the latter case they are paid a gross sum and pay their own social costs. This gross sum can be based on a fixed amount per patient or on the time of work. Orthoptists can also be in private practice. Orthoptists who work in rehabilitation centres are usually in salaried service.

A.4. Disciplinary rules

According to the Royal decree there must be a disciplinary law for the paramedical professions. At this moment there is a disciplinary law but this cannot be imposed because the paramedical professions are not regulated.

B. EDUCATION

B.1. General

Between 1960 and 1964 the School for Paramedical Professions in Belgium organised a training course for orthoptists. After discontinuation of this training in 1964 there were no possibilities to educate orthoptists until 1987 when a new orthoptic school started. Between 1964 and 1987 Belgian orthoptists were either trained abroad or trained by an ophthalmologist. With the coming regulation of the profession it will no longer be possible for ophthalmologists to train orthoptists.

The Belgian training is a part-time course which can be followed by those who already have a diploma or degree in occupational therapy, phy-

siotherapy, speech therapy or nursing at the level of higher education outside the university (A-1 level).

B.2. Position in the education system

The orthoptic training is a part-time education of two years which leads to an A-1 diploma (higher non-university education). There is only one school. This school is recognized by the Flemish Ministry of Education.
As a result of the structure of the education the position of the Belgian orthoptists in the general directive on paramedical professions is not clear.

B.3. Content

The training takes ten hours per week for two years (from 1 September 1991 it will be twelve hours per week).
Subjects that are taught are the following:

- Optics and refraction,
- Anatomy,
- Physiology,
- Pathology,
- Low vision,
- Examination and correction of visual functions (including theoretic and practical courses on strabismus and ocular motility disorders),
- Neuropsychology and remedial education,
- Legislation.

The practical training takes place in hospitals or in private practices. The amount of practical training in the first year is 40 hours and in the second year it is 240 hours.[21]

There are no possibilities for further training in orthoptics. There is a general course which leads to a teaching qualification but this is not specific to orthoptists. This course is a two year part-time course.

C. PRACTICE OF THE PROFESSION

In Belgium there are approximately 45 to 50 orthoptists of which 7 work full time. The majority work in a private ophthalmic practice. The others work in their own private practice, in hospitals or in rehabilitation centres.

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21 Curriculum postgraduaat orthoptie, Hoger Instituut voor Paramedische Beroepen, Sint Vincentius, Gent.

The orthoptic division of the National Council for Paramedical Professions has made a provisional definition of the orthoptists work. According to this definition the orthoptist:

- investigates the state of the monocular and binocular functions and the visual performance;
- carries out activities that are directed at the restoration or the improvement of monocular and binocular functions or of visual performance, in so far as no surgical activities, nor the prescription of corrective lenses for ametropias are involved.

The orthoptist's work is mostly in treatment of amblyopia and in contributing to the making of the diagnosis. Prevention and information do not form a large part of the work.

Orthoptists do not make their own diagnosis but they make their own plan of treatment. In the new legislation there will be a division between work that can be done independently and work for which a medical diagnosis is required.

The two largest groups of patients are the very young and the very old. Young patients usually have complaints of squint while the older patients may have problems of double vision.

The kind of complaints that are treated are the following:
Squint,
Amblyopia,
Double vision,
Learning and reading problems (including weak convergence),
Nystagmus,
Low-vision (in rehabilitation),
Contact lenses, visual screening (in private practices).

The following gives an overview of the possible kind of treatments for each complaint.

- squint : the treatment can consist of glasses, advise or proposal for operation.
- amblyopia : occlusion.
- double vision: prisms, exercise, proposal for operation, accurate diagnostics, reading glasses, prism glasses or proposal for referral.
- nystagmus : prism's, proposal for operation.
- low-vision : adapting and training with visual aids.

7.5. A comparison of the position and education of orthoptics in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium

A. LEGAL REGULATIONS

In the four countries orthoptists are mainly employed by ophthalmologists. An important difference is that in England and Belgium there are also orthoptists working in private practice in their own right. According to the ethical code of the British Orthoptic Society there must always be a medical referral if patients visit an orthoptist in private practice. In the Netherlands and Germany there are no orthoptists with a private practice.

In the United Kingdom there is an obligatory state registration for orthoptists who work in the National Health Service. Orthoptists in the Netherlands must register with the Chief Inspectorate of Public Health. In Germany there is no obligatory registration for orthoptists. In Belgium there is an obligatory registration for orthoptists who want to have a contract with the health insurance fund. This is not a legal obligation but it is a requirement for reimbursement.

In the United Kingdom orthoptics is free for patients who are treated in the National Health Service. People who go to a private practice usually get the treatment reimbursed from their private insurance, in which case they need a medical referral. In the Netherlands and in Germany orthoptic treatments are generally reimbursed by the health insurance funds and by various private insurance funds. In Belgium only one aspect of the orthoptist's work is reimbursed by the health insurance, namely the orthoptic training sessions. This is also the only aspect for which a medical referral is required.

There are no related professions to orthoptics as such, though in all four countries there are opticians who dispense and order glasses. In England there is also overlap with the optometrist, who works in refraction and glaucoma. In the Netherlands and Belgium there is a profession which is also concerned with the eyes but with a completely different approach than the orthoptists. These are the optologists or developmental optometrists.

In Germany, the Netherlands and Belgium there is no ethical code for orthoptists. Orthoptists in the United Kingdom are subject to two sets of disciplinary rules. There is an ethical code from the British Orthoptic Society which only applies to members and there is a Statement of Conduct from the Orthoptists Board of the Council for Professions Supplementary to Medicine. The disciplinary measure that can be taken on the basis of the State-

ment of Conduct is removal from the register. This means that the orthoptist can no longer work in the National Health Service. The ethical code only applies to members of the Society and the disciplinary measure that can be taken is that someone is dismissed as a member of the Society.
None of the countries have a disciplinary law for orthoptists.

The title of orthoptist is protected in the United Kingdom, the Netherlands and Germany, although in England the title is only protected for orthoptists who work in the National Health Service. The Netherlands is the only country where the profession is protected. In Belgium the title is not (yet) protected but with the new legislation both the work and the title will be protected.

B. EDUCATION

There are differences between the four countries in the required minimum number of years of education before starting the orthoptic training. In the United Kingdom and Belgium this minimum number is twelve years, in the Netherlands eleven years and in the Federal Republic of Germany it is ten years.[22]

The duration of the orthoptic training itself is three years in the United Kingdom, the Netherlands and Germany. The difference between the courses in England, the Netherlands and Germany lies in their position in the education system. In the United Kingdom, the training takes place in NHS training schools which will change to university training in 1992. In the Netherlands the training is higher education outside the university and in Germany it is secondary vocational education ('Berufsfachschule'). (See also diagrams of the education systems). These courses are all full-time. The education of orthoptists in Belgium is different from that in the other countries. In Belgium it is a two year part-time education which can be followed by those who already have a diploma in physiotherapy, occupational therapy, speech therapy or nursing.

An exact comparison of the content of the various courses is very difficult to make. One of the reasons for this is that similar subjects may have different names and another difficulty is that the amount of hours is sometimes counted in lecture-hours and sometimes in study load hours. A speci-

22 In calculating the number of compulsory years of schooling counting started at the age of six. However, in the United Kingdom and the Netherlands compulsory education begins at the age of five.

fic comparison of the content of the courses would require additional research.
An important aspect of the education is the clincial practice. In the United Kingdom and the Netherlands the clinical practice takes up about one third of the education. According to the minimum legal requirements in Germany the clinical practice takes up almost two thirds of the education. Because of the structure of the Belgian orthoptic training it has fewer practical training than the others. Summing up it can be said that the orthoptic training in the Federal Republic of Germany is much more practice oriented than those in the United Kingdom, the Netherlands and Belgium.

On the basis of the available information there is no reason to believe that there are major differences between the courses for orthoptics in the four countries. However, there are differences in the required amount of years of schooling before entry into orthoptic training, in the position in the education system and in the distribution between theory and practice in the education.

C. PRACTICE OF THE PROFESSION

According to the description of the professional role of the orthoptist from the liaison group of orthoptists from the European Community the orthoptist's work consists of investigating, diagnosing and treating disorders of ocular motility, binocular vision and associated anomalies.

In Germany and the Netherlands orthoptists only work in salaried service. Referrals usually come from specialists in the hospital or from the ophthalmologist. In the United Kingdom and Belgium most orthoptists also work in salaried service but there are also orthoptists in private practice in their own right. They usually receive patients after referral.

In England there is a difference in the kind of complaints that are treated in a hospital setting and those that are treated in the community. In hospital orthoptists treat strabismus patients, both congenital and acquired while in the community a lot of the work is in screening and working with handicapped people.

The professional survey of the liaison group of orthoptists in the EEC gives a list of activities of orthoptists. The major activities will be compared here. According to this list orthoptists in the United Kingdom, the Netherlands, Germany and Belgium are allowed to do orthoptic examination, orthoptic reeducation, amblyopia treatment, testing of visual acuity and quantitative perimetry. According to the information in the list orthoptists in the United

Kingdom, Germany and Belgium are not allowed to prescribe glasses. In Belgium orthoptists are not allowed to do retinoscopy or refraction, nor is retinoscopy part of the work of orthoptists in Germany.

In all four countries the bulk of work is in working with children with strabismus and amblyopia. Also in all the countries there is a growing concern for the needs of elderly patients.

8. CHIROPODY IN THE UNITED KINGDOM, THE FEDERAL REPUBLIC OF GERMANY, THE NETHERLANDS AND BELGIUM

8.1. The legal status, education and actual practice of the profession of chiropody in the United Kingdom

A. LEGAL REGULATIONS

A.1. General

The Professions Supplementary to Medicine Act (1960) is the main Act of Parliament that applies to chiropody. By separate statutory instrument state registration was made the requirement for employment in the National Health Service. The statutory instrument has the absolute force of law but it is not an act of parliament itself. It would need to go to parliament to be changed but it can be changed much more easily than an act of parliament. The 1960 Act regulates registration, discipline and education of those seeking the title "state registered chiropodist"

There are exemptions in the Medicines Act which apply specifically to state registered chiropodists. Under the Medicines Act state registered chiropodists can obtain access to certain medical products. e.g. injectable anaesthetics. There are no rules to separate the profession from the medical profession.

There is no obligatory referral. The chiropodist is an independent professional and may be consulted directly. In practice, patients are often referred.

A.2. Recognition

The profession of state registered chiropody is legally recognized by the Chiropodists Board of the Council for Professions Supplementary to Medicine (CPSM). The word state registered is important because anyone can set up as a chiropodist. There is no regulation for it. The Professions Supplementary to Medicine Act has no jurisdiction over those who do not choose or wish to be state registered chiropodists.

The titles of state registered chiropodist, registered chiropodist and state chiropodist are protected. The title "chiropodist" is not protected. Nor are the titles "podiatrist" and "podologist" (podologist is an anglicised version of the French 'podologue'). The title "podiatrist" is used in England, it is basically the same as chiropodist. There is no protection for it.

Professions that overlap with chiropody are pedicure, reflexology, orthotists (=maker of orthopaedic footwear), appliance technicians, prosthetists. The orthotist is involved in measuring and, not always, making orthopedic footwear and measures also corsets, collars etc. Appliance technicians are involved in actually making the devices.

For chiropodists working in the National Health Service state registration is required. Registration is voluntary for chiropodists engaged solely in private practice. The registration takes place at the Chiropodists Board of the CPSM. State registered chiropodists are entitled to use SRCh after their name.
The professional association is the Society of Chiropodists. Membership of this Society is not obligatory but it is advisable because it provides insurance, it has a trade union role for those in the health service, a journal and it provides continuing education. 88% of state registered chiropodists do belong to the society. Members of the Society of Chiropodists are entitled to use MChS (i.e. Member of the Chiropodist Society) after their name.

A.3. Finance
For patients who are treated under the NHS, chiropody is free.
Private patients pay fee-for-service. There is no cover under private health insurance schemes for chiropody. In the National Health Service chiropodists are paid a salary on nationally negotiated scales. Private practitioners treating NHS patients in their own surgeries are paid a fee for service.
There is a certain amount of overlap between private and NHS treatment. Private chiropodists can also treat NHS patients in their own surgeries. This is also a nationally negotiated fee. Many chiropodists work both in the NHS and privately. There are no special conditions which must be fulfilled before payment can take place.

From the first of April 1990 GP's have been able to employ chiropodists to work on their own premises. The means by which the doctor would be reimbursed for the employment of the chiropodist has been left rather open. It is not regulated how much the chiropodist should be paid.

There is no planning policy for chiropodists. Health authorities recruit staff as they feel they need them. Anyone can set up in private practice. The only restrictions would be non-medical ones e.g. the need to get planning permission for a surgery.

A.4. Disciplinary rules
The Chiropodists Board of the CPSM has a statement of conduct. If a chiropodist infringes that statement of conduct, this will be investigated and he

or she could be removed from the register. They can then no longer practise as a state registered chiropodist. They could practice privately but they could not continue employment within the NHS.
The Society of Chiropodists also has a code of ethics with an ethical committee to police it. People can be admonished or reprimanded. But it could also go further and then they can be struck off the register. The code of ethics and statements of conduct lead straight into disciplinary rules. There is no distinction between disciplinary rules and code of ethics.

B. EDUCATION

B.1. General

Students of chiropody should be at least 18 years old at the commencement of the course and should have attained five CE of GCSE passes (grades A, B, or C) to include English language and preferably two science subjects. Normally two of the passes should be at A level (or four at Advanced Supplementary Level).

All but one of the schools are now in the education sector and they come under the Department of Education and Science. Some of the schools used to be under the National Health Service. There are 14 schools in England, all are approved by the Chiropodist Board. They all have links with local hospitals and local clinics.

The diploma is the Diploma in Podiatric Medicine which is awarded by the Society of Chiropodists. The Society is also the examining body. They appoint the examiners and the inspectors. In the degree courses the universities have their own syllabus which is not under the control of the society. There are mechanisms either in the educational institution itself or through an outside body, the CNAA[1], to validate the degrees for their educational level. The Society then loses its direct examining role. Presently the Privy Council has approved degree courses in podiatry for state registration purposes.

The education of chiropody is recognized by the Chiropodists Board of the CPSM. The Department of Education and Science recognizes the diploma course from the Society of Chiropodists for the purpose of giving grants and loans to students. The diploma is issued by the Society of Chiropodists.
There are, apart from recognized schools, also non-recognized schools. These can be set up and issue diplomas, without regulation. The courses

1 CNAA: Council for National Academic Awards

are called courses in chiropody. They are not recognized by the Society of Chiropodists. They are generally correspondence courses with an element of practical training. One particular place where such a correspondence course is taught is the SMAE Institute, also called the British Chiropody Association. People who belong to this association use MBChA (Member of the British Chiropody Association) and also MSSCh (Member of the School of Surgical Chiropody) after their name. The name of the diploma of this course is Diploma in Surgical Chiropody. None of these courses qualify for a position in the National Health Service.

B.2. Position in the education system

The chiropody education takes place in higher education. There are 14 recognized schools of chiropody in England. There are no considerable differences of level between these schools, only differences in emphasis but they all teach for the same exams. When the courses become degree courses, they will also be at the same level.
The approved course of training is three academic years (full-time).

B.3. Content

The main subjects of the training are:
- basic medical sciences,
- anatomy and physiology,
- local analgesia,
- medicine,
- surgery,
- dermatology,
- podology,
- therapeutics,
- practical chiropody.

All the schools teach extra subjects. e.g. many of them are teaching a module on community medicine, or sociology. Some of the main subjects are sometimes divided, so that there is a specific course on for instance pathology which might even be examinable in addition to the main examination. Schools have licence to vary that. In the diploma course the hours are not specified but they will be in the degree syllabus.

The following example of a curriculum of one school is meant to give an idea of the content of the training.

- anatomy	=	120 hours (in three years). This includes lectures, tutorials and practicals.
- behavioural studies	=	30 hours total. (behavioural science, communication, introduction to psychology, sociology of medicine etc.).
- practical clinical studies	=	900 hours (practising chiropody, producing orthotics and appliances etc.).
- clinical tutorial work	=	132 hours.
- orthotics	=	198 hours
- community medicine (overlaps with behavioural science)	=	30 hours
- medicine and surgery	=	180 hours
- methods of inquiry	=	30 hours
- pathology	=	96 hours
- physiology	=	140 hours
- theory of chiropody (is now called podiatric medicine), biomechanics etc.	=	168 hours in the first year, 168 hours in the second year, 158 in the third year.

Anaesthetics is included partly in the clinical studies and in the theory of podiatric medicine.
The total course of chiropody is 2350 hours, of which approximately one third is practical. There is much supervision during practical training. The practical training consists of both observation and work.

For state registered chiropodists there are possibilities for refresher courses. These courses are both specialisations and short courses. There is no requirement to do any further study at all. The Society of Chiropodists validates courses run by schools and by post-graduate groups of the society. It validates them for their academic content and their standard.

C. PRACTICE OF THE PROFESSION

On 30 September 1989 there were 3480 (wte) chiropodists employed in the National Health Service.[2] According to the Society of Chiropodists there were by the end of June 1990 6,550 state registered chiropodists.

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2 Professions Allied to Medicine and related grades of staff (PT'A') Council, September 1990, Table 1, PAMS employed in the NHS.

The scope of practice for chiropodists is defined by the Chiropodists Board as follows:
"Chiropody comprises the maintenance of the feet in healthy condition and the treatment of their disabilities by recognized chiropodial methods in which the practitioner has been trained".[3] This is the only statutory definition of what the profession includes.

Chiropodists also perform ambulatory foot surgery. This is 'surgery performed at a level sufficiently minor as to be carried out on a day care basis and which would not normally warrant inpatient admission, the patient being ambulant with or without assistance immediately after surgery. It should be subject to the limitations of the operator's skills and training and the facilities available.'[4] According to the regulations of the Society ambulatory foot surgery may only be applied by those who have studied formally the Society's Syllabus in ambulatory foot surgery.

Chiropodists work in hospitals, in the community and in private practice. In hospitals chiropodists treat acute patients of any age with foot problems related to systemic disorders. This includes people with orthopaedic problems, diabetes, rheumatoid problems, circulation disorders, neurological problems and dermatological problems. They also play a role in the rehabilitation of stroke patients. The patients are mainly referred by consultants and sometimes by gp's. Only 15% of National Health Service Hospitals provide a chiropody service.[5]
In the community chiropodists treat patients whose complaints do not require the full hospital resources. Patients are mainly elderly people with chronic foot problems. These patients can refer themselves. The majority of work for chiropodists is in community care.
Chiropodists in private practice treat all kinds of problems. About 36% of state registered chiropodists are in private practice and anyone may visit their surgeries for advice or treatment.[6]
Most of the chiropodist's work is in therapy but they also work in prevention, screening, and after-care. The tendency for health authorities nowadays is to increase the amount of screening.

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3 Chiropodists Board, Statement of Conduct, CPSM, 1989.

4 The Society of Chiropodists, Syllabus for Ambulatory Foot Surgery, April 1987, p.1

5 The Chiropodist: a specialist in the medical team, p.23, The Society of Chiropodists.

6 idem

50% of state registered chiropodists are working full-time in the NHS, 13% are in private practice full-time and 23% are in private practice part-time. These figures don't add up because some chiropodists who work full-time in the NHS also do a certain amount of private practice part-time. Some chiropodists are working in industry, some are not practising.

The relation between the chiropodist and the physician is undefined. Chiropodists are regarded as part of the medical team. The chiropodist works independently and makes his own diagnosis.

Over 90% of NHS chiropody is for the elderly. In 1987 the total number of persons treated in the NHS was 1,949,000. Of these patients 1,732,000 were over 65, 233,000 were handicapped, 4,100 were expectant mothers, 115,000 were children and 44,000 were other patients.[7]

Chiropodists use the following treatments:
- corrective and functional orthoses,
- protective appliances,
- invasive surgical procedures,
- topical chemotherapy,
- cryotherapy,
- electrosurgical techniques,
- ultrasonic and other physical therapies,
- specialised dressings to protect against trauma,
- exercise therapies,
- shoe advice and alterations, especially for athletes.[8]

In the National Health Service there is a vacancy rate which was high and is coming down but there are also some local surpluses. The planning has been minimal.

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7 J. Trouncer, Society of Chiropodists. These figures relate to treatments in England only.

8 The chiropodist: a specialist in the medical team, p.17

8.2. The legal status, education and actual practice of the profession of chiropody in the Netherlands

A. LEGAL REGULATIONS

A.1. General

The profession of chiropody is legally regulated by the Act on Paramedical Professions ('Wet op de paramedische beroepen') and a specific regulation based on this act ('Podotherapeutenbesluit', februari 1982). In 1991 a new regulation will come into force.[9]

The definition of chiropody is the following:
'The promoting of the correct functioning of the support of the musculoskeletal system for medical purposes by improving the position and/or function of the feet by means of applying corrective and protective techniques to the feet, combatting external complaints of the feet and preventing or combatting nail defects, when required supported by advice'[10]. This definition only applies to work that is done in an individual therapeutic relationship between the chiropodist and the patient.[11]
According to the law a chiropodist may only treat patients after referral from a practising physician. Referral can take place by a GP, sports physician, paediatrician, internist (in the case of diabetes patients), dermatologist or a neurologist (only seldom).

A.2. Recognition

The profession is legally recognized on the basis of the Act on Paramedical Professions and a specific regulation ('Podotherapeutenbesluit'). The competence to practice is gained when, after the required education the exam has been successfully completed and the vow of confidentiality has been taken. Those who have the certificate to practice may practice the profession and use the title of 'podotherapeut'.

In the field of foot problems the chiropodist is the only professional that is legally recognized as a paramedical professional. There are also other professions that work in the field of feet and shoes, like for instance the

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9 Gewijzigd podotherapeutenbesluit.

10 Concept deskundigheidsomschrijving podotherapeut, 31 januari 1991.

11 Nota van Toelichting bij het Podotherapeutenbesluit, 1982.

shoe adviser, the foot carer, the 'shoe therapist', the 'podo-kinesioloog', the 'podo-orthesioloog' and the maker of orthopaedic footwear.[12]

The professional association is the Dutch Association of Chiropodists (Nederlandse Vereniging van Podotherapeuten). Membership of this association is not obligatory. The Dutch association is a member of the 'Federation Internationale des Podologues'.

A.3. Finance

The public health insurance fund does not usually reimburse the costs of chiropody treatment. Only a few private health insurance companies reimburse, partly or wholly, the costs of the treatment.
Chiropody is paid per treatment. For the treatment of diabetics or rheumatic patients chiropodists sometimes get a fixed fee from the public health insurance fund. Another possibility is that chiropodists are partly or wholly in salaried service of a clinic. The possibilities for reimbursement of chiropody treatment are increasing.

A.4. Disciplinary rules

The Act on Paramedical Professions creates the possibility for a disciplinary law for chiropody. So far, this has not been done. There is no formal ethical code.

B. EDUCATION

B.1. General

The entry requirement for the chiropody course is a secondary education diploma ('HAVO'), which means a minimum of eleven years schooling.
The chiropody course itself takes three years. The course falls under the responsibility of the Ministry of Welfare, Health and Cultural Affairs. There are no non-recognized courses.

B.2. Position in the education system

The chiropody course is higher education outside the university ('hoger beroeps onderwijs'). There is only one school in the Netherlands.

B.3. Content

The chiropody course consists of the following subjects:

12 A. de Wit, 'Veel zorg om voeten', Medisch Contact, nr. 10, 8 maart 1985, p.40.

1. CHIROPODY
   - Practice and theory instrumental treatment,
   - Practice and theory chiropody,
   - Assessment and treatment of the patient,
   - Knowledge of shoes,
   - Biomechanics.

2. MEDICAL SCIENCES
   - Anatomy,
   - Physiology,
   - General Pathology,
   - Specific Pathology,
   - Pharmacotherapy.

3. SUPPORTING SUBJECTS
   - Physics,
   - Chemistry,
   - Biochemistry,
   - Hygiene,
   - Social skills,
   - Health and hygiene,
   - Health care,
   - Job orientation.

4. CLINCIAL PRACTICE

The exam consists of the following subjects:
a. theory chiropody.
b. pathology and pharmacotherapy.
c. practice chiropody.
d. examination and treatment of the patient's feet.[13]

The educational institute supplies further training and refresher courses in consultation with the professional association.

[13] Concept opleidingsomschrijving podotherapie, 3 september 1990.

C. PRACTICE OF THE PROFESSION

The work of the chiropodist consists of applying corrective and protective techniques to the feet. This includes the use of various aids to improve the position and/or function of the feet.[14]
The chiropodist makes all aids for each patient individually. The chiropodist can also use, especially in the case of skin problems, externally applied medicine. Insofar as such medicine is only available on prescription, it will be prescribed by the referring physician.[15]

At this moment there are in the Netherlands approximately 150 chiropodists.[16] Chiropodists mainly work in primary health care in private practice. A few also work in institutional care. In institutional care they are mainly concerned with the treatment of diabetes patients and rheumatic patients. In those cases patients are referred by the physicians from the institution.
It is estimated that chiropodists treat 20,000 patients a year. Approximately 72 percent of the patients are female, 28 percent are male.[17]

The chiropodist is entitled to practice chiropody as a profession after a practising physician has given a written referral. In practice, however, the referral is often oral or there is no referral at all.

The following table gives an overview of complaints that are treated by a chiropodist.

Complaints	Patients in the survey with this complaint
problems with walking or standing	53 percent
painful feet	49 percent
malformation, deviation of posture	32 percent
back-, neck-, knee-, hip- and leg complaints	32 percent
complaints of the forefoot (toes, nails)	30 percent
corns, callosity etc.	25 percent
complaints of the ankle, spraining etc.	9 percent
other complaints, prevention	8 percent

[14] Nota van Toelichting Podotherapeutenbesluit, 1982.

[15] Nota van Toelichting Podotherapeutenbesluit, 1982.

[16] Beroepengids zorgsector, Nationale Raad voor de Volksgezondheid, Zoetermeer, Oktober 1990, p.48.

[17] Moll J.W. en A.A. de Roo, De podotherapeutische praktijk, april 1989, p.19.

The total sum is more than hundred percent because many patients have consulted the chiropodist for various complaints.[18]
A chiropody treatment usually starts with an elaborate examination which begins with the anamnesis. After that the patient's feet are inspected and palpated. Then an examination of function and tests of 'resistance' are done and the foot is screened for possible deviations of posture. The foot sole is examined by means of a special mirror ('podoscoop'). Another aspect of the examination is the examination of the shoes (quality, shape and wear) and the walking pattern of the patient. The chiropodist makes his own working diagnosis, also called the chiropody diagnosis.[19]

There are various treatments that can be used. Depending on the plan of treatment the following treatments can be chosen:
- instrumental treatment, e.g. cutting of nails, grinding of excessive callosity,
- temporary therapies, e.g. bandage and taping,
- onychoplasty, partly or wholly building up of the nail,
- orthonyxy, correcting or preserving the convexity of the nail by means of a nail brace,
- podotherapeutic soles,
- ortheses,
- prostheses,
- treatment of wounds, especially with diabetics,
- shoe adaptation and shoe advice,
- advice on foot hygiene and care of the feet,
- prevention e.g. with diabetics.[20]

Surgical treatment and ionizing rays may not be used in a chiropody treatment.

A survey of chiropody practice gives an overview of the activities.

elaborate examination	62%
soles, heightening of heels	43%
toe ortheses	18%
general foot care, corns, callosity	17%
(shoe) advice	62%
nail problem, nail brace	15%
other, not treated, referred back	2%

18 idem.

19 idem.

20 Beroepsprofiel podotherapeut, niet gelegitimeerde versie, 1989, p.50.

The total sum is more than hundred percent because various activities are done during the treatment.[21]

8.3. The legal status, education and actual practice of the profession of chiropody in the Federal Republic of Germany

A. LEGAL REGULATIONS

A.1. General

The profession of chiropody was first established by a vote of the Federal health council on 12 December 1978 as a paramedical profession. The following was established by this vote:

1. The profession of chiropody is a paramedical profession
2. Training and examinations are to be regulated by the state.
3. The period of training shall be two years in which theoretical and practical training will be in an appropriate relationship to one another.
4. The inclusion of training in other profession is not considered[22]

The province of Lower Saxony then, by a decree of the Ministry of Culture (1982) and the Ministry of Social Affairs (1983), regulated the training for the profession and its state recognition by decree. In the other federal states there is no state regulation. Additions or amendments to these regulations have thus far not taken place.
Regulations in Lower Saxony include a two year training period in a training school followed by a state examination (Ministry of Culture). The Ministry of Social Affairs established in its decree that those who successfully complete this training were to receive state recognition. By means of transitional regulations it has also been possible for those already active in the profession to receive recognition insofar as they meet particular conditions.

There are no regulations which differentiate this professional practice from professional medical practice. There is however the Act on paramedical practice pursuant to which only physicians, dentists and paramedics are able to practice medicine. The chiropodist practices a paramedical

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21 J.W. Moll, De podotherapeutische praktijk, p.23.

22 E. Maier, On the claim of the chiropodist for state recognition and the federal legal regulation of this profession as a paramedical profession. Sonderdruck aus Der Fuss, Volume 9, 1989

profession in the sense of section 1, paragraph 2, of the paramedical practice act of 17 February 1939[23]

Chiropodists may not carry out any treatment which represents the practice of medicine. They can in this respect only work on the prescription of doctors.

The chiropodist generally operates on referral and under supervision of a doctor. He can also treat healthy patients but may not treat sick persons without a medical referral. The referring doctor generally only gives more precise instructions in the case of ingrowing toenail. The patient is referred by the doctor and the referral can be from any doctor. It is generally from GPs, sports doctors, pediatricians, internists, rheumatologists, orthopedists and dermatologists).

A.2 Recognition

The profession has thus far only been recognized in Lower Saxony. The recognition comes for the profession from the local government.
The practice of the profession is not protected. As long as no medicine is practiced, anyone without any training can offer chiropody. The title 'Medizinische Fußpfleger' is not protected. In Lower Saxony the title 'Medizinische Fußfpleger-staatlich anerkannt' is in practice protected, because it can only be used by those who have state recognition.

Related professionals, to whom chiropody is given as an auxiliary subject in training, are masseurs, beauticians and orthopedic shoemakers.

It is not clear whether chiropodists are required to register.
The professional association is the central association of German chiropodists (ZFD)[24]. There is no compulsory membership in this professional association. Membership is recommended because there are ongoing further education opportunities within the professional association. The professional association is also the representative of the professional interest and it offers its members favourable group rates in the case of accidents, liability, old age care and in the case of sickness. The

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[23] Practice of medicine in the sense of the law is the professional occupational activity for the determination , cure or alleviation of sickness, suffering or physical injury to people, even where this is carried out in the service of others." Heilpraktikergesetz section 1, paragraph 2.

[24] Zentralverband der Medizinischen Fußpfleger Deutschlands.

association works with the international umbrella organisation the "Federation International de Podologie".

A.3 Finance

There is no official regulation with regard to finance. Normally a patient pays for the treatment himself. In cases where the doctor prescribes treatment, the insurance pays. The payment of the therapist is per treatment. In South Germany the costs of treatment are only paid by some insurance organisations when the chiropodist has successfully passed the association's exams and the equipment of the practice is of a certain standard.
Admission to the profession is not regulated. The chiropodist can open a private practice, work for colleagues or work in public service.

A.4 Disciplinary code

There is no disciplinary code for chiropodists. There is no ethical code.

B. EDUCATION

B.1. General

In Lower Saxony chiropody can be followed in one professional school, anyone with 'Realschule' or an equivalent level of education and at least two years of professional training, or sufficient professional experience can be taken on.[25]

The absence of legal regulations means that in all other Federal States there are no entrance requirements in respect of general education, practical skills or any other skills.

Training lasts two years and comprises clinical practice of twelve weeks. For masseurs, masseurs and medical bath attendants and orthopedic shoemakers the training period can on request of the local government be shortened by six months.[26]

In Lower Saxony training takes place in a special school. After successful completion of the examination, a certificate is given which has no special professional designation. Presenting the certificates and meeting further general conditions leads to state approval. The graduate is then a state-

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25 Blätter zur Berufskunde, medizinischer Fußpfleger/medizinische Fußpflegerin, Bundesanstalt fur Arbeit, Nürnberg, 1985, pp 6.7.

26 Bestimmungen über die Ausbildung und Prüfung an Berufsfachschulen - Medizinische Fußpflege Kultusminister, 1982.

approved chiropodist. They enjoy - in contradistinction to the non-approved chiropodists - exemption from VAT.

In Lower Saxony the training is state-approved. The training has been recognized pursuant to the decree of the Ministry of Culture of Lower Saxony. The certificates are drawn up by the state recognized school in Brunswick and signed by the examining committee. The chairman of the examining committee is a state civil servant in the local government in Brunswick.

There is only one recognized school in Brunswick, Lower Saxony. In all other federal states there is a two year period of service training which can be completed with a ZFD association exam.
In addition to recognized training there is also short training in the form of courses and this applies in Lower Saxony and in other states. This provision cannot be abolished, because anyone can open this sort of training institution. Between the state recognized training in Lower Saxony and the short training schools there are great differences in level.

B.2 Position in the education system
The training in Lower Saxony is below the level of university. The training takes place at a professional school for chiropodists ('Berufsfachschule'). For the same profession there is one recognized training program only at the prescribed level. The non-recognized training programs have different levels.

B.3. Content
The content of the training is in accordance with number 1.5 of the Ministry of Culture's decree (see annexe 3).

The association offers continuing education opportunities. These are one to three day courses in which new techniques or further information is given.

C. PRACTICE OF THE PROFESSION

The number of chiropodists is not known. The professional association has 2500 members.

Chiropodists work both in care (nail and foot care) and in the clinical area. In the clinical area the following techniques are involved:

- Orthonyxy (nail straightening). The chiropodist prepares a chrome steel brace which he places on the ingrowing toenail and operates so that the lower sides of the nail are drawn out and no longer grow in.[27]
- Guttapercha technique. This technology is used to prevent the growing of the nail out of the nail wall.[28]
- Nail prothesis.

Important aspects of the chiropodist's activities are also:
- Massage and exercises for foot and leg; the application of adjustment and support, corrective aids, toe protheses (orthoplastics) and foot support (orthodic devices)[29]

The chiropodist sells also foot care aid such as plasters, ointments, bath accessories, foam rubber and felt supports.

The chiropodist must be able to distinguish whether foot problems accompany other illnesses or whether they are a consequence of illnesses, for example the consequence of metabolic sickness (like diabetes) blood vessel disease, primary muscle disease, neurological diseases or degenerative disease of the central nervous system.[30]

The chiropodist treats patients of all ages, but principally the elderly.
The chiropodist works in prevention, therapy, advice and after care.
The most common form of practice is private practice.

The relationship to the doctor is not regulated by law. Chiropodists work principally independently, to a degree by referral from the doctor. When there is no referral from the doctor then the professional makes his own diagnosis and proposes his own treatment.

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27 Blätter zur Berufskunde, medizinische Fußpfleger/medizinische Fußpflegerin Bundesanstalt für Arbeit, Nürnberg, 1985 pp 2-3.

28 idem.

29 idem

30 idem

8.4. The legal status, education and actual practice of the profession of chiropody in Belgium[31]

A. LEGAL REGULATIONS

A.1 General

At this moment the profession of chiropody is not yet legally regulated in Belgium. There is a Royal decree of 1967 which gives a legislative framework on which the regulation of the paramedical professions (including chiropody) will be based. The Royal decree has been modified several times. The last modification of December 1990 concerned the regulation of the paramedical professions, including chiropody. The first step in the regulation has been the creation of the National Council for Paramedical Professions, which will advise the Minister on questions relating to the paramedical professions. The council has divisions for each profession. There is also a Technical Commission which will deal with regulation matters for all paramedical professions.

Because the profession is not yet legally regulated there are no requirements with regard to the medical referral. When the profession is regulated there will be a list of treatments with an indication whether a certain treatment can be done independently or whether a medical referral is required.

A.2. Recognition

The profession of chiropody is not (yet) legally regulated. When it is recognized both the title and the work will be protected. The title that is used is 'Podologue/Podoloog'. At this moment there is no obligatory registration for chiropodists.
A related profession that is not recognized are the pedicures.

The professional association is the Belgian Association of chiropodists ('Belgische Vereniging der Podologen - Association Belge des Podologues - Belgische Vereinigung der Podologen'). There is no obligation for chiropodists to be a member of this association. The professional association is a member of the 'Federation Internationale des Podologues'.

A.3. Finance

There is no legislation with regard to finance. The professional association has made a list of chiropody treatments with the fees that can be asked. These fees are recommended by the association but there is no obligation

[31] Although the professional association in Belgium prefers the term 'podologist' instead of chiropodist, in this report we will use the term chiropodist in all descriptions.

for chiropodists to follow these recommendations. The patients pay directly to the chiropodist. There is no reimbursement possible for these costs.

There are no requirements that must be fulfilled before a chiropodist can start a practice except that, as an independent professional, he must pay social taxes and VAT and take an insurance policy in civil responsibility. Chiropodists can also work in salaried service.

A.4. Disciplinary rules
The professional association has a code of ethics which applies to members of the association. If members do not work according to this ethical code they can be reprimanded or be dismissed from membership of the association.

B. EDUCATION

B.1 General
The entry requirement for chiropody training is a secondary education diploma.[32] Such a diploma can be obtained after six years of primary and six years of secondary school.

Chiropody training itself takes three years and takes place at higher education institutes. The title that can be used after qualifying is 'podologue - podotherapeute gradué'. The training is not yet recognized.

B.2. Position in the education system
The education is higher education outside the university ('graduaat').
There are two schools of chiropody in Belgium.

B.3. Content
The subjects that are taught in the education are the following:[33]
- chemistry,
- physics,
- law,
- information science,
- study of biomechanical movement,
- system in anatomy/topographics,
- deontology,
- hygiene,

[32] 'Enseignement Secondaire Supérieur'.

[33] ISCAM (leaflet).

- podiatry,
- shoe technology,
- dermatology,
- pharmacology,
- methodology,
- kinesiology,
- general pathology and special pathology,
- ortho-traumato pathology,
- general physiology and movements,
- financial management,
- first-aid,
- psycho-pathology,
- psycho-pedagogy,
- physical education and sport,
- interventions,
- practical and clinical podiatry.

The practical work in the school and the actual clinical practice take up about a third of the education. The clinical practice consists of both observation and work. During the clinical practice there is always supervision.

The professional association organizes refresher courses. These are both short and long courses. They are not recognized.

C. PRACTICE OF THE PROFESSION

There are in Belgium 82 qualified chiropodists.[34]
Chiropodists in Belgium work mainly in private practices. Except in private practices there are also chiropodists who work in hospitals or in homes for the elderly. The majority of patients that are treated by chiropodist are elderly.
Because the profession is not regulated, the chiropodist in Belgium can either work independently or after a medical referral. The future legislation will indicate which treatments can be done independently and which can only be done after a medical referral.

The kind of complaints that are treated are keratosis, onychopathies and functional troubles.
A chiropody treatment can consist of the following:
- excision of keratosis,
- enucleation (treatment of infected areas),

[34] Ministry of Health, Brussels.

- orthoplastics (toe orthosis),
- onychoplastics (nail prothesis),
- orthonyxy,
- orthotic devices (foot support) - biomechanical examination,
- physical therapies.

8.5. A comparison of the position and education of chiropody in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium

A. LEGAL REGULATIONS

For chiropodists in the United Kingdom there is no legally obligatory referral, although in actual practice there often is a referral. For Dutch and German chiropodists referral is a legal obligation. Because in Belgium the profession is not regulated there is no obligatory medical referral.

British chiropodists who work in the National Health Service must be registered with the Chiropodists Board of the Council for Professions Supplementary to Medicine. There is no such obligation if they work outside the National Health Service. Chiropodists in the Netherlands have to be registered with the Chief Inspectorate of Public Health. For chiropodists in the Federal Republic of Germany and Belgium there is no obligatory registration.

In England chiropody in the National Health Service is free. Patients who go to a private practitioner either pay everything themselves or they get the costs of the treatment partly or wholly reimbursed by a private insurance company. In the Netherlands chiropody is not automatically reimbursed by the health insurance funds although there is an increasing number of private insurance companies that reimburse the costs of chiropody treatments. In Germany the costs of the treatment are only reimbursed if the patient has a medical referral. In all other cases patients pay for the treatment themselves. In Belgium there is no reimbursement of the costs of chiropody.

Related professions in Germany are the masseurs, the beauticians and the makers of orthopaedic footwear. Chiropody is one of the subjects that is taught in their courses. Another related profession is that of the pedicures. Also in the other three countries the pedicures are a related profession, but it is not a paramedical profession. In the Netherlands the professions that are also occupied with (disorders of) the feet are for instance the general

practitioners, medical specialists and the makers of orthopaedic footwear. In England the professions that partly overlap with chiropody are reflexologists, orthotists, prosthetists and appliance technicians.

For chiropodists in the Netherlands and the Federal Republic of Germany there is no ethical code. Chiropodists in the United Kingdom are subject to the Statement of Conduct of the Chiropodists Board of the Council for Professions Supplementary to Medicine and to the Code of Ethics from the Society of Chiropodists. If registered chiropodists do not act according to the Statement of Conduct of the CPSM they can be removed from the register which prohibits them to work in the National Health Service. The Code of Ethics only applies to members of the Society of Chiropodists. Its sanction is to dismiss somebody from membership. In Belgium the professional association has an ethical code which only applies to members.
There is no disciplinary law for chiropodists in any of these countries.

In the United Kingdom the title "state registered chiropodist" is protected but not the title "chiropodist". In the Netherlands the title "podotherapeut" is protected. In the Federal Republic of Germany the title "medizinischer Fußpfleger - staatlich anerkannt" is protected. The title "medizinischer Fußpfleger" as such is not protected. The status of the profession and the education are only legally regulated in the state Niedersachsen. Chiropodists only have protection of the profession in the Netherlands. In the other three countries the profession is not protected. Because in Belgium the profession is not yet regulated there is no protection of title or profession. The future legislation will create protection of title and of profession.

B. EDUCATION

There are differences between the four countries in the minimum number of obligatory years of education before entry to chiropody education. If we start counting at the age of six, this minimum number is ten years in the Federal Republic of Germany, eleven years in the Netherlands and twelve years in the United Kingdom and Belgium.[35]
There are also differences in the length and position of the chiropody training itself. In the United Kingdom, the Netherlands and Belgium the duration of the training is three years and takes place in higher education outside the university. In Germany the education is two years and takes place in a 'Berufsfachschule', which is secondary vocational education. The

[35] In calculating the number of compulsory years of schooling counting started at the age of six. However, in the United Kingdom and the Netherlands compulsory education begins at the age of five.

practical training in the United Kingdom and the Netherlands takes up about a quarter of the education, in Belgium a third and in Germany the legal requirement with regard to the practical training is a minimum of twelve weeks in the two year course.

An important difference between the training in the United Kingdom and in the Netherlands, the Federal Republic of Germany and Belgium is the fact that British chiropody courses teach the use of local analgesia and minor foot surgery. Because chiropodists in the Netherlands, Germany and Belgium are not allowed to perform foot surgery or use local analgesia this is not part of their education.
Both in England and in Germany there are also non-recognized courses in chiropody. In England these courses are correspondence courses with an element of practical training. These courses do not qualify for a position as a chiropodist in the National Health Service. In Germany there are also short courses in chiropody which are not recognized by the professional association. In the Netherlands there are no non-recognized courses. In Belgium none of the courses are recognized.

Except the difference with regard to foot surgery and local analgesia there is no reason to assume, on the basis of the available information, that there are major differences between the content of the education in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium. However, there are major differences in the length of training, the position of the training in the education system, the entrance requirements and the distribution between practice and theory in the education.

C. PRACTICE OF THE PROFESSION

In the United Kingdom chiropodists work both in hospitals, in the community and in private practice. Approximately 50% work in some form of private practice. In the Netherlands, Germany and Belgium chiropodists work mainly in private practices.
In all four countries chiropodists treat all kinds of patients and everywhere the amount of elderly patients is growing.
In England there is a difference between the kinds of complaints that are treated in a hospital setting and those that are treated in the community. In the community chiropodists mainly treat patients with chronic foot problems while in hospitals they treat patients with foot problems related to systemic disorders. Because chiropodists in the Netherlands, Germany and Belgium work mainly in private practices there is no such strict division between the different complaints. In the Netherlands the number of chiropodists working in hospitals is growing.

An important difference between England and the other three countries is the fact that British state registered chiropodists are allowed to use local analgesia and to perform minor ambulatory foot surgery. The Society of Chiropodists has issued regulations on ambulatory foot surgery. In the Netherlands, Germany and Belgium chiropodists are not allowed to use anaesthetics or perform surgery.

A comparable aspect of the treatment in the four countries is the treatment of ingrowing toenails. However, chiropodists in Germany, the Netherlands and Belgium are not allowed to use local anaesthetics before such a treatment while British state registered chiropodists may use local analgesia.
Chiropodists also prescribe and sometimes make orthoses, they treat wounds on the feet and they advise patients about foot care and shoes. In contrast to chiropodists in England, the Netherlands and Belgium, chiropodists in Germany also sell foot care products and sometimes shoes.

9. SUMMARY AND CONCLUSIONS

9.1. Summary

The motive for this research is the unification of Europe as a result of which paramedical professionals, just like other professional groups, will have the opportunity of practising their profession in the countries of the European Community. There will be free movement of persons and services within the single European market. This has been achieved for a number of professions by means of specific directives. The paramedical professions fall under the general directive ('Council Directive on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration'). This directive gives paramedicals the opportunity to establish themselves in other countries and practise their profession. In the terms of the directive the host country can make demands of the immigrant. It can require that the immigrant takes an aptitude test or an adaptation period.

Because the various EC countries may set additional requirements for immigrant paramedicals, it is important to have information on the position and training of the paramedical professions in Europe. The object of the research is the provision of background information on the basis of which individual requests from foreign paramedicals may be judged. The research is directed at five professions in the United Kingdom, the Netherlands, the Federal Republic of Germany and Belgium. The five professions are physiotherapy, speech therapy, occupational therapy, orthoptics and chiropody. Information has been collected on the legal status, training and actual professional practice in these five professions.

The information in the report has been primarily acquired by means of question sessions with representatives of government, of the professional groups and with practising therapists. The papers have been written on the basis of this information and have been offered for commentary to various contacts. Use has also been made of the available literature on paramedical professions.

Physiotherapy
As far as the legal regulations governing physiotherapy in the four countries are concerned there is an important difference in the referral by the doctor.

In the Netherlands and Germany physiotherapists can only treat patients who have been referred by the doctor . This is not only a legal requirement but it is also a prerequisite for payment by the health insurance companies. In England on the other hand no medical referral is necessary for physiotherapy. This means that one can go directly to the physiotherapist. In practice it appears that most patients do have a referral. In Belgium there are not yet any legal regulations for the profession. As a consequence there is no legally required referral. A referral is however a condition for reimbursement of the costs. The professional title of physiotherapist is protected in all countries, except Belgium. When the new legislation on paramedical professions is passed in Belgium both the title and the profession will be protected. The educational title is protected in Belgium however. At this moment it is only in the Netherlands that there is also professional protection for physiotherapists. Another important difference is that in Germany physiotherapists can only start their own practice after working for someone else for two years. In the Netherlands, Belgium and England they can start their own practice immediately after qualifying.
In England there is compulsory registration for physiotherapists working for the National Health Service. There is no compulsory registration for physiotherapists in private practice. In the Netherlands there is compulsory registration with the Chief Inspectorate of Public Health. In Germany there is no registration for physiotherapists. In Belgium there is registration for those with diplomas with the Ministry of Health. This registration is a prerequisite for recognition by the health insurance authority.

The differences in training for physiotherapists in the four countries reside primarily in the admission requirements, the place of the training course in the education system, the duration of the training and the relationship between theoretical and practical education. The compulsory minimum level of prior education in England and Belgium is twelve years, in the Netherlands eleven years and in Germany ten years.[1]

There are also differences in respect of the position of physiotherapy training within the education system. In England and Belgium it is university training or higher education outside the university, in the Netherlands it is higher education outside the university ('Hoger Beroepsonderwijs') and in Germany it is a secondary vocational school ('Berufsfachschule'). The length of the programme is three or four years in England and Belgium, four years in the Netherlands and three years in Germany. In Germany the

[1] In calculating the number of the compulsory years of schooling, counting must start at the age of six. But it should be realized that in the Netherlands and England compulsory education begins at the age of five and not at six.

training is subdivided into two years of training followed by a year clinical practice. This makes the German training programme the most practical.
Only in England are there also non-recognized training programmes for physiotherapists. These are correspondence courses with short periods of practical training at the end.

In the Netherlands a relatively large number of physiotherapists work in private practice (almost 60%). In Germany almost a quarter of the physiotherapists have their own practice and in England the majority work for the National Health Service. In Belgium half of the physiotherapists have their own practice. Treatments in England and Germany include little massage, whereas in the Netherlands this is regularly applied. Another important difference is that in Germany physiotherapists apply physiotechnology far less than in England and the Netherlands. Very little physiotechnology is applied in private practices in Belgium because this is not paid for by the insurers. Payment only takes place when the physiotechnology is applied under the supervision of a doctor-specializing in rehabilitation medicine.

Speech therapy
An important distinction among the four countries is the fact that in the Netherlands and Germany a medical referral is required, whereas, in England the speech therapist can be consulted directly. In practice in England too there is generally a referral. Medical referrals in the Netherlands and Germany are a prerequisite for reimbursement of the costs of speech therapy treatment by the insurers. In Belgium there are no legal regulations for the profession and as a consequence there is no compulsory medical referral. A medical referral is however a prerequisite for reimbursement of costs. With the exception of Belgium, in the other three countries the title of speech therapists is protected by law. The Netherlands is the only country where speech therapists also have protection of the profession. When the act on paramedical professions has been passed in Belgium there will be, in addition to protection of the title, also protection for the profession as such. In Germany, speech therapists have to work in the employment of someone else for two years before they can start their own practice. In the Netherlands, England and Belgium speech therapists are allowed to start their own practice immediately after qualifying.
There is no compulsory registration for speech therapists in the United Kingdom. This is the consequence of the fact that speech therapy is not among those included under the "Professions Supplementary to Medicine Act". In the Netherlands speech therapists have to be registered with the Chief Inspectorate of Public Health. In Germany there is no compulsory registration. In Belgium there is registration for those with a diploma at the

Ministry of Health. This registration is a condition for recognition by the health insurers.

Important differences in training in the four countries are to be found in the admission requirements, the position of the training in the education system, the length of the training and the relationship between theory and practice. The differences in admission requirements reside in the number of years schooling required before a student can start training as a speech therapist. In England and Belgium this is twelve years, in the Netherlands eleven years and in Germany ten years.[2]
In England the training is at universities or polytechnics; in the Netherlands and Belgium at higher education institutions outside the university and in Germany at vocational schools ('Berufsfachschule'). In Belgium it is possible to study further after training in higher education and to follow a university speech therapy training programme for a 'licentiaat'. In England training lasts three or four years, in the Netherlands four years, in Germany three years and in Belgium three years after which one can follow a further three year university programme. An important distinction is that Germany is more practically oriented than the other three countries. In Germany, the practical part is almost half of the training; whereas in the Netherlands and England it is approximately a quarter and in Belgium a fifth.

In the Netherlands, Germany and Belgium speech therapists work both in hospitals and in private practice, whereas in England they are primarily in service of the National Health Service. A significant aspect in the Netherlands is that there are a large number of speech therapists in education. In all four countries the majority of patients are children.

Occupational therapy
The legislation for occupational therapists differs in the four countries. In the Netherlands and Germany a medical referral is mandatory. In practice however, except at the beginning of the treatment, there is not always a referral. As the profession is not legally regulated in Belgium there is no compulsory medical referral. In England there is no compulsory medical referral. In practice however most patients do have a referral. Another important difference is the fact that in Germany occupational therapists can only start a private practice after they have worked for someone else for two years. In England, the Netherlands and Belgium, occupational therapists can start a practice as soon as they are qualified. In the Netherlands

2 In calculating the number of compulsory years of schooling, counting started at the age of six. However it should be realized that in the Netherlands and England compulsory schooling begins at five instead of six.

and Belgium there are hardly any private practices for occupational therapists. In England, the Netherlands and Germany the title of occupational therapists is protected by law. The Netherlands is the only country where occupational therapists also have protection of the profession. Because the profession is not regulated by law in Belgium there is no protection of the title. In the new legislation however both the title and the profession will be protected.
In England registration is compulsory for occupational therapists who work in the National Health Service. For those in private practice there is no compulsory registration. In the Netherlands there is compulsory registration at the Chief Inspectorate of Public Health. In Germany there is no compulsory registration. In Belgium those occupational therapists with a diploma are registered with the Ministry of Health. This registration is a condition for recognition by the health insurers.

The differences in training for occupational therapists in the four countries reside primarily in the admission requirements for training, the place of the training in the education system, the length of the training and the relationship between theoretical and practical education. In England and Belgium the minimum number of years of education that have to be followed before one can commence training in occupational therapy is twelve years. In the Netherlands this is eleven years and in Germany ten years.[3]
Another difference is the position of the training in the education system. In England it is university education or higher education outside the university. In the Netherlands and Belgium it is higher education outside the university. In Germany occupational therapy training is given at secondary vocational schools ('Berufsfachschule'). The duration of the training is three or four years in England, four years in the Netherlands and three years in Germany and Belgium. In Belgium there is the option of further training at university level. An important distinction between the training programmes in the four countries is the relation between theory and practice. In the Netherlands the practical training takes up a quarter of the training time, in England there is a prescribed minimum of 1,000 hours of clinical practice, in Belgium there is a prescribed minimum of 1,200 hours of clinical practice and in Germany the practical part is almost half of the training. This makes the German training the most practically oriented.

In the Netherlands and Belgium occupational therapists work mostly in institutions. There are hardly any occupational therapists in private practice.

3 In calculating the number of the compulsory years of schooling counting started at the age of six. But it should be realized that in the Netherlands and England compulsory education begins at the age of five and not at the age of six.

In England and Germany occupational therapists work both in private practice and in institutions. In England they also work in what is called "community care". In all four countries occupational therapists work both in general and mental health care.

Orthoptics

The situation with regard to referral to orthoptics has to do with the employment of orthoptists. Because in all four countries the majority of orthoptists are employed by ophthalmologists there is in practice not usually a referral. Legally a referral is always required. Because in Belgium the profession is not yet legally regulated the medical referral is not obligatory, although it is required for financial purposes. Only in the United Kingdom and Belgium there are orthoptists who work in private practice.

Registration for orthoptists is different in the four countries. In the United Kingdom state registration is compulsory for orthoptists who work in the National Health Service, in the Netherlands they must register with the Chief Inspectorate of Public Health, in Belgium registration is only compulsory for reimbursement and in Germany there is no obligatory registration anywhere. In the Netherlands and the Federal Republic of Germany the title of orthoptists is protected. In the United Kingdom it is only protected for orthoptists who work in the National Health Service and in Belgium it is not (yet) protected.

Orthoptic treatments are reimbursed in the Netherlands and Germany. In the United Kingdom it is free for patients in the National Health Service, outside the health service it is usually reimbursed by the private insurance companies. In Belgium only the orthoptic exercise sessions are reimbursed. None of the countries have a disciplinary law for orthoptists. The United Kingdom is the only country with an ethical code for orthoptists.

The differences between the educations in the four countries lie in the entrance requirements, the position of the education in the education system, the duration of the education and the division between practical and theoretical training.

The required minimum amount of years of schooling before starting the orthoptic training is twelve years in the United Kingdom and Belgium, eleven years in the Netherlands, and ten years in Germany.[4]

There are also differences with regard to the position in the education system. In the United Kingdom the education takes place in NHS training schools but this will change to university training in 1992. In the Nether-

[4] In calculating the number of compulsory years of schooling counting started at the age of six. In the United Kingdom and the Netherlands compulsory education starts at the age of five.

lands and Belgium the training is part of higher education outside the universities and in Germany it is secondary vocational education ('Berufsfachschule').
In England, the Netherlands and Germany the education takes three years full-time, in Belgium it is a two year part-time education. The Belgian education is a further education which can be followed by students who already have a relevant higher education diploma.
With regard to the practical training the German education has the largest amount of practical hours (almost two thirds of the education). In the United Kingdom and the Netherlands the practical training takes up about one third of the education and as a result of the structure of the education the Belgian training only has 280 hours of practical training which is approximately a quarter of the education.

In the four countries the work of orthoptists consists of orthoptic examination, orthoptic reeducation, amblyopia treatment, testing of visual acuity and quantitative perimetry. Only in the Netherlands the prescription of glasses is also part of the work of orthoptists. In Belgium orthoptists are not allowed to do retinoscopy or refraction and also in Germany retinoscopy is not part of the work of orthoptists.
Orthoptists in the four countries have in common that the largest amount of work is with children with strabismus and amblyopia.

Chiropody
With regard to the legal regulations there are differences between the four countries. In the Netherlands and Germany the medical referral is not only legally obligatory, it is also a condition for reimbursement of the costs of the treatment. In the United Kingdom there is no obligatory referral for chiropody. In practice, however, there is often a medical referral. Because in Belgium the profession is not regulated there is no obligatory medical referral.
In the United Kingdom, the Netherlands and Germany the title of chiropodists is protected. In the Netherlands the profession itself is also protected. In Belgium there is no protection at all. However, the new legislation will create both protection of title and of the profession.

In Belgium and Germany there is no obligatory registration for chiropodists. In the Netherlands they must register with the Chief Inspectorate of Public Health and in the United Kingdom registation is only required for chiropodists who want to work in the National Health Service. Outside the National Health Service there is no obligation for registration.
In the United Kingdom chiropody in the National Health Service is free. Outside the National Health Service patients either pay everything them-

selves or (part of) the costs is reimbursed by a private health insurance. In Germany and the Netherlands chiropody treatments are not always reimbursed and if a certain treatment is eligible for reimbursement there must always be a medical referral. In Belgium there is no reimbursement of the costs of chiropody treatments.

An important difference between the education in the United Kingdom and the other three countries is that chiropodists in the United Kingdom are trained to use local analgesia and perform minor foot surgery. In the other countries this is not part of the education.
Other major differences are in the length of training, which is two years in the Federal Republic of Germany and three years in the other countries, and in the position of the education in the education system. In Germany chiropody education is secondary vocational education ('Berufsfachschule') and in the other three countries it is higher education outside the university. This latter difference is also reflected in the entrance requirements. The required minimum years of schooling before starting a chiropody training is twelve years in the United Kingdom and Belgium, eleven years in the Netherlands and ten years in Germany.[5]

In the Netherlands, Germany and Belgium chiropodists work mainly in private practices. In the United Kingdom they work not only in private practices but also in hospitals and in community care.
The major part of the treatments in the four countries are comparable. Important aspects are the treatment of ingrowing toenails, the prescription of orthoses, treatment of wounds, advice about footcare and shoes. However, there is one very important difference between the United Kingdom and the other three countries. This difference is that British chiropodists are allowed to use local analgesia and to perform minor ambulatory foot surgery. In the Netherlands, the Federal Republic of Germany and Belgium this is not allowed.

9.2. Conclusions with regard to professionalisation

In this section the professions in the four countries will be looked at from the perspective of professionalisation. When talking of professionalisation as mentioned here we look at two aspects, the professional autonomy of the

5 In calculating the number of compulsory years of schooling counting started at the age of six. However, in the United Kingdom and the Netherlands compulsory education starts at the age of five.

paramedical practitioner and the degree to which the market for paramedical services is controlled. In the case of professional autonomy this relates primarily to referral by the doctor, the prescribing of a treatment and the situation in which the paramedic works, in service or in private practice. The second aspect, control of the market, has to do with the protection of the profession and the title, the compulsory registration of the professional practitioners and the payment of paramedical treatment by the insurers.

Professional autonomy

First the aspect of referral. The research shows that there are differences, both among the professions and among the countries, as far as compulsory referral by doctors is concerned. If there is a compulsory referral, the paramedical professional has less freedom to pursue his own insights. The research shows that paramedical professions in England in general are not bound to referral by the doctor. In practice however most of the patients do have a referral. The structure of the British health care system also influences the compulsory nature or otherwise of medical referral. In England the majority of patients are treated in the National Health Service and there is no financial regulation to make a referral necessary. In the Netherlands and Germany the referral by a doctor is not only a legal requirement but is also a condition for the payment of the costs of treatment. In Belgium a medical referral is a condition for reimbursement of the costs of the treatment.

The aspect of referral also relates to the second aspect of professional autonomy, the prescription of treatment by the doctor. In general it can be stated that where there is no referral there is also no prescribed treatment. In cases where a referral does take place it is dependent on the individual referring doctor and the relationship between the doctor and the paramedical professional as to whether there is a detailed treatment proposal or not.

The autonomy of the paramedical professional depends further on the situation in which he is working, in private practice or in service of someone else. It appears that in the four countries orthoptists are virtually exclusively employed by other people.

As regards physiotherapists, speech therapists and occupational therapists there is an important difference in that in Germany these professionals have to work for someone else for two years before they can start their own practice. In England, the Netherlands and Belgium they can begin their own practice immediately after qualifying.

The comparison of professional autonomy in the four countries produces a varied picture. In respect of referral and prescribing of treatment by the doctor it appears that the British paramedical professionals are the most autonomous. As far as the paramedical working situation is concerned

these are comparable for orthoptists in all four countries. Because they are primarily in the service of someone else, they have less autonomy than paramedical professionals who work after referral. For the other professions it can be said that they have less autonomy in Germany than elsewhere because they have to work for someone else for two years before they can start a private practice.

Market control

An important aspect of market control is the protection of the profession and the title. This relates to the required training for the profession. The research shows that it is only in the Netherlands that the paramedical professions are protected. The bill proposing legislation in the form of an Act on the professions in individual health care does not propose to continue protection for the Dutch paramedical professions. In the Netherlands, England and Germany there is protection of the title of the paramedical professions. In Belgium at this moment there is no protection of the title or the profession, but the passing of the new act will ensure that both the title and the profession are protected. Market control resides in the existence of a protected title and specific courses of training that have to be followed.

The payment of the costs of treatment also has an influence on market control. If the insurers only pay for treatment by those who have followed prescribed courses of training, this means closing the market to other professionals. As far as financing is concerned, England assumes a special position because most paramedical treatments take place within the National Health Service. In these cases the patients do not have to pay for the treatment. However, in England this market is protected by the fact that only those who are state registered can work within the National Health Service. In order to become state registered, paramedical practitioners have to be registered with the Council for Professions Supplementary to Medicine. Only those who have completed a recognized course of training can be considered for this. For speech therapists there are separate regulations: for working in the National Health Service they need a certificate from the professional association. In the Netherlands and Germany reimbursement is often related to the referral by the doctor. If there is no referral, then there is no restitution of the costs by the insurers. In Belgium finance depends on recognition by the insurers. In order to be recognized by the insurers the paramedical professional must have a recognized diploma.

A comparison of market control of the four countries shows that in the area of protection of title and profession, Dutch paramedical professionals have the most protection. When the bill for the Act on the professions in the individual health care is passed the protection will be limited to that of the

title, as is the case in Germany and the United Kingdom. Because there is no protection of the profession or title in Belgium there is, in this respect, little market control for the Belgian practitioner. In respect of funding the British paramedical professionals have far-reaching control of the market. This is also true for chiropodists who in the other countries only control the market to a very limited degree. As far as the other professions in the Netherlands, Germany and Belgium are concerned there is a comparable level of market control.

9.3. Conclusions with regard to the directive

The free movement of paramedical professions in Europe is regulated by the general directive of the European Commission which came into force on the fourth of January 1991 (Council Directive on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration). The directive provides for supplementary requirements which can be imposed on migrating professionals. These supplementary requirements are set by the competent authority in the receiving country and can include an aptitude test or adaptation period.

The information on the five paramedical professions in this report will primarily be used as background information in assessing individual requests by paramedicals who want to work in the Netherlands. In the assessment of individual requests the competent authority will first examine whether the directive applies. If it does, then it has to be determined whether there are substantial differences. In general the individual request will contain the necessary data. The present investigation provides background information against which these data can be assessed.

Research questions were formulated with regard to the legislation for paramedical professions, the position and general content of the training for these professions and actual professional practice. With regard to these questions, we can draw the following conclusions.
The professions with which this investigation is concerned are professions which in the Netherlands are regulated by the Act on Paramedical Professions. In the United Kingdom and Germany there are also legal regulations for these professions. In England this is the Professions Supplementary to Medicine Act. Speech therapy is not included but is regulated by a separate statutory instrument. In Germany there are separate acts for the various professions. In Belgium there is a regulation with regard to

funding for these professions. A separate act for the paramedical professions is in preparation.
With regard to the position and the content of the training for the five professions there are important differences between the four countries. In general prior education is shorter for German paramedical training programmes than in the Netherlands, Belgium or England. The position of German training programmes in the education system is lower than the positions of these in England, the Netherlands and Belgium. The training programmes in Germany are not part of higher education and do not fall under the directive. As far as the duration of the training programmes is concerned, there are no systematic differences per country. These differences in the duration of training are described in section 9.1.
Except for the differences already mentioned, all German paramedical training programmes are more practically oriented in comparison with the training programmes in the other three countries.

In addition to the differences mentioned above there are two differences which specifically relate to the content of the professional practice. The first difference is in the area of physiotherapy and then in particular in relation to physical therapy in a narrower sense. It would appear that this is administered in Germany far less frequently than in the Netherlands and England by physiotherapists. Physiotechnology is part of the profession, but as a consequence of the funding regulations is seldom given. Where it is given in Germany this is largely under supervision by doctors, or by masseurs and medical bath attendants under the supervision of a doctor, whereas physiotherapists give this sort of treatment far less frequently. In Belgium in private practice little physiotechnology is applied. This is primarily a consequence of the financial regulations.
The second difference is in the area of chiropody. In England chiropodists are allowed to give local anesthetics and to carry out minor foot surgery. In the Netherlands, Germany and Belgium chiropodists are not allowed to do this.

As far as the content of the paramedical training in the four countries is concerned, on the basis of the information we have, there do not seem to be any further differences between the training in these four countries. It is not possible on the basis of this information to find the precise differences and points of agreement in terms of the content of the training. A great deal more research is necessary for this.

9.4. Other uses

The information in this report is in the first instance for the Ministry of Welfare, Health and Cultural Affairs as background for the assessment of individual requests. The information is however also important for others. Competent authorities in other EC countries may use the report to assess individual requests by paramedical professionals as the Dutch Ministry does. Others for whom this report is important are training institutes and professional associations of paramedicals. Above all, with increasing internationalisation it is important for training institutes and professional associations to follow developments in other countries. Furthermore the information in this report is important in placing the research that is done abroad in the right context. Insight into the position of the various professions in the health care system can be illuminating in the interpretation of the results of such research.

ANNEXE 1

Interviews and information:

UNITED KINGDOM

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Practice observations

UNITED KINGDOM

Physiotherapy practice in the Royal London Hospital.

Speech Therapy practice in Camberwell Health Authority

Orthoptic practice at Moorfields Eye Hospital, London

Chiropody practice in Greenwich Health Authority

Occupational Therapy practice in St. Georges Hospital, London

FEDERAL REPUBLIC OF GERMANY

Physiotherapy practice in Aix-la-Chapelle

Orthoptic practice in Nürnberg

Chiropody practice in Frankfurt

Speech therapy practice in Aix-la-Chapelle

Occupational therapy practice in Mönchen-Gladbach

BELGIUM

Orthoptic practice in St. Raphael hospital in Leuven

Physiotherapy practice in Turnhout

Speech therapy practice in Turnhout

Occupational therapy practice in Turnhout

ANNEXE 2

Questionnaire

A. LEGAL REGULATIONS

A.1. General

1a. What legislation is there in your professional field?
b. Are there any additions or alterations of this legislation?
c. What is regulated in this legislation?

2. Are there any rules to separate the profession from the medical profession?

3a. Is there an obligatory referral?
b. Who refers patients to your profession?

A.2. Recognition

4a. Is the profession legally recognized?
b. Which authority recognizes the profession?
c. Is the title or the profession protected? (or both).
d. What is the professional title after qualifying?

5. Are there any related professions that are not recognized?

6a. Is there an obligation for registration?
b. Where must the registration take place?
c. Is there an obligatory membership of a professional association or other association?
d. If membership is not legally obligatory, is it, in practice, advisable to be member of a professional association?

A.3. Finance

7a. Which legislation and regulation exists with regard to finance?
b. How is the payment of the costs of the treatment regulated? (does the patient pay directly to the professional, or does he pay premium to a medical insurance?).
c. How is the payment to the professional regulated? (is he paid per item of service, is there a capitation system or is he paid a regular salary?).
d. Are there any special conditions which must be fulfilled before payment can take place?

8a. How is the entry into active practice regulated? (can the allied health professional start a private practice, work in the pay of another professional or work in government service?).
b. Is there a policy in this field?

A.4. Disciplinary rules

9a. Are there any disciplinary rules?
b. Are these disciplinary rules internal or external? (Are they enforced by the government or by the professional association?).
c. Which disciplinary measures can be taken?

10a. Is there a code of ethics?
b. What measures can be taken when this code is not followed?

B. EDUCATION

B.1. General

1. What are the entry requirements to become a student in your profession? (both in terms of level and years of education).

2a. What is the duration of the education? (both in terms of years and study load).
b. Where does the education take place? (in hospitals, or is there a separate school?)
c. What is the name of the diploma?

3a. Is the education recognized?
b. Which authority recognizes the education?
c. Who issues the diploma?

d. Are there, apart from recognized schools, also non-recognized schools or courses?

B.2. Position in the education system

4a. Is the education at university level or lower?
b. If lower, how is this level called?
c. Are there, for the same profession, possibilities for education at different levels?

5a. How many schools or places of training do you have in your country?
b. Are there considerable differences of level between these schools?
c. How do these differences of level influence the later professional work?

B.3. Content

6a. What are the main subjects of the training?
b. What are the minimum requirements for obtaining a diploma?
c. What extra courses are given, apart from the required courses?
d. How much time is spent on the various courses?

7a. What is the distribution between practical and theoretical training?
b. Is there much supervision during the practical training?
c. Does the practical training consist of observation or work, or both?

8a. Are there possibilities for refresher courses?
b. Are these courses specialisations or short courses?
c. Are these courses recognized?
d. What are the conditions for recognition of these courses?

C. PRACTICE OF THE PROFESSION

1. How many professionals work in your country?

2a. In which fields do they work? (prevention, screening, therapy, after care etc.)
b. How are they distributed over these fields of practice?

3a. In which form of practice do they work? (private practice, in hospital or any other form?).
b. How are they distributed over these forms of practice?
c. Are there professionals working in community care?

4a. What is the relation to the physician?
b. Does the professional work independently, after referral or under supervision of a physician?
c. Does the professional make his own diagnosis and/or proposal for treatment?

5. What are the characteristics of the patient population? (Are they mainly young or old patients).

6a. What kind of complaints are treated?
b. What is the content of the treatment?

7. Is there a shortfall or a surplus of professionals in your field?

ANNEXE 3

The content of the training in chiropody in Lower Saxony, Federal Republic of Germany

	Zahl der Wochenstunden		
	Klasse 1	Klasse 2	Gesamt
Fächergruppe I			
Gemeinschaftskunde	1	1	2
Deutsch	1	1	2
Rechts- und Berufskunde	1	1	2
Physik	1	1	2
Wirtschaftskunde	1	2	3
Fächergruppe II			
Theorie der Fußpflege	3	1	4
Anatomie	2	1	3
Physiologie	2	1	3
Dermatologie	1	1	2
Orthopädie	1	2	3
Pathologie	1	1	2
Hygiene und Gesundheitslehre einschließlich Erster Hilfe	1	1	2
Waren- und Materialkunde	2	1	3
Fächergruppe III			
Pflegerische Maßnahmen am Fuß	8	8	16
Praktische Ausführung der Massage an Fuß und Unterschenkel im Rahmen der pflegerischen Maßnahmen	2	2	4
Praktische Ausführung von Bewegungsübungen an Fuß und Unterschenkel im Rahmen der pflegerischen Maßnahmen	1	1	2
Praktische Licht-, Wärme- und Wasseranwendungen an Fuß und Unterschenkel	2	1	3
Anwendung und Anpassen von Stütz- und Korrekturmitteln am Fuß im Rahmen der pflegerischen Maßnahmen	—	4	4
	31	31	62

Source: Blätter zur Berfuskunde, Band 2, 1985.

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