

De ontwikkeling van het praktisch medisch onderwijs in de huisartspraktijk

Citation for published version (APA):

Bouhuijs, P. A. J. (1983). *De ontwikkeling van het praktisch medisch onderwijs in de huisartspraktijk*. [Doctoral Thesis, Maastricht University]. Rijksuniversiteit Limburg. <https://doi.org/10.26481/dis.19830603pb>

Document status and date:

Published: 01/01/1983

DOI:

[10.26481/dis.19830603pb](https://doi.org/10.26481/dis.19830603pb)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

Summary

This dissertation focuses on the design and evaluation of the three-month attachment in general practice implemented by the medical faculty at Maastricht. Special emphasis has been put on the development of the attachment programme, the quality of realization achieved during the first year of operation, and the programme's refinement in subsequent years.

In chapter 1 the research is viewed against the background of trends in educational research into Higher Education. Also the attachment concepts are entered into and the role of this practical training in medical education.

Chapter 2 describes the original design of the attachment. The position accorded to it in the curriculum is elucidated, as is the setting in which its structuring has taken place. Furthermore, the most important elements of the attachment are dealt with successively. The major points are outlined in some more detail below.

In the Netherlands, family medicine or general practice traditionally plays an important role in the health care system under the influence of legal and insurance policies. On a population of about 14 million, mainly living in urban or suburban areas, there are more than 5500 general practitioners.

Generally, the important position of family medicine in health care delivery is not well reflected by medical curricula. This is all the more surprising considering that there are substantial differences between family medicine and hospital-based medicine, which are of great significance to the medical student.

Among the arguments advanced by Tiddens (1977), the founding dean, there were two which greatly favoured development of a family medicine attachment:

1. General practice offers the student a range of problems deviating from those in hospitals: the variation of complaints is virtually

unlimited; while the majority relate to minor problems of health, serious cases can and do occur in sufficient number; there are distinct connections between the somatic, mental and social factors in the complaints presented;

2. General practice is run by a specific mode of procedure and specific problems occur, with which the student should become conversant. Prominent here is the necessity that he should learn to work with tentative conclusions inferred from a limited amount of data and to subsequently check new information against the working hypothesis formed originally.

For a new medical faculty aiming at the strengthening of primary care it was quite natural to incorporate a three-month attachment in general practice as an important element of its six-year curriculum.

Major objectives of the attachment are:

1. Obtaining insight into the backgrounds of the complaints, problems and questions regularly submitted to the family doctor, as well as coming to know and understand the way in which the problems are presented;
2. Acquiring skill in the practice-attuned, methodical approach of such complaints, problems and questions.
3. Gaining proficiency in the preparation of medical records;
4. Acquiring the knowledge and insight necessary for adequate care delivery.

The programme was established for the first time in the fall of 1978 after one and a half years of preparation by a multidisciplinary teaching team.

Training model features*:

- the attachment to the general practice covers thirteen weeks; about half the number of students (24 = group I) completed this training prior to a six-month general clinical clerkship in a hospital, the other half (21 = group II) immediately after this clinical period;
- during the attachment every fifth-year student is assigned to a single GP teacher (GPT), who is responsible for the teaching in his practice;

* More extensive information can be found in:

A.H.M. Mol & P.A.J. Bouhuijs (Eds), Attachments in General Practices, Onderwijsreeks Rijksuniversiteit Limburg, Maastricht, 1981.

- the student works in the practice for about twenty hours a week;
- for acquisition of case histories, the student interviews and, if necessary, examines about fifteen patients per week; this activity is not attended by the GPT;
- the student prepares a record of his independent contacts with patients;
- the GPT concludes the consultations with the patients that have been examined by the student;
- the GPT has, in principle, a daily follow-up discussion with the student on the basis of the patient record;
- the student may in addition attend the consulting hour of the general practitioner, be present at team discussions, maintain contacts with other primary care workers, visit patients suffering from chronic diseases, accompany patients on their way to the hospital, participate in week-end duty, etc.;
- each week the student attends two study group sessions at the faculty;
- the study group consists of eight to ten students and is given guidance by a general practitioner-tutor (the GP tutor, i.e. a staff member of the department of family medicine);
- group meetings are devoted to consideration of certain complaints and patient problems and to topics related to primary care in general; the rest of the student's time is spent on independent study.

Out of a total of about 350 GP's in the recruitment area of the faculty (within a radius of about 100 km) 40 participated in the programme in 1978/79. Certain minimum criteria are used to select general practitioners for this job, such as a well-kept record system and availability of suitable work space. All of them have to attend a two days' workshop to introduce themselves to their teaching role.

Chapter 3 has a dual purpose, viz. description of the procedures included in the attachment design for assessment of a student's progress and outlining the methods employed in the research to collect information about the course of the attachments. The elucidation of the above procedures is considered in conjunction with the assessment policy agreed upon by the faculty in 1978.

From 1977 the medical faculty has measured learning results with the aid of so-called progress tests. These tests are structured to establish on a regular basis how far students have proceeded on their way

to the final goal of reaching the basic-physician level. The test is taken four times a year by all students of the faculty and consists of yes/no questions about topics and disciplines regarded as relevant for a basic physician. The consequence of choosing a programme-independent test model was that all other forms of testing (such as attachment assessments) assumed a non-credit character, and served for feedback only. The attachment offers a great many opportunities for feedback. The daily follow-up discussion with the GPT on the basis of patient records can be seen as a very important feedback session. The attachment design also provides for several occasions on which the student can be briefed in fair detail about the quality of his functioning. Two tests consisting of 115 true/false items were administered. Also a multiple-choice test from the medical faculty at Rotterdam was used. On all tests, results of a group of graduate basic physicians were available. At the end of the attachment the student has a complete consultation with a simulated patient (a healthy person instructed to simulate a patient having specific complaints). The course of the consultation is recorded on tape and judged by the GP tutor - with the aid of a questionnaire - whereupon he discusses the outcome with the student concerned.

Two types of information are important to programme evaluation: the learning results (product evaluation) and the achieved level of programme implementation (process evaluation).

The following sources have been used:

1. A questionnaire about a variety of attachment aspects to be filled out by all students at the end of the training. It is made up of 85 questions answered on a 5-point scale and of 2 open questions.
2. A skill check-list completed by the students at the beginning, halfway and at the end of the attachment. This instrument is used to obtain an idea of the acquired skill levels and to check which skills have been put to practice. Chapter 5 deals with this list in more detail.
3. The patient records submitted by the student, which are discussed in the chapters 4 and 7.
4. A specific worked-time record of the hours a number of students have spent on the various subjects, see chapter 4.
5. The Maastricht GP Attitude Scale. This is filled out at the beginning and at the end of the attachment period and is designed to provide an insight into a student's attitude towards aspects playing a part in the doctor-patient relationship. Chapter 6 enters into the research design and the results.

6. Study progress assessments; chapters 5 and 8.
7. Progress test outcomes; chapter 8.
8. A questionnaire about several elements of the attachment, filled out by all GPT's after 4 weeks and at the end of the training. It consists of 14 questions answered on a 5-point scale and of 2 open questions. Furthermore, at the end of the attachment, an additional 12-item questionnaire was submitted to the GPT's.
9. Minutes of planning group meetings.
10. Reports by GP tutors on the course of affairs in their attachment group.
11. Reports on the meetings with GPT's during attachments.
12. Information obtained by the researcher in talks with students, teachers, tutors, and members of the planning group.

Chapter 4 reports on the 1978-1979 family medicine attachments. Key element of the training are interviewing and examining of patients. Analysis of students' records of their contacts with patients gives a suitable survey of the activities involved. Total figures for submitted records show that the anticipated number of fifteen per week has not been reached. Moreover, the rather large diversification of the complaints reported reveals that there are great individual differences among students. Classifying the record into groups of complaints, it appears that students are chiefly dealing with patients suffering from disorders of the locomotor system, problems concerned with the respiratory system, skin diseases, headache, pain in the chest, epigastric complaints, and complaints of nervousness. The research has revealed that the supply of complaints is adequately varied. Also from information supplied by both students and GPT's appears that, in general, patients have no objection whatever against being examined by the students, a matter about which some of the GPT's had had definite prior doubts. It is evident from the results that the GPT's do not think that students' activities cause any annoyance to the patients. On the contrary, several report that patients appreciate these contacts because they feel that adequate time is now taken to listen to their complaints. Patient records play an important role in follow-up discussions with the GPT. Going by the results, one might infer that the judgment about the records and their significance in the follow-up discussion is positive in the majority of cases. However, problems did present themselves. Previously, the students had acquired insufficient proficiency in making records. The objectives of the record were not invariably adhered to: students did not always fill out the relevant

forms prior to having been informed of the general practitioner's findings regarding the patient concerned. The record does not represent the student's activities and findings in this case, but a joint conclusion. Such deviations from the proposed programme were occasionally enhanced in instances where the GPT did not concentrate the follow-up discussions round a fixed point of time.

Also in other ways students have been involved in the general practice work by their teachers: examination of patients with an 'interesting' pathological history, toddlers' clinics, team discussions with other health care workers, week-end duty, first aid, etc.. Activities of this nature were very much appreciated.

The overall net study time of the first attachment group fairly matches the 40-hour schedule of the programme. The second group spent less time on programmed activities. In either case students' work in the practice they had been assigned to took about 20 hours a week, which corresponds with the expectations of the planning group. Time expended on matters external to the practices conformed to expectations as far as the first group was concerned, whereas that of the second group fell short thereof: the latter group devoted less time to self-study, while also the hours given to other activities - particularly the study group meetings - were less in number.

After half the attachment period had passed, worked hours were on the decline in both groups. If time occupation is regarded as an indication of the challenging aspect of the attachment, it follows that students' stimulation seems to decrease.

Cooperation by the general practitioners in the realization of the attachment programme has been paid great attention by the faculty from the very outset. The limited number of GP's active within the region covered by the medical faculty makes an attachment of this kind rather vulnerable. Therefore, for successful implementation it is important that the majority of the GPT's speak with approval of their cooperation with the students and their presence in the practice. Also, the answers given by the students about their relationships with the GPT's justify the conclusion that they, too, appreciated the guidance received.

Chapter 5 discusses some of the aspects related to the vast area of medical skills and competence. An inventory of the skills a student employs in the general practice has been made. This information is a

crucial factor in judging whether one of the essentials of the attachment - namely the active participation of the student - is given its due. The conclusion may be drawn that the family medicine attachment offers students the opportunity to apply a large number of skills in practice. The chapter further establishes the quality of student performance in terms of medical skills and competence within the framework of the training. From self-judgments appears that on the average skill levels increase. On completion of the attachment, judgments about the general skill level prove predominantly positive. It is true, though, that students who at the outset of the attachment already have completed a six-month clinical clerkship apply more skills and on the whole receive more positive judgments at the end of the attachment. The initial level of the students entering their attachment period at the beginning of the fifth academic year does not satisfy the expectations of the planning group. Nevertheless, it may be inferred from the overall results that active participation in the general practice is feasible for these students as well.

Chapter 6 explores the influence of the attachment on a student's attitude towards the doctor-patient relationship, especially in primary health care.

Two instruments were employed:

1. Self-judgments of students and teachers with respect to relevant aspects of the doctor-patient relationship measured with the aid of the 3-factor Maastricht GP Attitude Scale. This questionnaire was submitted to the two groups at the beginning and at the end of the attachment period. Moreover, also the GPT's filled out both versions of the attitude questionnaires.
2. Teacher assessments of their students' performance with regard to patient contacts. For this purpose use was made of the programme-evaluation questionnaire.

Factor 1 - preparedness to supply information to patients - indicated a distinct drop in attitude scores, which could not be related to GPT opinions. The results indicate that on the whole no change occurs in the positive attitude as far as factor 2 - attention paid to psychosocial problems - is concerned. This does not imply however that there should be no change of attitude in individual students, but the net result for the group as a whole is nil. Whenever changes were encountered, a faint connection was found with the viewpoints prevailing among GPT's.

For factor 3 - availability for the patient - the scores were subject

to a slight decrease in the direction of measured GPT attitudes. As in the case of factor 2, no direct connection could be established between the attitudes of students and those of their teachers. The observed changes in attitude are certainly not of a nature which suggests increased cynicism or indifference toward pertinent aspects of the doctor-patient relationship. On the other hand, the outcome underscores the importance of educational activities during the attachment not directly linked up with patient contacts. Several of the questions contained in the programme evaluation questionnaire concern a student's functioning in relation to patients. The answers given may be regarded as an indication for a professional attitude. The teachers' opinions about this element of student conduct were definitely positive. Differences in judgment between initial and end phases of the attachment and between the two groups proved not to be significant in any of the cases.

Chapter 7 explores the quality of student's records.

In order to check on the quality of reporting and to establish what improvement, if any, had taken place in the course of the attachment, a random number of the records collected (complaints of the back and abdominal problems) were evaluated. The results show that the training has not brought about any improvement. Differences in the case of abdominal complaints even warrant the conclusion that a significant deterioration of quality has occurred. Plotted on a 10-point scale, the general score of the examined records lies between 6 and 7, but the spreading around the average implies that this level is not attained by all students. Most likely, the modest results here found are closely connected with a lack of experience on the part of students, teachers and tutors regarding the potentials inherent in sound reporting. The fact that the reporting quality decreases rather than increases suggests that one should not expect the mere practising of this skill to yield substantial improvement. Explicit prior exercise and more attention for reporting methods during the attachment may amend the situation.

Chapter 8 concerns the results achieved by students in formative knowledge-tests. Averages show that the three tests produce comparable results. The score of the second attachment group is higher on all tests than that of the first. It is also obvious that there is a great heterogeneity in knowledge level within the groups. In the three tests the second group reached a score which was well comparable to that of

graduate basic physicians, whereas the first did not. When GPT's were asked whether students' knowledge levels were sufficient for successful completion of the training, their answers were positive on the average. However, the deviations in the results justify the inference that a number of students (particularly in the first group) did not have the prior knowledge necessary to attend a programme of this kind. It may be concluded here that scheduling of the attachment at the beginning of the fifth academic year is not without risks. Better preparation (or a more strict selection) in the previous curricular year may reduce these risks. Efforts to relate the influence of the attachment to progress test results were unsuccessful.

Chapter 9 enlarges on the developments in the design of the attachment since 1978/1979. These are described on the basis of several salient points considered essential in this respect.

The 12-week family medicine attachment of 5th-year students to a general practice has gained a permanent place. This form of education has appeared quite satisfactory to both students and staff. Its design has proved a good starting point and has shown its feasibility in practice, even if it has become clear that not all objectives can be equally realized in all practices, by all students and all GPT's. Hence, the adjustments and changes incorporated so far can be seen as efforts by which to avoid that a given attachment should proceed less satisfactorily. It has been tried to realize this, partly by better preparation of the students and their teachers and partly by giving more explicit guidance in the course of the training.

This educational model calls on the part of the faculty for continuous attention for, and immediate availability to the practice in question. The GP teacher's share in the training is substantial, in both a quantitative and a qualitative aspect. He not only grants access to his practice and patients, but actually fulfils the role of teacher. He observes, stimulates, advises and, particularly, actively joins the student in reflecting on the latter's activities.

Insufficient attention for the teaching role of the GPT by the faculty might cause the selected attachment model to deteriorate into a model merely calling for routine procedures, or into a much less demanding one, with the student dogging his teacher and the follow-up discussion rather assuming the character of an exchange of information.

In view of growing student numbers regular suppletion of the ranks of the trainers should be seen to. In addition to this requirement, there is another important point of concern. At the time the attachment was

designed, ample participation by clinicians as resource persons could be counted upon. In the present situation however - mainly as a result of students' own doing - "clinical" contributions largely concentrate on the border area of primary and secondary health care.

This underlines the fact that the family medicine attachment takes a rather isolated position amongst clinical attachments and clerkships, and this in spite of the existing preference for extensive integration of them.

The governmental health care policy in the Netherlands is aimed at curbing hospital care by restrictive control. Should this development persist, primary care tasks will increase, which should be anticipated in medical education. A shift in emphasis in practical medical training towards the patient setting, here primary care, would be a logical move. However, sound preparation for the future task of a physician in Dutch health care can be achieved only if, by the side of family medicine, also other disciplines within the faculty attune their educational efforts to the above development. Owing to its experience with Practical Medical Education in the General Practice as well as with the application of interdisciplinary working methods, the medical faculty of the University of Limburg has created an excellent starting position for successful adaptation of the curricular programme to the changing conditions in the health care domain.

Further development of Practical Medical Education in the General Practice also warrants continuation of educational research. This should be focused in particular on the importance of patient consultations and examinations in the acquisition of knowledge and skills and in the development of the future physician's attitude.