

# Evaluation of skills training during clerkships using student focus groups

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**SUMMARY** *At the medical faculty of the University of Antwerp, student focus groups were used to evaluate the process of training basic clinical and procedural skills during clerkships. Eighteen final-year medical students participated and received modest remuneration. Two parallel groups had three meetings during which four topics were discussed. Finally, one consensus text was approved by students. Findings were that skills training was insufficiently attuned to clerkships, a clerkships logbook was not well used by students or faculty and the junior doctor is the most important teacher during the clerkships. Students also reported a lack of feedback. They liked 'on calls' and out-patient clinics, and preferred peripheral clinics to the larger university hospital. The general conclusion is that in this conventional medical school, clerkships resemble a mix of many unstructured educational events.*

## Introduction

In most Western European countries, clerkships are traditionally an important educational activity in the undergraduate medical curriculum. In clerkships students have to learn and practice on real patients on ward rounds, in independent patient contacts, small-group tutorials, during attendance at operations and bedside teaching (McLeod & Harden, 1985).

Training in basic clinical and procedural skills is nowadays considered an important part of the core undergraduate medical curriculum (Association of American Medical Colleges, 1984; General Medical Council, 1993). There is reason to assume that junior doctors are not adequately trained in these skills (Wiener & Nathanson, 1976; Kern *et al.*, 1985; St Clair *et al.*, 1992; Derese & Leroy, 1994). It may therefore be concluded that despite the extensive exposure to authentic clinical work the undergraduate curriculum is insufficient.

To investigate this far-reaching conclusion an evaluation was carried out at the University of Antwerp. The Antwerp medical school may be characterized as a conventional medical school with an emphasis on lectures and practicals, and some preclinical skills training. The evaluation consists of a thorough analysis of structure, process and outcome of clinical skills training in the undergraduate

curriculum. In this paper, by means of student focus groups, we explore the process of teaching clinical skills. The research question was how the training of clinical and procedural skills during the clerkships is experienced by the students.

## Context of the study

The entire medical curriculum at Antwerp university lasts 7 years. In a three-year preclinical period students are mainly taught basic sciences. In the clinical period (4 years) students start with a 60-hour course of skills training. Junior clerkships thereafter consist of 11 periods of 3 weeks in years 4, 5 and 6. Students attend rounds and work in the hospitals but follow lectures in the afternoon. Some clerkships are obligatory: internal medicine, surgery, paediatrics and gynaecology and obstetrics. Seven periods are elective.

Senior clerkships (12 full-time months) are scheduled in years 6 and 7. Finally, the second semester of the seventh year is oriented towards future career, and students may choose between various specialities including general practice. The clerkships are organized in the university hospital, some major city hospitals and in peripheral hospitals in the Antwerp region. During senior clerkships many students take a few months' elective clerkships in other Western European and developing countries.

In four final examinations (internal medicine, surgery, paediatrics and gynaecology and obstetrics) medical knowledge and clinical competence in the four main disciplines are assessed. There is no formal assessment of clinical skills after the skills training nor during clerkship periods.

At faculty level it was felt that the clerkship experience and training of skills should be structured. Therefore from 1995 all clinical students received a logbook, containing a

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comprehensive list of basic clinical and procedural skills that are supposed to be mastered. In this list four levels of mastery are suggested: 'have knowledge', 'have seen', 'have done once' and 'have fully mastered'. For instance, students should have seen an endoscopy of the large intestine at least once and have ample experience in observing eardrums.

## Method

To evaluate the skills training in the clerkships, focus groups were used. A focus group consist of four to 15 persons. Discussions take place in a supportive and friendly atmosphere. Characteristically focus groups provide the possibility of mutual stimulation of the group members and the potential for direct observation of the group process and of non-verbal communication (Krueger, 1988; Morgan, 1992). Knowledge of group interactions and dynamics is important for successful management of focus groups. In comparison with more traditional methods such as in-depth interviews, focus groups give comparable qualitative data but are relatively inexpensive (Johnston & Lecky, 1994).

The focus group method is an instrument well suited to derive qualitative data from the consumer's point of view. In programme evaluation of higher education the method has been applied before (Ashar & Lane, 1993; Hendershott & Wright, 1993; Sapp & L, 1993; Gowdy, 1996; Wernstein *et al.*, 1997). In recent literature it has proven useful in evaluation of undergraduate medical courses (Kvasnikcka *et al.*, 1995; Perez & Peel, 1995; Frasier *et al.*, 1997; Woodhouse *et al.*, 1997). In continuing medical education it may serve the purpose of finding the educational needs of doctors (Rourke & Rourke, 1995; Lockyer *et al.*, 1996; Fein *et al.*, 1997) and to evaluate continuing medical education programmes (Tipping & Tennenbaum, 1993).

From a class of 111, 18 seventh-year students were randomly selected and modestly paid for their collaboration. They were divided into two parallel groups, following a parallel procedure of three meetings, each of two hours. Sessions took place in the afternoons. Because one student did not turn up at the first meeting, one group contained seven students, the other 10 students.

After initial discussions with clinical staff and individual final-year students we selected four topics (teaching goals, the student-teacher relationship, training of skills during junior clerkships and student criteria for a good clerkship) to structure the discussions. In the first session these topics were raised by the researchers (RR and HVP) and the students subsequently were asked to reflect and to interact with one another. The second researcher's role was to assist the researcher as group moderator. Furthermore his written notes and observations were important in the analysis of the transcripts and the audiotapes. Discussions were audiotaped and the tapes of the first sessions were typed out.

In the first meeting the topics were introduced and student opinions were gathered. Immediately after the meetings of the two groups the tapes and transcripts were analysed. The first written report consisted of relevant

text fragments categorized according to the four topics. In the second meeting these reports were discussed in the two groups. Subsequently the audiotapes and written remarks of the second researcher were analysed again and the first reports were refined. In a separate meeting the researchers compiled the two reports into one. In this semi-final report, which was the same for both groups, only generally accepted statements were included. In the third meeting a consensus was sought for this text within the two groups. Then a final text was produced by the researcher and checked by the second researcher. Individual statements were removed in the final report.

## Results

Seventeen of the 18 invited students attended the meetings. One student did not turn up for the final meeting. All students were actively involved in the discussions. Between students there were differences in the number of interventions.

The main results are presented according to the four topics.

### *Teaching goals*

Clear objectives of what to do and learn during most clerkships were generally lacking. Only a few clerkships have clearly stated, written teaching goals. Students communicated their ideas of a particular clerkship by informal contacts. The logbook, the use of which was encouraged at institutional level, was widely felt to be an improvement but students pointed to some problems concerning its use. Generally, clinical staff were unaware of the existence of the logbook and therefore students found it difficult to use. Some students too had heard about a rumour that some clinical professors used the logbook at the final clinical examination. The logbook therefore had achieved a negative connotation for students.

### *Student-teacher relationship*

Students perceived the student-teacher relationship as inadequate and inefficacious. This perception is reflected by the following statements.

Because students do not yet feel accustomed to the medical habits and culture during junior clerkships, they often seek advice from senior students and junior and senior doctors. During the senior clerkships it is the junior doctor who gives advice, especially in the main teaching hospitals. Most of these doctors are training for a particular speciality and are only a few years older, i.e. belong to the same peer group. His or her personality, knowledge, skills and attitude to teaching play a crucial role. It was agreed that clerkships change in their educational value after rotation of a junior doctor.

It is generally assumed that consultants and professors are not so important in skills training because many of them are hardly involved in teaching. However, students

would like more contact, because they feel they could learn a lot from them.

Students need a few days to get accustomed to a new clerkship. This means that, especially in junior clerkships (lasting only three weeks) a considerable part of the time is spent finding the right person to learn from. An optimal teaching relationship therefore, is often not established.

Feedback is rarely given, although students would definitely like more. Discussing findings in clinical cases, for instance after students have completed a medical file, is rare. Sometimes students themselves decide to ask for a check or feedback, mostly when they doubt medical findings, or when they feel they have found something important in relation to the management of a particular patient.

#### *Skills training during junior clerkships*

Students felt most of the junior clerkships were a passive experience and not considered useful to practice skills that were taught in the preceding skills training sessions. To explain their perceptions student generated the following issues.

Junior clerkships are attended only in the morning, when clinicians do their ward rounds. Following clinical rounds in the morning and lectures in the afternoon is not considered to be optimal. Students are not able to attend outpatient clinics, which are mostly scheduled in the afternoons. They believe that substantially more might be learned if they could attend out-patient clinics.

Students are not supposed to do much themselves but are merely there to taste medical practice and active participation is an exception. Another structural problem is that some students start their first clerkships in a subspecialty clerkship such as radiology and nuclear medicine where they feel basic skills are not so important. Also, sometimes a clerkship may precede a theoretical course.

#### *Student criteria for a good clerkship*

Students tend to find peripheral hospitals more appropriate than central and university teaching hospitals for the training of basic clinical skills. The emphasis on technology in these hospitals makes hands-on skills less appropriate. Furthermore, in some central hospitals they had to compete with students of other disciplines to practice certain skills, i.e. midwives for deliveries. Some students argued that they saw more patients and had more opportunities in peripheral settings owing to a higher patient turnover.

An opinion shared by all students is that the most important person for skills training is the junior doctor. Learning moments that are considered extremely important for training basic skills are outpatient clinics and 'on calls'. They then feel a close relationship with the (junior) doctor and during these occasions they are supposed to do things themselves. The workload of students on the wards and an unwillingness to accept students in the sometimes private outpatient clinics often prevent students from joining consultations.

Some students have been abroad and were able to

reflect on the position of students in clerkships in other countries. They came into contact with components of clinical teaching such as bedside teaching, which are not very well known in the Antwerp situation.

#### **Discussion**

In the selection of an evaluation instrument, validity, reliability, acceptability and costs have to be taken into account. In qualitative research there are many potential sources of bias (Miles & Huberman, 1994). In the present study bias may have accounted for some of the results in two ways. First of all, being researchers we selected topics and subsequently filtered information during the discussion rounds by selection of text fragments. Second, as moderators we were part of the groups and influenced the group dynamics. We tried to reduce bias via a structured way of dealing with information. Students were asked to check the subsequent texts, and although not reported before in medical education evaluation, we feel this gives extra strength to the method.

By observing expressions and behaviour we collected supplementary information to add to the interpretation of words and sentences from the printed manuscripts. This advantage adds to the value of this method in relation to other qualitative instruments.

The participants were enthusiastic about the method, but this may partly be because of the financial incentive and the three half days off they received. Most students were pleased to have had an opportunity to express their views about educational affairs, so acceptability for them was substantial. The total cost to achieve the consensus document was estimated at no more than 500.

A limitation of this study is the small sample of students. Although our information may be biased by the way information was gathered, the qualitative data are difficult to obtain with other instruments, perhaps only with in-depth interviews. The method proved to be cost-effective and fairly easy to use.

Some of the results of this study are important for any traditional medical school such as Antwerp. They may be summarized as follows.

- Students feel that the alignment between the skills training course and the clerkships is insufficient. Students question the value of junior clerkships in basic skills training. At present they are viewed as passive experiences.
- The clerkship logbook and the skills list are not well accepted at present because of their very recent introduction, because of the negative connotation (students feel controlled) and, perhaps more importantly, because teachers simply do not use these checklists. So there might be a mismatch between two dimensions of Coles's curricular model (Coles & Grant, 1985), the 'curriculum on paper' and the 'curriculum in action'. Some schools now feel the need to clarify the teaching goals of clinical skills (Dacre & Nicol, 1996). Our results suggest that such an instrument must be rigorously marketed to and supported by students and teaching staff if it is to be of any value.

- The junior doctor (whether in training or not) is the most important teacher during the clerkships. However, there are no financial incentives to teaching. It is also questionable whether juniors are well placed to teach students. The level of expertise of junior doctors may not be adequate for this role, for it has been recognized that young doctors do not feel competent in their own skills (Jolly & Macdonald, 1989) and make mistakes themselves (Wiener & Nathanson, 1976; Kern *et al.*, 1985; Clair *et al.*, 1992).
- Students report a lack of feedback in day-to-day clinical work. Feedback in clinical education is of vital importance to learn and fine-tune skills. Being novices in clinical medicine, students do not have enough experience to distinguish normal from abnormal findings (Scherpbier *et al.*, 1997). In this period especially they need feedback about the patients and findings they have seen.
- Students like outpatient clinics and 'on calls' for clinical skills training. The closer relationship with the (junior) doctor and possibilities of feedback are important in these settings.
- Many students prefer clerkships in peripheral clinics. They find teaching basic clinical skills less appropriate in larger university and some larger city hospitals, because of the high-technology environment and because of 'dilution' of available patient material by competition with other (paramedical) students.

Our research question has been answered by a rich stream of data on the process of clinical teaching. Indeed, we found elements representing the minestrone model (Jolly, 1994) in which, from the student's perspective, skills training during clerkships resembles a mix of many unstructured educational events. The conclusion that, in conventional undergraduate medical education, clerkships experience poorly prepares students in clinical and procedural skills seems justified by the present study.

#### Notes on contributors

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