Teaching and assessing communication skills in Maastricht: the first twenty years

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SUMMARY In order to share the issues involved in setting up a communication skills training programme in a medical school, the development of such a programme at the Skillslab of Maastricht Medical School, the Netherlands, is described and the problems encountered are addressed. A multidisciplinary working group developed teaching goals for communication skills, focused on observable behaviour to be displayed by students. These teaching goals were incorporated in a generic model for doctor—patient communication. A longitudinal training programme was created, throughout the four years of the preclinical curriculum. Students meet in small groups of 10, once every 2 weeks. In between group sessions they practise consultation skills in simulated patient contacts. Communication skills are assessed in the annual multiple station examination. In the development of this programme the following consecutive actions were taken: teaching material was produced, and an assessment tool was developed, as were instruments for programme evaluation. The programme evaluation allowed student feedback to teachers, the teachers’ departments, and the administration of the medical school. Finally, teacher training was professionalized.

Introduction

Communication is essential to almost all aspects of healthcare, from history taking to providing information to the patient (Silverman et al., 1998). History taking contributes 60—80% of the data for diagnosis (Hampton, et al., 1975; Sandler, 1980; Kassirer, 1983; Peterson et al., 1992). Since Lay’s study on information giving (1977) it has been assumed that patients’ capacity to remember items explained to them is captured by the equation: number of items remembered ‘A x number of items told —I. However, further studies by Tuckett & Williams (1984) emphasized that it is not so much the number of items that is important, but rather their significance to the patient. Evidence about the significant influence of communication skills on the adherence to the doctor’s advice is reported. Non-compliance in medicine is well described: more than half of the patients deviate from their doctors’ advice or do not follow it at all (Sackett & Snow, 1979; Haynes, Taylor & Sackett, 1979; DiMatteo & DiNicola, 1982). Dissatisfaction is expressed in studies about the quality of communication in every phase of the medical encounter. Studies by Beckman & Frankel (1984) indicated that doctors interrupt their patients’ opening statements after a mean interval of 18 seconds. Furthermore, patients do not always understand what the doctor explains, advice is not always an answer to the patient’s questions or the advice may be too difficult to act upon.

Communication is an interactive process. A person’s experience and education strongly influence how information is interpreted. This idiosyncratic way in which an individual interprets information is often referred to as a person’s frame of reference. A doctor and a patient will view a health complaint from different frames of reference (Schouten, 1985). For the patient, a complaint is a matter of alarm. There have always been events prior to the decision to visit the doctor. The patient will often have limited information about the medical background and has his/her own interpretations of what the complaint might signify. For the doctor, a patient’s complaint represents a matter of logic. The doctor is a medical expert, to a certain extent responsible for making the diagnosis and giving advice.

Communication is likely to be effective when both parties (patient and doctor) attribute the same meaning or significance to the words and the non-verbal information that is exchanged. Effectiveness of communication improves when the doctor actively tries to understand the patient’s perspective, including the patient’s situation, beliefs, point of view, fears, worries and attributions, and when the doctor is able to share this understanding with the patient (Silverman et al., 1998).

Improved doctor—patient communication has been shown to result in: increased satisfaction of patients (Eisenhal & Lazare, 1976; Eisenhal et al., 1979), increased cooperation of patients (Steward, 1984), no increase in time spent with patients (Roter et al., 1995), decreased duration of treatment (Steward, 1984; Spiegel et al., 1989; Little et al., 1997), decreased duration of hospital stay (Muanford et al., 1982), fewer requests for painkillers (Egbert et al., 1964) and fewer malpractice suits (Levinson et al., 1997).

The quality of doctor—patient communication can be improved by training (Aspregren, 1999). Some elementary findings are:

• any training is better than no training (Maguire et al., 1986; Sanson-Fisher et al., 1988);
• training with practice is better than traditional instruction methods based on the acquisition of knowledge alone (Rutter & Maguire, 1976);
• longitudinal training is better than concentrated training (Flaherty, 1985);
• there is no systematic difference in teaching by teachers of different disciplines (Quirek & Letendre, 1986; Lynch et al., 1992; Levine, 1993; van Dalen et al., 1999).

It is for these reasons that healthcare organizations have recommended that communication skills training should be an integral part of any medical curriculum (General Medical Council, 1993; AAMC, 1999). Developments like these motivated the Maastricht Medical School to organize an elaborate communication skills training programme within the medical undergraduate curriculum.

In this article the development of this programme during its first 20 years will be described. First the generic model for doctor—patient communication is described, then the organization of communication skills teaching in the Skillslab is addressed. Stages in the development are dealt with, and some problems described. In the final section plans for the coming years are outlined.

Generic model for doctor—patient communication

Where possible a programme’s teaching objectives should be clear to students as the very start of the programme (Lesser, 1985). These objectives should preferably be operationalized as observable behaviour. At Maastricht medical school an interdisciplinary working group (general practice, surgery, internal medicine, psychiatry, nursing, social work and psychology) developed a generic model for doctor—patient communication, based on literature findings (Byrne & Long, 1976; van Dorp, 1977; Sanson-Fisher et al., 1981; Schouten, 1985; Riccardi & Kurtz, 1983). The model distinguishes three phases of the medical encounter. In the first phase the patient is the expert. The patient knows why he/she has come to see the doctor, his/her worries, anxieties and attributions and his/her individual request of the doctor. In this phase, the doctor should listen, explore and be receptive to the patient’s concerns.

In the next phase the doctor is the expert. By means of directive questioning the doctor translates the patient’s complaint into a medical frame of reference. Systems review is part of this phase, as well as physical examination, in which clarity of instruction and sensitive courteous behaviour are especially important, because the patient is often in a vulnerable position.

In the third and final phase both doctor and patient are experts, each in their own field. The doctor knows what can be done, including potential alternatives. It is the doctor’s responsibility to clarify these alternatives and their likely consequences. However, the patient judges the alternatives in the light of his/her own circumstances, possibilities and preferences.

In recent years this model has been further supported and refined by a growing body of experiences and evidence (Caroll & Monroe, 1984; Pendleston et al., 1984; Steward, 1984; Kraan & Crijnen, 1987; Neighbour, 1987; Bensing, 1991; Cohen-Cole, 1991; Bird et al., 1993; Keller & Caroll, 1994; Ong et al., 1995; Steward, 1995; Silverman et al., 1998; Aspregren, 1999).

Appropriate elementary communication skills for each of these phases have been formulated and operationalized. This allowed for specific teacher guidelines (van Dalen et al., 1989) and an assessment tool, the MAAS-Global (Kraan & Crijnen, 1987; van Thiel et al., 1991, 1992; van Dalen et al., 1998), which will be addressed in following sections.

Organization and structure of the communication skills training programme

The preclinical curriculum of Maastricht Medical School is organized in blocks of 6 weeks. In each block a type of patient problem is the focus of interest in problem-based learning groups (van der Vlcuten et al., 1996). Skills are taught in a separate department: the Skillslab (van Dalen & Bartholomeus, 1990; van Dalen, 2000). Communication skills training should be integrated with the teaching of theory, the training of other skills (i.e. physical examination skills) and the assessment system. It has been demonstrated that longitudinal training is better than concentrated training (Flaherty, 1985). There are indications that communication skills do not spontaneously improve without training and may even deteriorate during medical curriculum (Helfer, 1970; Poole & Sanson-Fisher, 1979; Bishop et al., 1981; Pfeiffer et al., 1998).

That is why training should ideally be organized longitudinally, parallel to the other curricular activities. For communication skills training, groups of 10 students meet once every 2 weeks with one or two facilitators (see Figure 1). The composition of the groups, both students and teacher(s), remains the same throughout the academic year. In the first and second years the first group meeting in each block is devoted to communication skills training, in which a variety of teaching formats is used: exercises, role
play and video vignettes. In the second week of all blocks in every year, pairs of students take part in teacher-independent simulated patient encounters, with all simulated patients portraying a similar role that is relevant for the theme of the block. For example, in the block on Abdominal Complaints the role of the simulated patient in week 2 is: abdominal pain, caused by Crohn’s disease. Pairs of students about his or her experiences as a patient during the encounter.

In the following days, all students plus their teacher(s) individually watch the videotapes of the five pairs of their group. The students who have played the doctor’s role have to fill out a form to share their learning goals and formulate specific questions for the other students and teacher(s) who watch the tape.

In the third week, when all group members have watched the tapes, the group reconvenes, with the teacher, to elaborate and reflect on these encounters. Feedback is requested and given and alternative approaches to communication with this patient and his or her problem are tried out. Medical aspects are exchanged, the students’ ‘trains of thought’ are made explicit and, if necessary, corrected. Ethical issues are also discussed. Subsequently, the student “doctors’ formulate new learning goals, to be addressed during communication skills training sessions and simulated patient encounters in the following blocks.

This procedure is repeated in weeks 4 and 5, with a similar type of complaint (e.g. in the block on Abdominal Complaints these complaints are now indicative of an appendicitis or an ectopic pregnancy), but now the other student of the pair is the ‘doctor’. At the end of the block all students into the programme. For these reasons, ethical issues are also discussed. Subsequently, the student ‘doctors’ formulate new learning goals, to be addressed during communication skills training sessions and simulated patient encounters in the following blocks.

Because of their training, behavioural scientists are expected to have the necessary expertise to teach communication skills. However, students also value the opportunity to identify with their teachers and may prefer doctors. In the course of the curriculum medical knowledge and problem solving are increasingly integrated facilitated by two teachers, a doctor and a behavioural scientist. An overview of the programme is given in Figure 2.

Figure 1. Organisation of communication skills training per block of six weeks

| Week 1 communication skills training (teacher, groups of ten) | Week 2 teacher independent simulated patient encounter (pairs: student A doctor, b observer) | Week 3 elaboration of and reflection on simulated patient encounter (teacher, groups of ten) | Week 4 teacher independent simulated patient encounter (pairs: student B doctor, A observer) | Week 5 elaboration of and reflection on simulated patient encounter (teacher, groups of ten) | Week 6 | Figure 2. Overview of the communication skills training programme in the Skillslab.

<table>
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<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<td>Emphasis on elementary communication skills related to information seeking (asking different types of questions; summarising, reflecting feelings, clarifying the patient’s reason to visit the doctor).</td>
<td>Emphasis on information giving and shared decision making, culminating in breaking bad news.</td>
<td>Emphasis is on history taking. Students also practise special interview situations:</td>
<td>Communication skills training is fully integrated in the simulated patients programme. The simulated patients’ roles are less strict representations of the block themes. In the fourth year a simulated office hour of four patients takes place. The fourth year ends with an ‘disaster simulation’ in which students have to deal with various emergency situations (Vooijs et al., 1997).</td>
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Note: The table above provides a summary of the emphasis and activities in each year of the programme. The activities are designed to progressively build skills in communication, history taking, and handling emergency situations.
Stages in development

The programme has not been brought about overnight; the development took place in stages. First, the main activities were directed at the production of teaching materials. Then an adequate assessment tool was designed. The next step was to systematically ask the students’ opinion about this programme, in order to adapt and improve it and to receive information about the teachers’ skills. Based on the students’ evaluations, a teacher training programme was developed.

Teaching materials

For the teaching of about 800 students, in four year-groups of about 200, some 120 teachers are involved, each investing about 0.05 full-time equivalent (FTE). Thus, overall six FTEs are involved in communication skills teaching, closely integrated with medical problem solving. To ensure uniform teaching, a detailed training protocol has been written for each session, containing:

- the teaching goals;
- preparatory material (literature, handouts);
- a time schedule;
- a chronological description of steps to be taken: presentation, introduction of the role play, role of the patient, role of the doctor, assignments for the students who observe the role play, topics for which the role was written, feedback rules, guidelines on how to stimulate involvement of the observing students, topics to be addressed during feedback, evaluation of the training preparatory advice for the next training.

A schematic example of a protocol can be found in Van Dalen et al. (1989). For the sessions following the simulated patient encounter the protocols include:

- a description of the complaint portrayed by the simulated patients, and the variations per individual simulated patients;
- diagnosis and medical background

Assessment procedures

The assessment system should reflect the educational system. Furthermore it is often claimed that assessment is a strong driving force to guide students’ study behaviour (Newble & Jaeger, 1983; Frederiksen, 1984). Once a year the students participate in a multiple-station examination of skills, which always includes communication skills. In 1981, the development of a reliable assessment instrument was undertaken, which has resulted in the MAAS-Global (Kraan & Crijnen, 1987; van Thiel et al., 1991, 1992; van Dalen et al., 1998).

Case-specificity limits generalizability of assessment of communication skills in one 20-minute station. This means that we cannot give the students a separate pass mark for their communication skills; instead the performance on communication skills adds information to the mark they receive for the entire clinical skills domain. Furthermore, knowledge about communication skills is assessed in the block test and progress tests.

Programme evaluation

Programme evaluation questionnaires have been shown to be reliable techniques to measure students’ satisfaction with a course (Gijselaers, 1988; Dolmans et al., 1994; Cook et al., 1997). The communication skills programme is evaluated annually by students and teachers. Students give their judgement on the teachers, which is reported to the teacher, the heads of the teachers’ departments, and the Educational Board of the Medical School, as a part of the teachers’ portfolios.

The students also judge the instructiveness of the programme as a whole and its components. Analysis of the contribution of the teachers’ didactic skills and the components of the programme to its instructiveness revealed that, according to the students’ perceptions, more than half of the learning effect was explained by the content of the programme (communication skills training accounting for 37% of the variance) while only 5% of the remaining variance was explained by the didactic skills of the teacher (van Dalen et al., 1999).

There is no systematic difference between the judgements about teachers from different disciplines. Students express pronounced preferences for individuals, but these are not reflected in the reported learning effects. Students find the programme very instructive during the 4 years they participate in it (van Dalen et al., 1994), as well as during the clerkships, looking back on the programme (Busari et al., 1997). The quality of the simulated patients’ feedback is a continuous matter of concern. We need to train our simulated patients repeatedly in giving the information that only they are experts in: their experiences during the encounter.

Teacher training

Detailed information from the annual programme evaluation provided the course organizers with teaching goals for teacher training. Teacher training programmes address the analysis of videotapes of student-simulated patient encounters, the application of feedback rules, collaboration and division of tasks between a pair of teachers, and the stimulation of student involvement. Attendance at these training sessions is very modest, partly because many trainers have considerable experience. The teacher training programmes have been developed during a pilot phase and soon attendance will be formally recognized as a requirement for new trainers.

Problems

The programme described above is extensive and organizationally firmly embedded in the infrastructure of the Skillslab. However, this being not the ideal world, many problems remain unsolved. We will review some of them.

Instruction videotapes

Initially, considerable times, money and energy was invested in video instruction tapes. These tapes were intended as preparation material for training: students could see and hear what behaviour was expected.
The tapes have never really worked. Quickly outdated clothing and poor acting soon overshadowed the messages of the tapes. The older the tapes became, the more urgent the problem became, so that we finally stopped using video instruction tapes altogether. A video teaching aid that works best in our experience is video vignettes (Blok et al., 1999).

An example would be a half-total shot of a patient, looking squarely into the camera and speaking an intriguing line, such as: ‘Doctor, I have come to say goodbye, and thank you for everything you have done for me, but I can’t face life any more. Tomorrow I shall be gone.’ The screen goes blank after that.

These vignettes are used in group sessions. Students are asked to write down what they have seen and heard, how it affects them and what in their view would be an adequate professional reaction. Their answers are exchanged and discussed. With these video vignettes the students’ attention is immediately captured and most see the relevance of the exercise right away.

Entire consultations for first-year students?

Originally, different phases of the consultation were trained in different curriculum years. ‘Clarifying the patient’s reasons to visit the doctor’ is an ideal topic to start with in the first year, because the students at that stage do not have much medical knowledge. This means that they can be unbiased listeners, and appreciate and acknowledge the information that patients share spontaneously. When medical knowledge increases, it becomes more difficult for the students to integrate the patient’s agenda (a complaint; alarm) with their own agenda (problem solving; logic). We have frequently observed that students listened less attentively in later curriculum years that they did in the first year, as has been found by Helfer (1970), Poole & Sanson-Fisher (1979), Bishop et al. (1981) and Pfeiffer et al. (1998). We therefore changed the content of training sessions to entire consultations, even for first-year students. In this way students practise from the onset integrating giving attention to the patient with problem solving. However, a drawback of this approach has been that it is quite difficult to create cases with which first-year students can confidently practise.

Choice of behaviour as the topic of training

Probably not all aspects of human interaction can be expressed in observable behaviour. For example: we have not succeeded in developing unambiguous criteria for ‘eye contact’. It can be argued that we pay too little attention to what might be indicated by the word ‘attitude’. Although every simulated patient encounter challenges students to make choices, based on their own norms and values, students and teachers do not always make these choices explicit. In the programme evaluation students regularly indicate that they want more opportunities to address ‘attitudinal issues’. Students choose not to address these issues in the group sessions elaborating on simulated patient encounters.

Model truly generic?

There are some specific occasions in healthcare communication where the model is not applicable, for example when a patient cannot express him/herself. These occasions are not addressed in this programme. Furthermore, it is often claimed that the way communication skills are defined in the model makes them impracticable and too time consuming, especially in the hospital setting. However, in light of the current widespread dissatisfaction with doctor-patient communication, this is rather a problem of the organization of healthcare than of communication taking too much time. Claims that patient-centred communication takes more time have been proved wrong by research findings (Roter et al., 1995).

Longitudinal organization too watered down?

In this longitudinal programme the driving force should be the individual learning goals developed by students. However, it remains difficult to maintain the momentum during the weeks between sessions. For five consecutive years a study guide was provided, with ample opportunity for students to note their individual learning goals, in order to carry this programme between sessions. Programme evaluations revealed that this was never used (mean: 1.8 on a five-point scale, n = 549). Currently, we hand out learning goals forms with every simulated patient encounter, and instruct the teachers not to give feedback if no questions or learning goals are provided with tape.

Limitations of simulated patients

Not everything can be simulated (Rethans, 1998). Students know that. This may cause them to avoid physical examination in their simulated patient encounters, especially towards the end of the programme. We have had some good experiences with mixing the simulated patients with specially invited real patients with stable dysfunctions., and challenging the students to detect which patients are simulated and which are real. Many simulated patients were subsequently declared ill.

The next years

A communication skills training programme is never finished. Societal demands are changing, and there are many unknown areas in what actually happens to students while we are teaching. The following developments are under way. In order to clarify the effects of this type of training on student learning, and the long-term effects on their behaviour, an effect study is currently being conducted, comparing the training programme of the Maastricht Medical School with that of another medical school in the Netherlands.

Furthermore, the radical transition form the preclinical to the clinical part of the curriculum is under revision in Maastricht. This curriculum reform, which aims to make the transition from in-school training to healthcare more gradual, challenges programme developers to tailor communication skills training to real healthcare situations.
Communication skills in Maastricht: the first 20 years

There are gaps in our programme: multiprofessional collaboration, the demands of a culturally diverse society, greater demand for support and care in changing health-care with an ageing population. It will be clear that not every aspect of communication can be offered so every student. We want to educate students to become lifelong learners. There is an increasing need so enhance students’ self-assessment abilities. We hope so publish a sequel to this report in some years time, discussing how we have addressed these issues.

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