

Teaching communication skills: beyond wishful thinking

Noelle Junod Perron^{a, b}, Johanna Sommer^c, Martine Louis-Simonet^d, Mathieu Nendaz^{b, d}

^a Division of Primary Care, Department of community care, primary care and emergency, Geneva University Hospitals, Switzerland

^b Unit of Development and Research in Medical Education, University of Geneva Faculty of Medicine, Switzerland

^c Unit of primary care medicine, University of Geneva Faculty of Medicine, Switzerland

^d Service of general internal medicine, Department of internal medicine, rehabilitation and geriatric medicine, Geneva University Hospitals, Switzerland

Summary

Communication skills tend to decline with time unless they are regularly recalled and practiced. However, most medical schools still deliver clinical communication training only during pre-clinical years although the clinical environment is considered to be ideal for acquiring and teaching clinical communication. The aim of this article is to review the barriers that prevent communication skills teaching and training from occurring in clinical practice and describe strategies that may help enhance such activities. Barriers occur at several levels: students, junior doctors and clinical supervisors sometimes have negative attitudes towards communication training; structured training in communication skills is often insufficient; clinical supervisors behave as poor role models and lack effective communication and teaching skills; finally, there are organisational constraints such as lack of time, competing priorities, weak hierarchy support and lack of positive incentives for using, training or teaching good communication skills in clinical practice. Given the difficulty of assessing transfer of communication skills in practice, only few studies describe successful educational interventions. In order to optimise communication skills learning in practice, there is need to: (1.) modify the climate and structure of the working environment so that that use, training and teaching of good communication skills in clinical practice becomes valued, supported and rewarded; (2.) extend communication skills training to any field of medicine; (3.) provide regular structured trainings and tailor them to trainees' needs. Practical implications of such findings are discussed at the end of this review.

Key words: communication skills; training; teaching; clinical practice; barriers; strategies

Terminology

The words “trainees” or “students/junior doctors” will be used interchangeably in the text. Similarly, “clinical supervisors” or “trainers” will be used to name senior doctors who teach in clinical practice. Finally, “training programmes” for clinical supervisors will also sometimes be named as Faculty development programmes.

“Clerkships” refer to students' clinical training and rotations during pre-graduate training and “graduate training” to training occurring after completion of pre-graduate training.

Introduction

Research conducted over the last decades has shown that good clinical communication has a positive influence on many outcomes ranging from patient satisfaction, consultation process, health behaviours, to human and economic costs of care [1–3].

Although some elements of clinical communication can be learned through practice such as being civil, maintaining eye contact and avoiding medical jargon, skills such as setting the agenda, regular use of summarising and perception skills (building rapport, exploration of patients' perspectives) are less easily acquired even after many years of practice [4]. There is now strong evidence that clinical communication can be effectively taught to and learned by medical students, junior doctors and nurses [5–7]. A recent systematic review showed that nearly all educational interventions resulted in improved communication behaviours among physicians [8].

The way communication should be taught is highly debated. Most experts share the conviction that good communication skills are not innate and can be learned through intentional, systematic and experiential training [9, 10]. Experiential learning includes role playing, interaction with simulated patient, practice under supervision and observation of self and others' practice. From theoretical perspectives, experiential learning differs from learning by doing in that it is considered as a structured cyclic process: its aim is to increase learning through the use of activated knowledge, practice, reflection and feedback that can take place either on an individual or collective level, in structured or daily practice [11, 12]. Focusing on tasks and skills encourages physicians to acquire a repertoire of strategies helping them meet their patients' needs [10, 13]. Others argue that dividing communication into skills defined, taught and then assessed by experts is too reductionist: communication is inherently subjective and there may be different ways to communicate that cannot be labelled as right or

wrong since different patients may experience the same communication style differently [14]. Alternatives to skill-based communication training include approaches such as mindfulness and self-awareness: they allow doctors to explore and analyse their thoughts, feelings and emotions towards patients and use their emotional reactions to patients for patients' benefits [15]. As in different arts, both approaches are thought to be complementary [16]: applying communication skills is not a matter of "one size fits all" but requires creativity and flexibility [17].

Most medical schools have now structured communication skills programme in undergraduate medical education. However, communication skills tend to decline with time unless they are regularly recalled and practiced [18, 19]. Most communication courses are given exclusively during pre-clinical years and delivered separately from other clinical skills such as history taking, physical and clinical reasoning [20]. Apart from a few exceptions [20], medical schools and hospitals still find it difficult to implement clinically-based, longitudinal communication skills training programmes during clerkships and graduate training. Still, there are few reports about graduate training except in fields such as general practice, psychiatry and oncology [21, 22], and even less in continuing medical education [23, 24]. Finally, longitudinal programmes are rare [25–27].

Although the clinical environment, as opposed to classrooms, is still considered to be the best place to acquire clinical skills (including patient communication), the teaching and evaluation of communication skills in a clinical context remain insufficient [28, 29]: many students and junior doctors have never been observed while taking history and very seldom get feedback on communication skills [30, 31].

The aim of this article is to first review the barriers to communication skills learning and teaching in clinical practice and second to provide a few strategies based on a review of literature and education principles in order to help enhance such training during clinical practice.

Barriers to communication skills learning and teaching in clinical practice

Barriers to communication skills learning and teaching in clinical practice are multiple and can be analysed at four levels: trainees, trainers, training and work environment/organisation (table 1).

The trainees

Several authors have described students and junior doctors' negative attitudes towards communication skills and their reluctance to learn them. The belief still exists that communication is innate and is a subjective social and non academic science that cannot be taught [32, 33]. Personal factors also influence students' perceptions of communication skills: in UK studies, students with more positive attitudes towards communication skills learning tended to be female, to have parents who were not doctors, and to think their communication skills needed improving [34].

Trainees' attitudes may also vary according to their level of experience. Junior and inexperienced doctors are described

as more stressed and less open to communication issues than more experienced ones because they are still struggling to reach a quick diagnosis and prompt treatment [35]. Coping with difficulties such as gaps in knowledge and clinical reasoning and use of technical procedures (electronic medical records) tend to hamper good communication [36, 37].

Despite these elements, several papers show that junior doctors value communication skills and expect them to be taught during bed-side teaching and ward rounds [31, 38, 39]. They also expect their clinical supervisors to take an active role in observing them and giving feedback, and to teach exemplary communication [40, 41].

The trainers

Teaching communication skills in clinical practice requires trainers to believe in, demonstrate and teach them [42]. Shortcomings in communication skills teaching may be perpetuated by the supervisor's belief that it is not essential to their expertise and cannot be taught [42].

In addition, clinical supervisors tend to teach communication and relationship skills by role modeling, in a very variable and rarely explicit way [43]. When clinical supervisors address communication issues with junior doctors, they tend to intervene more often as rescuers, clinicians or coaches than teachers [35]. By simply watching and listening, they expect that junior doctors will recognise, accept and reproduce desirable behaviours and skills [44]. Supervisors are often described as poor role models [36]. They report little training in communication and do not feel confident enough to teach and evaluate skills that they themselves have not mastered [35]. Finally, lack of faculty training in teaching skills is another important barrier to teaching communication skills [45].

The training of learners

Although students and junior doctors expect to be taught through direct observation of their performance followed by feedback [46], they often report that observation rarely occurs [30, 47, 48], or "informally, without structure or dedicated time and without distinct goals" [49].

Structured training itself can impact negatively on students' perception, depending on the type of teaching methods used [50]. It has been observed that the less experiential training they have received in communication skills, the less they consider communication as a skill that can be learned and used to improve patients' outcomes [51]. Use of experiential training methods (role playing, interaction with simulated patients, practice followed by feedback, etc...) for both trainees and trainers is highly recommended [10]. However, trainees can negatively perceive such experiential sessions if they are not conducted in a safe, non-judgemental and trustful climate [52].

Communication is also often taught by separate groups of teachers. Specialist physicians or surgeons tend to teach history taking and physical examination while general practitioners, psychiatrists and health scientists are those who address mostly communication and relationship issues [53]. Such a division of teaching fields conveys a tacit message to students that specialists are those who know about core medicine while the others are specialists of psychoso-

cial and less scientific issues. It may also carry the message that communication skills are a goal in itself and not a tool that allows for providing a higher quality of care to patients.

Finally, the way clinical communication is assessed can generate a counterproductive effect towards communication. For example, use of checklists is sometimes not well accepted by trainees since it gives the message that a conversation can be reduced to mere behavioural components and does not take into account the uniqueness of each consultation [54, 55].

The working environment

Lack of time is regularly described as a major barrier to teaching in clinical practice. The supervisors' first mandate is to address the medical needs of patients whatever their level of training or professional position [56]. When time is limited, other mandates such as teaching and research often become secondary. This suggests that teaching in general and more specifically communication skills teaching are not priorities in working settings [57–59] and that the institution itself gives little value to communication skills and its training [33, 51, 60]. Scarce resources to communication skills training may indicate to students and junior doctors that these competencies are less valued by their faculty or within each setting. This often called the “hidden curriculum” which refers to cultural values that are transmitted but not explicitly acknowledged through formal and informal educational activities [61].

Strategies/tips to improve communication skills training in clinical practice

In order to develop and implement strategies aimed at improving communication skills training in practice, there is first a need to understand the notion of transfer and its effectiveness. Training transfer is effective when the knowledge, skills and abilities acquired in the training context produce the desired behavioural change in the workplace context [62]. It is influenced by the trainees' personal and professional characteristics, the design and content of the training programme, and the workplace environment [62]. Because communication and teaching are considered to be skills for which there is much freedom about what and when to transfer, the degree of transfer may depend as much on personal and working situation factors than on the

training itself [63]. Although there are very few communication studies which assessed the transfer effectiveness of a training in communication skills and identified key elements of successful transfer [5, 64, 65], a review of the educational literature in this field and educational theory-based principles suggests that the implementation of seven strategies may facilitate communication skills learning and teaching in clinical practice (table 2). They will be addressed from a general to a more specific perspective.

Adjusting the working environment

The organisation of the working environment is an important element for successful and sustainable transfer in the field of communication skills [26, 66]. If trainees and train-

Table 2: Strategies to improve communication skills training in clinical practice.

- (1.) To adjust the work environment:
 - to ensure the adequacy between the formal, the informal and the hidden curriculum
 - to formalise communication and interpersonal skills as learning objectives
 - to integrate clinical communication in mainstream clinical training activities
- (2.) To teach communication skills in any medical field
- (3.) To integrate communication skills training inside other training activities
- (4.) To train clinical supervisors in communication and teaching skills in order to allow:
 - positive role modeling
 - students' observation (to recognise poor or good skill performance) followed by a well-intentioned, detailed and descriptive feedback
 - consideration of communication issues during case presentation
- (5.) To tailor communication skills training to trainees' individual needs
- (6.) To integrate communication skills evaluation in assessment of clinical practice
- (7.) To build communities of practice of communication skills teachers

Table 1: Barriers to communication skills learning and teaching in clinical practice.

Trainees	Personal beliefs and socio-cultural factors Level of experience
Trainers	Personal beliefs Poor role models Lack of communication skills Lack of teaching skills
Training	Use of non experiential teaching methods Separation of communication and clinical skills training Assessment with checklists not perceived as clinically relevant
Organisation	Lack of time Lack of communication skills consideration

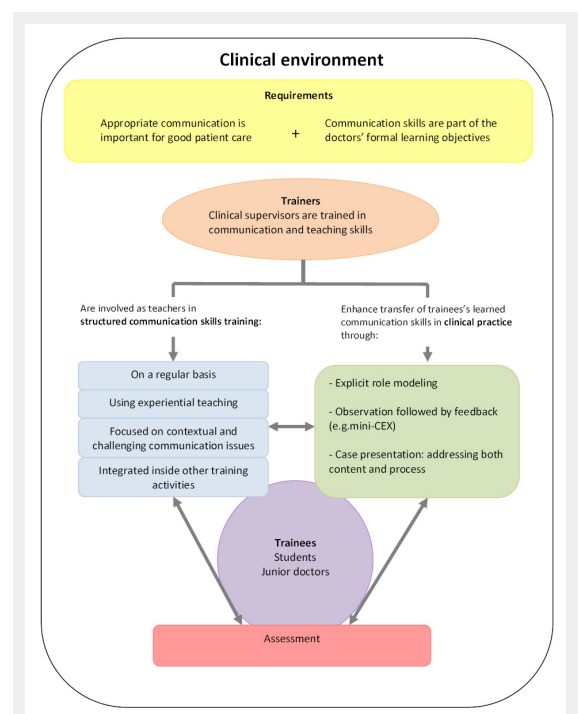


Figure 1
Dynamic model of communication skills training and teaching in the clinical environment.

ers perceive that there will be no support for the transfer of training, they will not be very motivated to invest the effort required to master the content of the training [67]. Successful and durable implementation of communication skills training in practice requires a change in strategy at the level of an institution or working structure such as a service in order to align the training to the institutional goals and strategies [68]. Moreover, it requires an adequacy between the different types of curriculum prevailing inside an institution or working structure: (1.) the formal curriculum: the stated, intended and formally offered learning goals which are outlined in mission statements and course objectives; (2.) the informal curriculum: the unscripted and highly interpersonal form of teaching and learning occurring between students/junior doctors and more experienced clinicians such as role modeling and supervision; and (3.) the hidden curriculum which refers to the structural factors and the culture and values of the institution as described above [61, 69].

In order to harmoniously integrate communication into an institution mission, the first step is to ensure that communication and interpersonal skills are all recognised and formalised as learning objectives inside an institution. Communication, together with professionalism, teamwork and evidence-based decision making must be considered core themes for clinical practice [70].

The second step is to link communication learning objectives to relevant clinical training activities so that it is not considered as something optional [53].

The third step is to ensure that the learned skills are applied and improved in practice.

This implies faculty development activities to train faculty members in teaching and assessing communication skills. Sufficient time should, therefore, be allowed to effectively supervise students and junior doctors and help them improve their communication skills.

Changes at an institutional level depend mainly on the perceived need of the institution leaders although this perception may be favoured by interventions of national or regional educational boards that usually take place through accreditation processes.

Teaching communication skills in any medical field

Extending communication skills training to all fields of medicine is another way to promote the importance of communication skills training. It transmits the message that good clinical communication is important and desirable for patient care in any medical discipline. Although such development requires considerable patience, flexibility and negotiation, two studies have shown that implementation of communication skills training in clerkships of different medical disciplines is not only feasible and well-appreciated by students [20] but also effective with significant improvement in students' communication skills performance [71]. Ingredients of success encompass strong support from the hierarchy (that can be obtained by matching institutional interests with course interests through accreditation) and active involvement of all clerkships' medical coordinators in several steps: (1.) defining the communication skills to be taught during each clerkship and ensuring that they are in line with the departments' interests (explaining a surgic-

al procedure in surgery, breaking bad news such multiple sclerosis in neurology,...); (2.) developing regular structured teaching experiential sessions; (3.) providing clinical supervisors teaching skills to help them facilitate such training sessions, (4.) providing effective feedback during clinical practice and positive role models [71].

At an undergraduate level, the educational committee for clinical years in medical schools may play an important role in encouraging all clerkship coordinators to think of one communication issue that could be addressed during their clerkship and providing help to ensure its development and implementation.

At a graduate level, hospital satisfaction surveys and reports of patients show that patients regularly complain about the quality of communication [72–74]. Regular discussions initiated by quality officers about such issues inside each working structure may be another way for their heads to become aware of the problem. They could trigger efforts to improve the quality of communication teaching and training at the postgraduate level in their settings. Ultimately, it may improve the quality of communication between physicians and patients [75].

Integrating communication skills training into clinical training activities

Several changes or adjustments have been suggested to help clinical communication training being part of the mainstream activities during medical education [53]. The key concept revolves around integration. There is a definite need to integrate clinical communication with other skills such as history taking, physical examination and clinical reasoning and not teach it as a separate skill in order to show that content and process of history taking or counselling forms a whole in pre-graduate but also graduate clinical training [53, 76]. For example, addressing communication issues inside training management of depression, diabetes or coronary heart disease may be a convincing way to show that appropriate management of the patients suffering from these diseases requires mastery of both content and process in order to provide high quality of care. Providing opportunities for trainees to train simultaneously technical and communication skills for procedures such as venous puncture, urinary catheter placement in skill labs is also another nice and rather innovative way to integrate communication with other skills [53, 77].

Training clinical supervisors to teach communication skills in practice

Experts agree on the importance of faculty development to enhance communication skills teaching in practice since clinical supervisors' attitudes, communication patterns and teaching skills heavily influence communication performance of students and junior doctors [43, 78, 79].

Communication skills teaching in clinical practice can take place in several ways: role modeling, observation of performance followed by feedback and feedback on case presentation.

In clinical practice where learning occurs mostly informally, role modeling is considered by both clinical supervisors and junior doctors to be a powerful way to enhance learning and convey professional values, attitudes and be-

haviours and learn about the doctor-patient relationship [79]. The most important qualities of good role models are: medical competence with up-to-date knowledge, commitment to excellence, being compassionate, caring, patient-centred, a humanistic attitude towards patients with good communication skills, a humanistic style of teaching, compassion for patients and interest in teaching [80]. Since trainees tend to emulate positive role models [81], it is important to improve trainers' role modeling with regard to communication skills. Ingredients of effective role modeling include being aware of being a role model, being reflective, participating in staff development and having time to teach [69]. With regard to communication, it implies being aware of one's own communication patterns, mastering good communication skills, maintaining them through reflection and continuing training and having time to teach. Being able to observe students and junior doctors perform in a clinical setting and deliver a well-intentioned, detailed and descriptive feedback is considered to be one of the most powerful ways to teach communication skills in clinical practice [10, 23]. Feedback can positively change medical students', junior doctors', or trained physicians' performance, whatever their level of training and whatever the setting [82]. Effective communication skills teaching requires clinical supervisors to know what is important to teach and to be able to recognise good or poor skill performance [83]. Therefore, faculty development programmes on communication skills training often offer preliminary communication skills training to help the trainers recognise and expand their repertoire of communication skills in various clinical situations [84, 85]. A study showed that training supervisors in both teaching strategies and communication skills was effective in that it objectively improved supervisors' feedback skills after the training [86].

The necessity to regularly and appropriately evaluate junior doctors' performance at work has led to the development of faculty development programmes in order to equip supervisors with effective teaching skills. Integration of vignettes that systematically include communication challenges together with clinical reasoning or procedural issues during training sessions may be a way to train and stimulate supervisors to address them in clinical practice.

A third strategy to teach communication skills in practice takes place when students and junior doctors make patient presentations to their supervisors [41]. Although trainers' feedback after such case presentation often focuses on biomedical content and missing information, taking the opportunity to address the necessary skills to hold an interview, obtain information, elicit patients' perspectives may help trainees perceive and understand what constitutes effective interviewing and its impact on the accuracy and efficiency on which correct diagnoses are made [41, 76]. To facilitate transfer of learned communication skills, it appears important to address content (medical information and reasoning) and process (communication skills) of history taking together and not separately [53].

From such a perspective, development or reinforcement of structured communication skills training at the graduate level may be an effective transfer strategy for communication skills teaching: it allows a higher number of clinic-

al supervisors to practice and master such skills and may also reinforce collaboration and continuity across the pre-clinical, clinical and graduate education [70] since the same supervisors tend to teach both the students and junior doctors. It may also help decrease the discordance perceived by students and young doctors between the formal training in communication skills they have received and their observation of how these are used in the workplace [87, 88].

Tailoring communication skills training to trainees' individual needs

It may be hazardous to teach communication skills in a uniform way because learning needs tend to differ according to personal, training and contextual factors [62].

Professional development itself also shapes learners' perspectives and needs. As young physicians progress in their training, self-representations change and their perceptions and attitudes towards psychosocial issues and patient-physician relationships evolve. Over time, they also feel more confident in their ability to deal with psychosocial issues [89] and give more importance to patient-centred models of care [90].

The importance of contextual factors has been highlighted in a study that showed that junior doctors from different specialties emphasised different communication norms, values and skills: in paediatrics and internal medicine they emphasised reflective practice while in surgery, obstetrics and gynaecology they focused more on specific skills and behaviour acquisition [91]. Needs for communication skills also differ between in- and outpatient care contexts: in the inpatient setting where clinical work focuses on making diagnoses and managing biomedical dimensions of care, junior doctors expressed needs to learn transmitting information and handling their own emotions. In the outpatient context, where patients are seen as more autonomous and empowered, more attention was paid to using communication tools that help manage time in the clinical encounter and increase patients' compliance with recommended care [92]. In addition, inside a working setting, the communication is modulated by the context and cannot be applied according fixed rules [93].

More generally, junior doctors express training needs for communication issues that are complex, challenging and relevant in their working context [37, 94].

Therefore, it seems reasonable to move beyond uniform communication skills training usually delivered during pre-clinical years and to target educational interventions in later clinical practices tailored to learners' needs. In order for communication skills to be effectively maintained in post-training medical practice, the issues must be those frequently encountered in clinical practice and associated with a high burden [95]. Asking regularly junior doctors about their problems encountered while communicating with patients or families may orient on the communication issues to address both formally and informally – they may change according to their present and past clinical and training experiences.

Integrated assessment of communication skills

Assessing communication skills is another powerful way to demonstrate their value and legitimacy as a focus of train-

ing. Although the statement “assessment drives learning” is often debated [96], there is a consensus that assessment must be educational, formative so as to promote learning and that it should provide guidance and support to address learning needs [97]. In order to be relevant and meaningful, the focus of assessment must closely match the learning objectives and content of the taught curriculum. Methods used to assess trainees’ communication skills usually include direct observations of their performance in simulated or real clinical encounters. To involve clinical supervisors in the development of examination material and assessment itself is an additional way to value and facilitate integration of communication skills inside an institution [53]. The fact that the interpersonal and communication skills are defined now as one of the core medical competencies and that their assessment in graduate training programmes becomes mandatory in many countries [98, 99] may change such culture and increase institutional support for such training. Implementation of work-based performance assessment such as mini-CEX may be a powerful way to emphasise such assessment [100]. However, one must ensure that assessment is performed in a fair and adaptable way since clinical communication changes according to the context in which the consultation takes place [17].

The way these different strategies can interact in order to improve physician-patient communication is illustrated in figure 1.

To build communities of practice of communication skills teachers

Finally, recent articles have shown the importance of building communities of practice to lead and sustain faculty development in the workplace [101, 102] since social networking, mentorship and peer support are essential for supporting and strengthening workplace teaching [103]. Communities of practice are defined as “persistent, sustaining, social networks of individuals who share an overlapping knowledge base, set of beliefs, values, history and experiences focused on a common practice and/or a mutual enterprise” [104]. Becoming a member of a communication skills teaching community may contribute to maintain one’s own motivation to practice and stimulate continuous improvement thanks to an exchange of ideas and a sharing of encountered difficulties with peers [103]. Indeed, a study showed that being involved in structured communication skills teaching activities appears to facilitate communication skills teaching in clinical practice [105]. For example, teaching regularly how to break bad news will encourage a trainer to address this issue while supervising a junior doctor.

Conclusion

Given the fact that patients regularly complain about the quality of communication in health care settings, there is real need to improve communication skills training during pre- and graduate training from both trainees and trainers’ perspectives. Structured communication skills training is still needed in graduate training and should be tailored to junior doctors’ needs and work context in order to be successful and well perceived. Training clinical supervisors

from all specialties to teach communication skills is a powerful way to ensure continuity between pre-graduate and graduate education and to reinforce the message that communication is essential to patient care in any medical field. However, in order to ensure regular and systematic communication skills teaching in clinical practice, more emphasis should be given to post-training incentives to sustain such efforts. These include academic recognition of teaching activities, peer and supervisory coaching, increased opportunities to practice and creation of a community of teachers; other incentives should also include development of institutional rewards for teaching communication skills and use of patient satisfaction regarding communication issues as a feedback loop in a quality improvement cycle.

Funding / potential competing interests: No financial support and no other potential conflict of interest relevant to this article was reported.

Correspondence: Noëlle Junod Perron, Division of Primary Care, Department of community care, primary care and emergency, Geneva University Hospitals, CH-1211 Geneva, [noelle.junod\[at\]hcuge.ch](mailto:noelle.junod[at]hcuge.ch)

This article is a shortened version of the post graduate professorship thesis of Noelle Junod Perron defended on 3 February 2014 at the Faculty of Medicine, Geneva University, Geneva, Switzerland and was inspired by her PhD thesis in medical education defended on 24 October 2013 at Maastricht University, Maastricht, the Netherlands.

References

- 1 Dwamena F, Holmes-Rovner M, Gauden CM, Jorgenson S, Sadigh G, Sikorskii A, et al. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2012, 12:CD003267.
- 2 Joosten EA, DeFuentes-Merillas L, de Weert GH, Sensky T, van der Staak CP, de Jong CA. Systematic review of the effects of shared decision-making on patient satisfaction, treatment adherence and health status. *Psychother Psychosom* 2008;77(4):219–26.
- 3 Zolnieriek KB, Dimatteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Med Care*. 2009;47(8):826–34.
- 4 Aspegren K, Lonberg-Madsen P. Which basic communication skills in medicine are learnt spontaneously and which need to be taught and trained? *Med Teach*. 2005;27(6):539–43.
- 5 Heaven C, Clegg J, Maguire P. Transfer of communication skills training from workshop to workplace: the impact of clinical supervision. *Patient Educ Couns*. 2006;60(3):313–25.
- 6 Langewitz WA, Eich P, Kiss A, Wosmer B: Improving communication skills – a randomized controlled behaviorally oriented intervention study for residents in internal medicine. *Psychosom Med*. 1998;60(3):268–76.
- 7 Yedidia MJ, Gillespie CC, Kachur E, Schwartz MD, Ockene J, Chepaitis AE, Snyder CW, Lazare A, Lipkin M, Jr.: Effect of communications training on medical student performance. *JAMA*. 2003;290(9):1157–65.
- 8 Rao JK, Anderson LA, Inui TS, Frankel RM. Communication interventions make a difference in conversations between physicians and patients: a systematic review of the evidence. *Med Care*. 2007;45(4):340–9.
- 9 Silverman J, Kurtz S, Draper J. Skills for communicating with patients. 2nd edition. Oxon: Radcliff Publishing Ltd; 2005.

- 10 Kurtz S, Silverman J, Draper J. Teaching and learning communication skills in medicine. 2nd edition. Oxford: Radcliff Publishing Ltd; 2005.
- 11 Spencer J. Learning and teaching in the clinical environment. *BMJ*. 2003;326(7389):591–4.
- 12 Yardley S, Teunissen PW, Dorman T. Experiential learning: AMEE Guide No. 63. *Med Teach*. 2012;34(2):e102–15.
- 13 Makoul G, Schofield T. Communication teaching and assessment in medical education: an international consensus statement. Netherlands Institute of Primary Health Care. *Patient Educ Couns*. 1999;37(2):191–5.
- 14 Salmon P, Young B. The validity of education and guidance for clinical communication in cancer care: evidence-based practice will depend on practice-based evidence. *Patient Educ Couns*. 90(2):193–9.
- 15 Epstein RM. Mindful practice. *JAMA*. 1999;282(9):833–9.
- 16 Zoppi K, Epstein RM. Is communication a skill? Communication behaviors and being in relation. *Fam Med*. 2002;34(5):319–24.
- 17 Essers G, van Dulmen S, van Es J, van Weel C, van der Vleuten C, Kramer A. Context factors in consultations of general practitioner trainees and their impact on communication assessment in the authentic setting. *Patient Educ Couns*. 2013;93(3):567–72.
- 18 Aspegren K. BEME Guide No.2: Teaching and learning communication skills in medicine – a review with quality grading of articles. *Medical Teacher*. 1999;21:563–70.
- 19 van Dalen J, Kerkhofs E, van Knippenberg-Van Den Berg BW, van Den Hout HA, Scherpbier AJ, van der Vleuten CP. Longitudinal and concentrated communication skills programmes: two dutch medical schools compared. *Adv Health Sci Educ Theory Pract*. 2002;7(1):29–40.
- 20 van Weel-Baumgarten E, Bolhuis S, Rosenbaum M, Silverman J. Bridging the gap: How is integrating communication skills with medical content throughout the curriculum valued by students? *Patient Educ Couns*. 2013;90(2):177–83.
- 21 Hulsman RL, Ros WJ, Winnubst JA, Bensing JM. Teaching clinically experienced physicians communication skills. A review of evaluation studies. *Med Educ*. 1999;33(9):655–68.
- 22 Moore PM, Rivera Mercado S, Grez Artigues M, Lawrie TA. Communication skills training for healthcare professionals working with people who have cancer. *Cochrane Database Syst Rev* 2013, 3:CD003751.
- 23 Berkhof M, van Rijssen HJ, Schellart AJ, Anema JR, van der Beek AJ. Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. *Patient Educ Couns*. 2011;84(2):152–62.
- 24 Rotthoff T, Baehring T, David DM, Bartnick C, Linde F, Willers R, Schafer RD, Scherbaum WA. The value of training in communication skills for continuing medical education. *Patient Educ Couns*. 2011;84(2):170–5.
- 25 Levinson W, Roter D. The effects of two continuing medical education programs on communication skills of practicing primary care physicians. *J Gen Intern Med*. 1993;8(6):318–24.
- 26 Stein T, Frankel RM, Krupat E. Enhancing clinician communication skills in a large healthcare organization: a longitudinal case study. *Patient Educ Couns*. 2005;58(1):4–12.
- 27 Kurtz SM, Laidlaw T, Makoul G, Schnabl G. Medical education initiatives in communication skills. *Cancer Prev Control*. 1999;3(1):37–45.
- 28 Holmboe ES, Hawkins RE, Huot SJ. Effects of training in direct observation of medical residents' clinical competence: a randomized trial. *Ann Intern Med*. 2004;140(11):874–81.
- 29 Kalet A, Earp JA, Kowlowitz V. How well do faculty evaluate the interviewing skills of medical students? *J Gen Intern Med*. 1992;7(5):499–505.
- 30 Howley LD, Wilson WG. Direct observation of students during clerkship rotations: a multiyear descriptive study. *Acad Med*. 2004;79(3):276–80.
- 31 Hutul OA, Carpenter RO, Tarpley JL, Lomis KD. Missed opportunities: a descriptive assessment of teaching and attitudes regarding communication skills in a surgical residency. *Curr Surg*. 2006;63(6):401–9.
- 32 Nogueira-Martins MC, Nogueira-Martins LA, Turato ER. Medical students' perceptions of their learning about the doctor-patient relationship: a qualitative study. *Med Educ*. 2006;40(4):322–8.
- 33 Rees CE, Sheard CE, McPherson AC. A qualitative study to explore undergraduate medical students' attitudes towards communication skills learning. *Med Teach*. 2002;24(3):289–93.
- 34 Rees C, Sheard C. The relationship between medical students' attitudes towards communication skills learning and their demographic and education-related characteristics. *Med Educ*. 2002;36(11):1017–27.
- 35 Junod Perron N, Sommer J, Hudelson P, Demaurex F, Luthy C, Louis-Simonet M, et al. Clinical supervisors' perceived needs for teaching communication skills in clinical practice. *Medical Teacher*. 2009(31):e316–22.
- 36 Essers G, Van Weel-Baumgarten E, Bolhuis S. Mixed messages in learning communication skills? Students comparing role model behaviour in clerkships with formal training. *Med Teach*. 2012;34(10):e659–65.
- 37 Van Nuland M, Thijs G, Van Royen P, Van den Noortgate W, Goedhuys J. Vocational trainees' views and experiences regarding the learning and teaching of communication skills in general practice. *Patient Educ Couns*. 2009;78(1):65–71.
- 38 Williams KN, Ramani S, Fraser B, Orlander JD. Improving bedside teaching: findings from a focus group study of learners. *Acad Med*. 2008, 83(3):257–64.
- 39 Tariq M, Motiwala A, Ali SU, Riaz M, Awan S, Akhter J. The learners' perspective on internal medicine ward rounds: a cross-sectional study. *BMC Med Educ*. 2010;10:53.
- 40 Malhotra A, Gregory I, Darvill E, Goble E, Pryce-Roberts A, Lundberg K, et al. Mind the gap: Learners' perspectives on what they learn in communication compared to how they and others behave in the real world. *Patient Educ Couns*. 2009;76(3):385–90.
- 41 Rosenbaum ME, Axelson R. Curricular disconnects in learning communication skills: what and how students learn about communication during clinical clerkships. *Patient Educ Couns*. 2012;91(1):85–90.
- 42 Cote L, Leclere H. How clinical teachers perceive the doctor-patient relationship and themselves as role models. *Acad Med*. 2000;75(11):1117–24.
- 43 Egniew TR, Wilson HJ. Role modeling the doctor-patient relationship in the clinical curriculum. *Fam Med*. 2011;43(2):99–105.
- 44 Weissmann PF, Branch WT, Gracey CF, Haidet P, Frankel RM. Role modeling humanistic behavior: learning bedside manner from the experts. *Acad Med*. 2006;81(7):661–7.
- 45 Novack DH, Volk G, Drossman DA, Lipkin M, Jr. Medical interviewing and interpersonal skills teaching in US medical schools. Progress, problems, and promise. *JAMA*. 1993;269(16):2101–5.
- 46 Lane JL, Gottlieb RP. Structured clinical observations: a method to teach clinical skills with limited time and financial resources. *Pediatrics*. 2000;105(4 Pt 2):973–7.
- 47 Chisholm CD, Whennmouth LF, Daly EA, Cordell WH, Giles BK, Brizendine EJ. An evaluation of emergency medicine resident interaction time with faculty in different teaching venues. *Acad Emerg Med*. 2004;11(2):149–55.
- 48 Kassebaum DG, Eaglen RH. Shortcomings in the evaluation of students' clinical skills and behaviors in medical school. *Acad Med*. 1999;74(7):842–9.
- 49 Fromme HB, Karani R, Downing SM. Direct observation in medical education: a review of the literature and evidence for validity. *Mt Sinai J Med*. 2009;76(4):365–71.
- 50 Rees C, Sheard C. Evaluating first-year medical students' attitudes to learning communication skills before and after a communication skills course. *Med Teach*. 2003;25(3):302–7.
- 51 Willis SC, Jones A, O'Neill PA. Can undergraduate education have an effect on the ways in which pre-registration house officers conceptualise communication? *Med Educ*. 2003;37(7):603–8.
- 52 Kurtz S, Silverman J, Draper J. Teaching and learning communication skills in medicine. 2nd edition. Oxford: Radcliff Publishing Ltd; 2005.
- 53 Silverman J. Teaching clinical communication: a mainstream activity or just a minority sport? *Patient Educ Couns*. 2009;76(3):361–7.
- 54 Salmon P, Young B. Creativity in clinical communication: from communication skills to skilled communication. *Med Educ*. 2011;45(3):217–26.

- 55 van den Eertwegh V, van Dalen J, van Dulmen S, van der Vleuten C, Scherpbier A. Residents' perceived barriers to communication skills learning: Comparing two medical working contexts in postgraduate training. *Patient Educ Couns*. 2014;95(1):91–7.
- 56 Yedidia MJ, Schwartz MD, Hirschhorn C, Lipkin M, Jr. Learners as teachers: the conflicting roles of medical residents. *J Gen Intern Med*. 1995;10(11):615–23.
- 57 Seabrook MA. Medical teachers' concerns about the clinical teaching context. *Med Educ*. 2003;37(3):213–22.
- 58 Morrison EH, Shapiro JF, Harthill M. Resident doctors' understanding of their roles as clinical teachers. *Med Educ*. 2005;39(2):137–44.
- 59 Busari JO, Prince KJ, Scherpbier AJ, Van Der Vleuten CP, Essed GG. How residents perceive their teaching role in the clinical setting: a qualitative study. *Med Teach*. 2002;24(1):57–61.
- 60 Laidlaw TS, MacLeod H, Kaufman DM, Langille DB, Sargeant J. Implementing a communication skills programme in medical school: needs assessment and programme change. *Med Educ*. 2002;36(2):115–24.
- 61 Hafferty FW. Beyond curriculum reform: confronting medicine's hidden curriculum. *Acad Med* 1998;73(4):403–7.
- 62 Goldstein IL, Ford JK. Training in organisations. Belmont, CA: Wadsworth; 2002.
- 63 Blume BD, Ford JK, Baldwin TT, Huang JL. Transfer of training: a meta-analytic review. *Journal of Management*. 2010;36(4):1065–105.
- 64 Lienard A, Merckaert I, Libert Y, Bragard I, Delvaux N, Etienne AM, et al. Transfer of communication skills to the workplace during clinical rounds: impact of a program for residents. *PLoS One* 2010;5(8):e12426.
- 65 van den Eertwegh V, van Dulmen S, van Dalen J, Scherpbier AJ, van der Vleuten CP. Learning in context: Identifying gaps in research on the transfer of medical communication skills to the clinical workplace. *Patient Educ Couns*. 2013;90(2):184–92.
- 66 Levinson W, D'Annunzio T, Gorawara-Bhat R, Stein T, Reifsteck S, Egener B, et al. Patient-physician communication as organizational innovation in the managed care setting. *Am J Manag Care*. 2002;8(7):622–30.
- 67 Salas E, Cannon-Bowers JA. The science of training: a decade of progress. *Annual reviews psychology*. 2001;52:471–99.
- 68 Visser A, Wysmans M. Improving patient education by an in-service communication training for health care providers at a cancer ward: communication climate, patient satisfaction and the need of lasting implementation. *Patient Educ Couns*. 2010;78(3):402–8.
- 69 Cruess SR, Cruess RL, Steinert Y. Role modeling – making the most of a powerful teaching strategy. *BMJ*. 2008;336(7646):718–21.
- 70 Hirsh DA, Ogur B, Thibault GE, Cox M. “Continuity” as an organizing principle for clinical education reform. *N Engl J Med*. 2007;356(8):858–66.
- 71 Kalet A, Pugnaire MP, Cole-Kelly K, Janicik R, Ferrara E, Schwartz MD, et al. Teaching communication in clinical clerkships: models from the macy initiative in health communications. *Acad Med*. 2004;79(6):511–20.
- 72 Clever SL, Jin L, Levinson W, Meltzer DO. Does doctor-patient communication affect patient satisfaction with hospital care? Results of an analysis with a novel instrumental variable. *Health Serv Res*. 2008;43(5 Pt 1):1505–19.
- 73 Coulter A, Cleary PD. Patients' experiences with hospital care in five countries. *Health Aff. (Millwood)* 2001;20(3):244–52.
- 74 Service qualité des soins -HUG: Enquête de satisfaction des patients hospitalisés http://qualite.hug-ge.ch/enquetes_satisfaction/patient1.html.
- 75 Norgaard B, Kofoed PE, Ohm Kyvik K, Ammentorp J. Communication skills training for health care professionals improves the adult orthopaedic patient's experience of quality of care. *Scand J Caring Sci*. 2012;26(4):698–704.
- 76 Kurtz S, Silverman J, Benson J, Draper J. Marrying content and process in clinical method teaching: enhancing the Calgary-Cambridge guides. *Acad Med*. 2003;78(8):802–9.
- 77 Kneebone R, Nestel D, Taylor P. Can “performing” a procedure help students explain it to their patients? *Med Educ*. 2003;37(5):481–2.
- 78 Lang F, Everett K, McGowen R, Bennard B. Faculty development in communication skills instruction: insights from a longitudinal program with “real-time feedback”. *Acad Med*. 2000;75(12):1222–8.
- 79 Egnew TR, Wilson HJ. Faculty and medical students' perceptions of teaching and learning about the doctor-patient relationship. *Patient Educ Couns*. 2009;79(2):199–206.
- 80 Jochemsen-van der Leeuw HG, van Dijk N, van Etten-Jamaludin FS, Wieringa-de Waard M. The attributes of the clinical trainer as a role model: a systematic review. *Acad Med*. 2013;88(1):26–34.
- 81 Paice E, Heard S, Moss F. How important are role models in making good doctors? *BMJ* 2002;325(7366):707–10.
- 82 Veloski J, Boex JR, Grasberger MJ, Evans A, Wolfson DB. Systematic review of the literature on assessment, feedback and physicians' clinical performance: BEME Guide No. 7. *Med Teach*. 2006;28(2):117–28.
- 83 Buyck D, Lang F. Teaching medical communication skills: a call for greater uniformity. *Fam Med*. 2002;34(5):337–43.
- 84 Bylund CL, Brown RF, di Ciccone BL, Levin TT, Gueguen JA, Hill C, et al. Training faculty to facilitate communication skills training: development and evaluation of a workshop. *Patient Educ Couns*. 2008;70(3):430–6.
- 85 Draper J, Silverman J, Hibble A, Berrington RM, Kurtz SM. The East Anglia Deanery Communication Skills Teaching Project-six years on. *Med Teach*. 2002;24(3):294–8.
- 86 Junod Perron N, Nendaz M, Louis-Simonet M, Sommer J, Gut A, Baroffio A, et al. Effectiveness of a training program in supervisors' ability to provide feedback on residents' communication skills. *Adv Health Sci Educ Theory Pract*. 2013;18(5):901–15.
- 87 Bombeck K, Symons L, Debaene L, De Winter B, Schol S, Van Royen P. Help, I'm losing patient-centredness! Experiences of medical students and their teachers. *Med Educ*. 2010;44(7):662–73.
- 88 Brown J. Transferring clinical communication skills from the classroom to the clinical environment: perceptions of a group of medical students in the United Kingdom. *Acad Med*. 2010;85(6):1052–9.
- 89 Adler R, Werner ER, Korsch B. Systematic study of four years of internship. *Pediatrics*. 1980;66(6):1000–8.
- 90 Fann JR, Hunt DD, Schaad D. A sociological calendar of transitional stages during psychiatry residency training. *Acad Psychiatry*. 2003;27(1):31–8.
- 91 Razack S, Meterissian S, Morin L, Snell L, Steinert Y, Tabatabai D, et al. Coming of age as communicators: differences in the implementation of common communications skills training in four residency programmes. *Med Educ*. 2007;41(5):441–9.
- 92 Junod Perron N, Sommer J, Hudelson P, Demareux F, Luthy C, Louis-Simonet M, et al. Residents' perceived needs in communication skills across in- and outpatient clinical settings. *Education for Health*. 2009;22(1):280.
- 93 Essers G, van Dulmen S, van Weel C, van der Vleuten C, Kramer A. Identifying context factors explaining physician's low performance in communication assessment: an explorative study in general practice. *BMC Fam Pract*. 2011;12:138.
- 94 Rider EA, Volkan K, Hafner JP. Pediatric residents' perceptions of communication competencies: Implications for teaching. *Med Teach*. 2008;30(7):e208–17.
- 95 Sanson-Fisher R, Cockburn J. Effective teaching of communication skills for medical practice: selecting an appropriate clinical context. *Med Educ*. 1997;31(1):52–7.
- 96 Wass V, Van der Vleuten C, Shatzer J, Jones R. Assessment of clinical competence. *Lancet*. 2001;357(9260):945–9.
- 97 Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA*. 2002;287(2):226–35.
- 98 Outcome Project [<http://www.acgme.org/outcome/comp/GeneralCompetenciesStandards21307.pdf>]
- 99 Competence framework [http://www.rcgp-curriculum.org.uk/nmrgcp/wpba/competence_framework.aspx]
- 100 Norcini JJ, Blank LL, Duffy FD, Fortna GS. The mini-CEX: a method for assessing clinical skills. *Ann Intern Med*. 2003;138(6):476–81.

- 101 Steinert Y, Macdonald ME, Boillat M, Elizov M, Meterissian S, Razack S, et al. Faculty development: if you build it, they will come. *Med Educ.* 2010;44(9):900–7.
- 102 Steinert Y. Perspectives on faculty development: aiming for 6/6 by 2020. *Perspect Med Educ.* 2012;1(1):31–42.
- 103 O’Sullivan PS, Irby DM. Reframing research on faculty development. *Acad Med.* 2011;86(4):421–8.
- 104 Barab SA, Barnett M, Squire K. Developing an empirical account of a community of practice: Characterizing the essential tensions. *J Learn Sci.* 2002;11(4):489–542.
- 105 Junod Perron N, Cullati S, Hudelson P, Nendaz M, Dolmans D, van der Vleuten C. Impact of a faculty development programme for teaching communication skills on participants’ practice. *Postgrad Med J.* 2014;90(1063):245–50.

Figures (large format)

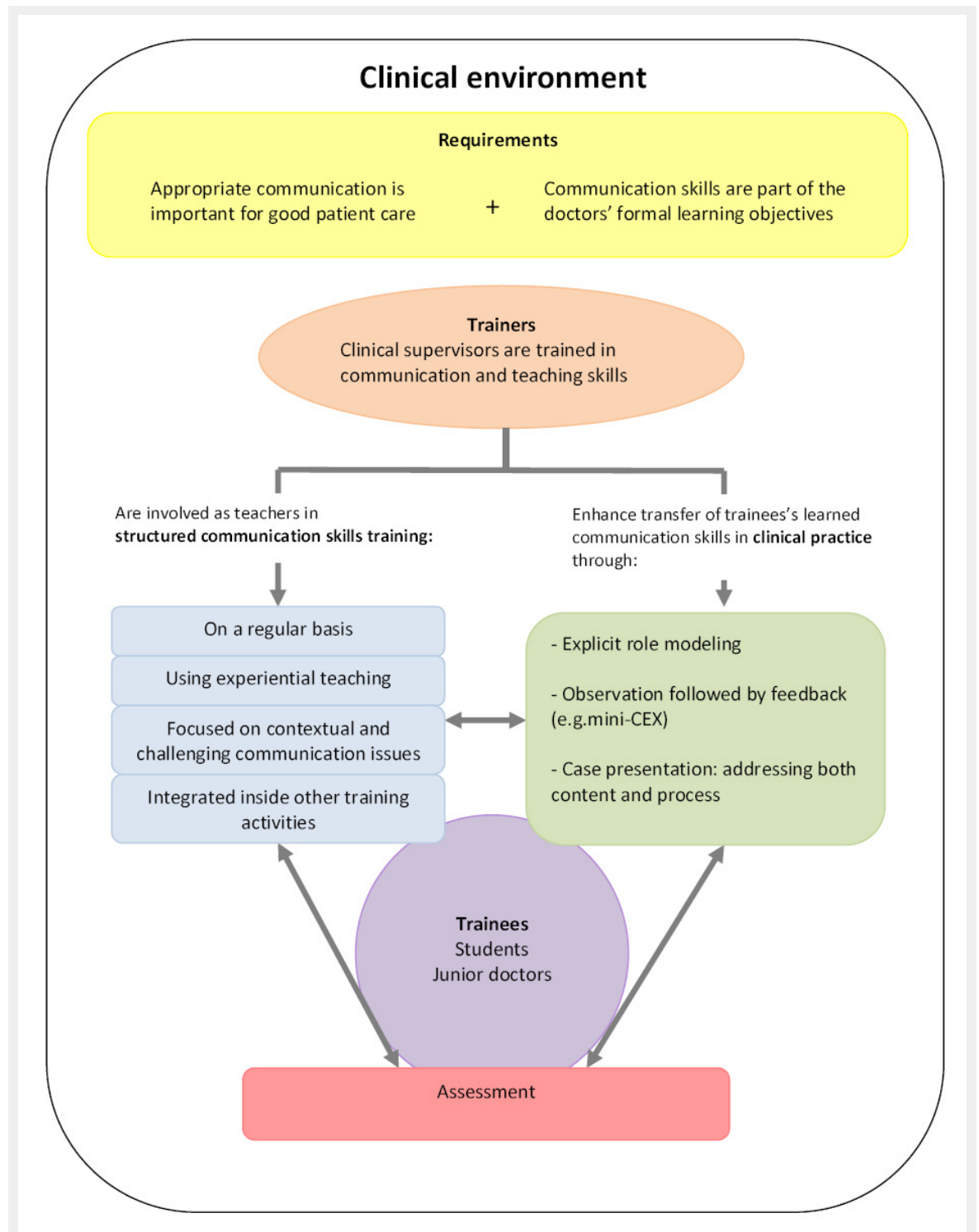


Figure 1
Dynamic model of communication skills training and teaching in the clinical environment.