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Communication Skills: An essential component of medical curricula

Part I: Assessment of Clinical Communication

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AMEE GUIDE 51
Assessment

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Contents

Abstract

This Guide has been written to provide guidance for those involved in planning the topic of communication skills; this first part of a two part Guide deals with the important issue of the assessment of clinical communication.

The first question to ask when approaching the task of designing such assessment is '*what do I want to assess?*'. This Guide provides guidance and information relating to the assessment of various aspects of clinical communication; its underlying theory, its practical ability to show that an individual is competent in certain aspects of communication and its relationship to how students perform on a daily basis. The advantages and disadvantages of assessing selective aspects are also discussed.

The Guide also draws attention to the complexity of assessing the ability to communicate with patients and healthcare professionals, issues of reliability and validity being highlighted for each aspect. Finally, current debates within the clinical communication teaching arena are raised. When should the assessment of clinical communication occur in undergraduate medical education? Should practical clinical communication assessment be integrated with clinical skills assessment, or should the two be separate? How important should the assessment of clinical communication be, for example should someone fail an assessment on the basis of their communication?

It is the aim of the authors not only to provide a useful reference for those starting to develop their assessments, but also provide an opportunity for review and debate amongst those who already assess clinical communication within their curricula, as well those who have a general interest in learning more about the possibilities for communication assessment.

TAKE HOME MESSAGES

- Communication skills are an essential component of health sciences undergraduate curricula
- When considering how to assess clinical communication, it is important to determine what the elements that need to be assessed are.
- Assessment may be made easier through the use of accepted models of skills development.
- Specific areas for consideration are: resource allocation; validity, reliability and generalisability; timing of assessment activities; confidence in the chosen methods and the importance of the results obtained.
- There are a number of areas of clinical communication assessment under current debate such as its integration into standard assessment activities.
- Many of the topics within the assessment of clinical communication are currently being researched, suggesting that it is still an important growth area.

Communication skills are an essential component of health sciences undergraduate curricula.

Introduction

What is clinical communication? In its broadest sense it would be any communication between health professionals or between health professionals and patients (and relatives). This communication could be written or oral, face to face, over the telephone, electronic or via video. The subject matter may range from a brief cold to terminal cancer (von Fragstein et al., 2008). What is always true though, is that how it is done is important. Effective doctor – patient communication has been linked with improvements in patient satisfaction (Williams et al. 1998), adherence to treatment regimens (DiMatteo, 2004) and patient health outcomes (Stewart, 1995).

What is clinical communication? In its broadest sense it would be any communication between health professionals or between health professionals and patients (and relatives).

Given the importance of clinical communication, is it something that doctors are good at? Several studies show that a large proportion of complaints against doctors stem from problems or difficulties in communication (Halperin, 2000; Taylor et al. 2002). Indeed, a recent JAMA article showed that poor communication scores on the Medical Council of Canada licensing exams predicted complaints to medical regulatory authorities in the following 2-12 years (Tamblyn et al., 2007). It would seem then that there are still improvements to be made in terms of the abilities of doctors to communicate effectively with their patients.

It is also clear that doctors do not always communicate effectively with either other doctors or other health professionals within the multi-disciplinary team providing patient care. This can impact on patient outcomes - one study reported impacts of care team communication on perceived quality of care, length of stay, post operative pain and post operative functioning in patients who had undergone an arthroplasty (joint replacement) (Gittell et al., 2000). It is not just communication with patients that requires work, but also interdisciplinary/multiprofessional communication.

It is also clear that doctors do not always communicate effectively with either other doctors or other health professionals within the multi-disciplinary team providing patient care.

Based on this growing evidence, medical education governing bodies embraced clinical communication as a vital component of their curricula. GMC's Tomorrows Doctors document, relating to undergraduate medical education in the UK(GMC 2009) states that each strand of learning (doctor as scholar and scientist, doctor as practitioner, doctor as professional) must be satisfactorily assessed. Communication is part of 'doctor as practioner' and outcomes related to communication and consultation skills are included within this.

A similar sentiment towards clinical communication is expressed in most national medical education guidelines such as The Association of American Medical Colleges(1998), The Scottish Doctor (Simpson et al., 2002) and The Institute for International Medical Education (2002), with learning outcomes specifically relating to clinical communication expressed in many of such documents. An example learning objective from the Tomorrows Doctors (GMC 2009) document is that graduates should be able to:

> *"Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding."*

This change in attitude by governing bodies has had the effect that the teaching of clinical communication gradually has become a core part of medical education (Brown 2008; von Fragstein et al., 2008).

Effective and sensitive clinical communication is therefore an acknowledged learning outcome for medical curricula. This guide is part I of a two part series which examines clinical communication within medical education. Part I (this Guide) focuses on methods of assessment for clinical communication whilst Part II will describe and discuss the clinical communication curriculum and pedagogical techniques that can be used.

Effective and sensitive clinical communication is therefore an acknowledged learning outcome for medical curricula.

Evidence is required that learning outcomes relating to clinical communication have been achieved; how can this be obtained? And what kind of evidence is required? Is it evidence of practical skills, knowledge or attitudes? What outcome should be measured; verbal communication or written, or both? Assessment, both as a driver for learning (Kelly 2007), and a method of grading levels of knowledge skills or attitudes is required.

It has been acknowledged by the Department of Health (England) (DoH 2003) that public confidence in the competence of Health Professionals depends upon the robustness of the methods used to assess skills during training, but the assessment of clinical communication is not uniform amongst medical education establishments. For example, in a survey of 24 UK medical schools (Raferty & Scowen 2006) all included formal, summative assessment of communication skills in their undergraduate examination programme. But what was assessed and how it was assessed depended on the clinical communication curriculum within each school.

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A large section deals with the most complex type of clinical communication assessment, practical skills (either to determine whether a minimum level of skill competence has been achieved or whether day to day practice is of a sufficient standard). Issues relating to who should be examining practical skills, how to maintain validity, and how to ensure reliability are all discussed.

The Guide also raises some of the current debates surrounding the assessment of clinical communication, such as;

- when should assessment be carried out?
- can we actually assess an individuals ability to communicate reliably?
- should communication assessment be integrated with clinical skills assessment?
- how much weight should be given to clinical communication in summative examinations?

This Guide therefore aims to provide examples of methods of assessment for clinical communication useful for individuals planning new assessment strategies. It should also stimulate discussion and debate amongst experts as there are still many unanswered questions in this field. Hopefully, the Guide will drive research to try to answer some of these questions.

Entrance assessment

This Guide will mainly cover assessment during undergraduate and postgraduate medical training, but the practical communicatory abilities of prospective students (Powis 1998) or postgraduates applying for membership of one of the colleges (Ward 2008) are often assessed during the entry application process. Written communication is also usually assessed in the written application process.

Assessment of the communicative ability of medical students often starts before they embark on their undergraduate studies. There have been several pieces of work investigating the selection process for medical students. In a British Medical Journal article, from the 'How to do it' series, the author (Powis 1998) provides a guide to determining how to implement the selection process and what techniques to use. One component is the personal interview which he states can be used to assess 'verbal reasoning, language and interaction skills, and attitudes'. He does stress that an interview should not be used as the only selection event and should be structured or semi-structured to provide validity. Staff involved should also be well trained to provide reliability.

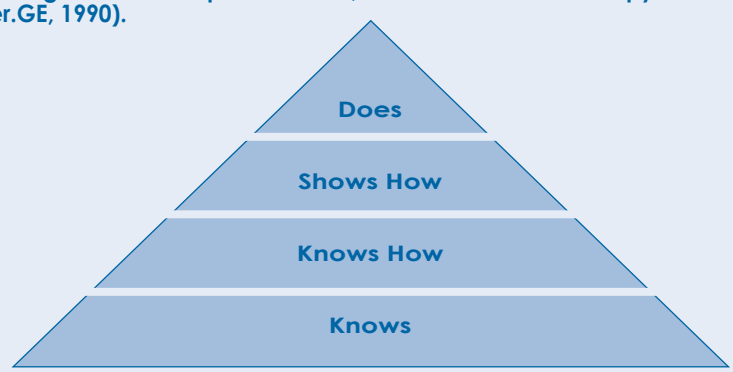
Assessment of the communicative ability of medical students often starts before they embark on their undergraduate studies.

Reliability is an issue that should be taken very seriously if personal interviews are a key component of the selection process. The multiple mini-interview (MMI) was developed to try to overcome this difficulty (Eva et al. 2004b). It comprises of several mini-interviews or 'stations' where a task has to be completed by each interviewee. These may involve the discussion of ethical dilemmas, the provision of some information about the healthcare system of the country the school is in or they can be more focussed towards communication. One example provided by Eva et al in their description of the development of the MMI (Eva et al., 2004b) is a station where the interviewee is told they are picking up a colleague to fly to a conference, only to discover that the colleague has a fear of flying. The interviewee is assessed on their ability to empathise and communicate this to the colleague (who is an actor playing the role). In a second study by the same group the MMI was found to be the only admissions procedure (other procedures included, grade point average and a personal interview) that correlated with pre clerkship Clinical Exam results, and in fact was of predictive value (Eva et al. 2004a). Many medical students therefore have had a communication assessment prior to being accepted onto a medical course. This tends not to be as specific (nor assessed in the same way) as the later communication skills/attitudes assessments. It should not be the only method of determining the suitability of the candidate, but should be seen as an early opportunity to gauge an individual's abilities in communicating. There is much debate about whether a minimum standard of communication ability should be a pre-cursor to medical school admission, but the counter-debate emphasises that all communication can be learnt at medical school, so no pre-requisite ability is necessary. This prompts an area for future research to provide evidence for this, for example by tracking the development of communication learning with progression through medical school. There is currently some work tracking the development of patient centred attitudes (Noble et al. 2007).

Summative assessment: What should we be assessing?

In 1990 George Miller published his review of the methods of assessing clinical competence and performance (Miller, 1990). In his article he introduced a framework highlighting the various levels that assessment could be focussed towards; these can be viewed in Figure 1.

FIGURE 1
Measuring clinical skills performance, the four levels of Millers pyramid (Miller.GE, 1990).



Miller argued that:

> *"no single assessment method can provide all the data required for anything so complex as the delivery of professional services by a successful physician."*

"no single assessment method can provide all the data required for anything so complex as the delivery of professional services by a successful physician."

The framework is presented as a pyramid of levels starting with the base of '**knows**' – a knowledge base relating to the skill. It progresses up through '**knows how**' – an understanding of the application of the knowledge and '**shows how**' – an individual can show in an exam setting that a minimum level of competence to carry out a skill has been achieved. Finally, at the apex of the pyramid is '**does**' – performance on a day to day basis above a minimum level of competence (Miller 1990).

There is surprisingly little evidence to show that grades on different levels of the skills pyramid correlate with each other. This seems to be especially the case between the two traditional methods of assessment, which tend to assess the 'knows' (knowledge) and performance after graduation (the 'does') (van Dalen et al., 2002b; Probert et al. 2003). Objective Structured Clinical Exams (OSCEs) show better correlation to performance after graduation and therefore greater validity (Probert et al., 2003). One study however, did show a weak positive correlation between knowledge, competence and performance early in undergraduate training, although interestingly in later years this correlation became negative (Humphris 2002). Another reported evidence that combined assessment, testing both knowledge and competence, was better at predicting clinical performance than competence assessment alone (Wilkinson & Frampton, 2004). So an assessment of knowledge and competence best predicted performance in the future suggesting knowledge tests and OSCE style exams are indeed testing different aspects of performance.

Perhaps the levels of Millers pyramid should be viewed as component parts of a jigsaw rather than levels of achievement that should be 'passed' before progressing to the next level. If this is the case then assessment of the different components of Miller's pyramid (Miller 1990) should provide a more accurate picture as to the performance of an individual in their day to day patient care.

This argument is also put forward by another author (Schirmer et al., 2005) in their review of tools for assessing practical, verbal communication. They state that:

> "*While difficult to measure, methods are needed to assess the degree to which the interviewer is mindfully adaptive, responsive, self-aware and aware of the other person, the context, and shifts in the interaction*".

This acknowledges that there are different components to communication which should all be assessed to fully appraise the abilities of an individual.

This evidence suggests that there should be scope to assess more than one component of clinical communication during an undergraduate's time at Medical School. There is no evidence to suggest whether these assessments should be carried out simultaneously. It would however appear that if all components of clinical communication cannot be assessed (due to restrictions of resources, time etc), then the practical assessment of competence is that most related to performance. It is not clear whether for postgraduates the assessment of all of the components is necessary, it may however be useful.

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If we accept the premise that assessment of all components of clinical communication skills competence and performance is optimally desirable, then how can they be assessed? The following sections describe and discuss the merits of methods that can be used to assess the various components of Miller's pyramid (Miller 1990).

Assessment of theory knowledge – 'knows'

As with any knowledge strand within a medical curriculum, communication knowledge can be assessed using multiple choice (MCQ), short written answer (SWA) questions or essays (Rees et al. 2002). Each of these methods assess a slightly different type of learning: for a comparison of the impact on student learning approaches of these types of assessment see Scouller (Scouller 1998).

Some Medical schools retain knowledge assessment stations within their OSCEs (Probert et al., 2003). These are usually clinically based, such as data interpretation stations (X-rays, for example) and such stations could also be used to assess clinical communication knowledge. For example, a vignette describing a particular communication scenario, a transcript of an interaction or a photograph of communication occurring could be provided and questions relating to the content of the material set. This method of assessment requires fewer resources (no software, simulated patients or practical assessors) and logistical organisation than would be needed to assess other components of clinical communication. It should be

remembered however, if SWA's or essays are set, considerable staff time may be required for marking.

There is another option; the OSVE (Objective Structured Video Exam) (Humphris & Kaney 2000) which will be described in greater detail in the next section. The OSVE can contain questions designed to test explicit knowledge, as well as other types of questions.

In the undergraduate curriculum there has been a general movement away from such tests of communication knowledge towards assessments of practical competence, ensuring the attainment of a minimum acceptable level. As discussed above, this may be a move from testing one aspect of communication to another (Institute for International Medical Education 2001; Humphris, 2002), in this case a shift away from assessing knowledge of clinical communication to the assessment of competence in carrying out the skills involved.

The basis for this shift is unclear, although it may, in part, be driven by the governing body guidelines such as Tomorrows Doctors (GMC 2009), the shift towards outcome based curricula and the focus within medical education on communication skills, with less focus on theory and underpinning principles. As noted in the previous section, when assessment of the various components of Miller's pyramid are combined a better prediction of postgraduate performance is achieved (Wilkinson & Frampton 2004). Medical schools should be aware of this and consider retaining at least a component of clinical communication knowledge assessment.

Assessment of knowledge of skill – 'knows how'

Miller originally described this level of clinical performance as the "*quality of being functionally adequate, or of having sufficient knowledge, judgement, skill, or strength for a particular duty*" (Miller 1990).

...not only does an individual require knowledge but they need to be able to apply the knowledge they have in solving a problem.

So not only does an individual require knowledge but they need to be able to apply the knowledge they have in solving a problem. In the case of clinical communication this would be the skills involved in appraising a communication situation and using the knowledge base they have to select an effective response for that situation. Testing this type of clinical communication knowledge is not always straight forward, especially when you wish to test the critical appraisal component.

One way to assess this would be to modify the OSCE knowledge stations described in the previous section (Probert et al., 2003) so that were aimed at a critical evaluation of the material or application of the content knowledge to the context of the material. SWAs could also be used in a similar way and would required fewer resources, for example they could be a component of a written exam if schools do not run OSCE style exams frequently.

Another method that has been used to assess this type of ability is the Objective Structured Video Exam (OSVE). The OSVE was initially developed at Liverpool University by Humphris and Kaney (Humphris & Kaney 2000). Students viewed a recorded doctor – patient interaction and answered written questions relating to what they had observed. Although inter-

marker variability was small and scores correlated well with OSCE examiner scores (but not to OSCE simulated patient scores), it was labour intensive to administer and there were difficulties with uniformity of the audio visual experience (personal communication Humphris).

More recently a computerised version of this was developed by Hulsman and colleagues (Hulsman et al., 2004) at the Amsterdam Medical School, which aimed to try to resolve some of the issues of the original format. OSVE questions can probe various components of Millers pyramid. They may examine the 'knows' component (theoretical knowledge) but also the 'knows how'. For the 'knows how' questions students could be asked to critically evaluate the interaction they have viewed or they could be asked to state how they would respond in specific communication situations (Hulsman et al., 2006; Miller, 1990). This focuses on how they would apply the knowledge they have to a specific communication context. Unfortunately although the computerised version of the OSVE does combat some of the difficulties of the non-computerised version (specifically solving the sound and visual quality problems) it still requires each student's answers to be individually marked and is therefore is as labour intensive as marking short written answer questions (SWAs). It would also require access to a suitable computing facility to ensure examination conditions when students were assessed. Thus if an OSVE is considered by schools as a method of assessment thought must be given to the resources and time it would require, whether it is computerised or non-computerised.

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Thus there are ways to assess the 'knows how' component of clinical performance described by Miller (Miller 1990). It is not clear how many schools do assess this element of performance. Understanding better how an individual approaches communication situations would provide more accurate information not just regarding their future performance but also on how their performance can be improved.

Assessment of verbal clinical communication

The assessment of practical verbal clinical communication is by far the most common way of assessing communication currently and therefore it is the largest section in this Guide. The assessment of practical verbal clinical communication may have one of two aims. It could be focussed at determining whether an individual has achieved a minimum level of competence in a particular skill or it could record their level of performance over and above that minimum level, a grading. These correspond to the 'Shows how' and 'Does' (Miller 1990) components of Millers pyramid.

The assessment of practical verbal clinical communication may have one of two aims. It could be focussed at determining whether an individual has achieved a minimum level of competence in a particular skill or it could record their level of performance over and above that minimum level, a grading.

The correlation between these two types of assessment has been found to be stronger (in relation to clinical skills) than relationships between the other components of Millers pyramid (Miller 1990), as shown by the stronger correlation between OSCE scores and performance assessment by consultants (Probert et al., 2003). It is not a perfect match though and the achievement of minimum levels of competence cannot be used to completely predict clinical performance levels on a day to day basis. There are advantages of using assessments of an achievement of a minimum level of competence, especially at undergraduate level, and these are discussed below.

- *Assessing verbal clinical communication – competence 'shows how'*

  Assessment of communication during a clinical skills examination such as the OSCE or mini-CEX (mini-clinical-evaluation-exercise)(Norcini et al. 2003)were developed because of the requirement to provide evidence of the achievement of minimum competence levels and the drive to increase the reliability of assessment methods. Such exams occur at both undergraduate and postgraduate level, although OSCEs tend to be more common in undergraduate education. The mini-CEX is mainly used now as a workplace based assessment either formative or summative (Wass 2005, Hatala et al. 2006). Both OSCEs and the mini-CEX consist of several cases which are presented to the examinees, either on the same day, or over an extended time period. In OSCEs, people trained to play a standardised role are involved, whereas for the mini-CEX 'real' patients tend to be used (Norcini et al. 2003). The patients present a case which can be used as a vehicle to assess particular skills. These skills are observed by an examiner who uses an assessment tool to grade the examinees performance, usually noting whether the candidate has passed, is borderline, or has failed the station (Norcini & McKinley, 2007). Students interact with the patients for 5-30 minutes. OSCEs tend to focus on one skill per case or 'station' (in the case of clinical communication examples of individual skills would be history taking or breaking bad news) whilst long or short case exams such as the mini-CEX may cover the whole patient case, or focus on one aspect (history taking, physical examination, formation of a diagnosis and treatment plan)(Barman 2005). The ability to test specific skill competencies in a short space of time is perhaps the main reason that the OSCE is used more commonly in undergraduate education (Epstein 2007) as it provides recordable evidence that a student has achieved minimum levels of competence in a single skill (although they are used for membership of for example, the Royal College of Surgeons (Ward 2008)). As a method of testing whether a minimum standard has been achieved OSCEs or mini-CEX are valid as the individual has to carry out the particular skill and show their competence. As a method of giving an estimate of performance level the OSCE type examinations are not completely valid as they do not show how the individual performs such skills on a day to day basis under normal working conditions.

  Various sources of error or variability are inherent within such practical assessments. Sources include assessment tools, examiners, cases, simulated patients (SPs) and, of course the students themselves. Efforts are required to minimise sources of variability other than the students, therefore ensuring reliability.

  - ***Issues of reliability – assessment tools***: During practical examinations where clinical communication skills are assessed in isolation, e.g. not integrated with other clinical skills, examiners utilise rubrics which are generally either checklists or rating scales (or a mixture of both). Checklist assessment tools contain lists of specific tasks the examinee should complete within their allotted time, and what to include in such a checklist is a current debate (Hettinga et al., 2010). Rating scales generally require the examiners to gauge how well they think the examinee has performed, either globally or for particular skill sets. Some

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tools might have added benefit be being a combination of tick lists and rating scales.

For expert examiners, global rating scales appear to be more reliable and show better construct validity than checklists for OSCE type examination (Regehr et al., 1998). Examples of some of the tools currently used by examiners include the Harvard Medical School (HMS) Communication Skills Tool (Makoul 2001), the Liverpool Communication Skills Assessment Scale (LCSAS) (Humphris & Kaney 2001c), the Maastricht communication skills assessment scale (MAAS – Global) (Thiel et al., 2000), the Amsterdam Attitudes and Communication Scale (AACS) (de Haes et al., 2001) and the Clinical Skills Assessment (CSA) (Boulet et al., 2002). Interested individuals should examine such tools as reliability data may already be published. Schirmer and colleagues (Schirmer et al., 2005) reviewed and graded various communication skills assessment tools on several categories of use. These included, the communication components assessed, whether the psychometric properties had been investigated, its overall value and its usability (both from the perspective of who it was deigned for use by, and by trained raters). Interestingly no tool scored highly on all parameters. It was found that often tools scoring highly in communication components they measured would be low for usability due to their extensive nature. An extensive tool may prove to be very accurate in assessing competence but if there is not enough time for assessors to complete it during the 5 minutes or so available in an OSCE station then it is not practical. Currently there is no individual rubric that is uniformly thought to be the most reliable, valid and easy to use for all potential examiners. Therefore a thorough investigation of the available tools and comparison with what individual schools wish to asses and with the examiners they have available should result in a suitable assessment sheet.

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- ***Issues of reliability – case specificity***: A study by Guiton and colleagues in California, USA (Guiton et al., 2004) investigated whether there was any case specificity in the assessment of clinical communication. The communication performance of students' at each station in a seven case exam was assessed using a rating scale. For each case seven areas of clinical communication were graded on a six-point Likert scale by examiners, and each student also received a global communication score. Within each case there was high reliability between the seven areas, but between cases, there was little reliability for the same clinical communication area for individual students. 50% of the observed variability was due to a student x case interaction, meaning there was a large degree of variation in how students responded to different cases.

  However, the generalisability of the seven items and seven cases was high. This suggests the whole examination gave a reliable measure of the student's communicative abilities (Guiton et al., 2004). This work shows that to give a reliable, generalisable measure of skill level (rather than competence in one or more skills), several cases are required. Norcini et al in their study in North Eastern USA suggested up to 14 cases were required for students in the borderline area in a mini-CEX.

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For students at high or low end of the scale, fewer cases were required to give a reliable, generalisable measure (Norcini et al., 2003) of communication skill.

When planning how many cases would be required thought must be given to the purpose of the examination. If a record of competence is needed for a specific skill, then a single case example may be appropriate but for a measure of more general communication ability competence such as 'can take a history from a patient in an appropriate, polite manner' then several cases may be needed for reliability.

This, of course, has implications for resources. If a measure of performance is needed but such practical examinations are only run in the final year of a course several stations would be required in a single exam to provide a reliable measure. Schools need to consider whether having so many clinical communication stations within a single exam is feasible. If it is not feasible it may be worth including stations in earlier examinations (if these are run within the curriculum) or to consider integrating clinical communication elements within other clinical skills stations. This resolution brings its own problems however and these will be discussed in the 'Integrated or separate?' section later on in this guide.

- ***Issues of reliability – Examiners***: Examiners need to be trained in the use of assessment tools to ensure consistency (Rider et al., 2006). Evidence of examiner over- compensation for difficult cases was observed in the study by Norcini (Norcini et al., 2003) in the mini-CEX. Interestingly in one study (Keen et al., 2003) the levels of error attributable to well trained raters was negligible. Therefore training examiners is effective in reducing this source of variability. Several training techniques can be used to improve inter-rater reliability (de Haes et al., 2001; Humphris & Kaney 2001b; Boulet et al., 2003).

Examiners need to be trained in the use of assessment tools to ensure consistency.

Training usually comprises familiarisation of the assessment tool then practise in using it during a mock assessment or to assess a video recorded interaction. Frequently training takes place in groups and discussion between individual assessors usually provides consensus with regard to marks or grades assigned. Several examples may have to be assessed by the trainees before consensus is reached (de Haes et al., 2001).

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Another option to nullify examiner sources of error would be to increase the number of examiners, such that the impact of individual differences is reduced. One study looking at the reliability of the assessment tool developed at Amsterdam Medical School (AACS) recommended a minimum of six assessors scoring six – ten items to achieve reliability (de Haes et al., 2001). However if examiners are well trained having an individual assessed by several examiners may not be necessary.

Training of examiners should therefore be a priority to achieve consistency and reliability. Results should be examined post hoc to identify any problems such as a lenient examiner.

- ***Issues of reliability – simulated or standardised patients***: Simulated (actors playing a role) or standardised (individuals who may have the disorder or illness being investigated) patients (SPs) also require training to ensure that the patient case is portrayed in a standard way (Collins & Harden 1998). The training should ensure SPs do not increase the level of complexity if students perform well, or decrease it in situations where students are struggling. Training should also minimise 'performance drift' which can occur if SPs are portraying the same scenario over a period of time.

  If more than one SP is used to play a particular case, either because the case is particularly taxing or because there are several exam circuits running in parallel, standardisation should occur between the SPs to ensure each examinee is given a fair representation (Norcini & McKinley 2007). This can be done by briefing the SPs on how the scenario should be portrayed and examiners being aware of this briefing so they can re-direct SPs should the stray from the desired portrayal.

  If more than one SP is used to play a particular case, either because the case is particularly taxing or because there are several exam circuits running in parallel, standardisation should occur between the SPs to ensure each examinee is given a fair representation.

  One use of technology in this area that may help reduce SP variability is the use of virtual reality patients (VPs). These are more common in clinical communication skills training but could also be developed for use in assessment. In a study using their VP DIANA, Raij et al found that medical students at the Universities of Florida and Georgia responded in a similar way to SPs and VPs (Raij et al., 2006) in terms of history taking, but not when it came to showing empathy (Deladisma et al., 2007). It may be that VPs are useful for teaching and assessing instrumental skills, such as what information is important when taking a history, but not the rapport type skills of relationship building. This is one area that could be developed in the future.

  Thought must be given to all of the above areas to ensure that practical examinations of clinical communication competence are fair, reliable and valid. But there are other elements to consider before decisions are made over what types of exams are implemented, including the resources involved.

- ***Costs of practical examinations and resources required***: Thought must be given to the cost of such assessment exercises. There are considerable costs to running the OSCE or mini-CEX type of practical exam. They are expensive in terms of labour, time, and require many resources such as space, assessment rubrics, examiner and patient training. Whether the facilities are available to run such an exam should be seriously considered before it is embarked upon. The OSCE or mini-CEX exams are also logistically complex, with large amounts of preparation required to ensure cases or stations can be accommodated within the time frame available.

  Costs for such exams will vary depending on whether schools have enough internal examiners or whether clinical assessors are required from external sources on an exam by exam basis. Likewise, for SPs, if professional rates are paid and several circuits of stations are required OSCE style examinations can become extremely expensive. Real patients, depending on the local arrangement, will often have a set

sessional fee. The processing of exam scripts, unless automated, may also be time consuming.

The integration of clinical communication into other clinical skills stations may reduce some costs but there is some debate as to whether it is beneficial to examine it separately during practical exams or whether it should be integrated to form a component of all stations or cases. It is important that students who are experiencing difficulty with their clinical communication can be identified early to ensure they are given help. Whether this could this be done if clinical communication is assessed only as a part of a station is unclear. The counter point to this argument is that clinical communication should not be seen as a separate entity to other clinical skills, as this could perpetuate its' isolation (DoH 2003). This debate is further examined in the Guide.

The integration of clinical communication into other clinical skills stations may reduce some costs but there is some debate as to whether it is beneficial to examine it separately during practical exams or whether it should be integrated to form a component of all stations or cases.

Students themselves do not always favour OSCE style examinations for clinical communication (Rees et al., 2002) believing them to be artificial:

> "*You look at the mark sheet and think 'I've got to do more empathy', you know the mark sheets, so you think of what you've got to put in. It's a bit false*".

Students themselves do not always favour OSCE style examinations for clinical communication believing them to be artificial.

Despite this though some students appreciate that the assessment of practical skills is also important in future doctors:

> "*Cause you could learn the theory, you could sit there and learn your notes. But it's whether you can actually apply it, that's what's important…*".

Despite this, OSCE style exams are a useful way of determining whether an individual has achieved a minimum level of competence in certain skills. That is they can complete a skill. Whether they do complete a skill on a daily basis is best assessed in other ways.

Assessing verbal clinical communication – performance 'does'

Traditional methods of assessing practical clinical communication abilities in undergraduates usually involved an individual being observed by a clinician over a period of time (usually whilst on clinical placement) and given a global rating of performance by that clinician (Epstein 2007). This tended to occur in the final two 'clinical' years of a pre-clinical/clinical curriculum. A similar method was used for junior doctors. As undergraduate curricula move away from the traditional preclinical/clinical split undergraduates have contact with patients earlier and need to have adequate skills. The opportunity for observation by a clinician over a period of time is smaller due to increasing numbers of undergraduates, clinician workload and limitation of clinical time, such that this method, where it is used, is most frequently utilised for postgraduates only (Beard et al., 2005). One way of getting round this is the mini-CEX, which, if it is workplace based and has enough cases (14 for students in the borderline area (Norcini et al., 2003)) over a period of time may provide a valid measure of performance whilst still being reliable (Wass 2005, Hatala et al. 2006). The mini-CEX is a flexible assessment which could be utilised for competence or performance assessment (Wass 2005, Hatala et al. 2006).

As undergraduate curricula move away from the traditional preclinical/clinical split undergraduates have contact with patients earlier and need to have adequate skills.

Assessment of this type provides an accurate grading of performance (day to day dealing with patients) rather than competence (ability to carry out a specific task or skill) and therefore should have excellent validity, but is it reliable? As with the tests of competence, there are issues relating to case specificity and inter-assessor differences. These can be reduced by utilising several cases and/or assessors. A further possibility is to train assessors well, although the numbers involved are larger than for example an OSCE. This training could be difficult to organise and be expensive, requiring clinicians' time.

The 360° assessment or multi-source feedback is one method used to assess performance (mainly for interpersonal and communication skills and professionalism) that has become more common (Lockyer, 2003). It is a questionnaire based system in which the performance of an individual is appraised by various co-workers (providing an inter-professional view(McLellan et al., 2005)) and, in the case of a health professional, also by patients. This type of assessment reduces the likelihood of examiner bias by relying on several assessors for each individual. Using this type of appraisal also reduces the pressure on individual examiners to be present at several cases to provide reliability (as might be expected in the more traditional method). It has proved to be particularly useful for continuing professional development and formative purposes (McLellan et al., 2005).

The 360° assessment or multi-source feedback is one method used to assess performance (mainly for interpersonal and communication skills and professionalism) that has become more common.

Ideally appraisers should be of a variety of levels, so in the case of a physician, senior and junior colleagues, nurses and other health professionals as well as patients should be involved to achieve a full picture of the level of performance. The questionnaires themselves need to be designed specifically for the competency information required. Care must be taken to ensure questions are valid and the raters have experience of the behaviours in the individual (for example other health professionals may not be able to answer some patient related questions and vice versa). Slightly altered questionnaires may therefore be required for colleagues and patients. A target number of raters should be calculated to provide reliable results without requiring excessive recruitment. 360 degree appraisal instruments have been shown to be reliable and generalisable (Lockyer 2003) and this type of assessment is very useful tool for assessing performance from a variety of viewpoints. It can be delivered online or via paper questionnaires. This flexibility means that the hardware or software resources required could be minimal, although with the paper based version staff time would be needed for processing.

One method that resolves the issue of potential variability between examiners if only a limited number are used, is the video recording and assessment of actual patient interviews. Assessment of the video material can be carried out by expert examiners using a coding system or other tool (Nuovo et al., 2006). This method is currently used in some GP assessments in the Netherlands (Ram et al., 1999) and was used in the UK by the Royal College of General Practitioners (http://www.rcgp.org.uk/). The advantage of this method is that it has high validity (although participants will be aware that the interaction is being recorded) and it takes up little time for practising doctors. Disadvantages include that the examinee may have the opportunity to select the best interactions for examiners to observe, although this can be reduced by recording a session of several consecutive patients, if they give

One method that resolves the issue of potential variability between examiners if only a limited number are used, is the video recording and assessment of actual patient interviews.

consent (Ram et al., 1999). As cases are not standardised, several should be recorded to improve reliability.

A further option of improving validity and reliability is to employ 'mystery' SPs who present incognito to clinics (with prior consent from the examinee) and rate the doctors' performance. This method has the advantage that the patient 'case' is standardised. The reliability of this method was investigated by Gorter who assessed clinical skills in rheumatologists from the Netherlands this way (Gorter et al., 2002). The SPs were not detected by the rheumatologists and graded the visits immediately after the consultation. In this instance communication skills were not assessed, but it was determined that 14 visits by incognito patients would be required to produce reliable and generalisable grading of the clinicians. This of course may not be feasible in all countries.

A technological development in the assessment of clinical communication performance is the CAT (Communication Assessment Tool), developed by Makoul et al in Chicago for use by patients over the telephone or online. It was found to be reliable and generalisable with Cronbach alpha 0.96 for 14 items (Makoul et al., 2007).

Using the CAT patients tended to rate their doctors very highly, as is typical for patient satisfaction scales, in fact more highly than the doctors themselves using the same rating system (Makoul et al., 2007), but discrimination was still possible. Clustering of high grading has been found previously with SPs (Rees et al., 2002). This tool could be extremely useful during continuing professional development after qualification as it does not require the training of examiners or standardised conditions but it could also be utilised when undergraduate students go out on attachment or clinical placement.

All methods of assessing the practical clinical communication abilities have their advantages and disadvantages. A study by Nuovo et al with residents at the University of California, Davis, Department of Family and Community Medicine compared results of monthly performance evaluations, OSCE scores and video tape analysis of doctor-patient interactions using the Davis Observation Code (DOC) (Nuovo et al., 2006). They showed no correlation between the different communication assessment scores, suggesting these examinations are testing slightly different aspects of communication. Global ratings of performance may have little correlation with competence on a specific task during a formal OSCE, whilst the focussed interaction analysis of the DOC may examine a communication aspect that differs from either previous assessment. Great care must be taken when selecting a method of assessment of clinical communication performance to ensure it is assessing what is required and is assessing it in a reliable and valid manner.

All methods of assessing the practical clinical communication abilities have their advantages and disadvantages.

Who should be assessing verbal clinical communication?

Who should be rating the communication skills of undergraduate medical students and postgraduate doctors in training? Undergraduate students at the University of Amsterdam have their communication skills assessed during clinical rotations in their fifth year by a variety of health professionals (de Haes et al., 2001) to reduce bias, with reliability between staff being good(de Haes

et al., 2005). This is similar to the 360 degree assessment described previously and requires appraisers to be trained to ensure reliability. This method though uses health professional time quite heavily, could the patients or SPs assess the clinical communication skills? This would mean less time involvement for health professionals and would be a cheaper alternative. Of course if SPs were being used to rate students they would require training (as a physician or other examiner would) but would they assess in the same way as they are a participant in the interaction rather than just an observer?

There is some evidence that a person directly involved in the interaction is in a better position to asses the communication skills being experienced than an impartial observer (Zoppi & Epstein 2002). Improved patient outcomes were found to be related to patient perception of 'connectedness', not observed communication elements in one study (Stewart et al., 2000). There is conflicting evidence regarding whether SP and expert examiner ratings of examinees correlate (Humphris & Kaney, 2001a; Boulet et al., 2002; de Haes et al., 2005; Rider et al., 2006). In a study by Cooper and Mira, an academic examiner and an SP both rated students' clinical communication using the same scales and then provided a global rating. Although the academic and SP global ratings were correlated the academic assessors overall score only accounted for 10% of the variance in the simulated patients overall score (Cooper & Mira 1998). When SP ratings were compared to a method of video taped utterance coding (the Roter interaction analysis system Roter (Roter & Larson 2002))SPs were found to be as accurate as the utterance coding in rating one group of trained students as being better at utilising rapport when compared to a group who were untrained (Price et al., 2008).

There is some evidence that a person directly involved in the interaction is in a better position to asses the communication skills being experienced than an impartial observer.

These studies suggest that although SPs are perhaps assessing different aspects of communication in comparison to expert examiners they are astute at picking up differences amongst students. Rating systems like the LCSAS (Humphris & Kaney 2001c) often have SP rating components to them but these are often much shorter (some consisting of one or two global rating, such as 'The student made me feel confident in them') than the expert examiner components. It might be appropriate for SPs to assess some aspects of a consultation, for example, whether they felt listened to.

When asked, students were unsure as to who should assess them. Some preferred SPs but others had noted that SPs tend to be overgenerous in their marking (Rees et al., 2002). This may make differentiation between students difficult if it is required but if all that is needed is a pass/fail decision then this may not be a problem.

A summary of the issues which should be considered when deciding on a method of practical clinical communication assessment can be found in Figure 2. As can be appreciated from the previous few sections there are many issues relating to the practical assessment of clinical communication that need to be considered before a method is chosen and applied. These include what it is you want to assess. If you require evidence that a minimum level of competence has been achieved the OSCE style practical examinations may be the best option. If what is required is a measure of an individuals performance in clinical situations then 360 or video assessment may be more valid.

FIGURE 2
Issues to consider when selecting a method for the assessment of practical clinical communication

Validity – what do you want to assess?
- Competence or performance?

Resources
- Assessors
- SPs
- Time
- Facilities

Reliability
- Assessment tool – Construct validity
- Assessors – Inter-rater reliability
- Case specificity – Multiple cases
- SPs – Inter-SP consistency

The costs and available resources will play a large role in selecting the feasibility of assessing a large number of individuals. For the OSCE style assessments, costs include payment for external examiners and SPs and the time allocated for internal members of staff in organising and examining. Resources include the facilities required to run potentially several parallel circuits involving multiple stations, and are there enough trained SPs and examiners? For the work based assessments costs are lower, unless sophisticated online recording of assessments are used. This is not necessary however as paper based assessments can be utilised. Staff may need to be trained however which may involve resources.

The costs and available resources will play a large role in selecting the feasibility of assessing a large number of individuals.

For both of the above types of assessment the assessment tool or rubric should be carefully chosen, for both practicality and construct validity. Examiners will require training to ensure inter-rater reliability and consistency. If OSCE type assessments are selected SPs will also need training for their portrayal of the scenario and, if required to provide an evaluation of student performance for that.

The case specificity should be considered. If an OSCE style format is selected how many clinical communication stations should be included if general abilities are to be measured? This decision will depend on the assessment tool used. Likewise for 360° or video recorded cases, how many cases should be viewed?

Finally, once a method has been selected, the reliability of it should be rigorously investigated. This should be carried out to ensure any adjustments to cases can be made or extra training for examiners or SPs provided.

Assessment of written communication

Doctors also need to be able to communicate effectively via written media. 18 of the 24 UK medical schools surveyed by Raferty and Scowen (Raferty & Scowen, 2006) assessed written communication. Poor written communication can lead to misunderstanding or incorrect note keeping, both of which can have serious consequences for patients. As with the verbal aspect of clinical communication, written communication performance could be assessed on many levels from 'knows' to 'does' (Miller, 1990).

Poor written communication can lead to misunderstanding or incorrect note keeping, both of which can have serious consequences for patients. As with the verbal aspect of clinical communication, written communication performance could be assessed on many levels from 'knows' to 'does'.

An example of the assessment of practical written communication skills is that of the Educational Commission for Foreign Medical Graduates examination (ECFMG) (CSA) which certifies international medical graduates to practice in the USA (Boulet et al., 2002). Examinees are expected to write a Patient Note (PN) after each station during a mini-CEX (Boulet et al., 2003; Boulet et al., 2004). The PN scores correlated moderately to oral communication ratings suggesting that although there was some relationship between verbal and written communication, it was not particularly strong. The PN would be an example of a method assessing the 'shows how' component of Millers pyramid (Miller 1990), or of competence to achieve a minimum standard.

Similar to the mini-CEX, OSCE stations are another potential opportunity to examine written communication skills. One study described the development and evaluation of such an OSCE station for internal medicine residents, testing their ability to dictate consult letters (Keely et al., 2002). The station was 22 minutes long (double normal length) and residents were provided with a referral letter from a family physician, a narrative account of the history, the results of a complete physical examination, results of investigations and a Dictaphone with a blank tape. Residents had to read the information provided and dictate a consult letter for the family physician. The letter was typed up and rated using a previously devised scale. This method of assessing was found to be reliable between raters. Interestingly the scores on the written communication station did correlate with those from a verbal clinical communication station but not a physical examination station from the same OSCE. However the written station correlated best with overall examination score (Keely et al., 2002). Feedback from the residents regarding this station was positive. The typed out letter was sent to the residents after the assessment, ensuring they also received formative feedback. Another example of such a station is the unmanned station in the entrance OSCE for the Royal College of Surgeons (Ward 2008). Assessment of written communication should be approached in the same manner as the assessment of verbal clinical communication and the above are examples of such evaluations.

Writing about communication: reflection on skills

Portfolios in medical education are becoming increasingly important and the ability to reflect upon learning experiences is being seen as a key skill that doctors should be able to carry out for continuing professional development (GMC 2009). Portfolio reflections can be used in a multitude of ways, including assessment of various components of clinical communication.

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Reflecting upon your own communication abilities can be used as a method of self assessment, with students determining which areas of their own communication require further practice and development. There are issues with the reliability of grading reflective writing relating to communication skills (Rees & Sheard, 2004) which suggest it may be a better method of formative assessment.

Students themselves were ambivalent towards the assessment of their clinical communication reflective piece (Rees & Sheard 2004). Interestingly, students who felt confident in their ability to reflect about their communication skills learning were more positive towards it and tended to receive higher grades for their portfolio.

There is also a question of validity, what is being measured in this example, ability to reflect, ability to reflect on clinical communication learning? It would be interesting to know whether students who reflect well on their communication learning also do well on practical assessment of those skills. Several self assessment rating scales have been developed which could be used in conjunction with reflective writing (Penava & Stanojevic 2002). In one study there was little correlation between students self reported communication skills and examiner ratings (Penava & Stanojevic 2002) questioning the usefulness of self reporting as a method of formative assessment for clinical communication.

Formative assessment and feedback

Summative assessments are used to provide information on an individual's level of performance, either by determining whether they have achieved a minimum standard of competence, by ranking them against others or by providing a measure of their skill level. The purpose of formative assessment is to provide feedback and drive further learning. This difference in use means the outputs from summative and formative assessment methods can be different. Formative assessment is often more useful, particularly in a skills setting, when it provides a profile of the performance of an individual, rather than just a pass/fail or a grade point (Crossley et al., 2002).

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Some methods of summative assessment are also used to provide feedback on performance. For example, the mini-CEX assessment tool has been used to provide feedback after summative assessment has taken place (Norcini et al., 2003), as has the AACS (de Haes et al., 2001). These types of assessment tools often provide both a summary of competence of particular lists of micro-skills (a profile) but also an overall grade or pass/fail recommendation. At the University of Illinois at Chicago (Yudkowsky et al., 2006) the OSCE examinations have 5 minutes set aside after each case or station to provide immediate feedback on performance as well as a summative assessment of competence. Although this innovation would be very useful for students it would add considerably to the complexity and length of the examination itself so should be thought through prior to instigation.

In a qualitative study by Rees et al, undergraduate medical students reported that summative assessments should be viewed as opportunities for

feedback '*What we want is how we can improve and that should be told to everyone who's teaching these things, and especially assessing these things, that you should give feedback*'. They also reported that sometimes feedback was not always given in the most constructive way (Rees et al., 2002). Feedback following summative assessment or via formative assessment should be considered but does require greater resources. It should also be a consideration when selecting the tool used for practical examinations or assessment – could it also be utilised to provide appropriate feedback? If so how, would considerable resources, such as time, be required to provide it for feedback? For postgraduate clinical communication skills performance assessment methods are frequently be[illegible]d for formative assessment. Indeed the 360° performance appraisal was developed for this purpose (Lockyer 2003).

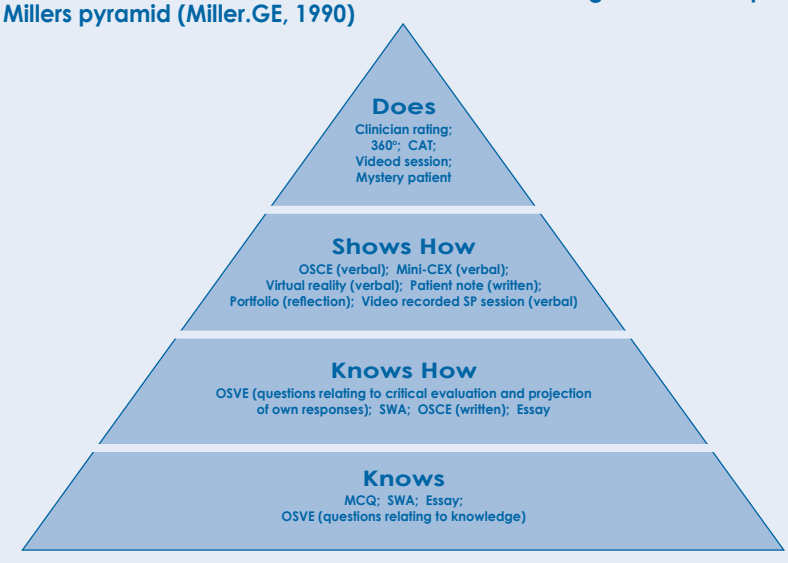
When selecting assessment methods therefore thought should be given to whether it is suitable to provide formative feedback as well as a summative measure of competence. This type of information is useful to both undergraduates and for continuing professional development after graduation.

When selecting assessment methods therefore thought should be given to whether it is suitable to provide formative feedback as well as a summative measure of competence.

For undergraduate medical students, formative assessment early on during their degree programme should be considered. This type of information is useful in two ways. For the undergraduate student it provides an opportunity to reflect on which areas of communication need more work. For the tutors it highlights individuals who are experiencing difficulties with their clinical communication and shows which areas training needs to be targeted towards. Other publications have discussed the merits of v[illegible]us types of feedback (Cantillon & Sargeant 2008; Veloski et al., 2006).

The previous sections describe the plethora of methods that can be used to assess, both summatively and formatively, clinical communication of all types. An overview of this information can be seen in Figure 3, which also presents which components of Millers pyramid of clinical performance each assessment method examines.

FIGURE 3
Methods of clinical communication assessment covering the four components of Millers pyramid (Miller.GE, 1990)



Current issues of debate

When should assessment take place?

Before methods of assessment are selected one further question needs to be asked; When should the assessment of clinical communication skills take place? In the survey of communication assessment in 24 UK medical schools, ten assessed the undergraduate students' clinical communication every year (Raferty & Scowen 2006), either by written or practical means.

Before methods of assessment are selected one further question needs to be asked; When should the assessment of clinical communication skills take place?

Traditionally the UK medical school system was split into preclinical and clinical years with clinical communication becoming relevant (and therefore assessed) in the clinical years. As this divide becomes less obvious and students are in contact with patients, in some schools from the first week, should clinical communication abilities be assessed from first year? If assessment is taken as a driver of learning then, yes, assessment should occur as soon as students are interacting with patients. To ensure students know which areas of clinical communication require further work they need to have been assessed, although this does not need to be summative.

Should assessment occur during every year of an undergraduate degree? Some medical schools are doing this (Deveugele et al., 2005), but it would seem to be an expensive and time consuming effort, especially if practical abilities are assessed such as via an OSCE, so are there advantages? There is evidence from Maastricht that longitudinal communication skills training appears to result in better assessment outcomes (van Dalen et al., 2002a), although even in this study the students were only tested at the end of their fourth and sixth years. It may be that knowledge of future assessment is enough to drive continued communication skills learning through the early years. It is also known that results from several 'cases' are required to ensure a reliable assessment (Guiton et al., 2004). What is not known is whether these cases all need to occur during the same batch of assessment or examination. There is little evidence investigating longitudinal assessment of practical clinical communication and whether that is a useful measure of practical skill level. Ultimately the decision of how often to assess may come down to resources, especially with regard to assessing practical skills. Organising OSCE style examinations every year for large cohorts of students may not be feasible or necessary.

Ultimately the decision of how often to assess may come down to resources, especially with regard to assessing practical skills.

Early assessment may provide useful opportunity for struggling students to be identified and given help. Self reported clinical communication has previously been found to not correlate well with examined skills level (Penava & Stanojevic 2002), so students may not be able to rely on their own reflection. From a tutor point of view without any formative assessment these students may progress to the point of a summative examination with no insight into how they are performing. This would suggest that some kind of early formative assessment of practical skills to highlight areas for concern.

Junior doctors face patients every day but will also be confronted with difficult communication challenges. In England the Department of Health's Guiding Principles for Health Professionals communication skills training (DoH 2003) state that due to the rigors of student assessment '*students on qualifying and gaining registration should not have to undertake further assessment if they have a proven and recognised level of competence*'. This is surprising

given evidence suggesting formal training improves communication skills (and attitudes to psychosocial issues) in practising doctors, although training does not necessitate assessment (Jenkins & Fallowfield 2002).

The balance between adequate assessment to drive learning and the best use of resources is difficult to achieve. To avoid overburdening an individual with large numbers of clinical communication examinations at one time point, longitudinal examination may provide the opportunity to assess performance over time whilst still providing reliable results (Epstein 2007). Multiple methods of assessment may provide a more rounded picture of the overall communication competence of an individual. Studies have shown little correlation between assessment scores of different types of clinical communication examinations, such as theory knowledge, practical verbal competence, performance or written communication (Humphris 2002; Boulet et al., 2004; Nuovo et al., 2006). This shows that communication is multi-faceted and assessment of one aspect will not give a picture of overall competence.

The balance between adequate assessment to drive learning and the best use of resources is difficult to achieve.

A blend of assessment methods throughout undergraduate education and continuing professional development after graduation seems to be the best option to reliably achieve an accurate evaluation of an individual's communicative abilities (increased validity and reliability). As can be seen from Figure 3, examinations testing communication knowledge assesses the 'Knows' domain, aspects of the OSVE test the 'Knows how' domain, OSCEs and mini-CEX (tests of competence) test the 'Shows how' domain whilst observation during clinical practice (tests of performance) assess the 'Does' level (Miller 1990). This means it may not be necessary to examine practical skills in an OSCE type examination every year but an individuals clinical communication skills should be assessed on more than one such station during their undergraduate training for generalisability. Ideally assessment of the other components of Millers pyramid should also take place (Miller, 1990). At a postgraduate level, several measures of performance from different individuals would be most desirable.

Optimal reliability and validity must be balanced against feasibility. What facilities are required and what will the cost of implementing such a programme of assessment be? These are the issues that need to be considered when developing a new programme of assessing clinical communication and when reviewing current practice.

Integrated or separate?

This issue is being widely debated. Should clinical communication be examined in isolation? Or, as it is a component of all interactions with patients, should it be assessed alongside other clinical skills? This debate could be similarly held in the context of teaching clinical communication skills and other clinical skills, but this guide is restricted to the assessment of such skills. In an editorial in the BMJ in 2005 Kidd and colleagues (Kidd et al., 2005) argue that, as in practice, neither skill is carried out in isolation, they should be taught together.

Should clinical communication be examined in isolation?

And, if taught together should these skills be assessed together? Again this may be related to what the assessment is aimed at. Is it designed to determine whether an undergraduate has achieved a minimum level of competence in a particular skill? If that skill is a particular communication task then it may be justifiable to assess it in isolation. This may be particularly useful in the early years of medical training where all clinical skills are reduced to components to enable greater understanding of the skill as a whole (Kidd et al., 2005). But it may not be useful in later training years, at postgraduate level, or where it is performance that is being assessed. This is the argument put forward by Debaene (Debaene 2005) in response to the Kidd et al's editorial. This is indeed the case for the Royal College of General Practitioners in their Clinical Skills Assessment (CSA). They point out that this examination is in fact 'an assessment of a doctor's ability to integrate and apply clinical, professional, communication and practical skills appropriate for general practice'(Royal College of General Practitioners http://www.rcgp-curriculum.org.uk/nmrcgp/csa.aspx). In that assessment the doctors are examined in thirteen 10 minute simulated patient consultations and their abilities graded as Clear Pass, Marginal Pass, Marginal Fail or Clear Fail (Debaene 2005).

If we consider the OSCE style exam, should the clinical communication that accompanies a clinical skill be assessed as a component of it? This then raises further questions as to the practicality of assessing two skills together. How could/should this be done? Would one examiner be able to focus on two skills, could they note whether a venepuncture is being carried out successfully and safely whilst also listening and observing the clinical communication skills of the examinee? If one examiner could not do this would two examiners, one for the clinical skill and one for the clinical communication be acceptable? This solution adds considerably to the logistical complexity and cost of any practical examination. There is no clear answer to this question yet, therefore it is a decision individual schools need to consider and resolve.

For performance, and especially 360d[illegible]essment this question may be answered by who is evaluating. Patients may not be able to assess an individual's skill in carrying out a particular clinical procedure whilst being very well placed to evaluate how they communicate. A colleague however, may be able to assess procedural skills but could not give a participant's evaluation of how someone communicated with patients.

How important should clinical communication assessment be?

How seriously should the results of this assessment be taken? Should a student fail their medical degree because of poor communication skills? Should a doctor be made to seek re-training following complaints about poor communicating abilities or could they be struck off? This is one issue that is currently being debated within the medical and medical education professions.

The GMC believes that clinical communication should be seen as one of the essential skills a doctor should be able to carry out well and that '*Communicate effectively with patients and colleagues in a medical context.. (GMC 2009)*'. The body responsible for evaluating and accrediting medical residency programs in the USA (the Accreditation Council for

Graduate Medical Education) also states that '*Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals (http://www.acgme.org)*'. The GMC also requires its qualified doctors to maintain effective practice (GMC 2006), which means continued quality practice, the driver of which could be assessment or evaluation.

Communication difficulties are associated with a considerable percentage of complaints made against doctors (Halperin 2000; Taylor et al., 2002) and physician scores on the communication element of the Canadian Clinical Skills Exam (CSE) was predictive of complaints made against them over the next 9-12 years (Tamblyn et al., 2007). That study shows that clinical communication assessment can be used to predict individuals who will struggle in the future with their communication unless help is given. Assessment therefore provides a useful tool in identifying those who struggle with communicating so that they can be offered training in this aspect of their profession. It also shows that from a patient perspective clinical communication is an extremely important component of being a competent doctor.

Communication difficulties are associated with a considerable percentage of complaints made against doctors.

But doctors don't just have to be able to communicate with patients. Without clear communication between staff, patient outcomes could suffer (Gittell et al., 2000). Good communication therefore must be with both patients and other Health Professionals.

Only where confidence in the assessment techniques is high can action against those who fail to reach minimum levels of competence be taken (de Haes et al., 2001). Interestingly, in Raferty and Scowens (Raferty & Scowen 2006) survey of communication skills teaching and assessment only in ten of the 24 respondent UK medical schools would a student who repeatedly failed communication skills assessment fail the course and be required to leave. Three other schools suggested that remedial action would be taken with the student and one school stated that students could not fail outright solely on the basis of poor clinical communication. Just how seriously are we taking clinical communication?

Conclusions

The assessment of clinical communication of both undergraduate medical students and postgraduate doctors has achieved greater prominence in the last decade. This greater prominence has resulted in strides being made in the improvement of reliability and validity of the assessment methods. When selecting assessment methods '*what do we want to assess?*' (or indeed, '*what do we not want to assess?*') is the first question that should be asked. The gold standard would be to examine all aspects and components of clinical communication. This however may not be achievable due to time, costs and facilities. More research is required to determine the relationship between the various components of clinical communication but it seems clear that measuring competence 'shows how' is the most closely related to performance 'does'. Priority should therefore be given to the assessment of competence initially.

The assessment of clinical communication of both undergraduate medical students and postgraduate doctors has achieved greater prominence in the last decade. This greater prominence has resulted in strides being made in the improvement of reliability and validity of the assessment methods.

Ensuring individuals acquire a standard level of competence at undergraduate level is often a requirement of such a qualification. But, as has been shown in this Guide, to determine the general communication ability of an individual would require the assessment of other components of Millers pyramid (Miller 1990). This knowledge may be important in understanding an individual's performance, allowing training to be targeted at areas where they experience difficulties.

Resources are key to any decision around assessment, especially the assessment of practical competence which can be both expensive and time consuming for staff. Performance measurement need not be so expensive to record, but may not provide evidence of the achievement of minimum standards of competence in particular skills.

Once methods of assessment have been selected the questions of when and how often examinations should take place need to be asked. There is no simple answer to this either at undergraduate or postgraduate level. It would seem however that self reported clinical communication levels are not correlated with examination results (Penava & Stanojevic 2002) so individuals require feedback on their performance levels early so that they can reflect on which areas they need to focus on for improvement. This would suggest an early formative assessment at least for undergraduates. Again, resources must be considered.

Finally, it is hoped the question of '*how important should clinical communication assessment be?*' will stimulate debate. Should someone fail their medical degree or be struck off if they cannot improve their clinical communication? Do all doctors need to be able to communicate? Are we happy to measure by competence or should we be looking for excellence (particularly for some specialities)? Is the reliability of the assessment process high enough such that we can say that someone is lacking in those skills and cannot improve them?

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