A Blueprint to Assess Professionalism: Results of a Systematic Review

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Abstract

Purpose
Assessing professionalism is hampered by varying definitions and these definitions’ lack of a clear breakdown of the elements of professionalism into aspects that can be measured. Professionalism is multidimensional, so a combination of assessment tools is required. In this study, conducted during 2007–2008, the authors aimed to match assessment tools to definable elements of professionalism and to identify gaps where professionalism elements are not well addressed by existing assessment tools.

Method
The authors conducted literature reviews of definitions of professionalism and of relevant assessment tools, clustered the definitions of professionalism into assessable components, and clustered assessment tools of a similar nature. They then created a “blueprint” whereby the elements of professionalism are matched to relevant assessment tools.

Results
Five clusters of professionalism were formed: adherence to ethical practice principles, effective interactions with patients and with people who are important to those patients, effective interactions with people working within the health system, reliability, and commitment to autonomous maintenance / improvement of competence in oneself, others, and systems. Nine clusters of assessment tools were identified: observed clinical encounters, collated views of coworkers, records of incidents of unprofessionalism, critical incident reports, simulations, paper-based tests, patients’ opinions, global views of supervision, and self-administered rating scales.

Conclusions
Professionalism can be assessed using a combination of observed clinical encounters, multisource feedback, patients’ opinions, paper-based tests or simulations, measures of research and/or teaching activities, and scrutiny of self-assessments compared with assessments by others. Attributes that require more development in their measurement are reflectiveness, advocacy, lifelong learning, dealing with uncertainty, balancing availability to others with care for oneself, and seeking and responding to results of an audit.


We see professionalism as central to the practice of medicine, yet the difficulty of its assessment is nearly as great as the value we place on it. Progress in assessing knowledge and skills has seen a move to authentic assessments that better match the expectations of doing the job. This progress has further highlighted the need to strengthen our assessment of professionalism. Yet, professionalism as a concept can be difficult to pin down.¹

There is universal acceptance that it is important, and most people agree when they see that it is missing, yet definitions range broadly.²,³ For some, it may be seen as a unidimensional entity and it is simply called “professionalism”; for others, it has become so broad as to encompass everything a doctor needs to do to undertake his or her job. Most agree than a core component of professionalism is a commitment on the part of the individual practitioner to self-monitor⁴–¹⁰ and improve.¹¹

The need to measure professionalism better is further highlighted because it is under threat. For example, external regulation may undermine intrinsic motivation to improve. Also, shorter working hours mean that some doctors may find it harder to develop an enduring commitment and sense of accountability. Finally, financial incentives and disincentives can compete with personal, moral, and ethical responsibilities.

There have been attempts to develop a number of new assessment tools that try to grasp the essence of, or at least a component of, professionalism. For example, many medical workplaces are now using multisource feedback as an assessment tool. This fills an important gap, yet there is now the trap that some may view the sole use of multisource feedback as being synonymous with providing a comprehensive assessment of an individual’s professionalism.

In view of the broad range of definitions of professionalism, alongside the development of a number of new assessment tools, we saw the need to try to draw together some of the threads from both these areas, a research agenda that has been strongly endorsed elsewhere.¹² What might a more programmatic approach to the assessment of an individual practitioner’s professionalism look like? To answer this, we needed to assimilate the various definitions of professionalism, collate the assessment tools that would be useful, and map those tools to the elements of

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A programmatic approach is likely to be needed whereby multiple snapshots of an individual’s professionalism can be taken and then collated into a whole to develop a clear picture of that person’s strengths and weaknesses and to provide a body of evidence on which to base summative decisions.18

This study had four aims:

- To synthesize the various definitions and interpretations of professionalism
- To describe a toolbox of possible assessment methods
- To produce a blueprint that matches assessment tools to the identified elements of professionalism
- To identify gaps where professionalism elements are not well matched by assessment tools

**Method**

We carried out this study during 2007–2008 in five stages: (1) a literature review of definitions of professionalism, (2) a thematic analysis of the definitions of professionalism, (3) a literature review of tools to assess elements of professionalism, (4) creation of a blueprint whereby the elements of professionalism are matched to relevant assessment tools, and (5) identification of assessment gaps.

In undertaking the literature review to identify definitions of professionalism, we were particularly interested in building on the work of van de Camp et al.10 who undertook a similar literature review and thematic analysis in 2004, but we also concentrated on studies that used a systematic process to develop consensus statements or to reach a shared understanding of a definition. The initial search was conducted within the Medline (1996–2007) database and was significantly supplemented by checking references for additional publications, enabling us to incorporate seminal work such as the Medical Professionalism Charter,14 Royal College statements,11 and the General Medical Council’s statement of good medical practice.15 In excess of 50 articles were identified, although more than 20 were rejected through their duplication of existing concepts or definitions.

Each of us undertook a thematic analysis of the definitions of professionalism by identifying the key elements from each definition. We then discussed any areas of difference and agreed on consensus elements and themes. We clustered those elements by taking account of two aims: to cluster them into similar attributes and to cluster them into themes that might use similar assessment techniques. From this, we aimed to develop a working definition of professionalism that captured all the relevant aspects. Alongside this was the need to clarify the behavioral manifestations of some key elements if the definitions were unclear.

We used those elements as the foundation for an expanded literature review to identify examples of relevant assessment tools. We searched for terms including the elements themselves (e.g., “teamwork,” “reliability”) combined with variations describing the tool, such as “instrument” and “examination” as well as terms including “assess,” “evaluate,” “measure,” and their derivatives (e.g., “assessment,” “evaluation,” and “measurement”). The search was originally conducted within Medline and was expanded through manually checking bibliographical references for further publications. We concentrated particularly on articles published since 2002 to build on the work undertaken by Lynch et al.19 We were especially interested in identifying tools that could be used as part of a summative process—that is, tools that, when combined with other tools, might be sufficiently robust to inform summative decisions. This meant discarding many interesting but less relevant ideas on how professionalism could be taught or learned. We undertook a similar, but simpler, thematic analysis of these identified assessment tools and thereby clustered each tool into those of a similar nature that seemed to assess similar attributes.

We then created a blueprint whereby we matched the attributes of professionalism to the assessment tools.

Finally, we identified the gaps where activities did not have an existing assessment tool or where a single tool may not fully assess an attribute adequately.

**Results**

**Defining professionalism**

A classification of the themes arising from definitions or interpretations of professionalism, mapped against the relevant references, is offered in Table 1.
Some terms arose that required clarification. The first was “self-regulation,” which is widely accepted as an integral component of a profession. Self-regulation of a profession has implications beyond self-regulation at an individual level. At the level of the individual, which is the focus of this report, we believe the term “self-regulation” to be insufficiently explicit because it could be interpreted as meaning preserving the status quo. Instead, we have chosen the term “commitment to autonomous maintenance and continuous improvement of competence.” We have further expanded this concept to include oneself, others, and the systems in which one works.

The second term was “altruism,” which was sometimes inferred as meaning subjugating oneself for others, yet this contrasted with maintaining a healthy work–life balance. We have therefore adopted the concept, “Balance availability to others with care for oneself.” This concept arose in relation to patients but also in relation to colleagues, so we have placed it within each of the two themes that focus on patients and on colleagues, respectively. The third term was “maturity,” which was mentioned in two articles. We found this difficult to define and were not convinced it could be classified into a separate, assessable entity on its own. Fourth, professionalism has its own underpinning base of knowledge that can be assessed with traditional knowledge tests, such as multiple-choice questions. Predominantly, however, professionalism is about what someone does, rather than what he or she knows. In developing a blueprint, we did not wish to ignore the underpinning knowledge base but, instead, wished to place our emphasis higher on Miller’s pyramid; that is, toward “maturity” and away from just “knowing.” Finally, some definitions include ensuring that a patient’s family are well informed. The concept of family has different meanings for different people, so we preferred the phrase “people who are important to the patient.”

Nearly all definitions of professionalism included some element of reflectiveness and/or self-monitoring. The purpose of this is to improve one’s competence. We therefore decided that these elements should be placed within the theme of improving competence in oneself.

### Identification of assessment tools

These clustered into groupings according to their use. Table 2 shows examples of tools within each grouping. We explain the groupings below.
Table 2
Examples of Tools That Assess Elements of Professionalism, Found in the References Indicated and Grouped According to the Tools’ Uses*  

<table>
<thead>
<tr>
<th>Tool use</th>
<th>Examples of tools</th>
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</table>
| Assessment of an observed clinical encounter | • Mini-Clinical Evaluation Exercise (mini-CEX)23–26  
• Professionalism Mini-Evaluation Exercise27  
• Ophthalmic clinical evaluation exercise58  
• Standardised Direct Observation assessment Tool59 |
| Collated views of coworkers                 | • Multisource feedback26–32,34,60–62                                               |
| Record of incidents of unprofessionalism    | • Incident reporting form63                                                        |
| Critical incident report                    | • Critical incident report57                                                       |
| Simulation                                  | • Ethical dilemmas in high-fidelity patient simulations64  
• OSCE41,65                                      |
| Paper-based test                            | • Defining issues test56  
• Objective Structured Video Examinations42  
• Critical incident report58  
• Multiple-choice test21 |
| Patient opinion                             | • FACE cards67  
• Wake Forest Physician Trust Scheme68  
• Patient assessment questionnaire (PAQ)69  
• Simulated patient rating scales70,71  
• Humanism scale56  
• Royal College of Physicians Patient Questionnaire46 |
| Global view of supervisor                   | • Global rating form72  
• University of Michigan Department of Surgery Professionalism Assessment Instrument73  
• Evaluation of professional behaviour in general practice (EPRO-GP)74  
• Amsterdam attitudes and communication scale75–77 |
| Self-administered rating scale              | • Time Management Inquiry Form78  
• Pharmacy Professionalism Instrument76  
• Groningen Reflection Ability Scale53  
• Cross-cultural adaptability inventory80  
• Cultural competence self-assessment questionnaire81  
• Interpersonal Reactivity Index20  
• Penn State College of Medicine Professionalism Questionnaire82 |
| Tool use                                    | • Cultural competence self-assessment questionnaire81  
• Interpersonal Reactivity Index20  
• Penn State College of Medicine Professionalism Questionnaire82 |

* The authors used the elements of professionalism identified in an earlier literature review as the foundation for an expanded literature review to identify examples of relevant assessment tools. The search was originally conducted within MEDLINE, concentrating on articles published since 2002, and expanded through manually checking bibliographical references for further publications.

Assessment of an observed clinical encounter. The mini-CEX is an example of this type of assessment tool.23–26 This tool is used to assess a 15- to 30-minute observed snapshot of a doctor/patient interaction that is conducted within actual patient-care settings using real patients and that has a structured marking sheet that covers predefined generic areas. Validity derives from using authentic interactions, and reliability is achieved by ensuring aggregation of multiple assessments and multiple assessors. Standardization between sites can be achieved with examiner training and by collating scores from several encounters. The original mini-CEX asks for assessment of professionalism as a single global entity. Modifications to this have been made to look at specific aspects of professionalism through the development of the Professionalism Mini-Evaluation Exercise (P-MEX),27 which can assess four discrete areas: doctor–patient relationship skills, reflective skills, time management, and interprofessional relationship skills.

Collated views of coworkers. This is usually achieved through multisource feedback (MSF), which is the systematic collection and feedback of data on an individual’s performance, acquired from a number of stakeholders. In the past, this has sometimes been referred to as 360-degree assessment.24–28–34 Typically, the person being assessed nominates 10 to 20 assessors who collectively can comment on the specified range of that person’s abilities. The assessors may include supervising consultants, registrars, nurses, allied health professionals, and clerical staff. MSF can be used to assess actual behaviors within the workplace that are difficult to assess within formal assessment conditions. It can be used to assess skills and behaviors that can sometimes be concealed within a formal assessment.

Record of incidents of unprofessionalism. This is used on an “as-required” basis whereby an observed incident of unprofessional behavior can be reported and collated centrally. An overview group would look at the reports to determine whether a pattern of behavior is apparent and/or whether further action is needed.35,36

Critical incident report. This method asks the doctor to reflect on a critical incident he or she has experienced or witnessed.37–39 Because the incident is self-identified, it contrasts with a record of an incident of unprofessionalism described above. It can encourage reflection and attention to elements of professionalism, but it is dependent on the type of incident to determine which aspect of professionalism is being assessed.

Simulation. Simulations are contrived scenarios that resemble real-life situations but that usually use models or simulated patients.33,40 Sometimes, these can be incorporated within an objective structured clinical examination (OSCE).33 Simulations can be used to assess rare or unpredictable situations or to standardize assessment of higher-order communication skills. Because they are conducted within an artificial context, this can reduce validity, although many “high-fidelity” simulations can be very realistic. They can be useful in assessing how well someone works under pressure. Single simulations, like single OSCE stations,41 can be unreliable.

Paper-based test. This requires provision of a scenario, such as an ethical dilemma
or video encounter, and a series of questions to be answered. It can test underlying knowledge of some principles of professionalism, moral reasoning or decision making, and what should be done, but it cannot assess what a candidate actually might do in practice.

Patients’ opinions. This is usually obtained by collating questionnaire-based opinions of patients about the nominated person’s abilities in specified areas. It can be used to assess actual behaviors within the workplace that are difficult to assess within formal assessment conditions. It is a direct survey of the key stakeholders of a health service. However, as discussed later, some patient populations can be more critical than others, so interpretation of results should be in conjunction with other assessments and with an understanding of the population that has been surveyed.

Global view of supervisor. This is a summary view, usually by a supervisor, reported on a form with predefined criteria. The criteria help to define the areas of importance, but the tendency for them to be used as views of single observers at single points in time can make them unreliable and difficult to defend, despite demonstrations of internal consistency. However, such a summary can be useful if it is used repeatedly over time and if it draws on the evidence derived from other assessments. If multiple raters are used and the results are collated, then it functions like multisource feedback. We have therefore taken the view that it is not an assessment instrument in itself but more a means to report a summary of assessments. For these reasons, we have not included this in our blueprint as an assessment tool, but we acknowledge that it can have an important role in a programmatic assessment process.

Self-administered rating scale. This is a questionnaire-based tool that an individual uses to assess his or her personal attributes or attitudes. It can aid reflection, but it has limited use in summative assessments, because it cannot assess what a person actually does.

Assessment blueprint

The overall blueprint is shown in Table 3. Note that critical incident report is not on the blueprint, because the areas it maps against would be individual and idiosyncratic. If we take the view that the best assessments are ones of direct observation of the behaviors of interest, then the mini-CEX, and particularly the P-MEX, would be core components of an assessment program. Some behaviors can be concealed if a person knows that he or she is being directly observed, so the collated views of coworkers (MSF) and of patients (patient opinion surveys) become complementary sources of information. Moral reasoning could be assessed by a simulation or, more efficiently, by a paper-based scenario. The gaps, or remaining attributes that would not be well assessed using these methods alone, are

- Reflectiveness/self-assessment
- Lifelong learning
- Dealing with uncertainty
- Advocacy
- Balance availability to others with care for oneself
- Seek and respond to results of an audit
- Advancing knowledge

Discussion

In this study, we attempted to clarify the elements of professionalism and to cluster them into assessable components. This process has confirmed that professionalism is multifaceted, and therefore a person could be excellent in one aspect and deficient in another. Furthermore, the assessment blueprint demonstrates how no single tool is able to measure effectively a person’s professionalism as a whole and that several tools will be required.

The themes of professionalism that we have chosen are not the only way the cake could be cut, but we have attempted to synthesize the range of definitions and themes used by others into a unified whole. Over time, we anticipate that this classification could be challenged or refined. However, in the meantime, there is a pressing need to align these themes with assessment instruments.

The blueprint demonstrates that direct observations (through the mini-CEX and P-MEX) and collated views (through MSF and patients’ opinions) are crucial elements because they capture many aspects in reliable, valid, and feasible ways. Medicine has, at times, been rather defensive about using patients’ opinions as a measure of anything, arguing that external factors might have a significant impact on how a patient views his or her doctor. Doctors, for example, do not and should not always acquiesce to patients’ demands, yet failure to do so could result in unfavorable ratings from that patient. The message and the messenger can sometimes be confused so that doctors might receive poor ratings if the messages they bring are unpleasant. In contrast, patients are the reason for our profession to exist, are the most important stakeholders, and appreciate having their views heard. Just as any instrument in isolation cannot measure a doctor’s professionalism, so too can patients’ opinions be misleading if taken on their own. However, patients’ opinions do complement other sources of information, and the blueprint shows they fill an important gap.

Portfolios have often been suggested as a means to assess professionalism. The function of a portfolio is to collate data from a variety of sources to form a body of evidence. Its value is therefore dependent on the contributing data. If the data are restricted to only a few elements of professionalism, then an incomplete picture will be formed. Furthermore, it acknowledges that the evidence will require a combination of global judgments alongside more structured instruments. Both approaches are reliable, provided data from sufficient numbers of observations and observers are aggregated. This reinforces the need for a systematic collection of evidence based on a blueprint, such as we have produced. Nevertheless, the whole of professionalism is more than the sum of the parts, and there is a need to be able to take an overview of all elements. We therefore see the portfolio as having an important role in collating evidence, but not as the source of that evidence. In itself, however, it is not an assessment tool of self-assessment or reflection. It therefore has a second important role in a person’s professional development by providing an opportunity to self-assess, reflect on the contents of the portfolio, and improve.

This leaves some important elements that are not easily assessed using mini-CEX, P-MEX, MSF, patients’ opinions, paper-
### Table 3
Professionalism Assessment Blueprint*

<table>
<thead>
<tr>
<th>Theme and subthemes</th>
<th>Assessment of an observed clinical encounter</th>
<th>Collated views of coworkers</th>
<th>Record of incidents of unprofessionalism</th>
<th>Simulation</th>
<th>Paper-based test</th>
<th>Patient opinion</th>
<th>Self-administered rating scale</th>
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<tbody>
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<td><strong>Adherence to ethical practice principles</strong></td>
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<td>● Confidentiality</td>
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<td>● Moral reasoning</td>
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<td>● Respect privileges and codes of conduct</td>
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<td><strong>Effective interactions with patients and with people who are important to those patients</strong></td>
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<td>● Respect for diversity / uniqueness</td>
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<td>● Empathy / caring / compassion / caring / rapport</td>
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<td>● Involve patients in decision making</td>
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<td>● Maintain professional boundaries</td>
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<td>● Balance availability to others with care for oneself</td>
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<td><strong>Effective interactions with other people working within the health system</strong></td>
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<td>● Teamwork</td>
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<td>● Accountability / complete tasks</td>
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<td>● Punctuality / time management / organization</td>
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<td><strong>Commitment to autonomous maintenance and continuous improvement of competence in:</strong></td>
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<td>● Seek and respond to feedback. Respond to error. Recognize limits.</td>
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<td>● Lifelong learning</td>
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<td>● Deal with uncertainty</td>
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<td>● Others</td>
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<td>● Provide feedback / teaching</td>
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<td>● Leadership</td>
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*The authors created this “blueprint” to show the match of the elements of professionalism (the themes and subthemes) with the relevant assessment tools (named in the columns’ headings) that they identified. See Tables 1 and 2 for more information about the elements and tools.
based tests, or simulations (listed at the end of the previous section). However, insight could be assessed by asking a person to complete a mini-CEX, P-MEX, or MSF form about himself or herself and by comparing that score with the scores of others. Used in this way, a measure of insight could be gained by noting any areas of discrepancy. Reflection is an element within the P-MEX, but this is only around isolated events, so there may be a need to adapt existing tools or develop additional measures of reflection. A person’s ability to advance knowledge could be assessed by documenting publications, presentations, research, or teaching activities.

The remaining attributes are less amenable to assessment with existing discrete tools but could be assessed with new tools or through appropriate assessment processes. For example, reflectiveness, advocacy, lifelong learning, dealing with uncertainty, balancing availability to others with care for oneself, and seeking and responding to results of an audit could be the foci of discussions with a supervisor or colleague. As such, the commitment to looking at these areas could be assessed, but it is less clear whether the attributes themselves could be accurately assessed. Although these processes would gather useful information on these attributes, these areas should also be high priorities for the development of novel assessment methods.

The strength of the blueprint that we developed is the multifaceted approach taken to this problem, by drawing together the varying definitions and measures of professionalism. The main limitation, however, is related to this, as the classifications we have chosen could be refined or debated. We acknowledge that a variety of classifications could be used, but we would argue that the mix of tools that should be used and developed is unlikely to be altered by such reclassifications.

We conclude that professionalism can be assessed using a combination of mini-CEX, P-MEX, MSF, patients’ opinions, paper-based tests, simulations, measures of research and/or teaching activities, and scrutiny of self-assessments compared with assessments by others. A portfolio is a useful means to support such a program of assessment. Attributes that require more development in their measurement are reflectiveness, advocacy, lifelong learning, dealing with uncertainty, balancing availability to others with care for oneself, and seeking and responding to results of an audit. These attributes should be the focus of development of tools and/or processes. The few tools that do exist need to be adapted.

References
35. Ainsworth MA, Szauter KM. Medical student professionalism: Are we measuring the right behaviors? A comparison of professional.