

# Designing an assessment tool for professional attributes of medical graduates from a new medical school in Nepal

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## Abstract

**Introduction:** Patan Academy of Health Sciences (PAHS) is a new medical school that specialises in specifically training doctors for service in the rural areas of Nepal. The trainee doctors' values are consistent with sustainable improvements in the health of poor and marginalized people. This new faculty is engaged in a collaborative exercise to define professional attributes that are required of new graduates and to design a simple assessment tool to measure themselves.

**Background:** Professionalism is an increasingly important topic in medical education today and a number of studies have described ways of defining and measuring professional attributes in Western medical graduates. No such studies can be found in any Asian medical schools.

**Methods:** An initial faculty-wide consultation meeting in 2007 produced a list of 29 attributes for PAHS graduates. In 2008, the newly formed Medical Education Unit was given the task of refining them into a workable list that could be realistically assessed. This produced a list of 12 attributes together with their operational definitions.

**Results:** The definitions of required attributes together with the presence or absence of their corresponding behaviour would be indicated in a simple table that could be used in a wide variety of educational settings.

**Discussion:** The final assessment document requires only a 'meets expectations' or 'below expectations' tick from the tutor across 11 attributes. The efficacy and practical value of this tool will only be determined with use, and further research to determine how effective it is.

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## Introduction

The Patan Academy of Health Sciences is a new medical school in Nepal. Currently, it is in the preparatory phase for the intake of students for 2009. It is based at Patan Hospital, Kathmandu, a 450 bed District hospital. The hospital provides compassionate healthcare to everyone who comes to it regardless of their financial ability to pay. The hospital serves people from every District of Nepal, from the remote villages as well as from the Kathmandu valley.

It is one of the largest hospitals in Nepal and has modern equipment and facilities to provide treatment for almost 320,000 outpatients and 20,000 inpatients every year. The Patan Hospital conducts more than 10,000 surgical operations annually.

The Patan Academy of Health Sciences is dedicated to improve the health of the people of Nepal, especially those who are poor and living in rural areas, through innovation, equality, excellence and compassion in education, service and research. It aims to work in collaboration with the National Health System (NHS) to contribute to the improvement of the health status of the people in Nepal, and proactively encourage the national government in the development of appropriate health policies, programmes and systems to uplift the health of the rural poor. To do this, it plans to enable deserving students from the underprivileged sectors of

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Nepali society to access health science education, starting with medical education, and eventually nursing and other allied health science education.

The goals differ considerably from those of the majority of medical schools in Nepal that tend to focus primarily on clinical competence only. Because of this, the faculty members conducted a collaborative exercise to define all other professional attributes that they wished graduates from PAHS to have at the end of their training. This paper describes the process and outcomes of that exercise and the assessment tool that will be used to determine whether the students are demonstrating the required professional attributes that are consistent with the goals and mission of PAHS.

## Background

Professionalism is an important topic in medical education today. While much work has been focused on defining professionalism and teaching medical students the appropriate interpersonal behaviours, relatively little research has looked at meaningful ways of assessing the relevant attributes. Van Zanten *et al.* (2005) used a standardised patient assessment to explore the attributes of medical graduates in the USA and found it reliable in some domains. Fontaine and Wilkinson (2003) in New Zealand developed an instrument following a survey of professional attributes of concern displayed by medical students. This was followed by development and validation, amongst medical faculty staff and students, of the instrument and its supporting process. Evaluation was by recording participation rates of staff and determining the consistency of the instrument across dimensions and clerkships. The process was able to detect students' concern and provide effective remediation and ongoing monitoring (Fontaine & Wilkinson, 2003). Clark (1994) conducted a retrospective survey of graduates of Kings College in the UK using a questionnaire designed to assess their perceptions on how well prepared they were in terms of knowledge, skills and professional attributes by their education, and used the results to assist in designing a new curriculum.

Later a postal questionnaire was sent to five cohorts of doctors who had previously qualified from Kings, asking them if they thought they had acquired the defined attributes of doctors that the medical school wished to produce. The results revealed

significant gender differences (Clark & Head, 1999). Cruess *et al.* (2006) in Canada developed a Professionalism Mini-Evaluation Exercise (P-MEX) using the mini-Clinical Examination Exercise (mini-CEX) format. From a set of 142 observable behaviours reflective of professionalism identified at a workshop, 24 were converted into an evaluation instrument modeled on the mini-CEX. This instrument, designed for use in multiple settings, was tested on clinical clerks in medicine, surgery, obstetrics and gynaecology, psychiatry, and paediatrics. This preliminary study suggested that the P-MEX is a feasible format for evaluating professionalism in clinical training. A search of *Medline* revealed no similar studies from any Asian medical schools.

## Methods

In April 2007 a meeting of 20 - 30 prospective faculty members of PAHS was convened in order to define the desirable attributes of PAHS graduates. Brain storming by this group produced a list of 29 attributes (Table 1) together with their operational definitions (that is, observable behaviours of the presence of the attribute).

Subsequently in September 2008, the newly formed Medical Education Unit of PAHS was given the task of collating these attributes and designing an assessment instrument that could be realistically used by many faculty members in a variety of educational settings to assess the presence or absence of the attributes in students. The twenty-nine attributes were integrated to produce a list of twelve attributes together with their operational definitions (Table 2). The numbers of the original attributes were recorded with the new combined attribute statements. This was conducted by means of a number of small group discussions, the number of people in the Medical Education Unit at the time being six.

## Results

The revised attributes were widely circulated among faculty members and international advisors for comments, but other than minor changes of wording no substantive changes were made. Afterwards, the Medical Education Unit designed an assessment tool that could be used in a variety of educational settings by faculty members to record the presence or absence of evidence of the various attributes in students.

*Table 1: 29 Attributes of PAHS Graduates (with operational definitions)*

1. **Knowledge of own limitations** = Seeking timely help when needed.
2. **Communication** = Ability to listen and explain concepts and situations appropriately.
3. **Commitment to serve in remote / rural areas** = Commitment to go and discharge expected professional responsibilities enthusiastically for a specified period of time in areas with challenging environments.
4. **Respect for patients' rights and dignity** = Willingness to respect patients' rights and dignity.
5. **Commitment to people's empowerment** = Willingness to make people aware of their rights and responsibilities.
6. **Awareness of social / cultural aspects of patients** = Acknowledgement of and respect for different social and cultural backgrounds.
7. **Awareness of patients' economic backgrounds** = Commitment to use cost-effective approaches in providing health care services.
8. **Team spirit** = Ability to work synergistically to accomplish a common goal.
9. **Benefit larger community while dealing with individual patients** = Taking a broader perspective and understanding the connection to community health while dealing with individual patients.
10. **Sound knowledge** = Core medical knowledge (biomedical + psychosocial) relevant to the practice of medicine in Nepal.
11. **Up to date with recent advances in the relevant professional field.**
12. **Technical competence** = Ability to apply knowledge appropriately.
13. **Innovation** = Ability to come up with new, practical ideas to deal with challenges.
14. **Critical appraisal** = Ability and willingness to question dogma, to evaluate the evidence, and act accordingly.
15. **Good educator** = Ability to facilitate learning and personal growth.
16. **Decision maker** = Ability and willingness to make appropriate decisions and act on them.
17. **Well organized** = Ability to use resources (e.g. time, money, equipment, and people) efficiently.
18. **Leadership** = Ability to make a group work together in setting and achieving common goals by effective mobilization of resources.
19. **Professionalism** = Maintaining professional values, and keeping society's interests above one's own.
20. **Compassion** = Willingness to help others, out of concern and kindness.
21. **Empathy** = Capacity to feel and act to ease the suffering of others.
22. **Willingness to serve disadvantaged / underserved populations** = Willingness to serve and improve the health and well-being of disadvantaged and underserved populations.
23. **Social responsibility** = Commitment to deal with social determinants of health and well-being.
24. **Life long learners** = Commitment to life long learning.
25. **Scientific approach** = A rational, objective, and evidence-based approach to problems and situations.
26. **Research oriented** = Willingness to go beyond rote learning and engage in research.
27. **Sensitivity and tact** = Capacity to understand people's feelings and act with consideration.
28. **Nonjudgmental** = Ability to act without prejudice and be impartial.
29. **Being a good human being** = Besides being a good health professional, being a good citizen.

**Table 2: Attributes of PAHS graduates (revised) – with operational definitions**

The PAHS Graduate will demonstrate all of the following attributes:

1. Compassion and empathy to their patients at all times. (20, 21, 27)
  - a. Demonstrates concern for patients and colleagues.
2. Good communication skills – listens, explains concepts clearly. (2)
3. Commitment to serve the disadvantaged, particularly those in remote, rural areas. (3, 22)
  - a. Demonstrates enthusiasm for serving in rural areas.
  - b. Relates well to local people.
4. Awareness of socio-economic and cultural issues. (6, 7)
  - a. Uses cost effective approaches in investigation and management decisions.
  - b. Takes into account the patients financial and social issues.
  - c. Demonstrates respect for patient's cultural and religious beliefs.
5. Awareness of community health needs and social determinants of health. (9, 23, 5)
  - a. Identifies and explains social determinants of health using a public/community perspective.
  - b. Demonstrates active involvement with the local community to help address their own health needs.
6. Professionalism (4, 15, 19, 28, 29)
  - a. Respects patients rights and dignity.
  - b. Acts without prejudice.
  - c. Puts societal/patient needs before one's own.
  - d. Takes responsibility for the education of other health workers.
  - e. Takes responsibility for own ongoing education.
  - f. Demonstrates meticulous and dedicated approach to work.
  - g. Demonstrates integrity.
7. Leadership and team spirit (8, 18)
  - a. Works well in a team to accomplish a common goal.
  - b. Uses resources (time, money, equipment and people) efficiently.
  - c. Able to make appropriate decisions and act on them.
8. Clinically competent (10, 11, 12)
  - a. Has sound core medical knowledge.
  - b. Up to date with recent advances.
  - c. Applies knowledge appropriately.
9. Critical thinking
  - a. Asks critical questions.
  - b. Evaluates the evidence and acts accordingly.
10. Life long learning (14, 24, 25, 1)
  - a. Is aware of own limitations.
  - b. Seeks help when needed.
  - c. Demonstrates a continuing desire to learn.
  - d. Utilizes available learning opportunities.
11. Innovation (13)
  - a. Comes up with new, practical ideas.
  - b. Meet challenges
12. Commitment to research (26)
  - a. Engages actively in research to address healthcare needs of Nepal.

It was considered important that this be short, simple and easy to use. The twelfth attribute on the list (commitment to research) was not included because it was considered it was unlikely to be realistically assessed during the

undergraduate training period. The assessment tool is displayed (Table 3). Unfortunately no pre-testing of the reliability and validity of the tool was possible.

**Table 3: Assessment form for PAHS Attributes – for use in clinical attachments, PBL and community placements**

<b>B – below expectations</b>	<b>M – meets expectations</b>
<b>Attribute 1 – Demonstrates compassion and empathy to their patients at all times</b>	
Rude to patients or colleagues. Ignores others contributions. Displays arrogance.	Shows sensitivity and respect for fellow students and patients. Tries to help others. Demonstrates concern.
<b>Attribute 2 – Good communication skills</b>	
Doesn't listen. Doesn't explain concepts or general facts clearly. Unwilling or unable to attend to verbal and non-verbal behaviours.	Actively listens to patients and colleagues. Explains concepts clearly. Recognizes and acts upon verbal and non-verbal behaviours. Avoids interrupting others.
<b>Attribute 4 – Awareness of socio-economic and cultural issues</b>	
Shows lack of respect and sensitivity for viewpoints and feelings of others including racial, social and gender issues. Persistently ignores financial constraints of patients.	Uses cost effective approaches in investigation and management decisions, taking into account the patients financial and social issues. Demonstrates respect for patient's cultural and religious beliefs
<b>Attribute 6 – Demonstrates professionalism</b>	
Fails to respects patients rights and dignity. Acts with prejudice because of race or gender. Fails to put societal/patient needs before his own (when there is opportunity to serve). Makes no effort to teach others and doesn't pursue his own ongoing education. Demonstrates a sloppy, lazy attitude to work.	Respects patients rights and dignity,. Acts without prejudice. Puts societal/patient needs before one's own. Takes responsibility for the education of other health workers. Takes responsibility for own ongoing education. Demonstrates meticulous and dedicated approach to work. Demonstrates integrity.
<b>Attribute 7 – Demonstrates leadership and team spirit</b>	
Reluctant to take on work. Doesn't stimulate group learning and discussion. Doesn't actively participate in discussion or dominates discussion.	Works well in a team to accomplish a common goal. Contributes to group learning, involving quieter members of the group without dominating discussion. Uses resources (time, money, equipment and people) efficiently. Prepares appropriately and presents effectively. Able to make appropriate decisions and act on them.
<b>Attribute 8 – Demonstrates clinical competence</b>	
Lacks sound basic clinical knowledge and/or skills. Does not make efforts to correct mistakes or improve knowledge and skills. Does not apply knowledge appropriately.	Shows sound core medical knowledge, up to date with recent advances, applies knowledge appropriately.
<b>Attribute 9 – Demonstrates critical thinking</b>	
Consistent difficulty identifying problems or applying knowledge to PBL cases or to patients. Doesn't critically appraise new knowledge. Conclusions are illogical.	Able to formulate hypotheses, synthesize information and apply to patient problems. Asks critical questions, evaluates the evidence in current literature and uses these skills to guide judgments.
<b>Attribute 10 – Demonstrates life long learning skills</b>	
Has difficulty accepting feedback from peers or mentors. Doesn't accept responsibility for own learning. Needs to recognize limits of his/her abilities.	Accepts responsibility for own learning. Able to recognize own weaknesses and strengths. Able to accept feedback constructively and responds appropriately to suggestions for improvement.
<b>Attribute 11 – Demonstrates innovation</b>	
Doesn't generate new ideas. Relies on others to solve problems.	Comes up with new, practical ideas to meet challenges.

Did you observe anything the student did particularly well? Please comment below.

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Did you observe anything the student did particularly not well? Please comment below

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## Discussion

The result of this process is a single A4 sheet with clearly defined observable behaviours listed under various categories of professional attributes. It requires tutors to note whether or not the student behaviours were or were not according to each category listed (i.e. a simple pass/fail decision with the desirable behaviours listed to minimise subjectivity). Additional space for optional comments was deliberately kept to a minimum since this tool is intended to be user friendly and to minimise the burden on busy tutors. Its generic nature enables it to be used in a wide variety of educational settings, and the intention is that it can be used in PBL groups, during ward-based teaching and in the community setting, thus gaining a wide picture of each student's behaviour and attitudes across different domains during their undergraduate training.

The tool has (unsurprisingly) a number of points which overlap with similar instruments used by Western medical schools (Van Zanten *et al.*, 2005; Fontaine & Wilkinson, 2003). The author was unable to find any similar tools developed in an Asian context.

The efficacy and practical value of the tool will become apparent when it is used, and further research conducted. A limitation of this paper is that it is unable to give any evidence of the usefulness of this tool in practice. However, the process of defining desired attributes and designing this tool has been a valuable one for the PAHS faculty members, and is believed to

be the first of its kind in a South Asian context. One advantage of this paper is it describes the process and makes the tool available in South Asia.

**Conflict of Interest:** Dr Morgan was involved in the development of the assessment tool.

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**Ethical Approval:** Not applicable

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