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## Healthcare Professional Education: 10 important things for the next decade

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### Abstract

Healthcare related education is a life-long process and the continuum extends from undergraduate to postgraduate and continuing professional education. With the time span stretching so long, it becomes inevitable that there will be evolutionary changes, progress and development in many aspects of the education. Healthcare related education evolution is based on changes in thinking, thought leadership and best evidence of the current times. It is complex and encompasses a multitude of subjects, didactic knowledge and practical skills, which all need to be integrated into a wholesome package for understanding (cognitive and procedural). It is optimal for the learners to be able to analyse, integrate and apply appropriately.

This paper focuses on 10 essential elements which will feature prominently in the area of medical/healthcare education during the next decade. It also discusses how to integrate them into the life of healthcare personnel to ensure their education is versatile, up to date, resilient and represents the best strategy to educate minds.

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### Introduction

Healthcare related education is a life-long process. The continuum extends from undergraduate to postgraduate and continuing professional development and education. With the time span stretching so long, it becomes inevitable that there will be evolutionary changes, progress and development in many aspects of the education. The evolution in healthcare related education is based on changes in thinking, thought leadership and best evidence of the current times. It is complex and encompasses a multitude of subjects, didactic knowledge and practical skills, which need to be integrated into a wholesome package for understanding (cognitive and procedural). It is optimal for learners to be able to analyse, integrate and apply appropriately

It is thus necessary for us to broaden our mindsets, understand and evaluate these in order to adapt ourselves to evidence-based practices, combining elements of clinical practice, teaching and research on a practical basis. The need to adapt is even more crucial as healthcare professionals today need to meet the higher expectations of patients, the public, students and the younger generation professionals.

Healthcare professional education today must emphasize on authentic learning, which focuses on complex, real world problems and their solutions, using modelling, role-playing, problem-based learning, case-studies and even participation in virtual community practices.

The ten areas which I feel are important for healthcare professional educators to focus on in the next decade include:

1. simulation-based learning
2. team-based learning
3. practice-based learning and reflective practice
4. evidence-based practice
5. communications
6. professionalism and ethics
7. compulsory feedback and evaluation
8. developing the clinician-educator

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10. integrated learning across disciplines  
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### Simulation-based learning

In medical education, there is usually exposure to live patients for young doctors and medical students to acquire the necessary skills. This may not always be adequate, possible or optimal in many situations. Growing complexities require doctors to master both knowledge and procedural skills as well as effective communication skills. Simulation is a technique for practice and learning that can be applied across many disciplines. The technique can (sometimes) replace and amplify real experiences with guided ones, and is often immersive (similar to the real world) in nature, that evolves or replicates substantial aspects of the real world, in an interactive fashion. Simulation technology continues to make these experiences as realistic as possible (Murphy *et al.*, 2007; Gaba, 2004; Satish & Streunfert, 2002).

The skills which can be enhanced with the use of simulation include:

1. technical and functional expertise training
2. problem solving and decision making skills
3. interpersonal and communications skills and team-based competencies

Simulation is also useful in developing skills in procedures that require eye-hand coordination and dexterity. Simulation training will help prepare healthcare personnel to deal with unanticipated medical events, thus increasing their level of confidence when handling real situations.

The cost of simulation training, which was high when first introduced, has now become more acceptable and affordable. Many have begun to recognize this as a worthwhile form of investment in education, in the long term.

Simulation based training has opened up new educational applications in medicine and healthcare. Evidence-based practices can be put into action by means of protocols and algorithms, which can then be practiced via simulation scenarios. The key to success in simulation training is to integrate it into traditional curricula and educational programmes (Binstadt *et al.*, 2007; Murphy *et al.*, 2007).

### Team-based learning and practice

Healthcare is now becoming less and less of a solo endeavour. Healthcare personnel need to have the skills to work in teams, communicate efficiently with colleagues, patients and be effective problem solvers. Group and team learning and practice have been shown to have advantages over individual and didactic traditional learning. Teams learn to function as a wholesome group from diverse backgrounds, but working together with accountability. As a team, learning goals and objectives must be achieved collectively. In the clinical setting, teams must ensure clinical outcomes are met. Members of the team must realize their own roles and responsibilities and at the same time, be integrated as part of the functioning team. They should be able to stimulate each other, exchange ideas and be familiar with each other's roles as required. This way, there may be possibility of cross-covering each other where relevant. There can also be constructive peer-evaluation in this way. Team-based learning and practice can be a tool to break down the silos that often exist between different department staff in institutions (Michaelsen *et al.*, 1989; Feichtner *et al.*, 1985).

To be effective, team based learning must be structured and also be able to nurture flexibilities in cooperative learning. It will test the people management and communications skills of team members as they learn to work together. Some examples of high performance teams with special characteristics in healthcare institutions would be the trauma team or a stroke team, comprising of personnel from different disciplines. In such teams, members would learn:

1. how to integrate and fulfill their assigned roles and at the same time develop inter-personal and team skills
2. how to share resources and manage time in an efficient way and
3. how to give feedback on individual and group performance

Finally team-based learning can integrate other concepts such as simulation-based learning and problem-based learning (Rosen *et al.*, 2008; Watson *et al.*, 1991; Michaelsen *et al.*, 1989)

## Practice-based learning and reflective practice

Practice-based learning started being popular in vocational based education and training where there is a necessity to integrate course work and practical workplace learning. It is very much like apprenticeship style learning. Industry placement and job attachments also represent some form of practice-based learning, with both 'on-the-job' learning and learning 'of-the-job'. It is the kind of learning that prepares the student and apprentice for the workplace and gives them the many perspectives needed, not only from the diversity of exposure but also the multifaceted capabilities available. The historical, cultural and situational factors provide added benefits to the learner. They get to understand the hierarchy of the workplace as well as the organization structure.

Practice-based learning programmes must be pedagogically sound, operationally effective and provide quality skills training. They must also have utility and be sustainable and able to address requirements for quality outcomes. Practice educators too must be prepared for their role as facilitators of learners' development and of reflective practice skills

Practice-based learning is also very much tied to the process of reflection which refers to reviewing an experience of practice in order to describe, analyze and evaluate. Reflective practice serves to make all encounters a potential learning situation. This way, the practitioner can continue to learn, grow and develop in and through practice. Engaging in reflection can be in one of two ways:

1. reflection on action: reflection done after the experience
2. reflection in action: reflection done during the experience itself

The latter is a more advanced skill, whilst the former is most often used in training healthcare personnel, especially those in their very early years of training.

Reflective practice in itself has several stages. The first stage is when there is an awareness of an uncomfortable feeling or thought. This is then followed by the person attending to that feeling and doing a critical analysis, which will eventually take one through to the development of a new perspective on the situation encountered. This will then gradually

allow exploration of probable issues to a deeper level of understanding (Parmelee *et al.*, 2009; Mamede, 2006; Mamede *et al.*, 2004; Kaufmann, 2003; Colin, 2002; Richardson *et al.*, 1995; Reid, 1993).

## Evidence-based practice

Evidence-based practice refers to the practice of integrating the **best research evidence** with **clinical expertise** and **patient values**. With these three elements, the practitioner and the patient will form a diagnostic and therapeutic alliance, optimising treatment options and quality of life. Evidence-based practice is here to stay, especially with the increasing expectations and knowledge of patients today. All therapeutic modalities must be backed up by evidence in practice. Institutions too are investing more on high quality research, especially basic sciences research and clinical trials.

The 5 basic steps to follow in implementing evidence-based practice (Sackett *et al.*, 1997) include:

Step 1: Converting the need for information (in one's clinical practice) into an answerable question

Step 2: Searching and tracking down the best evidence to answer that question

Step 3: Appraising the evidence available critically for validity (closeness to truth), impact (size of the effect) and applicability (application and usefulness in practice)

Step 4: Integrating the critical appraisal with clinical expertise and patient biology and values.

Step 5: Evaluating the effectiveness and efficiency of steps 1-4 and then enhancing them when necessary.

In the next decade, we will continue to see more benches to bedside applications and evidence-based practice will be the default mode.

## Communications

One of the paradoxes of the 21<sup>st</sup> Century is that we are able to communicate like never before; with 24-hours news, email, internet chat and mobile phone. Despite these, form of communication seems to be diminishing. There is nothing wrong with these modern

technology and communication techniques, as long as the more meaningful form of communications—interpersonal communications is not neglected.

Communication is the science and practice of transmitting information. Interpersonal communications is a complex process. Effective interpersonal communications is an important element in improving patient satisfaction, treatment compliance and health outcomes. At times, encounters can make us feel misunderstood and frustrated by our inability to convey our messages clearly. When conveying medical information to patients, relatives and lay persons, we often have to seek the most appropriate 'non-medical' terms to explain ourselves and get the information across successfully (Stewart, 1995; Bain, 1977). The communication context is shaped by the socio-demographic characteristics of the patient and healthcare provider as well as by the communication environment. Factors such as age, sex, education background and ethnicity affect how they communicate with each other (Stewart, 1995). Some of the objectives of the daily interpersonal communications performed in healthcare related jobs are as follows:

1. Need to identify the communication role and the challenges
2. Evaluate the work environment to assess ways to improve communication
3. Differentiate interpersonal and impersonal communication
4. Use of verbal and non-verbal techniques, to ensure clarity and to build positive relationships and
5. The use of active listening methods to improve understanding

Healthcare personnel are in a profession where they have the privilege of getting private and intimate information from others and this privilege must be respected. Handling difficult patients and relatives, breaking bad news, informing death, handling sensitive issues, confidentiality and taking proper informed consent are all situations where good and effective communication is crucial. Non-verbal communication, which includes gestures, body movements, positions, eye contact and even silence, is also very important. Healthcare providers, who appear fully attentive, avoid distractions, smile and sit at the same level as the patient all convey the important message of caring, listening and empathy. Many aspects of non-verbal communication are also specific to culture, customs and norms

(DiMatteo, 1995). Good communications will continue to feature prominently as part of excellent service standards in the coming decades and beyond.

### **Professionalism and ethics**

Medical ethics and professionalism are inseparable. The former refers to an endeavour to understand what is good and right in human experience and it involves knowledge, self reflection and discernment. It also refers to moral ideals and obligations. Professionalism comprises of the attitude and behaviour that serve to maintain patients' interest above physicians' self-interest. Studies have shown that factors such as gender, levels of experience and clinical interest have a bearing on ethics and professionalism related skills (Lazarus *et al.*, 2000; Prince *et al.*, 1998; Culver *et al.*, 1985; Olukoya, 1983). It has also been shown that positive attitudes of physicians towards professionalism and ethics improve beneficial outcomes. For example, house officers' positive views of the quality of their ethics training were associated with confidence in dealing with ethical conflicts (Sulmasy *et al.*, 1990)

How exactly to incorporate elements of professionalism into healthcare courses and training programmes is not necessarily cutting edge or rocket science. Simple use of good mentors and role-modelling may be sufficient and can leave an indelible impression (positive, hopefully). In a study by Roberts (2004), role-modelling by faculty was voted the most effective of the clinically orientated approaches. These techniques can be effective, but they lack reliability and reproducibility.

Just as it is difficult to precisely define and measure professionalism, perceptions about it too vary widely. The American Board of Internal Medicine defines professionalism as 'aspiring towards altruism, accountability, excellence, duty, service, honour, integrity and respect for others (American Board of Internal Medicine). The American College of Graduate Medical Education has also proposed innovative ways to approach the teaching and evaluation of professionalism to students and residents. These are universal and inherent to human conditions. Some examples of values included in professionalism assessment checklists include (Tomolo *et al.*, 2009):

- Empathy and care
- Appropriate foundation of knowledge

- Soundness of clinical judgment
- Technical expertise with diagnoses and therapeutic procedures
- Good communications with patients, family and staff
- Sensitivity and responsiveness to patients with differences in socio-economic status, ethnicity, age, gender and disabilities.
- Honesty in all dealings
- Accountability for all actions made
- Conflict resolution skills
- Adherence to regulatory, institutional and departmental norms.

With increasing expectations from patients and the public, there is no running away from strengthening and consolidating institutional guidelines and policies related to ethics and professionalism. Each healthcare professional too has the responsibility to ensure that his/her own performance and behaviour is in alignment (Sethuraman, 2006; Emmanuel *et al.*, 1995).

### Feedback and evaluation

Feedback and evaluation should be solicited at every possible opportunity. The value of this very important process has been repeatedly emphasized. Evaluation refers to the process of judging the worth of a programme, curriculum etc. and can be done as formative evaluation (used to identify problems on a daily basis with specific action-oriented feedback) or summative evaluation (a consolidated evaluation done at specific intervals to highlight strengths and weaknesses). Evaluation can be done by the educator, teacher or supervisor, by students/learners or it can be in the form of peer evaluation or 360 degrees evaluation. There is also increasing use of self evaluation techniques and questionnaire (Snell *et al.*, 2000; Wilkes, 1999). Evaluation can assess the

- a. process
- b. goals
- c. the delivery
- d. the content and
- e. the outcomes of teaching

Feedback on the other hand refers to inputs given on a performance e.g. teaching (for teachers), learning (for students) and can be positive/constructive or negative. Feedback can be done verbally or in written fashion; or even electronically these days. In many

institutions today, feedback and evaluation results are tied up to curriculum development, performance bonus and promotion. In the years to come, feedback and evaluation will become the norm of all educational processes.

### Developing the clinician-educator

A clinician-educator is a clinician who is also a dedicated teacher. Although this has been around since the times of William Osler (Osler, 1901), the roles have evolved rapidly especially in the last decade. The strong demand for skilled teachers compels the need to have structured pathways for training clinician-educators in clinical teaching, curriculum development, educational administration and scholarship. Institutions today need to provide the faculty with sufficient support and development opportunities.

There will be increasing need to attract, retain and recognize faculty members who devote time to clinical work and teaching. Dedicated time for clinicians to partake in relevant educational activities too will become a norm. It should not be ad hoc and incidental as is happening in many places today. The goal is to develop a strong and adequate pool of clinician educators with up to date knowledge and training skills, who are good role models for the healthcare personnel as well (Wipf *et al.*, 1995; Schroeder, 1993).

The steps which institutions need to undertake in training a good clinician-educator include (Wipf *et al.*, 1995):

1. Have a definition for the term clinician educator (whether in medicine, nursing, allied health or other areas)
2. Delineate training goals for developing clinician educators and the residents on the clinician educator track if available
3. Identify relevant opportunities for skills development
4. Plan the use of methods for assessment
5. Identify the resources needed and barriers which need to be overcome.

Despite more institutions having specific pathways to train such professionals and provide them with a platform to develop, grow and nurture their talent, there is still currently a lack of information and evidence to see if these pathways have been successful in recognising and promoting clinician-educators.

Given time, more information and data sharing across institutions and even across nations, there is a very large potential for improvement and fine-tuning, relevant to organization, culture and practices.

### **Harnessing information technology**

Information technology (IT) in healthcare appears to be the way forward and is an integral element to achieving substantial quality improvement. IT use improves access to information and this is crucial in the knowledge based economy of today. Other applications include: using IT clinical informatics to promote patient safety, to design and test best practices which can help to reduce errors in various settings, emergency medical records, practice-based networking, sharing through thought leadership in certain disciplines or interest groups, internet-based learning and of course the availability of a large resource network readily accessible at one's fingertips (Ortiz, 2003; Lim, 1990).

Certainly all these are closely related to the education process of the healthcare professional and will become incorporated in the different modules at various training and practice stages. In practice, IT must be driven by a need to enhance and improve care for our patients. Thus, there is also the need to prevent indiscriminate use of IT. Systems will have to utilize user identification with password-guarded access and, only relevant personnel should be allowed entry, to ensure patients' clinical history and confidentiality are maintained especially when sharing data. The internet is not always secure unless high grade encryption is utilized (Young, 1992).

In the coming decade, IT use will feature even more prominently. There will be more educational websites for both patients and caregivers. With the numbers of social networking sites growing, healthcare professionals may now become 'friends' with their patients on Facebook, for example. Where should we draw the line in such interaction and relationships? It would be wise for healthcare professionals to continue to strengthen their usage of IT to enhance quality of care in a patient-centric manner. It should be a tool for care improvement and the users should not be enslaved by it (Chin, 2010; Young, 1992).

### **Integrated Learning Across Disciplines**

Collaboration has been identified as a way of improving care, especially so for the more critically ill patients. Today, healthcare is moving away from being a solo practice to one which is team-based. The practice of team-based learning and the use of simulation-based learning to train personnel from different specialties to work together is getting more popular. Training includes learning about interdisciplinary cooperation, communications and willingness to listen and learn new things, shared decision making and being a team player. In fact, today, it is not just interdisciplinary collaboration, but the continuum of care and partnerships extends into the community networks as well. More and more primary healthcare clinics, voluntary welfare organizations and non-governmental organizations are becoming our partners, sharing the same training and education platforms. This is the way forward and every healthcare professional must work to strengthen this at all possible levels. This is also the way to be more competent in a practice discipline, understand the context and complexities of population health, understand the broader determinants of health such as housing, finances, social support etc and demonstrate basic group process skills such as communications, negotiations, time management and assessment of group dynamics. The determinants of health are beyond the capacity of one practitioner or discipline to manage. Therefore we must collaborate to survive (Mitchell *et al.*, 2000, Kelley *et al.*, 1996).

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