

SUMMARY OF ONLINE DISCUSSION ON NON-SCHOLASTIC ABILITIES

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The following is a summary of the online discussion on Non-scholastic Abilities held during the month of July 2007 by the FAIMER 2007 batch

The session on non-scholastic abilities was divided into following sessions.

- Warm up and awareness about non-scholastic (NS) abilities and their need in medical curriculum
- Discussion on the individual NS abilities - Why they are important and how to foster them?
- Evaluation of NS abilities

INTRODUCTION:

Ability is defined as the power and skills to do, think, act and make.

The word '**scholastic**' means "of or concerning schools and teaching". By implication the word **non-scholastic** can be taken to mean "not of or concerning schools and teaching".

We often hear that school or college grades are not all. It is also observed that in real life situations, it is not just the IQ that matters but emotional and spiritual quotient as well. In medical profession- which deals with human touch- these aspects of learning become vital. While it is inherently ingrained in some, most of us need to train to develop these abilities. In general, non-scholastic abilities include those abilities which are not traditionally taught and evaluated in schools. These abilities include attitudes, moral values, leadership, motivation, etc.

Specifically, non-scholastic abilities in the medical profession can be defined as general abilities that are not specific to medicine but these are needed for effective functioning of any caring person. These abilities reflect the later performance of the students as doctors. Hence, this is the concern of curriculum planners or medical educators.

While framing a medical curriculum following learning outcomes have been described by various institutions, bodies and policy makers:

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation
7. Drawing and sketching skills
8. Ability to handle instruments
9. Communication skills (Skills in writing and talking) and ability to communicate with peers, teachers, patients and assertiveness)
10. Social skills (Team work and leadership, discipline, ability to share, confidence or diffidence)

11. Personal qualities (Regularity, punctuality, hard work and attitude to work, inventiveness, originality and initiative, dependability, Psychological robustness)
12. Interest
13. Positive and Scientific attitude
14. Appreciation
15. Originality and Creativity
16. Participation in sports and other extracurricular activities, hobbies, social service activities
17. Body language/ non-verbal communication
18. IT skills: Computer, internet

In general a medical graduate is expected to be alert, observant, adaptable, honest and caring.

Similarly the following abilities (both scholastic and non-scholastic) have been identified for residents.

1. History taking
2. Physical examination
3. Diagnostic approach
4. Management approach
5. Procedural skills
6. Record keeping
7. Understanding the basic mechanisms
8. Responsibility and conduct
9. Relationship with patients and their families
10. Relationship with peers and other professionals
11. Self-directed learning

In the above list items 8, 9 and 10 fall under non-scholastic abilities. Responsibility and conduct include punctuality, reliability, dependability, enthusiasm, and reaction under stress, observation of work routines and standards of conduct. Relationship with patients and their families includes availability during non-working hours, caring approach to patients, giving clear and appropriate information and keeping patients' family informed and involved. Relationship with peers and other professionals includes collaboration, giving clear / courteous instruction and information, accepting constructive criticism and maintenance of team spirit.

A survey of 25 doctors belonging to different specialties was conducted (by Dr Santosh Kumar, JIPMER) to ascertain the qualities they considered most desirable while choosing their doctors. 24 doctors responded. A total of 147 responses were obtained. Their responses could be grouped into the following pedagogically meaningful groups:

- 1 Be caring
- 2 Diagnose and manage health problems
- 3 Be responsible
- 4 Be approachable
- 5 Be affordable
- 6 Have good reputation
- 7 Counsel and teach
- 8 Be patient
- 9 Be willing and able to manage emergencies
- 10 Be aware of one's limitations
- 11 Solve problems
- 12 Communicate well

Interestingly only group 2 belongs to scholastic abilities and all other groups belong to non-scholastic abilities. Thus, non-scholastic abilities are as important as scholastic abilities.

The MCI guidelines (1997) stipulate that

- Undergraduate medical education should be oriented towards health and community as opposed to disease and hospital.
- The graduate must develop humanistic qualities in discharging professional obligations and be able to function as leader of the health team in urban and rural settings.
- Students' training must aim at inculcating scientific temper, logical and scientific reasoning, clarity of expression, and ability to gather and analyze information.
- The graduate should be able to appreciate the socio-psychological, cultural, economic and environmental factors, affecting health and develop humane attitude towards the patient in discharging one's professional responsibilities.
- The student should be able to work as a leading partner in health care teams and acquire proficiency in communication skills.
- The graduate should have personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

(Adapted from: Bulletin of NTTC, September 2001; Principles of Medical Education, T Singh et al)

The Need to Develop and Foster Non-scholastic Abilities:

Most students have hobbies and things they like to do that help them to integrate their lives and feel fulfilled. Often these things suffer during and after medical school. How can we help students preserve and maintain a healthy life style while they go to medical school? Medical school can be a very unhealthy experience, in a stressful environment. It is ironic that we aspire to help people learn how to deal with health and lack of health in a fragmented and unhealthy way.

Multiple intelligences is a psychologist and educational theory put forth by psychologist Howard Gardner, which suggests that an array of different kinds of "intelligence" exists in human beings. Gardner suggests that each individual manifests varying levels of these different intelligences, and thus each person has a unique "cognitive" profile." The theory was first laid out in Gardner's 1983 book, *Frames of Mind: The Theory of Multiple Intelligences*, and has been further refined in subsequent years.

A medical professional, a surgeon for example, is called upon to perform various roles. He is a clinician, scientist, craftsman, manager, student, and teacher all rolled into one. It is like one person doing the work of six. Needless to say, one needs to develop various skills including non-scholastic ones to perform these roles.

It is a usual practice to separate and fragment scholastic and non-scholastic abilities in general as well as in medicine. It's important to foster the connection between the two. Giving attention to the health and well being of someone requires scholastic and non-scholastic things be linked and that the flow between them be open and robust.

It is important to develop non-scholastic abilities in ourselves. We all have multiple brains. However, none of them are independent or autonomous. They are all interlinked and act as supports for each other. The non-scholastic interests often act as buffers and refreshments when our scholastic abilities are exhausted and drained. Students who fostered non-scholastic abilities are known to have an uncanny grasp of the subject. They may not be the toppers in the class (simply because they spent less time with books), but they understood better, and in

fact even memorized better. They help in the overall build of personality as it influences our attitudes and interpersonal relationships which are a vital part of medical profession.

Non-scholastic abilities that are important for medical students or matter in medical profession:

There is a need for "Blue chip" grades and high entry examination scores as defining criteria for entry into medical school in the present system. Our task at this time is focused on students once they are accepted and in medical school (the admissions and selection process, however, it is in many ways more influential than the structured curriculum in predicting the general nature of the graduates). Once accepted into medical school, creativity and fulfillment as essential components of being human can be re-established as core elements of the "non-scholastic" curriculum and linked to caring, professional behavior, ethics, respect, etc. If we, as professors and role models, express and demonstrate repeatedly and consistently by our actions the valuing of these qualities, the students will follow. We speak often of the hidden curriculum, perhaps we can un-hide this part of the curriculum by attending to it more openly. It could be a form of positive deviance in the sea of curriculum fragmentation.

The NS abilities of importance to medical students are:

- Appropriate behavior and respect to others
- Development of communication and interpersonal skills amongst students in order that they become effective members of the health care team.
- Communicating well
- Being aware of his/her limitations
- Empathizing with patients

Non-scholastic abilities are important for teachers too.

These are:

- Helping the low achievers
- Being able to understand problems of students (non-academic) which are interfering in their academic behavior
- Leadership, multitasking
- Sense of humor
- Social conscience
- Interests outside medicine
- Balance of home and career
- Patience
- Communication skills
- Interpersonal relationships
- Professionalism
- Helping reduce the exam stress
- Encourage humanistic aspects

Non-scholastic skills required in various specialties

- Pharmacology - Aptitude in teaching, scientific temper, empathy and sense of justice towards animals and humans, ability to think and question, patience and perseverance
- Pediatrics - Empathy and sympathy for the children and their parents, a zeal for reading and a relaxed attitude.
- Pathology: An eye for detail, Patience, a good memory, ability to correlate, organizational ability, communication skills.

A brief summary of various non-scholastic abilities:

A. Communication skills:

What constitutes good communication skills?

Good communication skills include not just a good base of knowledge. It is built on compassion, interpersonal understanding, the ability to explain in understandable terms.

What is spoken is not as important as what is understood by the listener. It also includes

- Willingness to communicate
- knowledge of language, knowledge of subject
- Appropriate body language
- clarity of thought and words

The role of communication skills in medical profession:

The role is enormous. Communication is necessary with patients, colleagues, superiors, juniors, contemporaries in other colleges, institutes, subjects, professions. It is an important connection between communication and clinical reasoning. Understanding patient's biological, psychosocial and cultural background is necessary for effective patient care. A physician must use communication skills, biomedical knowledge and clinical judgment to generate and modify diagnostic hypotheses (i.e., clinical reasoning). Research shows many inadequacies in clinicians' skills including incomplete solicitation of patient concerns and inconsistent exploration of psychosocial issues. These practices can lead to inappropriate prioritization of problems, impaired clinical reasoning and poor therapeutic alliances with the potential for medical error and harm. Studies suggest that communication skills training may improve students' ability to gather accurate, relevant information. Teaching communication and clinical reasoning in isolation may prevent students from understanding the important link between these skills and may lead them to undervalue the psychosocial aspects of patient care.

Communication skills are also useful for using the internet, email, letters-official and otherwise, phone manners also.

A simple mnemonic for remembering this technique uses the vowels A, E, I, O, and U:

<i>Mnemonic device can help improve communication</i>
<i>A - agreeing</i>
<i>E - empathizing</i>
<i>I - inquiring</i>
<i>O - opening</i>
<i>U - understanding</i>

Barriers to Communication

Anything that prevents understanding of the message is a barrier to communication. Many physical and psychological barriers exist like culture, background, and bias, noise focusing on ourselves, defensiveness, superiority and ego. Distractions happen when we focus on the facts rather than the idea. Our educational institutions reinforce this with tests and

questions. People do not see things the same way when under stress. What we see and believe at a given moment is influenced by our psychological frames of references - our beliefs, values, knowledge, experiences, and goals. And the way to overcome filters is through active listening and feedback.

Active Listening

Listening is divided into two main categories: passive and active. Passive listening is little more than hearing. It occurs when the receiver or the message has little motivation to listen carefully, such as music, story telling, television, or being polite.

Feedback

The purpose of feedback is to change and alter messages so the intention of the original communicator is understood by the second communicator. It includes verbal and nonverbal responses to another person's message.

Speaking Hints

When speaking or trying to explain something, ask the listeners if they are following you. Ensure the receiver has a chance to comment or ask questions. Try to put yourself in the other person's shoes - Consider the feelings of the receiver. Be clear about what you say. Look at the receiver. Make sure your words match your tone and body language (Nonverbal Behaviors). Vary your tone and pace. Do not be vague, but on the other hand, do not complicate what you are saying with too much detail. Do not ignore signs of confusion.

Learning the Local language

In India, language is one of the problems, especially as doctors cross state boundaries. All the above mentioned points are very difficult to explain to patients. Communication is so difficult. Patients speak and expect us to speak in typical local language. Even if you learn the language you can not speak typical dialect.

Breaking Bad News

A vital duty of a doctor is conveying bad news to patients or their relatives, be it a bad prognosis, mortality or sometimes probable difficulties like huge expenses etc. Nothing tests our communication skills so much as breaking bad news. Such conversations can be extremely emotional for both doctor and patient. The right words said in the right way make a huge difference. Here are some tips:

- Be well informed about the case, including the details. The patient may ask questions that may need convincing answers.
- Speak to the nurse in charge of the patient and ask him or her to be present during the conversation
- Ensure privacy
- Arranging the conversation in advance and ensure that appropriate family members or care takers are present
- Introduce yourself and ask questions that will give you clues to the patient's ideas, concerns, and expectations
- Avoid jargon. Give information slowly and clearly, making sure that the patient has time to understand

- The crucial point in the conversation is the "bad news" itself. Explain the situation in a simple, unambiguous way and let the information sink in.
- Be flexible in your approach; depending on the patient's reaction and response.
- Discuss further options, Remember to give hope as well as information.
- Observe experienced seniors and also ask for feedback from nurses.

Assertiveness Vs Aggressiveness

How to be assertive without being aggressive? Here are a few tips...

- be clear about what you feel, what you need and how it can be achieved
- communicate calmly without attacking another person
- saying "yes" when you want to, and saying "no" when you mean "no" (rather than agreeing to do something just to please someone else)
- deciding on, and sticking to, clear boundaries
- being confident about handling conflict if it occurs
- understanding how to negotiate if two people want different outcomes
- being able to talk openly about yourself and being able to listen to others
- having confident, open body language
- being able to give and receive positive and negative feedback
- having a positive, optimistic outlook

Assertiveness is a skill, which can definitely be learnt and mastered with practice. A number of times, we are passive, at others, aggressive (sometimes even passive aggressive, like banging the doors etc) but not assertive.

Avoiding Medical Jargon

A few problems commonly observed while communicating with patients are:

People cannot understand instructions on how to take medicines and care for their own illnesses. Those instructions often appear on patient information sheets and handouts. Patients also have to deal with consent forms for procedures like surgery; health insurance claim forms; advertising for prescription drugs; safety warnings on package labels; instructions for using medical devices; and other written material. Studies reveal that health literacy is not just a problem of poor, uneducated people who lack general reading and writing skills. Even well-educated people have trouble understanding doctors and nurses. The problem is compounded in India due to various dialects and low awareness of patients too.

How to avoid medical jargon:

- Be conversational in your approach, going to patients' level of understanding if necessary.
- Use simple language and cut the jargon.
- Explain technical terms.
- Write in the active voice.
- In case of insurance claim forms, consent forms etc, have a dry run on volunteers.

Non verbal communication

To deliver the full impact of a message, use non-verbal behaviors to raise the channel of interpersonal communication. These include:

- Eye contact
- Facial Expressions
- Gestures
- Posture and body orientation
- Proximity: Cultural norms dictate a comfortable distance for interaction with others. You should look for signals of discomfort caused by invading the other person's space. Some of these are: rocking, leg swinging, tapping, and gaze aversion.
- Vocal: Speaking can signal nonverbal communication when you include such vocal elements as: tone, pitch, rhythm, timbre, loudness, and inflection.

How can we foster these skills in students?

Through training, group discussions, debate, being role models, inviting good trainers.

Effective teaching methods include:

- Provide evidence of current deficiencies in communication, reasons for them, and the consequences for patients and doctors
- Offer an evidence base for the skills needed to overcome these deficiencies
- Demonstrate the skills to be learned and elicit reactions to these
- Provide an opportunity to practice the skills under controlled and safe conditions
- Give constructive feedback on performance and reflect on the reasons for any blocking behavior

Practicing key skills

If doctors are to acquire skills and relinquish blocking behavior, they must have an opportunity to practice and to receive feedback about performance. However, the risk of distressing and deskilling the doctor must be minimized.

Practicing with simulated patients or actors has the advantage that the nature and complexity of the task can be controlled. "Time out" can be called when the interviewer gets stuck. The group can then suggest how the interviewer might best proceed. This helps to minimize deskilling. In contrast, asking the doctor to perform a complete interview may cause the doctor to lose confidence because "errors" are repeated.

Asking doctors to simulate patients they have known well and portray their predicament makes the simulation realistic. It gives doctors insights into how patients are affected by different communication strategies.

For a simulation exercise to be effective, doctors must be given feedback objectively by audiotape or videotape. To minimize deskilling, clear ground rules should be followed:

- Positive comments should be offered about what strategies (oral and monorail) were liked and why
- Constructive criticism should be allowed only after all positive comments have been exhausted

- Participants offering constructive criticisms should be asked to suggest alternative strategies and give reasons for their suggestions
- Any blocking behavior should be highlighted and the interviewer asked to consider why it was used (including underlying attitudes and fears)
- The group should be asked to acknowledge if they have used similar blocking behavior and why
- To reinforce learning, the doctor should be asked to reflect on what he has learned, what went well, and what might have been done differently.

B. Scientific temper:

Why is scientific temper important in medical profession?

Medicine is not just a science to be learnt once; it is an unending process of learning. Having a scientific temper entails the interest in continuing medical education, which is the only way to be up to date to knowledge of your own practice. Medical professionals need constant thinking, trying new ideas and approaches and checking their validity, Willingness to keep learning daily.

The medical curriculum in India is designed to give comprehensive knowledge of health care delivery. However it fails to do so. One of the reasons is the quality of reading the students do. Most reading and training of our students is through text books and evaluation is based on the knowledge acquired from these text books. A few years ago the text books that were recommended and read were richer, with a wider scope, books that dealt with concepts rather than brief summaries (that are designed to be memorized for reproducing in exams). The subjects themselves are very vast and sometimes students may find it difficult to comprehend books by western authors. Very few students actually visit libraries to do literature search or read scientific journals or reference books. On the other hand, reading rooms are overcrowded particularly when exams are due.

Most readers of medical journals don't read original articles. They may scan the abstract, but it's the rarest of beasts who reads an article from beginning to end, critically appraising it as he or she goes. Indeed, most doctors are incapable of critically appraising an article. They have never been trained to do so.

On the other hand a doctor may be in a primary care setting with minimal infrastructure, leave alone facilities for hard core research, but if he thinks and acts with a scientific temper, he does qualifies to be a scientist.

C. Interpersonal skills:

It is extremely important for doctors to have strong interpersonal skills. Effective interpersonal skills are a cornerstone of a physician's professional identity. The expectation from health care professionals is beyond just knowledge of the medical facts. Doctors must be able to establish therapeutic doctor-patient relationships and work within multidisciplinary teams in a manner that facilitates patient care.

The advantages of a mutually satisfying patient-doctor relationship have been well described in the literature. In addition to therapeutic benefits to patients, improved patient adherence, and fewer malpractice suits, maintaining patient loyalty through improved patient satisfaction is a factor of increasing importance in today's managed care environment. To have a chance

of being successful doctor, every interpersonal contact must have an objective and every effort must be made to avoid creating win-lose transactions whenever possible

Good interpersonal skills can lead to: less litigation, creating a friendly environment for patients and staff, increased productivity of the staff, effective time management, improvement in patient care and development of a good reputation for the institute or hospital.

All of these are vital tools and are becoming increasingly essential subjects in teaching both undergraduate students and postgraduate doctors. However, a degree of self-motivation and personal initiative is needed to develop these skills. There are important deficiencies in our interpersonal skills that could potentially be addressed by way of targeted training. There are many models to assess interpersonal skills either by direct observation, feedback from patients, 360° reviews and videotaped consultation. This kind of assessment should become an essential part of the annual appraisal process of all hospital doctors.

D. Emotional intelligence

Issues of emotional maturity, self-awareness, and personal well-being remain critical to success in the practice of medicine as in other fields. Emotional intelligence is about empathy, handling relationships, managing emotions, and self awareness. These attributes are important for every medical student. Epstein et al described its components such as active listening on the part of the physician, responding to patients' emotions, physician self-awareness, and respect for individuals. These components are similar to the domains that are currently being investigated as constituting non-cognitive intelligence, i.e., "emotional intelligence" (EI).

Components of Emotional Intelligence:

Self-awareness: Being mindful of one's moods, emotions and drives.

Self-regulation: The ability to think before acting and control negative impulses and moods.

Empathy: Being able to put oneself in another's shoes.

Social skill: The ability to build and manage relationships and influence others.

Motivation: Drive that is internally generated rather than resting on external rewards or financial compensation

Empathy:

Empathy is the feeling relationship in which the physician understands the patient's plight as if the physician were the patient. The physician identifies with the patient and at the same time maintains a distance. Empathetic communication enhances the therapeutic effectiveness of the clinician-patient relationship.

Empathy is a major component of a satisfactory doctor-patient relationship and the cultivation of empathy is important. The study in the given link (<http://www.blackwell-synergy.com/doi/abs/10.1046/j.1365-2923.2002.01234.x?journalCode=med>)

addresses the measurement of empathy, its development and its correlates in medical schools. It tests two hypotheses:

- Firstly, that medical students with higher empathy scores would obtain higher ratings of clinical competence in core clinical clerkships
- Secondly, those women would obtain higher empathy scores than men.

A 20-item empathy scale was used (Jefferson scale of physician empathy).

Both research hypotheses were confirmed. Empathy scores were associated with ratings of clinical competence and gender, but not with performance in objective examinations such as the Medical College Admission Test (MCAT), and Steps 1 and 2 of the US Medical Licensing Examinations (USMLE)

It's not very often that we get to know our student's problem. Sometimes timely action can save a life. While your role in this case was really positive and important, it also helped that the mother was supportive. I have come across a few instances where the parents have high expectations from the student and are more disturbed than the child when the latter does not perform. Having their children undergo psychiatric treatment is in itself considered to be a stigma. That increases the stress and a vicious cycle sets in. The College Council and the Student Welfare Committees can do a lot to help. Individual sensitive and committed teachers can also work wonders.

Handling stress:

Doctors in training face death, disability, pain, and depression every day. Even if they use the white coat as protection, underneath a feeling person has to find a way to cope with the distress that patients bring. Of course, one can ignore these issues—for example, many doctors bury themselves in work—and medical culture tends to encourage this approach. Tragically, this mentality can lead to sudden heart attack or other serious illness. Other dysfunctional ways to cope include resorting to alcohol and other drugs.

The proportion of doctors and other health professionals showing above-threshold levels of stress has stayed remarkably constant at around 28%, whether the studies are cross sectional or longitudinal, compared with around 18% in the general working population (BMJ). What has changed over the years is that doctors have become used to discussing the topic of stress and even to admitting to it in themselves. They are more aware of their colleagues' symptoms than they were earlier, which means that they may be more likely to help colleagues through a difficult time or suggest they get help when they need it.

One may work in an environment where “real doctors get on with the job and only the weak weep or feel distressed.” This pressure to deny emotions can have a profound effect on one's health. We need to move from this culture to one where medical students and doctors can openly share emotions and ask for help.

What makes a good doctor?

“Aside from the obvious benefits of a fine medical school, great teachers, and lots of hands on clinical experience, I think the very best way to produce a good (sympathetic and humane) doctor is to force student doctors or residents to become patients.

I believe every doctor in pupa should have many tubes of blood drawn over a few days by poor phlebotomists, have a nasogastric tube inserted once or twice, undergo a thorough sigmoidoscopy, barium enema, and bowel preparation, and perhaps even be made to spend a night or two confined to a hospital bed, plugged into an intravenous drip, and then be subjected to harried and uncaring staff doctors and nurses while bedridden.

I'll bet a case of wine that this trenchant exercise will produce far more empathetic, sympathetic, and good doctors than multiple lectures on sensitivity and humanism by some medical academic, ethics professor, or member of the cloth. I daresay that I truly believe that

my experiences of being a patient as a student sure as hell helped mould me into the caring and sensitive practitioner I am today! "

Robert I Rudolph, *clinical professor of dermatology*. University of Pennsylvania School of Medicine

Altogether 102 people wrote in response to our questions "what makes a good doctor?" and "how can we make one?"¹ They were clearer on the first question than the second, listing more than 70 qualities a good doctor should have. Among the usual—compassion, understanding, empathy, honesty, competence, commitment, humanity— was the less predictable: courage, creativity, a sense of justice, respect, optimism, grace.

Responses came in from 24 countries all over the world, and almost all of the respondents had something different to say, indicating, as one respondent put it, that "a good doctor will be different things to different people at different times." For some, the notion was very simple: a doctor who satisfies his or her patients; a doctor you would trust yourself; a doctor who likes people and likes the job; even "a doctor who feels for himself the sorrow of human kind."

For others, it was more difficult. Like describing a good car, a good play, or good weather it all depends on your perspective. A member of the library faculty at a New York university described a good doctor as one who "reads and reads and reads." A professor of bioethics (with an interest in medical history) argued that good doctors are also good historians, adding that medical history should take up at least a quarter of the undergraduate curriculum. Educators gave a high priority to being a good teacher, coach, and mentor. And a quality improvement specialist thought a good doctor was one who critically examined what he or she did and tried to improve on it.

Patients, however, wanted little more than a doctor who listened to them.

From this great diversity a few common themes emerged.

Firstly, there are plenty of good doctors around and we should nurture them better.

Secondly, to be a good doctor, you first have to be a good human being: "a good spouse, a good colleague, a good customer at the supermarket, a good driver on the road."

Thirdly, it's easier to be a good doctor if you like people and genuinely want to help them. A general practitioner from Wolverhampton wrote: "To like other people, from this all else follows. Liking your patients will get you through the grind and tedium of your working day, and patient contact will be a source of strength and renewal. You may even do some good."

Finally, good doctors, unlike good engineers, good accountants, or good firemen, are not just better than average at their job. They are special in some other way too. Extra dedicated, extra humane, or extra selfless. More traditional contributors wanted doctors to sacrifice themselves for the good of their patients. Others said doctors must look after themselves first—or they wouldn't be able to help anyone. Doctors are patients too.

Few respondents had anything to say about what makes a good doctor in specialties with little patient contact. Pathology, for example, or epidemiology. There wasn't much either on what makes a good surgeon. One of only eight contributing surgeons (an urologist from Saudi Arabia) wrote that good surgeons are "good doctors with extras." Another surgeon said that it was important for doctors to find medicine fun, fascinating, and stimulating.

Making a good doctor seemed a greater challenge than defining one. There was general agreement, though, that we aren't very good at it. To paraphrase 13 responses: **all we can hope to do is select students with the right gifts (not the right exam results) and somehow stop them from going rotten through overload cynicism and neglect during their training and early career.**

E. Leadership

Defining leadership is really a difficult task and it may mean different things to different people. There are as many definitions of leadership as there are people who tried to define it. It is much like words democracy, love, peace and so on.

"Leadership is a process whereby an individual influences a group of individuals to achieve a common goal". Some of the major leadership traits described in literature is

- Intelligence
- Self-confidence
- Determination
- Integrity
- Sociability.

A true leader will empower his followers.

There are a number of things that go in making a good leader; administration may be but one aspect of the leadership. Some training is always useful, if not formal some quality literature reading is a must and only experience may not be sufficient. A lot depends on ones personality and how one perceives administrative jobs as an opportunity to influence others and to do more than their specialty or as a liability. Management is the process of planning, organizing, leading and controlling the human, material, and financial resources of an organization. Managers are responsible for achieving organizational ends through people. This he does by supervising and motivating people in work organizations. A good manager must understand organizational behavior which is the scientific study of behavior and attitudes of people in organizations which contribute to organizational effectiveness. He must understand the use of motivation, organizational control and rewards systems, and job design and employee reactions to work. He must also be able to grapple with work group dynamics, problem solving, creativity, conflict management, and the use of influence processes like power and leadership.

Training in leading a team needs to start pretty early. At school, the introduction of 'houses' and posts like school pupil leader, house captain, sports captain are just the start of leadership training. You learn to take your classmates together. Organizational skills are inculcated when you begin organizing small events like an elocution competition- moving to bigger things like a Parent's Day or an annual day.

In Medical college, students who are part of the NCC or NSS or Literary organization or Dramatics society or sports teams imbibe a little of the organization skills. And as we join as faculty, the burden of administration gradually increases. Stock checking, store organization, student council organization, conducting CMEs and workshops- eventually you get dragged in everywhere

There are situations where team work and leadership skills are vital to optimum medical care: A few examples:

- Any surgery
- Management of trauma and other disasters
- Good housekeeping in a hospital
- Human resource management in a hospital
- Managing hospital infections
- ICCU care
- Managing an outpatient department

In medical education team work is required for:

- Deciding and revising curricula
- Deciding and implementing teaching
- Implementing research projects
- Conducting examinations
- Organizing recreational and extracurricular activities for students

Leader Vs Manager:

Most of us are good managers, but not necessarily good leaders. We often confuse between the two concepts. A manager tells his subordinates what to do, and both get paid for getting the job done. The relationship is essentially transactional. He needs a formal authority to exert that influence on his juniors. They are usually averse to taking risks and go by the book.

However, a leader inspires his 'followers' to do as he says. The action of his followers is voluntary and the relationship is transformational. Leaders are essentially risk takers and think out of the box. Leaders have a vision. They take blame for what goes wrong and give credit where it is due. People are more loyal to leaders than managers because they manage to stir your emotions. It is said that managers do things right, while leaders do the right thing. Management is essential for keeping things on track, and leadership is about creating new opportunities by motivating and inspiring others. Have a look at this table below which clarifies the differences further. Reporting Pathology Slides is quite often a team work as we take opinions among faculty or even friends across the NET. These days almost everything is a teamwork blood bank a team collects blood another team registers it and delivers for testing. Another team converts it to components. Still another one cross matches and delivers to patients. And another one transfuses.

Subject	Leader	Manager
Essence	Change	Stability
Focus	Leading people	Managing work
Have	Followers	Subordinates
Horizon	Long-term	Short-term
Seeks	Vision	Objectives
Approach	Sets direction	Plans detail
Decision	Facilitates	Makes
Power	Personal charisma	Formal authority
Appeal to	Heart	Head
Energy	Passion	Control

Dynamic	Proactive	Reactive
Persuasion	Sell	Tell
Style	Transformational	Transactional
Exchange	Excitement for work	Money for work
Likes	Striving	Action
Wants	Achievement	Results
Risk	Takes	Minimizes
Rules	Breaks	Makes
Conflict	Uses	Avoids
Direction	New roads	Existing roads
Truth	Seeks	Establishes
Concern	What is right	Being right
Credit	Gives	Takes
Blame	Takes	Blames

E. Team work

A team is a group of people with a common goal. With all of us trying to be high achievers in our own work areas, we must all realize that most of our actions cannot be solely accomplished by our own efforts even if given the 100%. We all depend on a small or large group of people as required to finish our task. There are however, certain basic and easily recognizable differences amongst a team and a group. A team is a group of people influencing each other, while in a group the members are together and aware of each other but not influencing each others actions in any way.

Characteristics of team members:

Mutual accountability, small in number, complimentary skills, defined approach and with meaningful purpose

A worldwide survey found that the most important values given for a team are their shared values, followed by mutual trust, inspiration and the last important thing being the rewards for the activity.

Although doctors are accountable for their conduct and practice on an individual basis, increasingly they must work in teams. Team working is necessary in many circumstances and the role of the doctor depends on the task to be done and the experience and knowledge needed. Increasingly new ways of working have developed in the health service, including more team and multi-disciplinary working. Another place where teachers need to work as a team is in planning integrated teaching. All too often they lack the cohesion, and we see repetition of the same thing by different teachers. Teachers find it tough to let go what they see their domain.

Similar things happen at a larger level during curriculum planning, when there is lack of interaction between different disciplines. You keep adding new things to the curriculum, and forget to remove what is redundant, or it is repeated in subject after subject. The poor student has to cope with the burgeoning syllabus.

17 laws of teamwork by Maxwell:

1. The Law of **Significance**: One Is Too Small a Number to Achieve Greatness
2. The Law of the **Big Picture**: The Goal is More Important Than the Role
3. The Law of the **Niche**: All Players Have a Place Where They Add the Most Value
4. The Law of the **Great Challenge** ("Mount Everest"): As the Challenge Escalates, the Need for Teamwork Elevates
5. The Law of the **Chain**: The Strength of the Team Is Impacted by Its Weakest Link
6. The Law of the **Catalyst**: Winning Teams Have Players Who Make Things Happen
7. The Law of the **Vision** ("Compass"): [Vision](#) Gives Team Members Direction and Confidence
8. The Law of the **Bad Apple**: Rotten Attitudes Ruin a Team
9. The Law of **Countability**: Teammates Must Be Able to Count on Each Other When It Counts
10. The Law of the **Price Tag**: The Team Fails to Reach Its Potential When It Fails to Pay the Price
11. The Law of the **Scoreboard**: The Team Can Make Adjustments When It Knows Where It Stands
12. The Law of the **Bench**: Great Teams Have Great Depth
13. The Law of **Identity**: Shared Values Define the Team
14. The Law of **Communication**: Interaction Fuels Action
15. The Law of the **Edge**: The Difference Between Two Equally Talented Teams Is [Leadership](#)
16. The Law of **High Morale**: When You're Winning, Nothing Hurts
17. The Law of **Dividends**: Investing in the Team Compounds Over Time

The most important function in a team work is that of leader. Leader has to identify weaknesses and strengths of individuals and then see how work is assigned.

Effective Vs Ineffective team:

Effective team: Goals are clarified and changed to meet everyone's needs; structured cooperatively.

Ineffective team: Members accept imposed goals; competitively structured.

Effective team: Team norms are explicitly stated and agreed upon.

Ineffective team: Norms are assumed

Effective team: Communication is two-way; open and accurate expression of both ideas and feelings.

Ineffective team: One-way communication. Either ideas or feelings suppressed.

Effective team: Participation and leadership are distributed amongst all team members.

Ineffective team: Leadership delegated; unequal participation.

Effective team: Decision-making procedures are matched with the situation.

Ineffective team: Decisions always made by highest authority; little group discussion.

Effective team: Controversy and conflict are positive opportunities.

Ineffective team: Controversy and conflict ignored, suppressed, and avoided.

Effective team: Interpersonally, there are high levels of inclusion, control, and affection.

Ineffective team: Functions are emphasized; cohesion ignored; rigid conformity promoted.

Effective team: The team evaluates itself and decides on improvements.

Ineffective team: Highest authority evaluates team; internal maintenance and development ignored.

Collaborative Learning Exercises

Some collaborative learning activities which could be adopted in our classrooms:

Think-pair-share: In think-pair-share, the instructor poses a challenging or open-ended question and gives students a half to one minute to think about the question. Students then pair with a collaborative group member or neighbor sitting nearby and discuss their ideas about the question for several minutes. After several minutes the instructor solicits student comments or takes a classroom "vote." Students are much more willing to respond after they have had a chance to discuss their ideas with a classmate because if the answer is wrong, the embarrassment is shared. Also, the responses received are often more intellectually concise since students have had a chance to reflect on their ideas. The think-pair-share structure also enhances the student's oral communication skills as they discuss their ideas with the one another.

Structured Problem Solving: Student groups are given a problem to solve within a specified time limit. A mini-lecture preceding the group problem solving may be appropriate depending on the specific activity. Each student is identified by counting off (e.g., from 1 to 4). The group is instructed to solve the problem such that all members agree on a solution and can explain the answer and strategy used to solve the problem. After the specified time, the instructor announces the number (e.g., "2") of the student to present the group's solution to the other groups. Besides the collaborative exchange, students become familiar with problem solving strategies, improve their communication skills, and reinforce their interdependence with other group members. Also, if this problem solving task is given right after a mini-lecture, the students are able to work with the concepts immediately.

Discovery method: This method is similar to the structured problem solving method except that student teams are asked to find the information they need to solve the problem on their own without the benefit of a mini-lecture. The instructor can structure a multi-layer discovery task. This way groups to ensure that groups that work faster than other groups can delve more deeply into the problem.

Send a problem: This task involves several groups generating solutions to problems or analyzing possible solutions. A problem can be created by the instructor or by the students in an earlier class. Once prepared, groups are either given a problem by the instructor or choose one themselves. Using a folder with the problem clipped to the outside, the group generates as many solutions to the problem as they can within a specified time. The solutions are written down and placed inside the folder. After the specified time, the folder is passed to another group which is permitted to see the problem but not the solutions generated by the first group. The second group also generates as many possible solutions to the problem within the time limit and places them inside the folder. A third group receives the folder and is given the task of selecting the best two solutions. This group reviews the solutions, consolidates them if necessary, and adds new ones as needed. The last step is a higher level thought process that involves synthesis and evaluation.

Think-Pair-Square: This is similar to Think-Pair-Share. Students first discuss problem-solving strategies in pairs and then in groups of fours. Since problem solving strategies can be complicated, this structure may be more appropriate with experienced collaborative groups. The instructor poses a problem. Problems that have a "right" answer work more effectively in this structure though open-ended problems also work. Students are given time to think about the question and then form groups of four. Two pairs of two students gather, each pair working to solve the problem. They then re-assemble as four and compare answers and methodologies.

The think-pair-square structure gives students the opportunity to discuss their ideas and provides a means for them to see other problem solving methodologies. If one student pair is unable to solve the problem, the other student pair can often explain their answer and methodology. Finally, if the problem posed does not have a "right" answer, the two student pairs can combine their results and generate a more comprehensive answer.

Drill review pairs: This structure is useful for courses that require drill and practice. Four students are grouped together as two pairs. Each pair is given two problems to solve. The two students are assigned roles of explainer (the person who describes step-by-step how to do the problem) and an accuracy checker (the person who verifies the correctness of the methodology used to solve the problem and encourages the other student if needed). After the first problem is completed, the roles switch for the second problem. After both problems are finished, the two pairs of students re-group and review the two problems. If the four are in agreement, the group forms pairs again and continues solving more problems. If there is disagreement, the group reviews the problem and reaches consensus on the solution to the problem. This structure can be beneficial following mini-lectures since it provides immediate reinforcement of any concepts or methodologies presented. When students are first learning a difficult concept they may need to help each other play the role of explainer.

Thinking Aloud Pair Problem Solving (TAPPS): The idea behind TAPPS is that presenting aloud the problem-solving process helps analytical reasoning skills. The dialogue associated with TAPPS helps build the contextual framework needed for comprehension. Similarly, TAPPS permits students to rehearse the concepts, relate them to existing frameworks, and produce a deeper understanding of the material. Students are paired and given a series of problems. The two students are given specific roles that switch with each problem: Problem Solver and Listener. The problem solver reads the problem aloud and talks through the solution to the problem. The listener follows all of the problem solver's steps and catches any errors that occur. For the listener to be effective, he or she must also understand the reasoning process behind the steps. This may require the listener to ask questions if the problem solver's thought process becomes unclear. The questions asked, however, should not guide the problem solver to a solution nor should they explicitly highlight a specific error except to comment that an error has been made.

Imparting interpersonal and leadership skills

Foundation course for undergraduates:

A foundation course of one week for the new batch of undergraduates held at Medical College, Karamsad, Gujarat.

The main purpose of foundation course at this stage is to help the learners in adjusting to the new environment in a medical college and develop skills for learning, so as to cope up with a vast curriculum. Many students who might have pursued rote learning in secondary/higher secondary education would find it difficult to cope up with new subjects. It is also necessary to sensitize students with interpersonal and communication skills, besides the role of information and communication technology.

The topics suggested for foundation course at this stage are as mentioned above.

1. History of Medicine
2. Study Skills, learning Techniques, use of Computers and information retrieval including use of internet.
3. Management of time.
4. Behavioral skills, group dynamics.
4. Stress management and coping skills.
5. Introduction to ethics, professional etiquettes.
6. Community based Medicine
7. Psychosocial issues and introduction to health economics.

Teaching Learning Methods may include structured interactive sessions, Case studies and simulated cases and triggers, Role play/Role Models, Video Clippings. CMCL Ludhiana has been experimenting with this type of introductory program for many years. There was a time in 1990s, when it used to be almost a month long with students spending that time in OPDs and wards, interacting with patients and visitors. It changed a number of times. However fresh students find it difficult to concentrate on these issues, which are alien to them. Finally it was narrowed on 3 important concepts- study skills, social skills and coping skills. It seems to be the right mix to us. However, an important issue is for the faculty is to role model these behaviors. If we teach them study skills but carry on only with rote lectures, for example, the concept is lost.

F. Service Orientation

There is a lack of doctors serving in rural areas. Before we begin the easy way out- criticize the government for not doing what it ought to- let us first do some introspection. Where are we failing as doctors in motivating our students to serve the people who need them most?

Since MGIMS Sevagram is India's first rural hospital- which was started in 1969 with the mission of orienting medical students to serve in rural areas. The following seven innovations, most of which are now adopted by other colleges as well:

Right in their first year, students participate in the Social Service camp- where they stay in a village for 15 days. And as I mentioned in a previous mail, MGIMS, Sevagram has an old tradition of adopting a village for each batch of medical students. Each student of the batch is allotted 4-6 families for their camp activities and follow-up activities for the next 4 years. They live like the villagers do, eat the food they eat and experience their surroundings. Initially it is tough getting used to pit toilets and makeshift bathrooms, but in the recent years, depending on the prosperity of the village, students have had the fortune of using proper toilets as well. The bond between the student and families usually is so strong that patients usually seek the student before they seek the consultant in case they visit the hospital.

Each department has been allotted time in these 15 days where the consultants visit and carry out free diagnostic camps. Patients who are referred to the hospital get free treatment, and the village is insured that year. Daily general OPD is run by the Department of Community Medicine. Specialists from each specialty also visit the village. Health education of the villagers is done at household and community level. A health exhibition is also organized in the village Panchayat building. Apart from these, the other activities that are carried out during the camp are school health check-up, tree plantation, promotion of soakage pits and kitchen gardens, promotion of organic farming, organization of 'Healthy baby, Conscious Parents' competition and organization of Kishori Melawa (meeting of adolescent girls).

Reorientation of Medical Education (ROME) camp is organized in our rural training centre for 12 days. They are provided clinical demonstration of the association of social and environmental factors in health and disease at family level. The students also understand the treatment seeking behavior of the villagers. Visits are arranged to the sub center, PHC, CHC and Anganwadi so that the students can see the health care infrastructure in rural India. The students carry out small surveys in the community and analyze and present the data during the valedictory session, thus equipping them with skills of survey technology, data analysis and report writing. They also provide health education in various schools of the area.

The students are divided into small groups for participatory learning of various National Health Programs. Students are provided training in 'data management through computers' as part of the ROME camp. Students also analyze data collected by themselves on various issues of public health importance using EPI INFO 6.

The plus points of rural postings are the simple living, interacting with the village folk, cooking our own meals, and we learnt to work independently and got the feel of being responsible for a patient. Many of our graduates actually learn a great deal after their rural service commitment as is apparent in their interviews for PG selection. They are able to answer the questions that follow brief case summaries much better than those fresh out of internship. And many have performed surgery during their rural service period. Arrogance is certainly not a desirable outcome and sessions on Medical Ethics and interpersonal relationships during MBBS training should be introduced.

There is the need to revive the institution of the family doctor. If it could be made the in thing to become a general practitioner like the NHS it would be great. And since the craze for being an MD isn't going to subside so soon in India, MD (Family Medicine) is one of the best things that can happen.

Having said all that about orienting our students to rural service the number of students actually working in rural areas are not many. Exact numbers, but the general perception is that people will do as they please. The mindset that comes from home doesn't change much. If you think it is fashionable to be a doctor with a posh consulting chamber and want to live in a city with all the amenities, I don't think anything changes it. Students, who originally belong to villages, if sensitive to the thought of serving the poor, will automatically go there. Other rural students who want to climb up the social ladder and want a 'good' life (read city) automatically choose to work in the cities.

Some interesting observations from the Report of the Task Force on Medical Education of the National Rural Health Mission

The terms of reference of the Task Force are as under:

To examine the possibility of revamping Medical Education with reference to the requirements of medical professionals under the National Rural Health Mission.

There is a widespread perception in the country that the MBBS curriculum is too theoretical in its content. After 4 ½ years of the main course and 1 year of internship, the finished graduate has very little 'hands-on' experience. Most graduates are not confident enough at that stage to even provide primary healthcare services independently. **The MBBS curriculum is closely linked to a tertiary care hospital. And, therefore, the graduates cannot function in a setting where there is no multi-disciplinary support, or advanced diagnostic hardware.** A large percentage of the graduates treat that stage as a launching pad for the post-graduate course. It is generally assumed that the clinical experience to equip the doctor to deliver medical services is only gained at the post-graduate stage. Whether this situation is inescapable, has never been critically examined. The medical graduate course of 5 ½ years is one of the longest professional courses. Lawyers undergo a 5 year course (after 12th standard), Masters of Business Administration a 2 year course (after graduation), Engineers a 4 years course (after 12th standard), etc. These other courses equip the individual to pursue their professions independently, though, of course, the standard of performance improves with time. It is only in the case of the medical graduate that an assertion is made that even 5 ½ years of professional training is not enough, as the management of health of a human being is a uniquely complex and demanding responsibility. As a solution it is suggested that the duration of the course be further extended in order to provide more intensive clinical experience.

The Task Force has carefully examined this issue and feels that the claim of clinical complexity of the medical profession is an over-stated one. Any professional course should equip the fresh graduate to practice his profession at the level of the more common tasks and services. **If the**

medical graduate does not have the requisite skills and confidence at the time of graduation, the fault lies with the curriculum and the pedagogic methodology.

The Committee was of the view that a fresh graduate must at least be able to deliver services contained in the primary healthcare package. The suggestion that the duration of the course be extended to give more intensive clinical exposure is not a practical proposition. As it is, the graduate medical course is one of the longest professional courses, and the students and their guardians, are exposed to a prolonged financial and familial burden. **With the extended time and substantial financial resources involved in a medical education, graduates are increasingly drawn towards the more lucrative specializations, their choice often being in direct conflict with broad community requirements.** Increasing the duration of the graduate course would only worsen those pressures.

Determinants of Service Orientation among Medical Students

Physicians' service orientation and understanding of patient expectations for service quality enhances both bedside manner and working relationships health care professionals maintain with patients and coworkers. Until recently, however, service orientation has received little interest. The reasons for this general lack of attention to service orientation include:

- regarding the act of service as not being prestigious nor requiring much skill
- believing that anyone can acquire these skills because they are so easy to develop
- extreme and one-sided focus on the scientific and technical elements of providing health care
- a generalized belief that highly developed social abilities are a natural by-product of being a health care professional.

In fact, service orientation is considered one of the key characteristics that bestow professional status upon an occupation (Reed and Evans, 1987). Paradoxically, there is a strong consensus that it is largely absent among many health professionals, especially physicians. Thus, one should not take for granted that higher levels of service orientation exist naturally among health care professionals, but that it is necessary to help them better understand and develop it.

The present study seeks to more fully understand service orientation as it exists among a key group of future health care professionals, namely medical students. The purpose of this paper is to present a description of an investigation of service orientation among a sample of medical students. It examines service orientation and how it is influenced by the students' perceptions of patient expectations for service quality and a variety of socio-demographic measures such as age, gender, marital status, and estimated future income.

G. Miscellaneous Non-Scholastic Abilities

a) Music

Soothing music helps heal faster. Music sure helps in the operating room, but should not distract. Music in the OR is always useful. There are two advantages: 1. It keeps unnecessary conversations to minimum - every one is engaged 2. Slow rhythmic music improves your pace and concentration in surgery

This is commonly used in business offices. In fact there are many evidences.

- Agriculturally, trees and flowers grow better with music
- It improves business performance

- For patients - there are now enough evidences to suggest that some diseases such as hypertension, IBS, and other disease are amenable to classical music - special ragas. Music keeps unnecessary conversation to the minimum. Sangeet Samrat Tansen was known to heal through music. According to music therapists, some of the ragas that have a positive effect on health are:

Bhairavi: Tuberculosis, asthma, cough

Asavari: Circulatory system, blood purification

Malhar: Anger, mental instability.

In India there are some centers that research the effect of music on health and healing. Research that putting an instrumental tune distracts as the mind starts to identify with the song being played but if it an instrumental one, whose lyrics are not known, then it helps. In earlier times (several hundred years ago), many physicians were also musicians and "scientists" (in that they questioned, disagreed, observed, experimented and reformulated their understanding based on systematic experiences). This was so among Arabic healers circa 1000, during the renaissance in the west, and probably elsewhere. Music is about the whole; wholeness, integration, completion, harmony-dissonance. It is a way to communicate ideas without language, without words - communication that goes deep and direct without the imposition of other symbols (language, etc). It includes emotional well being and feelings.

Music is about spatial and temporal relationships, patterns (like diagnosis and treatment), intervals between notes, time, empty space (rests) and history (melody). It has dynamic patterns (repeats of melodies with variations) that are pleasing (recognition). To play music is to give, to share with others. To heal is to help another to recreate, reorganize their wholeness in the moment and continuously. There is a flow, a free exchange of energy so that one can self-organize anew (heal) and be alive in the moment, every moment. There is a soothing role of music on all living beings including the human beings, animals and plants. Music and "mantras" (Vedic chanting) are supposed to send vibration to the external cosmos, purify the air and thus help in overcoming environment pollution. The practice of music also helps in cleansing our internal organs as the different notes (*SARGAM*) originate from the seven "*chakras*" the activation of which ultimately lead to the "awakening of *Kundalini*" the supreme seat of creative energies in human being.

Though the elements of music (*sur*, *lay*, and *taal*) deal with the techniques, the emotion "*Bhaav*" is at the heart of music which connects the soul.

Music should be encouraged in all sittings and settings wherever feasible (cultural activities, community activities, and health education. Music therapy may not benefit a terminal patient who is subject to a lot of pain; but a subtle kind of music with prayer component and meditation approach might be useful.

Medical science deals with service. So "Sing while you serve" should be the new slogan!

b) Sports

Those students are good at some sport are also good at studies generally. (Except few who are too good at sports but otherwise duds, but in the long run they turn out successful too). Besides simple good health sports provide many other abilities especially mental toughness. Sports and other hobbies do form a very vital part of our lives. They not only help us be fit, but also help us learn to accept defeat sportingly and enjoy winning gracefully. They help develop competitive edge and also team spirit. Mind games like chess exercise our minds too.

c) Intuition

Intuition is very important for Clinicians.

And here's the story, as written in the New England Journal of Medicine

Oscar the Cat Predicts Patients' Deaths

...It demonstrates the usage of tacit knowledge in medicine, in this particular instance in a cat.

It reminded me of tales of physicians/seers of yore who were said to have predicted not only their patient deaths but also their own deaths right down to the last minute and would generally choose to depart in style surrounded by their initially disbelieving relations.

Off course this may not be generalized to all physicians and this particular cat too needed to have been gifted to have found its place in NEJM (unless he was as success theorists like to believe just being at the right place at the right time).

In recent times another mention of tacit knowledge in physicians (British Journal of General Practice, May 2002 395) particularly with reference to predicting patient death has been made by a well known author physician and the paper also raises issues on EBM as EBM is definitely a way of reducing over-reliance on tacit knowledge in physicians:

That night, I went home and told my husband that I had seen a man who was going to die. He did indeed die, four days later, despite normal bloods and observation chart throughout. Postmortem showed a strangulated volvulus. This story raises a number of questions about the appropriate clinical management of the patient in hospital, but I include it here to show that intuitive insights are commonplace in general practice, and they may or may not save lives. They are rarely as impressive as the one I first heard quoted by Professor Nigel Stott (and which I subsequently analyzed in detail) from a GP in Cardiff: 'I got a call from a lady saying her three-year-old daughter had had diarrhea and was behaving strangely. I knew the family well, and was sufficiently concerned to break off my morning surgery and visit immediately.'

This GP's hunch led him to diagnose correctly, and treat successfully, a case of meningococcal meningitis on the basis of two non-specific symptoms reported over the phone -- an estimated 'hit rate' for that particular GP of one in 96 000 consultations, and a veritable tour de force for clinical intuition. The intuitive judgements we make on a daily basis in clinical practice are generally less dramatic but no easier to explain on a rational level.

Is intuition the secret of research success? Ask any Nobel Prize winner (I asked four) or any great inventor: "To what capacity do you owe your success?" The more self-assured, the more honest the respondent, the more success will attribute to intuition.

Whoever today neglects intuition does so at the peril of failure, especially in the hard-boiled realm of research and development. The reason is that in every research project, intuition is crucial at the beginning (the hunch), in the middle (the choice of optimal method), and in the end (application). As for a "thing" (an industrial product) coming into the hands of people, its marketing and selling can hardly be done without the nose, the Midas touch, the gut feeling—intuition.

ASSESSMENT OF NON-SCHOLASTIC ABILITIES

Why evaluate non-scholastic abilities at all?

A qualitative judgment can be done. However it may not be very objective. Passing a qualitative judgment is actually the definition of evaluation. Evaluation is the process of determining significance or worth, usually by careful appraisal and study. Without going into details of what is evaluation, it is also said to be the process of determining the worth or value of something. This involves assigning values to the thing or person being evaluated. This is what I was referring to. Will an evaluation of an ability which is not the primary ability of the specialty not affect the student or bias the faculty?

If one is to practice the 'art' of medicine (notice, no one says 'science' of medicine!) one needs to communicate well, be sensitive, be compassionate, be able to work in a team and get along with colleagues. In other words, one needs to do scores of other things, besides cramming up thick textbooks to be effective. Evaluation of these qualities is essential for two reasons. One, anything which is not evaluated is never learnt properly. You might pick up things by observation, but if you know something is going to be assessed, you learn it thoroughly, whether it is theory, practical or attitudinal. Two, the evaluation system itself is a motivating factor to imbibe these skills into one's personality. It is not as if non-scholastic skills are not being assessed in our present systems of evaluation. The traditional viva does just that- sees if a student can express himself. The long case does just that- assesses his/ her ability to reason out a diagnosis. The group discussions/ projects test one's ability to work in a team. The only problem is that all this is being done haphazardly. We do need to know whether the student can talk to his patient, counsel him etc. And we need to find tools to suit the ability we are testing.

We need to find relevant tools which suit us. It is another whole topic of discussion as to when and where we can assess these skills (we'll take that up a little later). But as of now, we can use rating scales, observational checklists and questionnaires to test these skills. They are not completely unreliable and give us a fair idea of whether the student is competent in a skill or not. An OSCE designed creatively will show you whether a student has learnt to counsel a patient. His peers, the nursing staff, his seniors can assess whether he is good at team work or not. One cannot separate scholastic from non-scholastic abilities and view them in isolation. I wouldn't look at you and say she is a good doctor because she knows each page of Nelson perfectly. You are a good doctor because you have knowledge and the ability to transfer that knowledge for the patient's benefit, with sensitivity, with compassion and with professionalism. Non-scholastic abilities are not just 'nice to have' or 'desirable to have', but 'must have' qualities. And since they are 'must have'- every effort must go into learning them.

Evaluation will also give the student an opportunity to know where he needs to improve. It is aimed at remedying the lacunae which exist. In my opinion, if you remove the non-scholastic part of a doctor, any robot with a heart of steel can do the job.

Not everyone possesses all these abilities that we listed. However some may be important. If it is detected early on that a student could improve on this skill, intervention and efforts may be planned. Also not all evaluation is summative. Formative evaluation also helps us correct the intervention process.

The actual evaluation may not be so simple since it has many variables, the parameters are subjective in nature and it largely involves the affective domain which is the most difficult to evaluate. Then there is another thing also, called Hawthorne effect. The fact that someone is watching you, in itself changes the performance. Unless we give weightage to these abilities-howsoever small it may be- it may be difficult to induce the students to learn them.

Many of us do not realize our non-scholastic abilities and having an evaluation system or a system to explore these may help the hidden talents or the introvert observers to come out and unknowingly display them.

Problems in Assessment of Non-scholastic abilities

The main reason for step-motherly treatment to non-scholastic abilities appears to be lack of indicators to quantify and measure these abilities. Standardized tools are difficult to get. But you can attempt to develop your own. But subjectivity is inevitable and it should be respected. You can reduce subjectivity by multiple observations over a period of time, multiple occasions, 360 degree assessment etc. We should try to see how to capture these abilities rather than declaring that they are "out of syllabus". Whether ethics or humanistic abilities or creativity, the fundamental concern is assessment; but setting "role models" and providing rich contextual experience is perhaps more important. If we have done it, we have a reason to be proud of.

It is paradoxical that as teachers we appreciate and enjoy non-scholastic abilities in our students but do little to identify and nurture them. None of our evaluation systems give due weightage to these abilities. It is just grades, marks and nothing else. How then do we expect our students to work towards these? While internal tests and University exams are mandatory for qualifying, participation in PULSE and like programs require special permission from the Dean. How often do we evaluate the ability to communicate/empathize/work as a team/etc in our students

Can a mandatory one-to-one interview with a psychologist or a psychological test be of use in this scenario- so that we get entrants with the right attributes?

MCOs cannot be used to select right kind of material for medicine, or for that matter any course involving attitudes and values. Psychological tests are more valid and useful; Qualitative tools such as document analysis, observation, in-depth interview, response to case scenarios and simulations (computerized) and 360 degree assessment etc. can be utilized, but they are labor intensive, time consuming and impracticable in our situation where numbers really matter. We are caught in the trap of providing transparency and capturing non-scholastic abilities (attitudes, behavior etc. etc.) which are very important for the profession.

Providing learning experience is more important than assessment (this is not to undermine the role of assessment). As teachers we can play a great role in reducing the exam stress, and encourage humanistic aspects. Each one of you may have your own tricks of the trade. Use them. A supporting and caring attitude may help in a big way in preventing mental disorders. Forget about video-cameras, just be what you are.

- The global trend in assessment is to enhance the fundamental attributes (relevance, validity, reliability, and feasibility);
- Traditional systems have overemphasized the knowledge, and to some extent skills, but we need to focus on the whole gamut of competencies, which requires a comprehensive tool box; ACGME grid can be illustrated as a starting point, but subject to modification depending upon the local conditions, expertise available with those who are in charge of assessment;
- It has been challenging for the teachers to capture abilities and outcomes such as critical thinking, communication skills, leadership & team work, professionalism including ethics, humanistic aspects, which bring about the need to assess (and foster) non-scholastic abilities in a systematic and comprehensive manner; We need to find/develop new tools and techniques;

- While the pendulum of assessment is swinging from subjectivity to objectivity (e.g., better structuring of the long answer/long case in to elements), there is also a move to go back, have a relook at the advantage of "holistic view" and retain the advantage of these modalities;
- On one hand the measurement is becoming more precise by using standardized approaches. On the other hand there is also a dilemma that we need to be more global, observant, student friendly and play "supporting role" rather than "judgment role" in fostering student learning.
- The assessment scenario which is unfolding in India and elsewhere is likely to face this unique challenge. Faculty development and capacity building play crucial role.

Assessment Tools to Evaluate Non-scholastic Abilities

A study that assesses the student's perception of formative vs. summative evaluation and self assessment vs. peer review of their communication skills.

The key learning points were:

While students seem to value formative methods of assessing their communication skills, they do not appear to value summative methods such as OSCEs. Students have different opinions about who should assess their oral communication skills. Despite student criticism of OSCEs, students suggest that summative assessment is necessary to motivate students to learn communication skills.

Judgment can be made based on observation. How they work, their attitude towards patients and colleagues. Evaluation methods can be selected based on which ability you want to measure. Hence it is not possible to comment in general. All principles of evaluation have to be taken into consideration for a particular ability. One source is the bio data form we make each one fill on beginning of each professional under the column 'Hobbies'. Also organizing a small students festival, giving duties to students during conferences also brings out the non-scholastic abilities.

Some assessment tools from a paper on surgical skills which could be adapted in our context:

Multi-source feedback (MSF)

This is an opportunity for a range of assessors (including doctors, nurses, and other healthcare workers) to give feedback about an individual doctor's performance in the workplace; the trainee selects the assessor. When complete, the educational supervisor discusses the feedback with the trainee and advises on what they are doing well and on areas for improvement. The trainees can compare their results with their peers to see how they are doing.

There are two MSFs, and trainees will complete one or the other. They are the mini-peer assessment tool (mini-PAT) and the team assessment of behavior (TAB). The mini-PAT uses eight assessors and the trainees fill out one form themselves; the TAB uses 10 assessors, of which at least five must be qualified nurses and three must be doctors.

Clinical evaluation exercise (mini CEX)

This is a 15-20 minute appraisal of a doctor/patient consultation. The structured checklist is designed to promote the use of "Good Medical Practice." The assessor records an evaluation and then gives feedback after the consultation.

ABSTRACT: At present the non-scholastic abilities such as human relationship, moral reasoning, creativity, initiative, leadership qualities, decision making etc. are being neglected in the M.

Ch Urology residency programme, as compared to scholastic or technical abilities. The non-cognitive personal attributes have been shown to be better predictors of academic as well as vocational success than only the cognitive abilities. The present method of evaluation of the former qualities, if it exists at all, suffers from major shortcomings such as lack of objective assessment, and failure to use the assessment as a motivating tool. An objective methodology for the self-assessment of non-scholastic abilities is suggested for the continuous monitoring and development of non-scholastic behavior in urology residents. Such an assessment is expected to reveal indirectly the lacunae, if any, in the urology department/institution, pointing thereby towards precise remedial measures to be instituted promptly so that urological administrators, teachers and residents can mutually continue to strive for standards of excellence, consequently reflected as improved total performance. (Tandon SP; Natarajan V; Rao MS; Vaidyanathan S; Jindal RK; Goswami AK .Assessment of nonscholastic abilities in the M. Ch (urology) curriculum.

Indian Journal of Urology. 1985 Sep.; 2(1): 26-32)

A scale for formative assessment of postgraduates. (Dr Sethuraman, JIPMER)

Resident evaluation checklist on professionalism

0 1 2 3 4 - unsatisfactory

5 6 7 8 - satisfactory

9 10 - exemplary

1. Empathy in patient care
2. Appropriate fund of knowledge
3. Soundness of clinical judgment
4. Technical expertise with diagnostic and therapeutic procedures
5. Communication with patients, families and staff
6. Sensitivity and responsiveness to individual patient differences in economic status, ethnicity, age, gender and disabilities
7. Honesty in dealing with patients and colleagues
8. Accountability for actions
9. Conflict resolution skills
10. Adherence to regulatory, institutional and departmental norms

Global Assessment of Competence

The more complex the behavior or ability you wish to assess, the more global is the assessment. You can't break a complex issue down into its component parts and hope to make valid inferences from the bits and pieces of data you get. It's not a machine made up of parts. It's better to make global judgments based on criteria that have been agreed upon by all concerned, then tested with students and then readjusted.

Also, when teachers pay attention to an ability, comment on it, provide feedback and act as role models, the students value it. The complexity of the issue however, makes the assessment scale, its analysis and interpretation equally complex. If we generalize evaluation for these abilities then it might become too complex. However it's important to see that the ranking or selections have descriptors or criteria. These can be modified by a group of teachers if they all agree. The difficult part is the faculty development necessary in order that all teachers involved are familiar with the instrument and able to use it well. The traditional Indian system of education even to this day emphasizes and gives undue importance to acquisition of knowledge from books and evaluation systems that test memory rather than analytical thinking and reasoning. This trend continues in higher education too including medicine. The teachers are also conditioned to think so. There is a gradual and silent revolution taking place both in the primary and higher education. It's hence important to first develop faculty towards the newer desired changes, so that they can impart the right message to the students by the right methods. We have to begin with the basics and have a simplified

approach and then proceed to the complex. And that makes the faculty development all the more vital.

How to Select Medical Students

Can the final psycho-analysis be done in a second test conducted by the institute where the student is joining? After all AFMC, does have its fitness test- and they are very strict about it. And the problem is not as small as it seems. Each year we hear of suicides by medical students who turn out to be undiagnosed schizophrenics or depressives. Only recently, we had a postgraduate student who was clearly mentally ill, and had been pushed by undergraduate examiners every year to pass and had reached our Department. Having him meant a very tense time for all of us, because he would turn violent and abusive without notice, threaten to commit suicide if reprimanded, and make terrible errors with patient reports. He couldn't cope with either colleagues or studies. He refused medication because it made him sleepy. When we finally got him to compulsorily see a psychiatrist, he resigned from his residency. Last year we heard on a news channel that he'd committed suicide, blaming his newly-wed wife for the decision. I'm sure we all have our stories to share.

The prevalence of any common mental disorder in doctors is as high as 28%, compared with 15% in the general population. Specifically, depression occurs in 10% of doctors, compared with 5% of the general population. Suicide rates are worse too, with male doctors twice as likely and female doctors three to four times more likely to commit suicide than the general population.

Unfortunately, the Supreme Court judgment restricted merit to MCQ tests (of questionable value by themselves). And now, the new ruling on internal assessment is going to spell doom for any efforts to make the things better. Judiciary has to go with the letter, even if it means killing the spirit. The educational side effects of these things take time to manifest but when they do, generally, it is a point of no return.

The University of Newcastle, Australia has modified its admissions process using interviews and non-scholastic data. They have shown that if you take the top 10% instead of the top 1% of candidates (based on entry scores on a national exam) the results in school performance are the same (see research published by David Powis).

The definition of merit may be different for different view points and for different persons. We are far from establishing a definition of 'holistic merit' in our systems. But, it is not just the definition to be blamed for the rising psychological problems in medical school. It is also the general expectation of everybody around.

From parents to teachers, friends, peers, colleagues, superiors etc. every person has a certain level of expectation from the other that tends to push us to the edge.

We need to carefully select a tool for aptitude testing. In India, a number of factors matter when it comes to developing certain qualities- socioeconomic status, place of stay, opportunities to education, type of educational institutions, living culture. Selection merely based on academic achievement may not do justice in a country where there are very wide gaps in opportunities of personal development.

These skills need to be assessed during the course of training of a medical graduate. These competencies cannot be evaluated in isolation. In fact, almost all these can be evaluated in some measure on a single patient. While assessing these aptitudes, attitudes and abilities is not an easy task, an attempt has to be made to tailor our curriculum depending on the competencies we need in a medical graduate. Emphasis needs to be given on formative as well as summative assessment, as evaluation of these skills helps students in identifying the lacunae and are a remedial measure.

