Guest Editorial

Meeting the current medical education challenges in Resource – Poor settings

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Medical and health professional education is a relatively new discipline that sits astride the borders of education and medicine. Medical teaching has evolved from being opinion-based to evidence-based and the art of teaching is rapidly becoming the 'science' of teaching. The need for evidence in our teaching and medical education practices is as important as it is in assessing a new therapy. This approach to education is not only associated with better results in terms of better learning, from the side of the students (the consumers), but also has a wider impact on patient care and the community.

While as health professionals we are well aware of EBM, i.e. Evidence Based Medicine, the concept of BEME, i.e. Best Evidence Medical Education is quite novel and hence not very well known. While EBM comprises 'What the doctors should be taught' (Evidence based Medicine for sound clinical practice), BEME is '*How they should be taught*'. The Best Evidence Medical Education is defined as 'the implementation, by teachers in their practice, of methods and approaches to education based on the best evidence available'.[1]

It involves a professional judgement by the teacher about their teaching taking into account a number of factors - the QUESTS dimensions.[2] The Quality of the research evidence available - how reliable is the evidence?, the Utility of the evidence - can the methods be transferred and adopted without modification?, the Extent of the evidence, the Strength of the evidence, the Target or outcomes measured - how valid is the evidence? And the Setting or context - how relevant is the evidence? The evidence available can be graded on each of the six dimensions.[2] The QUESTS criteria for evaluating evidence were accepted as the basis for the development of a tool which could be used by the teacher to evaluate the evidence available.[2]

Even as scientists, teachers in Medicine, somehow cling to the idea held for centuries that 'Teaching is an Art and not a Science'. Changes in climate and the environment, the ease of movement across the globe, and the increasing variety and severity of existing and new health problems are calling for a global effort to improve healthcare. This requires doctors better equipped to cope with the pace of change and the variety of illnesses, and much improved healthcare systems. Hence there is need to match the approaches of 'Medical Practice' and 'Medical Education', and apply the same scientific principles to medical education which we use as clinical scientists.

Careful reflection on the subject convinces a progressive practitioner of the importance of Best Evidence Medical Education, although its implementation is less easily adopted.

The implementation of BEME at present faces immense resistance in the form of almost stubborn ideology, cast iron practices, and a very cold attitude towards emerging research. There is a need to create a well-founded awareness of the issue, a change of behaviour away from the rigid opinion based thinking and to nurture a culture of more reasonable evidence based thinking!

Tackling of a problem of such magnitude, in our opinion, requires a very practical approach, progressive thinking and a strong multifaceted strategy involving actions for 'Change of Behaviour' at various levels. These need to encompass both individual and institutions including all relevant

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stakeholders and national bodies. The higher the level that needs to be influenced by new ideas, the more the resistance, but once successful, the bigger the benefits in terms of impact on the system!

Role of National Bodies & Other Stake Holders:

National bodies and Stakeholders can play their role by pressing the need for change on the institutions they work with. This can also operate in the reverse direction, i.e. the institutions can speak to national bodies and other stakeholders such as the country's National Health Services to focus attention on the need to improve medical education according to best available evidence, plan projects to help the issue and to allocate budgets, schemes and scholarships to achieve the objectives.

How Can The Institutions Play Their Part?

Institutions are in a position to act at diverse facets to attack the resistance to the adoption of BEME, for example by:

* Arranging introductory meetings with teachers and managers highlighting the need for and the importance of BEME. Encouraging the participation of medical students may multiply the pace of achievement.
* Arranging regular seminars and workshops led by experts in BEME.
* Encouraging teachers to look into the research relating to medical education and adopt the best methods in teaching suited to their circumstances.
* Arranging protected time for all teachers to familiarize themselves with the latest research in Medical Education.
* Facilitating access to relevant resources, e.g. by providing internet access in the premises for the latest research and reviews, and ensuring the availability of Medical Education journals in the institution library, e.g. 'Medical Teacher' by AMEE (An International Association for Medical Education).
* Providing training on the use of computers and the internet for teachers not equipped with IT skills.
* Helping the staff in shedding their resistance to change and to accept the implications of new ways and methods, supported by evidence for their use.
* Building an atmosphere of informal chats between teachers in tea and lunch breaks for the dissemination of research and the individual experiences of teachers.
* Creating a culture and ethos in which evidence based practice engenders respect and trying new methods does not become a source of ridicule or discouragement for the teacher who tries it, especially so if the method does not prove very successful initially.
* Providing financial rewards and incentives for those teachers who adapt to BEME.
* Setting up rewards in the form of Acknowledgments and Certificates providing credits towards CME (Continuing Medical Education).
* Recruiting new staff experienced in working according to BEME.
* Including the need for 'Adherence to BEME' into the job descriptions of all new teaching posts, and making it a criterion for appointments and promotions.
* Ensuring that all issues such as Curriculum Planning, Teaching Methods, Assessment Methods, Staff and even Student Recruitment have principles set according to the most recent best evidence available in medical education.
* Accepting that habits should not be clung to merely because they have been there for ages. It should not be forgotten that the Age of a set practice is no guarantee of its reliability and the age of any theory is never a measure of the soundness of that theory!
* Joining organisations like the BEME Collaboration for regular updates regarding current research and as a reliable source of guidance in difficult matters. [The BEME group co-ordinator can be contacted via email beme.collaboration@warwick.ac.uk.]
* Organising online help forums and networking between experts and novices in the field.
* Collaborating with other institutions who have already adopted the BEME approach or who are in the process of doing so.
* Providing feedback from students, stakeholders and the community ultimately treated by the doctors graduating from the institution, to the teachers, to amend, improve or feel further motivated about their teaching methods and strategies. This provides a clear picture of any lag between what they are intending to achieve and what they are actually achieving in terms of the education of their students.
* Assigning project leaders to implement BEME in the institution. These leaders could be either specifically appointed or internally promoted from existing employees based on some experience in the application and practice of BEME, or at least having enthusiasm to take the challenge well and to direct colleagues towards BEME.

* Arranging quarterly or monthly meetings to plan the implementation of BEME and to assess its progress.
* Encouraging Accountability and Quality Assurance to aim for an ethos for searching for best evidence in medical education and practicing accordingly.
* Funding local research in medical education at the institutional level to obtain a clear picture of the specific local education needs, as apparently no method is ideal for all situations and the best results are obtained if teaching methods are adapted according to relevant local characteristics.
* Creating future experts in BEME by partially or fully sponsoring the studies of interested teachers and new medical graduates in Medical Education.
* While making strategic decisions for the institution, the abuse of political power, prestige and force should be totally dispirited and only scientific reasoning should be allowed.

How Can The Teachers Play Their Part?

Teachers without doubt are the essential link between the institution's objectives and actual achievements. It is crucial that they understand the need for BEME and participate in the implementation and practice of it. They can play their role by:

* Abandoning Opinion based teaching in favour of Evidence based teaching.
* Discouraging cherished but useless or even harmful traditions in teaching, and becoming a more scientific teacher!
* Learning about the latest research in Medical Education and finding out ways to apply it to their teaching practices.
* Participating in relevant seminars and workshops.
* Accessing reliable teaching journals and websites to keep them up to date. (e.g. www.bemecollaboration.org)
* Establishing close collaboration with researchers in the field.
* Getting help from known experts (including teachers experienced in the use of BEME) in the field and disseminating to other colleagues what they have learnt.
* Practising a variety of teaching styles to suit the needs of various topics, various situations or students rather than maintaining a rigid preference of any one style. Improving their own techniques by obtaining feedback, which is another way of collecting evidence at a personal level.
* Becoming a reflective teacher and promoting the idea of scholarship in teaching.
* Seeking support and help if feeling diffident about applying novel research findings.
* While researchers in Medical Education are devoted to 'Looking for the Truth' and finding scientific facts in Medical Education, it should be the responsibility of a teacher to act as a 'Facilitator' for the implementation of this research rather than conveniently ignoring the efforts of fellow researchers and letting the findings go wasted. Taking the initiative should be a matter of one's own behaviour and sense of responsibility rather than waiting for it to be imposed as a duty by the authorities!
* While looking for such research all those responsible for teaching should make use of the best evidence and not necessarily keep waiting for Randomized Controlled Trials or even quantitative studies to bring a change in ones attitude towards teaching practices.

How Can The Students Play Their Part?

* Participation in activities related to BEME can prove fruitful and rewarding, as students are then more willing to give feedback and have a feeling of ownership of the objectives, with motivation to provide further input in the form of additional suggestions.
* A few students, especially in their final year, may be appropriately motivated to conduct small surveys among fellow students giving a better picture of the prevailing teaching practices and their effectiveness, as well as any unmet needs of students.
* Such surveys can also be done at the 'consumer' level by finding out patient satisfaction levels with trainee doctors from a certain institution. Such surveys may be conducted relatively simply in a hospital outpatient department where patients can be asked for a feedback regarding certain aspects of their care, e.g. history taking, examination or treatment plans. Here the students will be helping their teachers directly by collecting evidence for them in their own setting and medical education can then be further modified according to specific local needs.
* Finally, the students can be a source of enormous encouragement to teachers who practise the principles of BEME, by acknowledgement of the teacher's efforts and appreciation of effective teaching practices.

BEME has to be a 'Culture', a 'Behaviour' and not simply an 'Action' or even a 'Project' to display its full potential! And this BEME Culture has to be adopted by all to achieve the best outcomes.

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1. Harden RM, Grant J, Buckley G, Hart IR. BEME Guide No 1: Best evidence medical education. Medical Teacher 1999;21(6):553-562.
2. Harden RM, Grant J, Buckley G, Hart IR. Best Evidence Medical Education. Adv Health Sci Educ Theory Pract 2000;5(1):71-90.

HELPFUL WEBSITES:

1. The BEME Collaboration: A group of individuals or institutions who are committed to the promotion of Best Evidence Medical Education. http://www2.warwick.ac.uk/fac/med/beme/
2. AMEE: An International Association for Medical Education http://www.amee.org/index.asp?tm=23
3. Medical Teacher (An International Journal of Education in the Health Sciences produced by AMEE) http://www.amee.org/index.asp?tm=42&cookies=True
4. Medical Education: http://www.mededuc.com/ http://www.blackwellpublishing.com/journal.asp?ref=0308-0110
5. Association for the Study of Medical Education. http://www.asme.org.uk/
6. The Clinical Teacher (Journal) http://www.theclinicalteacher.com/