POST GRADUATE MEDICAL EDUCATION :
THEMES AND TRENDS

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Worldwide post graduate medical education is changing following certain themes and trends. The major difference between undergraduate and Post Graduate Medical Education (PGME) is that PGME needs more competence and professionalism. Besides in PGME there is more use of evidence based medical education and self assessment. Overall demand of society from post graduate is different with respect to mode of health delivery. During last few years in Bangladesh PGME had a major change: non residency to residency course and also innovative change in Observed Skilled Clinical Examination (OSCE) in fellowship examination. We should know our resource, imagine what is needed in future and proper plan for implementation. In this way we can reduce a gap between ours and developed countries.

Medical education is dynamic. Past experience is a guide to make curriculum for the trainees. All approaches are remodeled to teach and inspire for self learning. Globally for a post graduate training a minimum 7-9 years is required to develop competencies in the discipline. According to Patil the features of postgraduate training are [1].

- A progressive syllabus that has both formal and informal elements
- A recognized trainer and training unit
- Proactive supervision
- A balance of clinical duties and educational activities
- Protected time for education
- Defined exit outcomes

According to Harden PGME is now a composite outcome of education according to firm scientific basis, traditional topics, newer theme like professionalism and inter-professionalism [2].

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Themes and Tends of PGME
Themes
There are four themes [3]

1) Postgraduate medical curriculum

2) Application of learning technologies

3) Assessment of competence

4) Professionalism in medical education

PGME Curriculum
There are two trends in PGME curriculum [3]
1) Outcome based education
2) A unitary approach to medical education

1) Outcome Based Education: There are two models

i) Model adopted by 'The Accreditation Council for Graduate Medical Education (ACGME) in the USA'. In this model knowledge, attitude and skill has to be attained in six competencies [4].

- Patient care
- Medical knowledge
- Interpersonal and communication skills
- Professionalism
- Practice based learning and improvement
- System based practice

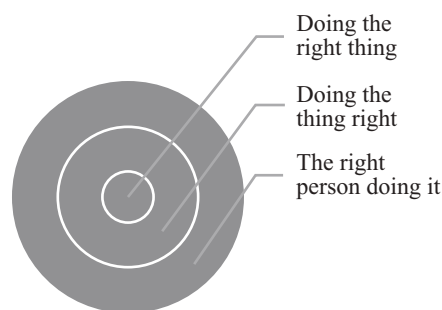ii) The three circle model : It has three circles [5]

Fig 1 : The three circle model

- Inner circle: What the doctor should be able to do ? ('doing the right thing')
- Middle circle : The approaches to doing it ('doing the thing right')
- Outermost circle : The development of the individual as a professional ('the right person doing it')

2) Unitary Approach to Medical Education

According to Medearis and Kinney medical education is a true continuum extending from secondary school to post graduate education [Fig-2]. [6]. Though it is not feasible at this moment many of educationists think that at least step should be taken for an integrated undergraduate and post graduate curriculum [7].
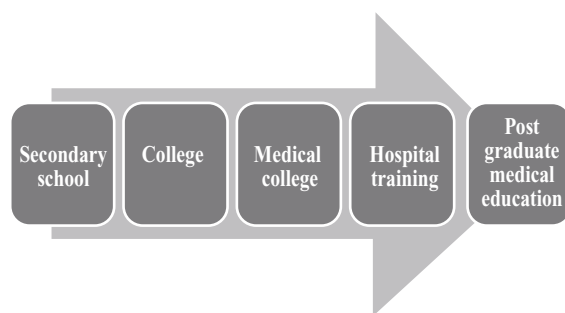
Fig 2 : Unitary approach to medical education

Learning Technologies of Post Graduate Education [3]

- Use of simulators
- e-learning

Simulators [8] : Its main advantages are

- Effective feedback
- Repetitive practice possible
- Multiple learning strategies
- Clinical variation
- Controlled learning environment
- Individualized learning

E-learning [9] : Characteristics of e- learning are

- Not just a passing fad
- Not only about knowledge transfer
- Effective and efficient On line learning
- Not isolated learning but Students can be part of an on line community
- Teachers and trainers have important but different roles
- Technology may be queen but pedagogy is king

Assessment: It is of two types

i) Competency and performance based assessment

ii) Portfolios and self assessment

Competency and Performance Based Assessment:

There are innovative OSCE in modern assessment [3,10].

- Questions whether students have the necessary clinical skills?
- Mastery of the required practical procedures?
- What about communication and information handling skills?
- Have they fulfilled appropriate clinical judgment and decision making skills?
- What about their attitudes and professionalism?
- Questions regarding their team approach and fellow feelings.

Portfolios and Self Assessment

A portfolio is a self assessment tool. It documents every day's work allotted to the students either in presence of a supervisor or by himself. Students have to present this during block assessment and there is a scope of scoring by trainer [3]. Advantages of portfolio assessment are [11] :

- There is no scope of reducing the total topics
- It assesses integrated and complex activities
- It is truly an outcome based approach
- It is a student centered self learning actively

Professionalism

It encompasses two roles of post graduate student

- A future trainer: They should have some competence and skill as teachers. It is time honored demand that the students should train undergraduate students and it should be supervised by post graduate teacher. This should be included in post graduate curriculum [12].
- Evidence based medical education and practice (fig 3): Today from diagnosis to management is based on best evidence and here is also a role of patient's choice [13].

The EBM Triad
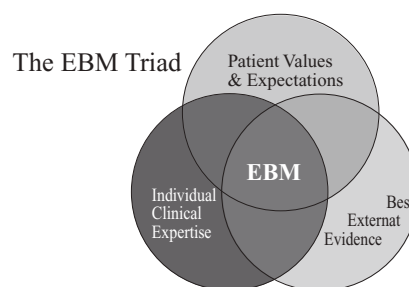
[Armstrong, E.C. Harnessing new technologies while preserving basic values. Fam Sys & Health. 2003; (21) 4 : 351-355.]

Fig 3 : Components of EBM

Pedagogy (Fig 4)

It is the discipline that deals with the theory and practice of education. On the background of content an appropriate technology is to be evaluated to teach specific subject matter [14].
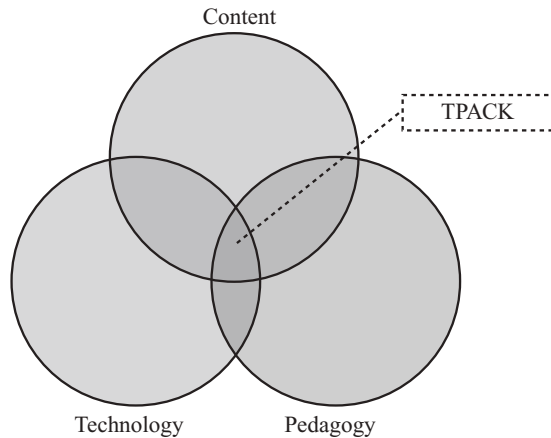

Fig 4 : Components of technological pedagogical content knowledge

In fine it is expected that there should be a strategic vision of the future for postgraduate medical education. The main hurdle for implementation of this vision is lack of imagination, proper planning and ability and a little bit lack of logistic supports for developed countries. In Bangladesh even we do not had any universal curriculum applied for all public or private universities, neither we had post graduate trainers with equal capabilities. In addition we must fill up the gaps between education and health care delivery. We have enormous pedagogical knowledge to support this. It is responsibility of all educationists and stakeholders.

References

1. Patil N G. The postgraduate curriculum. In: Dent JA, Harden RM, eds. A practical guide for medical teachers. Edinburgh: Elsevier Churchill Livingstone, 200531.

2. Harden R M. Evolution or revolution and the future of medical education: replacing the oak tree. Med Teach. 2000;22(5):435–442.

3. R M Harden. Trends and the future of postgraduate medical education Emerg Med J. 2006; 23(10): 798–802. doi: 10.1136/emj. 2005.033738. PMCID: PMC2579604.

4. Dyne P L, Strauss R W, Rinnert S. Systems based practice: The sixth core competency. Acad Emerg Med. 2002;9(11):1270–1277.

5. Harden R M, Crosby J R, Davis M H. et al. AMEE Education Guide No. 14: Outcome based education, part 5 from competency to meta competency: A model for the specification of learning outcomes. Med Teach. 1999;21(6):546–552.

6. Medearis D N, Kinney T D. On creating a true continuum of medical education. In: Anlyan WG, Austen WG, Beck JC, et al eds. The future of medical education. Durham NC: Duke University Press. 1973;133.

7. Shepherd S, Zun L, Mitchell J. et al. A model preclinical, clinical and graduate educational curriculum in emergency medicine for medical students and rotating residents. Ann Emerg Med. 1991;20(5):591.

8. Issenberg S B, McGaghie W C, Petrusa E R. et al. Features and uses of high fidelity medical simulations that lead to effective learning: A BEME systematic review. Med Teach. 2005;27(1):10–28.

9. Harden R M. Myths and e learning. Med Teach. 2002;24(5):469–472.

10. Harden R M, Gleeson F A. Assessment of clinical competence using an Objective Structured Clinical Examination (OSCE). Med Educ. 1979;1341–1354.

11. Friedman Ben David M, Davis M H, Harden R M. et al. AMEE Medical Education Guide No. 24: portfolios as a method of student assessment, Med Teach. 2001;23(6):535–551.

12. Hesketh E A, Bagnall G, Buckley E G. et al. A framework for developing excellence as a clinical educator. Med Educ. 2001;35:555–564.

13. Harden R M, Grant J, Buckley E G. et al. BEME guide no. 1: Best evidence medical education, Med Teach. 1999;21:553–562.

14. Lee H, & Hollebrands K. Preparing to teach mathematics with technology: An integrated approach to developing technological pedagogical content knowledge. Contemporary Issues in Technology and Teacher Education. 2008; 8(4): 326-341.