Summative to Formative Assessment: The Road to Competency Based Education.

K R. Sowmiya¹, Balaji Arumugam²

¹Associate Professor, Department of Community Medicine, Tagore medical College and Hospital, Chennai.
²Professor & HOD, Department of Community Medicine, Tagore medical College and Hospital, Chennai.

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ABSTRACT

Medical education in India has undergone innumerable changes in the recent years. However the ultimate goal of Indian medical education system is to produce an “Indian Medical Graduate” who can provide holistic health care to the people of India and the world. Community medicine is a medical science specialty which plays a major role in achieving this goal. However there is a big yawning gap between the curriculum taught and the assessment methods which hinder our way to the goal. Among the various competencies expected out of an undergraduate only few are assessed in the routine internal and summative assessment examinations conducted. The key areas like communication, attitude, professionalism, leadership qualities, working as a team and inclination to scientific research has to be addressed. Formative assessment like 360 degree assessment, experiential assessment, portfolio can help us realize our dream of creating Indian Medical Graduates, the Primary Health Care physicians of India.

Keywords: Competency, Community medicine, Formative assessment, Indian Medical Graduate.

INTRODUCTION

Medical education has existed in India from time immemorial. India has produced many competent surgeons and physicians since vedic times. Since then many changes have occurred in the medical curriculum. The recent curriculum has incorporated newer teaching elements like- integrated teaching both vertical and horizontal, early clinical exposure, foundation course for the fresher’s and so on. The ultimate aim of medical education in India is to create an “Indian Medical Graduate- IMG” with the necessary competencies to assume his or her role as a health care provider to the people of India and the world.¹ Competency in medical education is defined as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in general practice for the benefit of the individual and community being served”.² Competence depends on using expert scientific, clinical, and humanistic judgment to engage in clinical reasoning.³⁻⁴ And the branch of medicine which plays a vital role in creating competent Indian Medical Graduate is Community Medicine.

Name & Address of Corresponding Author

K R. Sowmiya
Associate Professor,
Dept of Community Medicine,
Tagore medical College and Hospital, Chennai.
5. Possess the attitude for continued self-learning and to seek further expertise or to pursue research
6. Familiar with the basic factors which are essential for the implementation of the National Health Programmes
7. Able to acquire basic management skills in the area of human resources, materials and resource management related to health care delivery.
8. Able to identify community health problems and be able to work as a leading partner in health care teams and acquire proficiency in communication skills.

**ASSESSMENT METHODS**

In a subject with vast scope, the assessment methods are still primitive. Tests used are:

1. Few internal assessments (formative assessment)
2. Qualifying exam (summative assessment)

It is of utmost importance to differentiate clearly the summative assessment to the exams which will guide the students and offer continuous feedback (formative assessment) as they produce different effects on student’s behavior. Summative assessment makes an overall judgment about competence, fitness to practice or qualification for advancement to higher levels of responsibility. It covers broad range of subjects at the end of the course, where there is comparison with peers & results in a pass / fail.\(^1\)\(^\text{[9]}\) It tests the performance of an individual on a given day and does not test the individual in depths. Whereas, Formative assessment is defined as "the process used by the teachers and students to recognize and respond to student learning in order to enhance that learning, during the learning."\(^2\) Formative assessments provide benchmarks to orient the learner who is approaching a relatively unstructured body of knowledge. They can reinforce students’ intrinsic motivation to learn and inspire them to set higher standards for themselves.\(^3\)\(^\text{[10]}\) Although summative assessments are intended to provide professional self-regulation and accountability, they may also act as a barrier to further practice or training, forcing them to learn without actually learning.\(^4\)\(^\text{[11]}\) Also Formative assessment is a crucial part of the educational process, especially where complex affective areas (humanistic approach), communication skills and ethical practices are to be mastered.

**CURRENT ASSESSMENT IN COMMUNITY MEDICINE IN INDIA**

The present day assessment, be it formative or summative in community medicine in India can be broadly classified into two types:

1. Theory examination
2. Practical examination

**Theory examination/ written examination:**
Theory exams are nothing but written tests which mainly assess the knowledge domain of the students. In most of the universities, the theory exam consists of essay questions, short notes and short answers. These assessment methods have the advantage of being relatively easy to frame and test knowledge and reasoning. The main disadvantages of these assessment methods are the limited range of application and lack of objectivity.

**Practical exams:**
The practical exams in community medicine consist of the following:

- a. Clinicoo social case presentation
- b. Epidemiological and biostatistics problems
- c. Objective structure practical exam (OSPE)
- d. Spotters
- e. Viva voce

These assessment patterns help in the assessing verbal skills. It may also assess interaction skills and student’s ability to apply their knowledge and problem solving skills.\(^5\)\(^\text{[12]}\)

**Pit Falls of the Current Assessment System:**
The current assessment assess the students knowledge, recall, clinical reasoning, analytical skills and to some extent the communication skills. But in a subject with wider scope and competencies, it is not enough to just assess the above said in a student who is going to be the first – contact or the primary care physician. The key areas like communication, attitude, professionalism, leadership qualities, working as a team and inclination to scientific research has to be addressed. Also it is of vital importance to provide feedback to the student, the ways and means to improve learning and acquisition of the necessary competencies. Formative assessment with effective and timely feedback can bridge this gap.

**Formative Assessment in Community Medicine- Newer Assessment Techniques:**
As touched on previously, formative assessment is assessment for learning\(^6\)\(^\text{[13]}\) and has been identified to have tremendous educational connotations on the degree of learning and has been recommended as an integral part of the curriculum rather than just an "add on".\(^7\)\(^\text{[13]}\) Formative assessment can be incorporated into the regular medical curriculum without conducting as a separate entity. In most of the universities in India, the medical students are posted in the community department from the first year onwards. During these clinical postings the key competencies listed before can be taught and assessed regularly hand in hand with effective feedback.

Experiential assessment can be followed both inside and outside the class room. And it would be ideal if the student performance is observed and assessed in
of competences that are difficult to evaluate in other settings. These formative assessment methods can be done during their regular rotatory clinical posting in community medicine. Feedback should be immediately given to the students based on their performances. Feedback is the single most important factor that has shown to have the maximum impact on student learning and accomplishment and determines the effectiveness of the formative assessment.\[17,18\] And most importantly it is not just the assessment methods that have to be revamped but also the teaching/learning methods have to be restructured. The curriculum should be made dynamic and medical advances should be incorporated at regular intervals. It should be kept in mind that medical student is an adult.\[19\] Inclusion of formative assessment into the curriculum requires commitment of the Medical institutions to support all activities for its implementation. Within the guidelines provided by the regulating bodies, institutes should integrate formative assessment into their curriculum using unique and time tested strategies.

CONCLUSION

Community medicine, a subject with vast scope and hope plays a vital role in creating the “Indian Medical Graduates” with the necessary competencies (knowledge, skills, and attitudes) to assume his or her role as a health care provider to the people of India and the world. There is a big gap in the current scenario between the goal of community medicine and its assessment methods. In addition to the traditional summative and internal assessment methods, formative assessment has to be formally included in the medical curriculum to bridge this gap. Formative assessment with newer methods like portfolio, multisource assessment, and constructive feedback can bring in better learning and understanding and make the undergraduate education more appropriate for the current needs of the people.

REFERENCES