Early clinical exposure: New paradigm in Medical and Dental Education

In words of Robert Louis Stevenson, "Don't judge each day by the harvest you reap but by the seeds that you plant." Belaboring this adage to education, the importance of "meticulous formative early years" in all spheres of education is intensely underscored. The intent of this editorial is to lay forward before the readers an intriguing concept of "Early Clinical Education" which calls for a shift in philosophy from "pedagogy" to "andragogy."

The Past…

A throwback on medical education worldwide brings out urgency of ushering in amendments at this hour. It all started in the mid-19th century when medical education was in shambles in the USA owing to the burgeoning "Proprietary Medical Colleges" that lacked disciplined teaching protocols and were busy churning out "doctors" (if we can name them so) of far too low competence. A revolution to curtail this deleterious trend in medical education arose in the 20th century and soon led to the establishment of what we may call a "Hopkins Circle." Among the selected few reformers in this circle, was a nonmedical educationist recruit, Abraham Flexner, who was entrusted with the onerous task of surveying colleges across length and breadth of the USA and Canada and suggesting reforms to improve the status of medical education. The result was the release of the famous "Flexner Report" also called as "the Carnegie Foundation Bulletin Number Four" in 1910. Aside from other guidelines, the report laid down the foundation of what we are still implementing today (a century later) - "the pedagogic pattern of training in medical schools." The distinctive feature of this report is the two years exclusive training on basic sciences (preclinical) followed by 2 years of clinical (patient) exposure. Clearly, the preclinical or the basic training has been siloed from the clinical training in this traditional format. This pattern was needed at that time, and much good came by implementing the same.

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The Present…

Today, however, we are experiencing tectonic changes in medical knowledge, technology, and practice. Changes to the clinical environment, the expectation of patients, the accountability to stakeholders, and the understanding of learning and its theoretical basis demand new, effective approaches to the learning, and the preparation of learners to be fit for purpose. Responding to these changes within and outside of medicine mandates an introspection to the existing lacunae in medical education and refurbishing the system to align with the shifting times. It can be rightly said that medical education is at "crossroads" and the time is right to adjust our sails!

One vista to turn winds to our favor is by introducing early clinical exposure (ECE)/experience, henceforward referred to as ECE. Nearly, after a century of Flexner's landmark study, "The Carnegie Foundation for the Advancement of Teaching" undertook another study wherein they followed Flexner's footsteps by visiting the medical schools in the USA and Canada. Subsequently, a program titled "A Summary of Educating Physicians," by "Molly Cooke, David M. Irby, and Bridget C. O'Brien" recommended following guidelines:

- At every level, the approaches to teaching must emphasize that "competence means minimal standard" of level of performance that all aspiring physicians must attain

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- The report called for "high intensity of integrated knowledge and skill in early patient experience," i.e. vertical integration of "practical experiences" into early traditionally theory years.

Following this, the "Report by Lancet Commission in 2010" and by the "Howard Hughes Medical Institute" also emphasized on competence-based education which have been published subsequently.

At this juncture, I would like to emphasis upon the vision 2015 by Medical Council of India with its recommendation on several facets of medical education including ECE/experience in India albeit with a slight adaptation to our setup!

So, What is Early Clinical Exposure?

Before addressing the same that let me address the issue of "what exactly is the problem?" The problem is that "Physicians of tomorrow are taught by teachers of today using curricula of yesterday."

ECE is just one modus operandi of contextualizing medical education. It is one method of modifying the curricula to meet tomorrow's need. It is basically "A teaching and learning methodology which fosters exposure of medical students to patients (actual human contact) as early as the first year of medical college, in a social or clinical context that enhances learning of health, illness or disease, and the role of the health professional."

It can have three basic forms of implementation. The first one is a college or a classroom setting wherein a patient (uncomplicated and cooperative) can be brought to the classroom and the basic science and clinical science teacher can discuss in detail with the students. In the second form, the students can be taken to the hospital "wards/clinics" and made to understand the protocols and patterns. These two "patient encounters" can help the student enhance their skills and understand diseases and ailments. The third form of patient exposure is that of the "community or underserved opportunity program." The object here is to provide a context for basic science learning by integrating it with clinical dimension, but more importantly societal perspective (socioclinical relevance and context to basic science learning). It creates awareness about how people live, how their living conditions influence health, and need of health services in a given population. By this form of exposure, students look beyond signs and symptoms of disease and think in terms of prevention of disease and promotion of health.

Why Do We Need It?

Irrespective of what form of ECE is chosen it provides a "spiral integrated model," i.e., a consistently graduated clinical and preclinical exposure throughout the time a student is in medical college. It is said, "the more you sweat in practice the less you bleed in battle." Clearly, the ECE format gives a veritable insight to the students into the entire system. One can say it helps the "naïve" students become more "seasoned" much sooner by the socialization with the medicine. It also helps to contextualize with the theory. Fewer gray zones and a clearer picture of black and white emerge when the students understand not just "what happens" but "why it happens" and "why do they have to study?" For instance, why "Krebs" cycle is important to learn? Why anterior triangle and its contents are important to be known to become a doctor? Why do we need to learn the composition of metal oxide paste if we have to work on a patient? By ECE, several such questions springing in our young minds can be answered. In fact, it has been reported that on implementing ECE, students do not feel they are merely "science students." Instead, the ECE validates their decision of choosing "medicine" and them being "doctors of future who share the onus of treating the patients." ECE brings about a smooth transition from a wide-eyed student to a physician occurs sans any abruptness. Hence, ECE bridges a chasm between preclinical or basic and clinical sciences.

ECE is an archetype of "vertical integration" in medical education, with an immense interdisciplinary contribution. A tremendous teamwork is required, and the same is encouraged for the success of this offbeat yet resourceful format. At the same time, the teachers (both basic science and clinical) are primarily facilitators, like a lighthouse, showing the path that the students take. This imparts the students a sense of responsibility and encourages them with self-directed learning.

Providing finer minutiae in relation to ECE is beyond the scope of this editorial. However, my main intent is to sensitize one and all about the prospect of ECE as the same has a strong formative influence that can be used to foster a socially responsive carrier orientation.

The Future…

I am not going to predict as I am no astrologer. But I sincerely hope to "sow our seeds right to reap a good harvest tomorrow!"

I sign off by quoting Benjamin Franklin's words of wisdom: "Tell me and I forget, teach me and I may remember, involve me and I learn."

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