

Re-defining the medical graduate – is there a need?

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Introduction

People do not like change – it makes us uncomfortable, particularly when we are set in our ways. With changes, there is an inherent need to adapt, acquire new skills and deal with the unknown and sometimes the unexpected. However, change is the norm. People change and circumstances change. If one is not willing to change, there is a risk of being left behind.

Concerning medical education in Sri Lanka, many things have changed over the years. Expectations of a medical graduate, the skills required, knowledge and attitudes are evolving. More importantly, the graduands are different – their learning methods, attitudes, and abilities are different to those in the past. The methods of teaching too have changed. The ready availability of IT-based developments including the use of artificial intelligence (AI) has redefined methods of teaching.

These changes must be taken into consideration and re-define the medical graduate concerning the knowledge and skills required. It is the responsibility of academics to foster healthy changes to medical education, regularly.

Evolution of medical teaching programs in Sri Lanka

The history of medical training in Sri Lanka goes back to 1847, when Dr Samuel Fisk Green, a medical graduate from the USA, started the first medical school in the country, in Manipay, Jaffna. He

intended to teach Western medicine to the 'indigenous population' of Sri Lanka 1. The Colombo Medical School was opened in 1870 and in 1880 was raised to the status of a college (Ceylon Medical College) 2. The curriculum, which was initially running for 3 years, was extended to 4 and then to 5 years in 1884 and date the medical undergraduate program remains the same duration.

With the establishment of universities in the country, medical faculties became part of these universities and currently Sri Lanka has 11 medical faculties within state universities.

They all follow a similar curriculum to the extent that all the undergraduates undertake the final examination with some common components, to be appointed for an internship in state hospitals. The current intake of these faculties is around 2000 per year.

Quality Assurance Processes: The governance of the faculties is mainly done by the respective universities. The University Grants Commission (UGC) recognizing the importance of maintaining the quality of the educational programs in Sri Lankan universities, established a quality assurance (QA) process in 2002, with the establishment of the committee on QA under the CVCD (Committee of Vice Chancellors and Directors). This later progressed to become the current Quality Assurance Council of the UGC in 2016. Internal QA units were established in the universities in 2005. The QAC ensures that

Table 1: University admissions for Medicine, source University Grants Commission

University	Proposed Intake 2017/2018	Proposed Intake 2018/2019	Proposed Intake 2019/2020	Proposed Intake 2020/2021	Proposed Intake 2021/2022
University of Colombo	190	190	224	224	224
University of Peradeniya	205	205	235	235	235
University of Sri Jayewardenepura	160	160	194	194	194
University of Kelaniya	165	165	199	199	199
University of Jaffna	150	150	184	184	200
University of Ruhuna	190	200	260	260	300
University of Moratuwa	-	-	100	100	100
Eastern University, Sri Lanka	80	80	114	114	114
Rajarata University of Sri Lanka	180	180	210	210	210
Sabaragamuwa University of Sri Lanka	75	75	109	109	109
Wayamba University of Sri Lanka	75	75	130	145	145

universities and their programs are reviewed regularly by external teams, based on the Sri Lanka Qualifications Framework (SLQF) standards. The medical degree programs of all universities are thus reviewed by this process. It ensures that educational activities address the level of competencies required by graduates of the relevant programs.

The SLQF Criteria: The SLQF has identified 12 categories of learning outcomes, under four core areas (Knowledge, Skills, Attitudes values professionalism vision for life and mindset and paradigm). (Table 2) All undergraduate training programs must ensure the imparting of these core areas.

Traditionally the curricula are geared to ensure the very of knowledge and this too under the first heading, i.e., learning outcome – subject and theoretical knowledge. This is done through didactic lectures, tutorials, etc. The second learning outcome, which is practical knowledge and application is vital – particularly for a course such as medicine. The 7 components under skills need to be suitably customized for a medical graduate. Such customization can be found as specific requirements of a medical graduate in the subject benchmark statement (SBS) for medicine (see below). One would realize that all 12 categories are vital for a medical graduate to succeed in his/her career. How much of this is emphasized in medical curricula is difficult to ascertain. Probably more attention and time should be allocated the categories 2 to 12 when delivering the medical programs.

Subject Benchmark Statement: The UGC through the standing committees of the different degree programs have formulated subject benchmark statements (SBS). They follow the above-mentioned 12 learning outcomes and are specific to the subject concerned. These are

developed and reviewed periodically by a group of subject experts, appointed by the UGC.

This SBS for medicine is a very valuable document for medical faculties to follow and adhere to. It allows autonomy to the faculty to conduct the program feasibly. It also recommends utilizing the methods of curriculum delivery and assessments which are evidence-based to be superior. However, there is no compulsion for the faculties to adhere to a particular method when addressing the SBS. This is understood, as the 11 medical faculties are quite diverse when it comes to resources (both infrastructure and manpower).

Minimum Standards Document: The QA of medical faculties took a new turn in the recent past with the Sri Lanka Medical Council (SLMC) establishing an accreditation unit (SLMC- AU) under its purview, which was recognized by the World Federation for Medical Education for accrediting medical degree programs. The SLMC also gazette a document containing minimum standards for medical education. The minimum standards document was prepared by a panel of experts appointed by the SLMC and all state faculties in existence had an opportunity to comment and edit. This document was a requirement to have legal status for the accreditation of medical faculties (both Sri Lankan and overseas). The minimum standards (MS) are quite elaborate and precise. This ensures that all faculties/ schools responsible for producing medical graduates in and for Sri Lanka are adhering to a minimum standard. One drawback of the document is that it appears to be prescriptive thereby leaving little room for innovation. The document being based on the traditional curriculum delivery methods practiced for many years in Sri Lanka, limits the freedom to explore different teaching/learning activities within a faculty.

Table 2: Categories of Learning Outcomes in the SLQF document

<i>Categories of Learning Outcomes</i>	<i>Core Area</i>
1. Subject/Theoretical Knowledge	Knowledge
2. Practical Knowledge and Application	
3. Communication	Skills
4. Teamwork and Leadership	
5. Creativity and Problem Solving	
6. Managerial and Entrepreneurship	
7. Information Usage and Management	
8. Networking and Social Skills	Attitudes, Values, Professionalism and Vision for life
9. Adaptability and Flexibility	
10. Attitudes, Values and Professionalism	
11. Vision for Life	Mind-set and Paradigm
12. Updating Self/Lifelong Learning	

Now we can see that there are many guiding documents which ensure the quality of medical education in Sri Lanka. By and large, these documents complement each other. By spelling out the learning outcomes, they also define the medical graduate that is produced in Sri Lanka.

The issue with the curricular content

Although these documents define specificities of subjects covered, the extent to which a medical graduate in Sri Lanka should have the knowledge and skills about these are not clear. This has left the faculties to decide the extent to which these subjects should be covered, e.g., the amount of surgical knowledge and skills required by a graduate from the University of Sri Jayewardenepura (USJ) is decided by the academics of the Department of Surgery of USJ. This results in academics from the relevant departments deciding on the volume of the relevant subject to be taught. Considering the finite period of 5 years an undergraduate spends in the faculty, the competing interests of subject specialists end up producing a workload that is difficult to complete within 5 years. This is seen in many medical faculties – with most having more than the number of credits recommended for a five-year program. One must realize that the credits are calculated in a manner that an undergraduate can manage his/ her studies with an acceptable amount of stress. When the credits exceed the recommended amount, it results in overburdening the students. Unfortunately, individual faculties find it difficult to define the balance of different subjects within the program.

Needs of the country

Sri Lanka is regarded as a country producing medical graduates of high quality. Our graduates excel both in Sri Lanka and overseas. Many might feel that there is no need to change, based on the performance of our graduates. However, this notion is probably applicable only to the top performers – probably the top 20% of the medical graduates. We tend to ignore the outcome of the rest of our graduates.

We also do not have an idea of the needs of our country. The intake for medical faculties is not decided based on the number needed for the country. The establishment of new faculties is neither dependent on the needs of the country nor the available resources.

In the recent past sources from the Postgraduate Institute of Medicine (PGIM), which is the only institution currently responsible for producing specialists for the country indicate that only around 25% of the graduates take up postgraduate studies in the country (Table 3).

Current documents which guide medical curricula are not clear as to the end-product we need to produce. Most believe that we should produce graduates who can become general practitioners. Others believe that they should be good interns. Some think that we should encourage postgraduate specialization. But are our programs designed to ensure these products? This is an important question for academics to address.

It appears that we are not considering the current needs of the country when it comes to the knowledge and skills of medical graduates. While the internship is mandatory and all our graduates should be able to complete the internship, several paths are possible to be taken by medical graduates in this country.

1. Post-graduate studies to qualify as a specialist
2. Full-time general practice
3. Senior house officer/ medical officer in a government or private hospital
4. Combination of medical officer and part-time general practice
5. Joining academia
6. Functioning as medical officers governed by other ministries, e.g., Ministry of Sports, Ministry of Defense, Ministry of Transport, Ministry of Local Government, etc.
7. Leaving the country for overseas

Table 3: Number of medical graduates following postgraduate programs

<i>Course</i>	<i>Intake 2021</i>	<i>1st year</i>	<i>2nd year</i>	<i>3rd year</i>	<i>4th year</i>	<i>5th year</i>	<i>6th year</i>	<i>Total</i>
<i>PG Certificate</i>	5	5	-	-	-	-	-	5
<i>PG Diploma</i>	216	409	45	-	-	-	-	454
<i>MSc</i>	94	179	104	-	-	-	-	283
<i>Inservice/Part I</i>	65	46	44	-	-	-	-	90
<i>Pre MD & Post MD(Local)</i>	488	506	449	565	729	236	10	2495
<i>Overseas Left & Return</i>	-	-	-	-	206	215	133	554
TOTAL	868	1145	642	565	935	451	143	3881

These numbers vary with time, and currently, the number leaving overseas is increasing. But this is mainly the top performers and the state universities probably need not consider the requirements of this group when defining the medical graduate. However, the other categories of healthcare staff are important, and it is good to know the requirements of the country of these categories and cater accordingly.

Who is responsible for defining the medical graduate?

Universities in Sri Lanka have the autonomy to decide on the curricular content and the methods of delivery. However, when it comes to the needs of the country, one may argue that universities cannot arrange for wider participation of stakeholders to decide on the needs of the country. The UGC is indeed responsible for the quality assurance of the degree programs conducted in the universities. One important determinant of quality is whether the graduate produced fulfils the needs of the country. Even though the SBS determines to some extent the definition of a graduate, it lacks the necessary details about curricular content and mainly provides a general guideline. Moreover, there is no compulsion to adhere to the SBS.

With the sudden reduction in manpower due to the migration of healthcare professionals, it is difficult for the ministry to address this issue with certainty at present. However, a long-term method of finding out the needs is of paramount importance.]

The SLMC which is responsible for the accreditation of medical degree programs, probably is bound legally to ensure that the graduates produced are suitable to work in Sri Lanka. Therefore, it is probably the body responsible for identifying the needs of the country and defining the product. SLMC has the authority to gather the necessary data on the requirements of the country from the relevant organizations – particularly the Ministry of Health. Stakeholders of the medical degree programs include average citizens of the country as well. They too should have a say about the medical graduates. All these views should be considered when defining the medical graduate. This should be reviewed periodically to suit the needs/requirements. One must remember that in developed countries the medical councils (e.g. General Medical Council of the United Kingdom) play the leading role in defining the medical graduate required for the country. There is no doubt that we could expect the same in Sri Lanka.

Once the necessary knowledge and skill set are defined after consultation with the relevant holders by the SLMC, the SBS and Minimum standards may be revised.

Responsibility of the faculties

The current undergraduates possess different skill sets when it comes to acquiring knowledge. The advancements in technology are second to them. Our teaching programs and methods should consider these during the designing and revision of curricula. More time should be spent on imparting the criteria 2 to 12 of the SLQF in the curriculum. This can only be done by prioritizing the knowledge component of the curriculum and selecting the essentials for didactic lecture-type teaching. Assessment should include areas other than knowledge and due importance should be given to these assessments.

Adopting innovative methods of teaching-learning activities might appear to be suitable only for established faculties with adequate resources. There is a worry among many academics that the loss of staff due to migration is a serious issue affecting the delivery of the curriculum effectively. This is true, particularly when we consider the traditional methods we utilize. But one must remember that some innovative methods, such as incorporating AI, integrated teaching etc. could ease the burden on the staff while optimizing the delivery. For example, the student-to-staff ratios are easier to maintain at optimum levels if the teaching is integrated. The students if allowed to use AI responsibly, might find content easier to understand and function at a pace suitable to them individually.

Conclusion

1. The need of the hour is to define the needs of the country with regards to the grade of medical graduates needed for the country for the next 10 years (particularly since almost all are employed in the Ministry of Health)
2. numbers taking up postgraduate studies (there may be a need to increase this)
3. knowledge (specific to subjects taught) and skills required of medical graduates, based on the common disease patterns and epidemiological trends of the country.
4. Once this is defined it would be up to the medical faculties to adjust the curricula to address the needs of the country, utilizing innovative teaching-learning activities which better suit the current undergraduates to produce medical graduates of higher quality. Both students and staff need to be trained in, using these novel cost-effective methods. One must realize that it would not be possible to produce graduates with all the required knowledge, skills, and attitudes, particularly since we would not know which path, they would end up in, after graduation. Therefore, it is important to produce graduates with the ability to learn on their own (self-learners) who would be able to progress in the path they choose to take.

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