Teaching and practice of Internal Medicine: Brazilian experience

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Introduction

The teaching of Clinical Medicine in Brazil has undergone significant reformulations since the 1960s. Several changes have been made in order to make it more appropriate and up-to-date. These include:

Clinical Medicine education integrating Propedeutics, Therapeutics and Infectious and Parasitary Diseases.

Implementation of the Departmental structure.

Coordination of the programs of various disciplines.

Students spending several hours per day in clinical service, under the supervision of teaching staff.

Emphasis on outpatient training.

One-year internship emphasizing full-time in-house training in the areas of Clinical Medicine, Surgical Practice, Pediatrics, Gynecology and Obstetrics.

With the inauguration in 1978 of the Hospital Universitário of the U.F.R.J, today known as Hospital Universitário Clementino Fraga Filho, the association of clinics, previously spread around several hospitals, was essential for this integration.

The Medical Course

In Brazil, university entrance is gained through an entrance examination (selection test) with the proportion of around 40 candidates to every vacancy.

Most colleges are located in the two largest centers, São Paulo and Rio de Janeiro. There are 11 medical schools: 4 federal and 7 private, in the state of Rio de Janeiro alone.

The first two years of the course are in basic disciplines, such as Anatomy, Physiology, Histology, Pharmacology etc, functioning outside the hospital. The clinical phase starts in the 3rd year. Clinical Medicine teaching starts there. From this initial phase until the completion of the training, the Instruction in Clinical Medicine is divided into four phases:

1st phase: graduation from the 3rd to 5th years of medicine.

2nd phase: graduation from the 6th year of medicine, separate from the previous phase because this phase of the final year of the medical course has differentiated characteristics in a separate group.

3rd phase: 2-year medical residency.

4th phase: Specialization in Clinical Medicine lasting one year.

Courses designated especially for doctors who do not have the opportunity to enroll in a medical residency program, and for those who graduated many years ago wishing to update their knowledge, appeared relatively recently.

1st phase: Graduation – The medical course in Brazil lasts six years. There are eighty Federal and State Faculties of Medicine in the country. Clinical Medicine education starts, as mentioned above, in the 3rd year of the medical course. This year the course is in Semiology or Medical Propedeutics, which is the introduction to Clinical Medicine. The students attend a Clinical Medical service for one year, full-time, where they receive daily and repeated training in anamnesis, the practice of physical examinations with daily training in palpation, percussion, cardiac auscultation, neurologic examination, etc, on inpatients or outpatients, emphasizing the correlation with clinical medicine from this initial phase.

In the 4th and 5th years of medicine they start to attend a Clinical Medicine service with theoretical and practical lessons, and begin to learn various pathologies of the clinical subspecialties. Special emphasis is placed on practical instruction, with a gradual reduction of theoretical lessons, making the course much more formative than informative. In this phase the students start to apply their training

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TABLE I

Distribution of Medical Schools by region of the country

	States	Schools
North	6	3
Northeast	9	13
Mid-west	5	4
Southeast	4	44
South	3	16
Total	27	80

in Semiology to the patient, making diagnoses and commencing therapeutics. It should be stressed that their training should be carried out in a Medical Clinic service proper, and not in specialized areas such as Cardiology, Gastroenterology, etc. Ideally, this activity should be done in the same service continuously, for 2 years (4th and 5th years of the medical course.)

Unfortunately in the majority of Brazilian universities, the 5th year is completely fragmented, with random lessons of specialties such as Orthopedics, ENT, Ophthalmology, etc, which does not allow for continuity of training in Clinical Medicine. An attempt to lessen the problem has been made in our service, allocating the 5th year students to the hospital ward during all their available intervals, and in the 2nd semester of this year, when they have more time, they following the same training program regime as the Internship.

In our Clinical Medicine service on the 7th ward of the Santa Casa da Misericórdia do Rio de Janeiro, two private universities operated with students distributed in groups of six to eight, in their 3rd to 5th years of the medical course. There are a hundred students (fifty from Universidade Gama Filho and fifty from Universidade Souza Marques) distributed in different schedules, in a service that has twenty-two beds, an outpatient service, small rooms for demonstration classes, an amphitheater and a library. The outpatient service includes Clinical Medicine, Pneumology and AIDS. The service has a staff of 12 professors, whose activity is continuously supervised by the head of service. The whole group carries out both teaching and healthcare activities.

TABLE II

Distribution of Public and Private Medical Schools

Public	45	56%
Private	35	44%

TABLE III

Indicators of courses in medicine

	1986	1988	1991
Places	7,767	7,594	7,786
Entrance exam entries	119,256	141,618	170,151
Places filled	7,696	7,758	7,523

The service functions full time, from 8 am to 5 pm, with a night shift, and on Saturdays, Sundays and bank holidays. The service has two full-time residents, 1R1 and 1R2.

2nd phase: Graduation Internship - This is the final year of the medical course, an intermediate stage between graduation and post graduation. In fact, because it is in-house training, it is the activity that is most similar to post graduation, and not dissimilar to the medical residency. It emphasizes full-time training from 8 am to 5 pm, with ward rounds (discussion of clinical cases in amphitheaters, weekly sessions, therapeutic update sessions and journal club). Scientific production is also encouraged, participating with the staff in scientific assignments and bibliographical reviews. Use of the service's library, which holds

TABLE IV

Distribution of medical residency programs and resident by region of Brazil

	Programs	%	Residents	%
North	5	2	93	0.9
Northeast	49	19	1093	10.2
Mid-west	22	9	633	5.9
Southeast	142	54	7139	67
South	41	16	1695	16
Total	259	100	10653	100

TABLE V

Clinical Medicine specialization course

Duration: 1 year, 720 hours

Curricular structure: Clinical Medicine 1
Clinical Medicine 2
Related areas of mastery
Clinical/ radiological correlation
Clinical/Pathological correlation
Clinical Epidemiology
Pedagogy

TABLE VI

Distribution of doctors by region of Brazil

		%
North	6,815	3.2
Northeast	35,070	16.6
Mid-west	13,437	6.4
Southeast	125,418	59.4
South	30,342	14.4
Total	211,082	100

classical works on Semiology, Clinical Medicine, and particularly, subspecialties, as well as several national and foreign medical journals, is also encouraged.

According to the rules of the Ministry of Education and Culture (MEC), this Internship must be on a *rotating basis,* which means the students must spend three months part-time in the areas of Pediatrics, Surgery, Obstetrics and Gynecology, with the serious inconvenience of partially interrupting their training. In my opinion, the rotating system is not ideal: students learn very little in three months in each of these areas, and spend precious time of their principal training.

It should also be emphasized that this final course year is essential, perhaps even more important than the medical residency, because at the end of the year, the students should be prepared to practice their professional activity. In Brazil the medical course is *terminal* in that medical residency, or any other form of training, is not compulsory. In reality most students finish their training for good at this point.

3rd phase: Medical Residency - In Brazil the medical residency represents a new *university entrance exam,* since 8 thousand physicians graduate each year, for 3000 to 5000 medical residency vacancies.

In Brazil the medical residency is only valid when held at an institution accredited by the Ministry of Education and Culture (MEC) at a university hospital, where possible. It was regulated by the National Medical Residency Commission (MEC) in 1981.

The Clinical Medicine residency lasts for two years. It represents full-time training between 8 am and 5 pm, five times a week, with on-duty shifts of around seventy-two hours. Ideally, it should take place exclusively at Medical Education Institutions. The shortage of vacancies, however, justifies it taking place at non-university hospitals, provided they are appropriately qualified. In clinical areas, the 1st year of residency (R1) of subspecialties such as Nephrology, Neurology, Dermatology, Cardiology etc, must be in Clinical Medicine. After two years of training, Clinical Medicine residents may opt for a third year (R3) in any clinical subspecialty. There are 2 years of in-house training with activity in the hospital ward, outpatient service, clinical sessions, anatomy and clinical sessions, radiological sessions, journal club, etcThe students are also encouraged to take part in research and bibliographical review activities. In addition, residents take part in seminars and discussion panels. They participate intensively in the activities of the service, including in the training of interns, specially the R2s. The training is basically *formative*, with a gradual reduction in the theoretical load.

4th phase: Specialization in Clinical Medicine - The main form of postgraduate training in any area of medicine is the residency. So why specialization in Clinical Medicine? It offers a training opportunity for those unable to take the residency program, and likewise, an opportunity for knowledge refreshment and skills up-dating for doctors who graduated many years ago.

Specialization courses have existed in Brazil for over twenty years, even before the medical residency was officially recognized in 1981. These courses were almost exclusively in specialized areas, particularly Cardiology, Obstetrics and Gynecology. Courses in Clinical Medicine are relatively recent in Brazil. The existence and value of these Clinical Medicine courses is linked to the philosophy of what is Clinical Medicine. Is it a specialty? And who is the physician? Which are the limits of his or her competence?

In our opinion Clinical Medicine is still the main medical specialty, recognized today (1990) by the Federal Council of Medicine as Clinical Medicine or Internal Medicine. And the physician is, undoubtedly the main integrator of medical practice, working together with specialists.

However, there has been a gradual devaluation and disrespect for Clinical Medicine, with a consequent overvaluation of the subspecialties. This began in the nineteen fifties in USA, and has been growing worse. At that time, in Brazil, the large services were Clinical Medicine services with specialists on their staff - Full professors specializing in Clinical Medicine. In the last thirty years, as they retired, they were replaced by professors specializing in Cardiology, Pneumology, Gastroenterology, Nephrology and Hematology, at the decision of the University Congregation. There are no longer any full professors specializing in Clinical Medicine.

In the USA, the shortage of practitioners is so severe that the problem would only be resolved if 50% of the medical residency vacancies were allocated solely to Clinical Medicine, which is not the case. This is one of the major concerns of the Clinton government, in the attempts to overhaul medical care in that country.

In Canada the Royal College of Physicians resolved the problem: 50% of residency vacancies are in Clinical Medicine, and consultations with specialists are referred by a practitioner.

In Brazil the severity of the situation attracted the attention of AMB and the Federal Council of Medicine, which decisively influenced the creation of the Sociedade Brasileira de Clinica Médica in São Paulo (Brazilian Society of Clinical Medicine in São Paulo) in 1989. Since then, seven regional departments have been created, including the one in Rio de Janeiro, founded by myself.

In 1992 we began our first Clinical Medicine Specialization Course recognized by the Federal Council of Education. The course was approved following a lengthy process, with stringent assessment of the titles held by our staff, their working hours, the distribution of disciplines, the teaching courses, the scientific methodology and medical ethics, as well approval of the service, including its physical layout: existence of library, outpatient service and ward. The specialization course must be in-house training lasting one year, with 720 hours of class. It should be held in a qualified Clinical Medicine service, preferably associated with Medical Education institutions.

As the main activities of the course, I would emphasize:

- Review of Semiology early on, in the first weeks, which is essential mainly for the knowledge refreshment of physicians who graduated many years ago;
- Discussion of cases with the staff at the patient's bedside;
- Daily ward rounds;
- Weekly clinical sessions;
- Weekly anatomy/clinical sessions;
- Radiological sessions;
- Outpatient practice;
- Emergency and ICU practice;
- Journal club;
- Discussion panels, seminars and conferences;
- Study of the physiopathology of the main clinical syndromes;
- Contact with state-of-the-art medicine and technological advances in ultrasonography, computed tomography, nuclear magnetic resonance, intervention radiology, nuclear medicine and bone densitometry;
- Clinical epidemiology;
- Scientific methodology;
- Medical ethics;
- Training in AIDS.

Our course has two types of student: newly graduated (66%) and a refresher course after five to ten years (33%). Only 10% have taken a medical residency.

We expect these specialization courses to make a decisive contribution to Clinical Medicine education, and also in helping to restore the image of the practitioner, contributing to the training of more generalist physicians, who are better prepared to cater for the needs of the population.

A recent editorial in the New England Journal of Medicine (March 1993) concludes that the shortage of practitioners in the USA is due to the fact that they have less prestige and earn less money (40% less) than specialists.

Good training in Clinical Medicine, which beings in the 3rd year of university and concludes with the medical residency or specialization, focusing on the considerable utility to the country of the figure of the general practitioner, will certainly help minimize the problem. We continue fighting to reach this goal.

Final commentary

I presented a brief report on the teaching of Clinical Medicine in Brazil. Although it has undergone profound reformulation, substantial change is still needed. This change must involve discussion of the philosophy of Clinical Medicine as a specialty, and of the figure of the practitioner as an integrator of medical practice.

The evasion of general practitioners is a global phenomenon that is being discussed at length in developed countries in America and in Europe.

In Brazil, our struggle began in 1989, with the creation of the Sociedade Brasileira de Clínica Médica. (Brazilian Society of Clinical Medicine). In 1991, we created the Regional Department of Rio de Janeiro. It was not until 1993, however, that Clinical Medicine was recognized as a specialty by the Federal Council of Medicine, with this name or Internal Medicine.

Recognizing the value of Clinical Medicine and the figure of the practitioner will certainly contribute to improving the teaching of Clinical Medicine.