

Training Program at Medical School of Chieti, Italy

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The Italian Ministry of Education, University, and Research (MIUR) has recently extensively revised the planning and contents of medical training in Italy. Teaching guidelines have been formulated and a reformed course, Medicine and Surgery Magisterial Degree, has been set up. The main teach-

We describe the changes in medical training program offered at the G. D'Annunzio University Medical School in Chieti-Pescara, Italy, which took place over the last decade. The new curriculum differs from the previous one in several important aspects, including limited number of students admitted to school depending on the estimated needs for physicians, obligatory class attendance, student attendance in preclinical laboratories, formative credits as a measure of student activity, and elective subjects. Furthermore, all medical graduates are allowed to take the State exam to obtain the licence to practice, which was not the case previously. As a result of these major changes, a higher number of students graduates in due time. The changes made in the medical education curriculum in Italy have enabled Italian medical graduates to work in European Community Hospitals, because their medical degree is recognized in other EU countries. The main motif that drives the Medical School in Chieti-Pescara is the achievement of high quality in medical education and biomedical research by creating as strong a relationship between education and research as possible.

ing guidelines equally support both theoretical and practical medical knowledge and reflect a distinct level of autonomy granted to each medical school in Italy. Indeed, each medical school can partially adapt or modify specific areas within the training program according to profiles of physicians

they produce. In addition to the changes of curriculum, the reform has brought changes in state medical license examination, after which all profiles of physicians are awarded a Medical Doctor degree and are eligible for obtaining a Medical License. In this report, we describe the reformed medical training program adopted by the G. d'Annunzio University Medical School of Chieti, Italy.

Admission criteria

Admission to medical school depends on the score achieved on a National Board of Medicine test, a multiple choice test consisting of 30 questions from general culture, 20 questions from biology, 10 from mathematics, 10 from physics, and 10 from chemistry. The test takes place simultaneously at all Italian medical schools, so each applicant can apply at only one medical school. The admission to a medical school depends on the highest score obtained by applicants in each school and on the number of positions available. The number of positions is determined by the MIUR on the basis of the estimated need for physicians determined by the National Medical Order, a body that maintains a list of all practicing physicians in the country (practicing medicine is not possible by a physician not included in the list), and on the basis of capacity of each university medical school in the country including facilities (eg, number of classrooms and laboratories), joint teaching hospitals, and human resources involved in the teaching process. G. d'Annunzio Medical School in Chieti-Pescara enrolls 160 students from European Union (EU) countries. Ten extra positions are available for students from non-EU countries.

Teaching aims

The Decree No. 509/1999 (1) of the Italian Ministry of Education, University, and Research has provided teaching guidelines (2) and specifi-

cally addressed the new content and teaching methodology to be used in medical education in Italy. A special emphasis is put on new teaching models that provide a firm theoretical, practical, methodological, and cultural basis for future physicians, on their professional autonomy, holistic approach to the patient, and continuing medical education (3). All training tasks follow the main rule of "let students achieve what they need to serve patients' needs" (4).

In line with the objectives of the Association of the American Medical Colleges (5), the aims of the medical school training are grouped according to the skills students should acquire during their studies. These include (a) gaining skills and experience in recognizing and solving medical problems in terms of prevention, diagnosis, prognosis, and therapy; (b) ability to interview patients and relatives; (c) ability to collaborate with colleagues and superiors; and (d) computer literacy and ability to use PC, experience in self-oriented studying, and development of a critical approach to international scientific literature. Once enrolled, students are divided into small groups assigned to a tutor who meets with the group to discuss and solve possible problems on a regular basis.

Formative credits

Formative credits (FC) are the measure of the student's activity in all courses included in the Curriculum. An FC is defined as 25 hours of student activities, 10 of which include attending classes, seminars, and tutorials, and laboratory and hospital activities, whereas 15-17 hours are dedicated to self-oriented studies, such as going to a medical library, computer training, or doing homework. The Italian Medical Training Program (1) grants 360 FCs: 60 FCs for basic sciences; 180 FCs for preclinical and clinical sciences; 60 FCs for the development of practical and professional skills; 48 FCs for electives, foreign language, and final dissertation; 12 FCs for

the additional activities, such as courses in general pedagogy, informatics, economics, and so on, or courses vocationally oriented toward a particular biomedical field (Table 1). Each School of Medicine has a complete autonomy in deciding on the profile of these additional activities, as they are allowed to partially adapt or modify specific areas of medical education within the training program for up to 12 FC in order to produce particular profiles of medical professionals (Table 2). The number of FCs for each discipline as established by the Medical School Council takes into account general guidelines provided by the MIUR (1) to make medical training as uniform as possible at all Italian universities. Students get FCs for a particular discipline once they have attended the mandatory classes and have passed the exam. Every student is given two booklets, one where attendance of courses (both obligatory and electives), grades obtained on each exam, and the corresponding credits obtained for both obligatory and elective courses are noted, and the other where all practical activities performed by the student are described in detail.

Electives

Electives are taught like mandatory courses, ie, they include seminars, practical activities, and lectures. Electives are an additional and novel part of the medical curriculum. Students can choose the electives from a list of electives proposed by each docent and have to take them during the 6-year course of their medical stud-

Table 1. Main activities of the new medical training program at G. d'Annunzio University of Chieti-Pescara Medical School

Activity	Formative credits (FCs)*
Total FCs over the 6 years of medical program*	360
Regular basic ex cathedra activities	60
Regular preclinical and clinical ex cathedra activities	180
Electives, scientific English language, and thesis	48
Additional activities in general pedagogy, informatics, economics, and other fields	12
Practical activities and professional skills, and attendance in research laboratories and hospital wards	60

*1 FC = 25 h; basic grade = [(sum of all grades) × (11)]/3; final grade = basic grade + thesis grade.

ies. The content of elective activities should not overlap with the content of the regular mandatory courses, but rather provide students with more detailed knowledge of a particular area of medicine, health care, and biomedical research (Table 1) (5). Fifteen FC are assigned to electives and distributed as follows: 3 FC for each elective taken during the first three years and 2 FC for each elective taken during the last three years of studies. Similarly to credits for obligatory courses, credits for electives are obtained once the students have attended the classes and passed the exam.

Skills development

In the new medical training program, 60 FC are dedicated to practical and professional activities. MIUR determines the total number of these credits, while the School Council decides on their distribution over the 6 years of medical program. Practical activities are performed in research laboratories (3rd year) and hospital wards (4th-6th year). All practical activities of students are monitored by an appointed tutor responsible for their acquisition of skills and knowledge (Table 1).

Foreign language

The medical school curriculum also includes at least 9 FC for scientific English language. The main aim of this course is to help students acquire a basic command of scientific English to be able to read, understand, and discuss international scientific literature, which is published in English (Table 1).

Student course evaluation

At the end of each semester, students are asked to fill out a standard questionnaire evaluating the courses they have attended that semester. The results of such evaluations are processed by

