The Context: A Lack of Physicians Educated in Switzerland

“We train the physicians, and you take them away from us by alluring them with Swiss francs”. This is how the Italian press describes the situation that has developed due to the lack of physicians who are educated at Swiss universities.

There is a grain of truth in this statement, and the reason is very simple: On the one hand, our country can offer better working conditions that attract physicians from other nations, on the other hand, we are suffering from a considerable shortage, especially of medical assistants and general practitioners who are educated in Switzerland. This shortage is expected to increase dramatically during the next decade.

The numbers speak for themselves. The average age of our physicians is currently around 50 years, and the share of foreign medical assistants is already very high (45% on average in Switzerland, with peaks of 72% in Ticino). And that trend will not change. All in all, the average age of physicians in Switzerland will keep on rising and they will have increasingly less successors.

In addition, while many physicians are recruited from abroad, many young Swiss cannot study medicine due to the numerus clausus, and they are excluded from education because of lack of training places. Does this mean that Switzerland suffers from a shortage of medical personnel because of a lack of training places? This is exactly the case! These and other observations reveal a clear need for the education of more physicians in Switzerland during the next 10 to 15 years, in order to increase the capacity of access to education by at least 30%.

Training more physicians is important for several reasons. Apart from quality considerations - the education of foreign physicians may in fact not always live up to Swiss standards - a key ethical dilemma arises. By relying on physicians from other countries, we deprive them of significant resources for their own health systems. The problem is well known. The so-called “brain drain” - in medicine, but also in various other scientific fields - causes damage to the countries of origin of these specialists. The fact that many physicians decide to migrate in order to find better working and living conditions thus contributes to a further deterioration of health systems that frequently are already deficient.

The Answer from Ticino: The Project of a New Faculty of Biomedical Sciences, Which Will Soon Be Discussed by the Cantonal Parliament

The Università della Svizzera italiana, USI, has observed this issue and, based on a mandate by Ticino’s State Council, it has set up a study group in charge of examining the possibility of introducing clinical education in Ticino. The group has recommended the institution of a Faculty of Biomedical Sciences at USI for multiple reasons. Creating this new Faculty, Ticino would demonstrate its strength and its willingness to contribute to the solution of an urgent problem of national importance, i.e. the shortage of physicians educated at Swiss universities. Moreover, thanks to this project the healthcare situation of the Canton could be improved. Finally, in the medium and long term, the increase in research activities would have significant impacts on the region’s industrial and business sectors. All in all, the new Faculty could contribute to a new and innovative future for the entire Canton, not only from a scientific point of view, but also from an economic, social and cultural one.

The University Council has approved the project of a new Faculty of Biomedical Sciences. Now, it is up to Ticino’s politicians to take the last step in this first project phase. The State Council has prepared a Message that will be discussed soon in the Cantonal Parliament.

The Academic Structure

The academic structure underlying the project is as follows: USI’s new Faculty of Biomedical Sciences comprises two entities in this first phase:

1) an Institute of Human Medicine, responsible for organizing and managing the Master in Human Medicine, which will have to be implemented in close collaboration with the EOC (Ente ospedaliero cantonale, a multi-site hospital of Ticino) – that has already confirmed its “determined and conscious” support of the project – and with the help of other hospitals and healthcare institutions of the Canton;

2) the current Institute for Research in Biomedicine (IRB) in Bellinzona with the related research activities in vaccinology/vaccinology and doctoral (PhD) programs.

Founded in 2000, the IRB has been affiliated with USI since 2010. It is financed by public and private institutions and, to a large extent, by competitive grants. Today, the Institute hosts 9 research groups and 95 researchers from all over the world. The research focus lies on the human body’s defence against infections, tumors and degenerative diseases. With more than 370 publications in the most important scientific magazines, the IRB has gained international reputation as a center of excellence in the fields of immunology and cell biology. It is also a center of post-graduate education. 54 students have already completed their PhD studies there.

Gradually, the new Faculty could become the seat of other research activities carried out in collaboration with other Faculties of USI, for instance with the Faculty of Communication Sciences in the field of health communication, with the Faculty of Economics in the public health sector, or with the Faculty of Informatics in the field of computational sciences. Moreover, synergies may form with the European School for Advanced Studies in Ophthalmology (ESASO), which has been hosted on Lugano Campus since 2008. Furthermore, a center will be created to merge the various courses that are already offered by USI in the field of continuing education in biomedical entrepreneurship.

In addition, it will be possible and desirable in the future to integrate into the new Faculty also other research institutes of Ticino that will be increasingly consolidated, such as the Institute of Oncology Research (IOR) at the IOSI and the research entities at the Cardiocentro Ticino and the Neuro-
A Master Degree in Human Medicine

In this context, inside an Institute of Human Medicine at a Faculty of Biomedical Sciences, USI’s Master in Human Medicine will be developed and consolidated through collaboration with various partner universities, one of which - namely Basel - will assume the role of reference university for the accreditation of the Master Degree as well as for the recognition of the first awarded degrees. Nevertheless, other partner faculties will collaborate equally in the didactic field, in clinical research and, in various ways, in the recruitment of students. Regarding this latter aspect, and very importantly for the new Faculty, the Rectors’ Conference of Swiss Universities (CRUS), stimulated by Ticino’s initiative, has decided to set up a study group in response to the rising demand for an increase in training places in medicine and to elaborate common solutions for the transition from the Bachelor to the Master. USI will be part of this study group. The idea is to find admission mechanisms for medical studies that are common to all universities applying the aptitude test (EMS), a model that also USI wants to follow.

USI’s Master in Human Medicine, which will host 70 students per year, will successfully integrate itself into the Swiss academic landscape only if it will provide both high quality education and special training programs that will be different from the Master programs of other universities. In due consideration of the Catalogue of Competencies of the BAG (Federal Office of Public Health), USI’s Master will distinguish itself based on two major characteristics:

1. An in-depth investigation into computational biomedicine and bioinformatics, thanks to the competencies of the Institute for Research in Biomedicine (IRB) and the Institute of Computational Sciences (ICS). This education program may be particularly appealing to those students who would like to focus on scientific research after completion of the Master. This offer could also be the seed of a fruitful collaboration with the Swiss Federal Institute of Technology in Zurich (ETH Zürich), that has shown much interest and that supports Ticino’s project.

2. An in-depth investigation into public health management with particular emphasis on family medicine, which is currently the focus of public attention and political debate. Even though education in family medicine is an FMH specialization, single teaching offers could already be part of the Master. USI’s competencies in health communication and public health, and the respective scientific networks (for instance the Swiss School of Public Health, SSPH+) represent an interesting offer in this sector.

Like several other successful Masters at USI, the Master in Human Medicine will be taught in English, in certain circumstances also in other national languages. With regard to clinical training, where also the language of the patient as well as that of the nursing and administrative staff counts, USI’s Master students will be required to enhance their language skills by acquiring some knowledge of Italian, for the benefit of better job opportunities and of an authentic Swiss multilingual culture. The project also foresees the creation of 11 full time professor chairs. These individuals will simultaneously hold an academic position as a professor and a clinical position as a head physician in a hospital. Each chair will receive a basic endowment for research and an adequate number of assistants and part-time teaching staff in order to provide sufficient time for theoretical, seminar and practical training.