




## VIEWPOINT



# The need for recognition of core professional groups in genetics healthcare services in Europe

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Genetic services have been in the forefront of the greatest technological and scientific progress in the field of medical sciences and diagnostics in recent decades [1, 2]. The repercussions of the genomics era have been notable in bringing about the constantly growing possibilities for genetic tests, the increased amount of individual genetic information obtainable from these tests, and the remarkable increase in genetic and genetic counselling consultations.

Considering the complexity involved in the correct interpretation of genetic test results, as well as in understanding and anticipating the possible implications for patients, families and at societal level it is essential that all genetic healthcare professionals involved in this process have specific and extensive training, including the continuous education of certified specialists. An absence of specialised services translates into poor care for patients affected by genetic disorders and into an unnecessary increase in health expenditure due to the failure to optimise resources. In addition, the misinterpretation of genetic test results may have mistaken clinical and reproductive implications for both patients and families, and this in turn may entail legal consequences. Recent technological advances in the field of genetics and those expected in the near future will make the approach to genetic diseases even more complex [2].

The evolution imposed by such advances for professionals in the field has been recognised, both in clinical assistance and laboratory dimensions. As a result, the core professional healthcare groups in genetics—medical geneticists, clinical laboratory geneticists, and genetic nurses and counsellors—are those who have the skills and knowledge for best application and result interpretation of such advances [3–6]. In the United States, for example, the Bureau of Labor Statistics has predicted a 21% growth rate in genetic counselling jobs from 2019 to 2029; much faster than the average for all occupations (Genetic Counselors: Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics ([bls.gov](https://www.bls.gov))) [7].

It is in this context of massive transformation the need to recognise specific professional competences becomes even clearer. The professional expertise of the three aforementioned groups needs specific recognition in order to prevent their expert activities being taken over by less qualified specialists from

apparently related professions where, in fact, expertise lies simply in their access to new high-throughput methods. This situation might be sufficient to be harmful to public health and safety, and cannot be replaced by the service provider's professional experience or knowledge, skills, and competences acquired in related healthcare contexts. Therefore, it is important to make a distinction between the activity of genetic diagnosis, testing and counselling, which may be undertaken by a range of health professionals with laboratory, counselling and ethical training in specific contexts, and the professions of medical geneticists, clinical laboratory geneticists and genetic nurses and counsellors.

To this end, professional and educational standards for genetics professionals in Europe have been introduced, under the auspices of an Ad Hoc Committee of the European Society of Human Genetics [3, 4, 8]. A registration system was launched by the European Board of Medical Genetics and about 500 professionals have been certified to date [8, 9]. Comparable bodies involved in professional certification worldwide have made reciprocal agreements with some of our branches, since the three professional groups exist and are well recognised in several countries such as USA, Australia, Canada, South Africa, and Cuba [10, 11]. At the European level, recognition was going more slowly until the turn of the century [1, 12] and in Spain, for example, the clinical genetics specialty is still not recognised, even though the EU has requested that it should be recognised in all Member States. Concurring with Kristoffersson and Macek [1], we believe that scientific progress in human molecular genetics has made our three professional groups important partners in the development of healthcare, aligned with the concept of personalised medicine. Thus, it is our understanding that we also have a key role in the “mainstreaming” of genomics within medicine, and that is why it is crucial to collaborate with other colleagues to support their growing engagement with genomics.

For all above, as the European Board of Medical Genetics, we called for the urgent recognition of the professional specialties of “genetic counsellor” and “clinical laboratory geneticist” by the health authorities, regulatory entities and administrations. We believe that they should be protected as recognised specialties at national level in all EU nations, as has already been recommended for the specialty of clinical (or medical) genetics.

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The three professional groups of the EBMG have stressed the need for continuous education to keep up-to-date with this fast moving field, as a hallmark for obtaining and maintaining competence in the core areas as defined by the EBMG standards. It is critical to ensure that those using these titles are appropriately educated and competent in their specialised field of practice if the quality of services being provided is to be maintained. The proper legal protection and professional recognition that those professional groups have had in several non-European countries has shown clear benefits for the quality of genetic service provision [10, 11].

We hope that the European Union directives in the fields of policy development and modernisation of professional qualifications will endorse the current statement in the near future, in order to support the quality of patient care and safety of practice in genetics healthcare services.

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MP conceived the manuscript as a position statement that led to the submission; coordinated the authorship team; drafted and revised the manuscript; approved the final version and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work. TL drafted and revised the manuscript; approved the final version and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work. CSJ drafted and revised the manuscript; approved the final version. UM revised the manuscript and approved the final version. BM revised the manuscript and approved the final version. IC revised the manuscript and approved the final version.

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