



Regarding the rights and duties of Clinical Laboratory Geneticists in genetic healthcare systems: results of a survey in over 50 countries

Melody Caramins^{1,2} · Tony Baddrick³ · Kevin Carpenter⁴

Received: 1 May 2019 / Accepted: 21 May 2019 / Published online: 10 July 2019
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We read with interest the article entitled “Regarding the rights and duties of Clinical Laboratory Geneticists in genetic healthcare systems: results of a survey in over 50 countries” by Liehr et al. [1] (*Eur J Human Genetics* 28 March 2019), which provides a high-level overview of how human genetic diagnostic testing is provided and supervised within 50 different countries and healthcare contexts. This initial survey has an important place in highlighting the value of the role of clinical scientists, both as part of diagnostic laboratory teams, and as members of a patient’s team of healthcare providers. However, the methodology of the survey, which was reliant on personal contacts from the lead author, did not formally contact institutions which provide training and accreditation for clinical scientists in relevant countries. This has resulted in survey results where the data misrepresent the reality in some instances, specifically in Australia.

In Australia, the regulatory framework requires most medical testing, defined as testing used to make medical diagnoses and decisions, be overseen by medical practitioners with an appropriate scope of practice. This is true for all diagnostic testing, including genetic testing used in medical decision making. Testing is provided by a laboratory team, which includes technicians, scientists, medical practitioners, and sometimes genetic counsellors, in pre-analytical, analytical, and post-analytical roles.

In recognition of the growing role of scientists in medical diagnostics, the Royal College of Pathologists of Australasia (RCPA) established the Faculty of Science in 2009. The role of the Faculty of Science is to enable scientists to achieve high levels of clinical competency through its 5 year training program, where genetics (medical genomics and biochemical genetics) has proven to be one of the most popular disciplines. The training program for clinical scientists is based on the training program for Pathologists in all the disciplines of laboratory medicine, including laboratory genetics. The title, Fellow of the Faculty of Science of the Royal College of Pathologists of Australasia (FFSc.) is provided by the RCPA and is a nationally recognised title and qualification for Clinical Scientists within the regulatory framework. Clinical Scientists in Australia are variously employed in the public and private sector, some are involved in teaching at universities, and may be performing result interpretation and reporting, including recommending further testing. Although any specific result does not need the signature of a medical practitioner to be valid, clinical governance must be through a registered medical practitioner who ultimately bears the medico-legal responsibility for all tests under their supervision, with reporting delegated to suitably qualified clinical scientists or medical practitioners, as appropriate. Although it is rare for clinical scientists to see or counsel patients, participation in these activities is included as part of their training program.

Prior to the establishment of the RCPAs training program, the nationally recognised training program for Clinical Scientists in Australia was via the Fellowship program of the Human Genetics Society of Australia (HGSA). HGSA qualifications were offered in Cytogenetics, Molecular Genetics, and Biochemical Genetics and required a minimum of 5 years’ experience in an accredited diagnostic laboratory prior to sitting for written, practical and oral examinations at Membership and then Fellowship levels.

✉ Melody Caramins
melody.caramins@healius.com.au

¹ Chair, Genetics Advisory Committee, Royal College of Pathologists of Australasia, Surry Hills, NSW, Australia

² Director of Genetics, Healius, St Leonards, Surry Hills, NSW, Australia

³ Chief Examiner, Faculty of Science, Royal College of Pathologists of Australasia, Surry Hills, NSW, Australia

⁴ Chief Executive Officer Human Genetic Society of Australasia, Surry Hills, NSW, Australia

In conclusion, Australia has long recognised and championed the role of Clinical Scientists as a valued member of the diagnostic team. This is particularly evident in the discipline of genetics.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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References

1. Liehr T, Carreira IM, Balogh Z, Dominguez Garrido E, Verdorfer I, Coviello DA, et al. Regarding the rights and duties of Clinical Laboratory Geneticists in genetic healthcare systems; results of a survey in over 50 countries. *Eur J Hum Genet.* 2019. <https://doi.org/10.1038/s41431-019-0379-4>