

# Developing Associate Genetic Counsellors

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## Background

Internationally, there is a recognised need for health professionals to be sufficiently skilled to apply genomics, as relevant to their role.

In 2016, the Melbourne Genomics Health Alliance developed a multifaceted workforce strategy to address needs 'at the coalface', where genomic sequencing was most relevant clinically.

At the time of this strategy, a workforce shortage of genetic counsellors was evident internationally. It was anticipated that this shortage would be exacerbated by the expected move of genomic sequencing from specialist genetic services into 'mainstream' healthcare. Furthermore, the existing genetic counsellor workforce needs genomic knowledge and skills.

## Project description and activities

The objective: to increase the number of genetic counsellors skilled in genomics.

A suite of initiatives was put in place to support skill development among new graduates, current practitioners and the future workforce.

Member organisations involved in these initiatives were: The Royal Melbourne Hospital, Murdoch Children's Research Institute (Victorian Clinical Genetics Services, which provides genetic counsellors The Royal Children's Hospital), Austin Health, Monash Health and The University of Melbourne.

## New graduates

Melbourne Genomics funded a total of five<sup>1</sup> full-time-equivalent genetic counsellor positions over four years at member hospital genetics services. Each site had at least one full-time equivalent position, to provide pre- and post-test genetic counselling for Clinical Flagships<sup>2</sup> at that site<sup>3</sup>. In order to build capacity in Victoria, positions were targeted to new graduates (Associate Genetic Counsellors, AGCs).

AGCs were supported to undertake requirements for professional certification, including:

- Gaining clinical experience outside of the Flagships
- Genetic counselling supervision, continuing professional development
- Involvement in education of other health professionals<sup>4</sup>

Hospitals were responsible for credentialing, employment, management and supervision of the AGCs, as well as ensuring they operated under existing clinical governance frameworks.

Funded genetic counsellors enabled dedicated support to patients in the Clinical Flagships and minimised the risk of clinical incidents.

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<sup>1</sup> The five equivalent full-time (FTE) positions enabled a total of 13 professionals to be employed.

<sup>2</sup> For more on Clinical Flagships, see separate project summaries. Cancer Flagships elected not to use genetic counsellors – consistent with real-world practice in the field. The counselling FTE salary was thus allocated to other staff involved in patient recruitment and test coordination (e.g. cancer nurses).

<sup>3</sup> The FTE allocated to each hospital was based on the anticipated number of patients at that site who would undergo genomic testing through the Clinical Flagships.

<sup>4</sup> See project summary, "Genomics in the clinic" workshops for medical specialists'.

## Current practitioners

To build genomics expertise among the current workforce, Melbourne Genomics developed, facilitated and evaluated five workshops in genomics for Victorian genetic counsellors.

## Future workforce

To ensure future graduates would be skilled in genomics, an educator was funded to support revision of The University of Melbourne's Master of Genetic Counselling program, to incorporate genomics and to double student intake. Melbourne Genomics also supported development of subjects in variant interpretation<sup>5</sup>.

In addition, due to workforce shortages, four Master of Genetic Counselling students were funded for up to six months to support Clinical Flagship activities at hospital genetics services.

## Outcomes

Victoria's workforce of genetic counsellors experienced in genomics grew through this initiative. Twelve Associate Genetic Counsellors and one Certified Genetic Counsellor<sup>6</sup> were funded to work at member hospitals' genetics services over the period 2016 to 2019.

Furthermore:

- Four genetic counsellors were attracted from overseas, interstate or private practice into the public health system. All had some experience and one was certified.
- Two AGCs have gained certification and another six have made submissions toward certification.

The Melbourne-Genomics-funded genetic counsellors also participated in other clinical work at their hospital site, such as backfilling clinics and other responsibilities to free up time for more experienced colleagues to gain exposure to genomics.

Existing genetic counsellors at all member sites have gained experience in ordering and interpreting genomic tests for their patients. At least eight genetic counsellors employed by genetics services gained hands-on experience in genomics through their contribution to Clinical Flagships and the Additional Findings proof-of-concept study<sup>7</sup>, via backfill, secondment and per-patient recruitment funding arrangements.

According to a 2017 national training census, at least nine of every ten genetic counsellors in clinical positions in Victoria (94%) have completed professional development in genomics – significantly more than in other States<sup>8</sup>. There were a total of 170 attendances at the Melbourne Genomics workshops specifically designed for genetic counsellors.

## Impact

Eleven of the 12 AGCs funded by Melbourne Genomics gained employment working in the delivery of genetics services in Victoria (one is completing further study).

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<sup>5</sup> These subjects have been incorporated into both the Master of Genetic Counselling and Master of Genomics and Health programs. (See project summary, 'Variant interpretation online training modules'.)

<sup>6</sup> The Board of Censors for Genetic Counselling (under the auspices of the Human Genetics Society of Australasia) certifies genetic counsellors in Australia. Associate Genetic Counsellors have completed a Master of Genetic Counselling degree but are yet to be certified.

<sup>7</sup> See project summary, 'Proof-of-concept for providing additional genomic findings to adults'.

<sup>8</sup> 81%,  $p=0.031$ , 2-sample, 2-tailed z-test (Nisselle et al. 2019 <https://doi.org/10.1002/jgc4.1101>).

## Lessons learnt

Genetic counsellors with Clinical Flagship experience were attractive candidates for positions at genetics services. During the program, genetic counsellors funded by Melbourne Genomics accepted permanent positions offered by genetics services, which freed up the Melbourne Genomics positions for more new graduates.