

RANZCO

Annual Evaluation Report



Background

The RANZCO Annual Evaluation Report (AER) 2021 outlines the monitoring and evaluation (M&E) activities undertaken and facilitated by the Royal Australian and New Zealand College of Ophthalmologists (RANZCO) from October 2020 to December 2021. It provides a detailed report of the evaluation, monitoring and quality assurance activities that RANZCO has been undertaking in the learning and teaching of its trainees and Fellows including but not limited to the Vocational Training Program (VTP), Continuing Professional development (CPD), online learning and cultural safety.

RANZCO AER 2021 focuses primarily on the evaluation activities that have been undertaken at RANZCO as part of the RANZCO Education Monitoring and Evaluation Framework 2021-2024. As stipulated in the RANZCO Education Monitoring and Evaluation Framework 2021-2024, M&E activities at RANZCO are undertaken:

- As part of reporting requirements to regulatory and funding bodies
- To assess program and policy outputs and outcomes
- For quality assurance and continuous improvements of processes, programs, and policies

Organisational Context

In its role as a specialist medical college for ophthalmologists in Australia and New Zealand, the core responsibilities of RANZCO are training new ophthalmologists and supporting the ongoing education of ophthalmologists as they progress through their career. RANZCO also plays a leading role in advocating for improved eye care services in Australia and New Zealand and supports ophthalmic education internationally, specifically in the Asia-Pacific region.

RANZCO delivers a Vocational Training Program (VTP) for future ophthalmologists and maintains a Continuing Professional Development (CPD) system for its Fellows. RANZCO is accredited as a specialist medical college by the Australian Medical Council (AMC) and the Medical Council of New Zealand (MCNZ) and is required to meet all their standards and requirements for medical education and training for VTP and CPD.

RANZCO supports the leadership role of ophthalmologists in influencing the factors that impact upon the eye health and wellbeing of the community and the healthcare they receive. Advocacy activities are primarily focused towards increasing ophthalmic services to populations in need and the improvement of the quality and safety of care for patients and promoting eye health. RANZCO and its membership are committed to improving eye care in Australia, New Zealand and internationally. The international work specifically focuses on reducing avoidable blindness in the Asia-Pacific region through the education and improvement of local training institutions that is expected to, in turn, improve the local eye health workforce through increased knowledge and expertise.

Monitoring and Evaluation at RANZCO

The primary objectives of the M&E at RANZCO are to:

- Determine whether the organisational strategic goals are being achieved
- Monitor and evaluate educational and other activities with a view to improving these activities
- Ensure that the mandatory M&E requirements by the regulatory bodies for various programs and activities are adequately met
- Upskill staff from the Education and other teams to conduct basic evaluations of their work and integrate M&E into their day to day work
- Establish mechanisms to support committees to monitor and evaluate the activities and processes they are undertaking

RANZCO M&E activities are guided by the program logic published in the RANZCO Education Monitoring and Evaluation Framework 2021-2024 and aim to improve the educational programs and activities being undertaken by RANZCO towards achieving an eventual outcome to improve the eye health of the Australian and New Zealand populations and in the Asia Pacific region. All M&E activities planned for 2021 under the framework were successfully completed.

RANZCO evaluation and quality assurance activities

End of term feedback and Annual trainee survey

In October 2020, the Trainee Representative Group and RANZCO developed an End of Term feedback form and an Annual Survey for Trainees to provide feedback to RANZCO about their current posting and the training program. Trainees are being asked to complete the End of Term report every three months since launch and the first Annual Survey was conducted in October 2020.

In the End of Term feedback form, trainees are asked to provide feedback about their training and learning opportunities and experience at the training post at the end of the term. This feedback is planned to be used by RANZCO to identify and address any issues related to the training post, and to ensure that the trainees' training needs continue to be met. The information will also be used by the Training Post Inspectorate when reaccrediting training posts.

The annual survey of trainees will help identify broader issues related to RANZCO, the training program and other areas where RANZCO can offer trainees assistance or advocate on their behalf. The areas covered in the annual survey include RANZCO exams and resources, professional skills of trainees and their work intentions after graduation as well as mentoring and health and wellbeing.

To ensure participant confidentiality is maintained, it was decided that responses from the End of Term feedback will not be analysed until five rounds of the reports have been completed. The latest feedback from Term 3 2021 completes the fifth round and the data will be continually analysed from early 2022 and used for the purposes described above.

The Annual Trainee Survey 2020 report has been published on the RANZCO Learning Management System (LMS) and can be viewed by all Fellows and trainees. The key findings in the report were communicated to the RANZCO membership via e-news with a link to the full report. Subsequently, trainees were emailed directly informing them how their feedback was being responded to and what actions were being taken.

Annual Trainee Survey 2020 Results

Overall response rate: 59.1% (104/176)

Key findings

- The training program and RANZCO are generally regarded well.
- There are issues RANZCO needs to address, some more urgent than others, to ensure a better training experience for trainees
 - Exam feedback
 - RANZCO e-Diary
 - Access to EyeSi
 - Improvements to Learning Management System including availability of resources to help prepare for exams
- Trainees need additional training about how to set themselves up in private practice given that most of them will work in private settings after graduating from the RANZCO training program.
- RANZCO Advanced Clinical Exams is a significant stressor event for trainees, particularly the timing of the exam and the high failure rates.
- Trainees generally do not perceive comprehensive ophthalmology or rural practice to be a desirable or viable career pathway and would like to subspecialise as soon as opportunities arise.
- Trainees would value a more structured mentoring program.

RANZCO has commenced work in four key areas in response to the issues raised by the trainees in the Annual Trainee Survey.

RANZCO Advanced Clinical Examination (RACE): RANZCO has engaged an external university research group to explore how RANZCO can better support trainees prepare for RACE.

RANZCO e-Diary (ReD): RANZCO is currently redeveloping the e-Diary and is involving trainees during the redevelopment to ensure that their needs are being considered during this process.

Supervisor feedback: RANZCO has developed and launched a training program for term supervisors and clinical tutors which includes a substantial component on how to give feedback to trainees.

EyeSi Simulator: RANZCO has established policy and formal training requirements as part of the VTP to ensure trainees have appropriate and timely access to EyeSi.

Annual supervisor and clinical tutor survey

The Annual Supervisor and Clinical Tutor survey 2020 (ASCTS 2020) was conducted in November 2020, shortly after the annual trainee survey. The questions asked in ASCTS 2020 addressed the same areas covered in the annual trainee survey from a supervisor and a clinical tutor perspective. The key themes covered in ASCTS 2020 were curriculum standards, supervised clinics and theatres, teaching and learning for trainees and themselves, RANZCO policies and support, bullying, discrimination and harassment and health and wellbeing. Going forward, ASCTS will be conducted concurrently with the annual trainee survey every year.

Annual Supervisor and Clinical Tutor Survey 2020 Results

Overall response rate: 42.7% (302/708)

- The response rates were consistent across the training networks
- Response rate by group:
 - Supervisors: 47.4% (55/116)
 - Clinical tutors: 41.0% (247/602)

Key findings

- Supervisors and clinical tutors know the VTP curriculum standards to the extent they need to for teaching and learning on a day-to-day basis.
- Supervisors and clinical tutors do not receive adequate support from hospital or practice in terms of clinic and theatre loads to support the training.
- Resources available in RANZCO learning management system to support the supervisors and clinical tutors are being used by very few of them.
- Supervisors and clinical tutors do not have an adequate understanding of the implications of RANZCO policies on trainee progression and support policies for their roles.
- Work-based assessments are crucial in supporting trainee progression; however the current form needs to be more specific and targeted to be able to assess trainees at the levels they are expected to be at. It would be helpful for supervisors and clinical tutors to have access to the work-based assessment reports about trainees from the previous posts.
- Supervisors and clinical tutors are concerned about the high failure rate in the written component of RANZCO Advanced Clinical Examinations and questioned whether the RANZCO training program is adequately preparing the trainees for the exam.
- Supervisors and clinical tutors want to provide constructive feedback to trainees but are concerned that their employers and RANZCO will not support them if issues arise.
- Reverse bullying by trainees is a significant concern for some supervisors and clinical tutors.
- Trainees do not receive adequate training on how to set themselves up in private practice in the RANZCO training program.
- Supervisors and clinical tutors show poor indicators of health and wellbeing even though the self-rating of their health and wellbeing is much higher than the Australian average.

There was alignment in a lot of areas in the responses and feedback between the supervisors and clinical tutors and the trainees. Interestingly, two out of the four areas identified as key issues by trainees, high failure rates in RACE and feedback to trainees, also featured strongly in ASCTS 2020.

In response to the survey results, in addition to the work that has been described above in the annual trainee survey section of this report, the RANZCO Health and Wellbeing Working Group has been proactively reaching out to the RANZCO membership with information, resources and tools to support their health and wellbeing. RANZCO has just recently migrated work-based assessments into an online portal, which will have provisions for supervisors and clinical tutors to see the trainees' work-based assessment reports from previous postings. The enhancements in the online work-based assessment platform will also allow supervisors and clinical tutors to provide specific information about trainees' progress.

Concerns remain around the limited support supervisors and clinical tutors receive from their employers to perform their roles. RANZCO has included in its accreditation standards, as a desirable requirement, that protected time during normal rostered hours is provided to all post supervisors, clinical tutors and trainees for teaching and assessment activities. However, it appears that this is not happening in most training sites. This issue is being considered as part of the ongoing the review of the standards.

Other findings from the survey have been made available to the relevant RANZCO staff and committees and are being addressed as part of continuous improvement processes.

Pilot evaluation of virtual accreditation

Due to the impending backlog of training posts that would require accreditation created by COVID-19 lockdowns in Australia and New Zealand, virtual accreditation visits conducted using online video conferencing applications were explored as an alternative approach of managing the increased requirements for accreditation visit in 2021.

An ethnographic study was conducted in which the investigators attended virtual accreditation visits at two sites (one each in Australia and New Zealand) as observers. These visits were conducted by the RANZCO accreditation teams independent of the study investigators. An open-ended observation proforma was used by the investigators to independently record their observations, which were later compared and discussed until consensus was achieved. All participants were asked to complete an online survey and document analysis of accreditation documents was conducted. Observation data was broken down into themes and triangulated with online survey and document analysis results. Quality assurance data from a subsequent virtual accreditation visit was used to further investigate the usefulness of video and photographic evidence of facilities and equipment.

The study showed that the accreditation interviews adequately addressed all relevant issues with high levels of robustness and reliability. However, RANZCO inspectors found it more difficult to discuss complex issues virtually compared with face-to-face. It was also determined that the interim and final reports from virtual accreditation would not be any different to what would be expected if a physical accreditation visit had been conducted.

Based on the findings of this study RANZCO has developed a set of criteria for determining training sites that could be acceptable for virtual training post inspections:

- ➔ Sites requiring re-accreditation where there are no known complaints that need to be addressed
- ➔ Previous accreditation reports have not identified any issues
- ➔ The site is not the administrative site for the local training network as the accreditation of these sites could involve complex discussions at a training network level

RANZCO data access and publication policy

It is important that RANZCO makes evidence-based decision to underpin improvements in education, training and eye health care based on data and encourages and supports other entities to do so. Over the past few years, there has been increasing number of requests for access to RANZCO data for research and evaluation purposes particularly around education and training and workforce distribution. A need was seen for RANZCO to have a fair, transparent and consistent approach in responding to requests for data, ensure that the data provided to external researchers is de-identified and that the relevant legislations in Australia and New Zealand are followed.

With the above objectives, the RANZCO data access policy was developed in 2020. The policy outlines the requirements and framework through which external researchers can apply to use RANZCO data for research and evaluation and publish their findings. Generally, the proposed research must contribute to improving eye health care services or the RANZCO programs, be in the public good and not be of commercial nature for access to data to be granted.

Other requirements for data access to be granted are:

- ➔ Ethics approval must be obtained from a recognised Human Research Ethics Committee in Australia or New Zealand
- ➔ Request must be for de-identified data
- ➔ Data storage and deletion must comply with relevant legislations in Australia and New Zealand, as appropriate
- ➔ Data must not be used for any other purpose than as approved by the Ethics Committee
- ➔ The study team must include a RANZCO representative whose role will include ensuring that the findings from the research is appropriately used to improve RANZCO's programs and activities.

RANZCO does not require the external researchers to seek additional approval from RANZCO to publish the findings once the data has been released.

There have been three studies that have been approved by RANZCO to receive relevant RANZCO data under the data access and publication policy since the policy was approved by the RANZCO Board in July 2020.

1. Gender differences in surgical exposure in the RANZCO VTP – University of Auckland
2. Evaluation of the Specialist Training Program in Australia – University of Tasmania
3. Promoting success in RANZCO Advanced Clinical Examination – University of Tasmania

Evaluation of the Specialist Training Program

RANZCO was funded by the Commonwealth Department of Health to undertake an evaluation of the Specialist Training Program (STP) to examine factors that impact on the provision of positive, quality training at STP funded posts and to identify strategies to improve the program. This evaluation was conducted in partnership with the University of Tasmania.

The Commonwealth Government Department of Health provides funding to RANZCO to administer and manage the STP to support up to 15 training posts for ophthalmology in a range of private and/or rural settings across Australia. STP funded training posts offer trainees a unique opportunity to gain skills, knowledge and experience within training settings outside of metropolitan tertiary hospitals. It is expected that these training experiences will encourage new ophthalmologists to consider working in regional areas once they qualify. It is therefore important that the training experiences for trainees at STP rotations is positive and of high quality, whilst also ensuring that local service needs are being met.

A qualitative study was conducted involving semi-structured in-depth interviews with trainees, supervisors and other key stakeholders from across Australia involved with the STP (n=32). Interview data were thematically analysed to identify benefits and issues relating to training provided at STP posts from the perspective of each stakeholder, with the results synthesised and consolidated into overarching themes.

The results of the study showed that trainees were able to access a range of unique learning opportunities not available in tertiary settings including the ability to develop business acumen as they transition into private practice as Fellows. Trainees also highly valued the opportunity to travel, explore and experience life working and living within regional communities of Australia. However, there were some concerns that the busy workload and inflexible rosters made it difficult to experience the area adequately to help the trainees make informed decisions on regional areas as an ongoing career option. Trainees' dissatisfactions about the regional postings mostly seemed to arise from limited information about the training site and location prior to arrival as well as their expectations for case-mix types and level of supervision.

Supervisors were found to be extremely supportive of STP and acknowledged the significant benefit of the program in offering workforce support, particularly in relation to reducing on-call responsibilities. They also saw it as an opportunity to give back to the profession. Some practices highlighted the benefit of workforce renewal, with previous trainees returning to join private practices once fully qualified. The biggest issues for supervisors and the sites were the regular change of contact person at RANZCO and the administrative requirements to complete reports.

The STP was acknowledged by all stakeholders as providing affordable and accessible ophthalmology services to underserved communities, particularly those in rural and remote areas in need of specialist eye care. However, it was highlighted that the funding made available to the training posts through the STP did not fully cover the cost of hosting trainees, in some cases, it could be a barrier for private practices to accept trainees.

Concerns were raised about the instability and complexities for trainees with young families having to relocate to regional areas for three-to-six-month placements and the additional relocation costs that the trainees have to bear themselves as the relocation allowances do not meet the full cost of relocation.

The findings of this study have contributed to several improvements at RANZCO which include:

- ➔ Require the trainees to be informed about conditions of employment at each site as part of the accreditation requirements for training posts
- ➔ Ensure that STP staff transition at RANZCO is not abrupt and that the reports that need to be submitted by the training posts are as streamlined as practicable
- ➔ Commencement of development of practical site-specific resources by RANZCO for trainees rotating to regional posts to help them familiarise with the location in general and the training post
- ➔ Development of promotional materials by RANZCO to inform trainees about the benefits of regional rotations for their teaching and learning
- ➔ RANZCO provided feedback to the Commonwealth government about the inadequacy of allocated funds in delivering the STP

Analysis of selection data

As part of an ongoing quality assurance of the central RANZCO selection process that started in 2018, a range of evaluation activities were undertaken in 2021. This is an ongoing quality assurance activity, and it is expected that the evaluation projects will continue into 2022.

The key areas that were assessed in the 2021 analysis of selection data included issues raised by various stakeholders including applicants, selection panel members and areas for which the evidence base had to be strengthened:

- ➔ Differences in referee scores by ophthalmic and non-ophthalmic referees
- ➔ Concordance of panelists' scores for referee reports, professional attributes and multiple mini interviews (MMI)
- ➔ Differences in Situational Judgement Test (SJT) scores between groups by known demographics which include age, gender and location
- ➔ Improvements in SJT scores in subsequent attempts
- ➔ Correlation between SJT and MMI scores

Key findings

- ➔ Applicants with less ophthalmic experience, who are more likely to have non-RANZCO referees, were not receiving better references than those with more ophthalmic experience.
- ➔ There was no correlation between the length of time since the applicants finished their medical degree and their referee scores suggesting that referees are not advantaging applicants just because they have been in the workforce longer.
- ➔ There was poor inter-grader concordance between the two graders for medical expert and professional attribute scores. The referee reports are used for scoring medical expert and professional attributes. It is crucial to continue to have a third grader to review discrepancy in scores.
- ➔ Referee reports are useful for identifying "red flags".
- ➔ There was a significant variation in the range of scores awarded by MMI interviewers.

- ➔ Older applicants tended to score fewer points in SJT than younger applicants. There were no effects seen for gender, years since medical school and place of residence.
- ➔ SJT and MMI scores were found to be moderately correlated ($r=0.2$, $p<0.1$).
- ➔ The only SJT domain that was found to improve in subsequent sittings was professional. No improvements were seen in other domains with multiple attempts.
- ➔ MMI concordance between interviewers is essential to ensure that candidates are not unfairly advantaged or disadvantaged

The outcomes of the analysis have contributed to several changes to the selection process which will be used in 2022. The referee reports will be used at the first stage of the selection process to identify red flags but their proportional contribution to the overall scores and ranking will be decreased to ensure that referee reports are not disproportionately influencing the selection process. The review process by a third grader where there are discrepancies in scores will be strengthened by allowing dedicated time for the grader to review scores systematically.

Concordance between MMI interviewers is another area that will be considerably focused on during the 2022 Selection process. A longer timeframe, including provisions for online meetings in small groups with other interviewers at the same stations, will be allowed for concordance of MMI scores between interviewers to ensure that the MMI results are reliable.

The results from this work and in response to other issues that have been raised by internal and external stakeholders has led to a project to assess the external validity of RANZCO SJTs. This project has commenced in 2021 and will extend into 2022.

Distribution of ophthalmologists by rurality in Australia

This study, done in partnership with the University of Tasmania, sought to address the paucity of information about the location stability of the ophthalmology workforce in Australia. Specifically, the aim was to investigate workforce distribution and location stability over time according to Modified Monash Model (MMM) category using Australian Health Practitioner Registration Agency (AHPRA) data. MMM category was mapped to postcode of primary work location over a six-year period (2014 to 2019).

The distribution of ophthalmologists by state remained stable over the study period, although there was a slight decrease in proportion of ophthalmologists located in South Australia. Analysis by MMM category found the majority of ophthalmologists worked in MMM1 each year. However, there was a smaller proportion of ophthalmologists working in MMM1 in 2017-2019 compared with 2014-2016. While the numbers are small, there was a slight increase in the number of ophthalmologists working in MMM2 in 2019 compared with previous years.

The results indicate that 84% of ophthalmologists remained working in the same Modified Monash Model category from 2014 to 2019. Largely, these ophthalmologists were working in MMM1 compared to MMM2-MMM7 areas (85% vs. 75%). However, there was a trend for an increasing proportion of ophthalmologists to work outside major cities, from 19% in 2014 to 24% in 2019. Despite the trend for an increasing proportion of ophthalmologists working outside major cities, it is still of concern that the workforce remains maldistributed. Unpublished Australian Bureau of Statistics population data shows 72% of the Australian population lives in metropolitan (MMM1) areas. A larger proportion of male ophthalmologists, compared with female ophthalmologists stayed in MMM2-MMM7 areas

The majority of ophthalmologists working outside MMM1 areas are based in large regional centres (MMM2), not MMM3-7 areas where the current level of ophthalmology services seems insufficient. This is despite higher prevalence of eye diseases and vision loss in rural and remote areas (MMM3-7). Policies that support strategies to increase the number of ophthalmologists in MMM3-7 areas are needed to address the considerable disparity in access to ophthalmologists.

While the Australian ophthalmology workforce is skewed toward metropolitan centres, there are early indications of outward migration from metropolitan centres to regional/ rural areas by Australian trained ophthalmologists. RANZCO is proactively working towards addressing workforce maldistribution by increasingly making more training opportunities available for trainees in regional areas through the existing Specialist Training Program and the newly developed Regionally Enhanced Training Network.

COVID training resumption surveys – 2020

When there were the initial disruptions to elective procedures in Australia and New Zealand during the first rounds of lockdowns in April 2020, a decision was made by RANZCO Board to suspend training as it appeared that there would not be adequate supervised clinic and theatre sessions for trainees. RANZCO conducted weekly snap surveys of post supervisors on an ongoing basis during the training suspension period to obtain a detailed understanding of how services were affected at each site and at the network level to assess whether the sites and networks were ready to meet RANZCO supervisory and other training requirements.

All supervisors who had a trainee when training was suspended were asked for information on the trainees' work in ophthalmology, number of supervised clinics and theatre sessions, case-mix and teaching and learning and professional development. Supervisors were also asked if the volume and speciality mix in clinics and theatre lists were sufficient to fairly assess the trainees' performance in all areas assessed in the end-of-term work-based assessment.

The data was analysed in a highly agile manner as the responses were received and updates presented frequently to an Executive Working Group that was set up by the Bi-national Qualifications and Education Committee to make decisions about the resumption of training.

As expected, there were differences between the networks on the exposure to training by trainees because of the variations in restrictions imposed by the different state and territory governments in Australia and the New Zealand government. None of the trainees were redeployed out of ophthalmology although two trainees were moved to a different location from their existing placements.

Within five weeks of commencing the weekly survey, the data and the trend from the surveys provided RANZCO with enough confidence to restart training and to accredit all training undertaken by trainees in 2020 with satisfactory work based assessments.

The use of the evidence generated from the snap surveys by the Qualification and Education Committee to make important decisions about the training is an illustration of how evaluation contributed timely, robust and credible evidence to inform a major decision with important consequences for trainees, RANZCO and the ophthalmic workforce.

Evaluation projects under progress

External validity of SJTs

RANZCO trainees who entered the VTP since 2019 had to sit the SJTs as part of the selection process. The exams and performance data of these trainees that has been collected since selection up until now has provided RANZCO with a unique opportunity to assess the external validity of SJTs and to further enhance the efficacy and validity of this tool.

As part of an ongoing quality assurance and improvement of the selection process into the RANZCO training program, we have commenced an evaluation project to assess the external validity of SJTs. Being the pioneer, non-GP specialist medical college in Australia and New Zealand to use SJTs as a selection tool, RANZCO is in a leading position to assess and enhance how SJTs continue to contribute to the selection of candidates for specialist training in Australia and New Zealand, not only in ophthalmology but also other specialities.

This study is being conducted in two phases, of which the first phase has been completed. The first phase involved a stakeholder interaction with RACGP in Australia to explore whether their experiences, enablers and challenges in implementing the SJTs are similar to the ones being faced by RANZCO and learn from their implementation. RANZCO and RACGP use the SJTs differently in that RACGP develop and administer the SJTs internally and do not use it towards restricting the number of candidates progressing to the next phase. RACGP use SJTs as part of their candidate knowledge and assessment test where candidates have to meet a predefined threshold to progress to the next stage of the selection process. A total of 50 out of 70 questions, all of which are equally weighted, in the RACGP candidate knowledge and assessment test are SJTs. It was evident in the discussions that RACGP did not have the same selection requirements as RANZCO as their applicant pool more or less aligned with the number of available training spots and therefore their central selection process focused on whether a candidate was trainable rather than ranking candidates.

In the second phase, multiple correlation analyses will be conducted between SJTs and indicators of professional attributes of trainees collected by RANZCO as trainees progress through the VTP and other relevant information provided by training networks.

Supervisor modules evaluation

Based on the outcomes from the Supervisor and Clinical Tutor survey 2020, RANZCO identified the need to develop modules on medical education for supervisors that reflect the latest evidence-based practices contextualised to the discipline of ophthalmology. This led to a new RANZCO initiative, the supervisor training program, that involves a systematic approach to online learning based on effective learning design.

Supervisor training modules that consider adult learning principles, a stepwise progression of activities, automated levels of feedback for participants, cross platform compatibility (Windows, Macintosh, iOS and Android), and self-paced completion were developed. These modules focussed on medical education in specialist ophthalmology training including assessment and feedback, each of which are between 1-1.5 hours in duration.

The aim of the ongoing supervisor module evaluation is to assess supervisor acceptance of the newly developed modules and evaluate their improvement in knowledge related to the learning. The evaluation also aims to improve the modules in the subsequent iterations.

An initial pilot was conducted with four training networks which showed a very poor uptake (12 registrations, 0 completions). On follow up, it was evident that the length of the modules, although they did not have to be completed in one sitting, was seen as a barrier by supervisors and clinical tutors. In response, we have converted the modules to micromodules where the content in the modules have been split into 3-5 minute standalone snippets. The micromodule snippets are currently being evaluated with members of the Bi-national RANZCO Qualifications and Education Committee and other Fellows who have previously participated in RANZCO activities. In the next steps, we intend to pilot the delivery of the modules via branch meetings and local grand rounds in training networks.

Trainee microsurgical skills and attitudes towards Eyesi simulator

One of the significant advantages in the research using the Eyesi simulator is that highly reliable surgical outcome data can be obtained from the simulator. However, microsurgical skills are a combination of motor, cognitive and psychological skills, and non-technical skills play a crucial role in surgical outcomes for real patients. It is therefore essential to assess non-technical skills in conjunction with the surgical outcome data to determine the preparedness of trainees to perform microsurgery on real patients.

The psychological components of microsurgical training have not been explored in the literature. RANZCO intends to implement a study designed on Certainty-Based Learning (CBL) and Self-Efficacy (SE), which are psychological constructs used in medicine that enable trainees to identify whether they were unaware or misled about their level of understanding of topics or performance of skills tested. This awareness could trigger trainees to undertake future learning activities, including consulting an instructor.

Our study aims to evaluate trainee development of microsurgical skills by establishing a correlation between simulator data and increased skills, confidence, and self-efficacy. The expected outcomes of this study are to identify whether Eyesi simulator training further develops trainees' self-efficacy and improves surgical outcomes in real patients. This will have an important implication for the RANZCO microsurgical training program, and in the long-term, patient safety. The study is also expected to contribute to the advancement of microsurgical education internationally and contribute to the peer-reviewed literature.

The study is being conducted using a mixed-methods approach. The data will include Eyesi simulator data and longitudinal surveys of trainee attitude towards simulation survey and their microsurgical skills.

As the first phase of this study, trainees commencing the VTP in 2022 have been asked to complete the baseline survey. This phase of the study is being supported by a student doing the Master of Medicine (Ophthalmic Science) at the University of Sydney, who is using this study for their thesis as part of the requirements for the degree.

Promoting Success in the RANZCO Advanced Clinical Examinations (RACE)

RACE is the final hurdle before trainees progress to the final year of the VTP, where they consolidate their learning and skills in preparation for working as unsupervised ophthalmologist. As such, RACE is considered by trainees and Fellows to have the highest stakes of all RANZCO examinations. RACE has two sections, objective structured clinical examination (OSCE) and written. Trainees need to pass both sections separately to commence their Year 5 training.

The pass rate of RACE is important for workplace planning as it directly influences the number of new ophthalmologists available to join the workforce in the next few years. The ramifications of delayed entry of trainees into the final year and for new ophthalmologists joining the workforce, has significant implications for ophthalmic service delivery, particularly in regions and settings that are currently underserved such as rural and remote areas and extended settings such as outreach and inreach services.

The aims of the evaluation are to explore the causes for success and failure in RACE and determine how RANZCO could provide additional support to trainees preparing for RACE.

Noting that other specialist Medical Colleges in Australia also generally tend to report low pass rates in their advanced examinations, the insights provided by this evaluation is expected to be generalisable across all specialities and will be useful in helping all Medical Colleges develop strategies and mechanisms to support their trainees to prepare for high stake examinations.

The study, which is funded by the Commonwealth Department of Health, is being conducted in partnership with the University of Tasmania and consists of three phases; analysis of RANZCO RACE data which includes past results and trainee surveys, semi-structured in-depth interviews with trainees and supervisors and review of past papers by general ophthalmologists to assess whether the questions are set at the right level for general ophthalmologists.

The first phase of this study has been completed. The results from the analysis of trainee post-RACE survey data suggest that the trainees believe that the written component of RACE, although it aligns with the curriculum, is pitched at a subspeciality level rather than at comprehensive, general ophthalmology level. Our analysis of RACE scores showed that there has been a decreasing trend in pass rates for both OSCE and written RACE over the years with the trend being steeper for written than OSCE. Pass rates tend to drop with the number of attempts which is likely because less competent trainees than those who passed in the first attempt are attempting the second time and so forth. Interestingly, the pass rates were the same for RACE OSCE and written in 2014 and have since diverged with fewer trainees passing the written examination compared with the OSCE, although the trend is not linear and the gap between the pass rates for the OSCE and the written examination have fluctuated over the years.

Based on the results of the first phase of this study, there are several areas that will be explored in the second phase:

- ➔ From the trainees' and supervisors' perspectives, why is there a difference in performance between the OSCE and written examinations?
- ➔ Relationship between examination questions and clinical training experiences
- ➔ Appropriateness of examination question format
- ➔ Wide variation in pass rates between semesters within some years (e.g. for the written exam in 2019 and 2020 and for the OSCE in 2018)
- ➔ Impact of examination preparation and subsequent failure on trainee work/life balance
- ➔ How to better prepare for the written examination