Perspective

Royal Australasian College of Surgeons Scholarship

Program Evaluation Snapshot: Success Breeds Success

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The Foundation for Surgery, established over 37 years ago, continues to excel in its role as the vital conduit between generous donors, corporate sponsors and talented scholars who are determined to further progress their research careers. As the philanthropic arm of the Royal Australasian College of Surgeons, it generates significant funding that translates into approximately 41 scholarships per year, consisting of research and travel scholarships and grants with a total value in 2017 of \$1.7 million. These awards range from \$10k - \$150k and span 1 to 3.5 years thereby giving scholars the opportunity to pursue higher degrees.

As trustee of the goodwill and largess of individuals and companies that support the ANZ Scholarship/Fellowship and Grant Program of the Royal Australasian College of Surgeons, it is beholden upon RACS to secure maximum return on every dollar disbursed. The means by which this is objectively gauged is via an in depth annual survey of scholars on completion of their scholarship or fellowship. At the end of each year's funding cycle, that cohort of scholars was asked a series of questions pertaining to any personal and professional benefits derived from being a RACS scholarship recipient. They were also surveyed for their feedback and suggestions for improvements to the scholarship selection and administrative processes.

We surveyed 50 scholars (49/50 responses, 98% rate) who received funding in 2014, 2015 and 2016. The two exclusion criteria applied in this survey were: i) John Mitchell Crouch Fellowship recipients as it is intended for more established researchers such as consultants and, ii) travel grant recipients and scholarship holders that had not yet completed by year end of 2016.

Consistent with the previous survey, the majority of successful respondents held positions within the speciality of General Surgery (58%; 29/50, Table S1) which reflects their higher representation in the RACS. The majority of RACS scholarships are not intended to provide full term support that exceeds 12 months for scholars undertaking higher degree research. However, 50% (25/50) had completed a PhD and 10% (5/50) a Masters higher degree during their tenure as a RACS scholarship recipient (Table S2).

A new question was posed to the 2016 recipients regarding whether they considered the RACS to be more prestigious than the National Health and Medical Research Council (NHMRC) scholarship; 38.9% (7/18) placed RACS above NHMRC, 22.2% (4/18) considered both to be equally prestigious and 16.7% (3/18) thought NHMRC to be better. However, 11.1% (2/18) did not consider it relevant to their circumstances and the remaining 11.1% (2/18) did not respond. In essence, the scholars' feedback could be summed up by the following comment: *"RACS scholarships are more sought after (and difficult to obtain) by surgeons whereas NHMRC has more relevance for non-surgeons and career scientists"*.

The majority of scholars (93.8%; 45/48) believed that they received adequate mentoring and support from their supervisor and/or department or unit in which they undertook their research. Three respondents provided additional comments regarding their supervisors, facilities and infrastructure at their research institutions. They attributed their success to having excellent mentoring, supervisory and technical support and having access to laboratory facilities. Significantly, they also did not feel it adversely affected their work-life balance.

Highlighted in this perspective are the recipients' responses when asked if they had acquired the essential skillset necessary to succeed as an academic surgeon¹. All scholars bar one (2%; 1/49) believed they had acquired new technical skills; 75.7% (28/37) acquired report writing skills (including thesis); 73% (27/37) acquired skills in critical evaluation of scientific information and critical analysis and evaluation of statistics; 70.3% (26/37) acquired skills in preparing peer reviewed publications and literature reviews; 62.2% (23/37) acquired laboratory skills and clinical trial design and execution; 43.2% (16/37) reported acquiring animal research skills and 32.4% (12/37) acquiring greater understanding of legal/ethical issues and finally 27% (10/37) saw improvement in their surgical skills. Furthermore, the majority of scholars believed their communication skills had improved during their scholarship-funded research: 83.3% (30/36) of scholars believed they had improved their ability to speak publicly and 77.8% (28/36) found improvement in their writing skills.

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In regards to expanding their capacity to work independently as a direct consequence of being a RACS scholarship holder, 83.3% (30/36) of respondents were confident in directing their own research plan; and 55.6% (20/36) identified potential individuals for collaboration. Additionally, a total of 75.7% (28/37) of scholars had established collaborations with other researchers within Australasia, and 59.5% (22/37) had collaborations outside of Australasia both of which are crucial to maintaining productive research careers; only 16.2% (6/37) of scholars had not initiated any collaboration.

It was also encouraging to note that 57.1% (28/49) of scholars had published in peer reviewed journals whilst receiving scholarship support. A further 34.7% (17/49) had published following their scholarship (with 12 of the 17 scholars having achieved both). To date, there have been 159 publications in 82 peer reviewed journals generated by this cohort of scholars (Table S3).

This bodes well for the scholar intending to enter the highly competitive arena of clinical research where securing long term support from national grant funding bodies such as the NHMRC requires the applicant to offer a substantive publications record.

The value and benefits of the RACS Scholarship Program are immense as reflected by the consistently positive feedback from respondents regarding their acquisition of tangible new skills and attested to by previous recipients². It has identified the benefits for recipients in relation to their success in establishing their academic and surgical careers, improved competencies in areas of research,

scientific writing and communication with other researchers. More importantly the benefits to patients and the community at large can be quantified via the number of publications generated by scholars arising from their novel research topics³.

As we move into the 21st century the modern day surgeon must adopt the view that they are a multi skilled practitioner, well versed in academic research whilst keeping abreast of innovative surgical techniques and practices.

Bibliography

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List of supporting information

Table S1 Scholarship Recipient by Specialty

Table S2 Higher Degree Enrolment Status During Scholarship Funded Research

Table S3 Aggregated Publications By Journal and Impact Factor

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