



Aniva Pacific Health Workforce
Development Programme

Educational Performance Report

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pacific perspectives



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Background

Ethnic and linguistic diversity among health professionals is associated with better healthcare.

Across key priority health areas for Pacific people – child and youth health, reducing the prevalence of risk factors, and preventing and managing chronic conditions – inequalities persist compared to the total New Zealand population¹. Pacific peoples fare poorly in each of the most important determinants of health², and the status of Pacific peoples' health in New Zealand has continued to resist many attempts to bring about sustained improvement³.

While broader socio-economic determinants play a significant part in the health inequalities experienced by Pacific peoples, various health reports state that health equity is not reducible to socio-economic determinants alone. Equity of access to and use of health services are also important, and there is evidence that improving access and quality of care does make a difference. The limited data on accessibility and quality of health care for Pacific people indicates high unmet health needs and that there are barriers to accessing quality primary and preventive health care⁴.

There is evidence that patients actively seek healthcare services from people with whom they identify and share a common language and ethnic background⁵, cultural differences between healthcare providers and service users act as barriers to access and patients from minority groups tend to report higher satisfaction and more appropriate care from 'in-group' healthcare workers⁶. This research also suggests that different ethnic groups experience ethnic concordance in distinctive ways further reinforcing arguments for diversity in the workforce and increased cultural competence of health workers and health services.

Ethnic and linguistic diversity among health professionals is important because it is associated with better access to, and quality of care for diverse populations⁷. Health workers also have an important role to play by having a personal rapport with service users, and as role models for aiga and communities⁸.

The connection between ethnic and linguistic diversity among health professionals and accessible and quality care for disadvantaged populations is well-accepted in the NZ health system⁹. This acceptance underpins policy initiatives and investment aimed at growing the Pacific health workforce and developing a workforce that better reflects the Pacific communities served by the health sector.

Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2014–2018 is the Government's national plan for improving health outcomes for Pacific peoples. This plan notes that Pacific peoples want not just high-quality but also culturally competent health care services, which suggests that the cultural perspectives and assumptions underpinning healthcare delivery are crucial¹⁰.

Measures that have been suggested and proven to improve Pacific health outcomes include a number dependent on a culturally competent workforce. These include providing culturally appropriate health education and resources in an appropriate language and supporting culturally competent care and Pacific health providers.

Methodology

Definitions, data sources, limitations and measures.

Definitions

Pacific. The term Pacific is used consistently throughout this report to denote people who have self-identified with one or more ethnicity associated with Pacific nations and territories. The ethnic groups encompass populations with strong historical ties or New Zealand-born populations (Samoan, Cook Islands Māori, Tongan, Niuean, Fijian, Tokelauan and Tuvaluan). It also refers to other smaller communities (such as Vanuatu, New Caledonia, Tahiti, Hawai'i, Palau, Solomon Islands, Bougainville, Palau, Papua New Guinea).

The use of the generic 'Pacific' term is a convenience and bears only a limited relationship to the lived experiences of the individuals and communities that it encompasses. There is no generic 'Pacific community' but rather Pacific peoples who align themselves variously, and at different times, along ethnic, geographic, church, family, school, age/gender-based, youth/elders, island-born/NZ-born, occupational lines or a mix of these¹¹.

The term Pasifika is often used to describe the groups discussed above in education contexts and may be substituted by readers.

Data sources

This report relies on secondary data sources sourced during February – April 2017. These sources draw from administrative data about tertiary education. Most of these sources are publicly available. For selected analyses, we sourced bespoke analysis based on administrative data.

For data about the performance of the Aniva programme, we drew on administrative datasets maintained by Pacific Perspectives staff. Each source is classified accordingly and described below.

Publicly available sources

Multi-year completion rates. The rate for other Pacific students based on full and part-time Pacific students enrolled in Honours/Postgraduate Certs & Diplomas, year started = any year between 2006 and 2015, after one year, Table COM29, Qualification Completion Rates in http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement.

Enrolment data (all students). Participation Rates for the 2015 year for Honours/Postgraduate Certs & Diplomas, and Master's, for Pacific and Total, Table PPN4, Participation Rates at <http://www.educationcounts.govt.nz/statistics/tertiary-education/participation>

Completion data. Number of Pacific students completing level 8 (PGCert and PGDip) or level 9 (Master's) programmes in broad field of study 'Health' in 2015 sourced from Domestic students completing qualifications by field of study, qualification level and ethnic group 2015 worksheet at Field of Specialisation for Students Gaining Qualifications from Tertiary Education Providers available at http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement.

Bespoke sources

Fees data. TEC supplied data for in the broad field of study 'Health' in 2016 based on course tuition fees, compulsory cost fees and maxima exempt fees reported to the TEC through the Single-data Return (SDR) by TEOs.

EFTS, EPIs for Health qualifications. TEC supplied data relating to enrolments by Pacific students in programmes within the 'detailed field of study' of Health. These data include student enrolment (headcount and equivalent full-time students, or EFTS) and EPI data (qualification completion and course completion¹²). Data relating to programmes that attracted fewer than five EFTS of enrolment was suppressed. Progression and retention data were unavailable. It appears that recorded rates at this level of detail were highly variable.

Aniva programme-specific sources

Enrolment and completion data. The number of Aniva enrolments and completions up to 2016 from the Database for Aniva Evaluation, maintained by Pacific Perspectives Limited.

Financial data. Sourced from contract data held by Pacific Perspectives Limited.

Limitations

The reliance on secondary data sources has several

advantages. New Zealand benefits from high quality and credible administrative data including relating to tertiary education enrolments and outcomes. These data are either readily available from public sources (such as the Education Counts website) or the relevant agencies (such as the Tertiary Education Commission).

It is important to note that secondary data sources do have a range of limitations. Important limitations include bias in the selection of the measures used, the potential for data errors and the general accuracy of the sources used and differences between each data source. We discuss each of these limitations below.

Measurement bias. The types of performance measures available are limited to those that are relatively amenable to measurement using existing data sources and those measures that considered more likely to be able to be influenced by TEOs.

Some potentially useful measures such as changes in employment outcomes for participants in postgraduate courses require more sophisticated methodologies and tend to be better suited for specific student populations¹³.

Accuracy. Data sources are necessarily imperfect representations of the world. These imperfections arise through factors such as methodological decisions (such as statistical suppression techniques¹⁴), some kinds of data receive less attention than others (such as fees data¹⁵), and the potential for inaccuracies (such as the self-reported nature of ethnicity data).

Different reference points. Certain data (such as the number of completions overall) was only available for part of the period covered by the Aniva programme. In these situations, we have tended to limit our analysis to enrolments in the Aniva programme in the year(s) for which comparative data is available. Where data is available over a timeframe longer than the Aniva programme, we have referred to averages.

Performance measures used

This report uses a mix of public measures of educational outcomes and tailored measures. Each measure is subject to differing levels of scrutiny.

Participation or enrolment data related to the numbers and intensity of enrolments by students. These data tend to be highly reliable given their currency for funding and the eligibility of students for various kinds of support¹⁶.

Educational performance indicators (EPIs) are among the most well-known of the public measures. These measures relate to rates of qualification completion, course completion, progression¹⁷ and retention. EPIs are subject to relatively intensive

review because of their use for funding and public performance reporting. More emphasis is placed on the qualification and course completion by Government agencies and tertiary education organisations.

The Ministry of Education has published **Cohort-based completion rates** for several years. These data are publicly available although only at the level of the tertiary education system disaggregated by key dimensions such as gender, ethnicity, age, full time and part time status and qualification level. Cohort-based completion rates are an emerging indicator and should be treated with caution (compared to EPIs and participation data).

The cost per completion measure was developed for this report and reflects the importance of demonstrating value for money in the delivery of the programme. This measure involved combining student enrolment data with published data on Student Achievement Component funding rates and unpublished data on average fees paid per student to develop an estimate of the total cost of enrolment in our reference year (2015). Costs for the qualifications in the Aniva programme take account of Ministry of Health funding for programme development, mentoring, monitoring and administrative expenses.

The measure itself involves dividing the total investment by programme type (Aniva or non-Aniva) and level (postgraduate or Master's) by the number of completions recorded. This measure provides a reasonable heuristic for thinking about the relative costs of tertiary education programmes.

The approach has some limitations because it is not currently possible to account fully for changes in the student population and their enrolment choices over time. The lag between first enrolment and completion is long for many qualifications, although is less significant for students enrolled in the Aniva programmes which tend to involve rapid completion.

Developing a Pacific health workforce

A complex workforce development system that doesn't always work well for Pacific.

Introduction

There are a considerable number of actors and interventions that contribute to the development of the Pacific health workforce including three Government agencies (the Tertiary Education Commission, the Ministry of Health, and Health Workforce New Zealand), 15 tertiary education organisations, the 20 District Health Boards and a significant number of private health providers.

The Government also invests approximately \$40 million per annum through tuition subsidies for Pacific students enrolled in health-related tertiary education¹⁸.

Despite this investment and the range of activity, the 'inflows' into the Pacific health workforce involve relatively few individuals, and these numbers reduce as these people undertake more specialised types of training. The 'in-flows' are reflective of a workforce development system that is only gradually responding to the needs of Pacific peoples.

Key factors that influence the responsiveness of that system include:

- *An insufficient supply* of skills to meet the needs of Pacific communities and employers. Pacific people made up just 2.3 percent of the regulated health workforce in 2012, and the overall numbers are not forecast to increase significantly in the medium term¹⁹.
- *Systematic barriers* impede Pacific people from accessing postgraduate training including high financial and opportunity costs, low self-confidence, feelings of isolation, lack of relevance due to small numbers of other Pacific students and staff, and the inconsistent nature of career planning and 'back-filling' arrangements.
- *Pacific nurses are underrepresented* in leadership roles. Pacific nurses comprise the largest group of Pacific people in the regulated health workforce. They are less likely to be engaged in clinical and

academic leadership roles compared to other nurses. Workforce development programmes have historically failed to equip this critical workforce group with the skills to exercise clinical leadership and to pursue professional advancement in primary and secondary care.

An important driver of these trends is the variability of Pacific people's experience of tertiary education and the return on the private and public investment in that education.

Pacific people experience poorer outcomes from tertiary education compared to other New Zealanders. Key differences include lower rates of participation in advanced tertiary education and course completion and qualification attainment. For example, at the postgraduate level:

- *Participation rates are low.* Pacific people are 25% less likely to be enrolled in postgraduate study compared to the general population. There were only 0.9% of the Pacific population in New Zealand enrolled in postgraduate or higher study in 2015 compared to 1.2% for all New Zealanders. Between 2011 and 2015, the skills system produced an average of eight graduates from Master of Nursing programmes who identify with a Pacific ethnicity annually.
- *Completion takes longer.* Of the Pacific students who began a postgraduate qualification in 2011, 66% had completed this qualification by 2015 (after five years). This rate compares to 74% for European/Pakeha postgraduate students.
- *Progression is uncommon.* Pacific learners in postgraduate health qualifications have a low level of progression to Masters-level study which we estimate at around just 28%²⁰.

These challenges are consistent with findings by the Productivity Commission that the tertiary education system underperforms for Pacific²¹ and research which emphasises the need to design education and training around the needs of these learners²².

Key implications

The cumulative effect of these issues is the lack of a critical mass of specialist knowledge and skills about Pacific health. The evidence base for Pacific health is dispersed and requires significant expertise and effort to access, analyse and apply to specific situations.

The small numbers of Pacific workers and learners, especially at senior levels in any one workplace or profession have prevented the development and definition of this Pacific specialist knowledge.

Pacific health workers are expected to deliver quality clinical services and demonstrate advanced cultural competencies. They work in a health system that does not consistently recognise the scope and range of demands placed upon them and the persistent invisibility of some of the key outcomes that they deliver.

There is increasing recognition that effective Pacific health workers must be specialists in their chosen professions as well as in Pacific health issues. Current tertiary education and workplace approaches provide for technical skills sets, for example clinical, management, education and research; however, no single organisation has yet established itself as a centre of expertise in specialist Pacific-health knowledge, skills and research methods.

The central challenge that remains is to ensure workforce development encompasses tailored Pacific health competencies in tertiary education, continual learning for the existing workforce and career planning and advancement support.

Such approaches will broaden the pool of culturally focused leadership and expertise available at all levels of the health system. These leadership skills can then be employed to influence policy and effectively advocate for system improvement²³.

Key indicators

Key indicators relevant to educational outcome performance, contribution to changes in participation in postgraduate education and training, characteristics of Aniva programme participants and programme efficiency including comparative analysis where possible.

Introduction

The Aniva Programme aims to support health workers to pursue career pathways that enable them to develop the technical skills and understanding of cross-cultural issues they need to effectively advocate for change in the delivery of health services to better meet the needs of Pacific populations.

This section provides an overview of the measured performance of the Aniva Programme making comparisons to other workforce development and training programmes. The performance of the postgraduate and Masters-level programmes aimed at registered nurses is discussed to provide context to the measured results where possible.

Several key diagrams are available online in an [Aniva Programme Dashboard](#).

Participation

Between 2012 and 2016 (inclusive) there were 167 enrolments as part of the in the Master's pathway offered through the Aniva programme. Of these

153 completed either the postgraduate certificate or postgraduate diploma. The Master's programme introduced in 2016 attracted 15 enrolments in its first year (2017).

The number of learner enrolments averaged 27 per year in 2012, 2013 and 2014. The introduction of the postgraduate diploma saw enrolments increase to 49. This increase reflected latent demand for this next stage in the pathway.

Aniva programme postgraduate enrolments accounted for an average of 10.1 percent of all postgraduate enrolments in the detailed field of study of 'Health' during the period 2012–2016 (see Figure 1). Aniva programme enrolments as a proportion of all such enrolments peaked in 2015 at 17.5 percent or 49 out of 277 enrolments.

The first year of the Aniva Master's programme was 2016. There were 15 enrolments which were equivalent to 17.6 percent of all Masters-level enrolments in the detailed field of study of 'Health'²⁴.

Completions

Between 2012 and 2017 (inclusive) there were 166 qualification completions including of the PGCert, PGDip and Masters of Professional Practice (Pacific Health Leadership), an average of 35 per annum.

Ministry of Education data shows that in 2015 the total number of Pacific people who completed a postgraduate (i.e. at the PGCert and PGDip level) health qualification was 170. The Aniva programmes accounted for 43.5²⁵ (or 25.6 percent) of these completions in that year²⁶. The programme also accounted for around one in eight of every postgraduate completion in any field by Pasifika students in 2015.

■ Completion rates (Master's programmes)

Ministry of Education data showed that in 2015 there were 160 Pacific people who completed a Master's level qualification in any field of study.

FIGURE 1: SHARE OF HEALTH POSTGRADUATE ENROLMENTS, 2011–2016

Aniva enrolments make up what percentage of all Health postgrad enrolments?

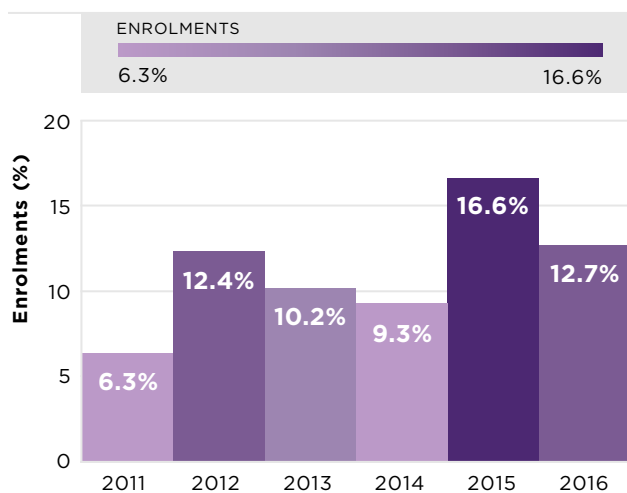


TABLE 1: EPI PERFORMANCE, POSTGRADUATE HEALTH PROGRAMMES, 2012 TO 2015

Type	EPIs	2012	2013	2014	2015	Average
All Pacific	Qualification completions	85%	96%	68%	73%	80%
Aniva	Qualification completions	85%	100%	92%	89%	103%
All Pacific	Course completions	88%	87%	84%	82%	85%
Aniva	Course completions	100%	100%	96%	100%	99%
All Pacific	Retention	74%	72.00%	72%	68%	70%
Aniva	Retention	100%	100%	96%	100%	99%

The number of completions of the Aniva Master’s programme in 2017 was 13. This result means that Aniva programme graduates may account for 8.1 percent of all Pacific people obtaining Master-level qualifications in 2017²⁷.

Aniva Master’s graduates are record faster completion that other Pacific learners. Ministry of Education data shows that 51 percent of Pacific Master’s level students complete within three years²⁸. The comparable rate for Aniva Master’s learners is 87 percent²⁹.

Educational performance indicators

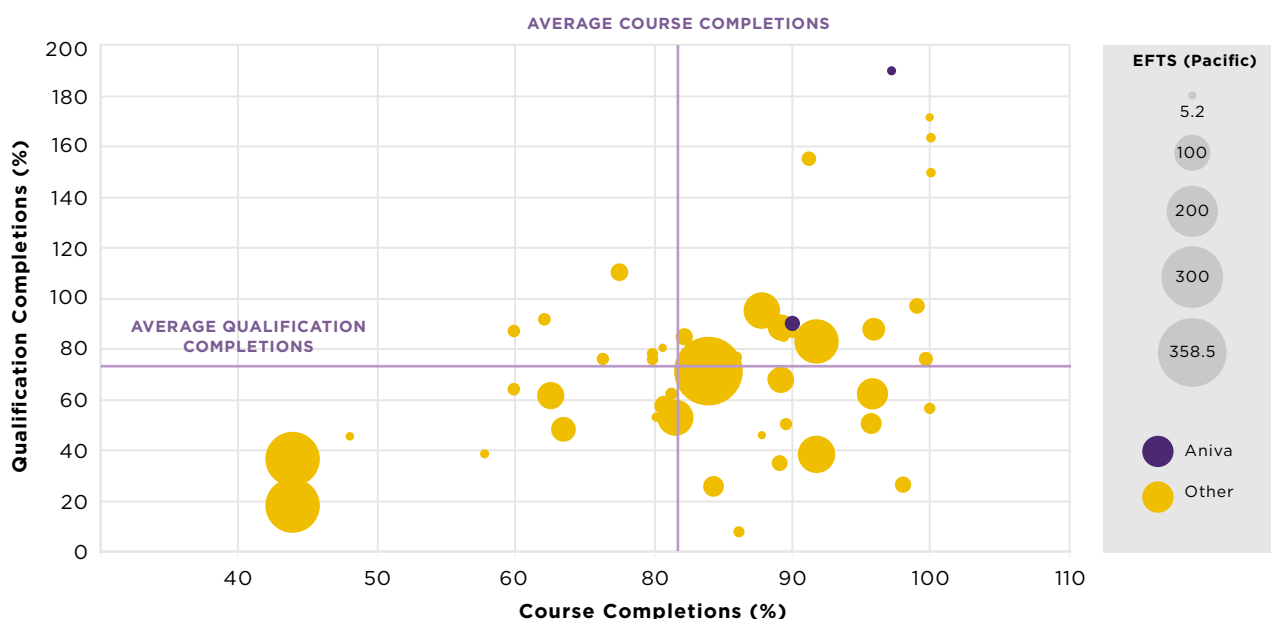
Educational performance indicators (EPIs) measures cover qualification completion, course completion, progression³⁰ and retention. Data on the performance of all postgraduate programmes in health (excluding Aniva programmes) compared to the Aniva postgraduate programmes is provided in Table 1.

These results show that Aniva programmes deliver a considerable performance premium compared to other postgraduate programmes on average. For example, Aniva programmes recorded a qualification completion rate of 91.6 percent on average compared to 80 percent for all Pacific postgraduate health students, a premium of 11.6 percent. The rates for course completions show a premium of 14 percent on average.

The most significant premium relates to retention within the Aniva programmes which averaged 99 percent between 2012 and 2015 compared to an average of just 70 percent for all Pacific students in postgraduate health programmes.

Data on EPI performance in 2016 for the wider tertiary education system was unavailable at the time of writing.

FIGURE 2: FOUR QUADRANT DIAGRAM, POSTGRADUATE HEALTH PROGRAMMES, 2015



Note: Aniva programmes in blue, refer to Aniva programme dashboard for more detail.

■ Programme-level comparisons

More detailed analysis that plots the relative performance of Aniva programmes in terms of qualification and course completions is depicted in Figure 2. This figure shows the relative performance of all postgraduate health programmes (Pacific enrolments only).

Aniva programmes are highlighted in blue on the diagram. The size of each bubble reflects the number of EFTS enrolled in each programme (with larger bubbles denoting higher enrolments).

Aniva programmes fall within the top quadrant of programmes demonstrating excellent rates of both course and qualification completion.

Other measures of educational outcomes

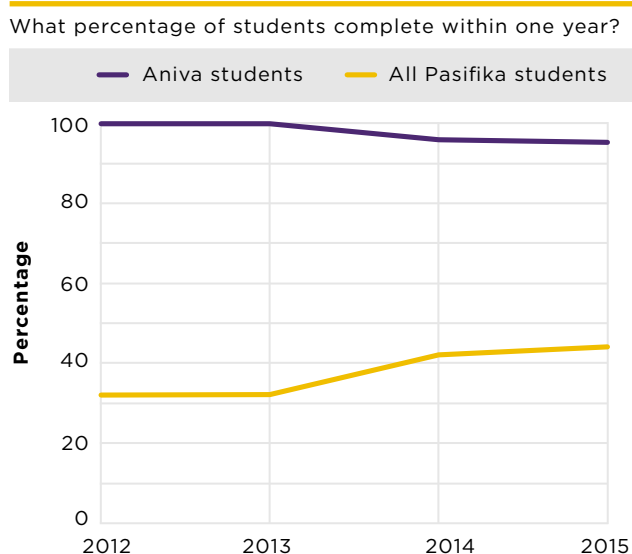
We have also identified five other measures of educational outcomes. These measures relate to the volume of completions, the speed of completion, advancement within the Aniva pathway, progression to more advanced study and forecast completion rates for Master’s level programmes.

■ Speed of completion

The proportion of Pacific people enrolled in any postgraduate programme between 2006 and 2015 who completed within one year was 25 percent³¹.

By comparison, the rate for the Aniva programmes was 92 percent (see Figure 3).

FIGURE 3: RATE OF COMPLETION WITHIN ONE YEAR, ANIVA VS. ALL POSTGRADUATE ENROLMENTS BY PACIFIC, 2012-2015



■ Advancement within the Aniva pathway

Advancement rates measure the proportion of learners who either complete and/or continue their studies at the same or a higher level over a longer period than ‘official’ measures of retention. These rates for Aniva programmes show no advancement initially until the postgraduate diploma option became available. Once that option was available (from 2015) these rates increased quickly for each Aniva learner cohort (see Table 2).

TABLE 2: PROPORTION OF ANIVA POSTGRADUATE CERTIFICATES WHO ADVANCED TO POSTGRADUATE DIPLOMA STUDY, 2012 TO 2015

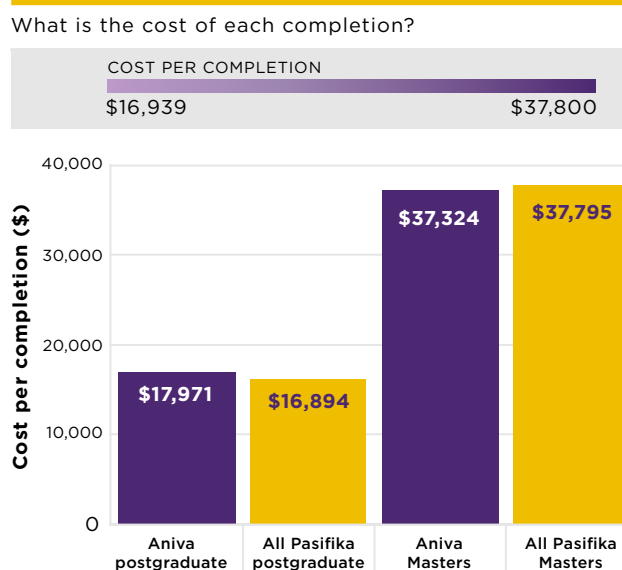
Year	One year	Two years	Three years
2012	0%	0%	26%
2013	0%	35%	39%
2014	28%	44%	N/A
2015	29%	N/A	N/A


Note: Comparable data for other postgraduate programmers was not available.

Value for money

Assessing the relative value for money for the Aniva programme is an important metric. As with many examples of innovative practice in the tertiary education system, the Aniva programme draws on funding additional to the Government’s general contributions to the costs of tertiary education.

FIGURE 4: VALUE FOR MONEY, ANIVA PROGRAMMES VERSUS PACIFIC ENROLMENTS, 2015





The cost per completion for the Aniva postgraduate certificate and postgraduate diploma programmes averaged \$17,971 in 2015³². This rate is only modestly higher (6%) than the average for all postgraduate completions which ranged between \$15,608 and \$18,410 (with a midpoint of \$16,894) in the same year³³.

The positive externalities that result from a more vibrant community of practice for Pacific health services, the opportunity costs avoided by a reduced number of people who only partly complete their training and significantly higher rates of progression to Masters-level training justify the modest premium for the postgraduate components.

The cost per completion rates for the Aniva Masters-level programme was \$37,325 for the 2017 year³⁴. This rate compares to the average cost per completion for all health-related Master's qualifications of between \$31,496 and \$47,245 (with a midpoint of \$37,795) based on 2015 data³⁵.


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Endnotes

- 1 Including higher rates of: hospitalisation for respiratory infections, asthma and skin infections; mental illness; diabetes and diabetes mortality and complications; stroke and stroke mortality; and cancer mortality (despite lower cancer incidence).
- 2 Income levels, employment rates, education achievement, and housing experiences
- 3 (Pulotu-Endemann, 2013).
- 4 (Southwick, Keneally, & Ryan, Primary Care for Pacific People: A Pacific and Health Systems approach, 2012)
- 5 (Saha, Taggart, Komaromy, & Bindman, 2000)
- 6 (Saha, Komaromy, & Koepsell, 1999)
- 7 (Grumbach & Mendoza, 2008)
- 8 (Southwick, Keneally, & Ryan, Primary Care for Pacific People: A Pacific and Health Systems approach, 2012)
- 9 (Barwick, 2000); (Ministry of Education and Ministry of Business, Innovation and Employment, 2014); (Health, 2016)
- 10 The importance of ensuring that the health workforce pipeline and health workforce in training reflect the ethnic and socioeconomic realities of the communities they serve is well recognised. See (Crampton, 2012)
- 11 (Anae, 2017)
- 12 For information about how EPIs are calculated see <http://tec.govt.nz/funding/funding-and-performance/performance/teo/>
- 13 For a discussion of the limitations and exclusions relating to the Employment Outcomes of Tertiary Education see https://www.educationcounts.govt.nz/_data/assets/pdf_file/0005/147245/The-outcomes-of-tertiary-education-for-Pacific-graduates.pdf
- 14 The number of reported completions for programmes other than Aniva are subject to statistical suppression practices (rounded to the nearest 0 or 5). This approach reduces the likelihood that the identity of individuals might be inferred. This approach means that while the actual number of completions by Pacific students in postgraduate 'Health' programmes for the 2015 year of 170 may in fact range between 156 and 184.
- 15 Fees data is indicative only as it has had little active use within funding processes to date, although this issue should reduce over time with the advent of the key information set. See <http://www.tec.govt.nz/teo/working-with-teos/kis/implementation/>
- 16 With some exceptions. See <http://www.tec.govt.nz/funding/funding-and-performance/audits-reviews-investigations/reviews/>
- 17 Progression rates are calculated for learners who enrol initially in level 1–4 qualifications. As a result, they are not applicable to the Aniva programme.
- 18 The relationship between Total of: a) Government subsidies for tertiary education (Student Achievement Component funded attracted by domestic students who identify with one or more Pacific ethnicity) of approximately \$30m (2,370 EFTS in 2016 at an average funding rate of \$12,390); and Vote Health funding (Pacific Provider Development Fund). Excludes subsidies associated with 'interest free' student loans and funding administered by Health Workforce New Zealand. Strictly speaking the amount discussed in 'a)' is the amount of public investment in the tertiary education of Pacific people enrolled in health-related programmes. The extent to which this funding contributes to the development of the health workforce is mediated by several factors such as rates of educational success and transition into the labour market.
- 19 Updated forecasts based on the methodology used in (Pacific Perspectives Limited, 2013)
- 20 Performance data drawn from Pacific Perspectives Limited's internal monitoring of the Aniva programme. Reference data sourced from the Ministry of Education and Tertiary Education Commission.
- 21 (New Zealand Productivity Commission, 2017)
- 22 (Southwick, Scott, Mitaera, Nimarota, & Falepau, 2017)
- 23 (Sheikh, George, & Gilson, 2014)
- 24 Number of Aniva enrolments in 2015. Sum of all PGCert and PGDip enrolments in 2015 from

- Database for Aniva Evaluation. Number of Pacific students enrolled in level 8 (PGCert and PGDip) programmes in 2015 sourced from TEC-supplied data. Percentage calculated from 49 (the actual number of individuals enrolled in one or more Aniva courses) divided by 277. Note that percentage rate provided is the 'peak' percentage. The long-run average (2011 to 2016) is 10.1%, and 2016 rate was 11.9%.
- 25 One Aniva student enrolled in the PGDip in the second semester of 2015 and first semester of 2016 and whose completion has been apportioned across these two years, half in 2015 and half in 2016.
 - 26 Number of Aniva completions in 2015. Sum of all PGCert and PGDip completions in 2015 from Database for Aniva Evaluation. Number of Pacific students completing level 8 (PGCert and PGDip) programmes in broad field of study 'Health' in 2015 sourced from Domestic students completing qualifications by field of study, qualification level and ethnic group 2015 worksheet at Field of Specialisation for Students Gaining Qualifications from Tertiary Education Providers available at http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement. Percentage calculated from 41 divided by 170. Note that the denominator is subject to statistical suppression practices (rounded to the nearest 0 or 5). As a result, the denominator may range between 156 and 184 and the percentage ranges between 22% and 26%.
 - 27 Number of Pacific students completing level 9 (Master's) programmes in any field of study based on 2015 data sourced from Domestic students completing qualifications by field of study, qualification level and ethnic group 2015 worksheet at Field of Specialisation for Students Gaining Qualifications from Tertiary Education Providers available at http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement. Percentage calculated from 13 divided by 160. Note that the denominator is subject to statistical suppression practices (rounded to the nearest 0 or 5). As a result, the denominator may range between 110 and 210 and the percentage ranges between 6% and 12%.
 - 28 Rate for other Pacific students based on Full and Part-time Pacific students enrolled in Master's, year started = any year between 2006 and 2015, after three years, Table COM29, Qualification Completion Rates in http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement. Note that the average rate for Pacific students (both full and part-time) who started in any year between 2006 and 2015 and who completed after one year was 8%.
 - 29 Three-year completion rate used because of uncertainty of timeline for completion of Aniva Master's students. Rate based on 13 of the 15 students in the 2017 cohort completing.
 - 30 Progression rates for postgraduate health programmes are highly variable and in any case the measure is intended for progression from level 1–4 (Sheikh, George, & Gilson, 2014) programmes.
 - 31 Completion rate for Aniva participants based on number of completions divided by the number of enrolments from Database for Aniva Evaluation. Rate for other Pacific students based on Full and Part-time Pacific students enrolled in Honours/ Postgraduate Certs & Diplomas, year started = any year between 2006 and 2015, after one year, Table COM29, Qualification Completion Rates in http://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement. Note that the average percentage of students (all ethnicities) who started in any year between 2006 and 2015 and who completed after one year was also 25%.
 - 32 Cost per completions for Aniva students based on the following assumptions:
 1. Data for 2015 year only
 2. Number of completions = 41
 3. Programme cost = \$781,757.43. Calculated based on Budget worksheet provided to Ministry of Health. Direct costs of \$157K for PGCert and \$197K for PGDip. Master classes of \$5K. Cross-workstream of \$201K apportioned at 50%. Salaries/wages and overheads of \$641K apportioned at 50%.
 4. Assumes that full SAC funding is included in calculated programme cost as per budget notes.
 - 33 Cost per completions for all Honours, PGCert and PGDip health students based on the following assumptions:
 1. Data for 2015 year only
 2. Number of completions = 170 with range between 156 and 184 (see above)
 3. Programme cost = \$2.87m. Calculated based on 128 EFTS enrolled by Pacific students in level 8 qualifications. SAC funding rate of \$14K. Fees of \$7.8K based on actual average fees paid by Pacific students (data provided by the TEC).

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4. Excludes other investment not directly attributable to student enrolments such as the Performance-based Research Fund, the Centres of Research Excellence or capital investments by the Crown
- 34 Cost per completions for Aniva students based on the following assumptions:
1. Number of completions = 13
 2. Programme cost = \$485,218. Calculated based on PPL EFTS forecast of 10.5. SAC rate B4 of \$12,872. Direct costs of \$118K for Master's. Cross-workstream of \$193K (average of 2015, 2016 and 2017 years) apportioned at 25%. Salaries/wages and overheads of \$731K (average of 2015, 2016 and 2017 years) apportioned at 25%. Sourced from Budget worksheet provided to Ministry of Health
- 35 Cost per completions for all Master's-level health students based on the following assumptions:
1. Data for 2015 year only
 2. Number of completions = 20 with range between 16 and 24
 3. Programme cost = \$755K. Calculated based on 29.9 EFTS enrolled by Pacific students in level 9 qualifications. SAC funding rate of \$15,432. Fees of \$10K based on actual average fees paid by Pacific students (data provided by the TEC).
 4. Excludes other investment not directly attributable to student enrolments such as the Performance-based Research Fund, the Centres of Research Excellence or capital investments by the Crown.





