australian continuous improvement group

Department of Health

Voluntary Dental Graduate Year Program

Program Evaluation: Final Report

Australian Continuous Improvement Group

30 March 2016

FINAL: 28 April 2016

Contents

Executive summary

Background

The Voluntary Dental Graduate Year Program (VDGYP) was a Commonwealth funded program aimed at improving the dental workforce supply to the public sector in general, with an emphasis on communities and special sectors in need, rural and Aboriginal and Torres Strait Islander communities and aged care settings. The program featured the placement of fifty dental graduates nationally each year commencing in 2013 and running until January 2016. Graduates were supported by a mentor and a continuing education curriculum during the graduate year, as they undertook one or several clinical placements. Their salaries were paid by the program and infrastructure grants were also made available to host service providers.

Evaluation objectives

The Department of Health (Health) commissioned Australian Continuous Improvement Group (ACIG) to carry out a series of formative and summative evaluations of the VDGYP over the period 2013-2016. Through these, Health aimed to determine (i) the extent to which the program was delivering its planned activities and outputs; (ii) lessons that could be used to modify the program implementation to increase the likelihood of successful outcomes; (iii) overall program outcomes; (iv) appropriateness of the program in meeting its objectives and policy goals; and (v) the levels of efficiency and effectiveness achieved by the program.

Evaluation approach and methods

The framework for the evaluation was developed in December 2012 by Three Rivers Consulting Pty Ltd and was modified in November 2013 and documented in a separate ACIG report: *Voluntary Dental Graduate Year Program Evaluation Framework and Evaluation Plan*.

The VDGYP evaluation framework starts with the high level questions that are to be answered by the series of evaluations. These high level questions are supported by a series of detail level questions that have been used to develop indicators that are the basis for data collection in the six rounds of the evaluation.

Scope of this Report

This report consolidates the findings of the six previous evaluation progress reports, adds findings from seven case studies and a post-program survey of graduate participants across all three program years, and reports on lessons learnt and recommendations should the program be reconsidered for implementation in a similar form in the future.

Summary of main findings

Findings are summarised below against the key evaluation questions that are relevant to this phase of the program.

Has there been an increase in dentist workforce and service delivery capacity in public dental and other areas of need as a result of the Program?

The VDGYP program each year successfully selected and placed fifty graduates in targeted dental services across disadvantaged, regional, and remote communities, supported by infrastructure grants, a professional development curriculum and a mentoring program. Forty-nine graduates completed the first year of the program in 2013, another forty-nine completed the second program year in 2014, and forty-eight completed the 2015 graduate year program.

Has the Program provided enhanced opportunities for graduates?

Graduates, mentors and service providers all report strong agreement that the program provided enhanced opportunities for the graduates. Graduates and mentors report that the program successfully contributes to an accelerated transition for the graduates to professional clinicians.

Are VDGYP graduates more confident and competent as a result of the Program?

Mentors and graduates alike report that graduates are more confident and competent as a result of the program. Mentors put the differences down to the structured program and the way it encourages graduates to expand their learning.

Was the Program attractive to graduating dentists?

The VDGYP proved to be attractive to graduating dentists, as evidenced by the number and quality of the applicants. Ninety-four graduates applied for fifty places (a ratio of 1.9 applicants per place on offer) in the 2013 program; 220 graduates applied for fifty places (4.5 applicants/place) in the 2014 program; and 201 graduates applied for fifty places (4.0 applicants/place) in the 2015 program.

Did the Program attract suitable mentors?

The mentoring element of the program was nominated by both graduates and mentors as a major highlight of the program. Not only do graduates see themselves as benefiting, but so too do most mentors. There was evidence that not only did mentors gain confidence and capability throughout the three years of the program but also that the program administrator, AITEC, progressively improved its mentor support processes.

Did the Program meet graduate expectations?

The program met graduate expectations to a very large extent. All graduates interviewed throughout the program said the program was very beneficial and consolidated their undergraduate learning. The program was described as a good transition to independent clinical practice by graduates, a finding confirmed in the follow up survey of 2013, 2014 and 2015 participants in early 2016.

Did the Program meet service provider expectations?

The program met and generally exceeded service provider expectations. Most service providers commented that the graduates were of extremely high quality and their energy and need for learning positively impacted on the service culture in ways that appear to be long lasting. The program also gave more senior dentists the opportunity to share their experience and learning, which increased motivation and re-energized many services. Service providers were very pleased to see that the graduates provided enthusiastic treatment to patients and were very popular with patients.

Did the application, selection and matching processes for graduates and service providers reflect the Program objectives?

The application, selection and matching processes reflected program objectives, after some early difficulties getting the desired number of service providers in remote and very remote areas. Actions undertaken in the second and third years of the program increased the numbers in these areas. Mentors and service providers commented highly positively about the success of the selection processes, which was reflected in the quality of the graduates and their attitude to learning and development.

Was the curriculum and training material aligned with Program needs?

The curriculum and training materials are clearly aligned with program needs, although the elements are rated at different levels by graduates and mentors. In general, mentors rate curriculum and training materials higher than do the graduates.

Graduate workload was raised as an issue in the 2013 graduate year but was much less prominent in 2014 and not even mentioned in 2015. This is likely due to program administration and curriculum delivery improvements made by AITEC progressively over the three years of the program, as well as increased communication of expectations by AITEC to mentors and service providers following on from experience in the first year of the program.

Did the resources allocated for the Program get spent?

Resources allocated for the program have been mostly released and used, although the rate of infrastructure funding take-up was initially slower than planned. This was a result of some service providers dropping out at a late stage in the preparation process, and slowness by some service providers using the infrastructure funding or claiming funds owed them, often due to processes beyond their control such as local financial year planning and project approval processes. These issues have been progressively resolved by AITEC, although infrastructure ended up underspent by slightly less than 10% of that planned over the life of the program. Some under-spending was due to savings made during the investment and installation process by service providers.

What proportion of funding went to frontline services?

Funding that flowed directly to frontline service delivery (salaries, incentives and infrastructure grants) was estimated as 89% of the program expenditure, the remainder funding support services essential to deliver the program.

Was infrastructure funding adequate and well spent, aligning with Program objectives?

Infrastructure spending was adequate, as demonstrated by the quantity and standard of infrastructure installed using program funding. Spending was the subject of regular independent audits that were reported to Health by the program administrator. Spending aligned with the program objectives, as it supported creation of clinical infrastructure sufficient to allow deployment of the dental graduates in dental practice, additional to the existing service capacity.

Was adequate Program funding provided to cover the costs of the VDGYP?

The program funding was adequate to cover the costs of the program.

How do Program costs and outcomes compare to similar Programs?

There are no directly comparable programs on which to base appropriate comparisons. There are studies available in the international literature about the efficacy of various graduate placement schemes but none provide cost data.

How does the value of the Program compare to the cost?

Unit costs of the VDGYP have been calculated from financial data held by Health. The information is not presented in this report, due to it being commercially sensitive.

Program value may be assessed through the assessments of worth made qualitatively throughout this evaluation. Economic cost-benefit analysis is beyond the scope of the evaluation, and calculation of the full economic value of the program would require access to data at the service provider and community level that is not readily available to the evaluators.

The program has, at a minimum, delivered additional services equivalent to the annual output of forty full-time equivalent (FTE) dentists: fifty dental graduates working delivering services at 0.8 FTE each, with 0.2 FTE time equivalent taken for the study program.

Did the Program do what it set out to do?

The program has to a very large extent what it was planned to do. Evidence concerning this is set out throughout the body of the report.

Was the distribution and rotation of VDGYP graduates appropriate, using partnerships where necessary?

Feedback from graduates and mentors indicates that distribution and rotation of graduates has been successful. Services rotated graduates through placements in various locations and different types of clinical experience, as described in the body of the report.

Have more graduates been recruited into and retained in the public sector as a result of the Program?

At the end of each of the three years of the program, about half of the graduates indicated that they intended to continue on in the public sector in the year following their graduate year, with a further proportion continuing in a mix of public and private practice.

According to the responses received to the graduate destinations survey in February-March 2016: eight of the eighteen 2013 VDGYP graduates who responded remained working in public sector dentistry two years after their VDGYP year; and fifteen of the twenty 2014 VDGYP graduates who responded remained working in public sector dentistry in the year after their VDGYP year. Twelve of the twenty-three 2015 graduates who responded said they intended working in public sector dentistry for the foreseeable future.

Has the VDGYP had a positive impact on attitudes of graduates towards the public sector and likely career choices?

Graduates involved in the program reported strongly positive attitudes to continuing employment in the public dental health sector. When asked in the graduate destinations survey about the influence the VDGYP had on their choice of workplace in subsequent years, between 82% (2013 graduates) and 87% (2015 graduates) of respondents said it had a positive or very positive influence on their decision about working in the public sector. Between 60% (2013) and 72% (2014) said it had a positive or very positive influence on their decision about working in a regional, rural or remote area.

Did mentors value the experience and has it impacted on their attitudes to public sector dental health services?

Mentors reported strongly favourable reactions to the program, in both interviews and surveys. They shared a view that the program is highly valuable, both to graduates and also for their own professional and personal development. Mentors interviewed for the evaluation reported greatly valuing the program and commented that the program was professionally delivered. There was significant impact on the culture in some services, for example in encouragement of senior clinicians to look for suitable cases for the graduates and also a challenge for the mentors to consider why they use certain approaches. Mentors expressed considerable regret that the program had ceased after the 2015 graduate year.

Did service providers value the experience and has it had a wider impact on their service mix or culture?

Service providers all strongly believed that the program had been highly valuable to their service. Several described it as extraordinarily valuable, or overwhelmingly positive both to the graduates and the region. This value was experienced not only through increased staff numbers and infrastructure, which allowed services to increase throughput and outreach activities, but also in a change in culture, with many services reporting a much more collegiate culture since the inception of the program. Service providers expressed considerable regret that the program will cease after the 2015 graduate year.

What impact did the Program have on services provided/patients seen?

The provision of forty-nine extra places for graduate dentists in 2013, fifty (for most of the year) in 2014, and forty-nine (for most of the year) in 2015, supported with infrastructure funding, has created additional capacity for dental services. While it may be argued that some of that capacity might possibly have been installed without the program, it is more likely that VDGYP represents additional capacity being added to serve disadvantaged, regional, rural and remote communities. Some services used their infrastructure funding to open clinics in rural or remote areas and others established or expanded mobile outreach services.

Many of the service providers reported reduced waiting lists and increased service delivery capacity as a result of the VDGYP. A number also reported using the infrastructure and staffing provided by the VDGYP to open clinics in rural or remote areas or deliver new and innovative services, especially outreach and mobile services. Some services which used the infrastructure funding to increase the number of dental chairs now face difficulties maintaining staffing to continue taking advantage of the infrastructure.

Has the Program had an impact on the quality of care?

Qualitative evidence gathered though interviews with mentors and service providers indicates that VDGYP participants have made positive contributions to the quality of care in the program's target populations. By increasing service capacity and reducing waiting lists, patient outcomes have improved because needed emergency treatment has been provided in time to prevent far more serious conditions developing and ultimately reducing extreme emergency treatment needs.

Was the Program administered and delivered to a high quality?

Data from surveys and interviews show strong approval of the program administration. The program administrator, AITEC made a number of enhancements to their program delivery throughout the three years and this is reflected in survey ratings by graduates, mentors and service providers, which improve consistently.

The program administrator, AITEC, clearly met the program objectives and the outcomes specified in their agreement with Health.

Recommendations

While the evaluators recognise that the VDGYP has now ended, we present the following recommendations to summarise the lessons learned, should a similar program be considered in future.

The merit of the VDGYP has been demonstrated throughout the three years of the program. There is considerable interest amongst service providers and mentors, supported by graduate participants, in continuing the program. Some service providers are continuing the graduate year program in a limited format (without access to the formal curriculum or supporting delivery technology), using their own funding. Given the initial start-up costs of the infrastructure and curriculum development, it would be an efficient and effective use of funds to continue the program, even in a limited capacity, and continue to achieve benefits from the investment already made.

> **Recommendation 1**: Seek alternative delivery models and/or funding sources for continuation of a graduate professional development year that includes local mentoring and case presentations as a minimum.

Essential elements of a successful graduate year professional development program have been demonstrated to be: a formal curriculum, combined with assessment tasks; regular study leave; formalised mentoring by senior dentists; overall program administration, curriculum delivery and monitoring by an independent third party (the program administrator). It was also made clear to the evaluators by mentors and service providers that the curriculum provides the framework for the mentoring; without the curriculum and all of its support materials and delivery channels, the potential impact of mentoring on graduates is lessened.

Recommendation 2: In the absence of a full formal graduate year program funded by government, licence the curriculum content and delivery channel technology at an affordable price to interested service providers.

One of the objectives of the program was to provide support for public dentistry services. There will be considerable impact on some services from discontinuation of the funding for graduate staffing within their services.

Recommendation 3: Focus the graduate professional development program on areas of greatest need such as regional/rural or remote services or Indigenous services.

If the program was to be re-established, several opportunities for improvement exist and these are the subject of the following recommendations.

Mentoring preparation could be improved and expanded, with more formal and in-depth training based on health professional education and clinical supervision principles and practices. A number of Australian universities offer short courses in health professional education that could be used as a basis.

Recommendation 4: Develop and deliver a formal training module for mentors and clinical supervisors prior to graduate year commencement.

Monitoring of placements progress could be increased to take the initiative to intervene in any developing problems.

Recommendation 5: Implement formal monitoring with check points at: six to eight weeks from graduate commencement; mid-program (six months); and at the three-quarter point in the program (nine months).

The infrastructure component has the greatest impact on smaller public dentistry services, especially in regional, rural and remote areas, whereas large state-based or metropolitan services often have enough infrastructure funding of their own,

Recommendation 6: Focus infrastructure spending on smaller services and regional, rural and remote settings.

The $15,000 bonus on completion of the VDGYP year was considered by a number of graduates to be unnecessary as an incentive, given the competition for employment among graduate dentists and the overall benefits afforded to graduates by the VDGYP.

Recommendation 7: Eliminate the bonus payment for completion of the graduate year.

Acknowledgements

ACIG gratefully acknowledges the cooperation and assistance of the graduates, mentors and service providers who generously gave their time to interviews by our evaluators.

ACIG also gratefully acknowledges the cooperation and assistance of AITEC Pty Ltd, the VDGYP Program Administrator in providing the source data for this phase of the evaluation.

Introduction

The Voluntary Dental Graduate Year Program

The Australian Institute of Health and Welfare reported that in 2013 of all employed clinicians, approximately 85% of dentists' main practice was in the private sector and 80% practiced in metropolitan locations. The Report of the National Advisory Council on Dental Health indicated that approximately 400,000 people are currently on public dental waiting lists and public dental patients have significantly worse oral health than the overall Australian population, including greater presence of decayed teeth, periodontal disease and extraction of teeth. The Australian Institute of Health and Welfare, *Australian Hospital Statistics and Research Series* states that dental conditions also account for around 59,000 potentially avoidable hospital admissions each year.

The Voluntary Dental Graduate Year Program (VDGYP) was developed in part in recognition of limitations in the public dental sector, partly due to the maldistribution of the workforce, and to address the Government's commitments to concentrate on dental service delivery issues. The intent of the VDGYP was to provide dental graduates with a structured program integrating enhanced practice and professional development opportunities, whilst enhancing workforce and service delivery capacity, particularly in the public sector. While this national program was expected to assist in addressing the oral health needs of the community generally, it was expected to be particularly important in addressing some of the issues identified in access to dental care for disadvantaged members of the community. The 2011-12 VDGYP measure provided $52.6 million over four years (2011-12 to 2014-15) and was subsequently extended to 2015-16.

Since the impacts of oral disease are felt more by certain sections of the Australian population than others, the program aimed to assist with other health priorities that include:

- communities and special sectors in need;
- rural and Aboriginal and Torres Strait Islander communities; and
- aged care settings.

As a result, the VDGYP formed part of the foundational activities envisaged within the Final Report of the National Advisory Council on Dental Health to support the dental workforce to move to areas of under-service, including rural areas and the public sector. Dental graduate participants were expected to benefit by gaining a broader range of experience and skills when they were engaging with those who depend on the public system for access to dental services. For graduates, the program featured:

- the placement of fifty dental graduates nationally each year commencing in 2013;
- facilitation of recruitment into the public sector, or other areas of need;
- access to continuing education opportunities;
- clinical rotations or varied experiences per placement;
- mentor support for each graduate;

- graduate salary; and
- a bonus of $15,000 upon successful completion of the program.

Service Providers hosting the graduate participant were expected to benefit from:

- enhancement of their team by the addition of the graduate/s;
- payment to the Service Provider of the graduate salary; and
- potential to receive dental infrastructure grants for activities related to the placement.

A number of jurisdictions had already developed some form of dental graduate program. The VDGYP aimed to build on those programs or complement them rather than replacing or duplicating existing models. Similarly, the VDGYP supported the employment of additional dental graduates into the public sector rather than replacing existing jurisdictional recruitment efforts. Additionally, the VDGYP complemented other Commonwealth commitments to dental services, including the Closing the Gap – Indigenous dental services in rural and regional areas program and the Dental Training Expanding Rural Placements (DTERP) Program.

Where possible, the VDGYP was planned to facilitate placement of dental graduates in areas of need, possibly including rural and regional areas, aged care settings, Aboriginal Medical Services, noting that the distribution placements throughout Australia would be influenced by a variety of factors including jurisdictional and local capacity and resources, and advice from relevant stakeholders.

The impact of the VDGYP was expected to be concentrated on those who depend on the public system for access to dental services. The VDGYP was also aimed at increasing recruitment into the public sector, and possibly enhancing the public dental sector as a longer term career option.

Purpose of the evaluation

In undertaking a series of formative and summative evaluations of the VDGYP, Health aimed to determine:

1. During program implementation, the degree to which the program was delivering its planned activities and outputs.
2. What lessons could be learnt during program implementation that could be used to modify the implementation to increase the likelihood of successful outcomes.
3. The overall outcomes attributable to the program.
4. The appropriateness of the program in meeting program objectives and policy goals.
5. The levels of efficiency and effectiveness achieved by the program.

An important consideration in making these evaluations has been to assess the various external influences that may be beyond the program's control but important to its success. Collectively, these influences may be seen as comprising the context within which the program operates. For example, while the VDGYP focused on building the supply side of dental services by encouraging graduates and service providers in the public sector and in rural and regional areas, other socioeconomic factors affecting service demand may act to diminish the

program's impact. By understanding the program's contribution in the light of its operational mechanisms and contextual setting, the evaluation can deliver useful policy as well as operational insights.

An evaluation framework for the VDGYP was developed for the Health in 2012 by Three Rivers Consulting Pty Ltd. The framework requires the evaluation be delivered through a series of formative and summative evaluations. Australian Continuous Improvement Group (ACIG) was subsequently engaged to conduct those evaluations. ACIG's evaluation design sought to operationalise the framework. The objectives of ACIG's evaluation of the VDGYP were to:

1) assess the effectiveness of the VDGYP in achieving the Australian Government's objectives; and

2) provide the Department with a report outlining and analysing the findings of our evaluation activities that will will assess:

    - the **outcomes** delivered by VDGYP;
    - the extent to which VDGYP has **achieved its objectives**;
    - the **appropriateness** of the VDGYP in addressing the dental graduate and workforce needs, particularly in the public dental sector;
    - the VDGYP's **efficiency** (including consideration of the extent to which the outputs are maximised for a given level of input); and
    - the **effectiveness** of the VDGYP based on the extent to which its outputs positively contribute to the specified outcomes, and the degree of success in achieving the outcomes.

Evaluation approach and methods

Evaluation framework and plan

The initial framework[i] for the evaluation was developed using three overarching principles: to ensure the evaluation would be proportionate, targeted and practical. Stakeholder consultation was an important aspect of the development of the framework and as a result, the framework reflects their views about the VDGYP, its goals and expected outcomes, and the evaluation objectives. Due to the inclusion of both formative and summative aspects in the evaluation framework, both the implementation and the outcomes of the VDGYP will be assessed during the life of the evaluation. The key indicators and data sources were expected to vary or need to be adapted slightly throughout the life of the evaluation. This meant that the evaluation framework was to be iterative, to respond to the maturation of the program. The evaluation framework was modified in November 2013 and documented in the separate report *Voluntary Dental Graduate Year Program Evaluation Framework and Evaluation Plan*.

The evaluation plan is included at Appendix 1.

The formative evaluations reported program progress of the VDGYP as it matured as a program. The summative evaluation focused on assessing the impact of the VDGYP and making overall judgements about whether the VDGYP has achieved its objectives, and whether as a program it has been appropriate, effective and efficient.

Table 1: Key dates for the VDGYP evaluation

Milestone output	Timeframe
Methodological Framework	October 2013
Progress Report 1	December 2013
Progress Report 2	April 2014
Progress Report 3	August 2014
Progress Report 4	February 2015
Progress Report 5	August 2015
Progress Report 6	February 2016
Draft Final Report	March 2016
Final Report	March 2016

Evaluation questions

The VDGYP evaluation framework breaks the evaluation questions into four different categories: overarching, appropriateness, efficiency and effectiveness. These four categories are broken down further into a high level question, followed by a series of detail level questions in Table 2 below.

[i] The initial evaluation framework was developed by Three Rivers Consulting Pty Ltd in December 2012. Minor changes were made to the framework before it became the basis of the current *Evaluation Framework and Evaluation Plan*, dated 6 November 2013.

Table 2: Key evaluation questions

Overarching
Has the VDGYP achieved its objectives?
1. Has there been an increase in dentist workforce and service delivery capacity in public dental and other areas of need as a result of the program?
2. Has the program provided enhanced opportunities for graduates?
3. Are VDGYP graduates more confident and competent as a result of the program?
Appropriateness
Is the program appropriate in addressing the graduate dentist and workforce needs, especially in public dental?
4. Was the program attractive to graduating dentists?
5. Did the program attract suitable mentors?
6. Did the program meet graduate expectations?
7. Did the program meet service provider expectations?
8. Did the application, selection and matching processes for graduates and service providers reflect the program objectives?
9. Was the curriculum and training material aligned with program needs?
Efficiency
Did the program maximise outputs given available funding?
10. Did the resources allocated for the program get spent?
11. What proportion of funding went to frontline services?
12. Was infrastructure funding adequate and well spent, aligning with program objectives?
13. Was adequate program funding provided to cover the costs of the VDGYP?
14. How do program costs and outcomes compare to similar Programs?
15. How does the value of the program compare to the cost?
Effectiveness
How well did the outputs and outcomes from the VDGYP meet the objectives?
16. Did the program do what it set out to do?
17. Was the distribution and rotation of VDGYP graduates appropriate, using partnerships where necessary?
18. Have more graduates been recruited into and retained in the public sector as a result of the program?
19. Has the VDGYP had a positive impact on attitudes of graduates towards the public sector and likely career choices?
20. Did mentors value the experience/has it impacted on their attitudes to public sector dental?
21. Did service providers value the experience and has it had a wider impact on their service mix or culture?
22. What impact did the program have on services provided/patients seen?
23. Has the program had an impact on quality of care?
24. Was the program administered and delivered to a high quality?

Data collection and analysis

Data collection and analysis methods are described in detail in ACIG's *Evaluation Framework and Evaluation Plan*. The following short summary leads into the specifics of the final evaluation data collection.

Quantitative data

Administrative data

We have drawn upon a variety of administrative data sources, including from the Program Administrator (AITEC Pty Ltd) and the Department of Health.

Surveys

Online surveys have been conducted every six months of graduates, mentors and service providers that give insights into the graduates' clinical experience and graduates', mentors' and service providers' views on the program curriculum, mentoring, support and program administration. The annual surveys have been consolidated in analyses for the final report.

All VDGYP graduate participants were also invited to respond to Graduate Destinations Survey in February-March 2016. The results are described in the body of this report.

Refer to *Appendix 2: Survey tools* for further details of the various surveys conducted throughout the program.

Qualitative data

Document review

Information available in document form such as the Program Administrator's regular reports and relevant Department of Health documents has been reviewed as part of the evaluation.

Interviews

Interviews have been conducted annually with samples of graduates, mentors and service providers at the end of each program year.

Case studies

Seven case studies have also been developed as part of the evaluation. Site visits were conducted to seven service providers in mid-2015 and early 2016 and graduates, mentors and service providers interviewed at each service. The case studies are attached at *Appendix 4: Case studies*.

Ethics application

An application to the Department of Health Departmental Ethics Committee (DEC) covering the evaluation data collection plan was made in July 2013 and approval received in August 2013[ii]. An update was submitted to the DEC in November 2013, and annual reports were submitted to the DEC in August 2014 and August 2015.

[ii] DEC Project number: 24/2013

Findings

Data sources

Data for the final evaluation were obtained from the following sources:

- the Program Administrator's program data;
- end of placement surveys of graduates, mentors and service providers, 2013, 2014 and 2015 graduate years;
- interviews with graduates, mentors and service providers in 2013, 2014, 2015 and 2016;
- site visits and case study interviews with service providers, mentors and graduates in 2015 and 2016;
- graduate destinations survey conducted in February-March 2016; and
- desktop research and document review.

The survey and administrative data were gathered and are held by the contracted Program Administrator, AITEC Pty Ltd who de-identified all data before forwarding them to ACIG. We gratefully acknowledge AITEC's assistance in providing the data.

Over the course of the evaluations by ACIG, we have interviewed graduates, mentors and service providers from all RA classifications.

Table 3: Remote Area Classifications

Remote Area Classification	Type
RA 1	Major cities
RA 2	Inner regional
RA 3	Outer regional
RA 4	Remote
RA 5	Very remote

Overarching evaluation question: has the VDGYP achieved its objectives?

The VDGYP Program Guidelines document describes the objective of the VDGYP as being '*to provide dental graduates with a structured program for enhanced practice experience and professional development opportunities, whilst increasing dental workforce and service delivery capacity, particularly in the public sector*'. The overarching evaluation question is addressed under the following three key evaluation questions.

Has there been an increase in dentist workforce and service delivery capacity in public dental and other areas of need as a result of the Program?

Program data

Evidence of the increase in dentist workforce and service delivery capacity may be found in the basic program data.

For the **2013** VDGYP program:

- ninety-four graduates applied for fifty places;
- twenty-seven placements were in metropolitan areas (RA 1), eighteen in regional areas (RA 2-3) and five in remote areas (RA 4-5);
- thirty-five of the graduates taking up placements in the 2013 program were female and fifteen male;
- thirty-two service providers hosted fifty placements from January through July 2013;
- thirty-one service providers hosted forty-nine placements from July through November 2013;
- note that the six graduates placed in Western Australia who were counted under RA1 because the service (OHCWA) is based in Perth, participated in regional and remote placements and should be considered "across RA" places.

For the **2014** VDGYP program:

- 220 graduates applied for fifty places;
- fifty placements were made for 2014, covering all RA classifications: 22 (44%) in metropolitan areas (RA1), 18.5 (37%) in regional areas (RA 2-3), 4.5 (9%) in remote areas (RA 4-5) and 5 (10%) in across-RA placements in Western Australia. Note that half-placements come about from the sharing of a graduate between six-month placements in different RAs.
- thirty-eight of the graduates who took up places in the 2014 program were female and twelve were male;
- one graduate resigned in April and was replaced, however their replacement resigned in October;
- thirty-one service providers continued to be available to host dental graduates in 2014

- eleven new service providers were selected to participate in the program for 2014.
- Of the forty-eight graduates in the 2014 cohort that successfully completed the program, at the time of Evaluation Progress report 4: twenty-four (50%) were to be employed in the public sector in 2015, with a further seven (15%) to be employed in a public/private mix.

Table 4: 2014 Graduate placements (at commencement of 2014 cohort)[iii]

VDGYP								
State		Metro (RA1)	Regional (RA2)	Regional (RA3)	Remote (RA4)	Remote (RA5)	Across RA	State Totals
Australian Capital Territory	ACT	1	0	0	0	0	0	1
New South Wales	NSW	8	4	2	0	0	0	14
Northern Territory	NT	0	0	1	1	0	0	2
Queensland	QLD	5	3	0	2	1	0	11
South Australia	SA	2	0	0.5	0.5	0	0	3
Tasmania	TAS	0	2	0	0	0	0	2
Victoria	VIC	6	5	1	0	0	0	12
Western Australia **	WA	0	0	0	0	0	5	5
Totals		**22**	**14**	**4.5**	**3.5**	**1**	**5**	50
** covers metro and regional		**44%**	**28%**	**9%**	**7%**	**2%**	**10%**	

For the **2015** VDGYP program:

- 201 graduates applied for fifty places;
- 179 applications met the program compliance requirements;
- fifty placements were made for 2015, covering all RA classifications: twenty-three (46%) in metropolitan areas (RA1), nineteen (38%) in regional areas (RA 2-3) and eight (16%) in remote areas (RA 4-5, and across-RA);
- thirty-six of the graduates taking up places in the 2015 program were female and fourteen were male;
- forty-eight graduates completed the VDGYP year;
- forty service providers continued to be available to host dental graduates in 2015;

[iii] Source: Department of Health

– two new service providers were selected to participate in the program for 2015.

Table 5: Placement distribution and gender balance - initial placements 2015[iv]

Remoteness Area	1	2	3	4	5	Total	Gender	
Graduate FTE in RAs							M	F
NSW	7	4	2			13	3	10
QLD	6	3		1	1	11	2	9
VIC	8	5	1			14	6	8
SA	2			1		3		3
WA	4					4	1	3
TAS		2				2		2
NT			1	1		2	2	
ACT	1					1		1
	28	**14**	**4**	**3**	**1**	**50**	**14**	**36**
	56%	**44%**				**100%**	**28%**	**72%**

Table 6: Placement distribution and gender balance - end of year 2015[v]

Remoteness Area	1	2	3	4	5	Total	Gender	
Graduate FTE in RAs							M	F
NSW	7	4	2			13	3	10
QLD	6	3		1	1	11	2	9
VIC	7	5	1			13	6	7
SA	2			1		2		2
WA	2.25				0.75	3	0	3
TAS		2				2		2
NT			1	1		2	2	
ACT	2					2		2
	26.25	**14**	**3**	**4**	**1.75**	**48**	**13**	**35**
	55%	**45%**				**100%**	**27%**	**73%**

Surveys

Data on the proportion of graduates who remained in the public sector and in regional, rural or remote areas subsequent to their VDGYP year are provided in later sections of the report – see page 47.

Service providers commented on the Program's effect on the public sector dental workforce in the following comments made in the end of year surveys.

[iv] Source: AITEC.

[v] Source: AITEC. Fractional apportionments for WA reflect time spent in remote areas by graduates in short-term placements.

'The VDYGP program provides excellent young dentists to areas which would not otherwise attract dentists and is a highly valuable program.' (Service Provider 2015)

'The VDGYP supported the state in recruiting, retaining and supporting new graduates with the necessary aptitude and suitability for regional and remote practice - and additionally supported infrastructure development and purchasing of much needed equipment.' (Service Provider 2015)

'Very disappointed the Program is not continuing.' (Service Provider 2015)

Has the Program provided enhanced opportunities for graduates?

Graduates

Nearly all graduates, from all regions, reported a high to very high level of overall satisfaction with the opportunities provided by the program, over all three years. Many graduates referred to their limited clinical experience on completion of their studies and their desire for a supportive clinical environment, which helped them attempt the more complex clinical cases. Typical comments by graduates we interviewed included:

'Couldn't have asked for a better first job.' (Graduate 2014)

I want everyone who gets involved to have just as good an experience as me'. (Graduate 2014)

'Couldn't think of a better way to do the first year out'. (Graduate 2015)

'Exceeded my expectations in every way' (Graduate 2015)

In each year, there was only one or at most two graduates who reported any problems. In a group of almost 150 graduates over the three years, this represents a high level of satisfaction. Two complaints related to the availability or quality of mentors. Two graduates, both from RA1 placements, also complained about the program. One reported being very disappointed and that their expectations had been high as the program had been *'really hyped up'* in the advertising materials, especially in the amount and range of experience that would be offered. In their placement, this did not happen and there was limited opportunity for broader clinical experience. AITEC responded promptly and moved them, but the graduate felt there had been limited oversight of the placement to ensure that the service provider was delivering what had been promised. Another graduate reported that the placement changed when there was a change of management at their clinic and the new manager had different views about how to manage the VDGYP placement. This led to stricter rules and controls, and AITEC were not responsive or supportive of requests for assistance, in their opinion.

On the other hand, a number of graduates over the program period mentioned having highly responsive service providers, who responded to the graduates' needs and ensured exposure in their areas of interest, such as fixed orthodontics or maxillofacial surgery. Some had significant exposure to other areas, for example one graduate who spent 5 months assisting the local oral surgeon and several who had placements in rural areas, where they were the only clinician. One graduate explicitly said they would not have been selected for their new job (in a public hospital) without the VDGYP experience.

The service provider *'… put my learning first'* (Graduate 2015)

Graduate views varied about the worth of the day per week set aside for study, with some graduates valuing it and others finding that it limited the amount of clinical experience they could gain over the year.

In multiple interviews for the end of year evaluations and the case studies, graduates commented on the range and variety of the experience seeming superior to their peers' reports of first year experience in private practices.

Graduates rated the program experience highly in the end of year survey, with scores increasing progressively from 2013 through to 2015.

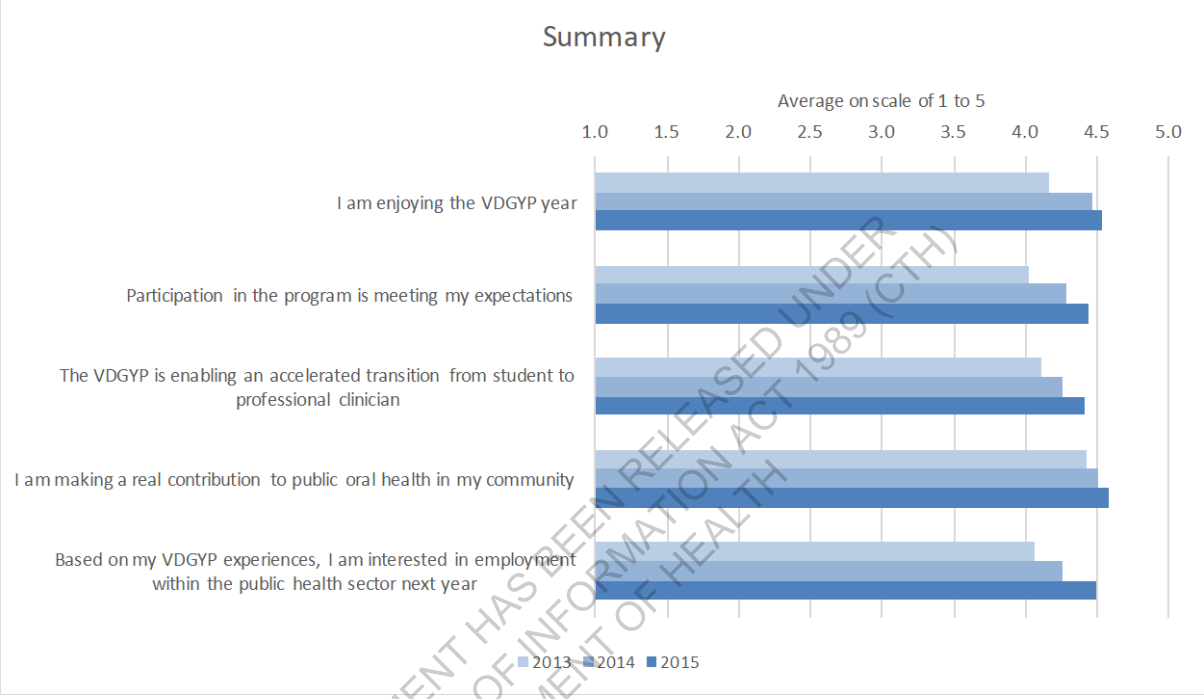


Figure 1: Graduate summary responses to the program, end of year surveys 2013-2015

Comments by graduates in the end of year surveys included:

> *'I have seen a lot of patients with complex medical histories and complex treatment which I have been able to follow up and mostly complete which is different from being a student where it was difficult to complete extensive treatment plans.'* (Graduate 2013)

> *'I have been given a wide range of experiences clinically and the clinic I work at has been extremely supportive.'* (Graduate 2013)

> *'It has been a valuable year. AITEC staff, my mentor and co-workers have all made the year very enjoyable.'* (Graduate 2014)

> *'I would recommend the program to any final year student looking for employment.'* (Graduate 2014)

> *'I believe I have been given opportunities well beyond a first year graduate. My supervisor often mentions how many advanced cases I have seen this year. Importantly, they have provided excellent support throughout these difficult cases.'* (Graduate 2015)

'[The service providers] have provided me with a wide array of opportunities to consolidate my learning and learn new skills. I have worked in many clinics, including many outer regional centres, remote settings and the prison.' (Graduate 2015)

'This has been an excellent program. I feel so thankful to every one for this opportunity. The program was very well run and organised. I very much appreciate it.' (Graduate 2015)

Mentors

Mentors consistently reported very high levels of satisfaction with the program over the three years. Their comments about the value of the program, both to the graduates and also to their own professional development, are covered in subsequent sections of this report.

Mentors expressed substantial disappointment following the announcement that the Program was to cease. Some had thought this program was a pilot for the introduction of an internship year for dentists, something which was mentioned as very much needed by many respondents.

'I honestly wish this sort of program were available to all graduates.' (Mentor 2014)

'Best thing that's come along in a very long time' (Mentor 2015)

'Can't express my disappointment loudly enough that the program is finishing.' (Mentor 2015)

Many mentors, over all program years, mentioned the online resources and course materials as providing a very useful framework for discussion with their mentees. They compared it to mentoring of other graduates who did not have a formal coursework component and said that the structured program was much more effective, as it guided their discussions and ensured a broad range of topics and issues were discussed. Mentors also reported that they valued meeting other mentors and graduates at the beginning of the year, and that the collegial support was very useful.

Mentors valued the orientation meeting in Adelaide at the beginning of the year for the networking and the explanation of the program.

Service Providers

In interviews for the end of year evaluations, and also in the case studies, service providers emphasised that not only did the VDGYP provide graduate employment that would likely not have been possible without the program, but also that the formal curriculum and mentoring clearly benefited the graduates.

Service providers reported that the VDGYP graduates were a significant presence in their clinics and in the treatment of patients. There was satisfaction for the service providers in watching the development of the VDGYP graduates and in knowing that they will go on to have an enjoyable and fulfilling career from the foundations that were built during the program.

'More than happy to continue with it'. (Service Provider 2015)

'It makes good sense business-wise'. (Service Provider 2015)

Service providers commented that the program was very well run overall.

Service providers also said the following in the end of year surveys:

> *'This has been a successful program of value to the service provider, the graduate and the mentor.' (Service provider 2015)*

> *'The graduate benefited from a nurturing team environment and peer support.' (Service provider 2015)*

Are VDGYP graduates more confident and competent as a result of the Program?

Graduate views on confidence and competence

Most graduates reported significantly increased confidence in the procedures they had experienced during their placements. In general, the view was that they had greater levels of confidence than if they had gone straight into the normal employment in the workforce and not completed the program.

The exposure to special needs dentistry varied greatly across the placements, with most graduates reporting a small amount of exposure, although one said she had more than twenty sessions during the year. Graduates who experienced working with special needs patients reported increased confidence in this area of practice.

In each year, graduates surveyed reported positively on the program's effect on their insight into public dental health – see Figure 2, below.

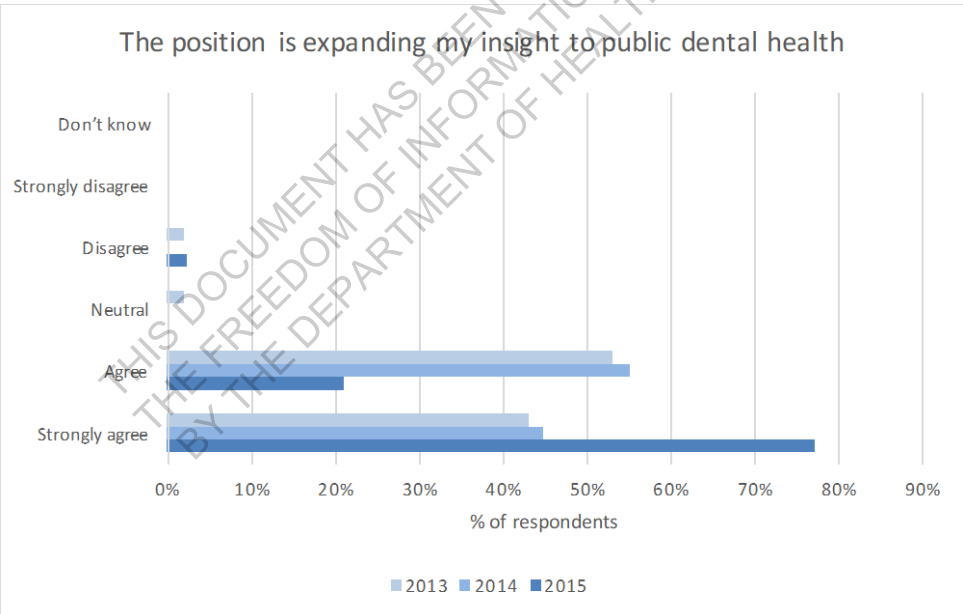


Figure 2: Graduate self-rating, end of year surveys 2013-2015

Comments in the graduate surveys were overwhelmingly positive. The following are typical:

> *'I feel as though my clinical experience has dramatically improved over the past year.'* (Graduate 2013)

> *'Clinical experience has been vast and of a great variety which has helped me develop into an independent clinician.'* (Graduate 2013)

'Clinical experience was diverse and this year allowed me to develop as an independent clinician. A proportion of my time was devoted to service establishment and development but, this was to be expected.' (Graduate 2014)

'I was able to perform a variety of procedures which was helpful in developing my skills as a dentist.' (Graduate 2014)

'Overall my participation in the VDGYP has provided me with a valuable support network and increased my confidence as a newly graduated dentist.' (Graduate 2015)

'My clinical experience thus far has been a valuable tool in my growth as a clinician. My experience in more remote clinics has given me the confidence to undertake certain procedures I would usually refer and be hesitant to undertake.' (Graduate 2015)

'Seeing a wide range of patients, including difficult cases. I'm gaining more confidence and independence with my skills.' (Graduate 2015)

Mentors' views on differences between VDGYP and non-VDGYP graduates

Not all services had both VDGYP and non-VDGYP graduates. In many services the regular case discussion meetings have included both graduate groups, and often also OHTGYP graduates. In other services both VDGYP and non-VDGYP graduates share workplaces and discuss their work together to improve their learning.

Most mentors, in all three years, spoke of the very high calibre of VDGYP graduates and felt that the selection process had been a major reason for the difference between VDGYP and non-VDGYP graduates. Many said that the graduates they were seeing were in the upper ranks of the graduate cohort. They seemed highly motivated, displayed exceptional communication skills and were dedicated to learning. AITEC's selection process was mentioned many times as an outstanding feature of the program that contributed to this result.

Most mentors who had the opportunity to observe the differences believed that the structured program was also a factor in making the difference in the professional development between VDGYP and non-VDGYP graduates during the year. VDGYP graduates had constant reminders of the need to study, a day per week set aside to focus on their study, and a mentor who came to them for regular meetings to discuss cases. Non-VDGYP graduates did not have that structure. The compulsory nature of the program was mentioned by many mentors. Exposure to a range of dentistry practice such as surgery, anaesthetics and special needs dentistry was also felt to be a significant contributor to the development, which was not generally available for non-VDGYP graduates.

In 2013, most mentors we interviewed identified differences between their VDGYP and non-VDGYP graduates. VDGYP graduates were said to exhibit more confidence and experience in their clinical practice and approach than those who had not had exposure to the program. One mentor talked with their dental assistants, who assessed that the VDGYP graduates were comparable to dentists with three to four years of experience.

In 2014, several mentors mentioned that their VDGYP graduates were more confident, open to asking questions of senior clinicians, systematic in their approach, and developed more quickly than their non-VDGYP colleagues. VDGYP graduates were seen to greatly benefit from

having a structured program to support their learning, while non-VDGYP graduates had to rely on their own motivation to do further study.

In 2015, fewer mentors reported a significant difference, because services with other types of graduates had been introducing graduate programs similar in some ways to the VDGYP. This is more common in the larger services, but has filtered into smaller services, which are now holding case discussion meetings on a regular basis, and providing mentoring to all graduates. A major remaining difference was the structured nature of the VDGYP, which provided a framework for the regular discussions between mentors and graduates, as well as the broad range of clinical experience offered on the program.

> *'Everyone will walk away from this curriculum better clinicians. It has been a great learning opportunity.'* (Mentor 2015)

Service providers' views

VDGYP graduates were seen to be more supported than other graduates. This was through their exposure to many clinical situations and to the mentoring. Service providers were divided in their opinions on whether there was a significant difference between VDGYP and non-VDGYP graduates in their actual practice. This appears to relate to the service culture: in services where all graduates are supported with a program and mentoring, the differences were not observed. Service providers also mentioned the excellence of the recruitment process, which led to a cohort of highly motivated and resilient graduates on the program.

> '*AITEC's selection is careful and they think about the attributes needed for our setting'*. (Service Provider 2014)

> *'The graduates report that they have gained confidence and are able to tackle a wide range of tasks now.'* (Service provider 2015)

> *'The graduates' clinical experience has improved considerably in 2015 thanks to the VDGYP program.'* (Service provider 2015)

Appropriateness: Was the Program appropriate in addressing the graduate dentist and workforce needs, especially in public dental?

Appropriateness considerations are addressed in the following six key evaluation questions.

Was the program attractive to graduating dentists?

The VDGYP proved to be attractive to graduating, as evidenced by the number and quality of the applicants.

Ninety-four graduates applied for fifty places in the 2013 program; 220 graduates applied for fifty places in the 2014 program; and 201 graduates applied for fifty places in the 2015 program. Thus the number of applicants outweighed the number of places by factors of 1.9 (2013), 4.5 (2014) and 4.0 (205). Based on the number of dentists graduating annually in Australia, as many as one-third of all graduates in a given year applied for the VDGYP.

Qualitative assessments of application quality by the program administrator, AITEC, led them to believe they were seeing top ranking graduates in each cohort. A preliminary analysis of applications based on grade point averages in 2013 supported this view, although it must be noted that because one major university does not give grades in final year, the analysis was incomplete. It should also be noted that the merit of applications was determined on a combination of factors, including academic performance, quality of written application, clinical references, secondary references and interviews. Other requirements for making placements included trying to match graduates to their nominated preferences for locations and type of practice, as well as practical, non-academic considerations.

Service provider and mentor commentary quoted elsewhere in this report consistently supports the view that VDGYP participants were from the middle to upper ranks of their graduate cohort.

Did the Program attract suitable mentors?

Graduates

Graduates reported a high to very high levels of satisfaction with the mentoring aspect of the program, in every year. When asked to list the essential elements of the program, graduates consistently ranked mentoring in their top three responses.

We observed a trend in graduate views on mentoring during the program, with a collegial and supportive culture developing and strengthening in most services. Graduates in 2015 mostly reported that while they felt they could approach a number of more senior clinicians for assistance and advice, they continued to meet regularly and formally to discuss the curriculum content and other issues with their appointed mentor.

Some graduates had several formal mentors, who worked in groups to mentor across all graduates in their service. Mentors were described as approachable, professional and available. Their answers to issues were highly valued by graduates and graduates felt reassured in having a senior clinician available to help them. Mentors also seemed to develop creative approaches over the program, with many looking for cases and experiences to enhance the learning of their mentee.

'Couldn't imagine the year without the mentorship.' (Graduate 2013)

'Provided both emotional support and practical 'tips and tricks'. (Graduate 2013)

'He challenges me and asks me to really reflect on how I practice as a clinician and whether there is a better way to do it' (Graduate 2014)

'There to save me from clinical mishaps' (Graduate 2014)

'My mentor asked me what I wanted to learn and then looked for cases to support it'. (RA4 Graduate 2015)

'They always looked at me as their equal, asked for my opinion and respected me'. (RA2 Graduate 2015)

Some graduates did not have a positive experience of mentoring. Each year there were one or two reports of problems arising when a mentor left the service and was either not replaced or was replaced by someone without mentoring experience. There was mention early in the program of mentoring variability, although this was not an issue in later years.

'VDGYP should review mentors throughout the year to ensure they are doing what they are supposed to do' (Graduate 2013)

One 2015 graduate reported having a mentor who did not look at the materials until the last minute, and of never having a meeting with her supervisor. This graduate also reported being left unsupervised by any senior dentists during most clinics. When the graduate raised these issues with management, there was no action, so they did not feel comfortable raising it again. Another graduate had issues when the mentor left the service, leaving the graduate with very few people to support them.

Nonetheless, the overwhelming majority of graduates in all years felt that the mentoring experience was very helpful for their practice as clinicians. They especially valued mentors being always available and supportive, sharing their experiences and sharing experiences from their own clinical practice.

Others spoke of the extensive personal support they received from their mentors, describing how they were supported to adjusting to rural life, often in their first move away from home.

Ioan Jones was singled out by graduates as a significant contributor to the positive experience of the program and was specifically singled out for mention numerous times in his role as Program Facilitator. Graduates reported that he had done an excellent job in facilitating the program and getting some very high calibre speakers for the webinars. He was also commended highly by the graduates he personally mentored.

Mentoring was the program aspect consistently valued as the highest by graduates in surveys. By 2015, 98% of respondents rated it as valuable, with only 2% rating mentoring as "neutral", and none rating it negatively.

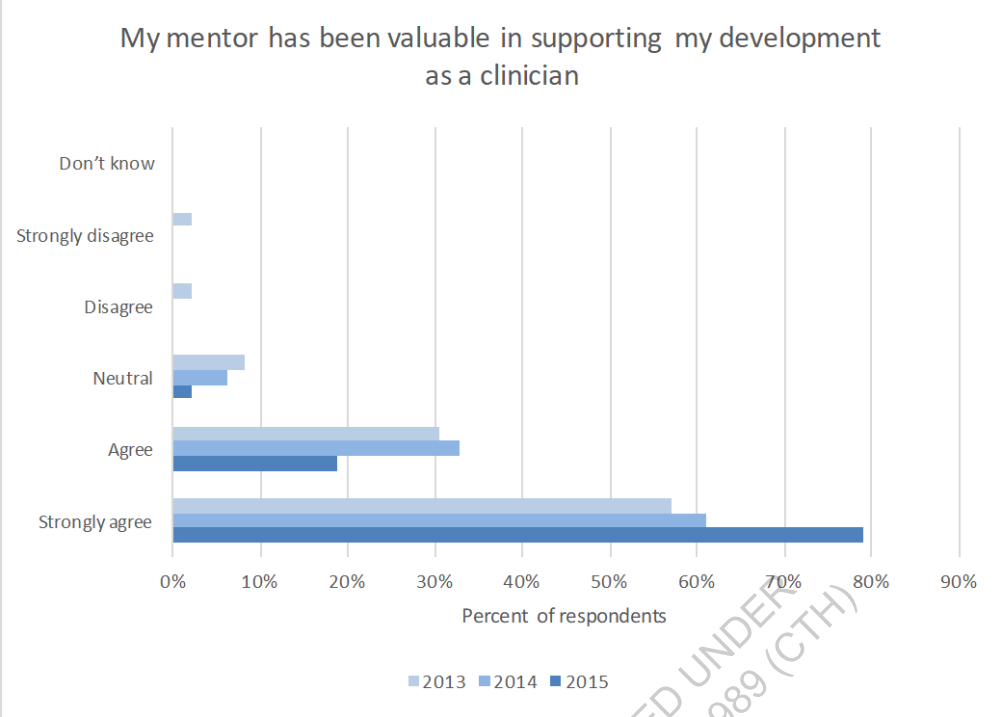


Figure 3: Mentor support, graduate end of year surveys 2013-2015

Comments by graduates in the annual end of year surveys included:

> *'Our mentor at this facility was very helpful in all aspects of dentistry. He actively created clinical and non-clinical activities and opportunities for development for us. He was very helpful with any help required with the VDGYP or patients.'* (Graduate 2013)

> *'Mentorship was invaluable opportunity to discuss patients, treatments, case work, etc. in a more casual environment.'* (Graduate 2013)

> *'My mentor has been the highlight of the year, her support and guidance was particularly important during those challenging times.'* (Graduate 2013)

> *'Absolutely incredible, our mentors go above and beyond to provide us with excellent training and clinical experience. The rural two-month placement was also invaluable in developing my confidence and independence.'* (Graduate 2014)

> *'My mentors were very experienced clinicians with lots of useful advice. They were also very friendly, encouraging and open to discussing topics from the case studies and presentations.'* (Graduate 2014)

> *'I had a lot of great unscheduled mentor support for clinical cases which helped me through the year.'* (Graduate 2014)

> *'Mentor has been invaluable this year. One of the best parts of the program. Was also a big reason I decided to apply.'* (Graduate 2015)

> *'I have found this year very challenging in a number of ways, and think that the support from my mentor has helped me stay on track and manage to work through the issues I have had at work.'* (Graduate 2015)

'My mentor has been the primary factor in assisting my development over the course of the year in all avenues.' (Graduate 2015)

Issues with mentoring were raised early in the program but diminished over the second and third years. Earlier comments by graduates reflected some concerns about variability of the mentoring and the ability to obtain time with their mentors.

'My mentor never logged on to the LMS and did not seem to have any idea as to what was going on in the cases or webinars. My development has been facilitated by the principal dentist, not my VDGYP mentor.' (Graduate 2013)

'Maybe all mentors should have minimum requirements. From what I heard all mentors were doing things differently as they weren't too sure exactly what their purpose was.' (Graduate 2013)

'I had a late change in 'official' mentor. Mentoring was mostly non-structured initially and became far more structured later.' (Graduate 2014)

'My mentor unfortunately left the service provider before the end of the program.' (Graduate 2015)

Mentoring support time reported by graduates was largely clustered in the range of six to fifteen hours per month, with estimated median times of 9.7 hours (2013), 10.3 hours (2014) and 9.2 hours (2015). Mentors estimated the times spent in mentoring at about the same as graduates did: 9.6 hours (2014) and 10.8 hours (2015). From comments made by graduates and mentors, it seems that it was common for them to seek a balance in the time spent in mentoring sessions (too much mentoring may be wasteful; too little may leave the graduate feeling poorly supported).

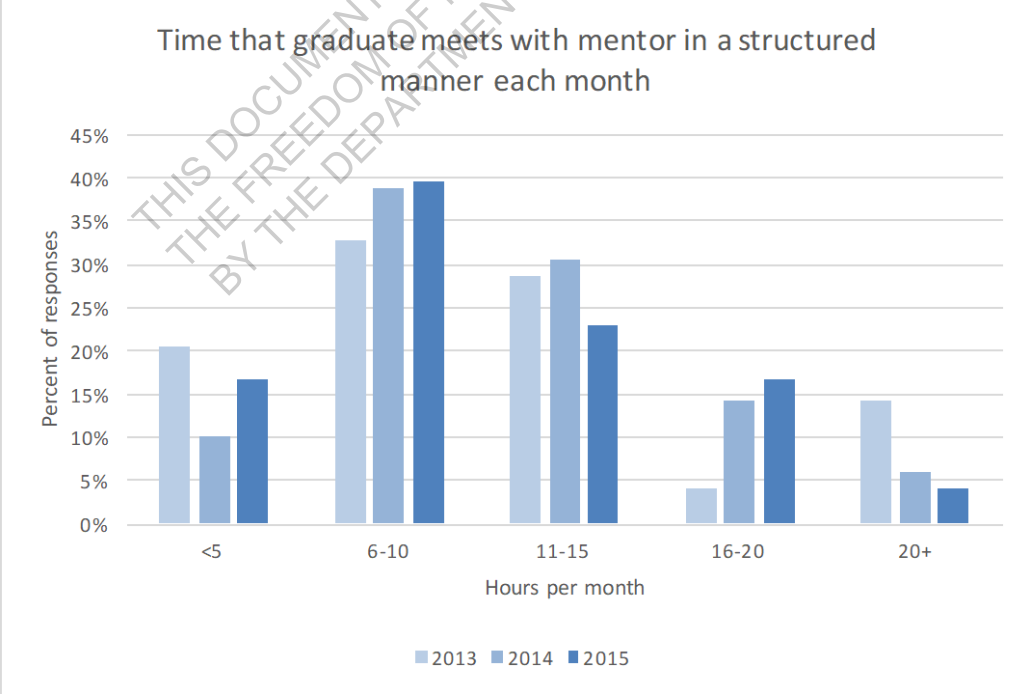


Figure 4: Distribution of mentoring support times reported by graduates, end of year surveys 2013-2015

Mentors

All the mentors interviewed reported that they enjoyed the experience, that it benefited their practice and increased their enthusiasm towards their work. The program was perceived to be well organised, and mentors found that working their way through the curriculum raised issues such as ethical practice, which they valued discussing.

Many mentors had previous experience in mentoring and teaching. They found sharing their own experience very rewarding and reported that it gave them the space to re-evaluate how and why they conduct their own practices. They also reported finding value in accessing the online materials and journal articles to update their own knowledge. Interacting with new graduates was also valued by mentors, as they were exposed to new techniques and challenged to explain the way they do things.

Several mentors said it re-motivated them in their practice. Mentors were very enthusiastic about their roles, often staying back late to discuss cases with the graduates or to do the coursework. Some mentors travelled long distances to meet face to face with their mentees on a regular basis. The mentoring relationship was described by all as very positive. Many of these relationships were supportive beyond the clinical role, with reports of social connections and support for graduates who were having issues settling into their new locations or dealing with issues in their first job. Mentors mentioned maintaining ongoing mentoring relationships with graduates from previous years and valuing the networking opportunity as many of these graduates will go on to specialize and will make good contacts. One mentor reported the rewarding experience of meeting previous mentees at conferences and being thanked for the support he had given them.

> *'I enjoy it. I have had plenty of professional experience, and I enjoy providing the support to the graduates. It's a two-way process: they can often challenge me too- it's good.'* (Mentor 2013)
>
> '*Enlivened me and guided my development and interest. I now have a more positive approach to everything.*' (Mentor 2013)
>
> '*The beauty of the program was that both of us ended up learning.*' (Mentor 2014)
>
> '*You get back as much as you put into it*'. (Mentor 2014)
>
> *'Made me much more aware of current learning processes'* (Mentor 2015)
>
> *'I learned a lot'* (Mentor 2015)

Mentors made one or two comments each year about issues.

On occasions, mentors reported the challenges of finding the time to do the online work. This was especially the case for mentors who were also service providers, which meant that several of them had to focus on some aspects of the program, such as the case studies and clinics, and pay less attention to the online materials. This was partially addressed by provision of funding for mentoring hours, however, only some services actually built this into the mentors' job roles and passed on the funding.

Some mentors reported that, although they gained significantly from their participation in the program, the workload is heavy. Mentors who had been allocated hours and salary for mentoring did not have a problem with the workload.

The lack of regional networks was raised by mentors. The general feeling was that the technology is not yet well developed enough to support the smooth running of these kinds of networks.

Service providers

Service providers commented positively on mentoring each year:

> *'We have been fortunate with a mentor with regional experience in mentoring clinicians.' (Service Provider 2015)*

> *'Mentoring took structured and organic formats and was provided by a number of senior clinicians. A key to the successful mentoring system was that is was driven by motivated, mature and self-directed graduates with strong skills in self-reflection.' (Service Provider 2015)*

Did the Program meet graduate expectations?

Graduate interviews

Almost all respondents interviewed over the three years for the evaluation said the program was very beneficial and consolidated their undergraduate learning. It was described as a good transition to independent clinical practice.

After the first year, many new graduate participants had clear expectations of the program before starting because they had spoken with previous program participants. Expectations included none at all, wanting to learn in a supportive environment, gaining a broad range of clinical experience, gaining experience in a public health or rural setting and just having a job. Some were slightly anxious about the workload, others were expecting a boring and repetitive curriculum while others went in with deliberately low expectations, but they were very pleasantly surprised by the quality of the experience.

> *'From day one they took actions in response to everything I said'*. (RA1 Graduate 2015)

> *'I didn't think I'd learn as much as I did'*. (RA4 Graduate 2015)

Almost all graduates interviewed at the end of the 2013, 2014 and 2015 VDGYP years reported that the program was very beneficial and had generally exceeded their expectations. Graduates generally reported the program met their needs. The major reported benefits were a gain in confidence, especially to work independently; an appreciation of working in public health dentistry and networking with other VDGYP graduates. This was attributed to the mentoring, the curriculum and the generally broad range of clinical practice, which was felt to be greater than their non-VDGYP counterparts.

There was some disappointment expressed in interviews by graduates each year. Two graduates reported disappointment with the program in 2015. In one case, the service did not provide a range of experiences, for example the graduate only went once to a rural location, to a prison and other different practice settings, which she felt were not enough to gain from the experience. '*The whole thing was used to generate dollars (rather than) to teach me what I want to learn*'. The graduate summed up her experience as being in a lovely workplace which did not have a commitment to learning.

The second case of negative feedback was from a graduate who had a change of management during their placement. This resulted in a reduction of their clinical hours, which they felt limited their ability to gain practical experience.

> *'It wasn't a bad experience, (it) just wasn't what it was meant to be. Disappointing'.* (RA1 Graduate 2015)

Concerns about the workload eased after the 2013 year, and later participants reported that the workload was manageable '*as long as you keep up'*.

Although most comments made about the curriculum were positive, and ratings of it in the end of year surveys increased year on year, each year there were a few criticisms.

BEST ASPECTS OF THE PROGRAM

Mentoring was consistently rated by graduate interviewees as the most highly valued aspect of the program, in each program year.

Other areas most mentioned across the three years were:

- Breadth of clinical experience;
- Curriculum;
- Day off for study;
- Supportive team environment, including local staff, presence of another graduate and ability to network with other VDGYP graduates;
- Encouragement to prepare for the fellowship examinations;
- Working in an area of need; and
- Structured program, including webinars and case studies.

AREAS FOR IMPROVEMENT

Many graduates reported that the program was extremely well delivered, however, when prompted, they we able to provide some feedback on specific areas for improvement. The most mentioned items over the three years were:

- Monitor placements more, to ensure that they are progressing according to plan and address any issues that have arisen;
- Improve webinars by taking into account time differences to ensure everyone could fully participate;
- Improve case studies by editing to reduce repetition, giving more feedback, More feedback on case studies
- More videos, especially those that show procedures
- Provide an opportunity to make a presentation to the whole group at a face to face meeting at the end of the year
- Ensure that the standard of mentors is consistently high across the program

Graduate surveys

Graduates rated their experience with the program highly, with an increasing trend across the three years, as shown in Figure 1, page21.

Comments in the end of year surveys were overwhelmingly positive. Representative comments included:

> *'Colleagues at all work sites have really embraced me as a new graduate, giving me guidance and treating me as an equal. It's nice that they've been asking for help from my knowledge, as well as allowing me to ask things of them, more like a team.'* (Graduate 2013)

> *'Excellent working environment, great range of experience and patients, fantastic mentorship and guidance and a good way to see the country side.'* (Graduate 2013)

> *'I have been included in the normal activities and scheduling of the other first year dental officers at my service provider who are not a part of the VDGYP. This is good as it includes treatment planning sessions too.'* (Graduate 2013)

> *'Excellent year, I now feel confident to tackle both the public & private sectors as an independent clinician with a lot more knowledge and experience behind me.'* (Graduate 2014)

> *'The VDGYP program has enabled a great introduction and transition from dental student to dentist.'* (Graduate 2014)

> *'A rewarding program overall, with key highlights being the webinars, mentorship and clinical development.'* (Graduate 2014)

> *'[The Service Provider] has been very supportive in my development as a clinician, providing me with opportunities to go on rotation and observe specialists. Mentorship has been great.'* (Graduate 2015)

> *'Very supportive and friendly work environment, expanded my knowledge as a fresh graduate and this has been an amazing experience which will definitely form a solid foundation for my future career.'* (Graduate 2015)

> *'My service provider has been excellent, I am very happy with the range of clinical experiences and support I have had this year.'* (Graduate 2015)

Each year, one or two graduates reported problems, which mostly related to specific issues with their service provider employer:

> *'The clinic manager pushes for productivity of the clinic rather than supporting me through the program'.* (Graduate 2013)

> *'The placement with [service provider] had some downfalls with disorganisation at the head office level.'* (Graduate 2013)

> *'At this employer, it seems the other new graduates receive a broader range of experiences in the Specialist Support Departments compared to the VDGYP. It would*

be good to have time in Prosthodontics, Periodontics (and Endodontics, Oral Surgery and Paediatrics).' (Graduate 2014)

'I have had problems with staffing which after intervention from AITEC were resolved; however, there's still many appointments where I am left on my own at some point; this could be due to the difficulties we face daily within the clinic.' (Graduate 2015)

Did the Program meet service provider expectations?

The program generally exceeded service provider expectations. Most service providers commented that the graduates were of extremely high quality and their energy and need for learning positively impacted on the service culture in ways that appear to be long lasting. The program also gave more senior dentists the opportunity to share their experience and learning, which increased motivation and re-energized many services. Service providers were very pleased to see that the graduates provided enthusiastic treatment to patients and were very popular with patients.

'W*in-win for the service, graduate and patient.'* (Service Provider 2015)

Service providers were very positive about their experience with AITEC, the program administrator, describing them as very professional and easy to deal with.

Some service providers expressed some anxiety at the beginning of the program, but, after the orientation, they were able to prepare and plan for how they would manage the year.

There was some disappointment at the lack of regional networking, which many felt would have made the experience better for mentors especially. All service providers reported that they would gladly take on another VDGYP graduate in future.

Most service providers said they would try and maintain the cultural effects of the program, by continuing such things as case discussion meetings, formal mentoring of graduates and a learning culture.

The level to which the program met service providers' expectations increased year on year throughout the program.

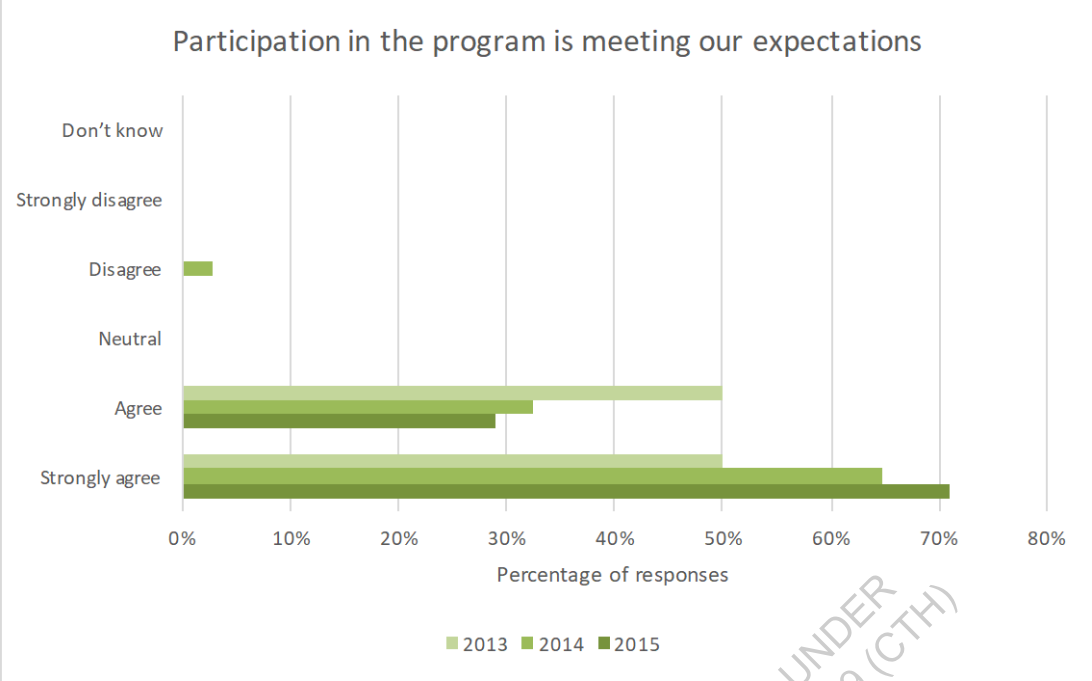


Figure 5: Service providers surveys 2013-2015

Did the application, selection and matching processes for graduates and service providers reflect the Program objectives?

As reported in the evaluation Progress Reports, the processes largely reflect program objectives, despite some early difficulties getting as many service providers in remote and very remote areas as desired. Actions undertaken in the second and third years of the program have increased the numbers in these areas.

As described in preceding sections, mentors and service providers commented highly positively about the success of the selection processes, which was reflected in the quality of the graduates and their attitude to learning and development.

Was the curriculum and training material aligned with Program needs?

Graduate views

With the exception of the first final year of the program, graduates were in general very satisfied with the curriculum. They found it interesting, stimulating and relevant and reported that it covered a wide range of dentistry.

> '*Just the right amount of stimulation*' (RA4 Graduate 2015)

The webinars were singled out as a highlight in each year of the program by many graduates, who appreciated hearing experts speak about their specialties. Some case studies were said to be too long.

Many concerns were expressed in the first year of the program about the workload imposed by the curriculum. These concerns diminished over the following two years, as shown in Figure 6 below. Positive ratings for the ability to manage the workload within the allocated time were given by 92% of the 2015 graduates, compared to 83% of the 2014 graduates, and 51% of 2013

graduates. Graduates who chose to do Stream 2 commented that the VDGYP workload was too great in the second half of the year. In response to the latter concern, AITEC moved some course content earlier in the year to reduce the second half workload.

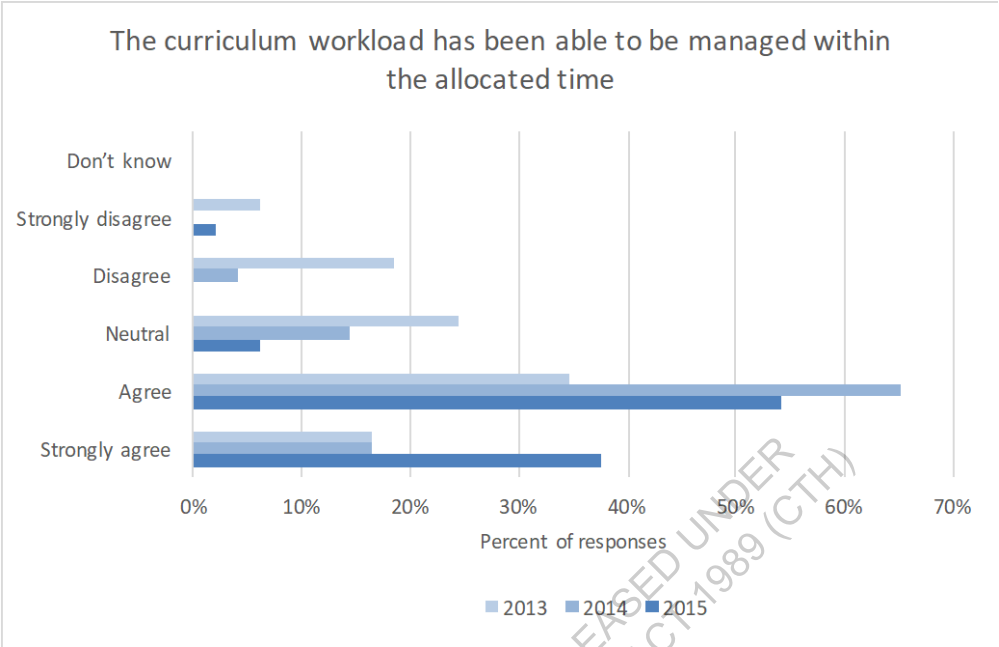


Figure 6: Curriculum workload – graduate end of year surveys 2013-2015

Representative comments included:

> *'…there was nothing in there that I didn't find directly useful.'* (Graduate 2013)

> *'I struggled dealing with completed curriculum and studying for primaries at the same time. I believe there needs to be even less of a workload for people undertaking primaries. Possibly all of their curriculum should be due mid-year.'* (Graduate 2013)

> *'I enjoyed the curriculum and found the case studies interesting.'* (Graduate 2014)

> *'I found it difficult to get all my work done for the curriculum- this is most likely due to poor time management on my behalf, and also when exams starting to get closer I put off my cases until after my RACDS exams so I could focus on passing.'* (Graduate 2014)

> *'Very clinically relevant and well set-out, great revision resources.'* (Graduate 2015)

> *'The curriculum has provided a valuable learning tool to further my knowledge. In addition, has highlighted areas of weakness that I need to to more research on whilst providing research papers to assist with this.'* (Graduate 2015)

> *'The curriculum was relevant to public health settings and was also very interesting and up-to-date. I valued the online resources such as the journal articles.'* (Graduate 2015)

Mentor views

Mentors generally said that the curriculum was of good quality and relevant to the graduates' practical work. Mentors mentioned letter writing, and working independently as practical aspects of the curriculum that were valued. However, many thought it should be more focused

on practical applications and be less academic. Some suggestions included presentation of cases and asking the graduates to prepare treatment plans, scenarios where graduates would be asked what they would do in this scenario. Some mentors reported that their graduates found the curriculum materials quite boring, and commented that the graduates are full of academic knowledge at this stage of their careers, and that this kind of curriculum could be more useful after 2 years in the workplace. Others said they found the curriculum excellent, very relevant to their daily practice, and very useful for stimulating good discussions.

'*I really admire the energy that went into it'* (Mentor 2015)

'*The modules were as good as they could be for hypothetical situations*' (Mentor 2015)

Webinars received generally very positive responses, but some mentors had trouble downloading them and others did not find them informative. Mentors commented that the videos on surgical extractions and endodontics were very useful.

Mentors and service providers valued the curriculum content somewhat more highly than did graduates, as seen in Figure 7 below. Graduate and mentor approval of the curriculum increased year on year throughout the program, achieving very strong ratings in 2015 surveys.

Many mentors and service providers expressed interest in continuing to have access to the curriculum after the program. They said they would continue using the curriculum if it were to be made available, as it strengthened the rigour of the graduate year professional development. Mentors and service providers expressed views that the curriculum and formal professional development were critical elements of any graduate year program, in combination with structured mentoring.

Several mentors commented that mentor preparation could be strengthened in future programs. There was a feeling that the quality of mentoring varied considerably and depended on the inherent abilities of the individuals more than on training or preparation for the role. We note that while mentors were supported in their task during the graduate year, it appears their preparation for the task was mostly limited to sessions at the orientation workshop. Mentoring (and clinical supervision of graduates) is not a simple task and several mentors felt that there could be greater emphasis on preparation, including more formal training. Monitoring of mentoring progress throughout the year could also be strengthened. There is a body of literature on the topic of mentoring[vi] in post-graduate medical education (although not necessarily focused on dentistry) that is available to inform development of further mentor training.

Service provider views

Most service providers did not access the program materials and so did not feel able to directly comment on individual curriculum elements. The few that did comment said they had feedback from their staff that the materials were of high quality and relevant. Others added that the workload seemed very high and some graduates became 'burnt out' from the load. Those that did access the materials said they felt that having a framework such as the course curriculum was important, as it provided discussion points for mentors and graduates, which supported the mentoring aspects of the program. One service provider said she felt it was

[vi] For a review article in this area see: Keane M, Long J. (2015). Mentoring in post-graduate medical education and specialist training. Health Research Board of Ireland. May 2015. Dublin. Accessible via: http://hdl.handle.net/10147/556404

important to have a curriculum like this as it developed the habit of using evidence to inform practice.

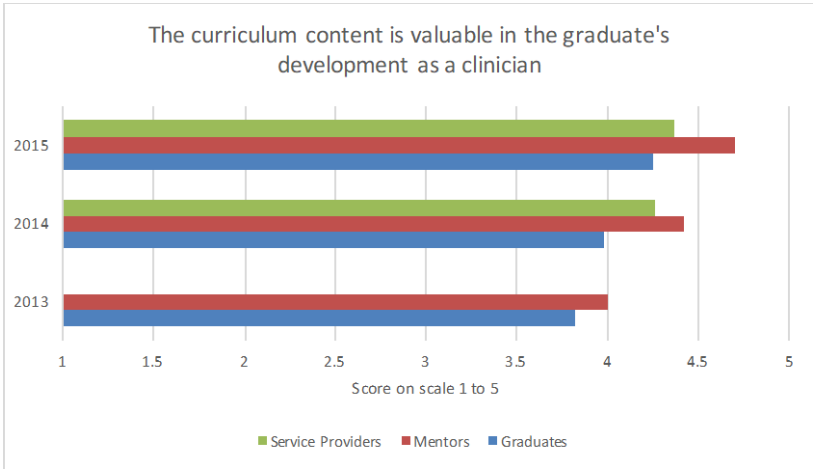


Figure 7: Curriculum value overall – graduate, mentor & service provider ratings, end of year surveys

Individual elements of curriculum content received mixed but overall positive feedback (see Figure 8 below). Webinars, case studies, case treatment plans and the curriculum facilitator were rated highest. The e-portfolio and web chat/online forums were rated lowest.

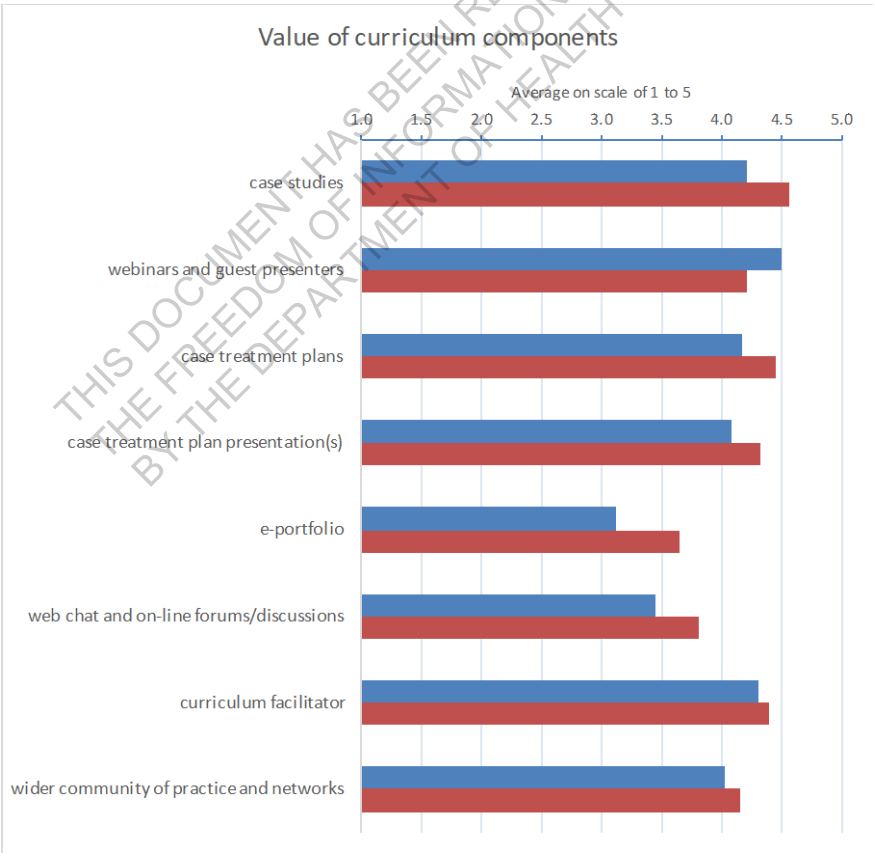


Figure 8: Graduate and mentor ratings of value of curriculum components, end of year survey 2015

AREAS FOR IMPROVEMENT OF CURRICULUM/PROGRAM

A few mentors reported that there were areas where the curriculum did not provide accurate or up-to-date information. In other examples, there were articles that were not relevant to the topic of study. One mentor reported that she had had no support from AITEC when she reported this issue and the course continued to present material that was no longer correct.

Loss of the Regional Mentors in the second year of the program was reported as an issue by a few mentors. They were replaced by Clinical Facilitators who worked nationally, which meant that some issues were not relevant to all regions.

There were a few mentors who believed that the weekly study day was taking the graduate out of the clinic for too long, resulting in them missing cases of interest. In addition, when employers interview recent graduates, they ask how many hours of practice they have had in certain procedures, making this a potential problem for graduates who have effectively worked 0.8 EFT.

Other comments included:

- Some videos did not load and some were too long;
- The audio on the webinars was not always good; and
- Webinar times were not always good for all locations.

Several mentors said the program should be opened up to become a formal internship year for all graduates. They said this could be achieved with less intense study requirements, while retaining the formal mentoring.

Service providers also spoke about the need for a formal internship program which could be open to all graduates.

Efficiency: Did the Program maximise outputs, given available funding?

Efficiency findings are examined under six key evaluation questions that follow the table of financial data.

VDGYP Expenditures

The funding agreement with AITEC for administration of the VDGYP was a total of $46,044,846.00 (GST exclusive) over five years 2011-2012 to 2015-2016. Funding included components such as infrastructure funding, as well as graduate and mentor salaries.

Funding was also provided for:

- the development of the program curriculum by the Australasian Council of Dental Schools;
- the development of the evaluation framework by Three Rivers Consulting Pty Ltd; and
- this evaluation.

Did the resources allocated for the Program get spent?

Most of the resources allocated for the program have been taken up over the course of the program. Spending on infrastructure was 10% under the amount endorsed in approved grants.

There were a number of reasons for approved infrastructure funding not being taken up. Some service providers had been unable to gain the required support and investment facilitation within their own bureaucracies and therefore did not take up the full amount in time. Other service providers managed to complete their infrastructure projects within budget and consequently did not need to take up the full amounts approved.

Not all service providers applied for infrastructure funding. Thirty-eight service providers received infrastructure funding; eleven service providers participating in the VDGYP did not receive any infrastructure funding.

Was infrastructure funding adequate and well spent, aligning with Program objectives?

Infrastructure spending was adequate, as demonstrated by the quantity and standard of infrastructure installed using program funding.

Spending was the subject of regular independent audits that were reported to Health by the program administrator.

Spending aligned, in general terms, with the program objectives, as it supported creation of clinical infrastructure sufficient to allow deployment of the dental graduates in dental practice, additional to the existing service capacity.

Was adequate Program funding provided to cover the costs of the VDGYP?

The program funding was adequate to cover the costs of the program and was substantially less than the amount projected in the 2011-12 and 2012-13 Federal Budgets.

As part of the 2011-12 Federal Budget, $52.6M was provided for the VDGYP from 2011-12 to 2014-15. The 2012-13 Budget included a further $35.7 million over three years (2013-14 to 2015-16) to expand VDGYP placements to seventy-five in 2015 and 100 in 2016.

The proposed expansion was later reversed through the Mid-Year Economic and Fiscal Outlook and fifty VDGYP placements per year were maintained each year. Additional funding was extended into the 2015-16 financial year bringing the total budget for the VDGYP to $54.92 million over five years (2011-12 to 2015-16).

In the 2015-16 Federal Budget, the Government announced the Consolidated and Streamlining Dental Programmes measure. This measure ceased the VDGYP and OHTGYP at the completion of the 2015 year, and refocused the Dental Relocation and Infrastructure Support Scheme to align with the Modified Monash Model (MMM) to more effectively support remote and rural locations in greatest workforce need.

How do Program costs and outcomes compare to similar Programs?

There are no directly comparable programs on which to base appropriate comparisons.

The DRISS scheme, a program to encourage private practice dentists to relocate to more remote areas than their current practice, is comparable to the extent that it partially shares the VDGYP objective of increasing services to regional, rural and remote communities. Dentists can apply for relocation grants and refurbishment/infrastructure/equipment grants up to a total of $370,000. However, as it is focused on private sector dentistry, it does not address the objective of increasing services to disadvantaged members of the community, nor does it benefit new dental graduates. The DRISS program budget was $77.7 million over four years. In comparison, the approved budget spending of the VDGYP amounted to $52.6 million over four years. The VDGYP made infrastructure grants to thirty-eight public dental service providers and funded the placement of 145 dentists in public dental services over three years. Since the scheme began in 2013, DRISS grants have been awarded to 126 private practice dentists.

There are studies available in the international literature about the efficacy of various graduate placement schemes, mostly about medical graduates but some covering oral health graduates, however none provide cost data.

How does the value of the Program compare to the cost?

The costs of the VDGYP have been analysed separately but the detailed breakdown by category is commercially sensitive and hence is not presented in this report.

Determining a figure for the program value is difficult, as a full economic cost-benefit analysis is beyond the scope of this evaluation. Calculation of the full economic value of the program would require access to data at the service provider and community level that is not readily available to the evaluators. However, it can be argued that the program has at least delivered additional services equivalent to the annual output of approximately forty FTE dentists (fifty dental graduates working delivering services at 0.8 FTE each, with 0.2 FTE time equivalent taken for the study program).

A basis for determining value could be developed from the following:

- Number and type of additional services performed by the graduates (that would not have been delivered, in the absence of the program).

- Value of the additional services, as measured by schedule fee.
- Estimated number of emergency cases or hospital admissions averted by delivery of the additional services.

There are some intangible benefits that may not be assessable even with full access to dental practice records, such as the additional productivity of a VDGYP participant in subsequent years due to the professional development undertaken in the graduate year program.

Effectiveness: How well did the outputs and outcomes from the VDGYP meet the objectives?

Effectiveness findings are examined under the following nine key evaluation questions.

Did the Program do what it set out to do?

The program has to a very large extent achieved what it was planned to do.

Number of service provider applications compared to number of funded places

The program initially attracted applications from forty-nine service providers to host a dental graduate; thirty-two were selected as host employers under agreements for two six-month placements for a graduate or multiple graduates, covering all fifty graduates selected for the program.

Thirty-one service providers continued in the 2014 graduate year and eleven new service providers were selected to participate in 2014. Again, all fifty graduates were placed.

Forty service providers continued in the program in the 2015 calendar year, and two new service providers joined the program. Places were offered to another fifty graduates for 2015. Two graduates resigned from the program during 2015, one in March and one in September.

Percent of graduates offered a place who (a) accepted and (b) commenced

In the initial offering of placements, for 2013, the Program Administrator found that numerous graduates were unwilling to accept a regional or remote placement. This was attributed to graduates' family or cultural ties and preferences to remain in metropolitan areas. This issue did make the placement offer process more complicated and lengthy but might be considered unavoidable, given the nature of the program and the varied backgrounds of graduates. The 2013 placements were even more difficult because they were being made concurrently with the process for selecting service providers, making exact locations uncertain. Graduates initially applied for a jurisdictional or state position without knowing which location they might be going to. This issue was not present in subsequent years and graduates applied for specific locations, indicating their order of preference.

Number of graduates placed and % of target placements filled by State

Northern Territory and Queensland did not receive sufficient applications to fill the available positions in the 2013 cohort, requiring consideration of graduates who had indicated a second or third preference for those locations. Some selected graduates withdrew their application, requiring reallocation of several arranged placements.

Despite these early issues, service providers selected in all states and territories have been allocated dental graduates in all three years.

Number of graduate applications vs funded places

As noted previously, ninety-four applications were received for fifty funded graduate places in 2013, 225 applications for fifty funded places in 2014 and 201 applications for fifty funded places in 2015, representing ratios of 1.9, 4.5 and 4.0 respectively. Up to one third of the graduating dentists in a given year applied for the VDGYP.

Number of mentors registered and participating; Mentor to graduate ratio

Thirty-one mentors participated in the 2013 program, rising to forty-three 'key' mentors in 2014 and 2015, supported by a further sixty-two support mentors. It should be noted that in the larger services, graduates may have been mentored by more than one mentor in the course of their placement.

Graduate satisfaction with mentors

As detailed elsewhere in this report, graduates described highly valuing mentoring support to their development as clinicians and as dental professionals in the community.

Mentor and graduate views on the national curriculum and training materials

As detailed elsewhere in this report, graduates rated a number of curriculum components lower than mentors did, although their scores were higher in the 2014 and 2015 end of year surveys than in the 2013 survey. Case treatment plan presentations, curriculum facilitator, and wider community of practice and networks all improved in their ratings from the 2013 mid-year survey to the 2013, 2014 and 2015 end of year surveys. The lowest scoring components surveys continued to be the e-portfolio, and web chat /online forums.

Graduate and service provider views on the employment process

The employment process was rated high to very high by graduates and service providers, as shown in Figure 9 below.

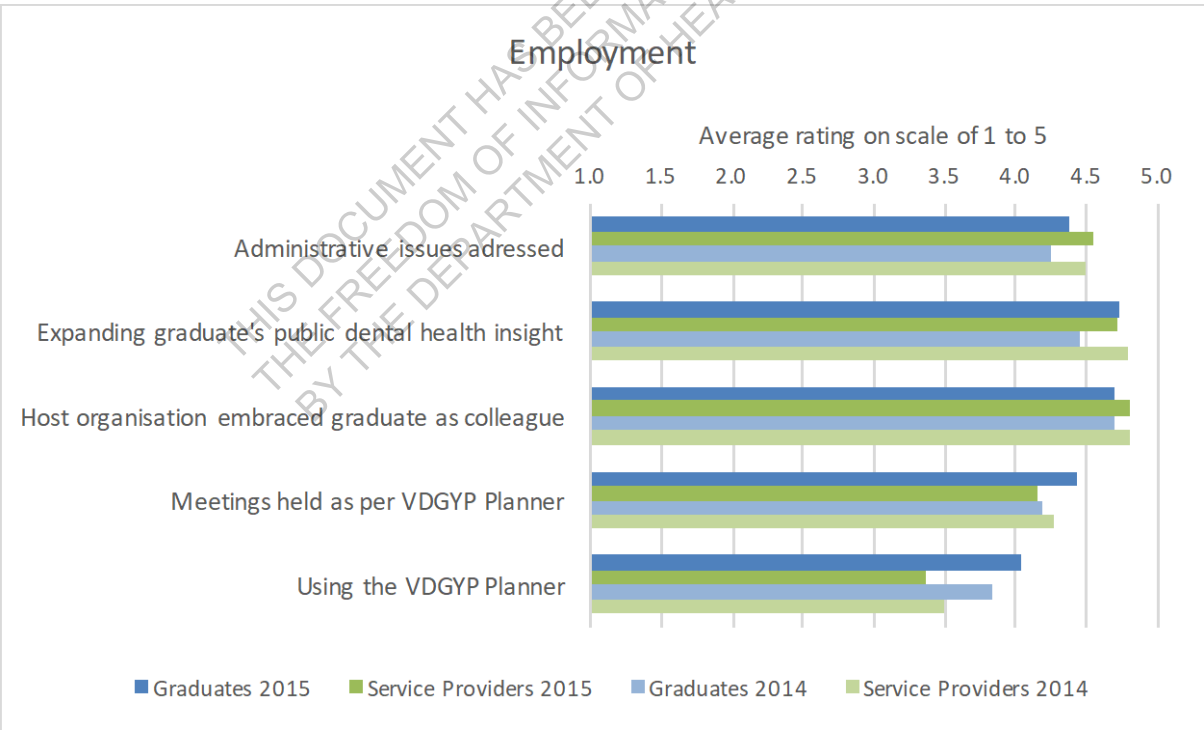


Figure 9: Graduate and service provider ratings of aspects of employment within the VDGYP 2014-2015

The VDGYP Year Planner was introduced to improve coordination and new survey questions were added to the 2014 and 2015 year-end surveys to monitor its use. Graduates reported using the planner more than service providers did. 2013 data are not included, as there were

too few service provider responses and only two of the above five questions were included in that year's end of year surveys.

Program administration and curriculum delivery

These aspects of the program were rated very highly. Please refer to the section titled *Was the Program administered and delivered to a high quality?*, commencing on page 57.

Overall graduate views – end of program survey of all years' graduates

Graduates from all years of the program were asked several questions in the graduate destinations survey about their assessment of the overall value of the program. Note that 2013 graduates are expressing opinions with the benefit of two years of additional practice experience, and 2014 graduates with one year of post-VDGYP experience.

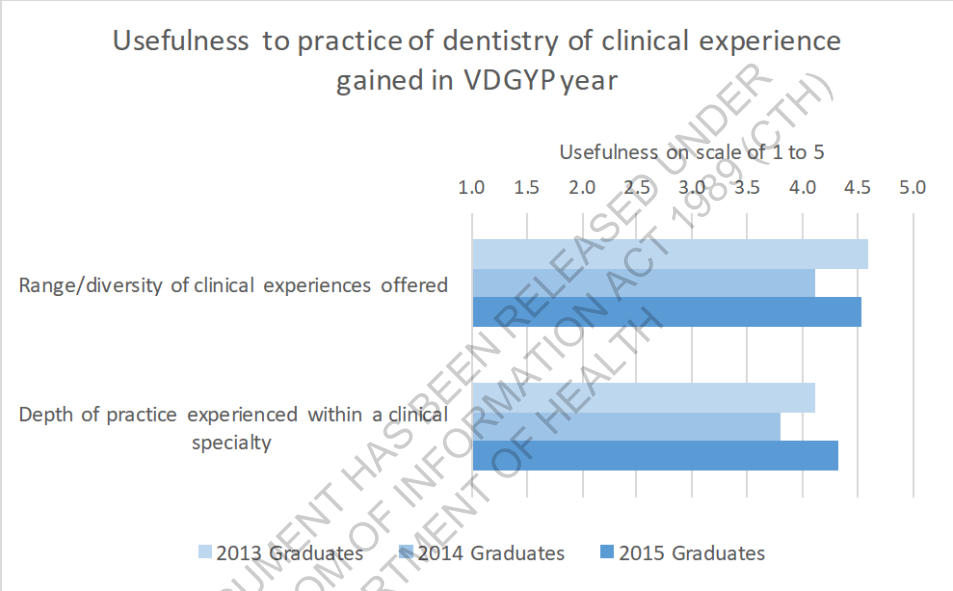


Figure 10: Usefulness of the clinical experience gained in the VDGYP year – Graduate destinations survey

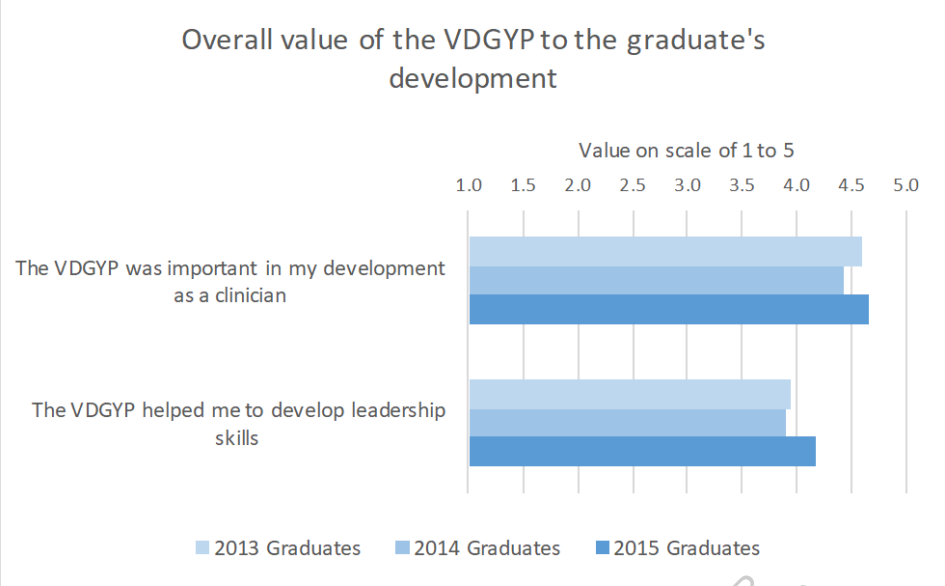


Figure 11: Overall value of the VDGYP year to the graduate's development – Graduate destinations survey

Was the distribution and rotation of VDGYP graduates appropriate, using partnerships where necessary?

A number of the participating dental health services rotated graduates through placements in different locations or different forms of service provision. For example:

- Oral Health Services Tasmania (OHST) rotated graduates through placements in Devonport and Burnie, and between different types of clinical experience, including in the Special Care Dental Unit, North West Tasmania Hospital, Mersey Hospital, and Latrobe
- The Oral Health Centre of Western Australia (OHCWA) gave graduates eight week rotations to rural and remote locations in Kununurra, Derby and Bunbury which included time in remote aboriginal communities.

Have more graduates been recruited into and retained in the public sector as a result of the Program? Has the VDGYP had a positive impact on attitudes of graduates towards the public sector and likely career choices?

At the end of the first two years of the program around half of the graduates indicated that they intended to continue on in the public sector in the year following their graduate year. Of the forty-eight graduates in the 2014 cohort that successfully completed the program, twenty-four (50%) were expecting to be employed in the public sector in 2015, with a further seven (15%) to be employed in a public/private mix.

Of the nine graduates interviewed for the 2015 graduate year evaluation Progress Report, three reported that the VDGYP had significantly and positively influenced their decision to work in the public sector. One reported that the program had a '*massive influence*' and that he had previously had no intention of working there, due to his negative undergraduate experience in public health. He has now been recruited to the public sector. Another reported

that the program had '*most definitely changed my mind*' about public dentistry, also citing a negative experience there as a student. Four graduates had previously had the intention to work in the public sector and were moving into permanent roles after completing the program. Two others reported a very positive experience in the public sector, and were moving into the private sector to gain experience, with the intention of returning to the public sector in a few years' time.

Each year, graduates expressed positive opinions in the end of year survey about continuing employment in the public dental health sector (see Figure 12 below), giving stronger ratings progressively through the program.

> *'I would definitely like to continue working within the public system either on a part-time or full-time basis.'* (Graduate 2014)

> *'I have thoroughly enjoyed my employment at [my placement] as well as the other rural sites that I have been allocated. The experience has been invaluable and has provided me with a new found appreciation for public health.'* (Graduate 2015)

> *'My experience has been overwhelmingly positive. As a consequence, I have decided to stay at the same organisation next year and hope to continue on in rural public practice for a number of years.'* (Graduate 2015)

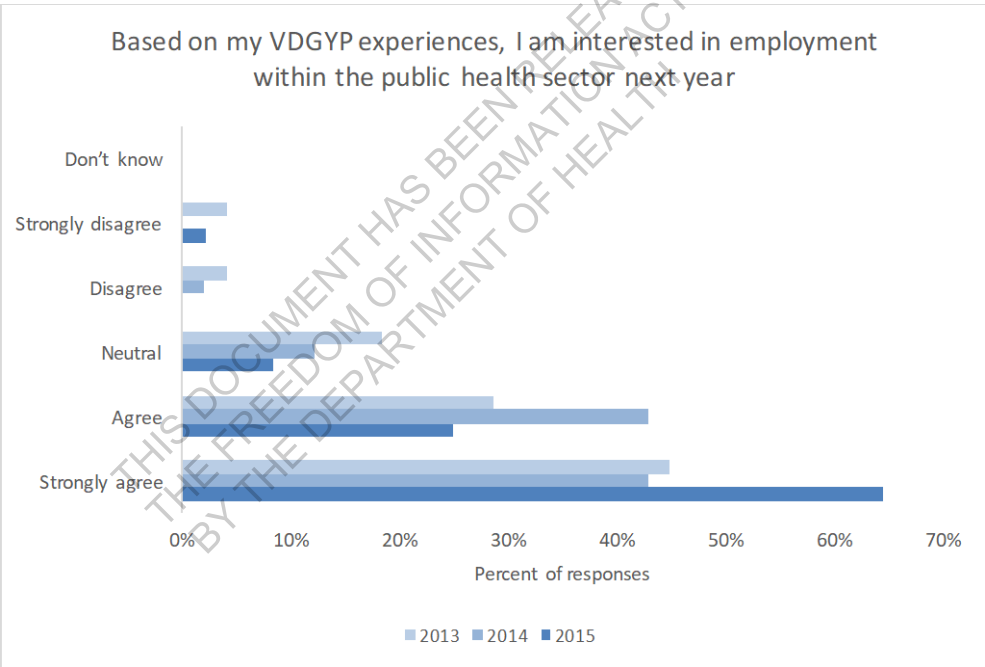


Figure 12: Graduates' reported interest in continuing public health sector employment

Graduate destinations survey

A graduate destinations survey was conducted in February and March 2016 by ACIG to gather more information about where former VDGYP graduate participants took up employment in subsequent years. The link to the online survey was sent by email to 144 graduate VDGYP participants, from all three years of the program. Sixty-nine graduates responded to the survey: eighteen from the 2013 graduate year, twenty from 2014 and thirty-one from 2015.

2013 Graduates

In 2014, seventeen of the eighteen respondents from the 2013 cohort were working in dentistry in Australia, while one worked part of the year in dentistry in Australia. Five worked full time in public sector dentistry and six worked full time in private practice dentistry. Seven worked part-time in both public sector dentistry and private practice. In other words, twelve of the eighteen 2013 VDGYP graduates remained working in public sector dentistry in the following year.

In 2015, fifteen were working in dentistry in Australia, while three worked part of the year in dentistry in Australia. Two worked full time in public sector dentistry and six worked full time in private practice dentistry. Six worked part-time in both public sector dentistry and private practice. In other words, eight of the eighteen 2013 VDGYP graduates remained working in public sector dentistry two years after their VDGYP year.

In 2016, five 2013 VDGYP graduates reported they were working in a regional, rural or remote area, of whom three said they intended working there for the foreseeable future.

2014 Graduates

In 2015, eighteen of the respondents from the 2014 cohort were working in dentistry in Australia, while one worked part of the year in dentistry in Australia. Two worked full time in public sector dentistry and four worked full time in private practice dentistry. Thirteen worked part-time in both public sector dentistry and private practice. In other words, fifteen of the twenty 2014 VDGYP graduates remained working in public sector dentistry in the following year.

In February-March 2016, eight 2014 VDGYP graduates reported they were working in a regional, rural or remote area, of whom three said they intended working there for the foreseeable future.

2015 Graduates

In the ACIG 2016 graduate destinations survey, twenty-three of the graduates from the 2015 VDGYP year responded to the question on their intention to continue working in public sector dentistry; twelve said they intended working in public sector dentistry for the foreseeable future.

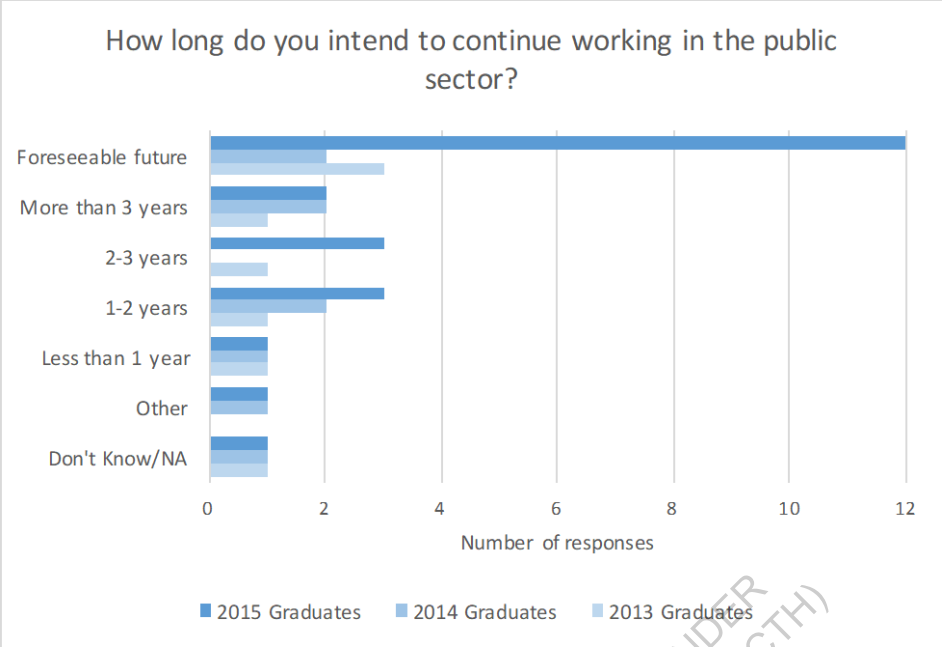


Figure 13: Public sector dentistry employment intentions, graduate destinations survey 2016

Of the graduates who responded to this question in the destinations survey, half said they intended to continue working in public sector dentistry for three years or more or for the foreseeable future:

2013 Graduates: 50% (four out of eight)

2014 Graduates: 44% (four out of nine)

2015 Graduates: 61% (fourteen out of twenty-three)

In February-March 2016, twelve 2015 VDGYP graduates reported they were working in a regional, rural or remote area, of whom five said they intended working there for the foreseeable future, and one said they intended to continue working there for more than three years.

INFLUENCE OF VDGYP EXPERIENCE ON CHOICE OF POST-PROGRAM WORKPLACE

When asked about the influence the VDGYP had on their choice of workplace in subsequent years, more than 80% said it had a positive or very positive influence on their decision about working in the public sector (2013 – 82%; 2014 – 84%; 2015: 87%). More than 60% said it had a positive or very positive influence on their decision about working in a regional, rural or remote area (2013 – 60%; 2014 – 72%; 2015: 61%).

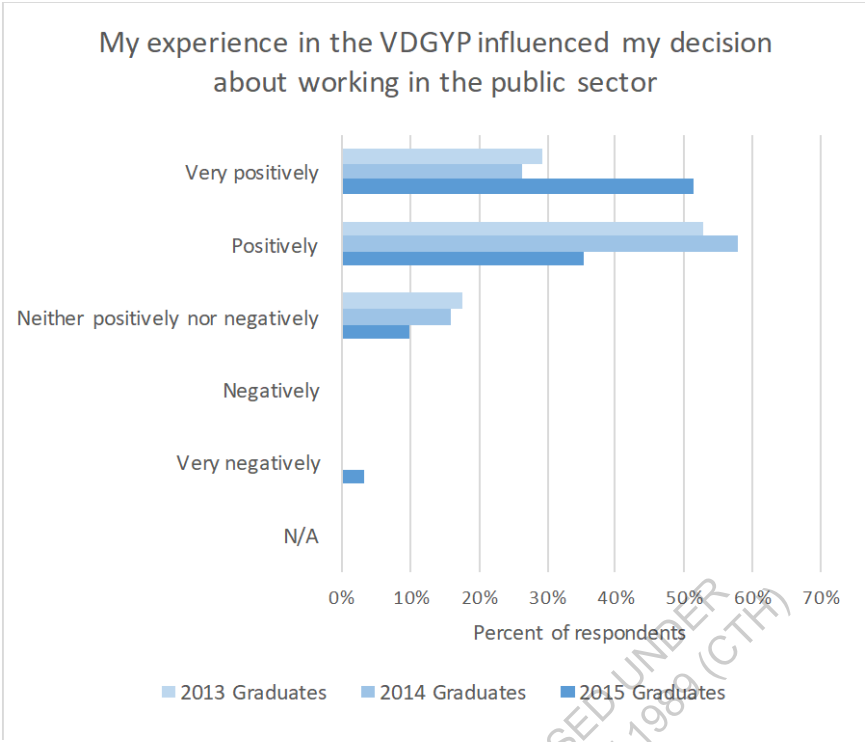


Figure 14: Influence of VDGYP experience on choice to work in public sector dentistry

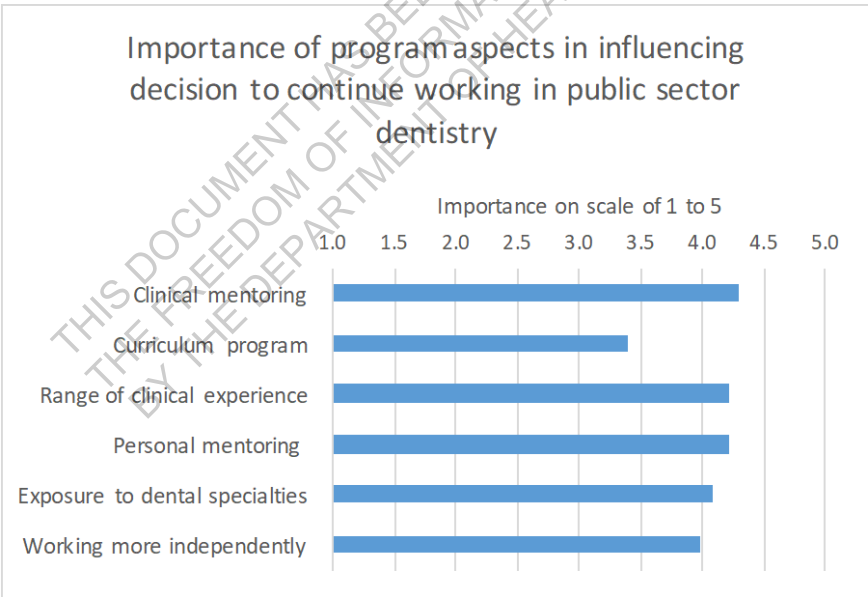


Figure 15: Program aspects influencing decisions on future working on public sector dentistry (all VDGYP years combined)

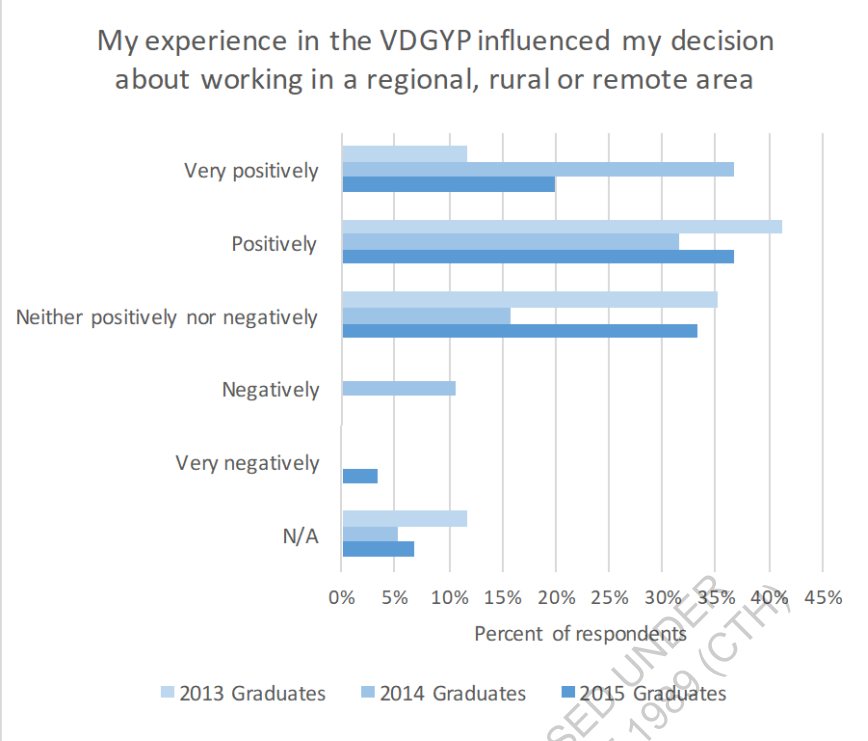


Figure 16: Influence of VDGYP experience on choice to work in a regional, rural or remote area

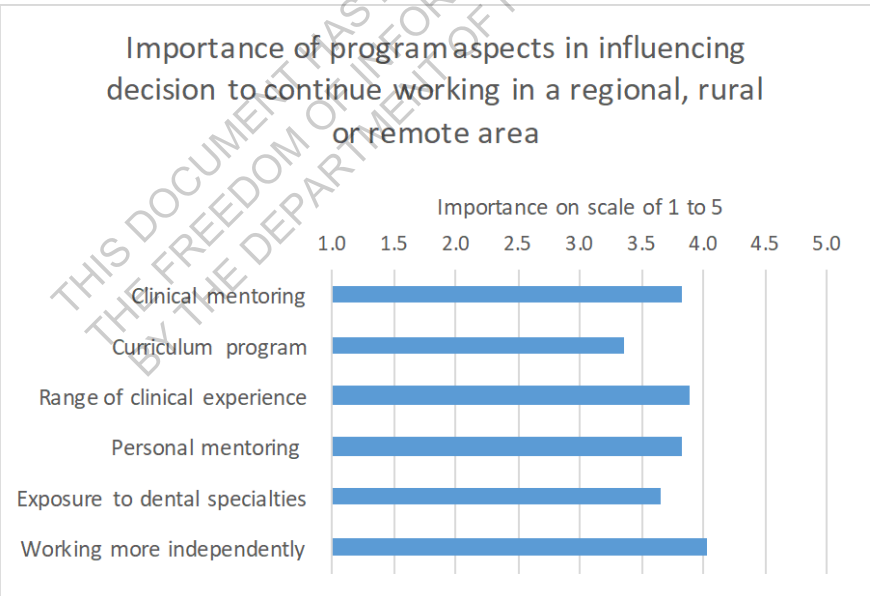


Figure 17: Program aspects influencing decisions on future working in a regional, rural or remote area

Did mentors value the experience/has it impacted on their attitudes to public sector dental? Did service providers value the experience and has it had a wider impact on their service mix or culture?

Mentors and service providers consistently reported strongly favourable responses to the program, in interviews and surveys.

Interviews

MENTORS

Mentors interviewed for the evaluation reported greatly valuing the program and commented that the program was professionally delivered. There was significant impact on the culture in some services, for example in encouragement of senior clinicians to look for suitable cases for the graduates and also a challenge for the mentors to consider why they use certain approaches. Some mentors reported that they have now changed the way they do certain procedures, after discussing it with the new graduates or working through the course materials. Many reported that they now conduct more case discussion meetings in their workplace and that this will continue after the program ends.

Some mentors felt that there was no substantive change to the culture at their workplace. This was because they felt they already had a culture of collegiality and of providing support and mentoring for new graduates.

Many mentors reported that new graduates add energy, fun and new knowledge to the workplace. The new graduates not only helped increase the number of patients seen, but patients were very happy to be treated by the new graduates.

> '*Reinvigorated the service'* (Mentor 2013)
>
> '*I've definitely learned from it'* (Mentor 2014)
>
> "*I think it's a great program'* (Mentor 2014)
>
> '*Fun to have new people around'* (Mentor 2015)

SERVICE PROVIDER VIEWS ON CHANGES IN CULTURE AS A RESULT OF VDGYP

Service providers all strongly believed that the program had been highly valuable to their service. Several described it as extraordinarily valuable, or overwhelmingly positive both to the graduates and the region. This value was experienced not only through increased staff numbers and infrastructure, which allowed services to increase throughput and outreach activities, but also in a change in culture, with many services reporting a much more collegiate culture since the inception of the program.

The increased staffing allowed some services to provide innovative outreach services and develop new areas of service. One service provider reported that her service had established an Indigenous dental clinic and are training dental assistants, partly using the extra staffing gained from the program.

> *'Enthusiasm, youth and fresh health promotion training has 'changed the face of dentistry in the region.'* (Service Provider 2013)

'The program also provided opportunities for dentists to be involved in teaching and mentoring for those who enjoy this activity, whereas before the program these opportunities were not available for rural dentists.' (Service Provider 2013)

'Raises the morale of our whole team. We don't feel like we're drowning'. (Service Provider 2014)

'The federal government really care'. (Service Provider 2014)

'One of the best things to happen in dentistry in the last few years'. (Service Provider 2014)

'*VDGYP was like a lifeline. It sustained the service.*' (Service Provider 2015)

'*One of the best programs ever created for public dental services'* (Service Provider 2015)

'*Devastating to see it terminated'* (Service Provider and Mentor 2015)

Cultural change within practices occurred over the life of the program, as dentists became more attuned to the value and benefits of structured supervision. This developed as more senior dentists took on mentoring roles, both formal and informal. Hosting the new graduates was reported to increase the sense of responsibility of the senior dentists and involvement of other practice members in providing support. The presence of the graduates was often reported as a hugely positive influence which motivated others to conduct their own research and study. This collegial and supportive atmosphere has been reported by many services to be a lasting legacy of the VDGYP. Service providers reported a change in the way people speak to colleagues, using a more open and transparent manner. Individuals have been more reflective of their practice and more open to ongoing learning. One service provider suggested that the dental profession had been slow to recognize the benefits of professional supervision and that the VDGYP had changed that for the better.

One service provider explained that her service had been '*forced as an organisation to develop young people*'. They achieved this by evaluating their existing graduate mentoring program and making changes to ensure that the mentoring of all graduates was at a high standard. The VDGYP mentor acted as a mentor for all graduates and was able to apply their knowledge and learning to the other graduates. Another service was so impressed with the program that they have established a similar program using state government funding. This program will be piloted with eight participants, starting in 2016.

In another service the cultural effects were seen in the non-VDGYP graduates, who became more interested in additional learning and started staying back after work to conduct further research and discussing cases with colleagues.

End of year surveys

Mentors surveyed reported highly positive experiences with the program. They saw the mentoring as having a positive impact on both the graduates and themselves.

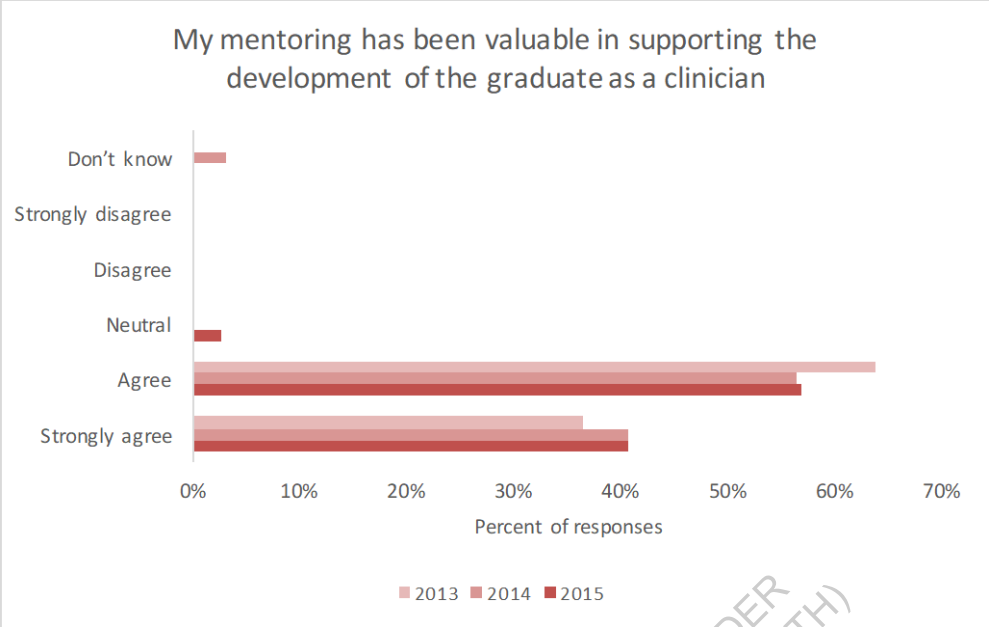


Figure 18: Value of mentoring, end of year mentor surveys 2013-2015

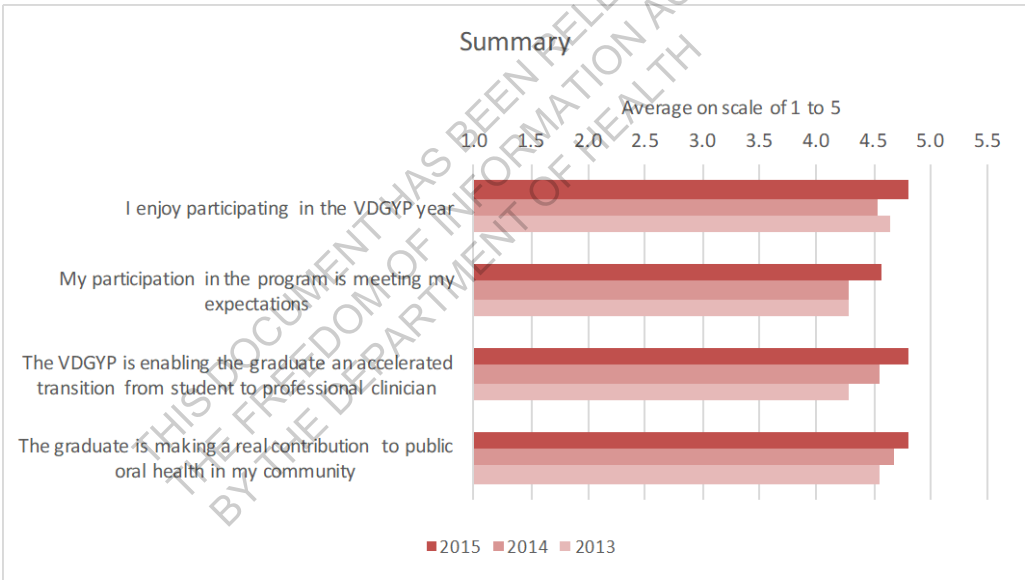


Figure 19: Mentors' overall ratings, end of year surveys 2013-2015

'Mentoring has helped me to keep in touch with advances in dentistry and has helped in reminding me of things that you begin to forget or take for granted over time.' (Mentor 2013)

'Looking forward to continuing my participation next year. Mentoring has been a very fulfilling and positive part in keeping my interest in dentistry as well as imparting knowledge and "tricks of the trade"; both clinically and in general life.' (Mentor 2013)

'A great experience for me to continue my own professional development and enjoy my own clinical practice more.' (Mentor 2014)

'I have really enjoyed the time spent mentoring the graduate. It gives great satisfaction to be able to partake in this program and have pride to watch the graduate evolve over the year.' (Mentor 2014)

'The role of mentoring has helped me grow professionally and able to enhance my knowledge and skill.' (Mentor 2015)

'I have been a part of VDGYP for the past 3 years and it has been the best thing for my career. I wish we were able to continue this program as it would benefit the young dental graduates to form a strong foundation in their professional career.' (Mentor 2015)

What impact did the Program have on services provided/patients seen?

The provision of forty-nine extra places for graduate dentists in 2013, forty-eight in 2014, and forty-eight in 2015, supported with infrastructure funding, has created additional capacity for dental services. While it may be argued that some of that capacity might possibly have been installed without the program, it is more likely that VDGYP represents additional capacity being added to serve disadvantaged, regional, rural and remote communities.

'The VDGYPs cut the waitlist at our primary practice from over a year to a few days.' (Service Provider 2013)

The case studies (see *Appendix 4: Case studies*, from page 81) added further information about a number of program sites and are discussed below.

Interviews

Service providers all reported that the program had significantly increased their ability to deliver services. The extra staffing increased throughput but also allowed for innovative practices such as increased outreach services. The infrastructure funding was essential and will leave a legacy beyond the life of the program for most services.

Some services used their infrastructure funding to open clinics in rural or remote areas. Some services which used the infrastructure funding to increase the number of dental chairs in their service now face difficulties maintaining staffing to continue taking advantage of the infrastructure. Some service providers reported that they are in the process of applying for other sources of funds, but others did not expect to be able to keep to the staffing levels they had during the VDGYP.

Many services purchased digital equipment with their infrastructure funding, which will be able to be useful beyond the life of the program.

Some services have yet to benefit from the infrastructure funding because of delays to building projects. This was not attributed to AITEC, rather it was an issue with hospital management and poor quoting processes for major works.

Graduates, mentors and service providers interviewed for the end of 2015 program year and for the case studies were disappointed in the program ending. Graduates felt very fortunate to have been able to take part in this transition to working independently and to be able to learn from other more senior dentists.

'… provided the ability to take the step towards working by myself' (Graduate 2015)

Case studies

During site visits conducted for the case studies (see *Appendix 4: Case studies*, from page 81), we found that the VDGYP had enabled a number of innovative service delivery developments. For example, Barwon Health purchased a mobile dental van that enabled the service to deliver an outreach service to adults and children across the region who may not have been able to easily access dental services at all in the absence of the outreach service. The van provided services for more than 5,000 kindergarten children three times a year across regional and rural areas covered by Barwon Health. A paper[vii] describing the innovative service was published in *Dentistry*, an open access journal, in 2015.

Oral Health Services Tasmania reduced waiting lists as a result of the additional service capacity enabled by the VDGYP graduates and infrastructure. Before the program, all but the most urgent emergency cases were subject to a waiting period. The VDGYP also raised the profile of the service and changed the culture of the organisation.

The Tharawal Aboriginal Corporation's Tharawal Medical Centre achieved the following service improvements:

- Doubled the throughput of patients;
- Enabled the service to do outreach into the community;
- Reduced the waiting list to two weeks;
- Increased attendance rate for appointments to between 80-90%, because reception now reminds people of their appointments;
- Reduced emergency presentations from 3 to 4 per day to 1 per 2 days due to better regular care; and
- Increased community confidence in the service and enhanced the reputation of the service, due to the new facilities and a friendly and culturally sensitive arrangement.

Has the Program had an impact on the quality of care?

Evidence concerning the impact on the quality of care is indirect in this evaluation. Many comments were made by mentors and service providers about the high quality of the graduates' work and their contribution to the practice. No mentors or service providers interviewed reported any complaints against any of the graduates, whether VDGYP or non-VDGYP graduates.

In some cases, patient outcomes overall have improved because needed emergency treatment has been provided in time to prevent more serious conditions developing. For example, in North West Tasmania only a relatively small proportion of emergency cases were being seen within acceptable timeframes prior to the addition of extra dental surgeries and graduate dentists. By the end of the program, all emergency cases were being seen within appropriate timeframes. It should be noted that these outcomes were achieved through the combination of National Partnership Agreement funding and VDGYP infrastructure funding and graduate staffing. In another case, at Tharawal Aboriginal Corporation, emergency

[vii] Mason A, Mayze L, Pawlak J, Henry MJ, Sharp S, et al. (2015) A Preventative Approach to Oral Health for Children in a Regional/Rural Community in South-West Victoria, Australia. Dentistry 5: 313.

presentations were reduced from three to four per day, to one every two days. This improvement was attributed to better dental care.

Was the program attractive to graduating dentists?

With ninety-four applications for fifty funded places in 2013, 225 applications for fifty funded places in 2014 and 201 applications in 2015, the Program was attractive to graduating dentists. A number of comments were made by 2014 and 2015 graduate VDGYP participants that the program had gained good word of mouth reputation in previous years and there was widespread interest in the program. Qualitative evidence gathered throughout the three years of the program evaluation supported the existence of two other factors. Firstly, public sector dentistry was increasingly seen by graduates as potentially providing a broader-based first year practice experience than many private practices. It is also known that rural placements, in either public or private practice, provide challenging opportunities for graduate dentists. Secondly, with more dental graduates being produced by the universities each year, competition for jobs is increasing and the experience of doing the VDGYP was seen as a good résumé builder.

Was the Program administered and delivered to a high quality?

Data from surveys and interviews show strong approval of the program administration. The program administrator, AITEC made a number of enhancements to their program delivery throughout the three years and this is reflected in survey ratings which improve consistently. Critical comments declined in successive years across all of the graduate, mentor and service provider interviews and surveys.

Interviews

Service providers reported that AITEC was particularly responsive, thorough and detailed. In general, the administration was said to be not burdensome, however the invoicing system was nominated as a problem by some services. Most reported that AITEC was open to suggestions, with a few notable exceptions where AITEC was said to have not responded to negative feedback.

Most service providers and many mentors mentioned the outstanding job that AITEC has done with recruitment to the VDGYP. They found the process very well-designed and streamlined and the resulting appointments were of very highly functioning graduates.

> *'I've been quite impressed; it's very professionally run. Everyone I've had to deal with has been excellent at AITEC. No issues.'* (Mentor 2013)
>
> *'AITEC were fabulous with everything except their invoicing process, which was anything other than smooth.'* (Service Provider 2015)
>
> *'Exceptional agency.'* (Service Provider 2015)
>
> *'I learned a lot from them as a service provider'* (Service Provider 2015)

Surveys

By the end of the program, graduates, mentors and service providers all rated program administration and curriculum delivery highly, as shown in the following figures.

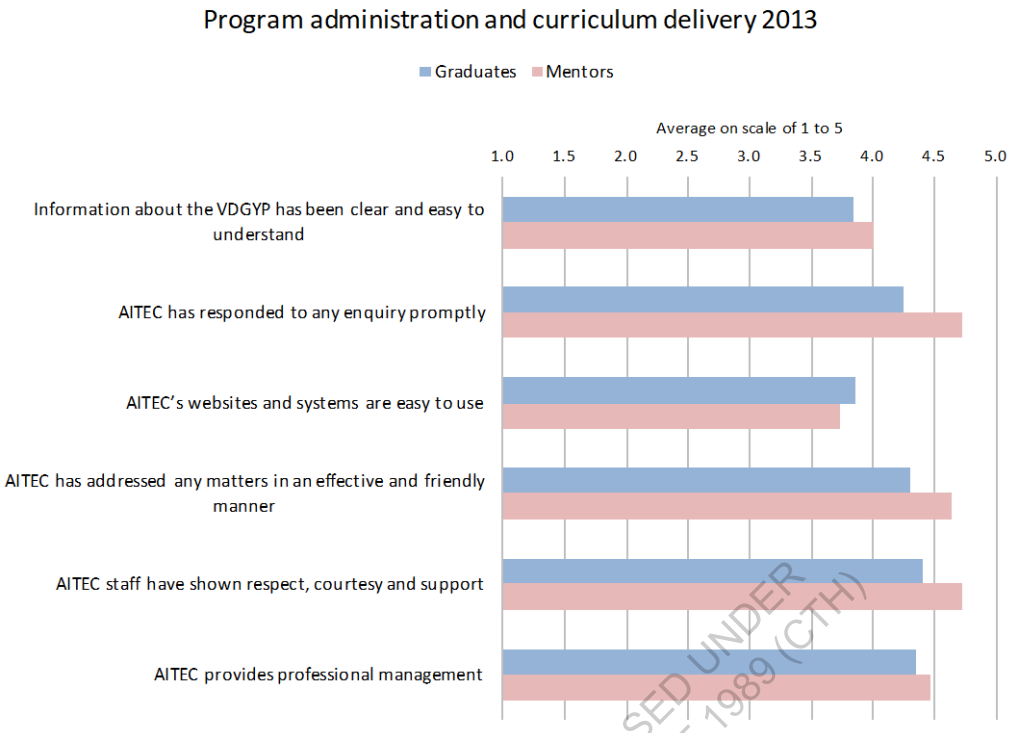


Figure 20: End of year survey ratings of program administration and curriculum delivery, 2013

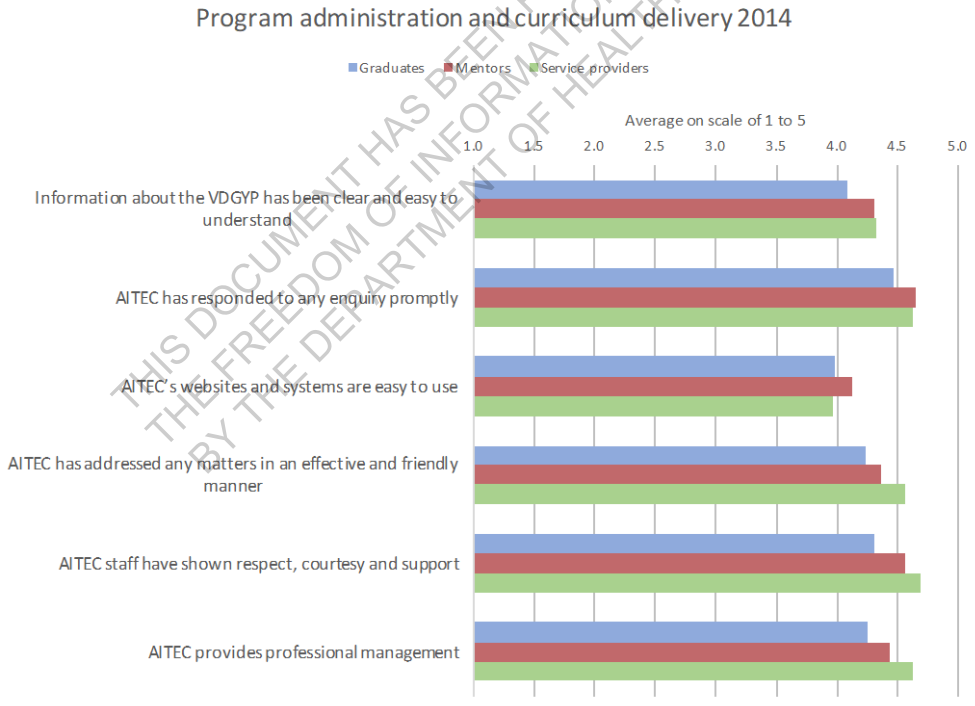


Figure 21: End of year survey ratings of program administration and curriculum delivery, 2014

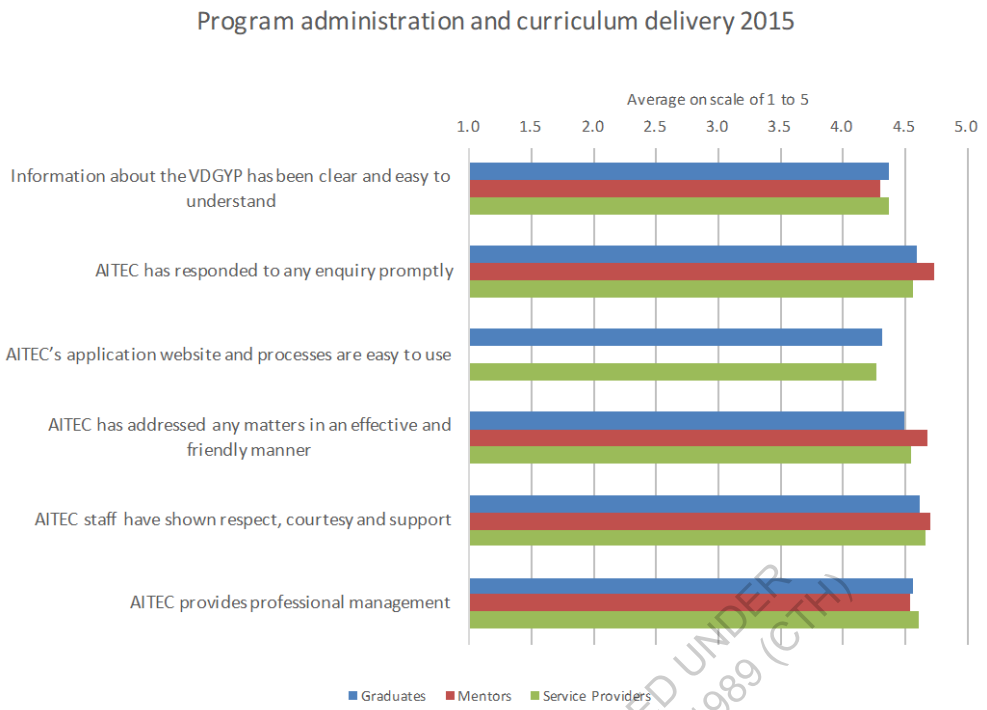


Figure 22: End of year survey ratings of program administration and curriculum delivery, 2015

Typical comments included:

> *'Excellent work from the team at AITEC! Thank you for all your hard work.'* (Graduate 2013)
>
> *'AITEC [did a] great job in delivery over short time frame. Everyone has been great to deal with.'* (Mentor 2013)
>
> *'Everyone at AITEC was very helpful when they could be'* (Graduate 2014)
>
> *'AITEC were absolutely fantastic managers'.* (Service Provider 2014)
>
> *'All AITEC staff have been friendly and approachable since day one.'* (Graduate 2015)
>
> *'AITEC showed excellent organisation and responded to any emails etc. promptly. I am grateful for the various reminders sent to action certain aspects of the program.'* (Graduate 2015)
>
> *'VDGYP has been very well organised and managed. AITEC was always very professional and helpful.'* (Mentor 2015)
>
> *'AITEC has delivered the program at a high level of professionalism.'* (Service Provider 2015)

There were only a few comments made in survey responses over the three years that criticised program administration, including:

> *'Technical glitches were reported initially but were resolved quickly.'* (Mentor 2013)

'We experienced a degree of difficulty navigating infrastructure funding arrangements. A shared understanding of procurement processes and facilitation of more detailed project planning may have alleviated some of the issues encountered.' (Service Provider 2015)

Program Administration and Curriculum Delivery Improvements

AITEC made a series of improvements to program administration and curriculum delivery throughout the program to better meet its objectives, evidenced by:

- Year-on-year improvements in survey ratings for program administration and curriculum delivery by graduates, mentors and service providers alike;
- Comments by mentors and service providers in the end of year interviews that indicated improvements were being made each year;
- Adverse comments made by the 2013 graduates, mentors and service providers that related mostly to teething problems attributable either to the short inception period for the program or initial unfamiliarity with the workload imposed by the curriculum; and
- Difficulties with curriculum delivery technology that were evident in the first year being progressively addressed by AITEC – we note that a number of the technology issues arose because of the compressed timeframe for program commencement.

It should also be noted that AITEC were originally contracted to conduct selection and placement processes for the VDGYP. A contract variation was then raised to engage AITEC to also deliver the curriculum, including organising the orientation workshop, establishing the Learning Management System (LMS), uploading and structuring the curriculum content, structuring the e-portfolio and producing new program materials. This was achieved in a short timeframe at the commencement of the program and inevitably resulted in teething problems that were resolved before subsequent program years.

AITEC also responded to issues raised by the 2013 graduates and mentors about the workload requirements of the curriculum by restructuring and/or re-sequencing content, as well as ensuring that all participants received a comprehensive briefing on the requirements at the orientation workshop. The issue was not raised in 2014 or 2015 interviews or surveys, indicating the success of the steps taken by AITEC.

Recommendations

Lessons learnt

Essential elements of a successful graduate year professional development program have been demonstrated to be:

- a formal curriculum, combined with assessment tasks;
- regular study leave;
- formalised, structured mentoring by senior dentists;
- overall program administration, curriculum delivery and monitoring by an independent third party (a program administrator).

It was also made clear to the evaluators by mentors and service providers that the curriculum provides the framework for the mentoring; without the curriculum and all of its support materials and delivery channels, the potential impact of mentoring on graduates is lessened.

There was considerable evidence that the program was operating at its peak after three years of development and continuous improvement. Given the initial start-up costs of the infrastructure and curriculum development, it would be an efficient use of funds to continue the program, even in a limited capacity, to continue to achieve the greatest cost benefit from the investment already made.

The following strengths of the VDGYP have been evidenced in the evaluation:

- The program clearly delivered what was planned to be delivered.
- Graduates, mentors and service providers expressed high to very high satisfaction with the VDGYP.
- Graduates experienced a supported professional development year which enhanced their confidence to practise independently across a range of clinical areas.
- Graduates had a highly positive experience of working in public dentistry, with many continuing or planning to continue working in this sector.
- The program enabled many participating services to expand services, improve their infrastructure, develop innovative services, improve their organisational culture and cut waiting lists.
- The mentoring process was highly successful for both mentors and graduates and has changed the culture at many practices which are now continuing with regular case discussion meetings.
- The program administrator, AITEC, clearly met the program objectives and the outcomes specified in their agreement with Health.
- The selection process attracted graduates with high academic ranking.

- Graduates experienced a variety of practice that they may not have been able to experience in the absence of the program.
- Networking enabled by the program benefited graduates and mentors alike.

Opportunities for Improvement

The merit of the VDGYP has been demonstrated throughout the three years of the program. There is considerable interest amongst service providers and mentors, supported by graduate participants, in continuing the program. Some service providers are continuing the graduate year program in a limited format (without access to the formal curriculum or supporting delivery technology), using their own funding.

> **Recommendation 1**: Seek alternative delivery models and/or funding sources for continuation of a graduate professional development year that includes local mentoring and case presentations as a minimum.

> **Recommendation 2**: In the absence of a full formal graduate year program funded by government, licence the curriculum content and delivery channel technology at an affordable price to interested service providers.

One of the objectives of the program was to provide support for public dentistry services. There will be considerable impact on some services from discontinuation of the funding for EFT within their services.

> **Recommendation 3**: Focus the graduate professional development program on areas of greatest need such as regional/rural or remote services or Indigenous services.

If the program was to be re-established, several opportunities for improvement exist and these are the subject of the following recommendations.

Mentoring preparation could be improved and expanded, with more formal and in-depth training based on health professional education and clinical supervision principles and practices. A number of Australian universities offer short courses in health professional education that could be used as a basis.

> **Recommendation 4**: Develop and deliver a formal training module for mentors and clinical supervisors prior to graduate year commencement.

Monitoring of placements progress could be increased to take the initiative to intervene in any developing problems.

> **Recommendation 5**: Implement formal monitoring with check points at: six to eight weeks from graduate commencement; mid-program (six months); and at the three-quarter point in the program (nine months).

The infrastructure component has the greatest impact on smaller public dentistry services, especially in regional, rural and remote areas, whereas large state-based or metropolitan services often have enough infrastructure funding of their own,

> **Recommendation 6**: Focus infrastructure spending on smaller services and regional, rural and remote settings.

The $15,000 bonus on completion of the VDGYP year was considered by a number of graduates to be unnecessary as an incentive, given the competition for employment among graduate dentists and the overall benefits afforded to graduates by the VDGYP.

> **Recommendation 7**: Eliminate the bonus payment for completion of the graduate year.

Appendix 1: Evaluation Plan

The evaluation of the VDGYP is detailed in a separate document titled *Voluntary Dental Graduate Year Program Evaluation Framework and Evaluation Plan*, dated 6 November 2013. The following briefly summarises the evaluation plan steps and the data to be collected for each phase of the evaluation.

The VDGYP evaluation has been undertaken over a three-year period, in the following stages:

Project setup

- Review of available documentation
- Commencement meeting

DEC application

- ACIG confer with DEC about the need for ethics approval for the evaluation.
- Ethics application made in July 2013.
- Ethics approval received in August 2013.
- Update to DEC to be made in December 2013.
- Annual reports and a final report are also to be made to DEC.

Evaluation framework and plan

- ACIG review existing documents provided by the Department, including previous reports, program logics and evaluation framework.
- ACIG consult with AITEC Pty Ltd (the Program Administrator) to enhance our understanding of the VDGYP, including the operational aspects and lessons learned to date.
- ACIG review and update the existing evaluation framework according to consultation and research.
- Review data collection tools.

Amend DEC application

- Update the DEC on the acquisition of data from AITEC.

Data collection (2013-2016)

Each round of data collection seeks to address different evaluation questions. Rounds 1, 3 and 5 are mid-year data collection periods and focus on administrative data from AITEC and the graduate and mentor surveys. Data collection will be undertaken in October/November 2013 (round 1), May/June 2014 (round 3) and May/June 2015 (round 5).

Rounds 2, 4 and 6 are based on end of placement year data and use administrative data from AITEC and other sources, and surveys and interviews of graduates, mentors and service

providers. Data collection for these rounds will be undertaken in December 2013-March 2014 (round 2), December 2014-March 2015 (round 4), and December 2015-February 2016 (round 6). Data collected from these rounds will be presented in progress reports 2, 4 and 6.

Final round – Summative Evaluation

The final evaluation examines the worth and significance of the VDGYP by demonstrating the impact that the program had over its three years of operation.

The data for the summative evaluation will be collected in December 2015-March 2016, and will inform the final report. The data will include a review over the program life of administrative data, surveys of graduates, mentors and service providers, and interviews with graduates, mentors and service providers. A number of case studies will also be developed to give depth to the program data

Case studies plan

- Develop criteria for selection.
- Consult with AITEC and Health.
- Make selections for case studies.
- Undertake two visits to each case study site.
- Write up case studies for inclusion in the final report.

Final report

- Analyse all evaluation inputs and synthesise themes and lessons learnt
- Write report
- Present draft report to governance committee
- Review report and deliver final

Linking the data collected with the evaluation framework and program logic map, ACIG's findings will be made with regards to the relevance, effectiveness, efficiency and overall impact of the VDGYP in the context of the Australian Government's funding and objectives.

Appendix 2: Survey tools

The following surveys were used throughout the VDGYP:

- Graduate, mentor and service provider surveys, mid-placement year; administered online by AITEC;
- Graduate, mentor and service provider surveys, end of placement year; administered online by AITEC;
- Graduate destinations survey, all VDGYP graduates across the whole Program invited to participate on a voluntary basis; administered online in February-March 2106 by ACIG.

Graduate survey		Scale
Employment	The position is expanding my insight to public dental health	Strongly Agree (5) to Strongly Disagree (1) (SA-SD)
	My host organisation has embraced me as a colleague	SA-SD
	Comments	Free text
Clinical experience	I am receiving appropriate support from my clinical supervisor/s	SA-SD
	The clinical experiences are consolidating and extending my clinical skills	SA-SD
	I am seeing a wide range of patients and conditions	SA-SD
	My supervisor actively seeks opportunities to expand my clinical experiences	SA-SD
	My clinical experiences have been relevant to the curriculum	SA-SD
	I have undertaken activities in this year that I thought would only occur later in my career	SA-SD
	I am developing well as an independent clinician	SA-SD
	I have access to appropriate dental and other equipment required	SA-SD
	I have been provided with appropriate dental assistance	SA-SD
	Comments	Free text

Curriculum	The curriculum content has been valuable in supporting my development as a clinician	SA-SD
	The curriculum workload has been able to be managed within the allocated time	SA-SD
	The on-line Learning Management System is easy to use for the curriculum	SA-SD
	The balance between the curriculum focus on clinical procedures versus clinical team work is appropriate	SA-SD
	The following curriculum components have been valuable case studies webinars and guest presenters case treatment plans case treatment plan presentations e-portfolio web chat and on-line forums/discussions curriculum facilitator wider community of practice and networks	SA-SD
	Comments	Free text
Mentoring and support	My mentor has been valuable in supporting my development as a clinician	SA-SD
	My mentor has been valuable in supporting my development as a dental professional within the community	SA-SD
	Mentoring sessions span the following areas: case studies clinical cases webinars case treatment plans personal development career development	Yes/No (Y/N)
	I meet with my mentor in a structured manner for the following number of hours per month <5 / 6-10 / 11-15 / 16-20 / 20+	Choose one selection

	Comments	Free text
Program administration and curriculum delivery	Information about the VDGYP has been clear and easy to understand	SA-SD
	AITEC has responded to any enquiry promptly	SA-SD
	AITEC's websites and systems are easy to use	SA-SD
	AITEC has addressed any matters in an effective and friendly manner	SA-SD
	AITEC staff have shown respect, courtesy and support	SA-SD
	AITEC provides professional management	SA-SD
	Comments	Free text
Summary	I am enjoying the VDGYP year	SA-SD
	Participation in the program is meeting my expectations	SA-SD
	The VDGYP is enabling an accelerated transition from student to professional clinician	SA-SD
	I am making a real contribution to public oral health in my community	SA-SD
	Based on my VDGYP experiences, I am interested in employment within the public health sector next year	SA-SD
	Comments	Free text

Mentor Survey		Scale
Clinical experience	The graduate is seeing a wide range of patients and conditions	SA-SD
	The graduate's supervisor actively seeks opportunities to expand their clinical experiences	SA-SD
	The clinical supervisor is aware of how to support the curriculum content with clinical opportunities	SA-SD
	The graduate's clinical experiences have been relevant to the curriculum	SA-SD
	The graduate is developing well as an independent clinician	SA-SD
	Comments	Free text
Curriculum	The curriculum content has been valuable in supporting the development of the graduate as a clinician	SA-SD
	The graduate has been able to be manage the curriculum workload within the allocated time	SA-SD
	It is easy to access the curriculum on-line Learning Management System	SA-SD
	The following curriculum components have been valuable to the graduate case studies webinars and guest presenters case treatment plans case treatment plan presentations e-portfolio web chat and on-line forums/discussions curriculum facilitator wider community of practice and networks	SA-SD
	Comments	Free text
Mentoring and support	My mentoring has been valuable in supporting the development of the graduate as a clinician	SA-SD
	My mentoring has been valuable in supporting the development of the graduate as a dental professional within the community	SA-SD
	Mentoring sessions span the following areas:	Y/N

	case studies clinical cases webinars case treatment plans personal development career development	
	I meet with the graduate in a structured manner for the following number of hours per month <5 / 6-10 / 11-15 / 16-20 / 20+	Choose one selection
	The role as mentor has been valuable to me for continuing professional development	SA-SD
	Comments	Free text
Program administration and curriculum delivery	Information about the VDGYP has been clear and easy to understand	SA-SD
	AITEC has responded to any enquiry promptly	SA-SD
	AITEC's websites and systems are easy to use	SA-SD
	AITEC has addressed any matters in an effective and friendly manner	SA-SD
	AITEC staff have shown respect, courtesy and support	SA-SD
	AITEC provides professional management	SA-SD
	Comments	Text box
Summary	I enjoy participating in the VDGYP year	SA-SD
	My participation in the program is meeting my expectations	SA-SD
	The VDGYP is enabling the graduate an accelerated transition from student to professional clinician	SA-SD
	The graduate is making a real contribution to public oral health in my community	SA-SD
	Comments	Free text

Service Provider Survey		Scale
Employment	The position is expanding the graduate's insight to public dental health	SA-SD
	My organisation has embraced the graduate as a colleague	SA-SD
	Comments	Free text
Clinical experience	The graduate is receiving appropriate support from the clinical supervisor/s	SA-SD
	The clinical experiences are consolidating and extending the graduate's clinical skills	SA-SD
	The graduate is seeing a wide range of patients and conditions	SA-SD
	The clinical supervisor actively seeks opportunities to expand the graduate's clinical experiences	SA-SD
	The graduate's clinical experiences have been relevant to the curriculum	SA-SD
	The graduate is developing well as an independent clinician	SA-SD
	The graduate has access to appropriate dental and other equipment required	SA-SD
	The graduate has been provided with appropriate dental assistance	SA-SD
	Comments	Free text
Curriculum	The curriculum content has been valuable in supporting the graduates development as a clinician	SA-SD
	The curriculum workload has been able to be managed within the allocated time	SA-SD
	The balance between the curriculum focus on clinical procedures versus clinical team work is appropriate	SA-SD
	The following curriculum components have been valuable case studies webinars and guest presenters case treatment plans case treatment plan presentations e-portfolio	SA-SD

	web chat and on-line forums/discussions curriculum facilitator wider community of practice and networks	
	Comments	Free text
Mentoring and support	The mentor has been valuable in supporting the graduate's development as a clinician	SA-SD
	The mentor has been valuable in supporting the graduate's development as a dental professional within the community	SA-SD
	Mentoring sessions span the following areas: case studies clinical cases webinars case treatment plans personal development career development	Y/N
	The graduate meets with the mentor in a structured manner for the following number of hours per month <5 / 6-10 / 11-15 / 16-20 / 20+	Choose one selection
	Comments	Free text
Program administration and curriculum delivery	Information about the program has been clear and easy to understand	SA-SD
	Invoicing and financial processes have been clear	SA-SD
	AITEC kept me informed of the graduate placement process	SA-SD
	AITEC has responded to any enquiry promptly	SA-SD
	AITEC's websites and systems are easy to use	SA-SD
	AITEC has addressed any matters in an effective and friendly manner	SA-SD
	AITEC staff have shown respect, courtesy and support	SA-SD
	AITEC provides professional management	SA-SD
	Comments	Free text

Summary	We are enjoying hosting the graduate	SA-SD
	Participation in the program is meeting our expectations	SA-SD
	The VDGYP is enabling an accelerated transition from student to professional clinician	SA-SD
	The graduate is making a real contribution to public oral health in our community	SA-SD
	Based on our VDGYP experiences, the graduate would be well suited for employment within the public health sector next year	SA-SD
	Comments	Free text

Graduate Destination Survey 2016

Plain Language Statement and Consent Form

1. Invitation to participate in the VDGYP Graduate Destination Survey 2016

You are invited to participate in the Voluntary Dental Graduate Year Program (VDGYP) Evaluation, which is being conducted by Australian Continuous Improvement Group (ACIG) on behalf of the Commonwealth Department of Health (Health). The Principal Researcher is Mr Euan Lockie (ACIG), with Associate Researchers Ms Ruth Friedman (ACIG) and Associate Professor Matthew Hopcraft (University of Melbourne).

The VDGYP and this evaluation are funded by the Commonwealth Department of Health (Health), and this evaluation research has been approved by the Health Departmental Ethics Committee.

This Plain Language Statement contains information about the evaluation so you can decide whether or not to take part in it. Feel free to ask questions about any information in the Statement by contacting the persons listed below.

2. Description of the Project

The VDGYP provides dental graduates with a structured program for enhanced practice experience and professional development opportunities, whilst increasing dental workforce and service delivery capacity, particularly in the public sector. The purpose of this project is to evaluate the VDGYP. The purpose of this survey is to research where participants have been employed after the completion of their VDGYP year and their perceptions in retrospect of the VDGYP. You are invited to participate in this survey because you recently participated in the Voluntary Dental Graduate Year Program.

3. Possible Benefits

Possible benefits from this evaluation include putting an evidence-based evaluation of the VDGYP on record for the benefit of those designing future programs.

4. Possible Risks

The research team does not feel that there are significant risks in taking part in this study.

5. Confidentiality and Disclosure of Information

We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. Any information obtained in connection with this project and that might identify you will remain confidential. Direct quotes made in comment fields will be de-identified to ensure that your confidentiality is maintained.

6. Further Information or Any Problems

If you require further information or have any problems concerning this project, you can contact the principal researcher. The researchers responsible for this project are:

…

…

If you have any concerns or complaints on the ethical conduct of this research, please contact: The Secretariat, Departmental Ethics Committee, Department of Health, …

No.	Question	Scale	Skip logic
1.	Do you wish to participate in this survey?	Y/N	If N: End
2.	When did you participate in the VDGYP?	2013/2014/2015	If 2014 go to #6
3.	Which of the following statements best describes your working status in 2014? • Working in dentistry in Australia • Working part of the year in dentistry in Australia • Not working in dentistry in Australia • Other (please specify)	Multiple choice (one only)	-
4.	1. On average over the 2014 calendar year, what proportion of your working time did you spend working in the public sector and/or private and/or other dentistry practice?	Matrix (one choice per line) 0% / 1-20% / 21-40% / 41-60% / 61-80% / 81-99% / 100%	-
5.	What is the postcode for the practice you spent the most hours working at in 2014?	Number	-
6.	Which of the following statements best describes your working status in 2015? • Working in dentistry in Australia • Working part of the year in dentistry in Australia • Not working in dentistry in Australia • Other (please specify)	Multiple choice (one only)	-
7.	On average over the 2015 calendar year, what proportion of your working time did you spend working in the public sector and/or private and/or other dentistry practice?	Matrix (one choice per line) 0% / 1-20% / 21-40% / 41-60% / 61-80% / 81-99% / 100%	-
8.	What is the postcode for the practice you spent the most hours working at in 2015?	Number	-
9.	Which of the following statements best describes your working status over the PAST MONTH?	Multiple choice (one only)	If not working in dentistry in Australia go to #18

No.	Question	Scale	Skip logic
	• Working in dentistry in Australia • Working in dentistry in Australia but currently on leave for 3 months or more • Working in dentistry overseas • Not working in dentistry in Australia • Not working in paid employment		
10.	On average over the past month, how many HOURS per WEEK did you work in dentistry?	Number	-
11.	How many different practice locations do you currently work at?	Number	-
12.	What is the postcode for the practice you spent the most hours working at in the past month?	Number	-
13.	On average over the past MONTH, how many HOURS per WEEK did you work in each sector of dentistry? Private / Public / Other	Number	-
14.	Do you currently work in the public sector?	Y/N	If N go to #16
15.	How long do you intend to continue working in the public sector? • <1 year • 1-2 years • 2-3 years • More than 3 years • For the foreseeable future • Don't know/Not applicable • Other (please specify)	Multiple choice (one only)	-
16.	Do you currently work in a regional, rural or remote area?	Y/N	If N go to #18

No.	Question	Scale	Skip logic
17.	How long do you intend to continue working in a regional, rural or remote area? • <1 year • 1-2 years • 2-3 years • More than 3 years • For the foreseeable future • Don't know/Not applicable • Other (please specify)	Multiple choice (one only)	-
18.	How much did your experience in the VDGYP influence your decision about your choice of workplace after the VDGYP? (a) My experience in the VDGYP influenced my decision about working in the public sector. (b) My experience in the VDGYP influenced my decision about working in a regional, rural or remote area.	Very Negatively Negatively Neither positively nor negatively Positively Very positively	-
19.	How important do you think the following aspects of the VDGYP were in influencing your decision to continue working in the public sector? (a) Clinical mentoring (b) Curriculum program (c) Range of clinical experience (d) Personal mentoring (e) Exposure to dental specialties (f) Working more independently (i.e. in remote settings)	Not at all important Not very important Neutral Important Very important	-
20.	How important do you think the following aspects of the VDGYP were in influencing your decision to continue working in a regional, rural or remote area?	Not at all important Not very important	-

No.	Question	Scale	Skip logic
	(a) Clinical mentoring (b) Curriculum program (c) Range of clinical experience (d) Personal mentoring (e) Exposure to dental specialties (f) Working more independently (i.e. in remote settings)	Neutral Important Very important	
21.	Thinking about the clinical practice that you have engaged in since the VDGYP year, how would you rate the clinical experience gained during the VDGYP year? (a) The range/diversity of clinical experiences offered (b) The depth of practice experienced within a clinical specialty	Not useful at all Not very useful Somewhat useful Quite useful Very useful	-
22.	Overall, how valuable do you think the Voluntary Dental Graduate Year Program was to your development? (a) The VDGYP was important in my development as a clinician (b) The VDGYP helped me to develop leadership skills	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	-

Appendix 3: Interview questions

Interviews were conducted annually with a stratified random sample of the Graduate cohort who had completed the VDGYP in the preceding twelve months, as well as selected Mentors and Service Providers. All potential interviewees are given the Plain Language Statement in advance and asked to complete the Consent Form should they choose to participate.

The interview format was semi-structured, with open questions inviting discursive responses. Interviews are taped, subject to the interviewee's prior consent, for transcription accuracy purposes, and use of the tapes and transcripts are subject to privacy and confidential controls.

Graduates

Introductions

Opening question

How has your graduate year been so far?

Ease of access to VDGYP materials.

What has been your experience accessing the program materials online?

Graduates' views on the quality of the curriculum and training materials.

What are your views on the curriculum content?

How relevant has it been to your professional practice?

What problems have you had using them?

In what ways might the curriculum or the training materials be improved?

Graduates' satisfaction with mentors.

What has your experience been with the mentoring process?

How would you describe your relationship with your mentor?

How useful has your mentor been to you in developing your practice?

Graduates' assessment of the extent to which the Program met their expectations.

Thinking back to the beginning of the year, what were your expectations about the Graduate Year Program?

To what extent has the Program met your expectations?

Mentors and service providers

Introductions

Opening question

How has the VDGYP program been so far for you?

Ease of access to VDGYP materials.

What is your view about the accessibility of the program materials?

Mentor or provider views on the quality of curriculum and training.

What are your views on the curriculum content?

How relevant has it been to the professional practice of your VDGYP graduate?

Have your non-VDGYP graduates accessed them? If so, what use have they mad of them?

What problems have graduates had using the curriculum materials?

In what ways might the curriculum or the training materials be improved?

Mentor or provider views on comparisons between VDGYP and non-VDGYP first-year graduates' performance.

If you have other new graduates working alongside VDGYP participants, do you see any differences in their professional development?

To what extent would you attribute the differences to the VDGYP program?

Mentor or provider satisfaction with VDGYP Graduates.

What has your experience been with the mentoring process?

How would you describe your relationship with your mentee?

How useful has the mentoring process been to you and your mentee?

Mentors' and service providers' assessment of the extent to which the VDGYP met their expectations.

Thinking back to the beginning of the year, what were your expectations about the Graduate Year Program?

To what extent has the Program met your expectations?

Appendix 4: Case studies

Introduction and Background

The VDGYP

The Voluntary Dental Graduate Year Program (VDGYP) was a Commonwealth funded program aimed at improving the dental workforce supply to the public sector in general, with an emphasis on communities and special sectors in need, rural and Aboriginal and Torres Strait Islander communities and aged care settings. The program featured the placement of fifty dental graduates nationally each year commencing in 2013 and running until January 2016. Graduates were supported by a mentor and a continuing education curriculum during the graduate year, as they undertook one or several clinical placements. Their salaries were paid by the program and infrastructure grants were also made available to host service providers

Case study approach

As part of the program evaluation, seven public dental services that received infrastructure funding and hosted graduates under the VDGYP have been the subject of case study examination by the evaluators, ACIG. The evaluators visited each of the seven services and interviewed graduates, mentors and service provider representatives to gain their views on the conduct and outcomes of the program. The purpose of the case studies is to describe how the program unfolded for each service and provide more qualitative detail in support of the overall program evaluation.

Armajun Aboriginal Health Service and the Poche Centre for Indigenous Health

The Services

Armajun Aboriginal Health Service

Armajun Aboriginal Health Service provides health services to the Indigenous community in the rural area of Inverell New South Wales. The Dental Service was established in 2014, with one senior dentist and a graduate position which was funded through the VDGYP. Indigenous dental assistants have been trained with the support of the Poche Centre (see below).

Armajun Aboriginal Health Service provides the following dental services to Indigenous people:

- Priority Care: Treatment for urgent dental needs.
- General Care: Routine treatment which includes check-ups, fillings, extractions and other dental services.

Dental services for adults are provided full time from the Armajun Health Service main location in Inverell and two days a week from an outreach clinic established in Hunter New England Health Service, using portable equipment.

Poche Centre for Indigenous Health

The Poche Centre provides support and coordination of other Aboriginal Health Services across NSW. A major objective of the Poche program is community capacity building in the dental services it directly delivers to Indigenous people in the Inverell region. The clinicians are sourced from Sydney University, prosthetists are volunteers from Sydney, but dental assistants have been sourced from the local Indigenous community and supported in their training by scholarships from Poche. The objective of this program is to build a sustainable level of skills in the community and gradually withdraw external services. Direct services currently provided are:

- Mobile dental services for general and emergency dentistry.
- Mobile denture services: Provision of full and partial dentures and other related services.
- Children's dental services located at Boggabilla Central School

To be eligible for either service, patients must be able to prove they are of Indigenous descent.

Context of the services

The Indigenous population in the area was described as 'mobile' ie they often do not have a fixed address, making it extremely challenging for them to practice good preventive health activities. Fresh food is expensive and hard to reach, with some towns only serviced by convenience stores, and significant travel required to reach a supermarket. School children have been reported as arriving at school drinking cans of sugar sweetened drinks, and often do not own their own toothbrushes, leading to significant dental issues at an early age.

Before the VDGYP, Armajun Health Service did not provide a dental service. The region relied on private dental services and some towns did not even have private dental services. There

was a history of difficulty in recruiting to dental positions, irrespective of whether they were private or public, with one private position in Tamworth mentioned as being vacant for 2-3 years.

VDGYP's Contribution

Armajun based its VDGYP graduates in its main health service in Inverell, but the graduates also travelled to deliver the outreach service across the region.

Infrastructure

The VDGYP provided infrastructure grant funding to Armajun in 2015 and to the Poche centre in 2014. The grants were used to purchase and install the following:

Armajun

- 4 wheel drive vehicle.
- Portable scaler.
- Portable root canal endodontic equipment.
- Portable X-Ray machine.
- Laptop computer.

Poche

- A mobile dental van.
- A mobile dental laboratory, equipped with 360 degree, digital X-Ray machine. (Van funded by OHTGYP, equipment funded by VDGYP)

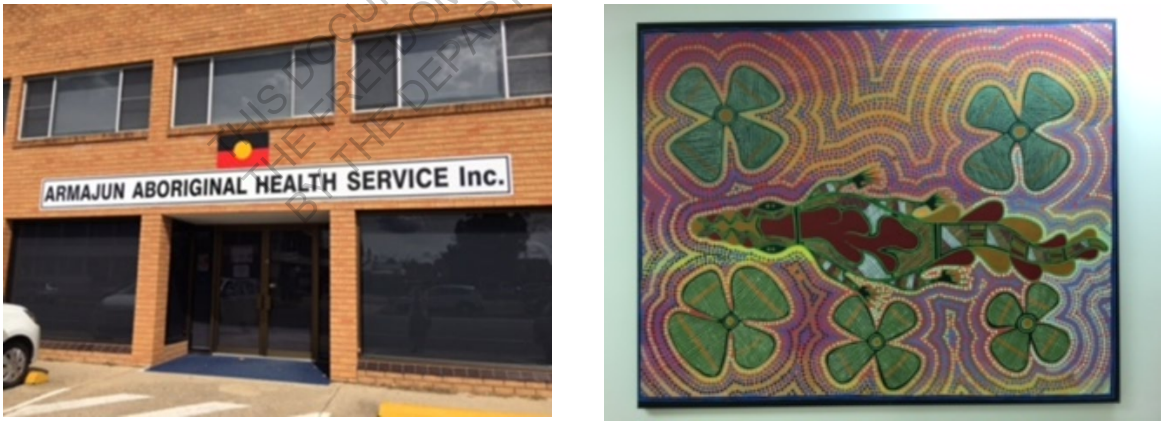


Figure 1: Armajun Aboriginal Health Service

Figure 2: 4 Wheel drive car with mobile dental equipment

Figure 3: Mouthguard equipment

Figure 4: Clinic at Boggabilla Central School (External)

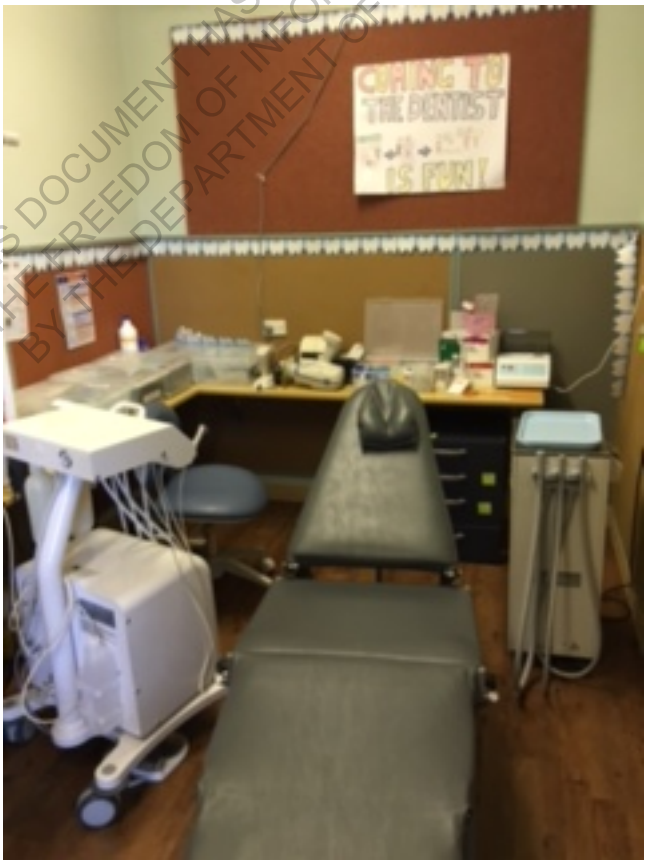


Figure 5: Clinic at Boggabilla Central School (Internal)

Figure 6: Mobile dental van

Figure 7: Logo acknowledgement on mobile van

Figure 8: Inside the mobile van

Figure 9: Mobile denture van-x-ray machine section

Figure 10: Mobile denture van – denture laboratory

Graduate placements

Armajun hosted two VDGYP graduates, one in each year of the program from 2014. Poche also hosted graduates, but this case study will focus on the Armajun service and its impact on the Inverell region (and the support provided by Poche).

Outcomes

Effect on service delivery

The purchase of the 4-wheel drive vehicle and the portable equipment has meant that the service can now provide an outreach service across the region. Having the graduate in place also provides the extra staff to enable one dentist to leave the main surgery.

The portable equipment has also been used several times when fixed equipment has broken down. This is a significant issue as repairs can take weeks in a regional location, meaning that appointments would have to be cancelled for all of this time. Having the backup of the portable equipment has been crucial in keeping the service operating on a number of occasions.

The mobile denture van which was built and equipped with funding from the VDGYP and OHTGYP programs, has made a huge impact on the community. Normally, it takes three to four months for dentures to be fitted, made and sent back to the area. Since the purchase of the van, patients can have their new dentures within four days. Patients are required to come back during the four-day period to have fittings. They do so because the service is available locally. There has been tremendous social impact from this service, enabling people to eat more effectively, and also increasing the confidence of individual patients. The denture van also has a 360^{O} X-ray machine, which enables diagnosis to be made on the spot rather than sending the patients to central areas for x-rays.

The Poche Centre also runs an oral health clinic in the local Indigenous primary school in Boggabilla. This centre operates for eight days per month and is kept busy treating only seventy children due to the significant oral health issues they face. This is a population that does not own toothbrushes and does not have a regular home. The Poche has just begun a program of tooth brushing at school, after distributing toothbrushes to all children.

The graduates

We did not interview the graduate on this visit as they had already completed their placement with the service. However, we were informed by the mentor that the VDGYP graduate from the previous year had taken up a position in a private practice in a nearby town. This position had been vacant for 2-3 years. The VDGYP graduate from 2015 has also stayed in the region, taking up a position in public health at Tamworth.

> *'that's a success story for the country'*
>
> *'this position in the surgery was available for two, three years and it's been filled now, I suppose because people are familiar with the town … they realise it's not such a bad place to be'*

'If they come out and actually try it, it's not as bad. You need to come out and get into the community and realise'.

Mentoring

The mentoring at this service was shared across the two senior dentists. One focussed on provision of clinical support while the other focussed on the curriculum and case study discussions. There was some apprehension at first about the potential for increased paperwork, but this was replaced by a deep appreciation for the experience.

'I found it very enjoyable, refreshing in a sense because you have to divulge everything that you know and you know more than you think'

'I was nervous about the paperwork'

'For me it was very useful. It makes you put things systematically through your mind again which is good'

The mentor we interviewed expressed concern with the lack of preparation of new graduates for the realities of dental practice. He believed that an internship year based on the VDGYP program is essential in order to allow dentists to practice safely.

'I was actually disappointed by the lack of experience the dentists had. I was surprised that they were so in need of support, to be quite honest'

'I think that they are nearly desperate to be mentored'

'They need a clinical year, seriously'.

Service provider perspective

The service provider believed that the VDGYP was an excellent program and expressed disappointment that it was ending. She believed that in future, a smaller, more focussed program could be delivered, which focusses on Indigenous communities.

She was also very supportive of the mentoring aspects of the program, which she believed were more important and more valued than the bonus incentive payment.

'that's worth a lot to them, the mentoring'.

The service provider also suggested that Oral Health Therapists are perhaps even more vital than dentists, due to their work on prevention of disease.

Culture/practice changes

It is difficult to comment on change, because the dental service was established at the same time as VDGYP. However, some activities were clearly established through VDGYP, such as the partnerships with other clinics to enable consultation with senior dentists if no local dentist is available.

'when you're in the clinic, when you're not in the city you need that additional help. …There's two private dentists available in Goondiwindi plus a public clinic, and especially in the public clinic, the dentists there always help us. Our past dentist, our

VDGYP who stayed on for a second year as well, she had a very good relationship with the public dentists there so she would sometimes go and watch them'.

Future plans

Currently, Armajun participates in the tele-dentistry clinics hosted by the Poche Centre to link oral health staff across the region. At these meetings people present and conduct case discussions. It is envisaged that these clinics will continue beyond the life of the VDGYP as they have been seen to be significant in providing support and development for all oral health staff.

The service will also continue to develop and build its partnerships with other services in the region to ensure a network of cooperative supports for its new graduates.

The portable equipment will continue to be useful to the community, and the mobile denture van will also be a sustainable service beyond the life of the program.

At this stage, Armajun will not continue funding a second graduate position into the future.

Conclusion

Overall, the VDGYP has had a significant impact on the Indigenous communities in the Inverell region. The most significant impacts have been:

- Portable equipment, which has enabled the Armajun Service to conduct outreach services and to provide backup equipment so that services can continue if there is any malfunctioning equipment.
- Mobile denture van, which has enabled the Poche Centre to provide outreach denture services to people who would otherwise never be able to access these services.

The case study demonstrates the value in new graduates having some country experience. The graduates in this service have stayed in the region. This could possibly be incentivised in future through extra Continuing Professional Development (CPD) points, or a regional placement could be introduced as a compulsory requirement for registration.

The case study also shows that services can greatly benefit from building relationships across the region, with people in different practices supporting one another.

Acknowledgements

ACIG would like to thank Armajun's managers, staff and VDGYP participants for generously allowing us their time for interviews and site visits. In particular, ACIG would like to express our thanks to Poche Centre for providing a staff member to guide us around the region.

Barwon Health

Barwon Health Dental Service

Barwon Health provides the following dental services:

- Priority Care: Treatment for urgent dental needs.
- General Care: Routine treatment which includes check-ups, fillings, extractions and other dental services.

Context of the services

Barwon Health is located in Geelong and services the low SES population in the Barwon region along the Southern coast of Victoria. The population is not well serviced with private dental clinics, and where there are private clinics, their patient load is already full. People often need to drive at least an hour to reach the service, meaning a day off work or the closure of their business for the day.

> *'The further you go West, the worse the teeth will be.' (Service provider)*

Before the VDGYP, Barwon Health did not provide an outreach dental service. This meant that many people were unable to receive dental care, including young children and people in aged care facilities.

VDGYP's Contribution

Infrastructure

The VDGYP provided infrastructure grant funding to Barwon in 2013. The grant was used to purchase and install the mobile dental van and some mobile equipment including:

- Digital x-ray equipment
- Digital camera

Figure 23: Mobile dental van

Figure 24: Mobile dental van in action (with service staff)

Figure 25: Interior of mobile dental van

Graduate placements

The VDGYP provided funding for three graduates over the three years of the program. In the second year, the graduate placement was only for the first six months of the year, after which the graduate rotated to another service. Graduates spent part of their time in the outreach service and part in fixed location services in Barwon Health.

Outcomes

Effect on service delivery

The purchase of the mobile dental van has been revolutionary in terms of the expansion of the Barwon dental service. The service has allocated the funding saved by having a graduate funded position, towards staff for the van. The van now services targeted areas and provided dental services for an extra 5,000 to 6,500 kindergarten children three times per year.

The health impact of this is significant, because these check-ups have revealed cavities that are still forming and have allowed for prevention activities to take place. The service provider explained that he would not have been able to obtain initial funding for this outreach service, because its impact and implementation efficiency had not been tested.

> *'As far as what it's done for us, it's been enormous. Without it, we would never have had an outreach program.'*

> *'And the cost saving, if you do an examination on a child here (in the clinic) it takes up half an hour, whereas if we go to them, we do it in 3-6 minutes. You get them all lined up and ready to go.'*

The outreach program has also significantly raised the community profile of the service.

> *'… breaking down those barriers, the children are like 'the dentist is back!' How many children are excited that the dentist is back? So it's done a lot for the community, it's raised our profile.'*

> *'So we opened it up because a lot of these communities have to shut their business for the day to go somewhere. First year was a little bit slow, we're now getting the sense that this year they're blowing us out of the water in all levels but I think it's because they know we're here for the long-term… all of a sudden we've got their trust and their confidence, and they're really knocking on our door.'*

An unanticipated consequence of the program is the research publications that have come from the outreach program. The program has been evaluated and an article on the Kinder White Smiles has been published. Presentations have been made at conferences and the program has won Research of the Year awards two years running in Geelong. This has raised the reputation of the service.

> *'We're showing that we're holding or reversing decay by finding them before they know…. Families don't know until the breakdown occurs… we can see its happening and we can do something about it. And at the same time, the community knows something about the dental services.'*

The service has been able to leverage its research success to obtain funding for an ethics submission writer, and a part-time statistician to support the research team.

> *'I would never have been able to get that sort of support through'*

Another part of the outreach program has been the visits to aged care facilities. This proved challenging due to reluctance from aged care providers, but they are now meeting with several services and expanding this service. The portable equipment means they can visit patients who are not able to leave their beds.

The graduates

We did not interview the graduate at this visit, however the perspective of the mentor/service provider was given. VDGYP graduates were given more responsibility and a broader range of clinical experience than they might otherwise have been given because the mentor was always looking for practical examples of the issues being studied in the case studies. The curriculum focussed everyone's attention on certain areas of practice.

Mentoring

The structured nature of the program made a significant difference to the experience for graduates. In the manager's opinion, the program turned out more skilled and confident dentists. After the first year, the service provided mentoring for all graduates, both VDGYP and non-VDGYP.

> *'Even the fact that it focused the attention on senior dentists that had to then step up and be able to run two- to three-hour supervision meetings, not just a three-quarter of an hour clinical supervision where they talk a lot of rubbish – so it made them better senior clinicians, as far as leadership and mentoring goes'*

Service provider perspective

The service provider was a strong advocate for the VDGYP and stated that it had made a huge difference to his service. He was greatly disappointed that it will cease from 2016.

He has not been impressed by the quality of dental graduates in recent years, but the graduates that were selected into the VDGYP were of higher quality. The service did have difficulties recruiting graduates in previous years, but he felt that from this point of view the VDGYP was about five years too late, because these days he 'gets inundated' even for six month positions.

Culture/practice changes

The service introduced structured mentoring for the first time. The service provider believed that there was a significant difference between VDGYP and non-VDGYP graduates in terms of confidence, and that this was due to the structured mentoring and the curriculum.

Future plans

The service provider has obtained a commitment from management that the outreach program will continue as a priority program for the service no matter what happens with the funding situation. If there are staffing shortages, they will cut back the clinical services at the health service rather than lose staff off the van. This is because the outreach program provides such a strong profile for the service amongst the community.

Conclusion

Overall, the VDGYP has had a significant impact on the Barwon community. The most significant impacts have been:

- Mobile dental van, which has enabled the service to provide outreach dental services to between 5,000 to 6,500 extra kindergarten children who would otherwise not be able to access these services.

- Portable equipment, which has enabled the Service to conduct outreach services at the bedside of elderly people in aged care facilities.

Acknowledgements

ACIG would like to thank Barwon Health's managers and staff for generously allowing us their time for interviews and site visits.

Mackay Hospital Health Service

The Service

Location: Mackay Hospital

Services offered:

- Priority Care: Treatment for urgent dental needs.
- General Care: Routine treatment which includes check-ups, fillings, extractions and other dental services.

Context of the service

Mackay is a regional town with a population heavily reliant on the mining sector for employment. With the recent closure of several large mines, unemployment has significantly increased and consequently, the number of people eligible for the public dental service has increased.

The remoteness of Mackay means that affordable fresh food is not readily available and fast food options are often a popular and cheap choice for people with low incomes. Obesity is a significant problem in this community.

Ten years ago, there were issues in recruiting dentists of any level of experience, however, more recently, there has been little problem recruiting graduate dentists.

Before the VDGYP, Mackay dental service employed three graduates and provided training and support for their professional development.

VDGYP's Contribution

Infrastructure

The VDGYP provided infrastructure grant funding to Mackay in 2013. The grants were used to purchase and install the following:

- Removable dental chair.
- Electronic ramp for wheelchair access.
- Bariatric dental chair.
- Digital x-ray equipment.

Figure 26: Electronic ramp for wheelchair access

Figure 27: Bariatric chair

Figure 28: Laboratory equipment

Graduate placements

VDGYP provided funding for one graduate per year over the life of the program, i.e. a total of three graduates.

Outcomes

Effect on service delivery

- Increased throughput of patients (small as this is a large service)
- Increased ability to service severely obese and disabled patients (did not increase numbers but new equipment meant that OHS issues were minimised for dentists and patients were more confident and comfortable)

The graduates

We interviewed one graduate during our visit who was mid-way through the VDGYP year.

Themes were:

- Very positive experience of VDGYP
- Mentoring provided a level of comfort and support that gave her confidence in clinical situations.
- Program introduced a wider subset of patients than would otherwise have been seen
- Saw many people in need, with chronic conditions, from low SES backgrounds which has been clinically interesting but also rewarding.

'Yesterday I saw a lady… who, for the past two years she's had no teeth, no dentures, so how do you eat with that? How do you survive? ….. It really affects her self-esteem as well, imagine going around with no teeth…. The fact that we can provide a service to them where we can give full dentures; that will impact on their lives.'

- The graduate spoke of the limited job opportunities that are now available compared to previous years.
- Living in a regional city for the first time has changed her perception positively towards regional life and has influenced her choice of future location.

'Because I've now had that exposure to what working in the public sector is like, I am more inclined to stay in the public sector as well, or maybe do part-time public part-time private.'

Mentoring

The mentoring role has been highly valued by this service. So much so, that the service has decided to continue to provide formal mentoring beyond the life of the program. The service provider spoke of the difference between the VDGYP and non-VDGYP graduates in their level of confidence, saying she was sometimes nervous about sending people out to practice where they do not have mentors.

The graduate found the mentoring extremely helpful in developing her confidence as a clinician. The formal sessions were used by both the VDGYP and non VDGYP graduates, as well as students on placement at the service, to discuss the cases and any work the students were doing at the time. The graduate felt she had greatly benefitted from the mentor's practical experience.

Service provider perspective

The service provider greatly valued the program. The main points made were as follows:

- Learning tools such as the curriculum and webinars were greatly valued
- If possible it would be very useful to retain the learning materials so that services could keep using them in ongoing mentoring programs.

- Graduates who are originally from rural or regional home towns are more likely to stay than those from the city. This has been the experience with students from James Cook University.
- There were issues with implementing all the infrastructure purchases, because the Queensland Health IT system did not have Windows 7 until recently and this made it impossible to install the digital x-ray equipment. The service therefore delayed purchasing it so that the warranty would not expire while waiting for the IT to be updated.

Culture/practice changes

- Provision of formal mentoring sessions for non-VDGYP graduates
- Incorporation of the learning tools for all graduates and dental students

'I think a lot of places where they haven't been so committed to be a training hospital or a training institution, the VDGYP has really brought that training culture of mentoring into the system, which I think is fantastic'.

Future plans

All those interviewed for this case study expressed disappointment that the VDGYP would not continue beyond January 2016.

The service has sourced funding to continue the graduate position, which means there will be four graduates in the service for this financial year. There is uncertainty about the extra staffing after this date.

The VDGYP mentor will continue in the role as a senior clinician responsible for student and graduate liaison and professional development. The aim of this program is to provide the graduates with a source of support and backup in the practical and clinical application of the evidence. The professional development could be enhanced if the VDGYP curriculum was to be made available for further use.

Conclusion

Overall, the impact of the VDGYP on the Mackay service has been highly positive, not just through the provision of enhanced infrastructure and the funding of one extra positions for three years, but also through the introduction of a formal mentoring program. One VDGYP graduate has partnered with a local and is now working elsewhere in the region in the public sector.

Acknowledgements

ACIG would like to thank the Mackay's managers, staff and VDGYP participant for generously allowing us their time for interviews and site visits.

Oral Health Centre of Western Australia

The Service

The Oral Health Centre of Western Australia (OHCWA) is located within the University of Western Australia's School of Dentistry and is a part of the Western Australia public dental system. The overall government responsibility for public dental services is held by Dental Health Services Western Australia (DHSWA).

Dental services are provided to public dental patients, who are subject to an eligibility test, as well as to private patients through private practice arrangements entered into with some of the Centre's general and specialist dentists.

Eligible adult patients are treated in General Dental Clinics throughout the metropolitan area and in rural and remote Western Australia. DHSWA has also partnered with some volunteer and non-government organisations to provide dental care to rural and remote communities, such as the Kimberley Dental Team, Royal Flying Doctor Service and Kimberley Aboriginal Medical Services Council. There are twenty-one general dental services, seven combined school and general dental services, eleven special dental services (including aged care, domiciliary, prisons, hospitals), 106 fixed school dental services and forty-one mobile school dental therapy vans. Dental Health Services provides free general dental care to approximately 245,000 school children aged between five and sixteen enrolled in the School Dental Service each year.

DHSWA provides facilities and other support for student dentists and oral health professionals to train during their university courses. Students from The University of Western Australia, Curtin University and the Central Institute of Technology are supported with their training to be dentists, oral health therapists, dental technicians and dental clinic assistants.

VDGYP's Contribution to OHCWA

OHCWA based their VDGYP graduates in Nedlands, Perth, with rotations to regional and remote WA locations (DHSWA clinics) during the year.

Infrastructure

The VDGYP provided infrastructure grant funding in 2013. The grant was used to purchase and install the following:

- Four additional surgeries, with dental chairs and ancillary equipment, at the Nedlands clinic.
- Digital radiography for the four new chairs and digital records at the Nedlands clinic.
- Four new mobile dental vans for DHSWA's outreach service.

Figure 29: New surgery

Figure 30: New surgery

Figure 31: Digital imaging reader

Graduate placements

OHCWA region hosted six VDGYP graduates in 2013, five in 2014 and four in 2015. Graduates did eight week rotations in rural and remote areas each year.

In 2013, three graduates rotated through placements in the Kimberley (Kununurra), two at Bunbury and one at Derby. The latter graduate spent half their time at a remote aboriginal settlement.

Similar rotations were conducted in 2014 and 2015 with graduates.

Outcomes

Effect on service delivery

The additional services enabled by the graduates and the additional infrastructure enabled OHCWA to reduce the number of patients on the general waiting lists and also the time that patients had to wait for an appointment. In combination, these service enhancements meant that patients received more timely treatment, reducing the likelihood of significant deterioration in their condition that would result in the need for higher level interventions and potentially worse patient outcomes overall.

The VDGYP graduate placements rotations enabled additional services at rural and remote locations equivalent to one member of full-time staff (one FTE) each year of the program (five graduates, each spending 20% of their VDGYP year in rural/remote settings).

The infrastructure investment at OHCWA also enabled installation of new chairs with load capacities up to 180 kilograms, compared to the previously existing 120-kilogram capacity. The new infrastructure also enabled two clinicians to work together on surgical extractions, by providing more space around the chairs.

Digital radiography equipment installed in the four new surgeries at OHCWA enabled the service to enhance its use of technology in patient care. This investment was important in playing a 'spearhead' role in the full digitisation of records for the service.

The graduates

We interviewed three graduates during our visit who were mid-way through their graduate year placement. The main themes to emerge were as follows:

- The graduates thought the curriculum was quite beneficial to their development throughout the year.

'We often find we do a case study or something comes up in a webinar, and in the following fortnight it'll happen to one of us, and you might not have done the procedure yourself, but you've done a hypothetical on it, or you've discussed the case, or you've heard specialists speak about it on webinars, so you feel more confident than dealing with a brand new situation.'

- Mentoring was valued very highly, a highlight of the program.

'I think it's been a great stepping stone going from university and into this. Whilst you do have the support network there, you can practice independently, in that you don't feel as though you have someone looking over your shoulder all the time. You are treated as an equal, I feel, but because you have that supportive network, when you want to get advice, that's there, readily available, you just have to ask for it. So that's been really good. Also a constant supply of patients is good for clinical development.'

- Overall, the graduates were highly appreciative of the VDGYP year.

'I found the program really great, it consolidates everything from dental school, because we're now doing these procedures independently but multiple times, and the availability of specialists as well.'

Mentoring

OHCWA had three mentors active in supporting the program. Group mentoring sessions have included teleconferencing so that graduates in remote locations could join in (see below).

Figure 32: Teleconferenced mentoring session

Service provider perspective

Although there were issues raised concerning a few inaccuracies in curriculum materials, some logistical problems caused by time differences between WA and the Eastern states and early issues with online program delivery, OHCWA representatives expressed very strong support for the program overall.

The service providers and mentors commented positively on the quality of the VDGYP graduates.

> *'…excellent standard. I'd say four out of five rank in the top ten percent of all the possible standard dentist grads. Very high standard."*

> *'I believe they are the cream because first of all they're well motivated and well educated, but also they're exposed to a broader range of clinical problems.'*

Culture/practice changes

The VDGYP graduates were seen as highly skilled and particularly adept with new technology, especially digital photography and imaging, helping lead the way in technology change for the OHCWA.

> *'…the staff dental pool has been relatively stable, so it's really good to get the "young guns" in there, don't underestimate the issue of how they helped train everybody else with the digital radiography"*

Future plans

Depending on OHCWA's ability to source funding, there is a desire to continue a graduate program in some form, possibly with fewer graduates but using the experience gained with the mentoring approach during the three years of the program.

Conclusion

Overall, the impact of the VDGYP on the OHCWA and DHSWA services has been positive, with the installation of four new clinic rooms that will continue in use indefinitely, and a possibility that several new positions may be created for postgraduate clinicians.

> *'From my point of view, it's interesting as a private dentist, even though a teacher in the public system, my perspective is that it [VDGYP] has met and surpassed its overall objectives. In terms of what the government would want, which is better care, and what we would want in the community, which is better dentists. So to me, [it was] a great success even though there are always things that could be improved.'*

A mechanism should be established for issues about the technical curriculum to be channelled to the curriculum designers for response. We note that AITEC, while responsible for providing online access to the curriculum materials, was not responsible for the design of the curriculum or development of the primary teaching materials.

Acknowledgements

ACIG would like to thank OHCWA and DHSWA managers, staff and VDGYP participants for generously allowing us their time for interviews and site visits.

Oral Health Services Tasmania

The Service

Oral Health Services Tasmania (OHST) is a service within the Tasmanian Department of Health and Human Services.

Oral Health Services Tasmania provides the following dental services to eligible Tasmanians:

- Priority Care: Treatment for urgent dental needs.
- General Care: Routine treatment which includes check-ups, fillings, extractions and other dental services.
- Denture Services: Provision of full and partial dentures and other related services.

Dental services for adults are provided from the five major dental centres in Burnie, Devonport, Launceston, Clarence and Hobart.

Dental services for children and adolescents are provided from the five major centres plus additional sites in urban and rural settings across the State.

Oral Health Services Tasmania also provides dental services to people who, due to various health conditions, require dental treatment within a hospital setting. These services are provided in Special Care Dental Units located at the Royal Hobart Hospital and the North West Regional Hospital.

There are also two fully equipped mobile dental units that visit sites around Tasmania.

To be eligible, patients must have a Health Care Card or Pensioner Concession Card.

Context of the service

Before the VDGYP, OHST struggled to attract dentists for employment in the North West Tasmania region. Service managers informed us that over a period of years, positions were often hard to fill. The service had some overseas dentists for a period under the public sector dental workforce scheme. The service had begun a mentoring approach but there was no formal graduate program as such.

North West Tasmania is also not well serviced by private dental services, and much of the population relies on the public dental service. Devonport and Burnie act as regional service hubs for the surrounding rural region.

Prior to 2013, waiting lists for OHST North West were quite long and the service struggled to fulfil even emergency needs within a reasonable waiting time.

VDGYP's Contribution to OHST

OHST based their VDGYP graduates in the North West Tasmania region, centred on Devonport.

Infrastructure

The VDGYP provided infrastructure grant funding in 2013. The grant was used to purchase and install the following:

- Two additional surgeries, with dental chairs and ancillary equipment.
- Digital imaging readers.
- Instruments for the Special Care Dental Unit.

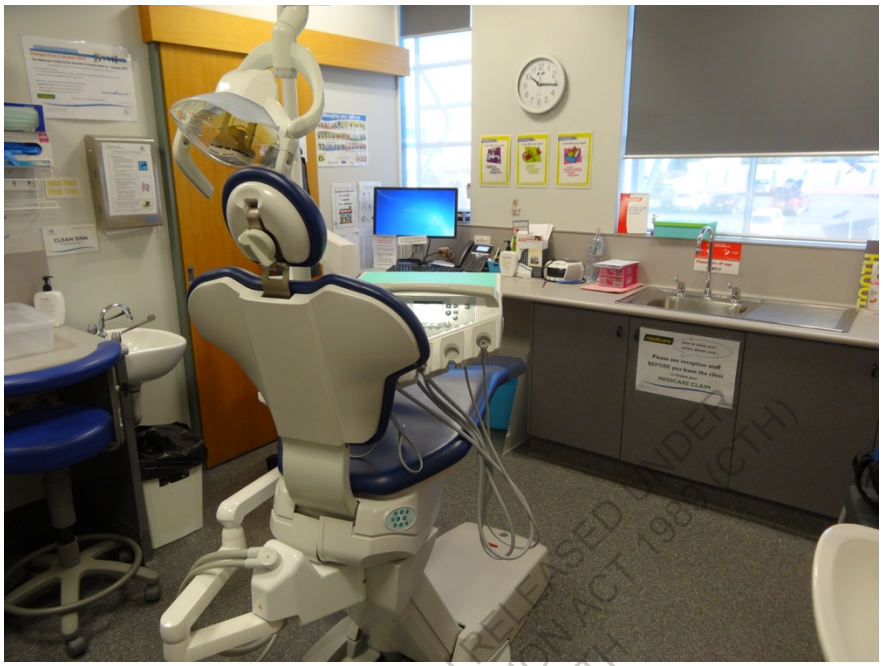


Figure 33: New surgery

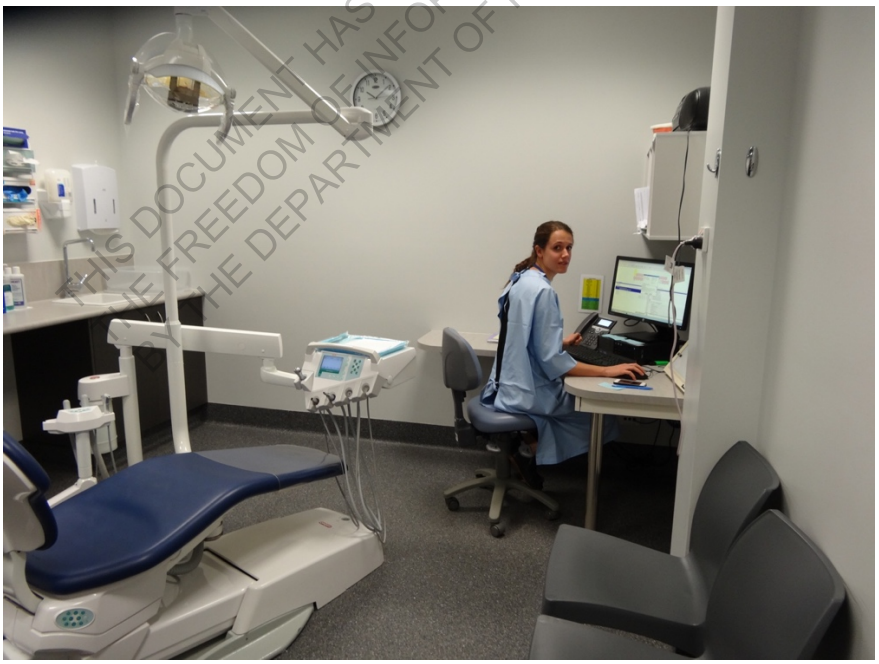


Figure 34: New surgery

At the same time, OHST obtained additional funding under the National Partnership Agreement that enabled them to upgrade the reception and waiting area, upgrade the Steribay, and to install a new steriliser.

Figure 35:Digital imaging reader

Graduate placements

OHST North West region hosted six VDGYP graduates, two in each year of the program – 2013, 2014 and 2015. A VDGYP participant who had their VDGYP year interstate was also hired into a permanent position in OHST in the following year.

Outcomes

Effect on service delivery

The combined effect of the infrastructure changes was to increase OHST's service capacity by 20% (from ten chairs to twelve) and to enable a higher standard of patient service. With two additional positions filled by the VDGYP graduates, each working at 0.8 EFT each, more services were able to be delivered.

Waiting lists were reduced, with particular impact on the experience for emergency patients.

> *'Before, all we were managing to do was to accept people who had emergencies, of course there was a triage system… and we couldn't manage them. They had to go on a waiting list which was not what you should expect. You'd expect you could get them in, in a timely manner, and that wasn't happening. And then gradually with the help of the voluntary program grads, we were able to start taking people from the waiting list which we hadn't been able to do ever in the North West, so there was definitely a decrease in waiting lists and an increase in being able to see people with emergencies more or less immediately.' (Service provider)*

As well as the improved technology enabled by the infrastructure grant (in conjunction with funding from the NPA), the influx of new graduates directly influenced the ability of the service to make innovations. An example of this was in the use of the 'wand', a computerised anaesthesia system that one of the graduates played an important role in implementing.

The graduates

We interviewed three graduates during our visit: two graduates who were mid-way through their graduate year placement and one who had participated in the VDGYP the previous year, in a different state.

All the graduates spoke very positively about their VDGYP experience. Common themes were that the variety in the curriculum and in the practice experience was very beneficial for their professional development. Several commented that their experience in the public sector was more rewarding, and had developed their skills better, compared to their peers in private practice, who told them they were getting exposure to a much more limited range of dental practice.

The graduates also strongly appreciated the efforts of their clinical supervisors and their mentor.

> *'My SDO [Senior Dental Officer] is great, and is always like 'my door is always open to you, text me, call anytime – even outside of work hours... And honestly I'm surprised at how much they really care about you as a person… they treat you with so much respect, and if I had any clinical problems I could email them immediately and I get a response quickly. I feel so comfortable coming to them with anything clinical.' (Graduate)*

Mentoring

The OHST mentor for the graduates was also the Program Facilitator for the overall VDGYP. He was said by all the graduates to be highly dedicated to the program and to supporting the graduates' professional experience and helping them adjust on a personal level to their new circumstances in a rural posting.

The OHST mentor has been intimately involved in multiple aspects of the VDGYP throughout its three years and he made a number of observations about what worked well and what might be improved. He had also been involved in the past with the Dental Foundation Training program in the UK, which is a compulsory for new dental graduates seeking NHS registration there. Unlike the UK, or in some other Australian health professions, there is no universal or sector-wide approach to a graduate professional year for new graduate dentists. There are a number of localised graduate programs within state government services, but the VDGYP was the first to use a uniform curriculum-based professional development program across the nation.

In his view, the monitoring of progress through a formal study program and set curriculum is highly valuable. It ensures consistency and that graduates work all the way through the professional development program. Furthermore, participation in curriculum activities widens the graduates' networks which also has indirect benefits for the dental service.

Service provider perspective

Graduates also had rotations at the Special Care Dental Unit (SCDU) at the North-West Regional Hospital in Burnie. The SCDU provides medically necessary dental services for people who have a medical condition or are undergoing medical treatment that impacts on their oral health. The Unit also provides a dental service for people who, due to various health conditions, require routine dental treatment within a hospital setting. The boosted staffing

enabled by the graduate placements meant that the service was better able to support the SCDU, as well as assisting in general anaesthetic sessions for oral surgery.

An outcome that might not have been anticipated prior to the program was that the reputation of OHST had grown, according to the service provider managers. This developed through networking and word of mouth between dentists and within OHST across the state.

Culture/practice changes

A benefit noted by the service provider managers that they put down to the VDGYP was the enhancement of teamwork within the service. This was due in part to the close contact between the graduates and their clinical supervisors and mentor, and in part to their rotation between locations and technical areas, and participation in case presentations.

The VDGYP graduates also engaged enthusiastically in the delivery of new techniques such as the 'wand', a computer-delivered anaesthesia system that is used in particular to reduce patient anxiety, especially for paediatric patients. The graduate developed methods using conscious sedation and pain control for anxious patients, particularly children.

Future plans

OHST managers want to continue the graduate programs, as they have seen significant benefits in patient care, reduction of waiting lists, improved teamwork and revitalisation of the mainstream service provision.

OHST are utilising funds from the NPA to continue a form of graduate year program for 2016. OHST has created two graduate Dental Officer positions and two Oral Health Therapist graduate positions, with the intention of conducting a professional year program annually, rotating new graduates through the service.

The VDGYP mentor will continue in his role as a senior clinician responsible for student and graduate liaison and professional development. This arrangement is aimed at strategically maintaining and strengthening OHST's recruitment and retention of dentists and oral health therapists, and includes undergraduate placements from mainland universities, as well as new graduate positions.

OHST intends to implement a modified graduate program that continues with the elements of the VDGYP that they are able to, such as the mentoring program, case presentations and study leave. Should the formal curriculum from the VDGYP be made available once more, the service provider and mentor feel that they would be able to provide an even better graduate year professional development experience.

Conclusion

Overall, the impact of the VDGYP on the OHST North West region service has been highly positive, not just through the provision of enhanced infrastructure and the funding of two extra positions for three years, but also through the reinvigoration and stimulation of teamwork that has flowed from the presence of the graduates.

Lessons for future programs included that while mentoring and clinical supervision are very important, so too is the availability of a meaningful and rigorous standard curriculum, supported by a formal timetable that is monitored throughout the year to ensure everyone completes the program.

Acknowledgements

ACIG would like to thank the OHST's managers, staff and VDGYP participants for generously allowing us their time for interviews and site visits.

Tharawal Aboriginal Corporation

The Service

Location is in the Tharawal Medical Centre, Campbelltown, NSW.

Services offered

- General dental services
- Emergency dental services

To be eligible for the service, patients must be able to confirm they are of Indigenous descent.

Context of the service

Tharawal Aboriginal Corporation is located in Campbelltown, an outer suburb of Sydney with a low SES and Indigenous population. The service now provides dental services for a population of over 3,000 patients across the region, since the closure of services in nearby suburbs. One of the features of Tharawal is that the reception staff and dental assistants are Indigenous. Training of dental assistants has been made possible through provision of scholarships from the Poche Centre for Indigenous Health.

Before the VDGYP the service was located in an old back building on the site of the medical service. It had one dental chair, with old equipment which appeared dirty and did not work well. The waiting list for services was six to eight weeks, and there were between three and four emergency presentations per day. There was no reception service or office, so it was not possible to confirm appointments, leading to a non-attendance rate of up to 50%.

VDGYP's Contribution

Infrastructure

The VDGYP provided infrastructure grant funding to Tharawal Aboriginal Corporation in 2014. The grants were used to purchase and install the following:

- Full dental equipment for two dental surgeries
- Two new chairs, that are state of the art and can hold larger, heavier bodies and are designed to avoid patients seeing all the dental equipment, in order to reduce anxiety
- Camera and x-ray machine which are fully integrated into the chair setup
- Sterilising tracking system for disinfection control
- Toys, charts and other dental equipment
- The new surgeries are larger and have specifically been made to accommodate the families of patients as a culturally sensitive measure to increase attendance and reduce anxiety.

Figure 36: New surgery (with staff)

Figure 37: New surgery includes x-ray and camera equipment integrated into chairs

Figure 38: New surgeries provide space for oral health promotion

Figure 4: New surgeries provide space for oral health promotion

Graduate placements

VDGYP provided funding for one graduate per year from the time the service moved in 2014 i.e. a total of two graduates.

Outcomes

Effect on service delivery

- Doubled throughput of patients
- Having two dentists (i.e. a senior dentist and a VDGYP graduate) enabled the service to do outreach into the community
- Reduced waiting list to two weeks initially, but this is now at three weeks because the catchment area has increased with the closure of nearby dental services

'the wait list is probably the biggest thing; because if you're in pain and we can't book you for another 2, 3 months, that's a long time to be in pain for. Even though it's 2, 3 weeks, that's a lot less time to wait'.

- Increased attendance rate for appointments to between 80-90% because reception now reminds people of their appointments
- Reduced emergency presentations from 3-4 per day to 1 per 2 days due to better regular care
- Increased community confidence in the service has enhanced the reputation of the service. This has come from the new facilities and the friendly and culturally sensitive setup.

  'the community can see the differences'

  'having the new surgery has boosted their confidence in our service. Having the new equipment, it's like someone cares about them'

  Re. new facilities: 'it's a big thing in a population group that's quite anxious as well. If they come to an area and it's quite cramped or it doesn't look professional, they won't say it but it does raise their anxiety and their willingness to get dental treatment'

  'because the medical service is an Aboriginal service, first of all they feel really comfortable. And most of the staff besides the dentists are Indigenous … it gives a lot of stability'

  'I have been here for many years and I can see the improvement … the culture is starting to change'

  'there aren't as many emergency patients as there were before – now they're doing regular care'

  'in terms of emergency it's [having two dentists] a really big factor. A lot of the patients, if they turn up and they are in pain, and they can be seen, then they will go in. It takes them a lot of effort, and they really have to work themselves up to come in, and if you can't see them because we're flat out with one dentist, then they may never come

back or even get treatment at all. So it's really good that we can treat them – more so than other public places'

- The new equipment has allowed the service to produce mouthguards in house. This acts as an incentive for children to come and have their treatment, and also protects their teeth during sporting activities.
- The new equipment has allowed the dentists to more easily diagnose the more complex cases.

The graduates

We interviewed one graduate during our visit. He had just completed his VDGYP year and was staying on temporarily before moving to live overseas.

Themes were:

- Very positive experience of VDGYP
- Valued the extra day to study
- Supportive environment allowed graduate to complete the primaries
- Mentoring was a two way exchange of ideas and experiences, very collegiate

'a lot of it was just talking with a colleague and coming up with ideas for the cases and we both had different knowledge from different universities, so it didn't really feel like I was being mentored all the time'

- There was a real sharing – mentor learned from fresh information being brought in; mentee learned from mentor's experience in the field.
- The program influenced the graduate's plans for working in the public sector in future

'as a graduate one of the things you look for is some sort of support. In private it's a little bit trickier to do because there aren't too many places that do mentorships because at the end of the day they work in private and have their own patients and are trying to make their own money as well…'

'this is a good bridging pathway'

Mentoring

The mentor valued the opportunity to participate in the program. She highlighted three elements – knowledge sharing, exchanging experiences, and being able to pass on knowledge of the culture and the patients as the key experiences for her. She found the workload high, and often had to do the work at home, as, despite having allocated time, there were always other things to be done at the workplace. She found the curriculum very useful and relevant both for refreshing her own knowledge and for preparing the graduate for the clinical experience.

'the mentoring not only helped the graduate but also helped me. It refreshed, it made me again look into things'

'the selection of the case studies were very good' 'they were not theoretical, they were very real, and very good and it was good for me to have a new view'

'Dentistry is something that by the time you finish dental school you haven't learnt everything there is to know. There are a billion other things, so many procedures that you might have touched upon at university or you might not have touched on at all. There are so many things that you can learn and it's always good to have someone that's done it before. It doesn't matter if you're first year out – even after first year you don't learn everything!'

Service provider perspective

The service provider was called away at the last minute so was not interviewed.

Culture/practice changes

The most significant cultural change was the development of a career path for Indigenous people. The extra chair provided by VDGYP along with funding and support from the Poche Centre, allowed for the training of Indigenous dental assistants. This has had a huge impact on the community, as they feel a sense of trust in the service. For the dental assistants, it has opened up a career pathway, with one gaining a scholarship to study for her Certificate IV and another going on the study to become and oral health therapist. This activity allows for the community to become self-sustaining in the future and has engendered a strong sense of pride and ownership in the community for their dental service.

Previously there was very little professional development opportunity. There was only one chair so each dentist was rostered on their own and there was no collegiate interaction. There were no meetings and no mentoring. Addition of a second dentist, the curriculum and the formal mentoring established a culture of discussion and two-way exchange which the senior dentist found very rewarding and motivating. She was finally able to debrief with another dentist and discuss interesting cases. They have built a culture of sharing and building on each other's knowledge and this extends to the assistants and their training. The second dental assistant had the opportunity to actually practice and develop her skills, and she is now moving on to study oral hygiene.

Now there is a capacity to see more patients, including emergencies. However, there is a new culture since the move to the new building which means that the policy has changed. People are encouraged to have regular appointments and discouraged from waiting until the situation is an emergency before coming in for help. Emergencies are only taken at morning appointments. Before the new clinic, the waiting list was so long that people could not get in for months, now they can be seen within two to three weeks.

The community quickly developed a good relationship with both VDGYP graduates. They accepted and trusted them and were prepared to come into the clinic to have treatment. Having younger people in the service helped because they related well with the community. The 2015 graduate played football with the local children at the outreach events, helping him integrate into the community.

Future plans

The staff interviewed were very supportive of the VDGYP and the positive impact it has had on their service and on the community. They expressed disappointment that the program will not

continue beyond January 2016, as this will affect their ability to maintain the level of service achieved under the program. The service is looking for funding to replace the VDGYP graduate position, as they currently have no funds to sustain this position. In addition, the senior dentist expressed the opinion that there would be significant benefit if the curriculum could be made available for services to support their new graduates, as it had been an important platform for discussion between the mentor and mentee.

The Tharawal case study illustrates one of the challenges in program evaluation, the timing of the evaluation. If the impact on Tharawal had been measured after only one year, there would not have been significant change observed, because the new surgery had not been completed and the waiting lists had not yet reduced. Staff reported that the program was only now beginning to peak in its efficiency and impact, due to the time lag in setting it up.

> *'I think the biggest thing is, you can't judge it by the first one or two years when you're just trying to establish the program, you don't really see much of the impact'*

This case study also illustrates some issues concerning judging infrastructure funding, where the capital cost is spent up front, but the program's impact can only be observed after a number of years of operation, which requires recurrent funding for staffing. At Tharawal, the infrastructure funding provided physical facilities that enabled the service to double its potential capacity. The closure of the VDGYP will impact on the service's ability to fully utilise the expanded physical facilities supported under the program.

Conclusion

Overall, the impact of the VDGYP on the Tharawal service has been highly positive, through the provision of enhanced infrastructure and the funding of one extra position for two years which effectively doubled the service's capacity. However, Tharawal's inability to continue funding the second dentist at this time has potential impacts on service delivery and community confidence. The Tharawal service is continuing to increase its focus on a growing local Indigenous population and as a result would greatly benefit from future targeted funding, such as the VDGYP.

Acknowledgements

ACIG would like to thank the Tharawal managers, staff and VDGYP participant for generously allowing us their time for interviews and site visits.

Westmead Centre for Oral Health

The Services

Westmead Centre for Oral Health

Westmead Centre for Oral Health provides the following dental services:

- Priority Care: Treatment for urgent dental needs.
- General Care: Routine treatment which includes check-ups, fillings, extractions and other dental services.
- Dentures and surgical extractions

Context of the services

Westmead is a large metropolitan dental health service located at Westmead Hospital in Sydney. It has 188 dental chairs.

Before the VDGYP, Westmead Centre for Oral Health took between eight and ten graduate dentist per year and had its own established and structured graduate internship program.

VDGYP's Contribution

Infrastructure

Westmead did not apply for infrastructure funding.

Graduate placements

The VDGYP provided funding for three graduates over the three years of the program.

Outcomes

Effect on service delivery

Taking one extra graduate in a service with 188 chairs did not have a significant effect on service delivery. The service provider explained that they had participated in the program because, as a teaching institution, they were interested in how the program would be run.

> '*… as a large teaching institution we want to know what's involved in it, and that's why we put a finger in it.*

The graduates

We interviewed the 2015 graduate who was half way through her VDGYP year. The graduate felt that the course materials were relevant and that her experience in the program was valuable and gave her a good grounding in practice.

> *'I think it's really made a difference to my confidence in the clinic. I think without the mentoring I may have made mistakes in the clinic and not realised that I'd made those mistakes. So it's good to be able to reflect on what I'm doing.'*

As Westmead has a well-developed graduate program, we asked the VDGYP graduate what the difference was and whether she felt she had a superior experience. She did not think that one program was superior to the other, with both offering their benefits to the graduates.

Mentoring

The mentor found the ability to network with other mentors valuable and returned to the orientation program each year for that specific purpose. They mentioned that the program did not have any education for mentors on how to teach or provide feedback to their mentees, which they felt was a deficit in the VDGYP.

Service provider perspective

The service provider found some minor benefits from being involved in the program. These included gaining access to some curriculum materials that covered subjects not usually covered by Westmead's internship program. He was not sure whether the extra study day per week was a benefit for the VDGYP graduate or not, because of the consequent loss of clinical time in comparison with the non-VDGYP graduates.

One issue that emerged during the program was that non-VDGYP graduates saw them as 'someone in another program' and excluded them from some discussions, conversations and camaraderie that was present between the other graduates. This was exacerbated by the equity issues created by the $15,000 bonus payment and the day off per week to study.

Culture/practice changes

The service did not experience any cultural or practice changes due to the relatively small increase in funding and FTE provided by the program.

Future plans

The service provider will continue to deliver their own graduate internship program as before.

Conclusion

Overall, the VDGYP has had a minimal impact on the Westmead Dental Service. There was little net benefit to the community from funding a placement at such a large facility as Westmead.

Acknowledgements

ACIG would like to thank Westmead's managers and staff for generously allowing us their time for interviews and site visits.

Appendix 5: Australia's Oral Health Workforce 2000-2015

Oral Health Workforce Programs

The Department of Health publicly released a review of the Australian Government Health Workforce Programs in May 2013. The purpose of this review was to analyse existing programs and identify; whether they aligned with workforce priorities, highlight potential areas for improvement, generate opportunities for stakeholder consultation and to provide government with advice on the health workforce.

The Government's Health Workforce Division aims to expand the dental workforce, particularly in regional, rural and remote Australia and in the public sector (Mason 2013). In 2006-07, the bulk of the government's funding was to support programs for medical graduates in areas such as GP training and rural workforce initiatives, with no funding at all for the dental workforce. By 2012-13, there was nearly $40 million to support workforce programs for the oral health workforce (Mason 2013). Although there has been modest investment in workforce programs for the oral health workforce, spending for medical graduates will increase from $200 million in 2004-05 to approximately $750 million in 2016-17, with similar large increase for nursing (from around $25 million to more than $400 million), and for multidisciplinary and allied health (from around $50 million to more than $500 million) (Mason 2013).

As at January 2016, the Health Workforce Division (HWD) is responsible for a number of dental workforce initiatives which include:

- Rural Health Multidisciplinary Training (RHMT) Program (which consolidated the previous Dental Training Expanding Rural Placements (DTERP) Program, University Departments of Rural Health (UDRH) Program and the Rural Clinical Training and Support Program;
- Voluntary Dental Graduate Year Program (VDGYP); Oral Health Therapist Graduate Year Program (OHTGYP), which have now both ceased; and
- Dental Relocation and Infrastructure Support Scheme (DRISS).

The Division also supports Education and training support schemes, including:

- the Nursing and Allied Health Scholarship and Support Scheme (NAHSSS);
- Nursing and Allied Health Rural Locum Scheme (NAHRLS);
- Puggy Hunter Memorial Scholarship Scheme (PHMSS); and
- the Australian Rotary Health Indigenous Health Scholarships (Rotary scholarships) program.

There are a number of other dental projects that are managed in other divisions of the Department of Health, which complement the HWD dental workforce initiatives, as well as various dental workforce infrastructure projects.

Dental Training Expanding Rural Placements (DTERP)

The Commonwealth Government funds the DTERP program through the Health Workforce Fund, with an allocation of $8.3 million from 2012-13 to 2015-16 (Mason 2013). The program commenced in 2007-08 to help address the geographic maldistribution of dentists, particularly in rural and remote areas, by assisting with rural clinical placements at six Australian universities (University of Sydney, University of Adelaide, University of Melbourne, University of Western Australia, University of Queensland and Griffith University).

Two review of dental rural placements by The University of Sydney found that graduates who had been through the voluntary rural placements were more likely to be working in rural areas following graduation (Mason 2013).

The University Departments of Rural Health program (UDRH)

The UDRH program provides rural and remote communities with improved access to appropriate health services, by promoting professional support, education and training of the rural health workforce. Recruiting urban professionals to the country is also a focus, as is encouraging students to undertake supported clinical placements in rural and remote areas. Dental placements are supported as part of this program, although the level of activity varies between UDRHs. A number of UDRHs are keen to expand their activities in supporting dental training. As a part of the Mid-Year Economic and Fiscal Outlook 2015-2016 (MYEFO), the DTERP and UDRH were consolidated into the RHMT programme.

The Voluntary Dental Graduate Year Program (VDGYP)

The Voluntary Dental Graduate Year Program (VDGYP) was a Commonwealth funded program aimed at improving the dental workforce supply to the public sector in general, with an emphasis on communities and special sectors in need, rural and Aboriginal and Torres Strait Islander communities and aged care settings. The 2011-12 Budget provided $52.6 million over four years (2011-12 to 2014-15) for the VDGYP and was extended until 2015-16.

The program featured the placement of fifty dental graduates nationally each year commencing in 2013 and running until January 2016. Graduates were supported by a mentor and a continuing education curriculum during the graduate year, as they undertook one or several clinical placements (depending on the availability through their service provider). Their salaries were paid by the program and infrastructure grants were also made available to host service providers.

The VDGYP formed part of the foundational activities envisaged within the Final Report of the National Advisory Council on Dental Health to support the dental workforce to move to areas of under-service, including the public sector and rural areas. Dental graduate participants were expected to benefit by gaining a broader range of experience and skills when they are engaging with those who depend on the public system for access to dental services. For graduates, the program featured:

- access to continuing education opportunities;
- clinical rotations or varied experiences per placement;
- mentor support for each graduate;

- graduate salary; and
- a bonus of $15,000 upon successful completion of the program.

Service Providers hosting the graduate participant were expected to benefit from:

- enhancement of their team by the addition of the graduate/s;
- payment to the Service Provider of the graduate salary; and
- potential to receive dental infrastructure grants for activities related to the placement.

A planned expansion of the VDGYP, announced in the 2012-13 Budget, was not progressed by the Commonwealth Government in 2014. It was announced in the May 2014 Budget that the VDGYP would not be continued beyond the original three-year program.

OHTGYP

The Oral Health Therapist Graduate Year Program (OHTGYP) was announced in the 2012-13 Budget, providing funding of $45.2 million over four years from 2012-13 to 2015-16.

The intent of the OHTGYP was to provide oral health therapist graduates with a structured program integrating enhanced practice and professional development opportunities, whilst enhancing workforce and service delivery capacity, particularly in the public sector. While this national program assisted in addressing the oral health needs of the community generally, it was particularly important in addressing some of the issues identified in access to dental care for disadvantaged members of the community. Since the impacts of oral disease are felt more by certain Australian populations than others, the program aims to assist with other health priorities that include:

- communities and special sectors in need;
- rural and remote communities; and
- Aboriginal and Torres Strait Islander communities.

The OHTGYP formed part of the foundational activities envisaged within the Final Report of the National Advisory Council on Dental Health to support the dental workforce to move to areas of under-service, including rural areas and the public sector.

Oral health therapist (OHT) graduate participants were expected to benefit by gaining a broader range of experience and skills when they were largely engaging with those who depend on the public system for access to dental services. For OHT graduates, the program featured:

- the placement of fifty graduates nationally each year commencing in 2014;
- facilitation of recruitment into the public sector, or other areas of need;
- access to continuing education opportunities;
- mentor support for each graduate;
- graduate salary; and
- a bonus payment upon successful completion of the program.

Service Providers hosting the graduate participant were expected to benefit from:

- enhancement of their team by the addition of the graduate/s;

- payment to the Service Provider of the graduate salary; and
- potential to receive dental infrastructure grants for activities related to the placement.

It was announced in the May 2014 Budget that the OHTGYP would not be continued beyond the second year of the planned three-year program.

Dental Relocation Infrastructure Support Scheme (DRISS)

DRISS commenced in 2012-13. As part of the Rationalising and Streamlining Health programmes 2015-16 Budget Measure, the Australian Government is providing funding of $57.494 million (GST Exclusive) over a period of three years from 2016-17 to 2018-19, for the DRISS through the consolidation and streamlining of dental programmes measure. The measure will help improve dental workforce distribution and service delivery capacity in regional and remote communities.

The scheme offers relocation and infrastructure grants for dentists to relocate to more remote areas, and assist them to establish new practices or expand existing practices. Dentists or dental specialists will be able to apply for relocation grants of up to $120,000 (depending on the location) and infrastructure grants of up to $250,000 to help with the purchase and fit-out of dental facilities.

Eligible areas will be determined using the Modified Monash Model (MMM) system. The MMM is a new classification system that better categorises metropolitan, regional, rural and remote areas according to both geographical remoteness and town size. The system was developed to recognise the challenges in attracting health workers to more remote and smaller communities.

Oral Health Workforce

Dental services in Australia are provided predominantly through the private sector, with less than 20% of dentists working in the public sector. Approximately 30% of the population is eligible for public dental care, however the recent report from the National Advisory Council on Dental Health highlighted significant barriers for public patients accessing dental care due to limited funding of public dental services (relative to the number of eligible patients). This results in long waiting times for dental care and an emphasis on emergency treatment at the expense of general care. Long waiting times are likely to discourage patients from seeking dental care, and as a consequence, waiting list data may not accurately reflect the underlying demand for dental care.

According to the Australian Institute of Health and Welfare, 31.7 per cent of people avoided or delayed visiting a dentist due to the cost. People from low-income households are more likely to avoid a dental visit due to the cost, and tend to have poorer visiting patterns and access to care than people from higher income households, with 40.9 per cent of people with an annual household income less than $30,000, and 37.9 per cent of people eligible for public dental care avoiding or delaying visiting a dentist due to cost (AIHW 2016).

Although around 64 per cent of people visited a dentist in the previous 12 months in 2013, nearly 10.6 per cent of people aged 15 years and over had not visited a dental practitioner in the last 2 years, and 7.8 per cent had not visited in the last 5 years (AIHW 2016).

In 2003, the Australian Research Centre for Population Oral Health (ARCPOH) at the University of Adelaide published two reports on the Australian oral health workforce. These reports argued that a reduction in dental student numbers in the 1980s (as a result of a perceived excess or over-supply), coupled with an increased in both demand and need for dental services, has led to an emerging shortage in Australia's oral health labour force (AIHW 2003; Spencer et al. 2003). Their modelling projected a shortage of around 1,500 dental care providers by 2010. In response to this report, the five existing dental schools increased their student intakes, and in 2004 the first new dental school in Australia in more than 60 years opened at Griffith University on the Gold Coast. Subsequently three more new dental schools opened, in addition to new training programs for oral health therapists.

In 2008, ARCPOH released a new analysis of supply and demand based on significant changes to inputs in their models. This revised modelling projected an undersupply of 1,000-1,100 dental care providers by 2020 (Teusner et al. 2008).

From 2000-2004, there were approximately 250 dentists graduating in Australia per year. This increased to 358 by 2008, and in 2015 approximately 620 dentists graduated from Australian universities (author's survey). The number of oral health therapy graduates has fluctuated significantly over the same time period, but has more than doubled from around 130 in 2007 to 277 in 2015 (author's survey).

The other main contributor to the dental workforce is dental migration, and from 2000 to 2013 the number of dentists who have qualified for registration annually in Australia through the Australian Dental Council examination process has increased from 51 to 235. There is little available data on the number of dentists who have migrated to Australia outside of the examination pathway (for example through mutual recognition pathways for dentists from New Zealand and the United Kingdom). Recently the occupation of dentist was removed from the Skilled Occupation List, which is likely to limit the number of dentists migrating to Australia.

The number of permanent visas granted to dentists and dental specialists increased from 62 to 118 between 2007 and 2012, and the number of temporary visas increased from 132 to 177 over the same time period (HWA 2014).

In March 2012, there were 14,223 dentists (including dental specialists) registered with the Dental Board of Australia, and 4,675 allied oral health professionals (dental therapists, dental hygienists, oral health therapists and dental prosthetists). In September 2015, there were 15,936 dentists (including dental specialists) and 5,352 allied oral health professionals registered with the DBA, an increase of 1,713 dentists (12.0%) and 677 allied oral health professionals (14.5%) (AHPRA 2015).

Health Workforce Australia undertook a detailed review of Australia's oral health workforce in 2014. They found that the supply of the oral health workforce is projected to exceed demand (which is based on utilisation patterns as they currently exist) across the entire projection period to 2025. This means that there is capacity within the current oral health workforce to provide an increased number of services, in the absence of any other changes (HWA 2014).

Willingness to travel and attitudes to public/private

There is little published research on the practice of recent dental graduates in Australia. A study in 2006 showed that a large proportion of new dental graduates chose to work in the public sector and rural areas on graduation primarily as a means of consolidating their clinical skills

(Silva et al. 2006). However, retention of dentists in both these areas appears to be a problem, with less than 10 per cent of 2000-2001 graduates still working in the public sector and only 20 per cent still working in rural areas in 2004.

This study found that the current workforce shortage trends in the public sector are most likely due to deficiencies in the retention of staff and not in recruitment since there appeared to be high levels of recruitment from new graduates into the public sector over the previous four years. This contradicts earlier findings and may reflect the success of recent measures taken to recruit dental graduates into the public sector.

The problems associated with retention in the public sector are significant, with almost 50 per cent of recent graduates who initially chose to work in the public sector in the past four years having already left or intending to leave in the next two years (Silva et al. 2006). These results appear to confirm anecdotal evidence that the public sector serves more as a training ground for private practice than a permanent professional choice for most new graduates. Silva et al also confirmed the findings of other studies that the main reasons for working in the public sector were for consolidation of clinical skills and mentoring.

The issues pertaining to the workforce shortages in rural locations reflect a similar pattern to those in public practice. It appears that retention, and not recruitment, is the main reason for the workforce shortages with over half of the graduate dentists choosing initially to work, at least part time, in rural practice. However, this high level of recruitment can be attributed to a broader group of reasons than that in the public sector. Whilst clinical experience is an important reason, so too is lifestyle and prospective remuneration. Unfortunately, like the public sector, attrition rates are high with 50 per cent of those graduates who chose to work in rural practice over the previous four years having already moved or intending to do so in the next two years (Silva et al. 2006). Once again, a cycle of loss of experienced dentists and replacement with inexperienced graduates is evident.

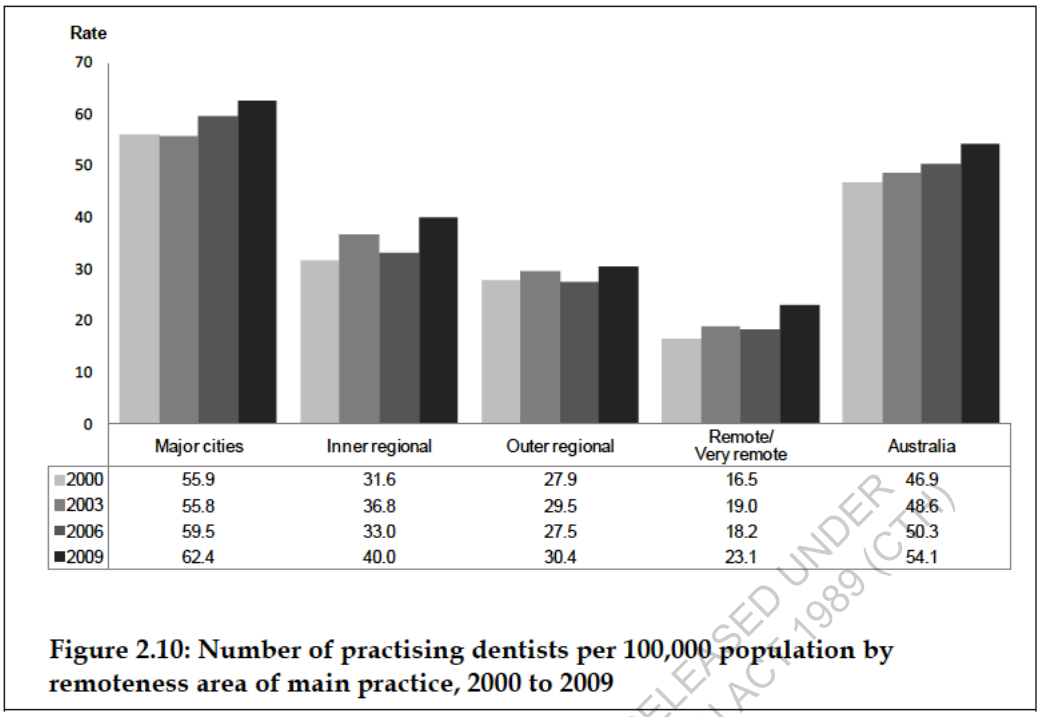
A survey of 180 dentists working in the public sector in Victoria in 2008 found that only 32.8 percent of respondents reported an intention to remain working in the public sector, with 33.9 percent unsure and 33.3 percent intending to leave in the near future (Hopcraft et al. 2010). Female dentists were more likely to be unsure about their future career in the public sector. Older dentists were significantly more likely to indicate an intention to remain in the public sector, with 44.3 percent of those aged 41+ years intending to remain compared with 25.7 percent of dentists aged less than 41 years of age. This suggests that retaining dentists in the public sector beyond the initial 2-3 years is important.

The main reasons dentists indicated that they were considering leaving the public sector in the near future were poor remuneration, frustration with public dental policies, and broader clinical experience in the private sector. Other than the desire to gain a broader range of clinical experience for younger dentists, there were no other age-related differences evident in factors affecting the decision to leave the public sector.

Geographic Distribution

In 2009, the practising rate of dentists across Australia was 54.1 per 100,000 people, however there was significant variation by geography. The ACT had the highest rate of 69.3, followed by South Australia (58.5), NSW (57.1), Western Australia (53.4), Queensland (52.4), Victoria (51.7), Tasmania (40.4) and the Northern Territory (34.6). There was also significant variation by

remoteness, from 62.4 for major cities, to inner regional (40.0), outer regional (30.4) and remote/very remote (23.1) (Chrisopoulos & Nguyen 2012).



	Major cities	Inner regional	Outer regional	Remote/ Very remote	Australia
2000	55.9	31.6	27.9	16.5	46.9
2003	55.8	36.8	29.5	19.0	48.6
2006	59.5	33.0	27.5	18.2	50.3
2009	62.4	40.0	30.4	23.1	54.1

Figure 2.10: Number of practising dentists per 100,000 population by remoteness area of main practice, 2000 to 2009

Figure 39: Change in practising dentists by remoteness, 2000 to 2009 (Chrisopoulos & Nguyen, 2012)

By 2013, there had been some shift in these trends, with the full-time equivalent rate of dentists per 100,000 population was 63.1 in major cities, 41.1 in inner regional, 38.2 in outer regional and 25.7 in remote/very remote areas (AHPRA 2015).

Effectively, the rate of practising dentists in major cities has increased 7.2, with 9.5 in inner regional areas, 10.3 in outer regional areas and 9.2 in remote/very remote areas from 2000 to 2013. This would suggest that broadly the policy of increasing dental graduate numbers and dental migration has been moderately successful, with greater growth of dentist numbers in regional and rural areas compared to major cities. However, there is still significant geographic disparity in practising dentist numbers across the country.

Public and Private Sector

Approximately 85 per cent of dentists work in the private sector in their main practice, with 8.6 dentists per 100,000 working in the public sector. There is significant variation across states, with a rate of 11.7 per 100,000 in the Northern Territory, 11.0 in South Australia and 10.3 in Queensland, with 6.5 in Tasmania and 6.1 in the ACT. The proportion of dentists working in the private sector has remained stable over time, with previous workforce reports showing 83% of dentists working in the private sector in 2006, 83.6% in 2003 and 82.6% in 2000 (Balasubramanian & Teusner 2011).

Despite the fact that the proportion of dentists working in the private sector has remained relatively stable over the past 15 years, as a consequence of the dental workforce growing in absolute terms and greater than population growth, the practising rate of dentists in the public sector has increased over that period.

Table 9.3: Full-time equivalent dental practitioners employed per 100,000 population, by remoteness area, 2013

Practitioner type	*Major cities*	*Inner regional*	*Outer regional*	*Remote/ Very remote*
Dentists	63.1	41.1	38.2	25.7
Dental prosthetists	5.0	6.0	3.3	0.9
Dental hygienists	5.8	2.8	3.3	2.5
Oral health therapists	3.4	2.8	2.9	0.7
Dental therapists	2.9	3.8	4.4	5.1

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

Approximately 85% of dentists worked in the private sector in their main practice, ranging from 91% in the Australian Capital Territory to 70% in the Northern Territory (Table 9.4).

Table 9.4: Full time equivalent dentists employed per 100,000 population in the public and private sectors, states and territories, 2013

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Public	7.6	7.9	10.3	8.6	11.0	6.5	6.1	11.7	8.6
Private	50.8	44.6	48.0	45.4	47.6	31.2	59.9	27.0	47.4
Total	**58.5**	**52.5**	**58.3**	**54.0**	**58.6**	**37.7**	**65.9**	**38.7**	**56.0**

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

Figure 40: Dental practitioners by state and sector, 2013 (AIHW, 2016)

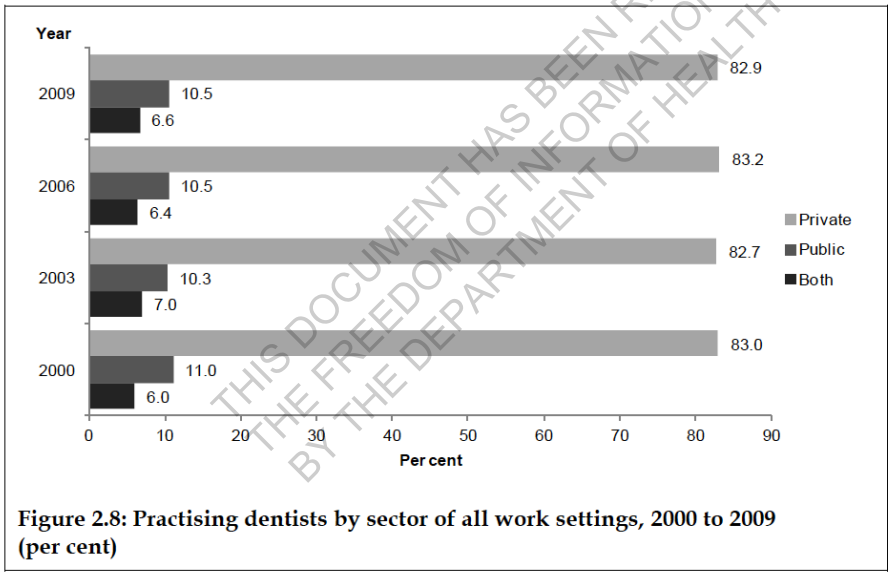
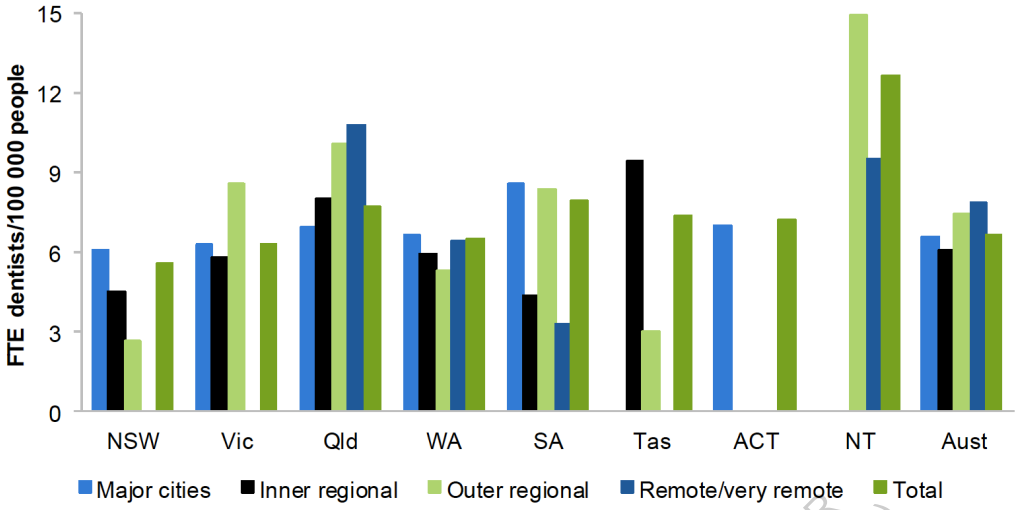


Figure 2.8: Practising dentists by sector of all work settings, 2000 to 2009 (per cent)

Figure 41: Practising dentists by sector of employment, 2000 to 2009 (Chrisopoulos & Nguyen, 2012)

Figure 10.9 **Availability of public dentists, 2014**[a, b, c]



[a] See box 10.4 and table 10A.27 for detailed definitions, footnotes and caveats. [b] There were no public dentists in remote or very remote areas in Victoria. [c] Tasmania has no major cities. The ACT has no outer regional, remote or very remote areas. The NT has no major cities or inner regional areas.

Source: AIHW (unpublished) National Health Workforce Data Set; table 10A.27.

Figure 42: Availability of public dentists by state and remoteness. (Report on Government Services 2016: Volume E: Health)

References

AHPRA 2015. Annual Report 2014/15. Australian Health Practitioner Regulation Agency. Melbourne. Available at http://www.ahpra.gov.au/Publications/Corporate-publications/Annual-reports.aspx

AIHW 2003. Teusner, DN & Spencer, AJ '*Projections of the Australian dental labour force*', Australian Institute of Health and Welfare. Cat. no. POH 1. (Population Oral Health Series No. 1). Canberra.

AIHW 2016. Chrisopoulos, S, Harford, JE, & Ellershaw, A 2016, '*Oral health and dental care in Australia: key facts and figures 2015*', Australian Institute of Health and Welfare, Cat. no. DEN 229. Canberra.

Balasubramanian, M. & Teusner, D.N. 2011. '*Dentists, specialists and allied practitioners in Australia: Dental Labour Force Collection, 2006*', Dental statistics and research series no. 53. Australian Institute of Health and Welfare, Cat. no. DEN 202. Canberra.

Chrisopoulos, S. & Nguyen, T. 2012. Trends in the Australian dental labour force, 2000 to 2009: Dental labour force collection, 2009. Dental Statistics and Research Series no. 61. Australian Institute of Health and Welfare, Cat. no. DEN 218. Canberra.

Health Workforce Australia, 2014, '*Australia's Future Health Workforce – Oral Health – Overview*'. Canberra.

Hopcraft MS, Milford E, Yapp KE, Lim Y, Tan YRV, Goh CSL, Low CC, & Phan T, 2010, '*Factors influencing the recruitment and retention of dentists in the public sector*', J Pub Health Dent 72, 131-139, 2010.

Mason, J, 2013. '*Review of Australian Government Health Workforce Programs*', Department of Health. Canberra. 2013.

RHWA. 2015. Rural Health Workforce Australia media release 28 January 2015: Grants scheme attracts more dentists to the bush. Accessed via : http://www.rhwa.org.au/media-releases on 3 March 2016.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2016, '*Report on Government Services 2016*', vol. E, *Health*, Productivity Commission, Canberra.

Silva M, Phung K, Huynh W, Wong H, Lu J, Aijaz A, Hopcraft M. 2006. '*Factors influencing recent dental graduates' location and sector of employment in Victoria*', Aust Dent J 51(1), 46-51, 2006.

Spencer AJ, Teusner D.N., Carter, K.D. & Brennan, D.S. 2003. '*The dental labour force in Australia: the position and policy directions*' AIHW cat. no. POH 2 (Population Oral Health Series No. 2). Australian Institute of Health and Welfare. Canberra. 2003.

Teusner, DN, Chrisopoulos, S & Spencer AJ 2008. '*Projected demand and supply for dental visits in Australia: analysis of the impact of changes in key inputs*', Dental statistics and research series no.38. Cat. no. DEN 171. Australian Institute of Health and Welfare. Canberra.