



Office of Hon Steven Joyce

Minister for Economic Development
Minister for Regulatory Reform
Minister of Science and Innovation
Minister for Tertiary Education, Skills and Employment

Minister Responsible for Novopay
Associate Minister of Finance

3 - MAR 2016

Dr James Wilson

fyi-request-3509-937c29ee@requests.fyi.org.nz

Dear Dr Wilson

Thank you for your request for official information dated 26 December 2016. Your request was for:

- *All advice and communications received from Massey University and its faculty/staff, the New Zealand Veterinary Association and its staff, and any other organisations which was used to justify increasing the size of veterinary student intakes at Massey University.*
- *All documentation generated by your office or associated Tertiary Education offices that considers the above mentioned increase in veterinary training numbers and that eventually recommends increasing veterinarian trainee numbers.*

Your request has been considered under the Official Information Act 1982 (the Act).

The only advice or correspondence held by my office with regard to increasing the size of the veterinary student intake to Massey University's Bachelor of Veterinary Science (BVSc) student intake from 2016 onwards was provided to me by the Ministry of Education. My office does not hold any correspondence from Massey University, the New Zealand Veterinary Association or any other organisation on this subject. I can confirm that no information within the scope of your request is held by the office of the Associate Minister of Tertiary Education, Skills and Employment Hon Louise Upston.

The advice I received from the Ministry about increasing the BVSc enrolment cap is contained in *Tertiary Education Report: Veterinary science enrolment cap and funding*. I am releasing this report to you. Some of the information in this document has been deleted, as it is outside the scope of your request.

I have interpreted the second part of your request as being for documentation considering or recommending an increase to the BVSc enrolment cap that was prepared by my office or the office of the Associate Minister for Tertiary Education, Skills and Employment, Hon Louise Upston. I am releasing to you a letter I wrote to Hon Steve Maharey, Vice-Chancellor of Massey University on 13 October 2015 advising him that I had decided to increase the enrolment cap. Some information in this letter has been withheld as it is outside the scope of your request.

Under section 28(3) of the Act you have the right to ask an Ombudsman to review this response. You can do this by writing to info@ombudsman.parliament.nz or Office of the Ombudsman, PO Box 10152, Wellington 6140.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'S. Joyce', written over the typed name.

Hon Steven Joyce
Minister for Tertiary Education, Skills and Employment



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13 OCT 2015

Hon Steve Maharey
Vice Chancellor
Massey University
Private Bag 11 222
Palmerston North 4442

Dear Steve

Thank you for your submissions to the Ministry of Education on the enrolment cap and tuition subsidy rates for Veterinary Science.

I am pleased to advise you that I have decided to increase the enrolment cap on the veterinary science year 1 intake from 84 to 100 EFTS from next year. This will help to retain the current level of full-time veterinarians in New Zealand.

out of scope

I was pleased to see in your submission that Massey has improved its BVSc retention and completion rates in recent years. I look forward to seeing more BVSc graduates, and more production animal veterinarians, in the future.

out of scope

In the meantime, should you have any questions, please direct them to Roger Smyth (Group Manager, Tertiary Education) at the Ministry, in the first instance.

Yours sincerely


Steven Joyce
Minister for Tertiary Education, Skills and Employment

cc: Tjm Fowler (Chief Executive, Tertiary Education Commission)
Roger Smyth (Group Manager, Tertiary Education, Ministry of Education)

26 August 2015

Tertiary Education Report: Veterinary science enrolment cap and funding

Executive summary

out of scope— Massey University (Massey) has sought increases to both the enrolment cap and [REDACTED] that apply to its Bachelor of Veterinary Science (BVSc) programme.

The Ministry considers there to be strong case to increase the current enrolment cap from 84 to 100 places from 2016. By delivering an additional 16 graduates per year from 2020, the increase would help address demand for production animal veterinarians and a forecast decline in the number of full-time equivalents in New Zealand's veterinarian workforce.

Increasing the BVSc enrolment cap would require additional SAC funding for the BVSc. The Ministry estimates that, provided the additional students would otherwise undertake a Bachelor of Science, SAC funding of between \$0.1m and \$0.2m 2016, and between \$2.4m and \$4.7m over four years from 2017, would be needed.

The Ministry recommends the BVSc enrolment cap be increased, with the additional SAC funding met by managing the extent to which SAC funding pressures decline as demand for tertiary education softens.

out of scope



Recommended actions

We recommend that the Minister for Tertiary Education, Skills and Employment:

a. **note** that Massey University (Massey) submitted a business case to the Ministry of Education seeking to increase:

(i) the enrolment cap that applies to its Bachelor of Veterinary Science (BVSc) programme from 84 places to 100 places from 2016

(ii) out of scope

Bachelor of Veterinary Science enrolment cap

b. **note** that the Ministry considers there to be a strong case to increase the BVSc enrolment cap from 84 places to 100 places from 2016, due to:

(i) existing shortages of production animal veterinarians

(ii) a forecast decline in the number of Full-Time Equivalent (FTE) veterinarians working in New Zealand, in part due to the shifting gender profile of the veterinarian workforce

(iii) data indicating that increasing numbers of Massey BVSc students are choosing to work with production animals and improved BVSc retention and completion rates

c. **note** that the Ministry estimates that the cost of the proposed change in the enrolment cap would range from \$0.1m–\$0.2m in 2016 and \$2.4m to \$4.7m over the four years from 2017 (depending on the extent of substitution from existing EFTS to BVSc EFTS)

d. **note** that, in the context of the softening demand for tertiary education highlighted in Budget 2015, the costs outlined in (c) could be met via reprioritisation from expected underspends against SAC allocations, which the Ministry would work with the Tertiary Education Commission (TEC) to manage

e. **agree** that the enrolment cap applied to Massey's BVSc be increased from 84 places to 100 places from 2016, and that the cost of doing so be met from within the 2016 and future SAC funding appropriations

AGREE / DISAGREE

f. out of scope

g.

h. out of scope

i.

out of scope

j.

k.

l.

AGREE / DISAGREE

Roger Smyth
Group Manager, Tertiary Education
Ministry of Education

NOTED / APPROVED


Hon Steven Joyce
Minister for Tertiary Education, Skills and Employment

___/___/___

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Tertiary Education Report: Veterinary science enrolment cap and funding

Purpose of report

1. This report proposes raising the enrolment cap that applies to Massey University's (Massey) Bachelor of Veterinary Science (BVSc) qualification from 84 first-year places to 100 from 2016.
2.  out of scope

Background

3. Massey is the sole provider of a BVSc qualification in New Zealand, making its provision important to New Zealand's animal-based primary industries. It is a key feature of Massey's identity and reputation. The recent Quacquarelli Symonds (QS) rankings placed Massey 15th in the world for veterinary science, including first in the world for its 'reputation with employers' criterion.
4. Students seeking to attain a BVSc must first complete a semester of pre-requisite papers, which determine entrance into the 4.5-year BVSc programme.
5. During 2012, Massey sought increases to the SAC funding rates for its BVSc and/or the number of domestic EFTS able to be enrolled. At that time, total enrolments were not to exceed a total of 340 EFTS across the BVSc programme – a cap that was set in 1999 [Metis 648281 refers]. You agreed (following a further submission from Massey) to replace the overall cap on BVSc places with a cap of 84 places for the first year of the BVSc [Metis 700709 refers].
6. The new cap commenced in 2013 and, in theory, enables Massey to have approximately 420 domestic EFTS enrolled in the BVSc as the cap flows through to subsequent years. Actual enrolments are influenced by the number of EFTS who progress from one year to the next and other factors (eg, part-time study). Around 300 students apply to enter the BVSc programme each year, meaning over two-thirds of applicants will not enter the BVSc programme.
7. Appendix One contains the tables and figures referred to in the below sections.

Part A Increasing the enrolment cap applied to Massey's BVSc

8. We estimate that, under the current cap of 84 places, there will be 410 places in the BVSc programme by 2019, up from 402 places in 2015 (Table One in Appendix One).
9. Under an increased cap of 100 places (16 additional places), and with attrition at the current low rates experienced in the BVSc, we estimate enrolments will increase to 490 places in 2020, 80 more than under the current cap. We expect that BVSc graduates would increase from 80 per year to 96 per year by 2020 under the increased cap.

The case for increasing the veterinary science enrolment cap

10. Massey considers the current veterinary science enrolment cap to be inadequate to maintain the current level of New Zealand-trained full-time equivalent (FTE) veterinarians practicing in New Zealand over the next 25 years.
11. Massey's case for increasing the cap highlights:
 - i) the changing gender composition of the veterinary workforce and BVSc graduates
 - ii) strong demand for veterinarians – particular in the primary production sector
 - iii) improved retention rates for BVSc students.

A change in the gender composition of the workforce and graduates

12. In 2013 (the most recent year for which comprehensive workforce data is available), 47% of practising veterinarians were female, up from 42% in 2009.¹ In 2014, 61 out of 81 (75%) BVSc graduates were female.
13. This trend is highly likely to continue: in 2013, 59% of female veterinarians were aged under 40, compared to just 23% of male veterinarians. 51% of male veterinarians were aged over 50 (Figure One in Appendix One). As male veterinarians leave the workforce, the proportion that is female will increase.
14. Data from the Veterinary Council of New Zealand (VCNZ) show that, in general, female veterinarians (particularly those aged over 30) work fewer hours per week (Table Two in Appendix One). The reasons for this are not exactly clear, but are likely to be partly due to family commitments.
15. Massey's case included modelling the impact of this shifting gender balance, based on an assumption that 1 FTE works 45 hours per week. Massey forecasts that, based on the status quo enrolment cap, the number of FTE veterinarians practising in New Zealand will decline slightly over the next 15 years. This is shown in Figure Two of Appendix One.

Demand for BVSc graduates and employment outcomes

16. A BVSc (or recognised equivalent) is the minimum requirement for being able to practise as a veterinarian in New Zealand. Massey's case notes that 100% of its BVSc graduates in 2013 and 2014 obtained employment within six months of graduating.
17. The Ministry of Business, Innovation and Employment (MBIE) considers there to be high demand for dairy cattle veterinarians, and the profession is on Immigration New Zealand's long-term skill shortage list.²
18. The Ministry for Primary Industries (MPI) operates a rural veterinarian bonding scheme to incentivise and support graduate veterinarians to work in practices that focus on primary production animals (eg, cattle and sheep). The scheme is capped at 30 entrants per year and provides \$55,000 over five years (paid in instalments over the third, fourth and fifth years). For those with a student loan, payments are made directly to IRD as loan repayments.³ In 2012, 42 applications were received; more recently, applications have been closer to 30 per year.

¹ Veterinary Council of New Zealand. 2014. The New Zealand Veterinary Workforce 2012-2013.

Accessed at: http://www.vetcouncil.org.nz/documentation/VCNZ_VeterinaryWorkforce2012-13.pdf.

² <http://www.mbie.govt.nz/occupation-outlook/pdf-library/primary-industries/Veterinarians.pdf>.

³ <https://www.mpi.govt.nz/funding-and-programmes/farming/vet-bonding-scheme/>.

19. In addition to clinical practice roles, veterinarians are a key part of New Zealand's frontline biosecurity workforce. Approximately 12% of veterinarians with a current annual practising certificate work in 'regulatory' practice.
20. Employment outcomes data show that people with a bachelors degree in veterinary studies were behind only those with a bachelors degree in medical studies, pharmacy, radiography, dental studies, civil engineering and manufacturing, engineering and technology in terms of median earnings five years after completing their degree.⁴

Contribution of Massey BVSc graduates to production animal veterinary workforce

21. Massey's case outlines how final-year BVSc students have the option of choosing a 'track' of interest for their clinical rotation experience: small (companion) animal; production animal; equine; or a combination. Massey notes that data from the 2014 and 2015 cohorts indicate that 70% of final-year BVSc students choose a production animal track mix, which has been a significant increase on 2010 to 2013 – this is shown in Figure Three in Appendix One.
22. In addition, Massey has noted that recent surveys of its BVSc graduates indicate that, since 2011, around 85% are involved in working with production animals in their first year of employment. Massey also noted this contrasts with international data – that, 'compared with almost all veterinary programmes in the developed world, Massey University produces graduates who want to work with production animals'.

Massey BVSc course retention and completion

23. Our 2012 advice regarding BVSc EFTS places and SAC funding [METIS 648281 refers] noted that one in five students accepted into the BVSc programme did not complete their qualification. That advice was based on a 2005 cohort of BVSc EFTS.
24. More recent data suggests that a much higher proportion of BVSc EFTS are now completing the qualification, and within the standard five-year timeframe. There were 75 EFTS in the second year of the BVSc in 2010, and 70 EFTS subsequently completed the qualification after five years (Table Three in Appendix One). This indicates Massey has improved retention and completion rates for its BVSc.

Labour market retention of Massey BVSc graduates and foreign-trained veterinarians

25. Our 2012 advice noted that, based on data published by the VCNZ, around 30% of Massey BVSc graduates did not have a current annual practising certificate five years later.
26. Recent data published by the VCNZ indicate similar levels of non-registration: of the 97 Massey BVSc graduates that first registered with the VCNZ in 2009, only 71% had re-registered in each of the following four years.⁵ We expect this reflects some BVSc graduates leaving New Zealand to take advantage of their Massey BVSc being automatically recognised as an equivalent qualification in a range of attractive job markets (eg, Australia, the United Kingdom and North America). However, retention of BVSc graduates in New Zealand is similar to that for medicine graduates – and is higher than for pharmacy, dentistry and radiology graduates.⁶

⁴ Ministry of Education. 2014. What young graduates earn when they leave study.

⁵ Veterinary Council of New Zealand. 2014. The New Zealand Veterinary Workforce 2012-2013.

⁶ Ministry of Education. 2014. What young graduates do when they leave study.

27. Retention of BVSc graduates and non-registration likely also reflects some female veterinarians taking time out from clinical practice due to family commitments.
28. Re-registration rates are low for foreign-trained veterinarians: of the 93 who were first granted an Annual Practising Certificate by the NVZC in 2009, only 35% re-registered in each of the following four years. This calls into question the sustainability of relying on foreign-trained veterinarians to bolster New Zealand's veterinary workforce.

Summary: there is a strong case to increase the enrolment cap applied to Massey's BVSc

29. Overall, the Ministry considers there to be a strong case to increase the enrolment cap that applies to Massey's BVSc from 84 places entering the second semester of the first year to 100 from 2016.
30. Data from Massey and the VCNZ indicate the veterinary workforce will continue to face significant pressures in future years. Massey's case that the existing cap will make it challenging to maintain the current level of FTEs in the veterinary workforce is compelling. Massey has improved its BVSc retention and qualification completions rates.

The cost of increasing the enrolment cap from 84 to 100 places

31. Increasing the enrolment cap that applies to Massey's BVSc would involve a cost in terms of requiring additional Student Achievement Component (SAC) tuition subsidy funding for each additional EFTS in the programme.
32. The increase of 16 places Massey is seeking equates to 8 EFTS entering the second semester of the first year (and a total of 50 EFTS in that semester).
33. Currently, the second semester of year one and all of year two of Massey's BVSc are funded at the SAC category G2 subsidy rate (\$21,035 per EFTS), while years three, four and five are funded at the SAC category Q2 rate (\$27,521 per EFTS). This is an average of \$25,359 per EFTS.
34. The higher rates for years three, four and five reflect the expected higher cost-intensity of the latter years of the BVSc. Each BVSc graduate therefore represents around \$115,000 of SAC funding across the 4.5 years of the BVSc programme.

Estimated cost of increasing the enrolment cap

35. Estimating the cost of an increase in the enrolment cap that applies to Massey's BVSc is complex. We can estimate the total additional cost over time of the additional EFTS places compared to current funding; however, it would be more appropriate to estimate the cost of the additional EFTS compared to the cost of future years under the status quo cap of 84 places. Without allowing for some level of non-completion, this approach would likely over-estimate the likely cost of increasing the enrolment cap.
36. Estimates of the cost of increasing the enrolment cap with no non-completion, and if 1 EFTS per year does not progress to the following year of study, are shown in Table One (below) and in more detail in Table Four of Appendix One.
37. With the higher enrolment cap, we estimate that SAC funding of Massey's BVSc would increase from \$9.1m in 2015 to \$11.1m in 2020.
38. Under the assumption of 1 EFTS per year not progressing, we estimate that SAC funding of the BVSc would need to be \$0.2m higher in 2016 than in 2015, compared to the

current cost. There would be an estimated four-year cost of \$4.7m from 2017 to 2020, which would represent increases of approximately 5% per year from 2017 to 2020.

39. However, the new enrolments into the BVSc under a higher enrolment cap are likely to have otherwise been enrolled into another qualification at Massey (eg, Bachelor of Veterinary Technology or Bachelor of Science (BSc)). Therefore, it would be more accurate to cost the additional SAC funding consumed as BVSc EFTS compared to the cost if they were BSc EFTS. This can be regarded as the marginal cost of the additional BVSc EFTS.

40. Table One (below) shows our estimates of the future cost (in terms of SAC expenditure).

Table One: Estimated marginal SAC cost of increasing the BVSc enrolment cap from 84 places to 100 places from 2016

Year	Additional EFTS (places)	Additional SAC cost (\$m)	Cumulative from 2017 (\$m)	Marginal SAC cost (\$m)	Cumulative marginal cost (\$m) from 2017
2016	8 (16)	\$0.2		\$0.1	
2017	24 (32)	\$0.5	\$0.5	\$0.2	\$0.2
2018	40 (48)	\$1.0	\$1.5	\$0.5	\$0.7
2019	56 (64)	\$1.4	\$2.8	\$0.7	\$1.4
2020	72 (80)	\$1.8	\$4.7	\$1.0	\$2.4

41. The Ministry therefore considers it likely that the cost (in terms of increased SAC funding) of increasing the BVSc enrolment cap from 84 places to 100 places from 2016 will lie between \$0.1m and \$0.2m in 2016, and between \$2.4m and \$4.7m over the four years from 2017.

Funding the SAC cost of the higher enrolment cap

42. Budget 2015 highlighted that the Ministry forecasts demand for tertiary education to soften after 2016, which creates headroom between baseline funded EFTS and the EFTS forecast to be consumed. Some of this headroom was committed to tertiary education initiatives in Budget 2015, keeping funding in the tertiary education system that might have otherwise been reprioritised.

43. In this context, Massey's baseline funding is also expected to decline. Indeed, the TEC has indicated that Massey's 2016 SAC allocation will be around \$4m lower than in 2015. As demand is expected to fall further, Massey's annual funding allocations are likely to also decline further. Our estimates of the cost of increasing the enrolment are therefore relatively small in comparison.

44. The Ministry therefore considers it possible for the cost of increasing the enrolment cap that applies to the BVSc from 84 places to 100 to be met from within existing funding.

45. Subject to your approval, we will work with TEC to manage the cost of the enrolment cap increase within current SAC baselines.

out of scope

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out of scope

Next steps

60. Subject to your approval, the Ministry will progress increasing the enrolment cap that applies to Massey's BVSc from 84 places to 100 places entering the second semester of the first year. This could be implemented through the supplementary 2016 SAC funding determination to be issued in accordance with section 159L of the Education Act 1989. The Ministry is working toward providing you with advice on this supplementary determination in early September.

61. out of scope

out of scope

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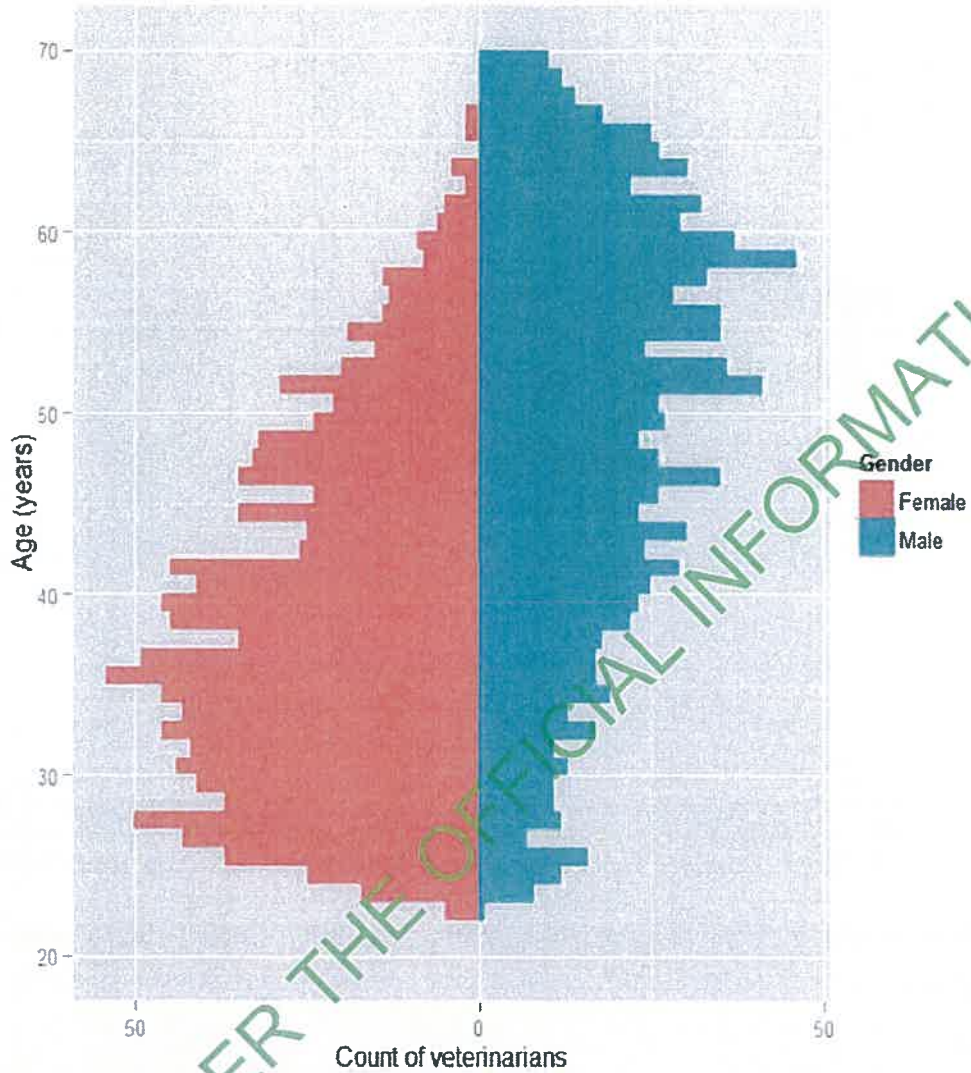
Appendix One

This appendix contains the tables and figures referred to in the body of the report.

Table One: Estimated increase in Massey BVSc EFTS under existing enrolment cap of 84 places and under cap of 100 places, and estimated total SAC funding, 2015–2020

Year	1	2	3	4	5	Total domestic EFTS (places)	Additional EFTS (places)	SAC funding (\$m)
Cap of 84 places (42 EFTS), 84 graduates (no non-completion)								
2015	42	79	84	73	82	360 (402)		\$9.12
2016	42	84	79	84	73	362 (404)		\$9.15
2017	42	84	84	79	84	373 (415)		\$9.45
2018	42	84	84	84	79	373 (415)		\$9.45
2019	42	84	84	84	84	378 (420)		\$9.59
2020	42	84	84	84	84	378 (420)		\$9.59
Cap of 100 places (50 EFTS), 100 graduates (no non-completion)								
2015	42	79	84	73	82	360 (402)		\$9.12
2016	50	84	79	84	73	370 (420)	8 (16)	\$9.31
2017	50	100	84	79	84	397 (447)	24 (32)	\$9.95
2018	50	100	100	84	79	413 (463)	40 (48)	\$10.39
2019	50	100	100	100	84	434 (484)	56 (64)	\$10.97
2020	50	100	100	100	100	450 (500)	72 (80)	\$11.41
Cap of 84 places (42 EFTS), 80 graduates (1 EFTS per year not re-enrolling)								
2015	42	79	84	73	82	360 (402)		\$9.12
2016	42	83	78	83	72	358 (400)		\$9.04
2017	42	83	82	77	82	366 (408)		\$9.26
2018	42	83	82	81	76	364 (406)		\$9.21
2019	42	83	82	81	80	368 (410)		\$9.32
2020	42	83	82	81	80	368 (410)		\$9.32
Cap of 100 places (50 EFTS), 96 graduates (1 EFTS per year not re-enrolling)								
2015	42	79	84	73	82	360 (402)		\$9.12
2016	50	83	78	83	72	366 (416)	8 (16)	\$9.21
2017	50	99	82	77	82	390 (440)	24 (32)	\$9.77
2018	50	99	98	81	76	404 (454)	40 (48)	\$10.15
2019	50	99	98	97	80	424 (474)	56 (64)	\$10.70
2020	50	99	98	97	96	440 (490)	72 (80)	\$11.14

Figure One: Veterinarians with an Annual Practising Certificate in 2013 by age and gender



Source: Veterinary Council of New Zealand

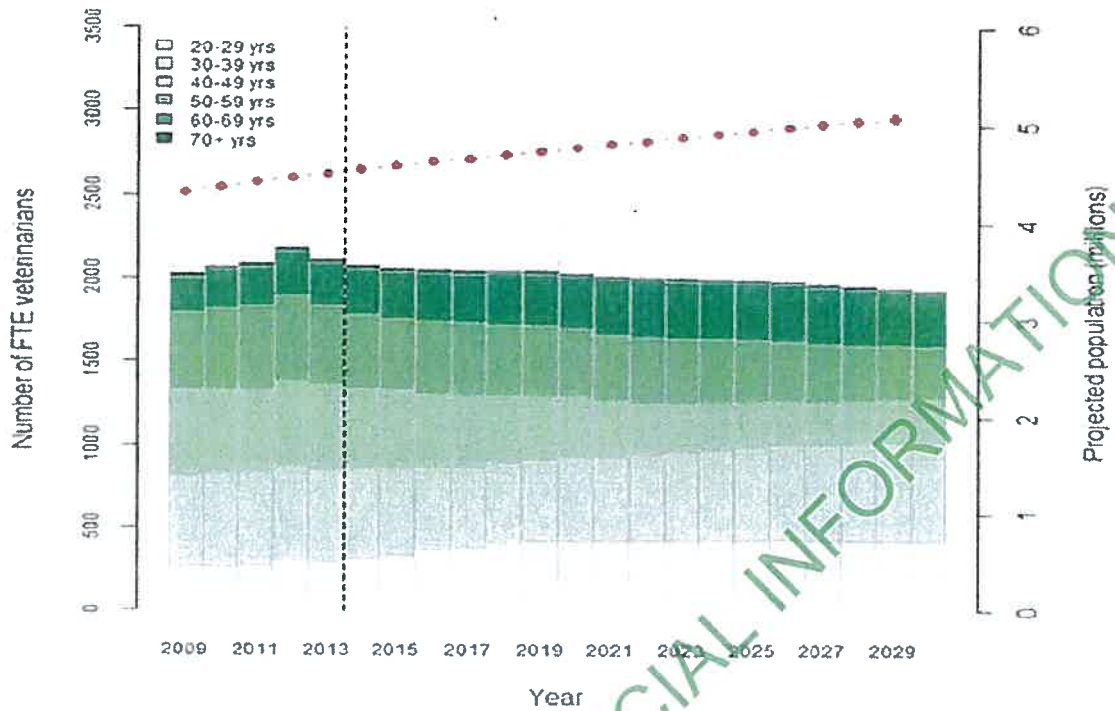
Table Two: Average routine work hours per week by practising veterinarians in their main work role, by age and gender, 2012

Gender	Age group (years)										
	20-24	25-29	30-34	34-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
Male	48	48	48	47	48	47	46	44	41	35	20
Female	47	46	40	34	32	33	34	36	40	18	0

Source: Veterinary Council of New Zealand

Note: Routine work includes activities carried out as a veterinarian during business hours as well as veterinary work done while on call.

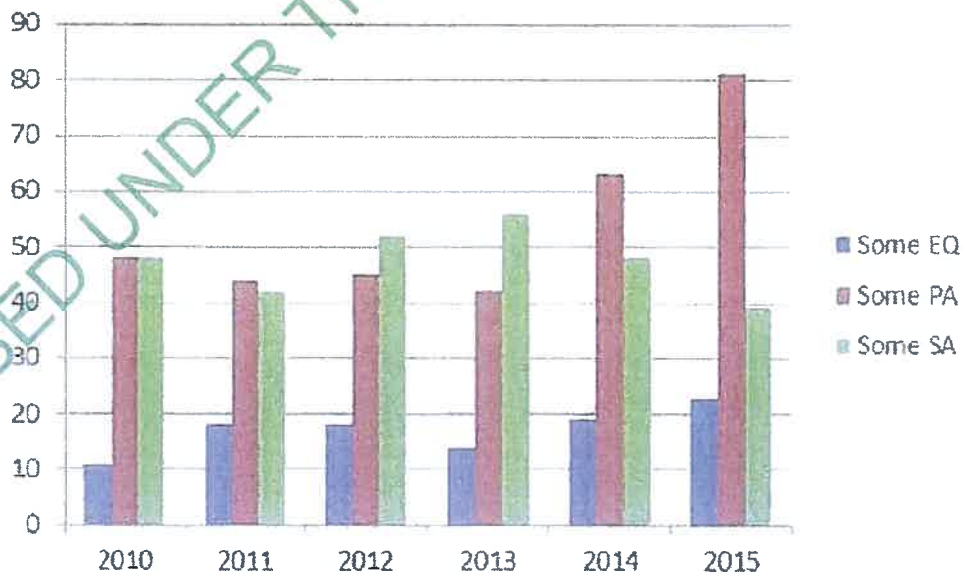
Figure Two: Massey University modelling of future veterinarian FTEs practicing in New Zealand



Source: Massey University

Note: Counts for 2009 to 2013 are actual figures from VCNZ workforce surveys. Counts for 2014 to 2030 are Massey's projections and assume 81 Massey graduates (20 male, 61 female) and 51 international graduates (10 male, 41 female) entering the veterinarian workforce each year.

Figure Three: Selection clinical rotation 'track' by final-year BVSc students, 2010–2015



Source: Massey University

Notes: Counts add to more than the number of final-year students as students indicate more than one preference.

EQ = equine; PA = production animals; and SA = small animals.

Table Three: BVSc enrolments, retention and completion, 2007-2013

Year	EFTS and years of study							
	1	2	3	4	5	6	7	8
2007	206	77	72	70	69	17	3	1
2008	61	57	57	55	55	3	-	-
2009	69	68	68	66	67	3	-	-
2010	77	75	73	73	70	-	-	-
2011	79	78	77	77	-	-	-	-
2012	82	81	76	-	-	-	-	-
2013	82	81	-	-	-	-	-	-

Source: Tertiary System Performance and Analysis, Ministry of Education

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