

# OPPORTUNITIES FOR NEW ZEALAND VETERINARY PRACTICE IN THE UTILISATION OF ALLIED VETERINARY PROFESSIONAL AND PARAPROFESSIONAL STAFF

Francesca Brown

## INTRODUCTION

Veterinary businesses in New Zealand and worldwide are under scrutiny as the industry suffers from low mental wellbeing, remuneration and profitability. Mair et al. (2020), Armitage-Chan and May (2018), Volk et al. (2018, 2020, 2022), Gopinath (2020) all tell the story that this is the case which has been further exacerbated by the global pandemic. Remuneration and profitability are also declining against inflationary and house price measures (McCormick & Goebel, 2022).

Widespread anecdotal reports from individuals in the New Zealand veterinary sector suggest that allied veterinary professional<sup>1</sup> (AVP) and ParaProfessional<sup>2</sup> (PP) utilisation is low, and veterinarians are often carrying out technical and/or nursing tasks. In 2020, Brown identified that effective utilisation of staff skills was linked with improved staff wellbeing in veterinary practices. In 2019, Harvey and Cameron concluded that veterinary nurses are trained in tasks they are not then performing in clinical practice. There is limited data investigating why this is the case and what tools are needed to change this.

This study examines the ratios of AVP's and PP's to each fulltime veterinarian, utilisation of staff, barriers to better increasing these ratios and utilisation, and the opportunities in New Zealand Veterinary Clinics for improved wellbeing, profitability, reduced staff turnover, and better animal welfare outcomes. It then identifies the next steps for practical change.

## METHODOLOGY

A survey was sent to veterinary clinic owners and/or clinic managers via the New Zealand Veterinary Association and Veterinary Council of New Zealand regular email newsletters and via New Zealand veterinary surgeons social media groups to identify what business practices are currently prevalent in their veterinary clinic. This survey covered a wide range of veterinary business practices, providing a broad base scan of the industry. It was the first step in a deeper dive into the identified priority areas to enable the development of potential business models which could be implemented to improve team wellbeing and business profitability. In this paper I offer my analysis of the data collected in the survey in relation to staff ratios, staff utilisation, and the barriers and opportunities around improved ratios of AVP's and PP's to veterinarians, and the current AVP and PP utilisation that exists.

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- 1 Allied Veterinary Professional (AVP) includes employees with formal veterinary nursing, rural animal technician or veterinary technology qualifications.
  - 2 Paraprofessional includes all staff working in a veterinary practice without formal veterinary, veterinary nursing, rural animal technician or veterinary technology qualifications such as receptionists, retail staff, administration staff, practice managers.

## RESULTS AND DISCUSSION

### Survey participant demographics

The industry scan survey was sent to veterinary clinic owners/managers in 2021. Thirty-four (34) owners engaged with the survey questions related to ratios and utilisation. Twenty-one (21) of these were companion animal only clinics, ten (10) were mixed practice clinics and three (3) were equine only clinics. Ownership structure was primarily privately owned (approximately 60%), with the remaining being approximately 30% corporate (New Zealand or international) ownership and 10% other structures. Privately owned clinics tended to be smaller, while corporates were multibranch businesses. The survey did not identify those participants who were answering on behalf of large multibranch or corporate groups. As a result, the actual industry coverage may be greater than 34 out of the existing 403 veterinary clinics in New Zealand<sup>3</sup>. Other demographic data collected from the survey showed a diverse range across profitability, socioeconomic situation and location.

Table 1. Ratios of veterinarians to allied veterinary professionals and other paraprofessionals.

Ratio of AVP's to 1 FTE veterinarian	All clinics	Companion only clinics	Animal	Mixed Practice clinics
<b>Max</b>	4.0	4.0		3.0
<b>Min</b>	0.3	0.3		0.4
<b>Average</b>	1.6	1.9		1.0
<b>Median</b>	1.5	1.8		0.8

Table 2. Ratios of all staff (excluding veterinarians) to veterinarians.

Ratio of all AVP and PP staff <sup>1</sup> to 1 FTE veterinarian	All clinics	Companion only clinics	Animal	Mixed Practice clinics
<b>Max</b>	5.3	4.2		5.3
<b>Min</b>	0.9	1.0		0.9
<b>Average</b>	2.4	2.5		2.0
<b>Median</b>	2.2	2.6		1.4

Table 1 demonstrates the ratio of AVP's to 1 Full-Time Equivalent (FTE) veterinarian and Table 2 shows the ratio of all other staff (AVP's and PP's) to 1 FTE veterinarian. There is a significant range of differing staff ratios in the participating clinics. However, the average and medians of both ratios remain relatively low across all clinic types (less than 2 and slightly above 2 for AVP:1-FTE-Veterinarian and AVP's-and-PP's:1-FTE-Veterinarian, respectively). These are highly suggestive of under-utilisation, especially when considering the extensive scope of veterinary service duties that can be undertaken by non-veterinarians legally and ethically.

Limited literature that describes optimal ratios of support staff to veterinarians. The situation is likely complicated by each individual business scenario. Lloyd (2021) reported that ratios of 4:1 (veterinary nurses/technicians: 1 FTE veterinarian) would support maximising profitability. Anecdotally, New Zealand veterinarians and AVP's who have previously worked overseas report ratios of 4:1 or 5:1 (AVP and PP staff: FTE veterinarian) in companion animal clinics. They also reported benefits of this structure to them personally, the staff, animals, clients and the business.

3 New Zealand Veterinary Sector - New Zealand has 3380 registered veterinarians (source Veterinary Council of New Zealand (VCNZ) council register, 14th Feb 2022), of which 1222 are male, 2149 are female and 13 are not specified. Of those approximately 77 % work in clinical veterinary practice.

The actual number of veterinary clinical practices in New Zealand is not known. There are 403 veterinary practices, including referral practices identified in the VCNZ register as at 14th Feb 2022 but there is an acknowledged margin of error due to recording method which could lead to a practice being recorded twice under slightly different names and could be identifying branches of the same business.

It is estimated that 60% of veterinary practices in New Zealand are companion animal practices and 40% are mixed or large animal practices, however mixed or large animal only practices tend to be larger, employing higher numbers of veterinarians.

It is harder to compare large animal clinics in New Zealand with those overseas, due to the New Zealand farming model. However, large animal veterinarians in New Zealand recognise that a large part of their current role involves technical tasks which could be completed by an appropriately qualified technician. Like companion animal clinics, there is a lack of models or case examples to help guide this change.

The four responding clinics with the highest ratios (3.5 or greater) of AVP's and PP's to 1 FTE veterinarian all reported they were meeting or exceeding the business's financial goals. Interestingly, there was no reverse correlation. The clinics with lower staff ratios were also meeting their business's financial goals. The following themes were identified from the data:

### Actual Utilisation

The survey asked participants to identify who within the clinic usually carried out a list of specific tasks. The tasks provided can all be legally performed by AVP's and are skills taught within existing AVP training programmes. However, they were not labelled as AVP-specific tasks. Instead, participants were told it was simply a list of tasks performed in a veterinary clinic.

The task list was created based on legal boundaries, existing literature (Harvey & Cameron, 2019), by canvassing AVP's in clinical practice, consultation with members of the Allied Veterinary Professional Regulatory Council (AVPRC) and by reviewing the skills included in formal education programmes. The task list was not an exhaustive list. It specifically omitted rural animal technician technical tasks, such as disbudding and teat sealing. This task list was provided to participants alphabetically and did not imply an order of importance of the tasks.

Table 3. Task list for AVP's (veterinary nurses and rural animal technicians).

Task number	Task details	Task number	Task details
1	Administering prescribed medication – IM route	14	Medical record keeping
2	Administering prescribed medication – IV route	15	Microchipping*
3	Administration and monitoring of IV fluid therapy	16	Microscopy
4	Assisting with surgery	17	Monitoring and maintenance of anaesthesia
5	Booster kitten/puppy vaccinations*	18	Placement of IV catheters
6	Clinical examinations	19	Radiographic positioning and taking radiographs
7	Collection of detailed healthcare histories	20	Routine admission*
8	Coordinating care with other health care providers and specialists	21	Routine discharge*
9	Counselling and health care education to clients	22	Set up of IV fluids
10	Dental scale and polish*	23	Taking blood samples
11	Development of and active management of nursing care plans – physical, behavioural, diagnostic, and pharmacological interventions	24	Urinalysis
12	Diagnostic testing using an in-house blood analyser	25	Veterinary consultations*      Nursing
13	Induction of anaesthesia	26	Wound management and minor debridement

\*Veterinary Nurse only

Note: technician tasks, such as disbudding and teat sealing, were not included in the task list for the purposes of this survey.

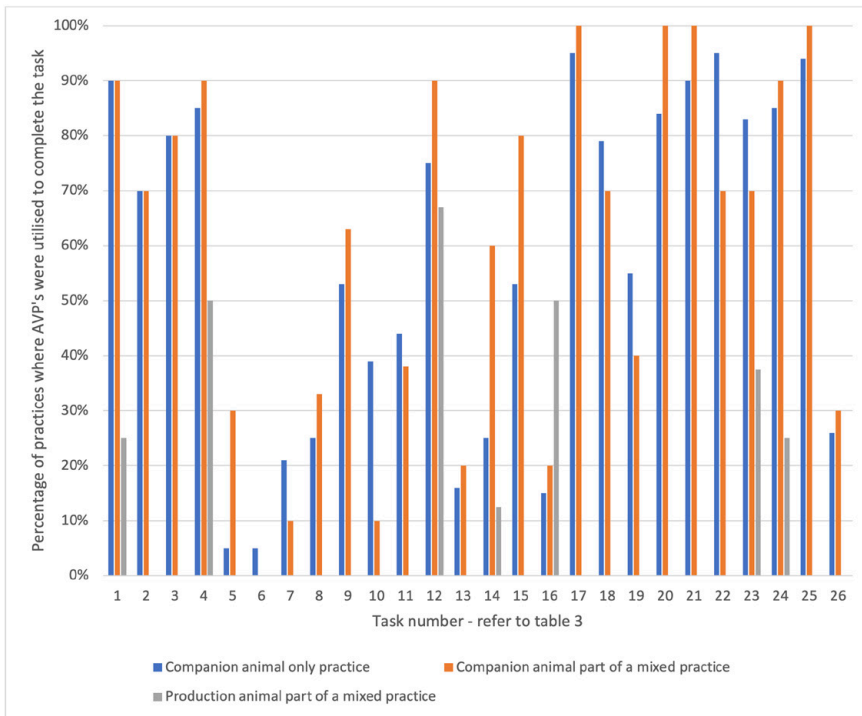


Figure 1. AVP utilisation for each task.

Figure 1 demonstrates how variable AVP utilisation is for each task, suggesting there are opportunities for increased utilisation. For companion animal AVP's, 9/26 of the tasks have AVP utilisation under 50% and a further 4/26 tasks have AVP utilisation between 50% and 70%. While it would seem reasonable that veterinarians may need to complete AVP tasks on occasion, the most efficient utilisation of staff would be seen when role appropriate tasks are allocated. Many tasks in Figure 1 are not completed by rural animal technicians. The task list was not an exhaustive list. It specifically omitted very seasonal rural animal technician technical tasks, such as disbudding and teat sealing, instead focussing on year-round tasks. Technicians are often used in practice for seasonal tasks such as teat sealing and disbudding (not included in the survey due to the seasonal nature of the tasks) and therefore only employed seasonally. There is an opportunity to examine widening the scope of the tasks undertaken by rural animal technicians during quiet seasons to allow for utilisation throughout the year. This may help clinics manage the significant peaks and troughs experienced in the current utilisation model of technicians more efficiently, and, in turn, allow veterinarians to complete tasks they currently do outside their normal work hours or focus on developing new business.

When the data was examined on a practice basis, the average utilisation of AVP's was approximately 57-60% of the 26 tasks included in the survey that can be delegated to AVP's for companion animal and 14% for production animal aspects of practice. The production animal data may be artificially low due to the omission of seasonal herd tasks, such as disbudding and teat sealing.

Job satisfaction may be low for these AVP's as they are not undertaking skilled tasks they are trained for according to Armitage-Chan and May (2018) and Brown (2020). This data suggests that veterinarians are expending valuable time completing technical tasks which other staff are trained for, potentially increasing their workload despite reducing their ability to complete veterinarian-specific tasks that cannot be delegated.

This may negatively influence veterinarian wellbeing. In addition, the costing structure could be impacted, as veterinarians have a salary 2-3 times higher than an AVP (Careers.govt.nz). Tasks may be more costly to the client or less profitable to the business than otherwise necessary.

## Perceived Utilisation

Data related to perceived utilisation asserts the percentage of tasks clinic owners/managers felt their veterinarians performed were AVP tasks. Forty-three percent (43%) of participants thought their veterinarians did between 0-20% AVP tasks, 37% felt this was 20-40%, whilst only 20% felt this was over 40%. This suggests incongruence between the perceptions and the reality of utilisation.

If more tasks could be redirected to AVP's there are considerable opportunities to free up veterinarian time. Veterinarians can then complete their work within employed hours or undertake new business, whilst AVP's may feel more valued and have better wellbeing as a result (Brown, 2020, Page & Vella-Brodrick, 2009, Grawitch, et al., 2006). Costing structures may also be more efficient. In the current COVID pandemic, many clinics are having to schedule appointment weeks in advance due to high workloads. Assuming AVP's are available to employ, increased AVP utilisation could reduce this wait time for clients, which would result in business benefits in terms of both client satisfaction and animal welfare.

This data further indicates a lack of knowledge regarding what are appropriate AVP tasks. This may also explain why we have such low ratios of AVP's to veterinarians in New Zealand. Furthermore, lack of literature and clear case studies that model increased AVP ratios is a gap that needs to be filled, in order to showcase how higher ratios of AVP's can improve income, value to clients and how valued staff feel, as well as overall staff wellbeing.

## Barriers to utilisation

Participants were asked in a free text question to identify what they considered were barriers to increased utilisation of AVP's. The data was able to be categorised into 10 themes. The themes were similar, regardless of clinic type, highlighted in Table 5.

Table 5. Barriers to increased utilisation of AVP's.

Theme	Explanation
<b>Client trust/ acceptance of AVP's</b>	Client willingness to accept services from an AVP were considered a limiting factor.
<b>Vet trust in AVP's</b>	This was a common barrier cited and is likely multifactorial. It could potentially be related to the veterinarian's own perfectionist tendencies, lack of time to support training of the AVP to ensure they can perform at the required standard, and current education standards, meaning graduate AVP's do not have the skills desired.
<b>AVP skill</b>	Many participants commented that the training of AVP's was not adequate and therefore they could not delegate tasks to them.
<b>Legislation and regulation of AVPs</b>	There were comments that legislation was preventing better utilisation of AVP's. However, all skills listed are currently legal (except for subgingival scaling by AVP's, which may be preventing veterinarians from delegating dental scale and polish to AVP's).
<b>After Hours</b>	After hours is widely cited as a reason AVP's are not utilised better. Participants would rather employ an additional veterinarian, to better share the after-hours workload, than an AVP.
<b>The capacity of the building</b>	Participants stated that there were not enough consulting rooms, preventing AVP's running veterinary nursing consultations, as an example. Other data collected suggested AVP's are rarely used in veterinary consultations to support the veterinarian.
<b>Team culture</b>	Some participants stated their clinics had a culture of distrust in AVP's and no expectation that AVP's can carry out specific tasks.
<b>Financial</b>	Some responding practice do not believe they can afford to employ quality AVP's.
<b>Time</b>	Lack of time to train AVP's to the expected standards, with a perception that it is easier for the veterinarians to perform the tasks instead. This is potentially closely linked to team culture.
<b>Caseload</b>	Limited caseload was also cited as a reason for low utilisation.

Team culture, time for training, legislation, and regulation, AVP skill, veterinarian trust and client trust in AVP's appear to be linked. The team culture requires trust in each other, allowing the whole team to contribute to creating solutions, having training plans in place and clear expectations around each team members roles and functions. According to Lai et al. (2021), pet owners view veterinarians as their most trusted source of pet health information. The Royal College of Veterinary Surgeons (RCVS, 2019) reported that veterinarians were the most trusted professionals, after opticians and pharmacists. Extrapolating from this, if veterinarians can demonstrate and communicate their trust in their AVP staff to the client, then clients will be likely to transfer this trust to the AVP. Therefore, the focus should be on creating opportunities for veterinarians to learn to trust their AVP's more. This will likely require a multifactorial approach, starting with ensuring there is a known standard that is expected from all AVPs on graduation, followed by a clear development plan for the new graduate AVP throughout their career. Career plans for AVP's are currently uncommon. Alongside this, there needs to be clarity on who can and cannot perform each task, and legislative change to regulate the AVP sector.

After hours being a barrier, appears to stem from an industry culture where AVP's are generally excluded from contributing to after-hours services. This will require further research and development of models that support utilisation of AVP's alongside after-hours service sharing models.

Financial barriers, building capacity and limited caseloads that have been identified would also require further case-specific modelling. A one size solution is not going to fit every clinic situation, and there may be other priorities for some businesses.

### **Opportunities for the veterinary practice with increased AVP utilization**

When asked in the survey "What opportunities do you see for veterinary practice growth, including increasing the scope of practice of your veterinarians, if allied veterinary professionals were used to their full capacity?", many participants answered that there was opportunity for AVP's to perform more skilled tasks. They then proceeded to state the tasks that AVP's can already legally perform as examples. This links back to a lack of understanding around what AVP's are trained to do.

Several participants identified that it would allow veterinarians more time to better research cases and treatment, see more clients in the day, develop new income streams, as well as help to alleviate the veterinarian shortage. They could also understand how this would increase business income and job satisfaction.

The opportunities identified suggest that participants recognise there is an underutilised resource in veterinary clinics. Case modelling that addresses the barriers along with real-life case studies would be helpful.

### **What is needed now to support increased utilisation**

1. A clear scope of practice for AVP's and PP's (such as animal healthcare assistants) – veterinarians need to know what tasks are appropriate for AVP's and PP's to complete. AVP's and PP's also need to have clear boundaries. Work is currently underway by AVPRC to create this scope.
2. Ensuring there is clear consistency in AVP education as well as clear career pathways that allow AVP's and PP's to continue developing skills. Work is currently underway in the education sector to create a unified programme, with support by the industry regulating body to direct the curriculum and clinical skills expectations. There are discussions surrounding the development of a micro credential programme to prove evidence of skill competency, to help increase confidence in AVP's and trust from veterinarians.
3. Further investigation into the barriers and opportunities identified by improving staff utilisation.
4. Example business models that show how to better utilise staff and the value that efficient staff utilisation creates for staff, clients, and the business. Every business scenario is different, hence, there is unlikely to be a one size fits all approach. Models will need to be adjustable for factors such as locality, building capacity and client load.

## Limitations of research

The limitations of this research at this stage does not provide ultimate solutions to the industry to tackle the underlying problem.

## Future research


In 2022, further research is being undertaken using focus groups to develop models using high AVP and PP to veterinarian ratios to demonstrate how it works practically within a business and the impacts on finances, staff wellbeing and client satisfaction. It is also working through mitigation of the barriers identified. Many other factors, such as staff wellbeing, fee structures and remuneration, will contribute to this and further research is needed.

## CONCLUSION

The AVP-and-PP:I-FTE-veterinarian ratios are suggestive of poor utilisation of veterinary staff. The data gathered on AVP utilisation supports this. It is often articulated that AVP's are underutilised. Whilst this may be true, it misses the fact that veterinarians are also being underutilised. If a veterinarian spends a large proportion of their time performing tasks which AVP's can proficiently perform (with the appropriate in-clinic support and mentoring), then veterinarians will have less time to dedicate to veterinarian-specific tasks. Anecdotally, reports from industry describe veterinarians currently working long unpaid hours writing client records, reading, and researching cases and following up with clients.

Ineffective utilisation of skill sets also impacts business cost structures. This is reflected in increased business costs, inappropriate staff salaries and costs to the client. While there are always going to be cases where it just makes sense for the veterinarian to perform the AVP task, a change in staffing ratios and structure, addressing the barriers of trust and training, and providing clear financial benefit modelling, those cases would likely be a small minority.

In addition to contributing to workload issues and business profitability, underutilisation of skill sets can be linked to individual staff feeling undervalued, which reduces job satisfaction and, ultimately, personnel wellbeing (Kuijk 2019).

**Francesca Brown**  <https://orcid.org/0000-0001-8471-6468> is a veterinarian who graduated from Massey University (1998). Since graduating and gaining experience in clinical practice she moved to education and then leadership in Allied Veterinary Professional (AVP) education, at both Otago Polytechnic, Te Pūkenga and VetFutures Aotearoa. Over her career she has seen first-hand and through her network of colleagues in the industry (both vets and AVPs) the significant challenges faced by personnel.

Correspondence to: Francesca Brown, School of Veterinary Nursing, Otago Polytechnic | Te Kura Matatini ki Otago, Forth Street, Private Bag 1910, Dunedin 9054, New Zealand. Email: [Francesca.brown@op.ac.nz](mailto:Francesca.brown@op.ac.nz)

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