

Quantitative and qualitative assessment of the demand for veterinarians and animal health technologists in western Canada

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Abstract – A manpower survey of veterinary practices in western Canada found that there were potentially 314 full-time equivalent veterinary vacancies. However, only 8% of the respondents were in urgent need of another veterinarian. The results underscore that hiring intentions are best viewed as a continuum and not as a simple dichotomous variable: “Looking to hire? (Yes/No)”.

Résumé – Évaluation quantitative et qualitative de la demande des vétérinaires et des technologues en santé animale dans l'Ouest canadien. Une enquête sur la main-d'œuvre dans les pratiques vétérinaires de l'Ouest canadien a constaté qu'il y avait potentiellement 314 postes vétérinaires équivalents temps plein à pourvoir. Cependant, seulement 8 % des répondants éprouvaient un besoin urgent pour un autre vétérinaire. Les résultats soulignent qu'il est préférable de considérer les intentions d'embauche comme un continuum et non comme une simple variable dichotomique : «Vous cherchez à embaucher?» (Oui/Non).»

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In 2004, a veterinary manpower survey, conducted on behalf of the Saskatchewan Veterinary Medical Association, concluded that western Canada needed an additional 240 full-time and 119 part-time veterinarians (1). A subsequent survey conducted in 2006 by Jelinski and Campbell (2) yielded similar results: western Canada required an additional 347 veterinary full-time equivalents (FTEs). While both surveys returned similar results, it was difficult to reconcile the large number of vacancies with the relatively low number of job postings in national and provincial veterinary publications. This begs the question as to whether the survey results were representative of the demand for veterinarians.

Surveys are prone to a number of sources of bias (3). One of the most commonly encountered is the response bias, which arises when the respondents' answers to the survey differ from those of the broader target population. To put this in context, veterinarians who are looking to hire a new associate may be

more likely to respond to a manpower survey versus those not in a hiring mode. Another common source of bias relates to the structure and wording of the survey. For example, veterinary manpower surveys invariably ask something to the effect, “Are you looking to hire another veterinary associate (Yes/No)?” However, hiring decisions are complex and not all practices share the same level of urgency or “determinedness;” therefore, it may not be appropriate to reduce this question to a simple dichotomous variable (Yes/No).

The study described herein had 3 objectives: 1) to describe, in quantitative terms, the demand for veterinarians and animal health technologists in western Canada using the traditional approach of asking whether the practices were looking to hire (Yes/No); 2) to use a set of descriptive statements to qualitatively assess the respondent's level of determinedness with respect to hiring intentions; and 3) to describe which hiring strategies (e.g., word of mouth, newsletter advertisements) were most commonly used in western Canada to hire veterinarians and animal health technologists (AHTs).

The sampling frame consisted of all veterinary practices in western Canada ($n = 1099$), compiled from the directories of the 4 western provincial veterinary associations. In July 2008, a 3-part survey was mailed to each practice along with a self-addressed, postage-paid, return envelope. Reminders were sent to the nonresponders in October and returns were accepted until January 2009.

Part I of the survey obtained background data on the practice (clinic name and postal code) and on each veterinarian in the practice. The practitioner data included the average number of hours each veterinarian worked per week and the percentage of time they devoted to each of the following types of practice: small animal, beef, dairy, equine, swine, poultry, and

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“all other.” Practices that devoted 100% of their time to small animals, horses, and/or “other” species (exotic or minor species) were classified as companion animal (CA) practices; practices that devoted 1% to 50% of the veterinarians’ time to food animals (beef, dairy, swine, and poultry) were classified as mixed animal (MA) practices; and those that spent > 50% of the veterinarians’ time on food animals were classified as food animal (FA) practices.

Part II included questions related to both the quantitative and qualitative demand for veterinarians in western Canada. Specifically, were practices currently looking to hire (Yes/No), and/or had they hired a new associate within the previous 24-month period. Those currently looking were directed to choose which of the following qualitative statements best described their hiring intentions: 1) not actively looking to hire someone but would hire another veterinarian if the “right person” came along; 2) actively seeking a new associate; however, the person must meet specific criteria, which may be related to education, experience, personality, etc.; and 3) in urgent need of another veterinarian and would hire anyone who is qualified for the job. The final question of this section asked the respondents to choose from a list of options which hiring strategies they use when searching for a new associate.

Part III was essentially a repeat of Part II except it was dedicated to obtaining data on past and present hiring intentions/strategies for animal health technologists (AHTs); an AHT was defined as someone with an AHT designation or an employee with a comparable diploma. The survey data were entered onto a relational database (Microsoft® Office Access 2003; Microsoft, Redmond, California, USA) and downloaded onto a spreadsheet (Microsoft® Office Excel 2003; Microsoft), at which point a quality control check was performed, comparing the raw survey data to the spreadsheet data. The data were analyzed in a statistical software package (Stata 10.1; StataCorp, College Station, Texas, USA). Descriptive statistics were used to summarize the data. All part-time vacancies were aggregated into FTE positions, wherein working > 35 h/wk constituted one FTE. Frequency distributions provided a breakdown of the hiring strategies for veterinarians and AHTs.

Responses were received from 47% (518/1099) of practices, but not every respondent answered every question. Response rates differed significantly between provinces ($P < 0.001$). A lower response rate was obtained from practices in British Columbia (38%; $n = 185$), while response rates from Alberta (56%; $n = 215$), Saskatchewan (55%; $n = 66$), and Manitoba (51%; $n = 56$) were comparable.

Table 1 provides a breakdown, by practice type, of past and present hiring intentions and activities for veterinarians and AHTs. Ninety-four (94) practices were currently looking to hire another veterinarian. Another 76 practices had hired within the previous 24 mo and were looking again. In total, 170 practices were looking to fill at least 148 FTE positions. The number of FTE vacancies was marginally higher than 148 because 18 respondents did not indicate the number of hours per week the new hire was expected to work. If the vacancy data from the responding practices were extrapolated to the 53% of practices that did not respond, then there were potentially 314 FTE vet-

erinary vacancies in western Canada, which was similar to the 2006 survey estimate of 347 FTEs (2).

With respect to the AHT vacancies, 488 practices provided data on past and present hiring intentions and activities (Table 1), 167 of which were looking to fill 179 FTE positions. Again, if these vacancy data were extrapolated to the entire sampling frame (all 1099 practices) then western Canada may have required another 403 FTE technologists. The caveat to this extrapolation is that not every veterinary practice employs AHTs; therefore, it is difficult to arrive at a denominator for practices with AHTs. The extrapolation does, however, provide a means to compare the crude demand for veterinarians to that of AHTs. Overall, from a purely quantitative perspective there was a strong demand for both veterinarians and AHTs.

As previously stated, 94 practices were currently looking to hire another veterinarian, and another 76 had both hired a veterinarian within the previous 24 mo and were currently hiring again. These latter 76 practices were excluded from the quantitative analysis because in many cases they failed to provide separate data sheets on both past and current hiring intentions; hence, it was impossible to ascertain whether the FTE data related to past or current hiring activities. Of the 94 practices currently looking, 31% ($n = 29$) were “not actively looking to hire but would hire another veterinarian if the ‘right person’ came along;” 61% ($n = 57$) were “actively seeking a new associate; however, the person must meet specific criteria;” and 8% ($n = 8$) were “in urgent need of another veterinarian and would hire anyone who is qualified for the job.” A similar analysis was done for the 62 practices looking to hire another AHT: 34% (21) were not actively looking but would hire if the right person came along; 50% (31) were actively looking to hire; and 16% (10) were in urgent need of another AHT.

Tables 2 and 3 provide a breakdown of the common hiring strategies used to attract veterinarians and AHTs, respectively. Regardless of whom they were looking to hire, veterinarians or AHTs, advertising in newsletters and by “word of mouth” were the most commonly used strategies. Furthermore, ~25% of practices did not bother to advertise, instead choosing to rely upon a strategy of screening unsolicited applicants. Lastly, ~25% of practices had either hired, or were thinking of hiring, a former summer student. This last finding concurs with previous reports wherein ~40% of graduates anticipated being hired by a practice in which they either worked and/or had a prior relationship with the veterinarian(s) (4,5).

We conclude that hiring intentions cannot be adequately captured by a simple dichotomous variable (“Yes/No”). Rather, an employer’s determinedness to hire is best viewed as a continuum, ranging from passively looking to being in urgent need of a new associate. The wages being offered also provide some indication of the market demand for veterinary associates and AHTs.

A central tenet of labor economics is that the prevailing wage rate being offered is a metric or surrogate indicator for assessing the demand for labor (6). In this study, the mean annual salary offered to full-time veterinarians was \$65 506. If we accept the premise that these wages are relatively low, then the corollary is that the demand for veterinarian associates is not so great as to be driving up wages. The wage data coupled with the qualitative

Table 1. Percent (number) breakdown of past and present hiring intentions and activities for veterinarians and AHTs, by practice type

	Practice type			
	CA	MA	FA	Unknown
DVM hiring activities (<i>n</i> = 518)	65 (337)	24 (123)	10 (50)	2 (8)
Looking to hire (<i>n</i> = 94)	61 (57)	31 (29)	7 (7)	1 (1)
Have hired and looking to hire (<i>n</i> = 76)	67 (51)	26 (20)	5 (4)	1 (1)
Have hired and not looking (<i>n</i> = 137)	68 (93)	24 (33)	4 (7)	3 (4)
Have not hired and not looking (<i>n</i> = 211)	64 (136)	19 (41)	15 (32)	1 (2)
AHT hiring activities (<i>n</i> = 488)	65 (319)	24 (119)	9 (43)	1 (7)
Looking to hire (<i>n</i> = 63)	71 (45)	25 (16)	3 (2)	0 (0)
Have hired and looking to hire (<i>n</i> = 104)	69 (72)	26 (27)	3 (4)	1 (1)
Have hired and not looking (<i>n</i> = 157)	65 (102)	29 (45)	4 (7)	2 (3)
Have not hired and not looking (<i>n</i> = 164)	61 (100)	19 (31)	18 (30)	2 (3)

CA — Companion animal practice, exclusively small animals, equine, and exotics.

MA — Mixed animal practice, 1% to 50% of veterinarians' time spent on food animals.

FA — Food animal practice, > 50% of veterinarians' time spent on food animals.

Table 2. Breakdown (number and percent) of the hiring strategies that respondents may have used, or were currently using, to assist in hiring another veterinarian (*n* = 287)

Hiring strategy	Number of practices	Percentage of practices
“Word of mouth” advertising	174	60.6%
Provincial veterinary newsletter	145	50.5%
CVMA advertisement	128	44.6%
Posted an advertisement at a veterinary college	101	35.2%
Not advertising, but will screen ‘unsolicited’ applicants	70	24.4%
Looking to hire a former student	68	23.7%
Contact college for background on graduates	55	19.2%
Other	31	10.8%
Visit colleges to meet with potential applicants	20	6.9%
Advertised in a foreign country	19	6.6%
Used a professional “head hunter”	9	3.1%

CVMA — Canadian Veterinary Medical Association.

vacancy data lead us to believe that the true demand for veterinary associates in western Canada at the time of the survey, was significantly less than 314 FTEs.

With respect to the AHT data, it was noteworthy that the demand for AHTs, both in terms of the number of vacancies and the percentage of practices in urgent need of another AHT, exceeded that of the demand for veterinary associates. Again, it was troubling to see that the average wage being offered for a full-time AHT was only \$32 308. We believe that the low prevailing wages were indicative of the true market demand for veterinarians and AHTs.

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Table 3. Breakdown (number and percent) of the hiring strategies that respondents may have used, or were currently using, to assist in hiring an animal health technician (*n* = 305)

Hiring strategy	Number of practices	Percentage of practices
Provincial veterinary newsletter	178	58.4%
“Word of mouth” advertising	150	49.2%
Posted an advertisement at a AHT college	130	42.6%
Not advertising, but will screen “unsolicited” applicants	91	29.8%
Looking to hire a former student	90	29.5%
Contact college for background on graduates	82	26.9%
Other	40	13.1%
Visit college to meet with potential applicants	23	7.5%

AHT — Animal health technician.

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