“Is there really a shortage of food animal veterinarians?”

Murray Jelinski DVM, MSc
John Campbell DVM, DVSc

Funded by the Beef Cattle Research Council
“What is the biggest problem facing the veterinary profession today? Is the question I was most frequently asked during my most recent trip across Canada.”

“The answer is, of course, the shortage of veterinarians”.

George C. Fisher
President, CVMA
CVJ 1960
“The shortage of veterinarians is a world-wide problem...The rapid growth of this country has extended the veterinary profession to dangerous limits.”

T. Lloyd Jones
CVJ 1966

“There is not much doubt that there is a shortage of new graduates willing to work in food animal practice.”

Terry L. Church
CVJ 1986

“The survey shows significant shortages of veterinarians and veterinary services in all sectors but especially rural areas.”

Duane Landals
AVMA, Registrar 2005

but...
• “There is no shortage of food animal veterinarians *per se*, but there is a shortage of veterinarians satisfied with a traditional food animal career… In the real world, any shortage that is truly “demand driven” will be quickly dealt with.”

G. Kee Jim
CVJ 1989

• Oversupply of veterinarians in Canada could lead to significant drop in incomes: Demographic analysis of the veterinary profession in Canada commissioned by the CVMA.

CVJ 1998
Have we critically assessed both the supply and demand for veterinarians?
North American Studies

- PEW Report, 1988
- KPMG (“Mega-Study), Brown and Silverman, 1999
- Brakke Consulting Report, 1998
Studies continued

- Demographic Survey Forecast (Osborne), 2002
- Diamant Marketing Group – Veterinary Human Resources Planning for Western Canada, 2003
- Food Supply Veterinary Medicine (FSVM) Study, 2006
- AAVMC - An Assessment of Current and Future Workforce Needs in Veterinary Medicine, 2007
KPMG ("Mega-Study", 1999):

- “…there is an excess of veterinarians… result in stagnant veterinary incomes over the next 10 years.”
- 1.7% decline in FTE veterinarians servicing the LA practice segment.
- Consolidation in the beef, dairy and swine producing sectors will result in a flat demand for veterinarians.

- Currently there is an oversupply of veterinarians in Canada (1998).
- By 2016 the oversupply will result nationally in a 9% decline in veterinary income.
- Veterinarians in Saskatchewan and the Atlantic provinces will experience a 30% decline in income.
Food Supply Veterinary Medicine Study (Prince Study)

- FSVM study forecasted a mean overall shortage of FSVM veterinarians of 4% per year (96 vets for every 100 vacancies).
- Conclusions based upon opinions of ~20 veterinarians in each sector. For the “Mixed” practitioner sector, 7/20 respondents were Canadians and only two were actively practicing.
- Veterinary profession is at a **crossroads**.
Diamant Study (2003) – Western Canada

- Small animal sector needs 73 FTEs
- Mixed animal sector needs 142 FTEs
- Large animal sector needs 4 FTEs
  - Total shortage = **219 FTEs**
  - Also need 400 AHTs (FTE)

- Methodology
  - Not a random sampling
  - Only surveyed those (1,623/2,589) having an email address.
  - 327 respondents (12.6%)
    - 32 food animal
    - 127 mixed
    - 123 small animal
Research (Jelinski and Campbell)

- Student WCVM Class of 2006
- Canadian graduates - 2007
- Practitioner survey
- Clinic survey
- Mentorship survey
“It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from the regard for their own interest.”

Adam Smith
“Wealth of Nations” (1776)
Supply – Demand – Equilibrium

Diagram showing the relationship between supply (S) and demand (D1, D2) and the equilibrium point (Q1, P1) where supply equals demand.
Supply and Demand as it relates to the western Canadian Veterinary Profession
Ratio of the number of practitioners/100,000 people, by province, and by year.

<table>
<thead>
<tr>
<th>Year</th>
<th>BC</th>
<th>AB</th>
<th>SK</th>
<th>MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>15.32</td>
<td>16.78</td>
<td>16.26</td>
<td>16.82</td>
</tr>
<tr>
<td>1997</td>
<td>18.43</td>
<td>18.81</td>
<td>19.94</td>
<td>17.79</td>
</tr>
<tr>
<td>2002</td>
<td>20.92</td>
<td>22.81</td>
<td>24.08</td>
<td>18.62</td>
</tr>
<tr>
<td>2005</td>
<td>21.27</td>
<td>25.00</td>
<td>23.11</td>
<td>18.14</td>
</tr>
</tbody>
</table>
The “mythical” food animal practitioner

- Myth #1 – mixed animal practice is synonymous with food animal practice
What is your definition of a “rural” Mixed Animal Practitioner?

- 58% of private practitioners spend 100% of their time on Companion animals; 2.9% spend 100% on Food animals.
- 68% spend >90% on Companion animals; 5.5% spend >90% on Food animals.
- Only 18.6% spend >50% on Food animals.
Division of labour in western Canada
(“Clinic Survey” data: 706/1100 clinics, 1872/2227 practitioners)

Percentage of time (hours) spent on each species:

- Beef: 13%
- Dairy: 10%
- Swine: 2%
- Other: 3%
- Poultry: 0%
- Equine: 72%

Legend:
- Blue: Beef
- Light blue: Dairy
- Red: Swine
- Yellow: Other
- Purple: Poultry
- Green: Equine
Breakdown (%) of time spent, by species, of 60 Alberta Mixed Animal practices (157 practitioners)
The “mythical” food animal practitioner

- Myth #1 – mixed animal practice is synonymous with food animal practice
- Myth #2 – new graduates are not interested in mixed or food animal practice
Class of 2007: What type of job do they anticipate in 6 months from grad?
Jelinski, Campbell, Lissemore, Miller CVJ (in press)

<table>
<thead>
<tr>
<th></th>
<th>AVC (n = 25)</th>
<th>OVC (n = 85)</th>
<th>WCVM (n = 56)</th>
<th>Total (n = 166)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusively small animal</td>
<td>28.0</td>
<td>57.6</td>
<td>26.8</td>
<td>42.8</td>
</tr>
<tr>
<td>Exclusively equine</td>
<td>4.0</td>
<td>7.1</td>
<td>5.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Exclusively food animal</td>
<td>4.0</td>
<td>4.7</td>
<td>5.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Mixed animal</td>
<td>36.0</td>
<td>17.6</td>
<td>37.5</td>
<td>27.1</td>
</tr>
<tr>
<td>Internship</td>
<td>24.0</td>
<td>10.6</td>
<td>10.7</td>
<td>12.7</td>
</tr>
<tr>
<td>Graduate studies</td>
<td>4.0</td>
<td>2.4</td>
<td>10.7</td>
<td>5.4</td>
</tr>
</tbody>
</table>
## Summary of Veterinary Career Path Choices (Western Canadian Veterinarians)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>FA</th>
<th>MIXED</th>
<th>EQ</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Vet</td>
<td>17</td>
<td>21</td>
<td>45</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Grad’n</td>
<td>25</td>
<td>16</td>
<td>48</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>2-yr</td>
<td>38</td>
<td>16</td>
<td>34</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Now</td>
<td>50</td>
<td>13</td>
<td>22</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>
## Current Type of Employment – Percentage (number)
### Survey of Western Canadian Veterinarians

<table>
<thead>
<tr>
<th>Pre-veterinary</th>
<th>Small</th>
<th>Mixed</th>
<th>Food</th>
<th>Equine</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Animal</td>
<td>85.5%</td>
<td>8.7%</td>
<td>0</td>
<td>0</td>
<td>5.8%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(59)</td>
<td>(6)</td>
<td>(0)</td>
<td>(0)</td>
<td>(4)</td>
<td>(69)</td>
</tr>
<tr>
<td>Mixed Animal</td>
<td>46.0%</td>
<td>32.3%</td>
<td>12.2%</td>
<td>3.7%</td>
<td>5.8%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(87)</td>
<td>(61)</td>
<td>(23)</td>
<td>(7)</td>
<td>(11)</td>
<td>(189)</td>
</tr>
<tr>
<td>Food Animal</td>
<td>36.7%</td>
<td>15.6%</td>
<td>33.3%</td>
<td>6.7%</td>
<td>7.8%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(33)</td>
<td>(14)</td>
<td>(30)</td>
<td>(6)</td>
<td>(7)</td>
<td>(90)</td>
</tr>
<tr>
<td>Equine</td>
<td>47.5%</td>
<td>10.0%</td>
<td>2.5%</td>
<td>37.5%</td>
<td>2.5%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(19)</td>
<td>(4)</td>
<td>(1)</td>
<td>(15)</td>
<td>(1)</td>
<td>(40)</td>
</tr>
</tbody>
</table>
The “mythical” food animal practitioner

- Myth #1 – mixed animal practice is synonymous with food animal practice
- Myth #2 – new graduates are not interested in mixed or food animal practice
- Myth #3 – veterinary colleges don’t select the “right” candidates
<table>
<thead>
<tr>
<th></th>
<th>AVC</th>
<th>OVC</th>
<th>WCVM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender (n=165(^a)):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>77</td>
<td>49</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>(84.0%)</td>
<td>(91.7%)</td>
<td>(87.5%)</td>
<td>(89.1%)</td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(16.0%)</td>
<td>(8.3%)</td>
<td>(12.5%)</td>
<td>(10.9%)</td>
</tr>
<tr>
<td><strong>Upbringing (n=166):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>10</td>
<td>58</td>
<td>36</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>(40.0%)</td>
<td>(68.2%)</td>
<td>(64.3%)</td>
<td>(62.7%)</td>
</tr>
<tr>
<td>Rural</td>
<td>15</td>
<td>27</td>
<td>20</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>(60.0%)</td>
<td>(31.8%)</td>
<td>(35.7%)</td>
<td>(37.3%)</td>
</tr>
<tr>
<td><strong>Size of center raised in (n=166):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small ((\leq 10,000))</td>
<td>12</td>
<td>22</td>
<td>25</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>(48%)</td>
<td>(25.9%)</td>
<td>(44.6%)</td>
<td>(35.5%)</td>
</tr>
<tr>
<td>Large (&gt;10,000)</td>
<td>13</td>
<td>63</td>
<td>31</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>(52%)</td>
<td>(74.1%)</td>
<td>(55.3%)</td>
<td>(64.5%)</td>
</tr>
</tbody>
</table>
What type of students are we selecting?
Class of 2007 (70% response rate)
(Jelinski, Campbell, Lissemore, Miller CVJ 2009 in press)

● Male: Female Ratio
  - AVC: 16% Male, 84% Female
  - OVC: 8% Male, 92% Female
  - WCVM 13% Male, 87% Female

● Rural Upbringing
  - AVC 60%
  - OVC 32%
  - WCVM 36%
What type of students are we selecting?
Class of 2007 (70% response rate)
(Jelinski, Campbell, Lissemore, Miller CVJ 2009 in press)

● Size of center of employment (<10,000)
  – AVC (22%)
  – OVC (30%)
  – WCVM (40%)
Factors associated with choosing a career in Mixed or Food Animal Practice
(Jelinski, Campbell, Lissemore, Miller CVJ 2009 in press)

- Being raised in a small centre (<10,000)
- Being male
  - Note this was not significant in previous WCVM surveys of graduates
- Having a good to excellent knowledge of agriculture at the time of entry to veterinary college
  - Determined by self assessment
Exodus of male and female veterinarians from food animal related practice (72 males, 56 females)
Upbringing of "switchers" (n=125)

Years in Practice

Farm
Acreage
Town/City
The “mythical” food animal practitioner

- Myth #1 – mixed animal practice is synonymous with food animal practice
- Myth #2 – new graduates are not interested in mixed or food animal practice
- Myth #3 – veterinary colleges don’t know how to select the “right” candidates
- Myth #4 – new graduates are “all about the money”
Why the profession cannot retain food animal practitioners

- Long hours and too many nights on-call
- LONG HOURS AND TOO MANY NIGHTS ON-CALL
- LONG HOURS AND TOO MANY NIGHTS ON-CALL
- LONG HOURS AND TOO MANY NIGHTS ON-CALL
Why the profession cannot retain food animal practitioners

- Long hours and too many nights on-call
- Lack of mentorship and support
- Noncompetitive salaries
Wages and work load of Veterinary Employees

- CA = $79,130  FA = $75,000  MA = $72,600
- CA = 47 hr/wk  FA = 59.8 hr/wk  MA = 53.1 hr/wk
- CA = 11.6 d/mo  FA = 15.9 d/mo  MA = 11.6 d/mo
- CA = $36.28/hr  FA = $27.17/hr  MA = $29.24/hr
- New graduates earn ~ $65,000/annum
Conclusions from wage data:

1. The veterinary profession is not governed by the universal laws of supply and demand.
2. The shortage of food animal practitioners is more of a myth than reality.
Other points to ponder
Percentage of multi-person practices by province

% of Clinics

1 2 3 4+

BC AB SK MB

% of Clinics

1 2 3 4+

BC AB SK MB
Western Canadian Cow-Calf Operators by Gender and Age (Stats Canada 2006)

Number of Producers

- Male
- Female
Year-end price of Alberta A1-A2 Steers, actual and adjusted for inflation (mean=2.69%/annum)
Average Wait time for Veterinary Services (Telephone survey of 50 Mixed and 49 Small Animal Clinics)

- **MIXED**
  - Cat Neuter = 7.0 d (1-35 d)
  - Dog Neuter = 7.6 d (1-35 d)
  - Dental = 7.3 d (0-21 d)
  - Vaccination = 2.5 (0-35 d)
  - Medical Case = 0.4 d (0-2 d)

- **SMALL ANIMAL**
  - Cat Neuter = 6.6 d (1-21 d)
  - Dog Neuter = 8.5 d (1-28 d)
  - Dental = 10.2 d (1-28)
  - Vaccination = 4.3 d (1-28 d)
  - Medical Case = 0.6 d (0-5 d)

- Pregnancy checks = 6.2 d (1-21 d)
- Bull Evaluation = 6.7 d (1-7 d)
- Medical case = 0.8 d (1-4 d)
- Calving = 0.9 hr (0-4 h)
- **C. Section = 0.8 hr (1-2 h)**
- Prolapsed uterus = 0.7 h (1-2)
Critical Control Points of Mentorship

- 1st meaningful interaction with a veterinarian = 12.4 y
- Average age at time of decision to become a veterinarian = 15.2 y, 60% decided by 18 y of age
- 18% of veterinarians had a family member or friend who was a veterinarian
Mentorship survey - conclusions

- 24.4% ♂/42.5% ♀ indicated that poor mentorship was the #1 reason for leaving a place of employment
- 36.6% ♂/54.5% ♀ endorsed a 1 y internship in practice before being fully licensed
- 65.9% ♂ and 76.1% ♀ think mentorship should be added to the veterinary curriculum
Summary (2001 data)

- SK – 96% of centres are non-viable and they represent 22.2% of the population.
- AB – 86% of centres are non-viable and they represent 7.4% of the population
- MB – 93% of centres are non-viable and they represent 11.1% of the population
Veterinarians migrate to areas of greatest demand

Mixed practice is becoming small animal practice

Fewer farms, larger operations, translates into fewer veterinarians (poultry, swine, dairy, feedlot)

We don’t have a shortage of veterinarians but an oversupply of veterinary clinics (Darren Osborne)

Employee recruitment/retention is an HR issue not a money issue

Need to address the role of technicians in delivering food animal services – “cost-driven pricing” versus “price-driven costing” (Peter Drucker)