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**An open letter to Mark Lawrie, President of the Australian Veterinary Association  
and other representatives of the veterinary profession and government regulators**

6 May 2010

**Attention:** Mark Lawrie, President of the Australian Veterinary Association (AVA) \*

cc:

- Graham Swinney, President of the Australian Small Animal Veterinary Association (ASAVA)
- Warren Foreman, President of the South Australian Division of the Australian Veterinary Association
- Julie Strous, Executive Officer, Australasian Veterinary Boards Council
- Peter Punch, Chair, Australasian Veterinary Boards Council
- Sue Millbank, Registrar, Veterinary Surgeons Board of South Australia
- Steven Holloway, Head of Small Animal Medicine, University of Melbourne
- Michael Day, Chair of the Scientific Advisory Committee, and Chair of the Vaccination Guidelines Group, World Small Animal Veterinary Association (WSAVA)
- Marian Horzinek, Member of the Vaccination Guidelines Group, WSAVA
- Ronald Schultz, Member of the Vaccination Guidelines Group, WSAVA, and the American Animal Hospital Association Canine Vaccine Task Force
- David Wadsworth, President, WSAVA
- Jolle Kirpensteijn, President Elect, WSAVA
- Brian Romberg, Immediate Past President, WSAVA
- Richard Squires, Member of the Scientific Advisory Committee, WSAVA
- Roger Clarke, Representative for Asia and Co-Chair of the Animal Welfare Committee, WSAVA
- Walt Ingwersen, Honorary Secretary, WSAVA
- Jane Hern, Registrar of the Royal College of Veterinary Surgeons, UK
- Richard Ford, Member of the American Animal Hospital Association Canine Vaccine Task Force
- Lynne White-Shim, Assistant Director, Scientific Activities Division, American Veterinary Medical Assoc.
- Bernard Rollin, Bioethicist, Colorado State University
- Eva Bennet-Jenkins, Chief Executive Officer, APVMA
- Allen Bryce, Program Manager, Veterinary Medicines, APVMA
- Phil Reeves, Principal Scientist, Residues and Veterinary Medicines, APVMA
- James Suter, General Counsel, APVMA
- Simon Cubit, Manager, Public Affairs, APVMA
- Jenni Mack, Member of the APVMA Advisory Board
- Heather Yeatman, Chair of the APVMA Community Consultative Committee
- Steve Dean, Chief Executive Officer, Veterinary Medicines Directorate, UK
- Richard Hill, Director, Center for Veterinary Biologics, US
- Aine Seavers, Veterinarian
- Luke Martin, Editor, The Veterinarian
- Jennifer Ritchie, Ag and Vet Chemicals (COAG Reforms), Dept. of Agriculture, Fisheries and Forestry
- Ann Bounds, Senior Advisor, Competition and Consumer Policy Division, The Treasury
- Bea Mies, Co-Advocate for judicious vaccine use, Sydney
- Pat Styles, Co-Advocate for judicious vaccine use, Perth

*\* Please note this letter and your response will also be forwarded to other relevant parties for information and discussion.*

Dear Dr Lawrie

**RE: OVER-SERVICING IN THE VETERINARY PROFESSION –  
UNNECESSARY, AND POSSIBLY HARMFUL, VACCINATION OF COMPANION ANIMALS**

Veterinarians in countries such as Australia, Britain and the United States continue to mislead pet owners with ill-founded vaccination advice, insisting they have their pets revaccinated 'annually' or 'triennially' with modified live virus (MLV) core vaccines for parvovirus, distemper virus and adenovirus when there is **no evidence** to support this ongoing practice.

In Australia, articles in the media over the past few months indicate that ***pet owners are still being bombarded with inconsistent, confusing, and misleading messages regarding vaccination of companion animals.***

Quotes from some of these media articles reporting parvovirus outbreaks illustrate the situation, e.g.:

- “Puppies can take three vaccinations from six to eight weeks, 10-12 weeks and 14-16 weeks, ***with booster shots for each following year.***”<sup>1</sup>
- “It’s part of being a responsible animal owner to make sure dogs are fully vaccinated and ***have a booster once a year.***”<sup>2</sup>
- “We haven’t seen much parvovirus here this year, but it’s a good time to remind dog owners ***to ensure vaccinations are up to date,***”<sup>3</sup>
- Please be extra careful ***and ensure your puppy or dog is up to date with all vaccines.***”<sup>4</sup>
- “***Adult dogs don’t necessarily need a booster if they have already had their shots,*** however, it is critical that puppies are vaccinated”<sup>5</sup>
- “***Adult dogs should have one vaccination booster a year. There is also a three-year booster system. This needs to continue throughout the dog’s life.***”<sup>6</sup>
- “***Adult dogs may need a booster*** and you can get advice on this from your local vet.”<sup>7</sup>
- “All vets recommend dogs are vaccinated against parvovirus at six weeks of age ***with annual boosters throughout their lives.***”<sup>8</sup>
- “***We have had some dogs that have even been vaccinated that got the parvovirus.***”<sup>9</sup>
- “***It’s possible the increased incidence of the virus may be linked to pet owners deciding against vaccinat(ing) their pets annually.***”<sup>10</sup>
- ***He’s recommending annual boosters for dogs in the Ipswich area, “because of the increased risk,*** and also just to cover against things like kennel cough where the vaccine doesn’t last longer than that twelve months”<sup>11</sup>
- “***Many vets recommend dogs to be boosted at least once a year...***”<sup>12</sup>
- “***It was imperative dog owners kept their dog’s vaccinations up to date.***”<sup>13</sup>
- “***We are recommending to all of our clients to check that their pets’ boosters are up-to-date and even to consider getting a booster done again sooner than the anniversary date to ensure pets are protected against this newer strain of virus (2c) over the summer.***”<sup>14</sup>
- Younger animals are at a greater risk than older ones ***but we still advise people to get their older animals vaccinated.***”<sup>15</sup>

(My emphasis.)

\* Refer to the separate document attached to the covering email of this letter for more detailed quotes and links to a sample of media articles for the period December 2009 to April 2010.

In January 2010, I contacted Warren Foreman, President of the South Australian Division of the AVA, regarding an article titled “Canine deaths mystery” published in an Adelaide newspaper in December 2009, which included the recommendation that “...owners should immunise their dogs, at a cost of \$60-\$90, even if the animal was vaccinated last year”.<sup>16</sup> I asked what was the scientific rationale for this revaccination recommendation and, in a rather tortuous response, he indicated that pet owners in “Struggletown” (i.e. a low socioeconomic area) are unlikely to be able to remember when their pet was last vaccinated, so the message needs to be kept simple, i.e. “a yearly ‘vaccination’ visit”.<sup>17</sup> ***This paternalistic and non-evidence based attitude regarding vaccination is unacceptable.***

Dr Lawrie, you were recently interviewed for an article in the *Gold Coast News* titled “Gold Coast dogs in danger of parvo”. The article concludes: “All puppies should receive a parvovirus

vaccination as part of their vaccine regime, **and then get yearly boosters.**<sup>18</sup> (My emphasis.) **Dr Lawrie, how does this advice sit with the AVA's policy on dog and cat vaccination ratified by the AVA Board in June 2009, and information in the scientific literature and international dog and cat vaccination guidelines re long duration of immunity, (probably life-long), with MLV vaccines?**

**UPDATE: Provided as a result of a response from Dr Mark Lawrie, President of the Australian Veterinary Association (18 May 2010)**

To clarify, the Gold Coast News article's concluding statement "All puppies should receive a parvovirus vaccination as part of their vaccine regime, **and then get yearly boosters**"<sup>19</sup> (my emphasis), is the journalist's concluding statement, not a direct quotation from Dr Lawrie.

In personal email correspondence to me on this matter, Dr Lawrie advises "**the AVA takes great pains in media interviews to avoid any mention of annual revaccination for adult dogs**".<sup>20</sup> He notes that the mission of "**AVA spokespeople has been to articulate our policy, including the need to reduce frequency of vaccination**".<sup>21</sup> (My underlining.)

The AVA's policy on vaccination of dogs and cats includes the following key points:

- Vaccination protocols should be determined within a veterinarian-client-patient relationship, based on attributes such as duration of immunity of available vaccines and an individual animal's requirements.<sup>22</sup>
- **Informed consent is important.**<sup>23</sup>
- Although annual vaccination has long been considered standard practice in Australia, scientific information exists to suggest that the duration of immunity (DOI) delivered by many of the products available is variable, **and may be significantly longer than 12 months.**<sup>24</sup>
- Every animal should be immunised and each individual animal **only as frequently as necessary.**<sup>25</sup>
- Because of maternally derived antibody and the variability in its level and duration between individuals, vaccines should ideally be administered two to three times to puppies and kittens, **with timing of the final dose being variable but not earlier than the age of 16 weeks** (the suggested age varies with the manufacturer and the vaccine). If cost is an issue and only one vaccine is possible, **it should be at the age of 16 weeks or older.**<sup>26</sup>
- It is being recognised that veterinarians should aim to reduce the vaccine load on individual animals **to minimise the risk of adverse reactions to the products.**<sup>27</sup>

(My emphasis.)

I will contact Dr Lawrie to request evidence of **proaction** on the AVA's part **to clearly and effectively communicate the AVA's reduced vaccination policy to the public** since it was released in August 2009. I will also enquire what action is being taken by the AVA to counter the recent stream of inconsistent, confusing and misleading articles in the media, many of which continue to recommend **non-evidence based revaccination of adult dogs against parvovirus.**<sup>28</sup> I am currently trying to discover how the Gold Coast News article on parvovirus was initiated, and how the journalist came to the conclusion for '**yearly boosters**'.

*In comments related to calls in the media for annual revaccination of adult dogs, Dr Lawrie notes that “**the AVA has no more control over veterinarians speaking in their individual professional capacity than anyone else**”.*<sup>29</sup>

*Which begs the questions:*

- *Who is responsible for regulating this supposedly ‘self-regulated’ profession?*
- *Who is responsible for ensuring that the public receives **objective evidence based information on vaccination ‘best practice’**?*
- *Who is responsible for protecting pet owners from being urged to have possibly harmful interventions for their pets that have not been proven to be beneficial for the individual animal?*
- *Who is responsible for protecting pet owners and their pets from over-servicing?*
- *Who is responsible to act on pet owners’ complaints about questionable veterinary practices?*

*I highlighted the lack of consumer protection for users of veterinary services in a submission to Craig Emerson, Federal Minister for Competition Policy and Consumer Affairs, in July 2009<sup>30</sup>, but so far I have had no formal response to the issues raised in my submission. Similarly, I made a submission to the Product Safety and Integrity Committee Secretariat of the Department of Agriculture, Fisheries and Forestry in February 2010, in regards to unnecessary, and possibly harmful, vaccination of companion animals<sup>31</sup>, and I await a response to this submission.*

*In my open letter to the Australian Pesticides and Veterinary Medicines Authority (APVMA) dated 8 January 2010<sup>32</sup>, I argue that, as the Federal government regulator, it is the APVMA’s duty to warn the public about unnecessary vaccination of pets, particularly after the **inexcusable years of delay in acknowledging this problem**. The APVMA subsequently published its Position Statement on Vaccination Protocols for Dogs and Cats on its website on 21 January 2010, revised 25 January 2010 after my urgent criticism.<sup>33</sup> The APVMA’s Position Statement contains many useful statements, which are discussed later in this open letter to Mark Lawrie. **Unfortunately, the APVMA appears to have done little to publicise its Position Statement on Vaccination Protocols for Dogs and Cats to warn the public about unnecessary vaccination of pets.***

*I will follow up with Dr Lawrie to check what action is being taken by the AVA to ensure that the confusing information provided in the Gold Coast News is clarified, **particularly as reference to the President of the Australian Veterinary Association in the article may give credence to the journalist’s misleading conclusion in support of ‘yearly boosters’, which is not in line with current vaccination ‘best practice’, or the Australian Veterinary Association’s reduced vaccination policy.***

*I will update these comments when a response from Dr Lawrie is available.*

*Updated 23 May 2010*

The article in the *Gold Coast News* also refers to a national disease-tracking database, Disease WatchDog. This database was also referred to in an AVA media release dated 3 March 2010. The AVA media release noted that the database was launched by Virbac Animal Health in February 2010.<sup>34</sup> This industry-funded database is not accessible to the public. **What action is the AVA taking to ensure that transparent and reliable epidemiological data on disease is freely available to the public?** At the moment dubious media advertorials about anecdotal

parvovirus reports, which promote indiscriminate revaccination of dogs, appear to be the only publicly accessible information on parvovirus in the community.

**An article by veterinarian Aine Seavers, published in the April 2010 edition of *The Veterinarian*, a magazine targeted at the veterinary industry, also gives cause for alarm for pet owners.** Complaining about the AVA's new vaccination policy, Seavers refers to the "unseemly haste with which we are being pushed to move from a proven safe good science to a new science as yet unproven..."<sup>35</sup> She appears to be unaware that vaccination has been a controversial topic since at least the mid-1990s. I also take issue with her comment that vaccination is a "proven safe good science". I have already addressed the problem of non-evidence based, and possibly harmful, vaccination extensively in my research documents, copies of which have previously been forwarded to you Dr Lawrie. (Refer to links provided at the end of this letter.) In particular, I refer to "the risk of adverse reaction to vaccination" in my report "Is over-vaccination harming our pets? Are vets making our pets sick?" (refer to pages 13-21)<sup>36</sup>, and my submission on the National Regulatory System in relation to "Unnecessary, and possibly harmful, use of companion animal vaccines" (refer to pages 13-19)<sup>37</sup>.

Seavers' concerns about 'unseemly haste', are ironic given that *The Veterinarian* raised this topic ten years ago with an article titled "The needle and the damage done?" by Jonica Newby, published in 2000. At that time, Newby reported that the Australian Veterinary Association and Australian Small Animal Veterinary Association had adopted a policy of 'wait and see' on vaccination practice.<sup>38</sup>

After nearly ten years of 'waiting and seeing', during which time pet owners in Australia continued to be kept in the dark about the vaccination controversy, and pressured to have non-evidence based annual MLV core revaccinations for their pets, the AVA finally announced its new 'triennial' dog and cat vaccination policy in August 2009, after campaigning by 'concerned pet owners'<sup>39</sup>, and negative publicity in the *Sydney Morning Herald*<sup>40 41</sup> and on the ABC.<sup>42</sup> The AVA's new policy on vaccination of dogs and cats, and other related matters, is currently located on the AVA website's Home Page.<sup>43</sup>

Seavers is now demanding that the AVA "should remove the current information on the OPEN page of the AVA website..."<sup>44</sup> **This is an outrageous request and indicates that some members of the veterinary profession are still unwilling to objectively inform pet owners of crucial information contained in the scientific literature and the latest international dog and cat vaccination guidelines.**

According to Seavers, she has personal correspondence from the AVA that supports veterinarians who want to "continue annual vaccination" saying "our policy still allows for this".<sup>45</sup> **Dr Lawrie, does this mean the AVA agrees with pet owners being denied the opportunity to make an objective and properly informed decision about evidence based vaccination?**

Seavers ironically calls for a "more even-sided conversation in this debate"<sup>46</sup>, but fails to recognise that the major stakeholders in companion animal health, *i.e. pet owners*, have been **unjustly excluded from this conversation for many years.**

Other voices in the Australian veterinary profession have tried to provide some transparency on the vaccination issue. For example, in an article in the *Australian Veterinary Journal* published in 2001, Roger Clarke, currently Representative for Asia and Co-Chair of the Animal Welfare Committee, WSAVA, stated:

...there is a debate in the veterinary world over the frequency of vaccination boosters for dogs and cats. For many years we have given these annually, even though there is evidence that the immunity is quite long lasting from some components of the vaccines. There is also evidence that some vaccines may stimulate an autoimmune response leading to autoimmune haemolytic anaemia or stimulate localised neoplasia. In the light

of this evidence, the scientific veterinary community is reviewing its protocols for vaccination to reduce the frequency of boosters.<sup>47</sup>

Clarke followed up with a letter to the *Australian Veterinary Journal* in October 2001, which discussed adverse reactions to canine vaccines, and in which he noted: "The need for ongoing boosters after an effective juvenile vaccine program is still debatable."<sup>48</sup>

In an article titled "Slaughtering the sacred cows", published in the *Australian Veterinary Journal* in April 2004, Jo Sillince, then AVA President, discusses evidence based medicine and asks "are we also challenging the 'traditional' system to present evidence on, say, vaccination intervals as we are challenging the 'holistics' to do likewise?"<sup>49</sup>

In May 2004, the Australian Association of Holistic Veterinarians made a submission to the AVA Policy Council on Small Animal Vaccination Policy Suggestions, which referred to "current research data which infers that some current routine vaccination practices may not be in the best interests of all animals".<sup>50</sup> According to an article in *The Mercury* newspaper, these concerns were reiterated at the AVA's conference in Hobart in May 2006.<sup>51</sup>

In 2007, the World Small Animal Veterinary Association's Guidelines for the Vaccination of Dogs and Cats<sup>52</sup> were launched before its annual international congress, held in Sydney that year. During the congress, Steven Holloway, Head of Small Animal Medicine at the University of Melbourne, noted that:

Duration of immunity studies overwhelmingly support that dogs over 1 year of age are protected for periods of over 3 years and maybe a lot longer. ***In other words it is not possible to defend the practice of annual vaccination for CPV2, CDV, CAV given the volume of data available.***<sup>53</sup> (My emphasis.)

Despite these calls from within the profession to decrease unnecessary vaccination, annual revaccination remained 'accepted practice' in Australia.<sup>54</sup> In September 2008, my own dogs were again unnecessarily revaccinated with MLV core vaccines at the behest of a veterinarian's ***unsolicited reminder letter***, which dictated these revaccinations were necessary for my pets to 'stay healthy'.<sup>55</sup> The eldest of my dogs, eight year old Sasha, became mysteriously ill with what was diagnosed as 'haemorrhagic gastroenteritis' eight days after her immune system was unnecessarily challenged with a C5 booster containing a concoction of antigens, adjuvants and excipients, and four days later she was put down. (According to one source, the cause of haemorrhagic gastroenteritis is unknown. The most likely suggested cause is "an abnormal immune response".<sup>56</sup>)

I subsequently discovered the controversy about unnecessary vaccination of companion animals, ***and the strong reluctance within the veterinary profession to acknowledge the possibility of adverse reactions to vaccination.***

I had misguidedly trusted the unsolicited reminder letter of the veterinarian, and was pressured to have a potentially harmful intervention for my pets that has not been proven to be of any benefit. ***I was provided with a one-sided and non-evidence based view of vaccination, and was not given the opportunity to consider information in the scientific literature and the latest international guidelines for the vaccination of dogs and cats.***

Non-evidence based vaccination practice is not acceptable. Ronald Schultz, a member of the WSAVA Vaccination Guidelines Group and AAHA Canine Vaccine Task Force warns:

Vaccines are medical products that should only be given if needed and only as often as necessary to provide protection from diseases that are a risk to the health of the animal. ***If a vaccine that is not necessary causes an adverse reaction that would be considered an unacceptable medical procedure,*** thus use only those vaccines that are

needed and use them only as often as needed....Vaccines are medical products that should not be used as practice management tools.<sup>57</sup> (My emphasis.)

In a report published in 2002, the American Veterinary Medical Association's Council on Biologic and Therapeutic Agents' noted:

Revaccination recommendations should be designed to create and maintain clinically relevant immunity while minimizing adverse event potential. ***The practice of revaccinating animals annually is largely based on historic precedent supported by minimal scientific data.*** There is increasing evidence that some vaccines provide immunity beyond 1 year. ***Unnecessary stimulation of the immune system does not result in enhanced disease resistance and may expose animals to unnecessary risks.***<sup>58</sup> (My emphasis.)

Industry-funded government regulators such as the Australian Pesticides and Veterinary Medicines Authority, and the UK's Veterinary Medicines Directorate, are eager to play down the possibility of adverse reactions to vaccination, saying that reports of adverse reactions are low.<sup>59,60</sup> However, the WSAVA guidelines admit that ***"there is gross under-reporting of adverse events which impedes knowledge of the ongoing safety of these products"***.<sup>61</sup>

Ronald Schultz acknowledges:

The risk of adverse reactions from vaccines are not well studied, nor are the adverse reaction rates well documented. Even where documented, the information is not readily available.<sup>62</sup>

In its 'Vaccination Principles', the American Veterinary Medical Association (AVMA) recognises that:

Adverse events may be associated with the antigen, adjuvant, carrier, preservative, or a combination thereof. Possible adverse events include, but are not necessarily limited to, failure to immunize, anaphylaxis, immuno-suppression, autoimmune disorders, transient infections, long-term infected carrier status, and local development of tumors. The role of genetic predisposition to adverse events needs further exploration and definition.<sup>63</sup>

The AVMA admits that "gaps still remain in our understanding of the immune system's acute and chronic reaction to multiple vaccinations".<sup>64</sup> In other words, the veterinary profession still does not understand the full impact or consequences of repeated vaccination or the long term effects.

Schultz advises that ***"adverse reactions can range from mild, self-limiting illness to chronic disease or death"***.<sup>65</sup> Schultz also notes ***"there is a reluctance to report reactions, even those that lead to the death of an animal"***.<sup>66</sup>

Richard Ford, a member of the AAHA Canine Vaccine Task Force, notes that ***"delayed-onset (days-weeks-months) adverse events are much less likely to be recognised, reported and studied"***.<sup>67</sup>

Bioethicist Bernard Rollin warns there is increasing evidence that over-vaccination can actually be conducive to disease development, not only as a consequence of immunological stress, but also more directly. For example, frequent vaccination has been implicated in the development of autoimmune haemolytic anemia in dogs and injection site sarcomas in cats, both of which can be fatal.<sup>68</sup>

Michael Day, Chair of the WSAVA Vaccination Guidelines Group, ***admits that the cumulative effects and consequences of repeated vaccination are unknown***, saying that few

“investigations have studied the phenomenon of ‘inflammageing’ (the effect of cumulative antigenic exposure and onset of late life inflammatory disease)” in dogs and cats.<sup>69</sup>

It appears there have been no longitudinal trials to test the cumulative effects of annual revaccination over the life of an animal. Voluntary post-marketing surveillance has also been a failure - so it is unknown if repeated vaccination over a dog's lifetime can have deleterious consequences, or what those consequences might be.

*(Refer to my report “Is over-vaccination harming our pets? Are vets making our pets sick?” (pages 13-21)<sup>70</sup>, and my submission on the National Regulatory System in relation to “Unnecessary, and possibly harmful, use of companion animal vaccines” (pages 13-19)<sup>71</sup> for more discussion on adverse reactions to vaccination.)*

In the past, the Australian Veterinary Association has provided confusing, misleading and contradictory advice to its members on vaccination practice. For example, in its 1999 draft “Guidelines for Responsible Use of Veterinary Immunobiologicals in Cats and Dogs”, the AVA acknowledged that “scientific information suggests that the duration of immunity delivered by some immunobiologicals and against some diseases may be variable”. Nevertheless, these draft guidelines also recommended that “immunobiologicals should be used according to the manufacturer's instructions”<sup>72</sup> **and did not clarify the obvious contradiction between manufacturers' annual MLV revaccination recommendations and the likelihood that these vaccines provided much longer duration of immunity.** (Similar draft guidelines were re-circulated to AVA members in March 2009.<sup>73</sup> There had been no progress in the intervening ten years...)

***There is no scientific evidence to support vaccine manufacturers' ‘annual’ or ‘triennial’ MLV revaccination recommendations.***<sup>74</sup> In its Position Statement on Vaccination Protocols for Dogs and Cats, the Australian Pesticides and Veterinary Medicines Authority has admitted its failure to ensure evidence based regulation of vaccine products, now acknowledging that it **“does not support the retention of label statements that direct or imply a universal need for life-long annual revaccination with core vaccines”**.<sup>75</sup>

The APVMA's Position Statement also publicly confirms that:

***Veterinarians and pet owners are under no obligation to follow revaccination intervals recommended on vaccine labels...*** veterinarians may therefore use vaccines at whatever interval they (***and the client***) determine is best for each particular animal.<sup>76</sup> (My emphasis.)

So veterinarians who use the false excuse that they are bound to follow manufacturers' revaccination recommendations **are misleading their clients...**

The APVMA's Position Statement also states that:

***...veterinarians should provide pet owners with pertinent, up-to-date information on vaccination best practice to assist in a joint decision as to whether and when to re-vaccinate their pet.***<sup>77</sup>

The APVMA notes that:

***It is important that veterinarians tailor vaccination regimens to suit the needs of each animal under their care, and discuss alternatives with their client.***<sup>78</sup>

Crucially, the APVMA acknowledges that:

...the aim should be to ensure that all susceptible animals are vaccinated, **rather than that already well-immunised animals are re-vaccinated.**<sup>79</sup> (My emphasis.)

So why are pet owners continuing to be bombarded with messages to revaccinate their pets against diseases such as parvovirus, when a close reading of the scientific literature and current WSAVA vaccination guidelines does not provide any evidence that repeated vaccination with MLV core vaccines is beneficial after the final vaccination recommended at 16 weeks?<sup>80</sup>

The WSAVA Guidelines advise that:

...the principles of 'evidence-based veterinary medicine' would dictate that testing for antibody status (for either pups or adult dogs) is better practice than simply administering a vaccine booster on the basis that this should be 'safe and cost less'.<sup>81</sup>

Are pet owners being offered the opportunity to have serological testing if they want to verify their dog's antibody status after puppy vaccination, rather than being pressured to have unnecessary 'annual' and 'triennial' boosters?

A recent paper by Schultz et al, published in the Journal of Comparative Pathology in January 2010, reiterates what has been well-known within the veterinary industry for years, i.e.:

In general, adaptive immunity following vaccination with modified live virus (MLV) vaccines develops earliest and most effectively in that it is often complete (e.g. sterile immunity is induced) and **duration of immunity (DOI) is often lifelong.**<sup>82</sup> (My emphasis.)

Schultz et al note:

Only one dose of the modified-live canine 'core' vaccine (against CDV, CAV-2 and CPV-2) or modified-live feline 'core' vaccine (against FPV, FCV and FHV), when administered at 16 weeks or older, **will provide long lasting (many years to a lifetime) immunity in a very high percentage of animals.**<sup>83</sup> (My emphasis.)

The international veterinary profession has known for years that MLV core vaccines provide long duration of immunity, probably life-long. Yet this information has not been shared with pet owners, and vets have continued to dictate that adult dogs be revaccinated annually (and more recently triennially), a non-evidence based, and possibly harmful, intervention.

Many veterinarians continue to urge pet owners to have their pets revaccinated with MLV core vaccines as a 'preventive' measure, despite the fact there is **no evidence** to support revaccination with these vaccines, and there **is** evidence to indicate these vaccines provide long duration of immunity, probably life-long.

In an article discussing the controversy surrounding hormone replacement therapy, David Sackett refers to the "arrogance of preventive medicine" and highlights that the "unsuspecting healthy" are put at risk by so-called "preventive manoeuvres" which are not evidence based:

But surely the fundamental promise we make when we actively solicit individuals and exhort them to accept preventive interventions must be that, on average, they will be the better for it. Accordingly, the *presumption* that justifies the *aggressive* assertiveness with which we go after the unsuspecting healthy must be based on the highest level of randomized evidence that our preventive manoeuvre will, in fact, do more good than harm. Without evidence from positive randomized trials (and, better still, systematic reviews of randomized trials) **we cannot justify soliciting the well to accept any personal health intervention.**<sup>84</sup> (My emphasis.)

This attack on non-evidence based 'preventive manoeuvres' is also relevant to companion animal vaccination, when pet owners are compelled to have their healthy pets unnecessarily revaccinated with vaccines that have not undergone adequate longitudinal efficacy and safety testing, or effective post-marketing surveillance.

Sackett asks:

What about the villains? Who is to blame for the widespread application of this and the other harmful 'preventive' interventions that cause disability and untimely death? I suggest that we not waste time blaming the manufacturers of 'preventive' drugs and devices, for they are pursuing profit not health..."<sup>85</sup>

I disagree with Sackett letting manufacturers of so-called 'preventive' products off the hook. ***The failure of government regulators to ensure medical interventions are evidence-based also plays a major role here.***

The veterinary industry, i.e. veterinarians, vaccine manufacturers and government regulators, has known for years that MLV vaccines provide long duration of immunity, probably life-long, yet MLV vaccine product labels continue to dictate prescriptive 'annual' and 'triennial' revaccination recommendations. ***This is an example of a systemic breakdown in the regulatory process.***

Only very recently has the government regulator in Australia, the Australian Pesticides and Veterinary Medicines Authority, admitted its failure to ensure evidence based regulation of vaccine products, and publicly confirmed that neither veterinarians nor pet owners are under any obligation to follow manufacturers' revaccination recommendations on vaccine product labels.<sup>86</sup>

Information on long duration of immunity and possible adverse reactions and long term health problems with vaccine use has not been shared with the pet owning public. Unnecessary vaccination of pets can be described as 'disease mongering', e.g. creating a profitable artificial market based on groundless fear of disease in already immunised animals, that financially benefits veterinarians and the pharmaceutical industry.

Vaccine manufacturers have been allowed to include prescriptive revaccination recommendations on their products which have no evidence to support them. In a recent paper, Glen Spielman and Peter Parry suggest that rather than evidence based medicine (EBM), "we are actually now entrenched in *marketing based medicine* (MBM), in which science has largely been taken captive in the name of increasing profits for pharmaceutical firms".<sup>87</sup>

The companion animal vaccine market is very lucrative for the veterinary industry. An international perspective is provided by Richard Ford. Commenting on the impact of implementing the 2006 Canine and Feline Vaccine Guidelines in the US, Ford estimated vaccine sales to veterinarians were worth \$US298 million. This translated to a market worth \$US3.1 billion after veterinarians' 10x mark-up.<sup>88</sup> So there is a lot of money at stake here...

While I believe the power and influence of vaccine manufacturers has been instrumental in maintaining non-evidence based vaccination practice, I also agree with Sackett when he blames so-called medical 'experts' for the widespread application of harmful 'preventive' interventions:

Who is to blame for the widespread application of...harmful 'preventive' interventions that cause disability and untimely death?...***I place the blame directly on the medical 'experts'*** who, to gain private profit (from their industry affiliations), to satisfy a narcissistic need for public acclaim or in a misguided attempt to do good, advocate 'preventive' manoeuvres that have never been validated in rigorous randomized trials. ***Not only do they abuse their positions by advocating unproven 'preventives', they also stifle dissent.*** Others, who should know better than to promote 'preventive' manoeuvres without clinical trials evidence, are simply wrongheaded.<sup>89</sup> (My emphasis.)

Many veterinarians are abusing their professional status by using their influence and authority to pressure trusting pet owners into having so-called 'preventive' interventions for their pets, such as repeated vaccinations, that are not evidence based and could be harmful.

Professions Australia provides a definition of a profession:

A profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public **as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level**, and who are prepared to apply this knowledge and exercise these skills in the interest of others.<sup>90</sup> (My emphasis.)

Given that veterinary professionals are expected to possess "...special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level...", it would be reasonable to expect that veterinarians would follow the principles of evidence based medicine and indeed, the Australian Veterinary Association's Code of Professional Conduct notes:

Veterinary procedures and recommendations should be based on **sound evidence-based science and practice**.<sup>91</sup> (My emphasis.)

The British Medical Journal provides this definition of evidence based medicine:

Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research....<sup>92</sup>

The Journal of the American Medical Association provides additional definition:

Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research. Evidence-based medicine requires new skills of the physician, including efficient literature searching and the application of formal rules of evidence evaluating the clinical literature.<sup>93</sup>

David Sackett notes that:

Without current best external evidence, practice risks becoming rapidly out of date, to the detriment of patients. The practice of evidence-based medicine is a process of life-long, self-directed learning in which caring for our own patients creates the need for clinically important information about diagnosis, prognosis, therapy, and other clinical and health care issues...<sup>94</sup>

Evidence based medicine has been described as a "paradigm shift":

When defects in an existing paradigm accumulate to the extent that the paradigm is no longer tenable, the paradigm is challenged and replaced by a new way of looking at the world. Medical practice is changing, and the change, which involves using the medical literature more effectively in guiding medical practice, is profound enough that it can appropriately be called a paradigm shift.<sup>95</sup>

This paradigm shift to "using the medical literature more effectively in guiding medical practice", has led to the development of guidelines for medical practice. An article titled "Guidelines for Guidelines" in the journal, Chest, notes:

The increasing premium placed on making health-care decisions and assessing quality of care using the best available evidence highlights the importance of transparent, thoughtful, and rigorous guideline development.<sup>96</sup>

Another article on evidence-based guideline development in Chest notes “evidence based clinical practice guidelines (EBGs) can provide an invaluable distillation of knowledge regarding best practices based on the available evidence”.<sup>97</sup> (This article also includes interesting discussion on conflicts of interest and relations with industry...)

In a paper titled “Vaccination guidelines: a bridge between official requirements and the daily use of vaccines”, Etienne Thiry and Marian Horzinek note that:

It is of primary importance that the vaccination schedules followed by the veterinary practitioners are the most efficacious ones **even if this means that they do not strictly follow the recommendations of the package inserts** (i.e. ‘the label’).<sup>98</sup> (My emphasis.)

Dog and cat vaccination guidelines have been available for many years.<sup>99</sup> Unaccountably these vaccination guidelines have been ignored by many veterinarians and, **most importantly, the information contained in these guidelines has not been passed onto pet owners for their consideration**. Many members of the veterinary profession seem to prefer to follow non-evidence based manufacturers’ revaccination recommendations on vaccine product labels, rather than dog and cat vaccination guidelines prepared by experts in immunology.

The AVA’s new dog and cat vaccination policy acknowledges that:

...in most cases, core vaccines need not be administered any more frequently than triennially **and that even less frequent vaccination may be considered appropriate** if an individual animal’s circumstances warrant it. **However, local factors may dictate more frequent vaccination scheduling**.<sup>100</sup> (My emphasis.)

**Dr Lawrie, what ‘local factors’ would dictate more frequent vaccination of dogs that have already responded to vaccination with MLV core vaccines?**

In 2006, the AAHA canine vaccine guidelines advised that vaccines produced by the major biologics manufacturers against parvovirus, distemper virus and adenovirus **all** produce excellent immune responses and can be soundly and reliably administered at the discretion of the clinician in extended duration of immunity protocols.<sup>101</sup>

In notes for a forum on the 2006 Canine and Feline Vaccination Guidelines, Richard Ford states:

It’s important to note that the recommendations of the AAHA Canine Vaccine Task Force for triennial booster administration are based on data derived from vaccines that were on the market 5 years ago. **Independent studies support the fact that extended durations of immunity (protection) against canine distemper, parvovirus, and adenovirus-2 are provided by all of the licensed (core) vaccines that were on the market between 2000 and 2003**. Any implication that a ‘3-year vaccine’ must be used when adhering to current vaccination recommendations is wrong...and misrepresents the intent of the 2006 AAHA Canine Vaccine Guidelines.<sup>102</sup> (My emphasis.)

Ford’s notes also record that the minimum duration of immunity of the canine MLV core vaccines for parvovirus, distemper virus and adenovirus is **7+ years**.<sup>103</sup>

**It is not necessary to use a designated ‘3 year vaccine’ and it is not necessary to revaccinate ‘every three years’. Immunological memory has not been demonstrated to**

***‘switch off’ after one or three years, so unnecessary ongoing revaccination cannot be justified.***

Why do so many veterinarians persist in compelling their clients to revaccinate their dogs with MLV core vaccines when ***there is no scientific evidence underpinning manufacturers’ revaccination recommendations?*** It has not been proven that it is necessary to revaccinate dogs annually or triennially with MLV vaccines. There *is* evidence that these vaccines provide long duration of immunity, demonstrated to be at least seven years. ***Why isn’t this information being relayed to pet owners for their consideration?***

As I have already outlined in my previous papers and correspondence (refer to detailed list below), veterinarians have a financial interest in using the threat of diseases such as parvovirus as a means to compel pet owners to return to their surgeries. Alice Wolf suggests some veterinarians use vaccination as a ‘profit centre’.<sup>104</sup> A vaccine industry newsletter, published in 2005, illustrates this fact, reporting that 89% of veterinarians surveyed indicated that dog and cat vaccinations were the number one contributor to practice turnover, and that 91% of veterinarians felt that a change from annual vaccination would have an adverse effect on their practice turnover. The newsletter concluded: ***“Annual vaccination appears to be an important source of income for many veterinarians”***.<sup>105</sup>

It appears annual vaccination of pets is used as a practice management tool by veterinarians to lure clients into their surgeries. Anecdotally, Ronald Schultz reports:

I have also been told by many practitioners that: *“I believe the duration of immunity for some vaccines like distemper, parvovirus and hepatitis is many years, but until I find another way to get the client into my office on a regular basis I’m going to keep recommending vaccines annually”*.<sup>106</sup>

This is a serious conflict of interest, as non-evidence based revaccinations are an unnecessary expense for the pet owner and, most importantly, needlessly place the animal at risk of an adverse reaction to vaccine products.

It is interesting to consider this practice of ‘over-servicing’ from an ethical viewpoint. Bernard Rollin discusses Aesculapian authority, which is the unique authority that accrues to medical professionals, and he suggests it is also applicable to veterinary medicine, particularly companion animal medicine. Rollin notes this powerful authority “must be deployed to further the best interest of the patient”. Aesculapian authority is abused when the veterinarian’s financial interest takes precedence over the interests of the patient.<sup>107</sup>

Veterinarians who continue to urge pet owners to have interventions that have not been proven to be necessary, e.g. revaccinations with MLV core vaccines, are failing to maintain professional and ethical standards. They are ignoring advice from veterinary experts that there is no scientific basis for revaccinating pets with MLV core vaccines, and ignoring warnings to reduce vaccination to minimise the risk of adverse reactions. ***Most importantly, this vital information is not being shared with pet owners.*** Many veterinarians are not obtaining ‘informed consent’ from their clients before carrying out interventions.

In an article titled “Modern elements of informed consent for general veterinary practitioners” Martin Fettman and Bernard Rollin state:

The basis for informed consent in medicine is to prevent patients from being treated against their will or the will of their guardians. ***In veterinary medicine, this principle leads to the objective that owners be provided adequate information so they can make the right decision for their pet and for themselves.*** Ernst and Cohen made an important point when they said, “The completion of a standard consent form does not, however constitute consent itself; it is merely evidence that consent has been given.” *It*

***is the exchange between owner and veterinarian of the information necessary for informed consent that constitutes the real test of whether a concerted effort has been made at effective communication and understanding.***<sup>108</sup> (My emphasis).

On the topic of 'anecdotally accepted common practice', Fettman and Rollin suggest:

One could question the ethics of practitioners who recommend conventional diagnostic procedures or therapeutic plans for which no controlled research exists to support claims of efficacy and safety. ***Certainly those who persist in advocating treatments that have been proven to be ineffective or even to cause harm cannot find protection in genuine informed consent.***<sup>109</sup> (My emphasis).

I suggest this comment is relevant to current vaccination practice. It has not been proven that ongoing revaccination with MLV core vaccines is necessary 'to ensure continuity of protection'<sup>110</sup>. Unnecessary vaccination is ineffective and puts pets needlessly at risk of an adverse reaction.

The most recent vaccination guidelines, the World Small Animal Veterinary Association's (WSAVA) Guidelines for the Vaccination of Dogs and Cats, recommend that:

We should aim to vaccinate every animal, ***and to vaccinate each individual less frequently.***<sup>111</sup> (My emphasis.)

The WSAVA Guidelines warn that:

***Vaccines should not be given needlessly.*** Core vaccines ***should not be given any more frequently*** than every three years after the 12 month booster injection following the puppy/kitten series.<sup>112</sup> (My emphasis.)

The WSAVA dog and cat vaccination guidelines warn:

We should aim to reduce the 'vaccine load' on individual animals ***in order to minimise the potential for adverse reactions to vaccine products.***<sup>113</sup>

***It is important to note that the WSAVA guidelines do not actually recommend revaccination 'every three years'.***

#### **NOTE RE AMBIGUITIES AND INCONSISTENCIES IN THE CURRENT WSAVA GUIDELINES:**

*It must be acknowledged that there are ambiguities and inconsistencies in the WSAVA guidelines, the current issue of which might be more accurately described as a 'consensus statement'.*

*For instance, why is there any reference to 'every three years' in these guidelines given that the guidelines admit that there is long duration of immunity with MLV core vaccines, demonstrated to be at least seven years with challenge and serological studies? **This information about long DOI should be passed onto pet owners for their consideration.***

***The reference to 'every three years' must be clarified in the revised WSAVA guidelines, due to be launched at the next WSAVA congress in Geneva in June 2010.***<sup>114</sup>

*(The WSAVA guidelines state they have been formulated "without consultation with industry"<sup>115</sup>. Nevertheless, it is interesting to note the WSAVA guidelines were sponsored by Intervet, the manufacturer of so-called 'three year' vaccine Nobivac DHP. The SPC*

for this product recommends: “To maintain protection a single booster dose is recommended every three years”.<sup>116)</sup>

It has **not** been proven necessary to revaccinate dogs’ annually’ or ‘triennially’ with MLV core vaccines. Schultz et al note that: “In general, adaptive immunity following vaccination with modified live virus (MLV) vaccines develops earliest and most effectively in that it is often complete (e.g. sterile immunity is induced) **and duration of immunity (DOI) is often lifelong**.”<sup>117</sup> (My emphasis.) There is no evidence that a booster is required to ‘maintain protection’ every three years...

The WSAVA guidelines currently recommend a 12 month booster injection with **core** vaccines (not to be confused with ongoing ‘annual’ revaccination which the WSAVA guidelines do **not** recommend) following the puppy/kitten series. The guidelines also acknowledge that “the principles of ‘evidence-based veterinary medicine’ would dictate that testing for antibody status (**for either pups or adult dogs**) is better practice than simply administering a vaccine booster on the basis that this should be ‘safe and cost less’<sup>118</sup>”. (My emphasis.) (**Hopefully this apparent contradiction will be clarified in the next issue of the WSAVA guidelines.**)

**It is essential that dog and cat vaccination guidelines be regularly updated to take account of scientific developments in this area, and to maintain vaccination ‘best practice’ and public confidence.**

The WSAVA guidelines note that dogs properly vaccinated with MLV core vaccines (i.e. with the final puppy vaccination at 16 weeks) have very high protection from infection and  $\geq 98\%$  protection from disease.<sup>119</sup>

The WSAVA guidelines Fact Sheets advise that duration of immunity after vaccination with these vaccines is seven years or longer, based on challenge and serological studies.<sup>120</sup> The guidelines note that “**dogs that have responded to vaccination with MLV core vaccines maintain a solid immunity (immunological memory) for many years in the absence of any repeat vaccination**”.<sup>121</sup>

The WSAVA guidelines define vaccines for less serious or less prevalent diseases as non-core vaccines (e.g. ‘kennel cough’ and leptospirosis). These vaccines may be recommended for “only those animals whose geographical location, local environment or lifestyle places them at risk of contracting specific infections”.<sup>122</sup>

In many instances non-core vaccines may not be beneficial at all. **Non-core vaccines have dubious efficacy<sup>123</sup> and safety<sup>124</sup>, and the risks and benefits of these vaccines must be carefully weighed up in each individual case, particularly as the cumulative consequences of long term repeated vaccination are unknown.**

I suggest one could question the ethics of a practitioner who continues to urge his/her clients to have their pets revaccinated if this possibly harmful intervention has not been proven to be beneficial, and without passing on crucial information about long duration of immunity or possible immediate and delayed adverse reactions for their clients’ consideration.

Veterinarians who ignore the current science regarding vaccination are going against the AVA’s Code of Professional Conduct, e.g. Item 3.b. “Veterinary procedures and recommendations should be based on sound evidence-based science and practice”.<sup>125</sup> They also go against the AVA’s goal to “strive to provide the best possible veterinary services and improve the quality of animal health and welfare at every opportunity”; and to “maintain and continue to enhance your professional knowledge and skills”.<sup>126</sup> Veterinarians who fail to keep up with the latest scientific

developments relevant to their profession are also contravening Item 7.a of the AVA Code of Professional Conduct:

Continuing veterinary education and the advancement of knowledge are fundamental to the role of the professional. **Failure to keep informed about relevant advances in veterinary science is a dereliction of this responsibility.**<sup>127</sup> (My emphasis.)

Most importantly, veterinarians are ignoring Item 4.c. "Prior informed consent of the owner should be obtained for any procedure or treatment, if readily available"<sup>128</sup> when they refuse to provide their clients with objective and evidence based scientific advice on vaccination practice, and therefore fail to obtain the 'informed consent' of their client before revaccination of pets.

I suggest that veterinarians who continue to insist their clients have their adult dogs revaccinated with MLV core vaccines without scientific foundation, and who do not obtain informed consent from their clients, i.e. do not inform them of international vaccination guidelines and information on long duration of immunity, **are misleading their clients and breaking the law.** Taking the *Veterinary Practice Act 2003 South Australia* as an example, I suggest such veterinarians are contravening 'Part 7 – Miscellaneous, 68 – False or misleading statement'.<sup>129</sup>

Also referring to the *Veterinary Practice Act 2003*, I suggest that veterinarians who mislead their clients about vaccination are guilty of unprofessional conduct, i.e. "improper or unethical conduct in relation to professional practice" and "incompetence or negligence in relation to the provision of veterinary treatment".<sup>130</sup>

One would expect the appropriate course of action of a pet owner who believes their pet has been unnecessarily vaccinated would be to make a complaint to the relevant Veterinary Surgeons Board, these Boards having the responsibility to oversee the 'self-regulated' veterinary profession.

Information on the Veterinary Surgeons' Board of South Australia website notes:

An important role of the Board is to maintain the public's confidence in the veterinary profession in South Australia. The main way the Board fulfills this role is by ensuring the profession maintains high standards.<sup>131</sup>

The website also notes: "The Board will investigate complaints made by members of the public."<sup>132</sup>

Under the provisions of the *Veterinary Practice Act 2003 South Australia*, it is the Veterinary Surgeons' Board's responsibility to protect "animal health, safety and welfare and the public interest by achieving and maintaining high professional standards both of competence and conduct in the provision of veterinary treatment..."<sup>133</sup> The functions of the Board include preparing or endorsing codes of conduct and professional standards for veterinary surgeons; and preparing or endorsing guidelines on continuing education for veterinary surgeons.<sup>134</sup>

In this regard, in April 2009 I forwarded a copy of my detailed and fully referenced report 'Is over-vaccination harming our pets? Are vets making our pets sick?'<sup>135</sup> to the Veterinary Surgeons' Board of South Australia for comment. I received this response:

The SA Board noted your correspondence at its recent meeting and agreed that it is not the role of the Board to comment on this issue. It may be best for you to approach the Australian Veterinary Association with your report.<sup>136</sup>

I also forwarded my report to other State Veterinary Surgeons'/Practitioners' Boards in Australia.<sup>137</sup> Only two bothered to respond, also declining to comment.<sup>138</sup>

With its refusal to acknowledge the problem of unnecessary vaccination of pets, the Veterinary Surgeons' Board of South Australia is failing in its responsibility to protect "animal health, safety and welfare and the public interest by achieving and maintaining high professional standards both of competence and conduct in the provision of veterinary treatment...."<sup>139</sup>

Indeed, the Veterinary Surgeons' Board of South Australia is complicit in maintaining unnecessary and possibly harmful vaccination practice. Eight months after the publication of the AVA's new dog and cat vaccination policy, the Veterinary Surgeons' Board of South Australia continues to recommend that boarding kennels require proof of vaccination of dogs against distemper, hepatitis and parvovirus **within the preceding 12 months** of admission.<sup>140</sup> (This recommendation remains in place as at 5 May 2010.)

***It appears futile to complain about unnecessary vaccination of pets to the Veterinary Surgeon's Board of South Australia, when this organisation is responsible for maintaining this unacceptable practice.***

The AVA is also making recommendations to boarding kennels that unjustifiably demand repeated revaccination of pets with core vaccines. In its advice on "Pet care businesses and the vaccination policy", the AVA strongly recommends that boarding kennels demand proof of annual or triennial boosters.<sup>141</sup> This means that dogs that have already responded to vaccination with so-called 'annual' MLV core vaccines will continue to be unnecessarily revaccinated, and needlessly placed at risk of adverse reactions and other health problems if their owners need to board them at kennels.

***Dr Lawrie, who will be responsible if these dogs suffer an adverse reaction or long term health problem due to unnecessary vaccination?***

The AVA is setting in place recommendations which will enforce unnecessary 'triennial' revaccination of pets, even though 'triennial' revaccination has not been proven to be necessary.

The AVA's advice on "Pet care businesses and the vaccination policy" is also likely to encourage pet insurers to continue to demand that pet owners have their pets unnecessarily revaccinated with MLV core vaccines. An article published in *Choice* magazine in July 2009 noted that pet insurers require that pet owners follow veterinarians' vaccination protocols.<sup>142</sup> This is problematic as the Australian Veterinary Association's dog and cat vaccination policy, and advice to pet care businesses, is confusing and contradictory. There is also concern that individual veterinarians will continue to ignore guidelines and continue to dictate that pet owners revaccinate their pets unnecessarily with core or non-core vaccines.<sup>143</sup> For example, last year I registered with a veterinary surgery that included the following statement on its patient enrolment form:

To prevent the spread of infectious diseases, all hospitalised and boarded patients must be **up to date with vaccinations** and free from internal and external parasites. (My emphasis.)

So, in this example, hospitalised patients "must be **up to date** with vaccinations". As shown by the quotes from the media articles re parvovirus outbreaks noted above, it appears veterinarians are continuing to urge pet owners to have annual MLV vaccination, (let alone triennial vaccination...) so there is a risk that many veterinarians will continue to dictate that 'annual' (or 'triennial') MLV revaccination is necessary to keep vaccinations 'up to date'. ***Dr Lawrie, what action is the AVA undertaking to ensure pet owners are not intimidated into having unnecessary, and possibly harmful, revaccinations for their pets?***

It is unacceptable that pets be put at risk with demands for MLV revaccination that are not evidence based. ***Veterinarians, boarding kennels, pet insurers and other pet care businesses should acknowledge information about long duration of immunity for MLV core vaccines contained in the scientific literature and the WSAVA guidelines.***<sup>144</sup>

The AVA regularly issues media releases recommending pet owners have their pets revaccinated. For instance a media release titled “Vets concerned about deadly dog virus” was released less than a week after the AVA’s new dog and cat vaccination policy was announced last August, stating that: “Parvovirus is an easily preventable disease by having your pet regularly vaccinated.”<sup>145</sup> **Again, I ask where is the proof that pets need to be ‘regularly vaccinated’ with MLV core vaccines?**

**Surely the emphasis should be on improving herd immunity, and attracting the attention of pet owners who have never had their pets properly vaccinated, rather than urging other pet owners to have their pets unnecessarily, and possibly harmfully, revaccinated over and over again?**

As Rosalind Gaskell notes in her paper “Duration of immunity (DOI) - The regulatory issues”:

Ultimately we need to target vaccination to a greater proportion of the population, rather than repeat-vaccinating the same individual animals.<sup>146</sup>

In “Are we vaccinating too much?”, Dennis Macy notes:

There is a mistaken assumption that if we recommend annual vaccination, a greater percentage of animals will be vaccinated... But it doesn’t do any good to overvaccinate one segment of the population and not vaccinate the rest. **Your good clients’ pets will have a higher risk of adverse reactions.**<sup>147</sup> (My emphasis.)

And Marian Horzinek, a member of the WSAVA Vaccination Guidelines Group, adds:

It is of course more arduous to solicit new clients than to summon old ones, but it needs to be done.<sup>148</sup>

The AVA’s so-called ‘recommendations’, which are not evidence based, are being used to entrench a culture of unnecessary revaccination of adult dogs which have most likely already responded to MLV vaccination. Not only is this an unnecessary financial imposition on pet owners, it also places pets needlessly at risk of an adverse reaction to vaccine products. There are serious conflict of interest and professional and ethical issues to be considered here, particularly as there is currently no effective consumer protection for users of veterinary services.

In its definition of a profession, Professions Australia notes that professions are expected to develop a code of ethics to govern the activities of their profession:

**It is inherent in the definition of a profession that a code of ethics governs the activities of each profession.** Such codes require behaviour and practice beyond the personal moral obligations of an individual.

**They define and demand high standards of behaviour in respect to the services provided to the public** and in dealing with professional colleagues.

**Further, these codes are enforced by the profession and are acknowledged and accepted by the community.**<sup>149</sup> (My emphasis.)

Jane Hern, Registrar of the Royal College of Veterinary Surgeons, notes that professional bodies are granted the privilege of self-regulation, **but only in return for an assurance their members set standards of competence and ethical behaviour to protect consumers.**<sup>150</sup> Who protects the consumer when the veterinary profession’s “standards of competence and ethical behaviour” are putting pets needlessly at risk with unnecessary vaccination? **By allowing unnecessary**

***vaccination to continue, the veterinary profession has failed in its duty to protect the rights of pet owners and the health of their pets.***

The veterinary profession is failing to enforce a code of ethics to protect pet owners from being exploited and compelled to have unnecessary and possibly harmful vaccinations for their pets.

***This leaves open to question the professional status of the veterinary profession – do they deserve this privileged self-regulated status?***

Where are users of veterinary services to turn to for consumer protection, when this self-regulated' profession fails to regulate its members?

A report on "Conflict of Interest in Medical Research, Education, and Practice" notes:

Society traditionally has placed great trust in physicians and researchers, granting them the considerable leeway to regulate themselves. However, there is growing concern among lawmakers, government agencies, and the public that extensive conflicts of interest in medicine require stronger measures. Responsible and reasonable conflict of interest policies and procedures will reduce the risk of bias and the loss of trust while avoiding undue burdens or harms and without damaging constructive collaborations with industry. Decisions about biomedical research, medical education, and patient care directly affect the public's health. ***The public needs to be able to trust that physicians' decisions are not inappropriately influenced by their financial relationships with industry.***<sup>151</sup> (My emphasis.)

***Similarly, the public needs to be able to trust that veterinarians are not inappropriately influenced by their financial relationships with industry.***

Veterinary associations must establish dedicated Ethics Committees to constantly review and monitor veterinary practice, and to ensure consumers are protected from exploitation.

Unnecessary vaccination of pets has been allowed to continue without censure for far too long. It is now time for decisive action to stop unnecessary and possibly harmful vaccination of pets, which is an example of blatant over-servicing.

In many cases, the latest scientific information on vaccination is not being objectively relayed to pet owners for their consideration. ***Pet owners are being forced to unnecessarily revaccinate their pets to access veterinary services, boarding kennels, pet insurance, and pet grooming facilities. Non-core vaccines of questionable efficacy and safety are also being pushed indiscriminately. This is unacceptable and unethical.***

In an essay first published in the Monthly Review in 1949, Albert Einstein questioned the overweening authority of 'experts' in society

...we should be on our guard not to overestimate science and scientific methods when it is a question of human problems; ***and we should not assume that experts are the only ones who have a right to express themselves on questions affecting the organisation of society.***<sup>152</sup> (My emphasis.)

I also question the authority of self-appointed 'experts' and demand that their so-called 'science' fulfils the criteria. ***Veterinarians do not have a mandate to dictate vaccination practice to their clients. The self-appointed authority of veterinarians who dictate that pet owners have interventions for their pets without evidence must be challenged.***

This is a serious consumer protection problem, and it is high time the 'self-regulated' veterinary profession was brought to account.

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***Dr Lawrie, I request your early response to the serious professional and ethical issues raised in this letter.***

Yours sincerely

**Elizabeth Hart**

**I present below my papers and correspondence on unnecessary, and possibly harmful, vaccination of pets:**

- ***Is over-vaccination harming our pets? Are vets making our pets sick?*** (13 April 2009). This report was tabled at a special meeting convened by the APVMA on 15 April 2009 to discuss the problem of unnecessary vaccination of pets:  
[http://users.on.net/~peter.hart/Is\\_%20over-vaccination\\_harming\\_our\\_pets.pdf](http://users.on.net/~peter.hart/Is_%20over-vaccination_harming_our_pets.pdf)
- ***Over-vaccination of pets – an unethical practice*** (16 June 2009). This paper is a summary of my 'over-vaccination' report with additional information:  
[http://users.on.net/~peter.hart/Over-vaccination\\_of\\_pets\\_-\\_an\\_unethical\\_practice.pdf](http://users.on.net/~peter.hart/Over-vaccination_of_pets_-_an_unethical_practice.pdf)
- ***Over-vaccination: Are vets making our pets sick?*** (June 2009, published in *National Dog* in July 2009):  
[http://users.on.net/~peter.hart/Over-vaccination\\_-\\_Are\\_vets\\_making\\_our\\_pets\\_sick.pdf](http://users.on.net/~peter.hart/Over-vaccination_-_Are_vets_making_our_pets_sick.pdf)
- ***Submission on the Consumer Voices Issues Paper: Request for consumer protection for consumers of veterinary services in Australia*** (17 July 2009):  
[http://www.treasury.gov.au/documents/1593/PDF/Elizabeth\\_Hart.pdf](http://www.treasury.gov.au/documents/1593/PDF/Elizabeth_Hart.pdf)
- ***The over-vaccination controversy continues*** (published in *National Dog* in December 2009):  
<http://users.on.net/~peter.hart/Over-vaccination%20Controversy%20Continues.pdf>
- ***Open letter to the Australian Pesticides and Veterinary Medicines Authority, Australian Veterinary Association and Australian Small Animal Veterinary Association*** (22 December 2009):  
<http://users.on.net/~peter.hart/Open%20Letter%20to%20APVMA%20AVA%20ASAVA.pdf>
- ***Open letter to the Australian Pesticides and Veterinary Medicines Authority, Australian Veterinary Association and Australian Small Animal Veterinary Association*** (8 January 2010):  
[http://users.on.net/~peter.hart/Open\\_letter\\_to\\_APVMA\\_AVA\\_ASAVA\\_8\\_Jan\\_2010.pdf](http://users.on.net/~peter.hart/Open_letter_to_APVMA_AVA_ASAVA_8_Jan_2010.pdf)
- ***Open letter to the Australian Pesticides and Veterinary Medicines Authority, Australian Veterinary Association, Australian Small Animal Veterinary Association, and Competition and Consumer Policy Division, The Treasury*** (24 January 2010):  
[http://users.on.net/~peter.hart/Open\\_letter\\_to\\_APVMA\\_AVA\\_ASAVA\\_CCPD\\_24-01-10.pdf](http://users.on.net/~peter.hart/Open_letter_to_APVMA_AVA_ASAVA_CCPD_24-01-10.pdf)
- ***A Submission on the National Scheme for Assessment, Registration and Control of Use of Agricultural and Veterinary Chemicals Discussion Paper in relation to "Unnecessary, and Possibly Harmful, Use of Companion Animal Vaccines"*** (10 February 2010):  
[http://users.on.net/~peter.hart/PSIC\\_Submission\\_E\\_Hart.pdf](http://users.on.net/~peter.hart/PSIC_Submission_E_Hart.pdf)
- ***Too many needles ! Unnecessary vaccination exposed*** (February 2010, published in *National Dog* in April 2010):  
[http://users.on.net/~peter.hart/Too\\_Many\\_Needles\\_National\\_Dog.pdf](http://users.on.net/~peter.hart/Too_Many_Needles_National_Dog.pdf)

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**Endnotes:**

**Note: If internet links do not work, try pasting the link in a web browser address bar, or otherwise search for the document by name in a web search engine.**

- 
- <sup>1</sup> More dogs hit by deadly parvo bug (The Queensland Times, 22 April 2010)  
<http://www.qt.com.au/story/2010/04/22/more-dogs-hit-by-deadly-parvovirus-bug/>
- <sup>2</sup> Dog owners warned about parvovirus (Liverpool Leader, 12 March 2010)  
<http://liverpool-leader.whereilive.com.au/news/story/owners-warned-to-vaccinate-dogs-against-parvo-virus/>
- <sup>3</sup> Warning: It's dog's life on Tweed (Tweed Daily News, 10 March 2010)  
<http://www.tweednews.com.au/story/2010/03/10/warning-its-dogs-life-on-tweed/>
- <sup>4</sup> Vaccinate your dog and defeat Parvovirus (Blacktown Advocate, 10 March 2010)  
<http://blacktown-advocate.whereilive.com.au/your-news/story/vaccinate-your-dog-beware-of-parvovirus/>
- <sup>5</sup> Deadly dog virus hits local district (Narromine News, 10 March 2010)  
<http://www.narrominenewsonline.com.au/news/local/news/general/deadly-dog-virus-hits-local-district/1772703.aspx>
- <sup>6</sup> Parvo virus alert for pooches (Daily Mercury, 8 March 2010)  
<http://www.dailymercury.com.au/story/2010/03/08/parvo-virus-alert-pooches/>
- <sup>7</sup> *Deadly dog virus brought on by wet weather* (Australian Veterinary Association Media Release, 3 March 2010)  
<http://avacms.eseries.hengesystems.com.au/AM/Template.cfm?Section=20104&Template=/CM/ContentDisplay.cfm&ContentID=16463>
- <sup>8</sup> Parvovirus alert for dog owners (The Cairns Post, 3 March 2010)  
[http://www.cairns.com.au/article/2010/03/03/96985\\_local-news.html](http://www.cairns.com.au/article/2010/03/03/96985_local-news.html)
- <sup>9</sup> Parvovirus hits dog population (The Observer, 11 February 2010)  
<http://www.gladstoneobserver.com.au/story/2010/02/11/parvovirus-hits-dog-population/>
- <sup>10</sup> Parvovirus cases detected in Ipswich (ABC Brisbane, 3 February 2010)  
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- <sup>11</sup> *Ibid.*
- <sup>12</sup> Warning to pet owners (The Western Weekender, 11 January 2010)  
[http://www.westernweekender.com.au/index.php?option=com\\_content&task=view&id=1408&Itemid=50](http://www.westernweekender.com.au/index.php?option=com_content&task=view&id=1408&Itemid=50)
- <sup>13</sup> Plea to protect pets (In My Community, 5 January 2010)  
<http://www.inmycommunity.com.au/news-and-views/local-news/Plea-to-protect-pets/7545267/>
- <sup>14</sup> New strain of parvovirus (Warwick Daily News, 22 December 2009)  
<http://www.warwickdailynews.com.au/story/2009/12/22/new-strain-of-parvovirus/>
- <sup>15</sup> *Ibid.*
- <sup>16</sup> Canine deaths mystery. *Adelaide Messenger*, 15 December 2009: <http://news-review-messenger.whereilive.com.au/news/story/canine-deaths-mystery/>
- <sup>17</sup> Letter from Warren Foreman, President of the South Australian Division of the Australian Veterinary Profession, dated 28 January 2010.
- <sup>18</sup> Coast dogs in danger of parvo (Gold Coast News, 30 April 2010)  
[http://www.goldcoast.com.au/article/2010/04/30/213235\\_gold-coast-news.html](http://www.goldcoast.com.au/article/2010/04/30/213235_gold-coast-news.html)
- <sup>19</sup> *Ibid.*
- <sup>20</sup> Email correspondence from Dr Mark Lawrie, President of the Australian Veterinary Association, 18 May 2010.
- <sup>21</sup> *Ibid.*
- <sup>22</sup> Australian Veterinary Association – Vaccination of Dogs and Cats Policy, ratified by the AVA Board 26 June 2009. Currently accessible via this link: <http://ava.informz.net/ava/data/images/documents/ava-vaccination-policy-final-june09.pdf> and on the AVA's home page: <http://avacms.eseries.hengesystems.com.au/AM/Template.cfm?Section=Home&WebsiteKey=bbfd2ab3-e7fc-4456-bc66-bba966478417>
- <sup>23</sup> *Ibid.*
- <sup>24</sup> *Ibid.*
- <sup>25</sup> *Ibid.*
- <sup>26</sup> *Ibid.*
- <sup>27</sup> *Ibid.*
- <sup>28</sup> Examples of articles reporting on parvovirus outbreaks and vaccination in the Australian media during the period December 2009 – April 2010. Compiled by Elizabeth Hart:  
[http://users.on.net/~peter.hart/Media\\_articles\\_re\\_parvovirus\\_Dec\\_2009\\_to\\_April\\_2010.pdf](http://users.on.net/~peter.hart/Media_articles_re_parvovirus_Dec_2009_to_April_2010.pdf)
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- <sup>30</sup> Submission on the Consumer Voices Issues Paper: Request for consumer protection for consumers of veterinary services in Australia (17 July 2009):  
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- <sup>32</sup> Open letter to the Australian Pesticides and Veterinary Medicines Authority, Australian Veterinary Association and Australian Small Animal Veterinary Association (8 January 2010):  
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- <sup>51</sup> Question mark over yearly shots. The Mercury. 24 May 2006.
- <sup>52</sup> WSAVA Guidelines for the Vaccination of Dogs and Cats: Day, M.J., Horzinek, M.C., Schultz, R.D. 2007. Guidelines for the Vaccination of Dogs and Cats, compiled by the Vaccination Guidelines Group (VGG) of the World Small Animal Veterinary Association (WSAVA). Journal of Small Animal Practice 48 (9), 528-541: [http://www.wsava.org/PDF/Misc/VGG\\_09\\_2007.pdf](http://www.wsava.org/PDF/Misc/VGG_09_2007.pdf)
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- <sup>54</sup> Australian Veterinary Association's (AVA) "Draft Policies and Position Statements – For members' comment by 13 March 2009" refers to "Responsible use of veterinary vaccines for dogs and cats". This draft policy admits that "annual vaccination is the currently accepted practice in Australia".
- <sup>55</sup> The unsolicited reminder letter received from the veterinarian said:  
*Dear Sasha, It's time for your vaccination !  
Yes, it's been 12 months since your last one, and you need a booster against Distemper, Hepatitis and Parvovirus. If you haven't also been covered for Canine Cough you'll need to be updated for this as well.  
You may not be aware of it, but if you are going to stay healthy, you need this vaccination. And if you are going to be boarded out, the people will need an up-to-date vaccination certificate....*
- <sup>56</sup> Provet Healthcare Information. Haemorrhagic Gastroenteritis (HGE): <http://www.provet.co.uk/health/diseases/git-hge.htm>
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- <sup>60</sup> VMD Position Paper on Authorised Vaccination Schedules for Dogs: [http://www.vmd.gov.uk/VetSQP/vaccines/Authorised\\_Vaccination\\_Schedules\\_for\\_Dogs.pdf](http://www.vmd.gov.uk/VetSQP/vaccines/Authorised_Vaccination_Schedules_for_Dogs.pdf)
- <sup>61</sup> WSAVA Guidelines 2007: [http://www.wsava.org/PDF/Misc/VGG\\_09\\_2007.pdf](http://www.wsava.org/PDF/Misc/VGG_09_2007.pdf)

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- <sup>63</sup> Vaccination Principles. American Veterinary Medical Association: [http://www.avma.org/issues/policy/vaccination\\_principles.asp](http://www.avma.org/issues/policy/vaccination_principles.asp)
- <sup>64</sup> *Ibid.*
- <sup>65</sup> Schultz, R.D. 1998. Current and future canine and feline vaccination programs. Veterinary Medicine. March 1998, 233-254.
- <sup>66</sup> *Ibid.*
- <sup>67</sup> Ford, Richard, College of Veterinary Medicine, North Carolina State University. Abstract of presentation on: Postvaccinal ischemic vasculitis in dogs: Satellite skin lesions. Presented at The 5th International Veterinary Vaccines and Diagnostics Conference, July 19-24, 2009, Madison, WI USA.
- <sup>68</sup> Rollin, B. E. "Case 82: "Can Annual Vaccinations Be Justified?" in An Introduction to Veterinary Medical Ethics. Iowa State University Press, 2006.
- <sup>69</sup> Day, M. Ageing, Immunosenescence and Inflammation in the Dog and Cat. J. Comp. Path. 2010, Vol. 142, S60-S69.
- <sup>70</sup> Hart, Elizabeth. Is over-vaccination harming our pets? Are vets making our pets sick? 13 April, 2009: [http://users.on.net/~peter.hart/ls\\_%20over-vaccination\\_harming\\_our\\_pets.pdf](http://users.on.net/~peter.hart/ls_%20over-vaccination_harming_our_pets.pdf)
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- <sup>74</sup> Ronald Schultz notes: "The one year recommendation was not determined by any scientifically validated studies **nor will one find in the literature publications that demonstrate a need for annual vaccination with many of the products in use.**" (My emphasis.)
- Schultz, R.D. 1998. Current and future canine and feline vaccination programs. Veterinary Medicine. March 1998, 233-254. Similarly, I argue that there is also no evidence for triennial vaccination with MLV core vaccines.
- <sup>75</sup> Australian Pesticides and Veterinary Medicines Authority's Position Statement on Vaccination Protocols for Dogs and Cats. Published 21 January 2010, revised 25 January 2010: [http://www.apvma.gov.au/news\\_media/news/2010/2010-01-21\\_vaccination\\_position.php](http://www.apvma.gov.au/news_media/news/2010/2010-01-21_vaccination_position.php)
- <sup>76</sup> *Ibid.*
- <sup>77</sup> *Ibid.*
- <sup>78</sup> *Ibid.*
- <sup>79</sup> *Ibid.*
- <sup>80</sup> WSAVA Guidelines: [http://www.wsava.org/PDF/Misc/VGG\\_09\\_2007.pdf](http://www.wsava.org/PDF/Misc/VGG_09_2007.pdf)
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- <sup>82</sup> Schultz, R.D., Thiel, B., Mukhtar, E., Sharp, P., Larson, L.J. (2010). Age and long-term protective immunity in dogs and cats. J. Comp. Path. 142, S102-S108.
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- <sup>84</sup> Sackett, D.L. The arrogance of preventive medicine. Canadian Medical Association Journal. August 20 2002; 167(4).
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- <sup>121</sup> *Ibid.*
- <sup>122</sup> *Ibid.*
- <sup>123</sup> Ronald Schultz notes: Bordetella immunity may be less than one year and the efficacy for the products is not well established. Many animals receive “kennel cough” vaccines that include Bordetella and CPI and/or CAV-2 every 6 to 9 months without evidence that this frequency of vaccination is necessary or beneficial. Schultz, R.D. 2007. What everyone needs to know about canine vaccines and vaccination programs. 2007 National Parent Club Canine Health Conference: <http://www.spinoneus.org/forum/uploaded/Admin/Vaccinations2007.pdf>
- <sup>124</sup> For example, Protech BB Bordetella Bronchiseptica Killed Vaccine contains an aluminium salt. Reading the scientific literature, I have discovered that aluminium is associated with cancer in dogs. For example, a study by Vascellari et al identified “distinct similarities between canine fibrosarcomas from presumed injection sites and feline post-vaccinal fibrosarcomas, suggesting the possibility of the development of post-injection sarcomas not only in cats but also in dogs. In this study “aluminium deposits were detected in eight canine fibrosarcomas from presumed injection sites”. Michael Day also suggests vaccines containing alum may be implicated in cases of vaccine-associated autoimmunity in his paper “Infectious Triggers of Immune-Mediated Disease”.
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<sup>126</sup> *Ibid.*

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> Veterinary Practice Act 2003 South Australia:

<http://www.legislation.sa.gov.au/LZ/C/A/VETERINARY%20PRACTICE%20ACT%202003.aspx>

<sup>130</sup> *Ibid.*

<sup>131</sup> Refer to the "Public" section of the Veterinary Surgeons' Board of South Australia website:

[http://www.vbsa.org.au/Public\\_side\\_link\\_34\\_Public.html](http://www.vbsa.org.au/Public_side_link_34_Public.html)

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<sup>133</sup> Veterinary Practice Act 2003 South Australia:

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<sup>134</sup> *Ibid.*

<sup>135</sup> Hart, Elizabeth. Is over-vaccination harming our pets? Are vets making our pets sick? 13 April, 2009:

[http://users.on.net/~peter.hart/ls\\_%20over-vaccination\\_harming\\_our\\_pets.pdf](http://users.on.net/~peter.hart/ls_%20over-vaccination_harming_our_pets.pdf)

<sup>136</sup> Email correspondence received from Sue Millbank, Registrar of the Veterinary Surgeons Board of South Australia, 15 May 2009.

<sup>137</sup> A copy of my report "Is over-vaccination harming our pets? Are vets making our pets sick?" was forwarded to Veterinary Surgeons/Practitioners Boards in Queensland, New South Wales, South Australia, Western Australia, Australian Capital Territory and Victoria on 18 April 2009.

<sup>138</sup> Apart from the response from the Veterinary Surgeons Board of South Australia, only two other responses were received to email about my over-vaccination report. These were from Glenn Lynch, Registrar of the Veterinary Practitioners Board of NSW, and Sue Godkin, Registrar of the Veterinary Surgeons Board of WA. They also advised that their boards had declined to comment on my report.

<sup>139</sup> Veterinary Practice Act 2003 South Australia:

<http://www.legislation.sa.gov.au/LZ/C/A/VETERINARY%20PRACTICE%20ACT%202003.aspx>

<sup>140</sup> Veterinary Surgeons Board of South Australia Code of Practice for the operation of Boarding Establishments:

<http://www.vbsa.org.au/boarding.pdf>

<sup>141</sup> Pet care businesses and the vaccination policy:

<http://avacms.eseries.hengsystems.com.au/AM/Template.cfm?Section=Campaigns1&Template=/CM/HTMLDisplay.cfm&ContentID=14748>

<sup>142</sup> Paws for thought: insurance can take the sting out of vet bills – but will your pet pay if you don't? CHOICE finds out. Choice (Chippendale, Australia). July 2009, p.12(4).

<sup>143</sup> For example, in a small survey undertaken by the author in September 2009, after the announcement of the AVA's new dog and cat vaccination policy, eight out of the ten veterinary surgeries contacted indicated that 'annual' vaccination of adult dogs with MLV core vaccines was still common practice.

<sup>144</sup> WSAVA Guidelines 2007: [http://www.wsava.org/PDF/Misc/VGG\\_09\\_2007.pdf](http://www.wsava.org/PDF/Misc/VGG_09_2007.pdf)

<sup>145</sup> Ref to AVA Media release issued on 18 August – "Vets concerned about deadly dog virus":

[http://avacms.eseries.hengsystems.com.au/AM/Template.cfm?Section=2009\\_Media\\_Releases&Template=/CM/ContentDisplay.cfm&ContentID=14314](http://avacms.eseries.hengsystems.com.au/AM/Template.cfm?Section=2009_Media_Releases&Template=/CM/ContentDisplay.cfm&ContentID=14314)

<sup>146</sup> Gaskell, R.M. 2006. Duration of immunity (DOI) – The regulatory issues. *Veterinary Microbiology*. 117, 80-85

<sup>147</sup> Smith, C.A. 1995. Are we vaccinating too much? *JAVMA*. Vol 207, No. 4 August 15, 421-425.

<sup>148</sup> Horzinek, M.C. 2006. Vaccine use and disease prevalence in dogs and cats. *Veterinary Microbiology*. 117, 2-8.

<sup>149</sup> Definition of a Profession. Professions Australia: <http://www.professions.com.au/defineprofession.html>

<sup>150</sup> Hern, J.C. "Professional conduct and self-regulation" in *Veterinary Ethics: An Introduction*. Ed. Legood, G. London, New York. Continuum. 2000.

<sup>151</sup> Conflict of interest in medical research, education and practice. Institute of Medicine of the National Academies. Report Brief, April 2009:

<http://www.iom.edu/-/media/Files/Report%20Files/2009/Conflict-of-Interest-in-Medical-Research-Education-and-Practice/COI%20report%20brief%20for%20web.ashx>

<sup>152</sup> Einstein, Albert. Why socialism? *The Monthly Review*. 1949: <http://www.monthlyreview.org/598einstein.php>