

Veterinary

Vaccination of dogs

Dr Mark Elliott BVSc VetMFHom MRCVS MLIHM PCH DSH RSHom questions whether commonly-given advice for annual inoculations is still relevant.

FOLLOWING MY RECENT ARTICLE ON vaccination in gamebirds (*KtB* Winter 2018/19, page 41), there has been considerable interest in understanding why we vaccinate our dogs, and do we really need to vaccinate every year?

Controversy over this issue is not new, and many informed owners now only vaccinate their puppies and give a “booster” at one year of age or test for titre levels to the main diseases. This often sets them at odds with their vets who insist that annual vaccination is a requirement. However, while there are articles in the veterinary literature suggesting that the impact on practice income informs the debate, while manufacturers steadfastly refuse to investigate longevity of vaccinated status and brush aside the fact some 50% of

all drug reactions reported in animals are for vaccines, and while social media publicises everything, vets are increasingly struggling to defend that position. Social media thrives on putting the fear of God into everyone, and the information gleaned must always be properly interrogated to be believed. Although social media is highly successful in getting information out there and has put the risk of side effects under the microscope, I wonder if the debate has gone too far: figures now suggest that fewer than 80% of puppies are being vaccinated at all. This could lead to outbreaks of disease, which no-one can want. Both sides need to come together to investigate the evidence without bias, demand more from manufacturers and approach the issue sensibly and logically.

As I said previously, a good vaccine/vaccination programme should be effective in the entire population, and should have no unwanted side effects. It must produce long-term disease protection by inducing a “memory bank” of cells ready to respond to disease, resolving it quickly.

Do canine vaccines achieve this aim? How do we know?

There are a number of ways we can interrogate efficacy and risk – we could expose the patients to disease and see if they succumb; for viral diseases we can analyse the response of the body by looking at antibody titres; and we can look at epidemiological data and reports in the veterinary literature.

Without going into huge detail, some of what we already know follows:

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1. For *Distemper, Infectious Hepatitis, and Parvovirus (DHP)* the duration of immunity known to be at least seven years, and is almost certainly life-long following puppy and booster vaccination at one year of age. If concerned, a blood test for antibody titres can be checked which, if positive at any level, confirm the “memory bank”. If negative this does not confirm a failure of efficacy, it may just be that there is no local wild virus about to stimulate the memory cells to produce measurable levels. Reports from titre levels (testing is now more common) and the occasional case confirms that these often fatal diseases are still around and vaccination is both effective and essential.

2. For *Leptospirosis* vaccine, the duration of immunity can only be measured by challenge studies which, if being done, we are not told about. If we look at similar bacterin vaccines in other species they are not given repeatedly due to risk of adverse effects in doing so, and the fact the induction of the “memory bank” is long lasting. Because there is no hard data available, manufacturer data sheets suggest annual revaccination but is this wise? More on this below.

3. *kennel Cough* vaccine only reduces symptoms, and only covers part of the disease complex. It can produce symptoms severe enough to necessitate antibiotics and also spread to and cause illness in unvaccinated dogs. Also, it doesn't produce a long-term immunity. In my opinion, this is a pretty pointless vaccine for what is mostly a mild transient illness.

4. *Rabies* is only really needed for travelling pets. Immunity is confirmed by titre testing, although titres drop away quickly, probably as there is no wild virus to provide stimulation in the UK.

Leptospirosis concerns in working dogs are often talked up in articles in the shooting press as a reason to keep vaccinating dogs annually. What perhaps is less well-known is that for years we have only been vaccinating for two strains (L2), and that these are very rarely seen (quite possibly because of vaccination). Leptospirosis cases were very rare in practice; in fact until recently I had seen only one in near 30 years.

In recent years there has been a new vaccine on the market, covering four strains, one of which is not a UK strain, so why is it being given? Since this new vaccine's introduction, there are growing concerns over its side effects and more cases of Leptospirosis. The reporting of more cases may be a result of increased awareness and hence diagnosis, or it may be due to something else going on. Reference to my previous article will inform readers of concerns over evolution causing vaccination programmes to fail, and with the Leptospirosis vaccines only covering a few strains when there are many out there, and having an impact on the immune system, is this what is happening? Answers to these questions are needed, and manufacturers need

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adequately to answer the concerns of campaigning groups over fatalities and side effects being claimed the result of this vaccine. Certainly in my practice we stopped using it quickly because of the reactions we saw and contacted the manufacturers at that time. We went back to the L2 version, or don't vaccinate for Leptospirosis at all if risk is accepted as low for that patient.

We also have concerns that the Leptospirosis vaccine only reduces shedding and prevents illness in the dog. As humans can contract the disease might it not be better to know, and treat the dog if needed, rather than risk human health?

Controversy, with entrenched views on both sides, is arguably putting our canine partners at risk. Published figures report fewer than 80% of puppies are now vaccinated, which makes disease outbreaks more likely. Fewer than 60% are re-vaccinated (given a booster). An evidence-based, logical approach is needed and, based on my practice's assessment of the evidence, it may be useful to detail what we do – I recommend that:

- Puppies are vaccinated for parvovirus no earlier than nine weeks of age.
- Given DHP and L2 at 12 weeks old.
- Given a further DHP and L2 at 16



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A good vaccination programme must produce long-term disease protection.

weeks old (due to identified parvovirus cases in the area).

■ Thereafter titre testing for DHP, or re-vaccination at one year of age with DHP and L2 and then titre testing a year later for DHP.

■ If OK then we see no need for further vaccination at all, but do a titre test if the dog is going into kennels or if the insurers demand it.

■ We have close to 100% of all pups vaccinated which I think reflects confidence in our advice.

NOTE IT!

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