

Barking Dogs: The Big Picture

Recently the Companion Animal Advisory Committee has been investigating the issue of barking dogs. Clearly, this is a problem that requires a balanced approach. On the one hand, barking can undoubtedly be an annoyance, and may even pose a more serious problem for some people. On the other, dogs also offer important and measurable benefits to their human companions. The challenge for the Committee is to weigh up these competing values. Recommendations must reflect the real values of our community, and proactively guide us towards actions that will maximize the wellbeing of that community over the long term.

The benefits of dog ownership and companion animals generally have long been carefully scrutinised in social, psychological, and medical research. As far back as 1987, the US National Institute of Health (NIH) compiled a report summarising the research then available¹. At that time the evidence for the benefits of companion animals on human health was only just emerging. However it was noted that companion animals offer measurable benefits for the elderly. Research showed that pet programs for the elderly resulted in increased alertness and more frequent smiling and talking. Pet programs were also found to reduce depression, and to be a more effective intervention than either human visitor programs or conventional psychotherapy.

Over the ensuing two decades, the evidence for the benefits of pet ownership has only grown stronger. To offer just a few brief illustrations of the kind of research that has been published over the last twenty years, consider the following:

- In 1990 the *Journal of Personality and Social Psychology* reported that people who own pets make fewer visits to the doctor³. Dog ownership in particular seemed to markedly reduce visits to physicians in times of stress.
- In 1991 the *Journal of the Royal Society of Medicine* reported that giving dogs as pets to randomly chosen subjects resulted in fewer minor health problems, and an improved indication of general health overall². People who were given other animals as pets also experienced these benefits temporarily, but the benefits eventually tapered off. In contrast, people who were given dogs sustained these benefits throughout the study. Unlike subjects who were given other pets, those given dogs also became more physically active.

- In 1995 the *American Journal of Cardiology* reported that patients with pets were significantly more likely to be still alive one year after a heart attack than patients who did not have pets⁴. Here again, dog ownership was found to be especially beneficial. Dog owners had significantly increased chances of survival over and above those enjoyed by people with other types of pets.

Here are a few more contemporary Australian examples of the positive research findings:

- In 2004 Deakin University's *Children's Leisure Activity Status Study* (CLASS) reported that dog walking consistently ranked among the top ten physical activities undertaken by children¹². This is surely a major consideration for a society with a spiralling childhood obesity epidemic.
- In 2008 the *Health Promotion Journal of Australia*⁶ published results showing that dog ownership was indeed associated with a lower risk of obesity among children.
- In 2006 the *Medical Journal of Australia* published findings on elderly dog walkers⁵. The researchers were especially interested in measuring the effect of dog walking on stress. They measured stress by monitoring heart rate variability, an accepted indicator of autonomic nervous function. Their results showed that not only was dog walking an effective way of reducing stress, but that walking with a dog was significantly more effective at reducing stress than walking without a dog. Clearly, physical exercise is not the whole story here. In fact, even simply patting a dog resulted in significantly reduced stress.

Over the last twenty years the case for the medical benefits of dog ownership has grown to the point where it is now overwhelming. Most researchers seem to believe that the exceptional benefits of dogs over and above other companion animals stem from two factors. Firstly, dogs, unlike most other companion animals, need to be walked regularly^{2, 3, 4, 5}, which encourages a certain level of physical activity. Secondly, being naturally gregarious animals themselves, dogs offer a high level of emotional support and companionship to humans. This emotional support seems to generally reduce stress levels^{2, 3, 4}.

This perspective integrates the known benefits of canine companionship into much broader findings about the benefits of companionship in general. Improved social support results in better health in times of stress⁷ and ultimately results in an extended lifespan^{8, 9}. It now seems that canine companions benefit our lives in much the same way as do human companions. Canine companions may even be *more* beneficial in some respects. As previously noted, the 1987 NIH review¹ of research indicated that for the elderly, pet intervention programs were actually more effective than human visitor programs. It is also undeniable that dog ownership often results in more reliable and dependable companionship than many human relationships.

Given all this, it is hardly surprising that companion animals generally – and dogs in particular – are extremely highly valued by many people within our community. Measures of this high value range from economic statistics to self reporting. The Australian Companion Animal Council reports that 83% of Australians have owned a pet at some stage, and that of those who do not currently own a pet, more than half would like to so do¹⁰. Currently, 63% of Australians own a pet¹¹. What's more, 91% of pet owners reported feeling "very close" to their pets and almost as many reported such feelings for human family members¹⁰. Based on these figures, we must conclude that over 57% of people in our community feel very close to one or more pets. In the medical research literature these feelings of emotional closeness are widely regarded as central to the stress reducing power of pets^{2, 3, 4}. Here again, dogs hold the advantage. People with dogs consistently report greater feelings of emotional closeness than those with other pets^{2, 3, 4}.

In economic terms it is also clear that pet owners place a very high value on their animal companions. According to a report compiled by BIS Shrapnel, in 2005 Australian consumers spent over \$4.6 billion on their pets¹¹. In NSW, almost \$1 billion was spent on dogs alone. This offers a fairly clear indication of just how highly we, as a community, value our canine companions. On the economic front it also bears mentioning that with annual receipts of \$4.6 billion, the pet care industry is an important part of our economy.

The medical effects of pet ownership in general and of dog ownership in particular also offer significant economic advantages to our society. The NSW state government has forecast expenditure on health for the fiscal year 2008-09 at \$13.2 billion¹³. Total expenditure on health has now reached 9% of Gross Domestic Product (GDP)¹⁶. Because medical services represent such a major expense for both governments and individuals, even a modest reduction in the demand for such services can have major economic benefits. In 1995 the Baker Medical Research Institute (a research facility within the University of Melbourne) published research stating that the presence of pets in the community saved the nation between \$790 million and \$1.5 billion in medical bills annually. The \$790 million represents the economic impact of the known medical effects of pet ownership based on the assumption that only the primary carer of each pet reaps these advantages. The \$1.5 billion is based on the assumption that the other members of the household each gain half the benefits reaped by the primary carer. The researchers indicated that they regarded this higher figure as far more likely to represent the true effect of pet ownership on the medical expenses borne by Australians.

One must also factor in the reality that this research was done in 1995, and was based on the most recent figures then available (the 1992 – 93 financial years). If we repeat the calculations performed by the Baker institute researchers^{14,15,18} using the most recent figures now available (2005 – 06 financial year)¹⁶ the numbers are substantially higher. We get a minimum conservative estimate of \$1.9 billion per year, and a more probable (again, according to the judgement of the Baker researchers themselves) estimate of \$3.8 billion per year.

It is important to remember that these numbers measure the impact of pets solely upon medical bills. They do not in any way reflect the broader costs of illness to the community. They specifically do not factor in the effects of time spent off work, time spent receiving a disability pension or incapacitated allowance, or the “knock-on” effects of illness on the work capacity of people who may need to take time off work to care for a sick family member.

As a point of reference, it is worth considering one study of a hepatitis outbreak published by the US federal government’s Centre for Disease Control (CDC) ¹⁷. The authors of this study found that the sum total of the direct medical expenses caused by the outbreak accounted for less than 6% of the total costs inflicted on the community. If the ratios generated by their figures were applied to the present analysis, we would conservatively estimate the true economic benefits of pet ownership on human health in Australia at \$33.4 billion, with a more likely figure of \$66.8 billion.

Of course, extrapolating cost ratios from one medical context to another is an undertaking fraught with difficulty. It therefore needs to be made clear that these numbers are not presented as serious estimates. They provide, at most, a very rough benchmark. They are indicative of the kind of numbers we might expect to see were more serious research to be conducted in this area. They serve to illustrate how a pure focus on medical bills alone can lead us to dangerously underestimate the true economic impact of a public health problem or of a potential solution. So the real point here is simply this: \$3.8 billion is in all likelihood a very, *very* conservative estimate of the true economic benefits created for Australia by pets via their effect on human health.

In a democracy, the role of all government agencies is one of stewardship. This means that the ultimate goal must always be to reflect the values of the community and to pursue its true, long term interests. Dog barking may be a negative but it is a negative that comes as part of a much broader package. A package that in sum is enormously positive. Imagining that we, as a community, can enjoy the benefits of dog ownership without having to endure some barking would be like expecting to have children without ever having to endure crying.

When the Committee advises rangers to deal with barking, it should be clear that actions such as taking away people’s dogs need to be regarded as an absolute last resort; if for no other reason than that by doing so we would also be doing a great deal of harm to the human community. The same can be said of imposing penalties that are so harsh as to render dog ownership difficult or even impossible for many members of that community.

Dog ownership offers benefits that are large, extensive, and measurable. Not coincidentally, a great many people within our community place an enormously high value on their canine companions. We respectfully submit that the Committee take these considerations into account.

Dogs are a package deal.

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FOOTNOTE

18 As stated in the body of the text, the updated figures are based on the same methodology as was used by the Baker institute in their 1995 study (14). However, in compiling this paper it was not possible to locate contemporary figures for *recurrent* health expenditure: the expenditure used as the basis of the Baker institute calculations. Nevertheless, it was possible to determine *total* health expenditure both for the year used in the Baker institute study (15), and in the more recent fiscal year 2005 – 06 (16). The figures used were taken from table 5.1 on pg 234 of the Australian Institute of Health and Welfare's 2000 report (15), and table 8.1 on pg 397 of their 2008 report (16). In order to estimate recurrent expenditures for the 2005 – 06 fiscal years, it was assumed that the ratio of recurrent to total expenditures has remained more or less constant. While all assumptions must be closely scrutinized, this particular assumption seems robust in the light of two facts:

First, in the year of the Baker institute study, recurrent expenses made up over 94% of total expenses. Thus, non recurrent expenses seem to make up only a very small part of the overall picture.

Second, as a percentage of GDP, expenditure on health has grown at a slow but very steady rate from 4.3% in 1960 – 61 to 9% in 2005 – 06 (again see the aforementioned tables in references 15 & 16 respectively). In 1992 – 93, the year used in the Baker study, expenditure fit closely to this curve with a total expenditure equal to 8% of GDP. In 2005 – 06, the year used in this report, total expenditure again fits closely to the curve with total expenditure now equal to 9% of GDP. Because both years fit so closely to the long term trend line, it seems unlikely that either of the years in question had extraordinary items of sufficient magnitude to significantly distort the overall result.