

# Measuring the Benefits

Companion Animals and the Health of Older Persons

Executive Summary



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*Given that nearly two billion people over the age of 60 will live on the earth by 2050, the challenge to governments and local communities to create age-friendly societies is real and imminent. Continuing research in human-companion animal interactions reveals both the extensive and therapeutic benefits to elderly people provided by pets and companion animals, and the associated positive social and economic influences for local communities and society as a whole.*

# Companion Animals and the Health of Older Persons

## Executive Summary

This report is the most extensive literature review to date of research undertaken in the field of companion animals and the health of older people. Encompassing published research from 1980 to 2013, it considers the impact on the physical, psychological, emotional and social health of older people, both in the community as pet owners and as residents of care facilities and other institutions to whom animals are introduced for recreational and therapeutic purposes. The economic impact of companion animals is also considered. Despite limitations and gaps in the research caused by weak project design or poorly-controlled studies, the positive indicators of improvements to the health and well-being of older people are encouraging and affirm the value of future research in this field.

### Background

Archaeological and genetic evidence suggests the existence of dogs and cats with humans as far back as 14,000 years ago, concurrent with the first permanent human settlements. While this early companion human-animal relationship is perceived as a purely practical one – such as herding, control of rodents and other pests, and protection of the humans – it is thought that animal behavioural traits were selective determinants of breeding practices in order to promote human-animal companionship and attachment bonds (Virués-Ortega et al, 2012).

In modern times, the continuation of this companionship between humans and animals is clearly evident and growing stronger. In 2001 around half of British households owned pets (Nafsted et al, 2001); in 2009, 172 million dogs and cats as pets were recorded in the United States (American Pet Products Association, 2009) while more than two-thirds of Australian households had a pet (Wood [ed], 2009). Most pet owners consider their pet to be an important member of the family.

*Creating active ageing policies and helping seniors to remain in their communities are key economic and social issues: by 2050, two billion people over the age of 60 will inhabit the world.*

The use of animals as companions for older people living in residential care facilities and other institutions is also increasing; these animals, most commonly dogs, cats and rabbits, may be part of an Animal-Assisted Activity (AAA) or Animal-Assisted Therapy (AAT). The former provides “opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life... delivered in a variety of environments by specially trained professionals, paraprofessionals, and/or volunteers, in association with animals that meet specific criteria” (Pet Partners, USA).

Animal-Assisted Therapy (AAT), commonly referred to as 'pet therapy', is a goal-directed intervention that is "designed to promote improvement in human physical, social, emotional, and/or cognitive functioning... [as] an integral part of the treatment process". Undertaken or supervised by professional service providers, AAT interventions are provided to individuals or selected groups in a therapeutic process that is documented and evaluated (Pet Partners, USA).

Older people receiving Animal-Assisted Therapy (AAT) include those living in residential aged care homes and long-term medical care facilities, both with or without a diagnosis of dementia, psychiatric disorder and/or depression; and those admitted to hospitals or hospices for acute and chronic medical management.

## **The Research: Studies and Findings**

With global population projections reporting that by 2050 more than two billion people over the age of 60 will be living in the world, local communities and governments need to focus not only on health and active ageing policies but also on creating environments that enable older people to remain in the community and to live healthier lives.

*Researchers are keenly interested in the influence of companion animals upon the physical health of older people, both in terms of quality of life and of longevity.*

A growing body of literature of human-animal studies highlights the importance of the human-animal bond and the increasing evidence of the health and social benefits of companion animals.

Within this body of research, the therapeutic benefit of companion animals is attracting increasingly keen interest among health and social science professionals (Fine, 2010; Baun and Johnson, 2011; Risley-Curtiss, 2010), and research and education programs at universities are developing, mainly in the United States at this stage.

### **a) Pets as companions**

Studies of the comparative health of pet owners and non-pet owners include investigation of both the physical health of older people and their own perception of personal health and well-being (Headey, 1999; Pachana et al, 2005; Raina et al, 1999; reported in Virués-Ortega et al, 2012).

Researchers note strong evidence to the effect that companion animals are associated with increased self-esteem, life satisfaction, positive moods and lower levels of loneliness (El-Alayli et al, 2006).

Quiet company between humans and pet dogs has been observed to lower the person's blood pressure and increase the levels of neurochemicals linked to relaxation and bonding (Filan and Llewelyn-Jones, 2006).

Several studies have found evidence of the ability of pets to ameliorate bereavement for older people (Raina et al, 1999; Garrity et al, 1989; Bolin, 1987).

The capacity of pets to increase their owner's social interactions, both real and perceived, has been noted. For example, an Australian study found that more than half of all dog owners (and just under half of pet owners in general) confirm that they meet people in their neighbourhood as a result of their pet and more than 80 percent of dog owners talk to other people when out walking their dogs (Wood et al, 2005). Referred to as 'social capital', this connectivity is shown to have positive effects on the community's sense of its own health as well as the fiscal health of a society (Australian Companion Animal Council, 2009).

A keen area of interest among researchers is the influence of companion animals upon the physical health of older people, both in terms of quality of life and of longevity. Friedmann et al (1980) concluded that outpatients of a cardiac care unit who were pet owners lived longer than non-pet owners. It should be noted, however, that a community survey in Australia with a larger sample size found no evidence that pet ownership is associated with cardiovascular health benefits (Parslow and Jorm, 2003). These contrasting findings are attributed by researchers to variables in the quantity and quality of the research studies (Wells and Rodi, 2000; Herzog, 2011; Siegel, 2011).

Notwithstanding these contradictions, the American Heart Association (AHA) published a scientific statement on pet ownership and cardiovascular (CVD) risk in 2013, in which it concluded that "pet ownership, particularly dog ownership, is probably associated with a decrease in CVD risk...and may have some causal role in reducing CVD risk" (Levine et al, 2013).

## **b) Companion animals in AAA and AAT**

Six studies into the effects of Animal-Assisted Therapy (AAT) on the behavioural and psychological symptoms of dementia showed a marked reduction in agitation and aggression in the human subjects of the research. Four studies observed a positive impact on social behaviour; and one study found an improvement in the nutrition of older people with dementia following the installation of fish tanks in their care facility dining rooms (Filan and Llewellyn-Jones, 2006).

Similarly, research conducted across nine studies on dog-assisted therapy for older adults with dementia in residential programs observed the common effects of visiting animals included a decrease in the residents' agitation and aggressive behaviour, and an increase in pro-social behaviour such as alertness, increased frequency of touch, verbalisation and smiles. Each of these behaviours was observed to improve over time (Perkins et al, 2008).

In five randomly assigned control group studies published between 1984 and 2000, dogs were brought to visit depressed older people in hospital and nursing home settings and four of the five studies showed 'significant improvements in depression' of residents from the pre- to post-test phases (Souter and Miller, 2007). Other studies confirm that dogs visiting hospitalised patients suffering from major depression have the effect of decreasing depression and anxiety (Hoffmann et al, 2009; Majić et al, 2013).

### c) Economic effects of companion animals

Investigators estimated that cost savings in 2000 for companion animals as pets to the health care system was 5.59 billion Euros in Germany and \$3.86 billion in Australia.

Results showed that long-term pet owners as well as pet owners who acquired a pet in the last five years reported fewer doctor visits in the three months before interview. When compared with non-pet owners and those who no longer had a pet, the pet owner group accessed health services via the general practitioner approximately 10 percent less (Headey and Grabka, 2003).

In contrast, a later study of a 2,551 older adults in Australia found no reduction in visits to the general practitioner in the 60 to 64 year age group (Parslow et al, 2005). Confounding variables may largely account for these differences, strengthening the call for improved measurements and standardised project design in future research programs.

*Studies on dog-assisted therapy for older adults with dementia in residential programs observed a decrease in the residents' agitation and aggressive behaviour, and increased pro-social behaviour such as alertness, verbalisation and smiling.*

## The Way Forward

Investigators in this specialised research field acknowledge that the current data on human-companion animal interactions are often predicated on anecdotal evidence and scant qualitative and quantitative data, with poorly-constructed and poorly-controlled study design (Chur-Hansen et al, 2010; Filan and Llewellyn-Jones, 2006; Jendro et al, 1984; Perkins et al, 2008; Souter and Miller, 2007; Virués-Ortega et al, 2012).

While the flaws in the current research data prevent an unequivocal understanding of the mechanisms by which older people may benefit from animal companions, investigators are united in believing that more research time and energy should be directed towards this important field of research. They base their assertion on the current evidence of considerable positive potential for the health of older individuals, and the associated health and welfare benefits for local communities and societies.

This report summarises the limitations and gaps in the research noted by investigators, as well as their recommendations for improvements in research methodology, both general and specific.

In addition, the report identifies a number of other factors lacking in current research and offers recommendations for their inclusion in future research projects.

## Recommendations

1. Several existing community programs that enable older people to keep and care for their companion animals are discussed in the report. These include volunteer support for grooming and exercising pets, transporting pets to veterinary appointments, and fostering pets when their owners need to be hospitalised for a period of time.

### Recommendation 1:

Programs such as these could become the focus of future research on the health and social benefits of animal-assisted interventions, to include the perspective of both health care practitioners for the humans in the project (e.g. nurses, physiotherapists, social workers, occupational therapists) as well as for the animals (e.g. veterinarians and veterinary nurses).

2. Research is lacking in veterinarian involvement, despite the fact that their professional expertise and frequent interactions with pet owners make them well-placed to be consulted in studies of companion animals and older people's attachment, affection and bonding capacities, well-being and social capital.

### Recommendation 2:

Studies involving veterinarians and veterinary nurses should be conducted – for example, standardised questionnaires and/or interviews covering perceptions of attachment and bonding, health care attention and prioritisation, and the self-reported and observed influence on older people's psychological and emotional health.

3. The effect of pathogens potentially transmitted between pets and humans, especially vector-borne and other zoonotic diseases, needs to be investigated in more depth. Research data is needed to formulate advice and guidelines on disease and zoonosis prevention between older people and pets, similar to the guidelines that exist for specific risk groups such as HIV-infected people (Brown et al, 2003; Kaplan et al, 2002).

### Recommendation 3:

Complementary research is required into the risk versus advantage (fact and perception) of animals as perceived carriers of pathogens transmitting diseases that may adversely affect the health of older people. In addition, the health risks of the animals must be taken into account, to assure the mutual benefit of the human-animal companion relationship and that animals are able to fulfil their companion role.

This research needs to involve veterinarians and should examine data for actual infectivity rates as well as perceived risk of disease. This perceived risk should be compared with the demonstrated and perceived advantages of having a pet for owners' mental, emotional and social health – such as increased well-being, sense of purpose and social interactivity.

*The capacity of pets to increase their owner's social interactions has been noted... an Australian study found that more than 80 percent of dog owners talk to other people when out walking their dogs.*



4. Studies considering the impact on older people of the physical health and temperament (or personality) of the animal with whom they interact are scarce.

**Recommendation 4:**

Research into the influence of the animal's health upon its interaction with the older person could explore the differences between relationships with young, healthy animals with full vitality and older animals with age-related behaviours, such as slower responses and the need for more resting periods. Animal handlers and veterinarians should be included in these studies.

5. Much of the published research has been conducted in the United States, Canada, Europe and Australia. Aside from a few descriptive and qualitative studies focused on older adults from different cultures (e.g. Risley-Curtiss, 2006), the extent to which older adults from different cultural groups may benefit from companion animals is unclear. Research is also lacking into human-animal companionship among older people of different ethnic origins who live alongside each other in long-term care facilities in multicultural communities.

**Recommendation 5:**

Research into companion animals and animal-assisted interventions in developing countries is needed, as well as studies of attitudes towards companion animals among various cultural groups in modern, multicultural societies. This research could inform programs and protocols for the inclusion of animal-assisted interventions in long-term care facilities whose residents may have significantly different ethnic origins.

6. A notable limitation to the research into the economic benefits of companion animals is the focus on health services usage only – such as the time spent by older people seeking medical intervention, and the money they spend on medicines (Headley et al, 2002).

**Recommendation 6:**

More complex socio-economic models of services and delivery that have so far been overlooked – for example gender, urban versus rural, cultural and other variants in living arrangements – should be factors in future research into the economic effects of companion animal programs. This area of study has the potential to bring beneficial changes to professional protocols and practices and to influence healthy ageing policy development. In societies with increasing numbers of older people, further research is therefore critical for the development and evaluation of new policies and programs at a fiscal, governmental level.

*Investigators believe that research on the influence of companion animals on the physical, psychological and emotional health of elderly people has important implications for the future welfare of societies and individuals.*



## Conclusion

This report is informed by a widely-held conviction among investigators that this research field has important implications for the future of societies and individuals, and has a twofold aim:

- 1. To summarise the influence of companion animals and animal-assisted activities and interventions on older people's physical, psychological/emotional, social and economic health as determined through research;*
- 2. To inform future research in the field, which can influence care planning for older people at local and national levels.*

A practical, truly useful evaluation of ways in which the well-being of older people in the community can be enhanced requires a deepening of the exploration into their relationships, including those with companion animals.

Furthermore, advances in the creation of age-friendly societies, such as those brought about by facilitating positive interactions between older citizens and animals, can only have a positive influence upon the health of society as a whole.

*This report was prepared by Vyvyan Mishra with contributions from Bonnie Schroeder.*

*As the elderly cohort within our societies expands, further human-animal studies will have valuable implications, as research contributes valuable insights into the mechanisms by which older individuals benefit from animal companions, informs new professional protocols and practices in elder health care, and ensures a more compassionate age-friendly society.*



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