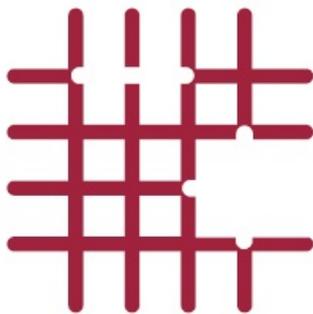


Animal
Assisted
Interventions

Welfare of Humans and Animals?



COUNCIL ON
ANIMAL AFFAIRS

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Procedure

This advisory report from the Council on Animal Affairs was prepared by a panel of Council members comprising N. (Nienke) Endenburg (chair), W.T.A.A.G.M. (Ted) van den Bergh, L.J.A. (Len) Lipman, R.A. (Ruud) Tombrock and former Council member H. (Hans) Hopster. The Council is supported by deputy secretary D. (Daniëlle) Hartman, deputy secretary A.E. (Anne) van den Ende and secretary M.H.W. (Marc) Schakenraad from the Council on Animal Affairs office.

Reader's guide

This advisory report begins with an introductory chapter on the background, key questions and approach of the report. Chapter 2 provides further information on animal assisted interventions and their intended effects. Chapter 3 outlines the range of interventions provided in the Netherlands and discusses the possibilities for insurance coverage. Chapter 4 looks at national and international regulations governing animal assisted interventions. Finally, Chapter 5 examines human and animal welfare, the risks of them being harmed and how animal welfare can be measured. The advisory report concludes with recommendations for research bodies, the government and the operating sector with regard to animal assisted interventions.

1. Introduction

1.1 Background and key questions

Animal assisted interventions are interventions conducted with the assistance of animals on people with a physical and/or mental disability. The ultimate purpose of the intervention is to improve the physical, social, emotional and/or cognitive health or functioning of an individual. These interventions are increasingly common. In 2000, for example, there were just over 200 care farms in the Netherlands; according to the Federatie Landbouw en Zorg (Agriculture and Care Federation), that figure has now risen to more than 1,000. Other organisations, such as KNGF Geleidehonden (Royal Dutch Guide Dog Foundation) and Stichting Hulphond Nederland (Dutch Assistance Dog Foundation), are also showing growth. In its annual report for 2010, KNGF Geleidehonden reported that there were 451 active combinations (client-dog combinations) in the Netherlands at that time; by 2016, it was reporting an increase to 652 active combinations. Stichting Hulphond Nederland wrote in its annual report for 2014 that 2,000 dog-assisted therapy sessions had been conducted on children that year; that figure had risen to 3,300 sessions in 2016.

The aforementioned figures lead the Council on Animal Affairs (hereinafter: the Council) to conclude that the number of activities around animal assisted interventions (AAI) has increased in recent years. The subject has also come to the attention of the media, as is shown by the following recent examples:

"Cuddling puppies helps reduce stress: Amsterdam leads the way, despite criticism",
de Volkskrant, 22 oktober 2018

"Equine assisted ADHD therapy", Vrij Nederland, 17 april 2019

"Donkey assisted therapy is beneficial in helping to overcome anxieties", Het Laatste Nieuws, 18 maart 2019

Whether directly or indirectly, the purpose of animal assisted interventions is to increase the welfare of the human client. The Council supports the notion that interactions and relations between humans and animals can influence the welfare of both and notes that this is not restricted by the species of animal. In doing so, it relies on the concept of One Welfare (annex 1), which follows on from the concept of One Health (Council on Animal Affairs, One Health: A Policy Assessment Framework [Dutch title: One Health, een afwegingskader voor beleidsbeslissingen], 2016). The concept of One Welfare recognises that relations and interactions between humans and animals have an effect on their welfare. The welfare balance can be either positive or negative for both parties in any

interaction. In the context of animal assisted interventions, the animal is primarily used to promote human welfare. This can harm the welfare of the animal concerned. Under Section 2.1.1 of the Animals Act (Wet Dieren), it is illegal to harm the welfare of animals without good reason. The Animals Act also recognises that animals have an inherent – or intrinsic – value, which is separate from their useful value for humans (Section 1.3). The Council interprets the concept of intrinsic value as a moral requirement that human action shall not result in a structural or substantial impairment of animal welfare, health or integrity (Conceptual Model, Council on Animal Affairs, 2018). The use of animals for the benefit of humans requires that we consider the usefulness and necessity of the action compared to the harm (if any) to animal welfare. This has prompted the Council to examine whether there are sufficient guarantees for animal welfare in the growing practices around animal assisted interventions and how the sector can be helped to safeguard human and animal welfare in the future. The Council now wishes to present its views on the use of assistance animals for the benefit of humans. To this end, it will evaluate the usefulness and necessity of the interventions and provide an answer to the central question:

'What is needed to ensure animal assisted interventions are conducted in a responsible manner and in such a way that human and animal welfare continues to be safeguarded?'

1.2 Approach

In order to provide a good picture and to take stock of the current situation, a short literature review was carried out. In addition, talks were held with multiple parties on the supply side of animal assisted interventions, including in a stakeholder meeting and during a working visit to the Institut für soziales Lernen mit Tieren (www.lernen-mit-tieren.de) in Germany.

As part of its efforts to provide an answer to the central question of the report, the Council will address the following items:

- Definition of animal assisted interventions;
- Intended and achieved effects of animal assisted interventions;
- Legislation and regulations;
- Descriptive summary of animal assisted interventions in the Netherlands;
- Potential human and animal welfare problems based on scientific literature and interviews;
- Usefulness and necessity of animal assisted interventions;
- Alternatives;

- Possibilities for guaranteeing the welfare of both humans and animals when conducting animal assisted interventions.

Given that dogs and horses are most commonly used for animal assisted interventions, this report will focus on these species in particular.

2. Animal Assisted Interventions

2.1 Definition and examples

There are multiple definitions of animal assisted interventions in use. The Council adheres to the definitions adopted by the International Association of Human-Animal Interaction Organizations (IAHAIO, 2018). This is the leading global association of organisations that are involved in animal assisted interventions.

An **animal assisted intervention** is a goal-oriented and structured intervention that intentionally uses animals to improve human physical, social, emotional and/or cognitive health or functioning.

Animal assisted interventions can be further divided into the categories animal assisted therapy (AAT), animal assisted education (AAE), animal assisted activities (AAA) and animal assisted coaching (AAC) (annex 1).

Examples of animal assisted interventions include:

- A dog is used to promote the social skills and empathic capacity of an autistic child (therapy);
- A dog is placed near a child by an educator while reading a book for the purpose of improving reading literacy (education);
- A dog/cat/rabbit is taken by a handler to a (health)care institution so that the elderly residents can stroke or pet the animals for the purpose of cheering up the residents (activity);
- A horse (or a herd of horses) is used with a person who is suffering from nervous exhaustion by a qualified coach for the purpose of enabling that person to find a way to relax better (coaching);
- A guide dog is used to enable a person with reduced vision or without the power of sight to move safely in society (assistance).

Activities that are intended solely for recreation, without any additional purpose, are not considered as animal assisted interventions. Examples are:

- Walking with alpacas;
- Horse-riding for sport and recreation;
- A visit to a petting zoo;
- Hugging cows at a farm open day.

The categories are distinguished chiefly in terms of the objectives set for the persons in the intervention. They are characterised by a more or less formal methodology, degree of structure and a particular background or qualification held by the handler in question. There may be an overlap between categories: for instance, in certain cases an intervention can include both therapeutic and educational values. Furthermore, the use of assistance animals, such as guide dogs, can be seen as a continuous intervention in the form of a long-term human-animal team for human benefit (Annex 1).

2.2 Intended effects of animal assisted interventions

Many effects of the interaction between humans and other animals have been described. The best-known effects are increased levels of the hormone oxytocin, a lowering of the heart rate and reduced blood pressure in both humans and animals (Kis, Ciobica, & Topál, 2017) (Bert et al., 2016). In addition, Beetz et al. (2012) describe that contact with companion animals (whether pets or therapy animals) has the potential to promote the social functioning of children and adults. This contact has also been reported to promote a positive state of mind and reduce depression among adults and children with psychiatric problems (Beetz et al., 2012) (Bert et al., 2016). Furthermore, the presence of an animal has a calming effect and reduces anxiety in various stressful circumstances (Beetz et al., 2012). Therefore, according to the literature, human-animal interaction can produce a beneficial impact on human welfare. In their review of the benefits and risks of animal assisted interventions, Bert et al. (2016) write that the use of animals in the form of animal assisted interventions can also have advantages for hospitalised patients with a range of different health issues. Significant positive effects have been reported in both physical and psychological terms, with parameters including patients' experience of anxiety/depression/pain, physical activity (daily steps) and systolic blood pressure (Bert et al., 2016). However, the value of these studies has been criticised. Marino (2012), who examined 137 studies concerning animal assisted therapy and activities, found that the methodology was poor in virtually all the studies. Methodology is frequently described as the stumbling block in studies on animal assisted interventions. This is also highlighted by Brelsford et al. (2017) in her review of animal assisted interventions involving dogs in a classroom setting and Anestis et al. (2014) in their review of equine animal assisted

interventions. Furthermore, the lack of standardisation in methodologies makes comparisons of studies difficult. The following weaknesses in studies on animal assisted interventions are most common (Bert et al., 2016) (Marino, 2012) (Brelsford, 2017) (Anestis et al., 2014) (Herzog, 2014):

- Sample research group too small;
- Lack of a control group;
- No double-blind studies;
- Absence of standardised treatment and reporting procedure;
- Few long-term follow-up studies;
- No verification to take account of the effect of new experiences;
- Publication of studies with a positive result only.

The majority of studies carried out on animal assisted interventions make it difficult to draw any firm conclusion about the effect of animal assisted interventions. The question of effectiveness is less in dispute in the case of certain assistance dogs. It can be empirically observed that a guide dog can enable its owner to successfully cross the road, that a hearing dog can alert its owner when the doorbell rings and that an Activities of Daily Living (ADL) dog can fetch a newspaper from the front door letterbox. Owners of guide dogs confirm that the dog increases their mobility, but also report an improvement of psychosocial factors, such as greater social interaction and a feeling of independence and self-confidence (Whitmarsh, 2004).

It cannot be ruled out that positive and healing effects from animal assisted interventions can also be partly or wholly obtained through alternative methods not involving the use of assistance animals. Innovations such as robots might not only be able to take over the primary function of assistance animals, but could potentially also offer a form of companionship (Melson et al., 2009), notwithstanding the very real ethical issues this entails.

3. Descriptive summary

3.1 Animal assisted interventions in the Netherlands

As previously mentioned, the number of activities around animal assisted interventions appears to have increased in recent years. There are no precise statistics available, since no central register for the sector exists. In the Netherlands, animal assisted interventions are conducted at the practice of a coach or therapist (psychologist, special education expert, speech therapist, physiotherapist, occupational therapist etc.), at the patient's

home or at the location where the animals are kept. The latter is often the case with therapy involving horses or other large animals. For instance, care farmers with a care farm and employees/volunteers of a healthcare institution also regularly organise animal assisted interventions. While dogs, horses and rabbits are routinely used for animal assisted interventions, other animals, such as cats, chickens, sheep and cows, are also used. Animal assisted interventions are conducted for people of all ages and for a range of different issues, including autism spectrum disorders, behavioural problems, ADHD, Down syndrome, depression and dementia.

The method for working with animals varies. Practitioners can opt to work with their own animal(s) or to use a handler-animal combination that is suitable for the therapy. An animal can be a pet that is fetched a few times a week to be used as a therapy animal. Other instances involve the use of animals that have been specially bred and extensively trained for the purpose. While some animals have been trained for animal assisted interventions from an early age, others are not used for this work until they are older, sometimes without any prior training.

Anyone can conduct animal assisted interventions without any type of training, skills or knowledge, provided they do not act contrary to the Individual Healthcare Professions Act (Wet op de beroepen in de individuele gezondheidszorg). There are also no specific rules or standards that the animals that are used for animal assisted interventions must satisfy before being put to work. Anyone wishing to be trained in conducting animal assisted interventions can choose from a range of training providers (see annex 2), among whom there is no uniform curriculum. In addition, people who wish to train to a higher professional level cannot distinguish themselves from people who are less professional in their approach to their work. Interviews with providers of interventions revealed a motivation and desire for professionalisation in the field. There is a need for high-quality training institutes with a uniform curriculum that pay sufficient attention to animal welfare, animal health, animal behaviour and the risk of zoonosis, among other things.

3.2 Entitlement to health insurance reimbursement

Most animal assisted interventions are not covered by health insurance (neither basic health insurance nor supplementary insurance policies). Basic health insurance does not cover such interventions due to the lack of sufficient scientific evidence for the effectiveness of the intervention, as required by Zorginstituut Nederland (National Health Care Institute). Due to the unorganised nature of the sector, most supplementary policies do not cover these interventions either (Barten & de Boer, 2013).

On the other hand, health insurance coverage must contribute toward the reasonable costs of keeping and using guide dogs, hearing dogs (for the hearing impaired) and ADL dogs pursuant to the Healthcare Insurance Regulations (Regeling zorgverzekering, Art. 2.6). Eligibility for reimbursement is conditional on medical grounds. Basic health insurance generally covers the entire cost of purchasing the dog. The dog user also receives a certain amount to cover the costs of keeping and using the dog. Such a construction results in health insurers imposing additional demands on organisations that supply the dogs. These include the demand that the supplier of the dog is a member of an umbrella organisation, such as Assistance Dogs International (ADI) and the International Guide Dog Federation (IGDF). These associations impose demands on organisations wishing to become a member. While membership is not mandatory – anyone in the Netherlands can train and supply a guide dog – it is required to qualify for full reimbursement by health insurers. As a result, this branch of animal assisted interventions is more organised and can possibly serve as a model for the professionalisation of the remainder of the sector. Annex 3 includes a list of suppliers of guide dogs.

For animal assisted interventions that are not covered by health insurance, the Social Support Act (Wet Maatschappelijk Ondersteuning, WMO) often does not provide for reimbursement either. The implementation of this Act, which aims to promote the self-reliance of individuals and to support opportunities for their participation in society, is the responsibility of local authorities. Some animal assisted interventions, as in the case of assistance dogs that support people suffering from Post-Traumatic Stress Disorder (PTSD dogs), are seen by certain local authorities as constituting treatment or part of a treatment, and are therefore not covered by the Social Support Act. In response to the conflicting approach by local authorities regarding PTSD dogs under the provisions of the Social Support Act, the Central Appeals Tribunal ruled on 12 September 2018 that local authorities are justified in declining a request for reimbursement of the costs and purchase of a PTSD assistance dog, given the lack of sufficient scientific evidence for the desired effect of the provision. However, the same ruling also acknowledged that the use of PTSD assistance dogs was a recent development which was still being studied and that local authorities could consider it justified to supply a PTSD dog if that was considered the most suitable course of action in an individual situation.

Different arrangements are in place for reimbursing care farms and the therapies they provide. There was already a movement toward professionalisation in this sector that resulted in the accreditation mark for care farms *Kwaliteit laat je zien* (Display of Quality), issued by the Federatie Landbouw en Zorg. Care farms with this accreditation mark may qualify for reimbursement of the care they provide, for instance under the Personal Care Budget (persoonsgebonden budget, PGB) or the provisions of the Social Support Act. Care

farms and their activities are defined as animal assisted interventions, but are viewed by the government and local authorities as daytime activities. As a result, reimbursement is possible under the PGB and/or the provisions of the Social Support Act.

4. National and international legislation and regulations

There is no specific legislation in the Netherlands for animal assisted interventions. The main legislation in the field of animal assisted interventions is the Animals Act (Wet Dieren) and the Animal Keepers Decree (Besluit houders van dieren).

The Animals Act acknowledges the intrinsic value of animals (Section 1.3(1)). The Act defines this as the recognition of the value that animals possess in their own right as sentient beings. Any violation of the integrity or well-being of animals beyond what is reasonably necessary must be avoided and the care reasonably required by the animals must be guaranteed. This care is specified in the Act as in any event freedom from hunger, thirst and malnutrition (incorrect feed); physical and thermal discomfort; pain, injury and disease; fear and distress; and restriction of their natural behaviour, insofar as this can reasonably be expected. It is illegal to cause an animal pain or injury or to harm the health or well-being of the animal without good reason or in excess of what is acceptable for this reason (Animals Act, Section 2.1(1)).

Section 2.3 of the Animals Act refers to the use of animals. Although animal assisted interventions involve the use of animals, no mention is included of additional regulations, directives, guidelines or recommendations for the conduct of such interventions, even as part of legal acts as defined by the EU.

Chapter 3, paragraph 2 of the Animal Keepers Decree contains regulations governing the commercial sale and supply of companion animals, the keeping of companion animals in animal sanctuaries and the breeding of companion animals. Requirements are specified for managers of establishments, such as a boarding establishment, as well as for activities such as exhibitions, fairs or markets. The requirements relate to accounting records, professional competence, accommodation and care (sick and healthy animals), health, socialisation and vaccination. Rules are also imposed regarding the method of information provision on the sale or delivery of the animal, including the animal's care, costs, health status and behaviour. These regulations do not apply to the conduct of animal assisted interventions.

At the EU level, there are no specific regulations or directives regarding animal assisted interventions that apply to all Member States. The Member States are free, however, to introduce their own supplementary legislation. Austria is the frontrunner as regards regulations on animal assisted interventions (Bremhorst, 2018). An additional guideline concerning therapy and assistance animals (Richtlinien für die Beurteilung von Blindenführhunden gemäß § 39a Abs. 4) was included in the Austrian Federal Disability Act (Bundesbehindertengesetz, BBG) by the Minister for Labour, Social Affairs and Consumer Protection with effect from January 2015. It stipulates that certification must be obtained before a handler-dog team may conduct animal assisted interventions in practice. Among other things, this certification requires an evaluation of the human-animal team and health, temperament and behavioural controls to determine whether an animal is suitable for carrying out the work. In addition, requirements are imposed on the professional who intends to use the dog. These include possession of recognised qualifications, a minimum number of training hours and a minimum age of 18. Therapy dogs may be used no more than once a day for a period of 45 minutes, twice a week. In exceptional circumstances, a dog may be used three times a week. The teams are evaluated and monitored by the Messerli Research Institute, part of the University of Veterinary Medicine Vienna. The Federal Disability Act also stipulates requirements for assistance dogs. According to the Act, these assistance animals include guide dogs, hearing dogs for the hearing impaired, medical hearing dogs (for epilepsy and diabetes patients) and ADL dogs. The requirements for the professional include veterinary health checks, assessment of the behaviour and character of the animal and an evaluation of the suitability of the work performance of the animal for the intended owner. These too are evaluated and monitored by the Messerli Research Institute. Provided that all the stipulated requirements are met, a dog's placement can be made definitive, public funds can be accessed and the animal can be registered on the new owner's identity document. This enables the owner to demonstrate his or her disability and exempts him or her from various rules concerning dogs, such as the requirement that the dog be on a leash on public transport in Austria and the ban on dogs entering public buildings.

Austria is not the only country with specific rules for animal assisted interventions. Other countries, such as Germany, Luxembourg and Switzerland, have a certification system in place. Certification is only obtainable through training programmes that meet certain standards and guidelines stipulated by the International Society for Animal Assisted Therapy (ISAAT) and/or the European Society for Animal Assisted Therapy (ESAAT). ISAAT is a worldwide non-profit organisation dedicated to quality assurance regarding animal assisted interventions. ESAAT is its European counterpart. ISAAT accredits the curricula of institutions offering training programmes through a process that involves strict criteria

regarding the qualification of those teaching in the curricula, minimum hours of courses and exams. It also sets requirements for the content of the curricula in which animal welfare plays a role. Furthermore, ISAAT has prepared a quality brochure setting out guidelines for how animal assisted interventions ought to be conducted. In 2017, this quality brochure was translated into Dutch and adapted to the situation in the Netherlands. This translation has the title 'richtlijn Kwaliteitsontwikkeling en kwaliteitsborging bij dierondersteunde interventies' (Wolfarth, Olbrich, & Verheggen, 2017). The Netherlands does not have a training and accreditation system providing a guarantee of quality in animal assisted interventions. The recently introduced quality brochure can provide guidance regarding the professionalisation of the sector.

5. Potential welfare problems

5.1 What is welfare?

Acknowledgement of the intrinsic value of animals and the fact that they are sentient beings gives rise to a moral responsibility among humans to consider the welfare of animals in our actions. There are several definitions of animal welfare. In this report, we have chosen to adhere to the definition that is set out in our advisory report on the Conceptual Model (2018):

'Animal welfare is the quality of life as it is experienced by the animal itself. An animal will experience a positive state of well-being when it has the freedom to exhibit normal, species-specific behaviour patterns and is able to respond adequately to the challenges that the prevailing circumstances offer. Such challenges relate to hunger, thirst and malnutrition (incorrect feed); thermal and physical discomfort; injury and disease; fear; and persistent stress stimuli.'

While this definition links animal welfare to the animal's experience and perception, it is humans who assess whether an animal's welfare has been adversely affected in a particular situation. This assessment relies on various parameters, of which behaviour is one. Proper assessment of animal behaviour requires sufficient knowledge and understanding of the behaviour of the species concerned and the variations in how that behaviour is expressed. Other parameters for assessing animal welfare include physiological parameters, such as hormone levels, brain activity and metabolism. It should be noted that the complexity, interrelationship and variations between species and individuals of these parameters mean that data are not always easy to interpret. Paragraph 5.4 looks at animal welfare assessment in further detail.

5.2 Animal welfare risks

In order to form a picture of welfare risks potentially affecting animals that are used for animal assisted interventions, a literature study was carried out. This was also a focus during the interviews conducted with external experts. Our literature review shows that there are few scientific studies on welfare issues among the animals that are used for animal assisted interventions that stand the test of critical appraisal. Of the studies that did look at this topic, none suggest the existence of an acute welfare problem. Some studies reported that the animals showed signs of stress and increased levels of cortisol during the conduct of animal assisted therapy (Glenk, 2017). For example, several cases are described of patients and employees handling the animal in an inappropriate way, with the animal being bullied or mistreated. The risk of exhaustion due to a lack of breaks is also described (Glenk, 2017) (Fine, 2010).

So-called assistance animals differ from other intervention animals in that they stay with the owner whom they assist around the clock. ADL dogs perform everyday tasks that the owner is no longer able to carry out. A guide dog safely leads its owner around obstacles out of doors. An autism service dog can have added value for the safety and behavioural development of a child and offers companionship. A seizure alert dog warns people of an oncoming or actual epileptic seizure and provides its owner with assistance during and after a seizure (www.hulphond.nl; www.geleidehond.nl). The amount of time spent providing assistance and 'downtime' during the day varies from one type of animal to another. In addition, there are virtually no good studies available that examine the welfare of this group of animals. Krause-Parello et al. (2016) also describe this in their review of dogs used for veterans suffering from Post-Traumatic Stress Disorder. There are critics who have expressed concern for the welfare of this group of animals, due to the fact they sometimes need to be active 24/7. For instance, Fine (2010) highlights risks such as exhaustion and stress. Moreover, people with mental health issues, such as in the case of PTSD and autism, can act unpredictably and cause the animal concerned physical or mental harm (stress, confusion).

Many dogs that become assistance dogs (irrespective of the type of assistance dog) are placed in a host family during the first 12 months from birth, which they then leave after approximately 12 to 18 months for possible further training. During this period, the dogs are trained not to respond to environmental stimuli and to follow different rules (e.g. not to swim, not to urinate multiple times, not to respond to other people or animals). Depending on their eventual function, these rules may not always be necessary. The dogs often stay in a kennel during further training, sometimes in the company of an animal of the same species. After completing its further training, the dog can be used for animal

assisted intervention purposes. In some cases, e.g. guide dogs, the animal will be placed permanently with the client at his/her home. In other cases, the dog will be placed in a host family and used for animal assisted interventions several times a week. Once a dog has reached retirement age, another family may be sought where it can live into old age. In other cases, the dog may spend the remainder of its life with the same family or owner (www.hulphond.nl, s.d.) (www.geleidehond.nl, s.d.). Consequently, an assistance dog may experience several significant transitions and changes in social environment (e.g. household, owners and handlers) during its training (Rietveld-Pierpers, Enders-Slegers, 2018). In addition to the standard transitions, the animal may experience more frequent changes of social environment if unforeseen problems occur. For instance, an animal with clinical problems will be removed from the training programme and may be transferred to one or more successive lodging addresses. However, a young animal's experiences influence its eventual behavioural development (Dietz et al., 2018). Fine et al. (2010) describes that welfare risks may arise as a result, in particular if the animal is not well handled.

Welfare problems can also arise if an animal that is not suitable for an intended intervention is chosen. The sensitivity in young animals referred to above means that they are unsuitable for use in an intervention setting. The Council also believes that only domesticated animals should be used for animal assisted interventions. Domestication is a process whereby an animal population changes in terms of its characteristics and features through selection and breeding over several generations, such that animals belonging to this population become increasingly adapted to living in close proximity to humans in circumstances created and controlled by humans that are similar over several generations. Animals from domesticated populations are less sensitive and reactive than non-domesticated animals of the same species, so that in principle they are better able to cope and function in a stimulus-rich environment (Neijenhuis & Hopster, 2018). Nonetheless, not every animal species is equally suitable for domesticated animals of that species to be used for animal assisted interventions. Factors that play a role in this regard include day-night rhythm, orientation toward humans and needs with respect to accommodation/care. The International Society for Animal Assisted Therapy has drawn up a list (ISAAT, 2018) setting out which animal species are suitable or less suitable for use in AAI.

The interviews revealed that abuse sometimes occurs, often as a result of ignorance or incompetence on the part of the person conducting animal assisted interventions. Lack of knowledge of animal behaviour and care needs is cited as the principal cause of welfare problems. Abuses can also occur as a result of careless or uninformed selection of animals, burdensome training programmes and heavy work duties.

The Council concludes further that, as the popularity of animal assisted interventions increases, interventions are being conducted for which there is no necessity. By way of illustration: a horse is used for a team-building exercise, where the team attempts to get the horse to carry out certain tasks. While this may potentially be useful for team-building, there are alternatives available for this purpose, rendering the use of animals unnecessary.

5.3 Human welfare risks

Where animals and humans come together, there is always a risk of incidents, such as zoonosis, biting, scratching and kicking. It is not uncommon for animal assisted interventions to take place in a healthcare institution, school classroom or hospital. This means that animal assisted interventions are conducted on risk groups, such as the elderly, children and immunocompromised individuals. These individuals are more susceptible to contracting zoonoses (National Institute for Public Health and Environmental Protection). Zoonoses are infectious diseases that can be transmitted to humans by animals. Examples include ringworm, toxoplasmosis, cat scratch disease and echinococcosis. Whether there is an increased risk of contracting a zoonosis during animal assisted interventions, and what that risk is, is unknown.

There are approximately 150,000 dog bites in the Netherlands each year. Of these 150,000 incidents, roughly 50,000 require medical treatment of the wounds sustained by the people concerned. Hospital admission is necessary for 230 of these people. Biting incidents cause one to two deaths each year (Hondenbeten in perspectief [Dog bites in perspective], 2008). Children are at an increased risk of being involved in a biting incident (Rezac, Resac, & Slama, 2015) (Davis et al., 2012) (Keuster, Lamoureux, & Kahn, 2006) (Council on Animal Affairs, Hondenbeten aan de kaak gesteld [Dog bites exposed], 2017). As previously mentioned, animal assisted interventions are frequently conducted on children. It is unclear how many biting incidents occur during animal assisted therapy. There are no figures on cat scratching or biting incidents; the same also applies to biting and kicking incidents caused by horses. Allergic reactions can also occur among humans, particularly where animals are used simultaneously for multiple people, such as in a classroom or care home (Bert et al., 2016). Knowledge of zoonoses and risk management in relation to zoonoses, biting, scratching and kicking is needed to minimise the risk of incidents.

5.4 Animal parameters/welfare assessment

Animal welfare covers the quality of life of an animal as it is experienced by the animal itself. An animal will experience a positive state of well-being when it has the freedom to exhibit normal, species-specific behaviour patterns and is able to respond adequately to

the challenges that the prevailing circumstances offer. The fact that animal welfare must be approached from the perspective of the animal makes its assessment complex. As previously mentioned, among the criteria applied by Dutch law are the so-called five freedoms: the animals must have freedom from hunger, thirst and malnutrition (incorrect feed); physical and thermal discomfort; pain, injury and disease; fear and distress; and restriction of their natural behaviour, insofar as this can reasonably be expected.

Professor David Mellor of Massey University (New Zealand) has expanded this further to create a model that can be used to facilitate a systematic, structured, comprehensive and coherent assessment of animal welfare (Mellor, 2017). This model is known 'The Five Domains model'. The purpose of each of the domains is to draw attention to areas that are relevant to animal welfare assessment. The four domains of nutrition, environment, health and behaviour reflect the physical condition and functioning of the animal. Each domain is associated with different factors that can be assessed. Under 'nutrition', for example, it is possible to measure whether adequate quantities of feed and water are consumed by the animal, and whether the feed is of sufficient quality. The subjective experiences (affections) arising from the aforementioned domains come together in the fifth domain: the mental state of the animal. For instance, lack of nutrition leads to hunger and eventually to a feeling of malaise as a result of malnutrition. The Five Domains model provides an overview of pillars that play a role in assessing animal welfare and also indicates why these pillars are important. It establishes the link between the measurable variables and the subjective experiences of animals. The Five Domains model (English version) can be found in annex 4.

It should be noted that different animals also have varying needs in terms of nutrition and environmental factors, that they develop different diseases and display different behaviour. While dogs and horses are most frequently used for animal assisted interventions, other animals, such as cats, chickens, sheep and cows, are also routinely used. These different species not only have their own specific needs, but individual variations within a species also exist. As a result, an assessment of the welfare of an animal in a particular context requires specific knowledge of the species concerned, including possible variations within that species.

6. Conclusion

Before the main question – *what is needed to ensure animal assisted interventions are conducted in a responsible manner, and in such a way that human and animal welfare continues to be safeguarded?* – can be answered, the use of animals for specific

intervention purposes requires that we consider the usefulness and necessity of the practice compared to the harm (if any) to animal welfare (Conceptual Model, Council on Animal Affairs, 2018). If the usefulness and necessity of an intervention are not sufficiently demonstrated, at least the animal's welfare must be safeguarded. Pursuant to Section 2.1(1) of the Animals Act, it is illegal to cause an animal pain or injury or to harm the health or well-being of the animal without good reason or in excess of what is acceptable for this reason. If the usefulness and necessity of an animal assisted intervention are clear, the likelihood that the use of the animal will cause its welfare to be harmed must still be minimised. This also means that minimisation of the burden placed on the animal should always be a primary goal whenever animal assisted interventions are conducted.

At the same time, the usefulness and necessity of animal assisted interventions has not been demonstrated for the full range of interventions. There is as yet insufficient evidence to state conclusively that animal assisted therapy actually produces better results than therapy conducted by a professional alone (see paragraph 2.2). Nevertheless, the Council recognises that the use of animals in interventions may well have added value and notes the existence of studies aimed at demonstrating this. The Council observes that it is difficult to assess the actual scope of harm to the welfare of animals in the range of interventions reliably. Also, in the Netherlands anyone may conduct animal assisted interventions, regardless of their knowledge and expertise. This makes ensuring the protection of human as well as animal welfare a matter of urgency. As the Council believes that professionalisation of the sector is essential for ensuring that animal assisted interventions are conducted in a responsible manner, it makes the following recommendations.

7. Recommendations

7.1 Recommendations to the sector for achieving professionalisation

The Council defines professionalisation as organising the sector in such a way that (1) animals are not used for interventions that harm the animal's welfare without plausible usefulness or necessity; (2) where the usefulness and necessity of the intervention are established, animal welfare is guaranteed as far as reasonably possible; (3) abuses and ignorance or incompetence are prevented; and (4) there is transparency concerning the practices and quality systems employed in the sector. The approach to professionalisation taken by professional groups in other healthcare areas can be a model for professionalising the sector (annex 5). The following common denominators stand out in the professionalisation process:

- Establishment of a professional association;

- Development of shared positions, such as a set of regulations, articles of association, professional codes;
- Development of (refresher) training and recognition of training qualifications;
- Accreditation of training;
- Further professionalization, such as health insurance reimbursement, recognition of profession.

The establishment of a professional association and the design of a uniform training curriculum serve to safeguard animal and human welfare.

Safeguarding welfare

Animal assisted interventions can put animal and human welfare at risk in a variety of ways. The sector itself can take steps to limit these risks. Firstly, it is important to select a suitable animal for the intended intervention. This starts with selecting a suitable animal species. Domesticated animals show less sensitivity and reactivity and have increased stress tolerance, enabling them to cope and function better in the stimulus-rich human environment than non-domesticated animals. The International Society for Animal Assisted Therapy has drawn up a list (ISAAT, 2018) setting out which animals are suitable or less suitable for use in interventions.

The animal must be specially trained for the work to be carried out. This calls for a differentiated training programme, appropriate for the intended intervention. Unnecessary restrictions for the animal must be avoided. It is also in the interest of both parties that the animal's nature suits the subject of the intervention, particularly in the case of a 24/7 human-animal interaction. A suitable combination will facilitate the human-animal collaboration. A matching procedure can be used for this purpose.

The animal should also receive the recommended preventive and therapeutic veterinary care. Hygiene and safety protocols reduce the likelihood of zoonoses, biting and kicking incidents. Protocols on workload can prevent the animal becoming exhausted or overstimulated. It is not advisable to use young adolescent or pre-adolescent animals in view of their sensitivity and impulsiveness.

The animal's welfare should be monitored by the professional handling the animal. As previously mentioned, the assessment of animal welfare is not straightforward. The Five Domains model (annex 4) provides parameters that can assist in this regard. In the first instance, the Council advises that the monitoring of animal welfare be carried out by the

sector itself. For this to be effective, the sector needs to be transparent. The government should have the power to intervene if welfare is not sufficiently guaranteed.

Establishment of a single professional association

Although everyone can adopt a different approach to how they conduct animal assisted interventions and the activities that are carried out are very diverse, there are nonetheless large common denominators in the field, such as animal welfare, training requirements, quality and safety. The establishment of a professional association can enable professionals to set themselves apart from non-professionals and ensure this is clearly brought to the attention of clients as well as health insurers. The professional association can draw up regulations and articles of association that stipulate requirements for persons conducting animal assisted interventions. The quality brochure (Wolfarth, Olbrich, & Verheggen, 2017) referred to above, which has been translated into Dutch and which is used in many German-speaking areas, can potentially provide guidance on drawing up such articles of association, regulations and requirements. This brochure can also provide a basis for the further approach toward defining the requirements for training and its recognition. The Council further believes that the 'White Paper' produced by the International Association of Human-Animal Interaction Organizations (IAHAIO, 2018) can assist in this process.

The first step in creating a professional association is to bring together a select group of people who understand the sector. This group can then consider the objectives, articles of association, regulations and action plan of their envisaged association. These can include requirements on the selection and training of animals as well as practising professionals. It must also be determined which knowledge must be incorporated into a uniform and continuous curriculum. Parties engaged in animal assisted interventions can join the association and thereby agree to endorse the quality system that has been put in place. The association could consider attaching a quality mark to this quality system, possibly in collaboration with NGOs. Organisations that are awarded this quality mark can highlight how their application of a professional methodology, including measures to safeguard animal welfare, sets them apart from other providers.

Initial and refresher training courses

The establishment of a professional association provides opportunities for imposing requirements on the training courses and programmes that are available in the sector. A uniform curriculum can be defined for this purpose. Requirements can be specified for each separate intervention type and animal species. We recommend that the people conducting interventions be educated in animal welfare and how to assess it. Relevant knowledge of zoonoses, animal health and hygiene are also necessary to guarantee human and animal

physical health. Knowledge about animal behaviour prevents unsafe and undesirable situations. The ISAAT/ESAAT guidelines can provide support.

7.2 Recommendations to the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sport

Section 2.3 of the Animals Act concerns the use of animals. Despite the fact that animal assisted interventions cover practices involving the use of animals for human benefit, the Act makes no mention of these. The Minister of Agriculture, Nature and Food Quality can extend the scope of the assessment framework for production animals to include animals that provide services. This specific recommendation for animals that provide services is already included in the Council on Animal Affairs advisory report on the assessment framework for production animals (2016). In assessing whether an animal species is suitable for using in animal assisted interventions, it is possible to impose requirements on the trainer or handler, such as that they work in accordance with certification specifications. This makes it possible to impose conditions on the persons conducting the interventions, for instance that they must be a member of the professional association and must have obtained recognised professional qualifications. The legislation concerning assistance animals and therapy animals that has been in force in Austria since 2015 can act as a model in this regard.

The Council further recommends that the Minister of Agriculture, Nature and Food Quality and the Minister of Health, Welfare and Sport facilitate the professionalisation of the sector by organising a discussion forum for the providers of animal assisted interventions. The ministries can offer support in helping to create a professional association and defining a quality mark. In this way, the government will contribute to the quality of the provision of animal assisted interventions and good animal husbandry.

7.3 Recommendations for research

To date, the majority of studies that have been carried out have focused on demonstrating the positive impact of animal assisted interventions on humans. Well-designed studies on the effectiveness of animal assisted interventions can indeed demonstrate the usefulness of certain therapies and the use of animals. This is necessary to justify the use of animals. Animals that are used for purposes for which the usefulness and necessity have not been demonstrated may not experience any adverse welfare effects as a result of the activity concerned. It is therefore important to invest in such studies, which should involve the application of a careful methodology so as to increase the evidentiary burden. Among other things, these types of study should examine whether specially trained animals contribute more to human welfare during interventions than companion animals. This is relevant,

since positive effects may also be expected from the interaction and bond between human and animal in the case of companion animals. Supplementary studies can also support, or challenge, the necessity of an intervention, in addition to its usefulness. This allows alternatives for the interventions to be studied. ADL dogs no longer need to be trained and used if they could be replaced by a robot. If a dog offers demonstrable, additional benefits compared to a robot, such as affection and interaction, these can also be provided by a companion animal.

It is also strongly recommended that a comprehensive study be carried out of animal welfare in work situations. This applies to assistance animals as well as therapy animals. The welfare of specially trained animals should be compared with a comparable group of companion animals in order to analyse the impact of using these trained animals on the animals themselves.

7.4 Recommendations to health insurers and local authorities

We recommend that health insurers and local authorities make a decision as to whether to reimburse animal assisted interventions dependent on a professional structure in the sector. Safeguarding animal welfare is a criterion that should be included for accessing supplementary insurance cover or to enable reimbursement under the Social Support Act. The quality mark referred to above can serve as a guide in this regard.

7.5 Recommendations to institutions

We also advise institutions intending to use animals for animal assisted interventions to do so only in collaboration with organisations that can demonstrate compliance with the proposed quality mark. By only engaging organisations that have the quality mark, institutions can prevent the irresponsible use of animals.

8. Sources

- Anestis, M., Anestis, J., Zawilinski, L., Hopkins, T., & Lilienfeld, S. (2014). *Equine-Related Treatments For Mental Disorders Lack Empirical Support: A Systemic Review of Empirical Investigations*. *Journal of clinical psychology*, 1115-1132.
- Animal assisted intervention. (2016). Opgehaald van Animal Assisted Intervention International: <http://www.aai-int.org/aai/animal-assisted-intervention/>
- Barten, M., & de Boer, M. (2013). Samen op weg naar professionalisering: Een onderzoek naar mogelijke interne en-/of externe samenwerkingsverbanden om het werkveld paardencoaching te professionaliseren. Leeuwarden: VHL
- Beetz, A., Uvnäs-Moberg, K., Julius, H., & Kotrschal, K. (2012). Psychosocial and psychophysiological effects of human-animal interactions: the possible role of oxytocin. *Frontiers in Psychology*, 1-15.
- Bert, F., Gualano, M., Camussi, E., Pieve, G., Voglino, G., & Siliquini, R. (2016). Animal assisted intervention: A systemic review of benefits and risks. *European Journal of Integrative Medicine*, 695-706 (8).
- Brelsford, V. e. (2017). Animal-Assisted Interventions in the Classroom - A Systemic Review. *International Journal of Environmental Research and Public Health*, 669.
- Bremhorst, A. M. (2018). Spotlight on Assistance Dogs - Legislation, Welfare and Research. *Animals*, 1-19.
- Davis, A., Schwebel, D., Morrongiello, B., Stewert, J., & Bell, M. (2012). Dog bite risk: An assessment of child temperament and child-dog interactions. *International Journal of Environmental Research and Public Health*, 3002-3013.
- Dietz, L., Arnold, A., Goerlich-Jansson, V., & Vinke, C. (2018). The importance of early life experiences for the development of behavioural disorders in domestic dogs. *Behaviour*, 83-114.
- Fine, A. (2010). Chapter 20: Welfare considerations in therapy and assistance animals. In *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice* (pp. 453-474. 2th edition). Elsevier Inc.

- Fine, A. (2010). Chapter 3: Animal-assisted interventions in mental health: definitions and theoretical foundations. In *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice* (p. 34. 3th edition). Elsevier inc.
- García Pinillos, R., Appleby, M., Manteca, X., Scott-Park, F., Smith, C., & Velarde, A. (2016). One Welfare – a platform for improving human and animal welfare. *Veterinary Record*, 1-8.
- Glenk, L. (2017). Current Perspectives on Therapy Dog Welfare in Animal-Assisted Interventions. *Animals*, 1-17.
- Herzog, H. (2014). Does Animal-Assisted Therapy Really Work? - What clinical trials reveal about the effectiveness of four-legged therapists. *Psychology Today*.
- Hondenbeten in perspectief (2008). commissie van Sluijs.
- IAHAIO (2018). IAHAIO White Paper: The IAHAIO Definitions for Animal Assisted Intervention and Guidelines for Wellness of Animals Involved. International Association of Human-Animal Interaction Organisations.
- ISAAT (2018). ISAAT Species List. Opgeroepen op 29-08-2018, van <http://www.aat-isaat.org/component/jdownloads/send/1-root/310-isaat-species-list-2018>
- Keuster, T., Lamoureux, J., & Kahn, A. (2006). Epidemiology of dog bites: A Belgian experience of canine behaviour and public health concerns. *The Veterinary Journal*, 482-487.
- Kis, A., Ciobica, A., & Topál, J. (2017). The effect of oxytocin on human-directed social behaviour in dogs (*Canis familiaris*). *Hormones and Behavior*, 40–52.
- Krause-Parello, C., Sarni, S., & Padden, E. (2016). Military veterans and canine assistance for post-traumatic stress disorder: A narrative review of the literature. *Nurse Education Today*, (47) p. 43-50.
- Lockwood, R., & Arkow, P. (2016). Animal Abuse and Interpersonal Violence: The Cruelty Connection and Its Implications for Veterinary Pathology. *Veterinary Pathology*(Vol.52(5)), 910-918.

- Marino, L. (2012). Construct Validity of Animal-Assisted Therapy and Activities: How Important Is the Animals in AAT? *Anthrozoos: A Multidisciplinary Journal of The Interactions of People & Animals*, 139-151.
- Mellor, D. (2017). Operational Details of the Five Domains Model and Its Key Applications to the Assessment and Management of Animal Welfare. *Animals* 7(12), 60.
- Melson, G., P.H., K., Beck, A., & Friedman, B. (2009). Robotic Pets in Human Lives: Implications for the Human–Animal Bond and for Human Relationships with Personified Technologies. *Journal of Social Issues*, 65: 545-567.
- Neijenhuis, F., & Hopster, H. (2018). *Gedomesticeerd? Begripsomschrijving en beoordelingskader, toegepast voor het rendier en de zeeboe*. Wageningen Livestock Research, Rapport 1102.
- RDA. (2016). *One Health; Een afwegingskader voor beleidsbeslissingen*. Den Haag.
- RDA. (2016). *Toetsingskader voor Productiedieren*. Den Haag.
- RDA. (2017). *Hondenbeten aan de kaak gesteld*. Den Haag.
- RDA. (2018). *Denkkader*. Den Haag.
- Rezac, P., Resac, K., & Slama, P. (2015). Human behavior preceding dog bites to the face. *The Veterinary Journal*, 284-288.
- Rietveld-Pierpers, B.; Enders-Slegers M.J. (2018). *De inzet van dieren in zorg en onderwijs*. Open Universiteit, leerstoel Antrozoölogie.
- RIVM. *Risicogroepen*. Opgehaald van <https://www.rivm.nl/ziek-door-dier/risicogroepen>
- Romer-Bartels, M. (Vol. 53(3), 2006). *Diergeneeskundig Memorandum*.
- Whitmarsh, L. (2004). The Benefits of Guide Dog Ownership. *Visual Impairment Research*, 27-42.
- Wolfarth, R., Olbrich, E., & Verheggen, T. (2017). *Kwaliteitsontwikkeling en kwaliteitswaarborging bij dierondersteunende interventies*. 67p.

9. Annexes

Annex 1: Definitions and terms

Animal assisted intervention is a goal-oriented and structured intervention that intentionally uses animals to improve human physical, social, emotional and/or cognitive health and/or functioning.

Animal assisted therapy (AAT) is a goal-oriented, planned and structured therapeutic intervention that is intended to improve human physical, social, emotional and/or cognitive functioning, in association with a specially trained and selected animal and its professional handler. Specific goals are set for each individual and the process is professionally documented and evaluated. An example of AAT is the use of a specially trained and selected dog in the therapy of a person affected by a trauma or depression.

Animal assisted education (AAE) is a goal-oriented, planned and structured intervention directed and/or delivered by education professionals and intended to improve social skills and cognitive functioning. Intervention progress is measured and included in professional documentation. An example of AAE is a dog-assisted reading programme, where a reading dog is used to help improve a person's reading literacy.

Animal assisted activity (AAA) is a planned, informal interaction or visitation conducted by a human-animal team for motivational, educational and recreational purposes. There is no requirement to document and evaluate the intervention. Taking goats or rabbits from a petting zoo to a residential care facility so that elderly residents can pet or stroke the animals is a form of AAA.

Animal assisted coaching (AAC) is a goal-oriented, planned and structured intervention directed and/or delivered by a professional who is licensed as a coach. Intervention progress is measured and included in professional documentation. AAC is conducted by coaches with expertise within the scope and target group of the coach's practice. The focus is on supporting personal growth, insight and support in group processes, social skills and/or the social-emotional functioning of the recipient involved.

Animal support/service (AS) is support provided by professional organisations that train animals and their handlers. The animals support individuals with a disability with specific daily activities so as to enable them to function better in society. These disabilities include visual impairment (guide dogs), hearing impairment (hearing dogs), physical/mobility impairment (ADL [Activities of Daily Living] assistance dog), mental

health issues (PTSD, autism) and medical conditions (diabetes, epilepsy). The assistance animals stay with the person they are supporting 24/7.

One Welfare, or mutual welfare, is a concept that was recently introduced in literature (García Pinillos et al., 2016). The concept overlaps with the One Health principle that has received increased attention since the start of the century. One Health recognises the interrelationship between human health, animal welfare and the ecosystem (Council on Animal Affairs, One Health: A Policy Assessment Framework [Dutch title: One Health, een afwegingskader voor beleidsbeslissingen], 2016). However, health is just one of several factors determining whether a person or animal is in a state of well-being. The One Welfare concept recognises that interactions occur between humans, animals and the environment that influence the well-being of sentient individuals. A dog that is used in a therapeutic intervention and that is not well cared for, is fearful, displays aggressive behaviour and/or has physical ailments is affected in its well-being and may therefore not be able to perform the work effectively and/or safely. This in turn has an impact on the prospective recipient of this type of therapy. Another example of One Welfare is the relationship that exists between domestic violence and cruelty to animals. Lockwood and Arkow (2016) describe this relationship in detail in their report.

Annex 2: Overview of Animal Assisted Therapy Training

Name of training provider	Title of course/programme	Level	Duration	Animal welfare	Animal health	Animal Behaviour	Zoonosis/ Hygiene
Van Hall Larenstein – Animal Management	Specialisation Animals in (Health)Care	Higher professional education	One semester of a four-year study programme	Yes	Yes	Yes	Yes
Aeres Hogeschool Dronten (University of Applied Sciences)	Minor: Animal in Therapy, Training and Coaching	Higher professional education	One semester of a four-year study programme	Yes	?	Yes	?
Pets4care	Dog Assisted coaching	Higher vocational education + Higher professional education	20 training days	Yes	?	Yes	?
Pets4care	Children's Coach with the dog as Co-Coach	Higher vocational education + Higher professional education	20 training days	Yes/No	?	Yes	?
Pets4care	Animal handler training programme	Higher vocational education + Higher professional education	3.5 training days	Yes	?	Yes	Yes
Stichting Contacthond/ Martin Gaus Academie	Basic training programme for AAI/DOI Dog Handler	Higher vocational education + Higher professional education	Four-day basic course	Yes	?	Yes	Yes
Happy Tails	Therapy dog (dog is also tested)	?	Two training days	?	?	?	?

Name of training provider	Title of course/programme	Level	Duration	Animal welfare	Animal health	Animal Behaviour	Zoonosis/ Hygiene
Kreulseweg	Equine Assisted Coach-Level 1	Higher professional education	20 training days	Yes	?	Yes	?
Kreulseweg	Equine Assisted Coach-Level 2 (level 1 mandatory)	Higher professional education	16 training days	No	No	No	No
Kreulseweg	Equine Assisted Children's coach (level 1 mandatory)	Higher professional education	16 training days	No	No	No	No
Nederlandse Stichting Helpen met Paarden (foundation)	SHP Equithérapie Training Programme	Higher professional education	Total programme length: Two years	?	?	Yes	?
3PK kennishuis (expertise centre)	Equine Coaching: basic training	?	12 training days	?	?	?	?
Caprilli Coaching en Training	Equine Coaching: basic training	Higher vocational education + Higher professional education	Five training days	?	?	?	?
Caprilli Coaching en Training	Systemic Equine Assisted Coaching: basic training 2	Higher vocational education + Higher professional education	Four training days	?	?	?	?
Caprilli Coaching en Training	Specialization: Equine Assisted Coaching for Children	Higher vocational education + Higher professional education	Five training days	?	?	?	?

Name of training provider	Title of course/programme	Level	Duration	Animal welfare	Animal health	Animal Behaviour	Zoonosis/ Hygiene
Centrum voor Paardencoaching	Cognitive Equine Assisted Coaching Basic Training/post HBO programme	Higher professional education	12 months (predominantly online course)	Yes	?	Yes	?
Opleidingscentrum Dialoog tussen Mens en Paard	Equine Assisted Coaching Dialogue	?	16 training days (spread over a year)	?	?	?	?
Europees Opleidingscentrum Paardencoaches	Training to become an Equine Assisted Coach	Higher professional education	104 hours (completion in 3-7 months)	?	?	Yes	?

NB: general overview, incomplete listing.

Annex 3: Overview of guide dog providers

	Assistance dog type							Member of		Contracted to				
	Buddy/ PTSS	ADL	Autism	Sight	Hearing	Diabetes	Epilepsy	Assistance dog inter- national	Inter- national guide dog federation	Menzis	Interpolis	Ohra	Unive	Zilveren Kruis
Stichting hulphond Nederland	X	X					X	X		X	X	X	X	X
KNGF geleidehonden	X	X	X	X				X	X	X	X	X	X	X
Hulphondenschool de Click	X	X						X		X	X	X	X	X
Martin Gaus geleiden- en hulphondenschool		X		X				X	X	X	X	X	X	X
Stichting Hero	X	X		X		X					X		X	X
Stichting personal service dog		X						X		X	X	X	X	X
DCN geleidehonden fonds				X						X	X	X	X	X
Geleidehondenschool Herman Jansen	?		X	X					X	X	X	X	X	X

	Assistance dog type							Member of		Contracted to				
	Buddy/PT SS	ADL	Autism	Sight	Hearing	Diabetes	Epilepsy	Assistance dog inter- national	Inter- national guide dog federation	Menzis	Interpolis	Ohra	Univé	Zilveren Kruis
Ans Labee geleidenhonden				X							X			X
Stichting Signaalhond					X			X					X	
Bultersmekke assistance dogs	X	X	X		X		X	X			X	X	X	
Hulphonden voor Autisme	?		X										X	

NB: general overview, incomplete listing.

Annex 4: The Five Domains model

Survival-Related Factors

Situation-Related Factors

1: Nutrition		2: Environment		3: Health		4: Behaviour	
Restrictions on: Water intake Food intake Food quality Food variety Voluntary overeating Force-feeding	Opportunities to: Drink enough water Eat enough food Eat a balanced diet Eat a variety of foods Eating correct quantities	Unavoidable/imposed conditions: Thermal extremes Unsuitable substrate Close confinement Atmospheric pollutants: CO ₂ , ammonia, dust, smoke Unpleasant/strong odours Light: inappropriate intensity Loud/otherwise unpleasant noise Environmental monotony: ambient, physical, lighting Unpredictable events	Available conditions: Thermally tolerable Suitable substrate Space for freer movement Fresh air Pleasant/tolerable odours Light intensity tolerable Noise exposure acceptable Normal environmental variability Predictability	Presence of: Disease: acute, chronic Injury: acute, chronic; husbandry mutilations Functional impairment: due to limb amputation; or lung, heart, vascular, kidney, neural or other problems Poisons Obesity/leanness Poor physical fitness: muscle de-conditioning	Little or no: Disease Injury Functional impairment Poisoning Body condition appropriate Good fitness level	Exercise of 'agency' impeded by: Invariant, barren environment (ambient, physical, biotic) Inescapable sensory impositions Choices markedly restricted Constraints on environment-focused activity Constraints on animal-to-animal interactive activity Limits on threat avoidance, escape or defensive activity Limitations on sleep/rest	'Agency' exercised via: Varied, novel, engaging environmental challenges Congenial sensory inputs Available engaging choices Free movement Exploration Foraging/hunting Bonding/reaffirming bonds Rearing young Playing Sexual activity Using refuges, retreat, or defensive attack Sleep/rest sufficient

Affective Experience Domain

5: Mental State

Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
Thirst	Wetting/quenching pleasures of drinking	<i>Forms of discomfort:</i> Thermal: chilling, overheating	<i>Forms of comfort:</i> Thermal	Breathlessness	Comfort of good health and high functional capacity	Anger, frustration	Calmness
Hunger (general)	Pleasures of different tastes/smells/textures	Physical: joint pain, skin irritation	Physical	Pain: many types		Boredom, helplessness	Engaged, in control
Hunger (salt)	Pleasure of salt taste	Physical: stiffness, muscle tension	Respiratory	Debility, weakness		Loneliness, isolation	Affectionate sociability
Malnutrition malaise	Masticatory pleasures	Respiratory: e.g. breathlessness	Olfactory	Sickness, malaise		Depression	Maternally rewarded
Bloated, over full	Postprandial satiety	Olfactory	Auditory	Nausea		Sexual frustration	Excitation/playfulness
Gastrointestinal pain	Gastrointestinal comfort	Auditory: impairment, pain	Visual	Dizziness			Sexual gratification
		Visual: glare/darkness eye strain	Variety-related comfort	Physical exhaustion	Vitality of fitness	Anxiety, fearfulness, panic, anger	Secure/protected/confident
		Malaise from unnatural constancy				Neophobia	Likes novelty
						Exhaustion	Energised/refreshed

The Five Domains model as presented by (Mellor, 2017). Within the 4 main domains there are different variables that result in positive or negative experiences for the animal. These variables come together in the fifth domain: the mental state of the animal.

Annex 5: Professionalisation in other sectors

To assess what is needed to achieve professionalisation in the sector, it can be useful to examine the steps taken by other comparable sectors in this regard. The profession of animal physiotherapist can serve as an example. According to the veterinary memorandum from 2006 (Romer-Bartels), the first evidence for the existence of the profession of animal physiotherapist dates back to 1986. At that time, the profession of animal physiotherapist was not a regulated profession and anyone (trained or untrained) could practice at will. An animal physiotherapy theme day was organised and the participants were so enthusiastic that they discussed setting up a working group to develop the profession further. When eventually established, this working group was composed of members from the Royal Dutch Association for Physiotherapy (Koninklijk Nederlands Genootschap voor Fysiotherapie, KNGF) and the Royal Netherlands Veterinary Association (Koninklijke Maatschappij voor Diergeneeskunde, KNMvD). Together they made a series of agreements on how they wished animal physiotherapy to be practised, they drew up protocols on agreed practice that were adhered to by the members, and they set a target of formal recognition of the profession. They eventually organised an animal physiotherapy training course, which commenced in 1988. The working group developed into a professional association, the Netherlands Association for Physiotherapy for Animals (Nederlandse Vereniging voor Fysiotherapie bij Dieren, NVFD), to make the group more official. Articles of association were drawn up, talks were held with the Ministry of Agriculture, Nature and Food Quality on laws to regulate and protect the profession, a curriculum committee was appointed, internal regulations were drafted, refresher training courses and lectures were organised and a PR commission was set up for the purpose of designing a logo, among other things. This eventually resulted in legislative alignment in the Veterinary Medicine (Practice) Act, Paraveterinary Decree (Wet op de Uitoefening van de Diergeneeskunde, Besluit Paraveterinair) on 1 August 1992, making animal physiotherapy a regulated profession.

A report by Van Hall Larenstein University of Applied Sciences (Barten & de Boer, 2013) describes the steps taken to professionalise haptotherapy and creative therapy. The similarities in terms of the above examples of professionalisation are as follows:

- Establishment of a professional association;
- Development of shared positions, such as a set of regulations, articles of association, professional codes;
- Development of (refresher) training and recognition of training qualifications;
- Accreditation of training;

- Further professionalization, such as health insurance reimbursement, recognition of profession.

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Composition of the Dutch Council on Animal Affairs

The Council on Animal Affairs (Raad voor Dierenaangelegenheden, RDA) is an independent Dutch council of experts that gives the Ministry of Agriculture, Nature and Food Quality of the Netherlands solicited and unsolicited advice on multidisciplinary issues in the field of animal welfare and health. The Council on Animal Affairs comprises scientific experts and professional practitioners, who serve in a personal capacity, are independent and not bound by any instructions.

The draft advisory report was submitted to the full Council. This advisory report is therefore a product of the Council on Animal Affairs as a whole.

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