

**FACILITATING AN ANIMAL-ASSISTED INTERVENTION PROGRAM: THE  
RISKS AND REWARDS OF WORKING WITH ANIMALS IN HELPING AND  
EDUCATIONAL SETTINGS**

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## **Dedication**

I would like to dedicate this project to my supervisor, mentor, and friend, Dr. Amber Gear. Without your help and guidance, Amber, I would not be where I am today and the students that we worked with would not have had the opportunity to connect with Wesley, their therapy dog.

## **Abstract**

Humans and animals have been living and working together for centuries. The mutual relationship that developed led professionals to begin incorporating animals into human services and education to enhance human wellness, a practice presently referred to as Animal-assisted Intervention (AAI). In current research and practice there exists a gap in the literature that together defines AAI and helps individuals, unfamiliar with AAI, understand the risks and rewards of facilitating an AAI program in human services and education. The following project reviews the AAI literature—including the types of AAI, its proposed benefits, and the risks of working with animals in this context. It provides further information to help individuals make an informed decision about the appropriateness of an AAI program based on their unique needs. The project is broken down into two parts, a paper and presentation. The paper includes the literature review and detailed information about facilitating an AAI program, while the presentation provides an engaging summary of the paper that can be presented to individuals and organizations interested in developing an AAI program. The presentation was given to two organizations that provide AAI services in Edmonton Alberta in order to receive feedback on the appropriateness of its content.

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## Chapter 1: Introduction

Humans and animals have been co-existing and depending on each other for over 10, 000 years (American Veterinary Medical Association [AVMA], 2011a; Urichuk & Anderson, 2003). It is hypothesized that wolves were first domesticated after interacting with early human civilizations (Urichuk & Anderson, 2003). In ancient Greece, horses were used to help rehabilitate soldiers utilizing the horse's movement as a tool for physical therapy (Meregillano, 2004; Urichuk & Anderson, 2003). Prior to the industrial revolution, agrarian societies depended on animals to assist with farm work and animals like dogs and horses helped carry supplies and munitions during the World Wars.

More recently, the relationship between humans and animals started to shift. Humans began viewing animals as loving companions rather than working partners when domesticated animals, or pets, became increasingly common in human households during the mid 20<sup>th</sup> century. During this time, medical professionals and researchers like Konrad Lorenz, James Bossard, and Boris Levinson began studying the reciprocal nature of human-animal relationships (Hines, 2003). The preliminary research indicated that pets were playing an important role in helping humans feel happy, loved, and accepted (Bossard, 1950; Hines, 2003; Levinson, 1962).

The basis of this research led educational and human service sectors to incorporate animals in the treatment of individuals who were struggling with mental and physical health problems. In these populations, relationships based on trust with service providers are fundamental in treatment and rehabilitation (Rogers, 2007). Due to animals' natural ability to bring about feelings of comfort, many professionals began incorporating animals to enhance their regular practices in counselling, education, and healthcare. The

purposeful incorporation of animals in education, human services, and social institutions, to enhance human wellness, is now commonly referred to as an Animal-assisted Intervention (AAI; Animal Assisted Intervention International [AAII], 2016a; Pet Partners, n.d.a). Various organizations and individuals in these sectors have developed unique AAI programs specifically to meet the needs of each population they work with. AAI is therefore a broad term that encompasses a number of specific types of human-animal interaction programs.

### **Definition of Terms**

A plethora of terms have been used to describe these different types of AAI, creating significant confusion in research and in practice (Kruger & Serpell, 2006). Pet Partners and AAII aimed to standardize AAI terms to provide clear and adequate terminology for professionals utilizing AAI and for individuals interested in receiving AAI services. Pet Partners (n.d.a) created a chart that provides a visual representation to further clarify their conceptualization of these terms (see Appendix A).

For the purpose of this paper, it is helpful to first define AAI. AAI is an umbrella term that encompasses Animal-assisted Activities (AAA), Animal-assisted Education (AAE), and Animal-assisted Therapy (AAT; Pet Partners, n.d.a). AAI refers to the intentional integration of animals in goal-oriented interventions, focused specifically on developmental, therapeutic, emotional, and/or behavioural therapeutic goals, within social institutions, education, and human services to enhance wellness (AAII, 2016a; Pet Partners, n.d.a). The following section defines the most commonly used terms in AAI to clarify the way in which they are used in current AAI research and practice:

*Animal-assisted Activities (AAA)* refer to activities that involve animals and their

handlers in social institutions for motivation, education, and/or recreation (AAII, 2016a). AAA can involve numerous activities but hospital visits, nursing home visits, stress reduction events, hospice, and at risk youth programming are among the most common (Pet Partners, n.d.a). AAA is one type of AAI (Pet Partners, n.d.a).

*Animal-assisted Education (AAE)* refers to a goal-directed strategy focusing on integrating therapy animals into the learning process (AAII, 2016a). AAE is facilitated by an educational professional that helps educate individuals and/or groups of individuals while meeting each individual's learning goals (AAII, 2016a). AAE is also one type of AAI (Pet Partners, n.d.a).

*Animal Handler* refers to an individual that has been trained to work with a certified therapy animal in AAI (AAII, 2016a).

*Animal-assisted Interventions (AAI)* refer to the intentional integration of animals in goal-oriented interventions, focused specifically on developmental, therapeutic, emotional, and/or behavioural therapeutic goals, within health, education, and human services to enhance overall wellness (AAII, 2016a; Pet Partners, n.d.a). AAI is an umbrella term that encompasses AAA, AAE, and AAT (Pet Partners, n.d.a). AAI can be implemented with individuals of any age and in individual or group settings (AAII, 2016a).

*Animal-assisted Therapy (AAT)* refers to a goal-directed intervention that aims to enhance physical, social, emotional, and/or cognitive functioning within the context of therapy (AAII, 2016a; Pet Partners, n.d.a). AAT is delivered by trained therapists (e.g., Occupational Therapists, Physiotherapists, Psychologists, Speech Language Pathologists, Social Workers etc.) who have experience incorporating animals into their specific

therapeutic practice (AAII, 2016a). AAT is one type of AAI (Pet Partners, n.d.a).

*Animal Trainer* refers to an individual with specialized training and certification in areas of animal training and behaviour modification (AAII, 2016a). Their goal is to train therapy animals so that they can then participate in AAI programs (AAII, 2016a).

*Human-animal Bond* refers to the mutual and dynamic relationship between humans and animals that enhances both human and animal well-being (Pet Partners, n.d.a).

*Service Animal* refers to an animal that is trained to do work or perform tasks for individuals with disabilities and/or mental health diagnoses (Pet Partners, n.d.d). Service animals have access to places where the general public is allowed (Pet Partners, n.d.d). This type of animal is beyond the scope of what will be discussed in this paper but for brevity is included in this list.

*Therapy Animal* refers to an animal that has been trained by an animal trainer and has completed therapy animal certification so that they can participate in AAA, AAE, and/or AAT (Pet Partners, n.d.d). Therapy animals are different than service animals in that they do not live with or accompany the people they work with full-time. They also have no special rights of access (Pet Partners, n.d.d). Throughout this paper, animals that are involved in all types of AAI will be referred to as therapy animals. Typically, animals that are involved in AAA and AAE are also certified for AAT, so even though the animal being referred to might not be involved in actual therapy, they often have the qualifications to do so.

*Therapy Animal Certification* refers to the process in which an animal is assessed in order to determine its ability to safely work with a handler and individuals

participating in AAI.

### **Project Intent**

The existing literature does not include a document or comprehensive explanation to help individuals unfamiliar with AAI understand the types of AAI, the risks and benefits of AAI, and how to develop an AAI program. In order for individuals interested in AAI to make an informed decision about whether or not AAI is appropriate for them, they must possess adequate knowledge about AAI as well as the risks and benefits of working with animals in this capacity (AVMA, 2011a; AAI, 2015a; Baun, Johnson, & McCabe, 2006; Urichuk & Anderson, 2003). This project aims to synthesize the necessary information required so that these individuals and organizations can determine the appropriateness of an AAI program based on their specific needs.

### **Project Overview**

This project includes two main components: a paper and a presentation. The following paper summarizes the research on AAI and provides the scholarly background for the presentation. The paper includes:

- a review of the literature that defines key concepts in AAI, including the risks and benefits of working with therapy animals;
- standards of practice for therapy animals and their handlers in AAI;
- major ethical considerations for the treatment of animals involved in AAI;
- therapy animal and handler certification and training; and
- information about how to facilitate an AAI program.

The presentation is attached in Appendix B and it is designed to be an accessible and engaging outline of the concepts discussed in the paper. It was presented to

organizations that provide AAI services within Edmonton Alberta, Canada. Specifically, the presentation was piloted with three staff members from Dreamcatcher Nature-Assisted Therapy Association and four board members of a local not-for-profit-initiative, Chimo Animal-Assisted Wellness and Learning Society (CAAWLS). The feedback from the pilot presentations is summarized in Chapter Six of the paper and was incorporated into the final version of the presentation.

## **Chapter 2: Literature Review**

Empirical research on AAI was spearheaded in 1977 with the creation of the Delta Foundation in the United States (Pet Partners, n.d.e). Delta, in Greek, refers to a symbol shaped like a triangle. For the Delta Foundation, the three points of the triangle represented the animal, animal handler, and healthcare provider in AAI (Altschiller, 2011). The *Handbook for Animal-Assisted Activities and Animal-Assisted Therapy* was the first AAI manual, created by the Delta Foundation, to help practitioners incorporate therapy animals into their practice (Altschiller, 2011). In 1982 the Delta Foundation changed its name to Delta Society due to the influx of researchers and medical practitioners interested in newly emerging AAI (Pet Partners, n.d.e). During the early 1980s, Delta Society focused on researching the human-animal bond based on their preliminary findings that animals helped reduce blood pressure, stress, and anxiety, and increase the release of endorphins (Pet Partners, n.d.e). In 2012, they changed their name to Pet Partners to more accurately convey the nature of their services (Pet Partners, n.d.e).

### **Theoretical Frameworks for AAI**

Building on the foundational research conducted by Pet Partners, a number of studies now demonstrate the therapeutic effects of AAI for many different types of

people. Current research posits that the different types of AAI can provide mental and physical health benefits to a number of populations including children, seniors, individuals with physical disabilities and mental illness, as well as individual's who are incarcerated (AVMA, 2011a). The consensus in the research suggests that, in general, AAI has five main benefits that contribute to human health and wellbeing: it improves motivation, social interaction, and attendance, while it also reduces anxiety and depression (Chandler, Portire-Benthke, Minton, Fernando, & O'Callaghan, 2010; Urichuk & Anderson, 2003). There are a number of hypotheses documented in AAI research that propose the underlying mechanisms that promotes these therapeutic effects; however no one unified theoretical framework exists (Geist, 2011; Kruger & Serpell, 2006; Morrison, 2007).

**Innate animal characteristics.** Some researchers believe that it is animals' innate characteristics that contribute to the effectiveness of AAI (Kruger & Serpell, 2006). These theoretical perspectives explore the effects of an animal's presence, behaviours, and interaction with individuals in AAI. This makes sense, given one of the most commonly cited benefits of working with therapy animals noted in the research includes their ability to facilitate rapport and bonding. For instance, therapy dogs typically greet individuals with enthusiasm and unconditional positive regard, which helps them feel comfortable (Jenkins, Laux, Ritchie, & Tucker-Gail, 2014; Urichuk & Anderson, 2003).

**Modelling.** Alternatively, therapy animals might help individuals learn about their psychological functioning and behaviour through modelling and environmental feedback related to the cause and effect of their interactions (Kruger & Serpell, 2006). For example, a child in AAE might be working on how to engage in relaxation if they have



difficulty focusing or paying attention. The therapy animal could provide a demonstration about getting highly aroused in play and then self-soothing afterwards to return to a lower arousal state. The child can visibly see the animal engage in high-energy behaviours and then subsequently engage in behaviours that help them relax. Urichuk and Anderson (2003) discuss how therapy animals can be effective in helping clients understand and express their emotions in AAT. In counselling, for instance, when a client working with a therapy animal expresses an emotion such as sadness, a therapy dog might orient towards the client and respond with affection to their emotional display. This could help the client understand that people around them will also orient towards and help them when they express emotion like the therapy dog did.

**Physiological change.** Other research posits that human-animal interactions in AAI produce physiological changes in the individuals involved. The results of the supporting studies demonstrate therapy animal interactions contribute to reductions in pain due to a decrease in stress hormones and an increase in endorphins (Braun, Stangler, Narveson, & Pettingell, 2009; Harper et al., 2015; Marcus, 2013; Marcus et al., 2013). Some research suggests that the noted changes depicted in AAI research related to improvements in social attention and behaviour, interpersonal interactions, mood, levels of cortisol, heart rate, blood pressure, self-reported fear and anxiety might be due to effects of oxytocin release, although more research specifically examining this particular phenomenon is necessary (Beetz, Uvnas-Moberg, Julius, & Kotrschal, 2012; Odendaal & Meintjes, 2003).

Depending on the type of AAI, though, the mechanisms of action and the proposed benefits are unique. Therefore, the remainder of this section further explores the

different types of AAI and breaks down the research on AAT, AAA, and AAE into distinct categories to provide further clarity on the benefits of AAI.

### **AAT**

AAT is defined as a goal-directed intervention that can be incorporated into various types of therapy where the client-animal interaction is used to facilitate the therapeutic process (Urichuk & Anderson, 2003). It is used in a number of modalities, with various types of animals, with individuals of all ages, and in diverse settings (Altschiller, 2011). Throughout the literature, researchers and professionals frequently use the term AAT incorrectly. In 1984, Beck and Katcher explained that although animals provide a number of emotional and recreational benefits, simply receiving any of those benefits when interacting with animals does not qualify as therapy. The distinction between animal activities and animal therapy was established many years ago, but the terms are still frequently confused and misused (Kruger & Serpell, 2006). The term therapy is used to describe treatments that address disease and/or psychiatric conditions and thus AAT should only be used to define goal-directed AAI that occur with a trained professional for the purposes of treating mental or physical health conditions (Kruger & Serpell, 2006).

The nature of AAT is versatile, but it must be noted that AAT differs from AAA and AAE. Specifically, AAT is administered by trained health/human service professionals who wish to incorporate AAT into their practice as a way to enhance their services (Parish-Plass, 2008). Alternatively, AAA and AAE describe exchanges that involve activities associated with animal interactions, which are not done in the context of therapy. For example, AAT might involve an animal that interacts with a client who

has specific therapeutic goals to reduce their anxiety in a counselling setting.

**History of AAT.** The first recorded use of human-animal interactions to improve mental health was in 1792 during an English retreat for individuals with mental illness (Levinson, 1965). The patients learned to take care of various small animals to help facilitate their well being by reducing the necessity of medication and restraints (Levinson, 1965). Throughout the 19<sup>th</sup> century, animals involved in the practice of mental health grew in popularity in in-patient psychiatric care facilities (Altschiller, 2011; Urichuk & Anderson, 2003). In 1919, AAT was first facilitated in Washington, D.C. where dogs were used to help enhance psychiatric care (Urichuk & Anderson, 2003).

However, with the development of psychotropic medications in the 20<sup>th</sup> century, AAT, particularly in psychiatric care facilities, decreased rapidly (Urichuk & Anderson, 2003). The majority of AAT documentation and research was stalled until the 1960's when Dr. Boris Levinson's work spearheaded the practice and research of modern AAT (Hines, 2003).

Levinson happened across AAT when a child client, who struggled with communication, came into his office for counselling and began playing with Levinson's dog, Jingles (Urichuk & Anderson, 2003). Levinson reportedly left the child alone with his dog during one of their sessions (Levinson, 1984). Upon Levinson's return, he found the client playing and speaking to the dog (Levinson, 1984). Levinson reported that throughout his work with this client, his dog had noticeably helped facilitate rapport and enhance the therapeutic relationship because, until that point, the client had barely spoken to Levinson (Levinson, 1984). Levinson went on to hypothesize that animals in therapy act as transitional objects that help children with emotional and behavioural struggles

relate to the animal first, then slowly the therapist, and then eventually to other people (Altschiller, 2011; Levinson, 1962, 1964). In a later article on animals in therapy, Levinson (1984) explained that therapy animals work as co-therapists in four different ways.

First, Levinson believed that therapy animals could work in counselling as a psychotherapeutic adjunct, that is an animal that acts as a supplementary therapeutic tool to help facilitate client comfort (Levinson, 1984). Second, Levinson thought that therapy animals could act as a stand-alone therapist for clients that have a strong relationship with the animal and are able to work with the animal to express themselves. Third, therapy animals were believed to work as catalysts to therapeutic change. Levinson believed that, like peer support and paraprofessionals, therapy animals provide another medium of social support. Finally, Levinson reported therapy animals help individuals connect with nature; improving mental health by providing individuals greater opportunities for happiness and enthusiasm.

Overall, Levinson believed that animals provide unconditional love that helps fulfill the emotional needs of clients during therapy (Levinson, 1984). Specifically, he suggested AAT increases client self-worth, decreases negative feelings and cognitions, and improves psychosocial development (Levinson, 1984). He hypothesized that these benefits would act to decrease depression in his clients. Since Levinson's work, the field of AAT has expanded into an innovative area of research and practice in both mental and physical health fields. Many of Levinson's initial ideas have translated into current AAT practice, particularly the idea that true AAT is conducted within a goal-directed treatment process aimed at enhancing physical, social, and/or emotional functioning (Urichuk &

Anderson, 2003).

**Settings for AAT.** AAT is conducted by a trained professional who chooses to incorporate therapy animals into their practice to enhance the therapeutic process (Pet Partners, n.d.a). Therefore, a range of professionals can facilitate it, but most often psychologists, physiotherapists, occupational therapists, social workers, and speech therapists utilize AAT (AAII, 2016a).

**Counselling.** Counselling and psychotherapy is the most commonly researched and documented setting in which AAT takes place. In counselling, AAT has been successfully incorporated into various therapeutic approaches (e.g., Cognitive Behaviour Therapy, Trauma-focused Cognitive Behaviour Therapy, Play Therapy, Solution Focused Therapy, Gestalt Therapy, and Dialectical Behaviour Therapy; Amerine & Hubbard, 2016; Dietz, Davis, & Pennings, 2012). The aim is largely to facilitate client-therapist rapport, client acceptance, self-esteem, empathy, and a sense of control (Parish-Plass, 2008).

Therapy animals can be involved in the counselling process in a number of different ways. First, Urichuk and Anderson (2003) suggest therapy animals can be helpful as a means for assessment by observing the client's comments and interactions with the animal. Second, some individuals in counselling have less difficulty expressing their experiences indirectly rather than through direct talk therapy. Clients can work with the therapy animal to help them tell their story through projection, much like a child might prefer to use a puppet to explain sexual abuse than to disclose the nature of the abuse by speaking directly to their counsellor (Urichuk & Anderson, 2003). Third, therapy animals can help the client relate or even better understand their experiences

when they are used as a tool for storytelling and metaphor (Urichuk & Anderson, 2003). For example, a story about a dog's leash reactivity and the resulting training classes they took might help a client relate to their experiences with behavioural aggression and their subsequent work in counselling. Fourth, animal-therapist modelling can help clients learn how to set boundaries and constructively problem solve when an animal engages in an undesirable behaviour or engages in a behaviour that is not appropriate in the therapeutic context (Urichuk & Anderson, 2003). Finally, therapy animals are often utilized as teaching tools in the counselling context (Urichuk & Anderson, 2003). A common reason for individuals to enter therapy is to receive help with grief and loss. A therapist might help a client understand death, grief, and loss by discussing the therapy animal's life cycle and how individuals and animals grieve after experiencing loss.

***Speech therapy.*** AAT in the context of speech therapy is aimed to help clients enhance their reading and communication skills by reading out loud and communicating with therapy animals (Altschiller, 2011). The Reading Education Assistance Dog Program, also known as the READ Program, was created by Intermountain Therapy Animals in 1977 (Altschiller, 2011). It was the first literacy program that incorporated therapy dogs to help children with reading problems (Altschiller, 2011). The program aimed to provide the children with a safe and nonjudgmental space where they could read to a therapy dog (Altschiller, 2011). The program was piloted, in 2000, at an elementary school and the staff reported the children involved in the program had marked increases in reading comprehension, confidence, motivation for reading, self-esteem in peer relationships, and improved hygiene (Altschiller, 2011). Many programs similar to the READ program are utilized by speech therapists (as well as educators in AAE) to help

individuals enhance their speech, reading, and communication.

***Social work.*** AAT in social work developed based on the ecological perspective that humans change through reciprocal transactions with their environment (Evans & Gray, 2012). Based on this theory, therapy animals assist social workers by acting as transitional objects that help clients more easily form a relationship with their social worker (Evans & Gray, 2012). In social work, therapy animals can be part of the assessment process (e.g., when a worker asks about family dynamics) and as an object through which a client can discuss situations in their lives that might parallel that of the therapy animal's (Evans & Gray, 2012). The literature on AAT in social work is new and, therefore, quite limited. The majority of the evidence for the therapeutic effects of AAT in social work is derived from research on AAT in counselling. However, as AAT grows in popularity, more individuals in human services like social work will likely start to utilize and research AAT in their unique contexts.

***Physical and occupational therapy.*** Both physical and occupational therapists typically utilize AAT to help individuals with their physical health. These approaches within AAT often utilize the movements of the animals to assist in human client mobility and pain reduction (Champagne & Dugas, 2010; Elmaci & Cevizci, 2015; Hakanson, Moller, Lindstrom, & Mattsson, 2009; Meregillano, 2004). A common example of AAT in these realms is in hippotherapy when the movement of the horse is used to help clients with their flexibility and mobility (Meregillano, 2004).

**Proposed benefits of AAT.** The following section outlines the main mental and physical health benefits of AAT reported throughout the literature.

***Emotional.*** Urichuk and Anderson (2003) explain that animals contribute to a

number of psychological benefits, largely filling human emotional needs/desires for love, respect, acceptance, and trust (Urlichuk & Anderson, 2003). Individuals that participate in AAT have the opportunity to work with a therapy animal that is a non-judgmental and responsive support that helps fulfill these needs (Friesen, 2010). The supporting literature documenting the emotional benefits of AAT has typically established that AAT helps reduce feelings of depression (Dietz et al., 2012; Hunt & Chizkov, 2014), anxiety (Hamama et al., 2011; Hunt & Chizkov, 2014), withdrawal (Friesen, 2010), and isolation (Dietz et al., 2012).

***Behavioural.*** The benefits of AAT for behavioural problems are most commonly reported in studies that examine the impact AAT has on individuals with Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorders. Generally, individuals with Attention Deficit Hyperactivity Disorder typically struggle with self-regulation and recognizing social cues leading which often leads to behavioural problems (Schuck, Emmerson, Fine, & Lakes, 2015). The most notable changes for these individuals documented in AAT research are improved social skills, prosocial behaviour, and fewer behaviour problems (Busch et al., 2016; Schuck et al., 2015). Alternatively, individuals with Autism Spectrum Disorders, often struggle with communication (Ward, Whalon, Rusnak, Wendell, & Paschall, 2013). The research suggests that AAT is helpful in facilitating social interaction for individuals with Autism Spectrum Disorders (Ward et al., 2013) and for individuals that solely struggle with language impairments as well (Boyer & Mundschenk, 2014).

***Physical health.*** A few research studies have focused on the physical health effects of AAT and hippotherapy for individuals with mobility problems and chronic



pain. Although the research is also relatively new, and typically relies on qualitative reports, improvements in motor function and balance, and reductions in muscle spasms are among the main benefits in AAT and hippotherapy reported (Champagne & Dugas, 2010; Elmaci & Cevizci, 2015; Hyun Jung, Kwon, Lee, & Kim, 2012). In chronic pain patients, AAT purportedly reduces self-reported levels of pain as well (Braun et al., 2009; Harper et al., 2015).

**Efficacy of AAT.** Research on AAI, in general, is relatively new and empirical scientific studies are slowly beginning to emerge. In the AAI literature there is significant overlap in AAA, AAE, and AAT interventions due to the only recent standardization of terms in AAI. Most of the research focuses on the study of AAT because the interventions have fewer variables than AAA or AAE, making experimental studies on efficacy more straightforward.

Although Levinson's work on AAT received a number of criticisms about the utility of the intervention, he did not purport therapy animals were a stand-alone approach to solving all mental health problems (Hines, 2003; Levinson, 1964). Rather, he described AAT as a therapeutic tool that helped to facilitate change associated with self-understanding, acceptance, and goal setting (Levinson, 1965). Current efficacy research on AAT supports this trend (Altschiller, 2011). A number of literature reviews and some meta-analyses have produced intriguing results regarding the effectiveness of AAT in this nature (Beetz et al., 2012). Nimer and Lundhal's (2007) meta-analysis of completed AAT studies and found that AAT resulted in similar if not better therapeutic effects when compared to traditional therapeutic interventions.

Despite these exciting findings, many AAT studies have some major

methodological flaws (Amerine & Hubbard, 2016; Stern & Chur-Hansen, 2013). The largest obstacles facing AAT research include small sample sizes, nonrandom assignment in experimental studies, inadequate exploration of confounding variables, limited long-term follow-up, and treatments that are not standardized (Amerine & Hubbard, 2016; Stern & Chur-Hansen, 2013). A further limitation is that a number of the studies that included observational research were not blinded and self-reports in the research are quite common so the researchers might have a bias towards reporting positive results of AAT (Amerine & Hubbard, 2016; Stern & Chur-Hansen, 2013).

Notwithstanding, there is preliminary evidence for the calming and prosocial effects of AAT that should not be negated because research in the area does not yet support it (AAT is a new field and there is more research required; Amerine and Hubbard, 2016; Stern & Chur-Hansen, 2013). Also, while many studies only provide anecdotal qualitative evidence in support of AAT, they are of importance because studies like these provide basic evidence that participants found the opportunity for animal interactions beneficial.

### **AAA**

Unlike AAT, AAA typically involves activities that include therapy animals and their handlers in social institutions for motivation, education, and/or recreation (AAII, 2016a). AAA is not done in the context of therapy or goal-directed education. An example of AAA is when a dog goes into a nursing home and spends time with the residents by sitting with them so that the residents can pet the dog. Historically, AAA was the first type of AAI used in human services and education. AAI started with individuals playing and working with therapy animals in unstructured interactions (Hines,

2003). As AAI developed, professionals saw the benefits of working with animals and began incorporating therapy animals into their practice in what became AAT and AAE.

**Settings for AAA.** Currently, AAA occurs in a vast number of areas, including those outside human service sectors and education. The following section attempts to outline the most common settings that provide AAA.

*Healthcare.* Towards the latter part of the 20<sup>th</sup> century, animals in healthcare began to scientifically be viewed as beings that benefited human health (Serpell, 2006). Friedmann, Katcher, Lynch, and Thomas' (1980) study facilitated this movement with their impressive research finding that 92 outpatients from a cardiac care unit lived longer lives if they owned animals compared to those outpatients that did not own animals. Currently, AAA in health care programs can be found most commonly in critical care units, long-term care facilities, and children's hospitals (DeCoursey, Russell, & Keister, 2010). DeCoursey et al. (2010) posit that AAA programs are not a stand-alone treatment in hospitals but the animals can provide support and unconditional love for some of the individuals in care that human companions and hospital staff might not be able to.

*Hospitals.* The goal of most AAA in hospitals is to enhance the sometimes scary and sad atmosphere and help improve mood. It is difficult to categorize all of the different types of hospital programs that are incorporating AAA to help their patients and again research surrounding hospital AAA programs is limited (Chur-Hansen, McArthur, Winefield, Hanieh, & Hazel, 2014). With the appropriate measures taken to ensure the therapy animal is healthy, immunocompromized patients are not at risk, and general sanitary guides are followed, the research indicates there are only slightly elevated risks of AAA in hospitals that most often can be managed and prevented (Brodie, Biley, &

Shewring, 2002). One of the concerns noted in the research about hospital AAA programs is the ability of the patients to participate in AAA (Chur-Hansen et al., 2014). If a patient is immunocompromized, for example, interacting within a group of other sick patients and an animal could put them further at risk (Chur-Hansen et al., 2014). Some of these risks will be further discussed later in the paper as well.

*Long-term care facilities.* Individuals in long-term care homes, typically seniors, often have unique struggles related to their mental and physical health. Depression, loneliness, and isolation are among the most common emotional struggles seniors report (Altschiller, 2011). Some research indicates that including therapy animals in long-term care facilities helps support the residents and their emotional needs for support and companionship (Baun, et al., 2006). Some individuals in the aging population also struggle with deterioration associated with mobility and communication (Altschiller, 2011). Therapy animals provide nonverbal support through touch and varied interaction that might enhance the emotional and cognitive welfare of individuals in long-term care (Baun et al., 2006; Moretti et al., 2011).

Among one of the most important factors associated with success of AAA in long-term care facilities is the appropriateness of the therapy animal for the population (AAII, 2015a; Baun et al., 2006). Many different types of therapy animals might be appropriate but the most common in this setting are typically dogs, cats, rabbits, small rodents, birds, and fish (Baun et al., 2006). Another concern to note is that the residents most likely will not be able to care for the animal full-time if the animal, like a bird or fish, lives on site (Baun et al., 2006). It is important to have a responsible person or staff member capable and willing to take care of the animal and agree to do so (Baun et al.,

2006).

***Commercial enterprises.*** A number of commercial enterprises, including businesses, hotels, and airports have started incorporating AAA into their organizations (Pet Partners, 2016a). The aim of a number of these organizations is to enhance their vocational environment by including a lively animal that is enjoyed by staff as well as patrons (Pet Partners, 2016a). Currently, in Edmonton, Alberta, the Fairmont Hotel Macdonald is one such organization that has included the therapy dog Smudge as the hotel's canine ambassador (Fairmont Hotel Macdonald, 2017). The hotel posits that Smudge interacts with guests in AAA by accompanying them during relaxing activities like walks along the river (Fairmont Hotel Macdonald, 2017). Alternatively, the Edmonton International Airport has joined with the Pet Therapy Society of Northern Alberta to provide positive animal interactions for individuals arriving and departing the city (Edmonton International Airport, 2017).

Due to the influx of interest in AAA in commercial enterprises, Pet Partners (2016a) created a position statement to clarify the unique considerations of involving therapy animals in business. Pet Partners (2016a) specifically addresses the importance of understanding that if the animals are being used to attract business, it is not considered AAA. They also noted that they do not condone unsupervised and/or uncertified therapy animal interactions because of the risks possible for both the humans and animals involved (Pet Partners, 2016a). It is important to maintain the same rigor of AAA programming in a commercial enterprise as it is within an AAE or AAT program such that the animal has an identified handler who knows the animal, is able to advocate for the animal, is in tune with their behaviour, body language, and has training as well as

certification in AAI (Pet Partners, 2016a).

***Correctional institutions.*** The first recorded integration of animals in prison was during World War II at Camp Stark in New Hampshire (Altschiller, 2011). German prisoners of war reportedly took care of some of the animals living around the prison. In the beginning, Altschiller (2011) reports that correctional officials had mixed feels about incorporating animals into the rehabilitation and recovery of inmates. Currently, a number of institutions in North America have developed prison-based animal programs (PAPs) based on some intriguing preliminary research that indicates human-animal interactions in incarcerated populations can improve behavioural and psychosocial outcomes (Altschiller, 2011; Fournier, Geller, & Fortney, 2007).

Some PAPs teach inmates to train service dogs, however, more programs are now incorporating animal rehabilitation, AAA, and AAE so that the inmates are able to help injured and abused animals and the animals can help provide the inmates comfort and support (Altschiller, 2011; AVMA, 2011a; Furst, 2006). Altschiller (2011) posits that often prison programs do not work with the animals primarily for the therapeutic effects on the individual inmates, but instead they focus on education related to training, grooming, and animal behaviour. These types of programs are considered AAE not AAA. It is important to note that each institutional program is unique and possibly incorporates more than one type of AAI program.

**Proposed benefits of AAA.** In general, the research on AAA is limited compared to AAT. Similar to AAT, research on AAA reveals that symptoms of depression and anxiety are reduced when individuals are involved in AAA (Hoffmann et al., 2009; Moretti et al., 2011). More research in AAA has examined the cognitive benefits of

human-animal interactions. For individuals diagnosed with schizophrenia, severe affective disorders, and personality disorders, the evidence suggested that AAA helped with coping strategies and self-efficacy (Berget, Ekeberg, & Braastad, 2008) as well as self-esteem and self-determination (Chu, Liu, Sun, & Lin, 2009).

Some of the first steps are also being taken to explore the physiological effects of animal interactions in order to gain biological evidence that animals have a therapeutic impact on humans. For example, Aoki et al. (2012) found that AAA increased activity in the prefrontal cortex in individuals diagnosed with depression. A more recent study focusing on the physical effects of AAA attempted to determine if simply touching an animal helps reduce heart-rate during a working memory task (Gee, Friedmann, Stendahl, Fisk, & Coglitore, 2014). Results indicated that participants in the animal condition did not have any reduction in heart rate compared to the other conditions. Although this study provides further insight about the presence of an animal, it provides little context to whether or not actually interacting with an animal in a stressful situation would impact their heart rate. More quantitative research that examines the physiological effects of AAA, like the previously mentioned studies, will need to be completed before more definitive conclusions can be drawn.

### **AAE**

Finally, AAE is a goal-oriented and structured intervention facilitated by an education professional who aims to help students with academic goals, pro-social skills, and cognitive functioning while monitoring the student's progress (Pet Partners, n.d.d). It is similar to AAT in that it is a strategy being used by a professional but instead of in some type of therapy it is in education.

**Settings for AAE.** AAE was first introduced in an educational setting in 1947 at the Green Chimney's School for Little Folk (Mallon, Ross, Klee, & Ross, 2006). The school began as a repurposed dairy farm that became a boarding school for young children (Mallon et al., 2006). As part of the curriculum, the children living at the school spent part of their day working with the animals on the farm (Mallon et al., 2006). The staff reportedly viewed the children's work with the animals as helpful for providing companionship, socialization, and education (Mallon et al., 2006). In the 1970s the school became a residential treatment center for children who had experienced severe neglect, abuse, and developmental delays, but it maintains both AAA and AAE programming (Mallon et al., 2006).

Today, animals involved in AAE are becoming more common (Baumgartner & Cho, 2014). Working with therapy animals helps provide feedback to students about their social, behavioural, and emotional needs through an engaging medium (Baumgartner & Cho, 2014). It can be particularly helpful for students that have disabilities to learn positive behavioural strategies (Baumgartner & Cho, 2014). Baumgartner and Cho (2014) explain that the most effective AAE programs in school are dependent on support from students, staff, and parents; they have clear goals, and well developed plans to monitor progress. There are a number of schools within Edmonton and in surrounding areas that have incorporated AAE programs into their curriculum. CAAWLS (n.d.b), for example, currently has therapy animals and their handlers volunteering for at least four primary and secondary schools in AAA, AAE, and AAT programs.

**Proposed benefits of AAE.** The most common research reported on AAE programs are based on read aloud programs that encourage individuals with reading



difficulties, language impairments, or difficulties with communication to read out loud to therapy animals. The process of reading out loud to an animal has a number of documented benefits including enhanced reading comprehension, confidence, motivation for reading, and self-esteem in peer-relationships due to enhanced communication skills (Altschiller, 2011; Boyer & Mundschenk, 2014; Urichuk & Anderson, 2003). The researchers posit this effect to therapy animals' ability to help people feel comfortable (Jenkins et al., 2014). When an individual reads to another person, for example there is a certain amount of pressure for the reader to say things correctly, but with animals they do not care whether or not the individual says a word correctly, they continue to provide positive support regardless.

### **Chapter 3: Training, Certification, and Ethics in AAI**

As AAI programs and media attention increased in North America, more support was required for the organizations providing AAI to ensure the quality and safety of their services (Hines, 2003). Pet Partners continues to remain an influential organization in AAI by providing a model for other AAI organizations to follow; they created the first AAI training program to ensure animal handlers were as well educated and trained as the animals they accompany, they ensure AAI education is readily available to the public, and that their animals are reassessed each year to ensure they are enjoying AAI, and that they are being properly supported during AAI (Pet Partners, n.d.b).

Other organizations were also developed to help establish some guidelines AAI organizations could follow to provide the highest quality of AAI services. In 2013, the non-profit organization AAI was developed to address some of the specific and changing needs of organizations providing AAI (AAI, 2016b). AAI's goal is to specifically

support organizations providing AAI, on an international level. They did so by creating a set of standards to help AAI organizations, therapy animals, and their handlers (AAII, 2016b).

The most recent set of AAII standards was revised in 2015. Although the standards were developed specifically for therapy dogs, many of the criteria can be generalized to other types of therapy animals as well (AAII, 2015a). The document outlines a general set of standards that define the minimum requirements an AAI program should follow for the health and welfare of the therapy animal, handler, and human participant (AAII, 2015a). The general standards are broken down into four categories. The Standards of Practice for the Dog Handler outlines the handler's communication skills, competencies, and certification documentation. This is further described later in the paper (see the Ethical Treatment of Therapy Animals and Animal Handler Training sections; AAI, 2015a). The Standards of Practice for the Dog and Evaluation Standards outline the dog's behaviour, training, health and welfare (see Therapy Animal Certification section; AAI, 2015a). Finally, the section on General Public Issues addresses the importance of maintaining adequate insurance coverage for agencies providing therapy dogs and for individuals providing AAI (see the Facilitating an AAI Program section; AAI, 2015a). AAI further provides standards for AAA, AAE, and AAT, for training and assessment, and health and welfare to use in conjunction with the general standards (AAII, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f). The links to the AAII standards of practice documents are included in the reference section of the paper. The various standards will be discussed intermittently throughout the remainder of the paper in the previously listed sections.

## **Ethical Treatment of Therapy Animals**

Throughout much of the literature, apart from the AAI standards, the treatment of therapy animals is often underreported compared to the safety concerns for human participants working with the therapy animals (Altschiller, 2011; Hatch, 2007). Often studies examining the risks of working with animals focus on animal diseases that can be spread to humans, while they neglect to address the health and welfare of the therapy animals (Altschiller, 2011; Hatch, 2007; Serpell, Coppinger, & Fine, 2006). Interestingly, it is often the mistreatment of therapy animals that has the potential to create the largest safety concerns for humans.

**Animal welfare.** Animal welfare is defined by the AVMA as “...how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress” (AVMA, 2017, para. 1). The AAI (2015b) developed a set of standards as they specifically relate to the health and welfare of dogs working in AAI. It is broken down into sections outlining the basic needs and rights, training, and health and welfare that will be discussed more in-depth throughout the rest of this section (AAI, 2015b).

The first major concern for professionals in AAI is that there is no Bill of Rights for animals (Altschiller, 2011). The first attempt to address the welfare of therapy animals was conducted by the Farm Animal Welfare Council in Great Britain in 1993 (Altschiller, 2011). The Farm Animal Welfare Council provided the following list of freedoms necessary for animals involved in helping humans as cited in Altschiller (2011, pg. 41):

- “...freedom from thirst, hunger and malnutrition—by ready access to fresh water and a diet to maintain full health and vigor;
- freedom from discomfort—by providing an appropriate environment including shelter and a comfortable resting area;
- freedom from pain, injury, or disease—by prevention or rapid diagnosis and treatment;
- freedom to express normal behaviour—by providing sufficient space, proper facilities, and company of the animal’s own kind; and
- freedom from fear and distress—by ensuring conditions which avoid mental suffering.”

The fifth freedom is the most difficult to determine in practice because, apart from the animals outward body language, it is nearly impossible to determine what animals do and do not like (Altschiller, 2011; Serpell et al., 2006). Furthermore, these differences most likely vary depending on the species of therapy animal (Serpell et al., 2006). Currently, the Standards for the Health and Welfare of Dogs Working in a Range of Interventions strongly suggest that organizations providing AAI ensure their therapy animals have access to these Five Freedoms (AAII, 2015b).

More recently, Serpell et al. (2006) developed the following guidelines for the welfare of therapy animals in AAI.

1. In order to keep therapy animals safe, AAI organizations and handlers must be educated on species-specific behavioural and social needs of the animal.
2. Furthermore, handlers need to be aware of the animal’s distress tolerance to close physical contact, monitor the animals stress signals, and accommodate for breaks,

ideally before the animal becomes stressed in the first place.

3. Animal handlers must always monitor the therapy animal to ensure the animal's safety. It is not acceptable to leave a therapy animal alone with a participant due to the potential risks this could cause the participant and animal.
4. Due to their unique needs, wild and nondomestic animals are not appropriate for participation in AAI.
5. If an individual would like to certify a therapy animal with special needs, they must ensure the unique needs of that animal are addressed.
6. Early training, behaviour modification, and socialization are helpful in preparing animals to become certified.
7. Force-free training (i.e., training without aversive stimuli) should be the only method for helping an animal adjust their behaviours.
8. Continuing education on the welfare of therapy animals is necessary to help AAI organizations and animal handlers best meet the needs of the animals they work with in AAI.

**Factors contributing to therapy animal distress.** The problem remains that animals are unable to speak to their handlers and tell them when they are feeling overwhelmed or stressed. At this point, the best way to determine the extent of a therapy animal's level of psychological stress is by carefully examining their body language (Altschiller, 2011). Therefore, it is the animal handler's responsibility to ensure their therapy animal is being treated respectfully and has the appropriate outlets/breaks if the animal does show signs of distress (AAII, 2015b; Urichuk & Anderson, 2003). The main physical indicators of animal stress are: body shaking, yawning, muscle spasms, tense

posture, dilated pupils, increased lip licking and salivation, excessive dandruff, excessive blinking, piloerection (i.e., when the hairs raise on an animals back), refusing treats, excess shedding, diarrhea, scratching, turning away and avoiding eye contact, shyness, increased activity or pacing, excessive vocalizations, and hiding behind a handler (Altschiller, 2011; Urichuk & Anderson, 2003).

***Length of session.*** Altschiller (2011) posits a main factor to consider in therapy animal stress level is the length of the AAI session. Sessions must be monitored so that the animal does not become overstressed and so they do not become at risk of developing chronic stress (Altschiller, 2011). There is great debate about the actual length of time a session of AAI should run; however, AAI (2015b) currently recommends that sessions last no more than 60 minutes and there should be 30 minutes between each hour-long session to ensure the animal has optimal rest time.

***Participant-animal interactions.*** Altschiller (2011) also notes that it is important to consistently monitor the human participants treatment of the animal. Although most individuals are well intentioned, a young child might pull on a dog's tail or an elderly participant with dementia might physically act out towards an animal (Altschiller, 2011). Therapy animals have no voice and thus little control over unwanted social or physical interactions (Altschiller, 2011). It is important that participants are aware that hugging a therapy animal, laying on an animal, or putting their face near the animal's face are all behaviours that can make even the most sound therapy animals uncomfortable regardless of their training and good behaviour; these actions should be avoided (Urichuk & Anderson, 2003).

Another consideration for the treatment of therapy animals as well as other

animals is the potential for participant disclosures of animal abuse during AAI (Urichuk & Anderson, 2003). In these situations, Urichuk and Anderson (2003) explain the importance of advocating for and intervening with the proper authority if a handler becomes aware of animal abuse. An example of when a situation like this might arise is in working with children in AAT. In situations of domestic violence, animals are frequently threatened by an abuser in an attempt to control and manipulate victims (Bancroft, 2002; Urichuk & Anderson, 2003). A child might disclose an abusive parent harmed the family pet when the co-parent tried to flee with the child.

***Environmental factors.*** Environmental factors also might impact a therapy animal's safety. For example, in a hospital setting, medication might be spilled by a patient or staff member. If the spill is not cleaned up properly and a therapy animal ingests the medication it could seriously harm them. Handlers must continually monitor the environment so that the therapy animal does not come in contact with any hazardous material (e.g., medication, cleaners, poisons, sharps) that might injure them (Urichuk & Anderson, 2003).

***Untrained handlers and uncertified animals.*** Finally, Altschiller (2011) noted that often individuals who want to facilitate AAI are well intentioned, but at times lack the education and experience necessary to conduct an ethical and safe AAI program for the therapy animals. Depending on the setting of the AAI and the animal handler and/or the facilitator's knowledge in these cases, an animal's welfare might be impacted, particularly in situations where an individual decides to facilitate AAI with a personal pet that has not gone through temperament and obedience testing (Urichuk & Anderson, 2003).

## **Therapy Animal Certification**

A number of different types of animals work in AAI. The most commonly certified therapy animals are dogs, but horses, cats, small rodents, and various types of farm animals like chickens, donkeys, and llamas can also become therapy animals. Regardless of the type of animal, in order to become a certified therapy animal, it is important the animal undergo intensive assessment that evaluates their enjoyment of and suitability for AAI. Broadly speaking the animal's temperament, behaviour, and physical health are the overarching factors assessed during the certification process (AAII, 2015a).

**Temperament.** Temperament refers to the animal's personality and nature. AAII (2015a) provided a set of minimum standards to assess the therapy animal's temperament. In an environmental context, the animal should be assessed in various situations while remaining calm, without demonstrating physical signs of distress, and without overreaction to distracting stimuli. Socially, the animal must present as calm and approachable with small and large numbers of individuals, have genuine interest in interacting with humans, have appropriate impulse inhibition with food, and appropriate play and handling with various types of individuals (AAII, 2015a). Most importantly, the therapy animal should also appear to enjoy their time in AAI (Urichuk & Anderson, 2003). As an aside, due to the relative instability of temperament in younger animals, AAII (2015a) recommends that animals younger than one-year refrain from certification.

**Behaviour.** Therapy animal behaviour should be assessed according to the following factors: reliability, predictability, and controllability (Urichuk & Anderson, 2003). AAII (2015a) General Standards of Practice state the following behaviours should be assessed: the animal's reaction to strangers and children, their obedience level on and



off leash, grooming acceptance, loose leash walking, behaviour in a crowd, ability to work when other animals are present, reaction to distractions, separation from handler, resource guarding, aggression, and arousal. AAI (2015a) recommends therapy dogs, specifically, understand the following commands: sit, down, stay, come, and leave it through voice commands, whistle, and/or hand signals (AAI, 2015f). As a minimum standard, AAI (2015a) suggests the dog be able to respond accurately to the commands listed approximately 80% of the time in AAA and 90% of the time in AAE or AAT. Animal trainers often look for problem behaviours like jumping on participants without prompting, nipping, biting, and/or mouthing, inappropriate urinating, excessive sniffing, excessive vocalization, and inappropriate resource guarding because, if left unaddressed, these behaviours could put the AAI participants and animals at risk (Urichuk & Anderson, 2003). Continually assessing a therapy animal's temperament and behaviour is important because, similarly to humans, animals' likes and dislikes can change with age. AAI (2015b) recommends that a therapy animal's temperament and behaviour be reassessed each year.

**Physical health.** Therapy animals' physical health should also be assessed and regularly monitored to ensure they do not have any physical health concerns or zoonotic diseases that could impede their wellness and/or participation in AAI (AVMA, 2011b). Senior animals, particularly those with health problems, should refrain from AAI if participating in a program will enhance their stress or physically hurt them (AAI, 2015a; AVMA, 2011b). Health screening by a licensed and knowledgeable veterinarian should include examination of the following: annual immunizations including rabies, distemper, hepatitis, leptospirosis, parainfluenza, and parvovirus; parasite prevention in the form of

fecal exams; additional vaccinations of heartworm, bordatella, and giardia; and continual monitoring of fleas, lice, ear mites, mange, and hot spots (AVMA, 2011b). Health screening will depend on the individual agency that is certifying the animals, but the AVMA (2011b) recommends that the veterinarian responsible for the therapy animal's care should be aware of the animal's involvement in AAI and the types of tasks that they perform. AAII (2015b) recommends therapy animals receive, at minimum, yearly physical exams from a licensed veterinarian.

**Testing.** In order to assess these abilities in therapy animals, AAI organizations have developed a number of protocols to determine the fit of animals and their handlers for AAI. Each individual AAI organization will have their own unique testing process, but The Aptitude Test of Dogs in Mental Health Settings, created by the Pet Therapy Society of Northern Alberta (retrieved from Urichuk & Anderson, 2003) outlines the most important aspects to include in the testing process. The Pet Therapy Society requires the dog first pass the Canadian Canine Good Citizen Test (CCGCT) created by the Responsible Dog Owners of Canada organization. The CCGCT is a standardized test used to assess a dog's behavior in everyday relaxed settings and their handler's ability to work with them (Responsible Dog Owners of Canada, 2016). The CCGCT is completed in a public space and it involves 10 steps:

1. The accepting a stranger test involves having the handler greet a stranger to determine the dog's comfort with unfamiliar people.
2. The patiently sitting for petting is a test to determine the dog's level of shyness and guarding of personal space.
3. The appearance and grooming evaluation is based on the handler's care of their

dog.

4. The walking test helps determine the handler's control of their dog.
5. The walking through a crowd task assesses the dog's distress level when walking through a group of people.
6. The dog's response to the commands "sit", "down", "stay", and "come" evaluates the dog's training and response to their handler.
7. The praise and handler-animal interaction test relates to the team's relationship and the ability of the handler to help the dog calm down.
8. The reaction to passing dogs test determines the dog's ability to behave in the presence of other dogs.
9. The distractions test evaluates the dog's confidence when there are environmental distractors present.
10. The supervised isolation test determines how well the dog is able to maintain their training when another handler, other than their primary handler, is supervising them.

Once the dog successfully completes the CCGCT and they are at least one year of age they are eligible to complete the Aptitude Test for Dogs in Mental Health Settings (Urichuk & Anderson, 2003). This test focuses on 19 criteria that are graded on a three-point scale (A = Acceptable, U = Unacceptable, B = Borderline). The criteria are as follows: Handled by Stranger, Exuberant/Clumsy Petting, Test for Hand-Shy, Restraining Hug, Pain Response, Direct Stare, Bumped from Behind, Loud Angry Vocalization (Indirect), Loud Angry Vocalization (Direct), Sitting with Stranger (Touching), Sitting with Stranger (Not Touching), Reaction to Movement, Taking a Treat, Blow in Face, Feet

Stomping, Reaction to Running/Being Chased, Play/Settle, Crowded Petting, Come When Called (Other than Handler; Urichuk & Anderson, 2003). The CCGCT followed by the Aptitude Test for Dogs is one testing protocol that an AAI organization might utilize to evaluate therapy dogs. There are many ways in which to evaluate an animal's ability to become a therapy animal, but the most important part is that the animal received some type of standardized assessment as part of the certification process and that the AAI agency certifying the animal can provide information and documentation supporting their individual protocol (AAII, 2015a).

**Additional considerations.** The following section outlines some further considerations related to the therapy animal selection, training, and the animal-handler relationship that are important to address in the certification of therapy animals for AAI.

***Selection of therapy animals.*** Selection of therapy animals, based on the individual type of animal and their personality is crucial component of an AAI program (AAII, 2015a). For example, a quiet cat might work best for a long-term care facility because the residents most likely would prefer a laid back animal, while children might prefer to interact with a larger and energetic dog. Animals with disabilities, special needs, or those that look different might also be helpful for certain AAI participants, as long as the animal is not harmed in any way (AVMA, 2011b; Pet Partners, 2016b). For instance, an animal that is missing a limb might be preferable in an AAT program with veterans who have also had amputations.

Horses are another type of therapy animal that some participants in AAI might prefer. Equine AAT programs are referred to as Hippotherapy and Equine-facilitated Psychotherapy (EFP). Hippotherapy is a type of AAT, most often administered by

occupational therapists, physical therapists, and speech therapists, which utilize the movement of a horse to help clients (Kruger & Serpell, 2006). Hippotherapy reportedly aids individuals struggling with posture, balance, coordination, fine motor control, improving articulation, and enhancing cognitive skills; however, it does not involve the client learning how to ride horses (American Hippotherapy Association, 2016; AVMA, 2011a). Alternatively, EFP uses an experiential psychotherapeutic approach to AAT that includes horses in various activities like handling, grooming, lunging, riding, driving, and vaulting (Kruger & Serpell, 2006). The activities are facilitated by mental health professionals accompanied by an equine professional to help individuals achieve their therapeutic goals aimed at enhancing their cognitive, emotional, behavioural, and/or social skill development (Altschiller, 2011; Kruger & Serpell, 2006).

***Preparing an animal for certification.*** A number of traits necessary for certification as a therapy animal are those that are developed and trained early in an animal's life. Pet Partners (n.d.c) created some tips for individuals that are interested in helping their animal become a certified therapy animal. First, Pet Partners (n.d.c) indicate proper socialization with other animals, with various types and ages of people, in different settings is important to create early positive experiences that will help the animal feel comfortable in novel situations. Second, early and consistent handling is important to help the animal get used to experiencing physical contact (Pet Partners, n.d.c). Further early experiences with grooming can be helpful as well because these are common activities that participants engage in with therapy animals (Pet Partners, n.d.c). Third, and most importantly, early development of a mutual relationship based on trust will help the animal understand that their owner will ensure their safety (Pet Partners,

n.d.c). Finally, interested individuals should engage in obedience training using force free and positive reinforcement techniques to address any behaviour concerns and help the animal learn the difference between acceptable and unacceptable behaviours when interacting with people (Pet Partners, n.d.c; Serpell et al., 2006). If an individual would like to eventually certify an older dog, a number of the same principles listed above apply that help provide more insight about whether or not the animal might enjoy work in AAI.

Prior to a future therapy animal engaging in AAI it can be helpful to ensure they are familiar with environments and situations they might engage in during AAI as well (AAII, 2015a). For example, prior to certification, a therapy animal could be exposed to wearing jackets or vests because in AAI they will most likely be required to wear some form of identification as a therapy animal. If an individual believes their animal will engage in future AAA or AAE with children, they might focus on safely socializing their animal with children in circles of family and friends so that the animal becomes comfortable with children.

***Animal-handler relationship.*** Another important component of AAI is the relationship between the therapy animal and their handler (AAII, 2015a). Mutual trust and understanding helps ensure that the handler can gently correct the animal if they demonstrate any undesirable behaviours (AAII, 2015a). A trusting relationship is fundamental for the animal as well because if they trust their owner they know that their welfare and safety will not be jeopardized (AAII, 2015a; Pet Partners, n.d.b). To facilitate this type of relationship, AAII (2015a) reinforces the benefits of force-free behavioural modification strategies opposed to the use of positive punishment training tools like loud vocalizations, establishing dominance, shock, choke, and/or prong collars.

## **Animal Handler Training**

It is necessary that both professionals and animal handlers involved in AAI receive adequate training and education. Animal handlers are the individuals who directly manage the therapy animal. The animal they are working with could be their own animal that they have helped become certified or a therapy animal that is provided by an AAI organization. In some instances, an animal handler and a professional like a therapist or teacher work together to provide AAI.

In order for a professional and/or handler to effectively work in AAI it is important they have the appropriate training to ensure the AAI program is safe and enjoyed by both the animals and participants. Individual professionals will have to follow their own ethical guidelines, but the fundamental competencies, outlined by AAI, are that the individual working with the animal in AAI understand general info about the animal they are working with, including animal learning principles, body language, behaviour, stress signals, soothing techniques, and force-free behaviour modification (AAI, 2015a; Serpell et al., 2006). AAI (2015a) also recommends a number of core competencies and skills that animal handlers involved in AAI should have. A proficiency in human interaction, specifically in social skills and in verbal and nonverbal communication, is crucial because the handler must be able to teach individuals how to properly interact with their therapy animal and also advocate for the animal they are working with if the animal becomes stressed or if the animal is not being treated appropriately (AAI, 2015a).

In the General Standards of Practice, AAI (2015a) suggests that training programs for the handler should teach them to address the following: ability to identify

three environmental dangers to the animal, describe bidirectional zoonosis and vaccination protocols, identify three signs of illness, injury, or stress that would impede the animals ability to continue work in AAI, identify three participant factors that might negatively impact AAI, demonstrated ability and understanding of animal care, ability to use appropriate equipment the animal requires, knowledge of the specific animal they are working with (e.g., their likes, dislikes, and stress signals), and the ability to engage in training if the animal engages in undesirable behaviours.

Although each handler's involvement in AAI might look different (i.e., they might be working professionals and/or volunteers), the Pet Therapy Society of Northern Alberta created a Code of Ethics that explains handler roles and responsibilities to ensure that volunteer handlers act in accordance with acceptable AAI standards (Pet Therapy Society, 2016). The main points require volunteers to fulfill their commitment to Pet Therapy Society to the best of their ability, to not accept payment, to refrain from substance use, to avoid using the animal's status to receive special treatment or public access, to ensure the status of the animal is being represented correctly, and to ensure both their own and the animal's behaviour is appropriate (Pet Therapy Society, 2016).

Documentation is another important component for handlers involved in AAI. The handler should be aware of the policies and procedures of the organization in which the AAI is taking place (AAII, 2015a). They must also ensure they have the appropriate documentation related to the population they are working with (e.g., a vulnerable sector check if they are working with minors; AAII, 2015a). Documents outlining the therapy animal's veterinary checks and vaccinations must also be readily available for the safety of both the therapy animals and human participants (AAII, 2015a).



## **Chapter 4: Facilitating an AAI Program**

The following chapter explores how an individual or organization interested in AAI might begin to establish an AAI program. It adds to the previously reviewed benefits of AAI and also presents some of the human risks and safety concerns that should be carefully examined prior to the onset of an AAI program. The section then outlines key concepts associated with cost, liability, and program evaluation.

### **Establishing a Program**

The first step in establishing a program is to create a research-based proposal for the organization interested in an AAI program (Urichuk & Anderson, 2003). It is important to be aware that often proposals of an AAI program will be met with some anticipation and concern (Urichuk & Anderson, 2003), but interdisciplinary involvement and cooperation is crucial in the success of the AAI program (AVMA, 2011a). The proposal should include an analysis of the risks and benefits of working with animals, particularly risks associated with disease, infection, and allergies, an explanation for how the therapy animal will be contained and cleaned up after, how an AAI program might impact the organization's workload, and an explanation about how any liabilities will be navigated and addressed (Urichuk & Anderson, 2003). Further discussion associated with program goals and expectations are helpful to strengthen the proposal as well (AVMA, 2011a).

Urichuk and Anderson (2003) identified a number of questions critical to ask when trying to determine if an AAI program will fit within an agency and if so, what the AAI program might look like. First they suggest the organization determine participant eligibility for the program. For example, in a counselling setting will the program be

available to clients with a certain set of diagnostic criteria? Second, who will be responsible for running the program and managing any volunteers involved? Third, Urichuk and Anderson (2003) state the importance of determining how any risks will be monitored and managed. Fourth, will the organization contact an appropriate AAI program that provides therapy animals or will an individual in the organization certify their own therapy animal and receive personal training in order to facilitate AAI?

Once an affirmative plan to execute a program is in place, the next step involves preparing for the coming therapy animal. The AAI (2015a) General Standards of Practice recommend that individuals in the organization should be informed before an animal is brought on site prior to the start date of the program. AAI (2015a) also recommend that participants participating in the AAI program be screened for allergies, zoonosis, medical conditions, visual impairments, mental health status, phobias, cultural attitudes, aggression, violence, abuse/neglect issues, or any indicators that might place the animal handler and animal at risk.

The AVMA (2011a) provides a seven-point checklist for developing an AAI program that addresses the most important considerations. The list is as follows:

1. Organizations should determine if an AAI program is necessary and if it will readily adapt to pre-existing programming.
2. Organizations should develop realistic goals and ensure they have financial and professional backing.
3. Organizations should establish an outline of the benefits an AAI program could offer based on AAI research.
4. Organizations should decide what type of intervention and animal would be best

- suiting to their individual population.
5. Organizations should ensure any necessary training and awareness for staff is provided.
  6. Organizations should examine the risk of zoonotic diseases and how the organization will manage these risks.
  7. Organizations should evaluate the successes and failures of the program to continually meet the needs of the organization. This point will be further discussed at the end of this section.

### **Risks of AAI and Safety Precautions**

There are a number of factors to consider when addressing the safety concerns associated with AAI. Of particular concern is the safety of the participants in the program. The potential for risk and human safety will be the focus of this section; however, ethical care and safety of therapy animals is just as important as was previously discussed (see the section titled Ethical Treatment of Therapy Animals in Chapter 3). Although the research indicates that the benefits of AAI appear to outweigh the associated risks (Bert, Gualano, Camussi, Pieve, & Voglino, 2016; Brodie et al., 2002), there are a number of additional factors to consider when working with therapy animals.

**Transmission of diseases.** One of the most common risks of AAI cited in the literature is the risk that a therapy animal might transmit a disease to a human participant (Lefebvre et al., 2008). Zoonoses are defined as infectious diseases that can be transmitted from vertebrate animals to human beings (Urichuk & Anderson, 2003). Zoonoses can be transmitted when a human comes in contact with an infected animal, their feces and/or their environment, they inhale infected particulate, or they are

bitten/scratched by an animal (Urichuk & Anderson, 2003). The most likely zoonoses to occur in an AAI setting are: rabies, salmonellosis, campylobacteriosis, streptococcal infection, and giardiasis (Urichuk & Anderson, 2003). Toxocariasis, larva migrans, toxoplasmosis, and echinococcosis are the most commonly transferred parasites, while canine scabies, fleas, ticks, and dermatophytosis are the most commonly transferred animal-related skin problems (Urichuk & Anderson, 2003). Zoonoses are particularly concerning for individuals participating in AAI who have compromised immune systems (Bert et al., 2016). For example, dogs can carry salmonella and E-coli in their feces. Although these bacteria do not affect dogs, they can have negative effects on humans, particularly those who are unable to fight off infection (Bert et al., 2016).

In order to reduce the transmission of these zoonoses, parasites, and infections, Urichuk and Anderson (2003) suggested the following animal care strategies:

- regular animal vaccinations and check-ups,
- disposal of feces in appropriate locations,
- regular checks for animal skin-problems,
- provision of nutritious food in clean bowls,
- ensure animals are unable to drink from a toilet,
- regulation of the therapy animal's environment, and
- avoid participation in an AAI program if any health concerns arise for the therapy animal.

It is also important that individuals participating in an AAI program have the opportunity to wash their hands after they interact with the therapy animal (Urichuk & Anderson, 2003). Overall, the continual monitoring of the animals health status in AAI is essential

for human participant safety.

**Human allergies.** A second risk of working with therapy animals is human allergies (Bert et al., 2016). Some individuals have severe enough allergies that they are not able to interact with animals at all because it might send them into anaphylactic shock, compromising the individual's respiratory system (Urichuk & Anderson, 2003). Allergies to animals can be triggered by petting an animal, coming in contact with their saliva, or by inhaling animal dander (Urichuk & Anderson, 2003). Dogs, cats, and rabbits, for instance, have dander that some individuals have severe and adverse reactions to.

In their meta-analysis, Bert et al. (2016) found that with appropriate precautions, overall, there was minimal risk for participants with allergies involved in AAI. Urichuk and Anderson (2003) suggest establishing the following guidelines to account for individuals who have severe allergies to therapy animals and are therefore unable to participate in AAI: limit the area the AAI takes place and ensure the area is well ventilated, attempt to reduce the therapy animal's access to other non-designated areas, try to utilize an area that is not carpeted to enable easy clean up, ensure participants wash their hands, and ensure individuals who do have allergies are aware of the AAI program so that they can choose how or if they would like to participate.

**Injury.** Next, because animals can be unpredictable, it is important to take precautions to minimize bite risk (Bert et al., 2016). Therapy animals must be formally assessed and trained, as should their handlers, to avoid incidences of behavioural aggression towards humans. To reduce bite risk, it is helpful to teach children, in a developmentally appropriate way, through AAE about the proper way to interact with a

therapy animal; doing so greatly reduces the likelihood a problem will arise (Jalongo, 2008). Awareness of animal body language and stress signals are crucial to ensuring participants in an AAI program are safe as well. When animals are uncomfortable and stressed they might present with dilated pupils, piloerection, yawning, shaking, excessive drooling etc., dependent on the species of therapy animal (Urichuk & Anderson, 2003). These are general warning signs to the animal handler and/or leader of the AAI program that the animal needs a break because if they reach their threshold, participant safety might be compromised (Urichuk & Anderson, 2003).

**Fear and cultural considerations.** It is not uncommon for some individuals to have a fear of animals (Chur-Hansen et al., 2014; Mallon et al, 2006). Bert et al. (2016) suggest that individuals who prefer to avoid interactions with therapy animals are advised when the animals are around so that they are not placed in an awkward position. Chur-Hansen et al. (2014) explain that individual attitudes towards AAI must be considered because it is unfair to place staff or other individuals in a position where they are uncomfortable with an AAI program. Similarly, if the participant does not view animals as pets or has other cultural attitudes that do not align the Western positivist view of animals it is unfair to place them in a compromising position (Chur-Hansen et al., 2014; Urichuk & Anderson, 2003).

**Social concerns.** Some research has also noted a few social concerns precipitated by animal programs. In situations where individuals have the opportunity to become quite bonded to the animal they are working with, they might become possessive, as if the animal is their animal alone (AVMA, 2011a). This has the potential to create discourse and an atmosphere of competition for other individuals involved in the AAI program

(AVMA, 2011a). Another factor to consider is an individual's reaction to a therapy animal that does not respond to them in a way that they would like and, therefore, impacts the individual's self-esteem (AVMA, 2011a). Further issues might arise if the therapy animal passes away or is moved to another AAI program (AVMA, 2011a). In these instances appropriate care and support must be provided to the individuals impacted by the loss (AVMA, 2011a).

**Additional safety considerations.** To ensure that AAI participants are not exposed to unjust risk of accident or injury, Urichuk and Anderson (2003) recommend the following safety precautions:

- Organizations should only work with certified therapy animals that have had a current medical check and behaviour assessment.
- They must ensure the therapy animal and participant are always accompanied by a trained animal handler.
- The handler should have and safely use the appropriate equipment (e.g., harnesses, collars, toys, etc.).
- They should not allow therapy animals or AAI participants to engage in dangerous activities.

### **Cost**

The cost of facilitating an AAI program is largely dependent on individual AAI organizations. Some organizations charge for the visits, while others provide volunteers and handlers for free. Alternatively, for therapy animals involved in AAT, for instance, the individual professional might have their own hourly fee. The Psychologists' Association of Alberta (2014) recommends a fee schedule as a guideline that reflects a

fair fee for services. For example, they recommend therapists in Alberta charge \$190.00 for one hour of individual therapy (Psychologists' Association of Alberta, 2014). Due to the nature of the costs associated with including an animal in therapy, individual professionals might choose to increase their fees. Alternatively, individuals providing AAT might also work on a sliding scale to help participants that could benefit from services but might require a unique fee structure.

### **Liability and Insurance**

In the United States, the majority of states do not prohibit animals from being in institutions, although there are often restrictions about animals present in areas where food is prepared and served or in areas that require a sterile environment (AVMA, 2011a). Ultimately, connecting with local officials for specific regulations and with different organizations based on individual building regulations and lease agreements is often necessary (AVMA, 2011a).

Insurance must include a policy specific to cover the type of AAI (i.e., AAA, AAE, and/or AAT), particularly so that the insurance covers any risks to staff, volunteers, and participants (Urlichuk & Anderson, 2003). Often community AAI organizations have their own insurance that covers the therapy animal and their handler, but this does not generalize to individuals who chose to pursue their own training and certify their own therapy animal. Professional liability insurance might or might not cover an individual choosing to conduct an AAI program independently; this will vary depending on the individual's insurance carrier. The cost of including insurance coverage for AAI might or might not cost more money depending on the insurance provider. For individual professionals interested in developing an AAI program with their own therapy animal in



Alberta, CAAWLS has a professional membership program that is covered by the CAAWLS liability and insurance policy so that members do not have to worry about obtaining their own coverage (CAAWLS, n.d.c). Many AAI agencies also require strict adherence to guidelines (e.g., therapy animals must stay on leash, report problems back to the AAI agency with any concerns etc.) by their volunteers so that they remain covered by their liability insurance (Urichuk & Anderson, 2003).

### **Space**

Public access is a right provided to individuals with disabilities who require accompaniment by a service dog (AAII, 2016a). Public access is not granted to a therapy animal (AAII, 2016a). It is important to note that many organizations will not provide accommodations for therapy animals. For example, businesses that have no pet policies will permit service animals but not therapy animals (Pet Partners, n.d.d). For organizations wanting to establish an AAI program, it is important to receive approval to have a therapy animal in the space.

### **Evaluating a Program**

In order to determine the utility of an AAI program, it is important to consistently monitor the program to see if it is benefiting the individual and/or organization (Anderson, 2006). To begin, Urichuk and Anderson (2003) suggest an organization question which AAI activities are appropriate, effective and efficient, what part of the program needs to be improved, and are participants involved in the program experiencing better outcomes? One way to evaluate an AAI program is to use performance indicators – measurement tools to determine if a program is addressing the preset goals – like rate of participant attendance, percentage of participants in AAI that obtain therapeutic gains,

and percentage of participants reportedly satisfied with the AAI program (Urichuk & Anderson, 2003).

To gain further insight into how AAI is impacting participants, evaluating participant outcomes can be helpful (Urichuk & Anderson, 2003). Outcome measures can be in the form of standardized psychological instruments that the participant completes at regular intervals, direct observation and documentation of behaviours, surveys and/or questionnaires, and case notes (Urichuk & Anderson, 2003). Unfortunately, based on these measures alone, individuals evaluating an AAI program will be unable to determine exactly if it was the AAI program, specifically the therapy animal, that was responsible for any marked changes; a scientific experiment controlling for the presence of the animal is the only way to determine a causal connection (Urichuk & Anderson, 2003).

### **Chapter 5: Plan of Inquiry**

AAI is rapidly increasing in research and in practice; however, for individuals new to AAI, the literature lacks a cohesive explanation that captures how these individuals might make an informed choice about facilitating an AAI program. The first three chapters described AAI from a historical and contemporary perspective, reviewed the evidence outlining the risks and benefits of AAI, and finally explained a number of critical considerations important in implementing an AAI program. The project will help individuals better understand AAI, and its modalities, through a comprehensive medium. The literature review documents the research, while the accompanying presentation, with professional feedback, reviews the most important factors salient to provide a concise resource for those interested in establishing an AAI program.

The literature review involved the compilation of multiple academic resources as

well as current local AAI organizational information online. The following key terms were used to search the academic literature: *animal-assisted interventions*, *animal-assisted activities*, *animal-assisted education*, *animal-assisted therapy*, *therapy animals*, *mental health*, *pet visitation*, *human-animal interaction*, and *human-animal bond*. The primary databases used were *PsychINFO*, *ScienceDirect*, *Web of Science*, *EBSCO*, and *NCBI*.

## **Chapter 6: Synopsis**

### **Overview of the Presentation**

The presentation component of this project is intended to be a concise and engaging outline that reviews the most pertinent factors necessary for individuals interested in facilitating an AAI program to consider. It can be adapted in order to best meet the needs of the population it is being presented to. The presentation is largely based on the information reviewed in the accompanying paper. The presentation begins by exploring human-animal interactions from a historical perspective to provide background information about how AAI developed. Subsequently, the current aspects of AAI including AAT, AAA, and AAE, and the proposed benefits of each intervention are presented. Next therapy animals and the certification process are reviewed, including a discussion on the ethical treatment of therapy animals. Animal handler training is also addressed. Finally, the presentation summarizes the most important factors to consider in facilitating an AAI program. This section includes a discussion on establishing a program, the risks of working with therapy animals as well as various associated safety precautions, additional considerations related to cost and liability, and some suggestions about how to evaluate an AAI program.

## **Professional Feedback**

This section includes professional feedback about the presentation's content received during two individual meetings with experts in AAI from Dreamcatcher Nature-assisted Therapy Association and Chimo Animal-assisted Wellness and Learning Society (CAAWLS). The purpose of the meetings was to have individuals well versed in AAI ensure that the presentation accurately depicted AAI, its risks and benefits, and that it also addressed the most important information to highlight for individuals interested in AAI.

Dreamcatcher Nature-assisted Therapy Association is a private practice that provides psychological services to children, youth, and adults. They utilize various treatment modalities including traditional talk therapy, AAT, and EFP (Dreamcatcher Nature-assisted Therapy Association, n.d.). Two Registered Psychologists and one student from Dreamcatcher provided the following suggestions for the presentation based on their experience with AAI, in particular AAT:

- They highlighted the importance of providing information based on peer-reviewed empirical research that demonstrates the physiological changes that occur when working with therapy animals. They explained that sound research on AAI related to heart rate, blood pressure, stress hormones, and endorphins is relatively new and quite limited and, therefore, necessary to appropriately address.
- Next, they stressed the significance of providing a thorough explanation of the ethical treatment of therapy animals. They noted that this topic has largely been neglected in the research, until recently, and it is a crucial component of safe and effective AAI interventions. In particular, they noted that it must be up to the

therapy animal to decide how and when they would like to interact with a participant in AAI.

- Lastly, they explained the nuances associated with the terms ‘using’ animals in AAI compared to ‘integrating’ animals in AAI. They stressed that terms like integrating or incorporating animals into AAI are more appropriate because individuals providing AAI are not using the animals, instead they are working together with the animal, ensuring the animal’s wellbeing, to collaboratively enhance AAI participant wellness.

CAAWLS (n.d.a) is a not-for-profit organization that certifies therapy animals and handlers that volunteer or run AAI programs throughout the community. Four board members from CAAWLS provided the following suggestions after viewing the presentation:

- They noted that depending on the context of an AAI program, the term therapy animal might or might not be appropriate. They suggested that the term wellness animal might be more appropriate instead. For example, some organizations providing AAI might only do AAA and AAE, in these instances it might not be appropriate to refer to the animal as a therapy animal because the term misrepresents the nature of the type of AAI taking place. The board members from CAAWLS also noted that some individuals might also hold a negative view of the term therapy. In general, the board members recommended that the terms be adjusted in the presentation depending on the individual audience.
- Another suggestion provided was the importance of clarifying the proposed benefits of the different types of AAI. For instance, some research posits that

AAT might be helpful to enhance social communication for individuals with Autism Spectrum Disorder (Ward et al., 2013). In the presentation, the board members highlighted the importance of clarifying that AAT might help certain symptoms associated with Autism Spectrum Disorders, but it is not recommended as a stand-alone treatment.

- The CAAWLS board members noted the particular difficulties they have encountered providing AAI in settings where there might be an individual who is immunocompromised. They suggested the importance of including this in the risks section of the presentation so that individuals deciding whether or not to facilitate an AAI program will take this factor into consideration.
- Their final recommendation for the presentation was inclusion of a point related to procuring liability insurance for AAI organizations and for professionals choosing to incorporate AAI into their practices. The board members explained that in purchasing liability insurance, it is necessary to include coverage specifically for AAI to protect the professional and the individuals they are working with in AAI.

### **Target Population**

This project is intended for individuals and organizations, unfamiliar with AAI, who are interested in learning more about AAI and how to develop a program that will meet their unique needs, particularly in human service and educational settings. In order to help enhance awareness about AAI and provide accurate information to help interested parties determine the appropriateness of an AAI program for their needs, the project incorporated feedback through collaboration with some two AAI organizations. This project is also aimed to help current AAI organizations develop new networks with

individuals and organizations interested in learning more about AAI, incorporating AAI into their practice, and/or developing a program.

### **Strengths and Limitations**

The largest strength of this project is the comprehensive nature in which it has integrated existing AAI research and current AAI programming to help organizations make an informed decision about whether or not to facilitate an AAI program and how to do it. There is no other resource that currently encompasses information defining AAI, its risks and benefits, and information about implementing an AAI program in the literature.

However, the field of AAI is new and consistently changing. Due to rate at which new AAI programs are developed and research is published, it is impossible to capture in one project all of the facets of AAI. Further research, feedback, and evolution of the final paper and presentation will be required to ensure that the most current information is made available to those interested in facilitating an AAI program.

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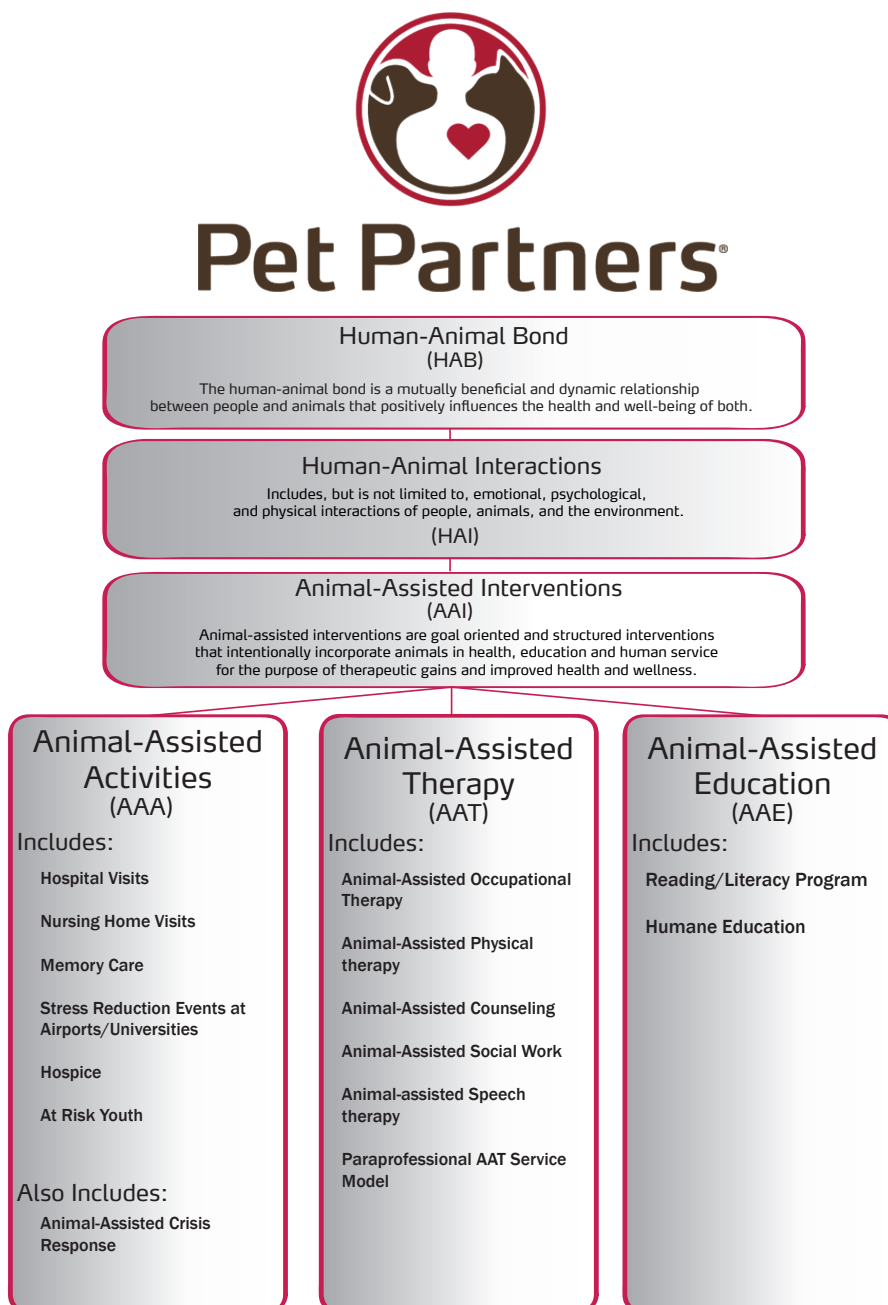
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## Appendix A

### Pet Partners AAI Terminology Chart

Pet Partners (n.d.a) created the following chart to represent their conceptualization of AAI terms:



## Appendix B

### Presentation

# FACILITATING AN AAI PROGRAM: THE RISKS AND REWARDS OF WORKING WITH ANIMALS IN HELPING AND EDUCATIONAL SETTINGS

Katelynn Couling B.Sc.

## Outline

- History of Human-animal Interactions
- Defining AAI
- Types of AAI and Proposed Benefits
  - ▣ AAT
  - ▣ AAA
  - ▣ AAE
- Therapy Animals and Certification
  - ▣ Ethical Treatment of Therapy Animals
- Animal Handler Training
- Facilitating an AAI Program

## Brief History of Human-animal Interactions

- Humans and animals have lived and worked together for over 10,000 years (American Veterinary Medical Association [AVMA], 2011 a)
- Popularity of domestic pets
  - ▣ Increased in the mid 20<sup>th</sup> century
- Animals in human services and education
  - ▣ Improve mental and physical health
- The Delta Foundation
  - ▣ Created in 1977
  - ▣ Now referred to as Pet Partners
  - ▣ Provides research, training, and animal interventions

DEFINING ANIMAL-ASSISTED  
INTERVENTIONS (AAI)

## AAI

- *The intentional integration of animals in goal-oriented interventions, focused specifically on developmental, therapeutic, emotional, and/or behavioural therapeutic goals, within health, education, and human services*

(Animal Assisted Intervention International [AAII], 2016; Pet Partners, n.d.a)

## TYPES OF AAI



## Animal-assisted Therapy (AAT)

*AAT: a goal-directed intervention that can be incorporated into various types of therapy where the client-therapy animal interaction helps facilitate the therapeutic process (Urichuk & Anderson, 2003)*

- Developed by Boris Levinson and Jingles in the 1960s
- Used in:
  - ▣ Counselling
  - ▣ Speech therapy
  - ▣ Social work
  - ▣ Physical and occupational therapy



## Proposed Benefits of AAT

- **Emotional Benefits**
  - Fills human desire for:
    - Love, acceptance, and trust (Urichuk & Anderson, 2003)
  - Reduces depression, anxiety, social withdraw, and isolation (Dietz, Davis, & Pennings, 2012; Friesen, 2010; Hamama et al., 2011; Hunt & Chizkov, 2014)
- **Behavioural Benefits**
  - Improves social skills and pro-social behaviour (Busch et al., 2016; Schuck, Emmerson, Fine, & Lakes, 2015)
  - Facilitates social interaction and communication (Boyer & Mundschenk, 2014; Ward, Whalon, Rusnak, Wendell, & Paschall, 2013)
- **Physical Benefits**
  - Physiological changes in blood pressure, heart rate, stress hormones, and endorphins (Beetz, Uvnas-Moberg, Julius, & Kotrschal, 2012; Odendaal & Meintjes, 2003)
  - Mobility (Champagne & Dugas, 2010; Elmaci & Cevizci, 2015; Hyun Jung, Kwon, Lee, & Kim, 2012)
  - Reduced pain (Braun, Strangler, Narveson, & Pettingell, 2009; Harper et al., 2015)

## Animal-assisted Activities (AAA)

*AAA: activities that involve therapy animals and their handlers in social institutions for motivation, education, and/or recreation (AAII, 2016)*

- First type of AAI utilized in human services and education
- Used in:
  - Commercial enterprises
  - Correctional institutions
  - Education
  - Healthcare
    - Hospitals
    - Long-term care facilities

## Proposed Benefits of AAA

- **Symptom reduction:** (Hoffmann et al., 2009; Moretti et al., 2011)
  - ▣ Depression
  - ▣ Anxiety
- **In individuals with schizophrenia and personality disorders** (Berget, Ekeberg, & Braastad, 2008; Chu, Liu, Sun, & Lin, 2009)
  - ▣ **Enhanced:**
    - Coping strategies
    - Self-efficacy
    - Self-esteem

## Animal-assisted Education (AAE)

*AAE: a goal-oriented and structured intervention facilitated by an education professional who aims to help students with academic goals, pro-social skills, and cognitive functioning while monitoring the student's progress with assistance from a therapy animal (Pet Partners, n.d.b)*

- **Used largely in:**
  - ▣ Education
- **Sometimes in:**
  - ▣ Correctional institutions

## Proposed Benefits of AAE

- Mostly commonly reported benefits in Read Aloud Programs
  - Children or adults with:
    - Reading difficulties
    - Language impairments
    - And/or difficulties with communication
  - Research indicates increases in: (Altschiller, 2011; Boyer & Mundschenk, 2014; Urichuk & Anderson, 2003)
    - Reading comprehension
    - Confidence
    - Motivation for reading
    - Self-esteem in peer relationships

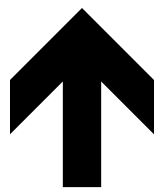
## Recap: AAI

- **Animal-assisted Therapy (AAT)**
  - Goal-directed
  - Enhances physical, social, emotional, and cognitive functioning
  - Facilitated by professionals providing some type of therapeutic intervention
- **Animal-assisted Activities (AAA)**
  - Activities involving human-animal interactions
  - For motivation, education, and/or recreation
  - Facilitated in social institutions
- **Animal-assisted Education (AAE)**
  - Goal-directed
  - Integrates therapy animals in learning
  - Facilitated by an educational professional

(AAII, 2016)

## Big FIVE Benefits of AAI

(Chandler, Portire-Benthke, Minton, Fernando, & O'Callaghan, 2010)



Motivation  
Social-interaction  
Attendance



Depression  
Anxiety

THERAPY ANIMALS AND  
CERTIFICATION

## Types of Therapy Animals

- Dogs
- Horses
- Cats
- Small rodents
  - ▣ Rabbits
  - ▣ Guinea pigs
- Farm animals
  - ▣ Donkeys
  - ▣ Llamas
  - ▣ Pigs



## Therapy Animal Certification

### Temperament Testing

- Environmental contexts:
  - ▣ Animal must remain calm in various situations
- Social contexts:
  - ▣ Animal must present as calm and approachable
  - ▣ Have a genuine interest in human interactions
  - ▣ Appropriate impulse inhibition, play, and handling

(AAII, 2015a)

## Therapy Animal Certification

### Behavioural Testing

- Reaction to strangers and children
- Obedience level on and off leash
- Grooming acceptance
- Loose leash walking
- Behaviour in a crowd
- Ability to work when other animals are present
- Reaction to distractions
- Separation from handler
- Resource guarding
- Aggression and arousal

(AAI, 2015a)

## Therapy Animal Certification

### Physical Health Testing

- Regular screening by a veterinarian:
  - ▣ **Annual immunization** → rabies, distemper, hepatitis, leptospirosis, parainfluenza, and parvovirus
  - ▣ **Parasite prevention** → fecal exams
  - ▣ **Additional vaccinations** → heartworm, bordatella, and giardia
  - ▣ **Continual monitoring** → fleas, lice, ear mites, mange, and hot spots

(AVMA, 2011b)

## Ethical Treatment of Therapy Animals

### Animal welfare

“...how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress.”

(AVMA, 2017, para. 1)

## Physical Indicators of Animal Stress

- Shaking
- Yawning
- Muscle spasms or tension
- Dilated pupils and increased blinking
- Piloerection
- Increased lip licking and salivation
- Refusing treats
- Excess shedding and dandruff
- Diarrhea
- Scratching
- Turning away
- Avoiding eye contact
- Shyness
- Increased activity or pacing
- Excessive vocalizations
- Hiding

(Altschiller, 2011; Urichuk & Anderson, 2003)

## Factors Contributing to Therapy Animal Distress

- Length of AAI session
  - ▣ Max 60 min
  - ▣ Ample time for breaks
- Negative participant-animal interaction
  - ▣ Important to teach appropriate interaction with therapy animals
- Environment
  - ▣ Hazardous spills
  - ▣ Toxic substances
- Untrained handlers and uncertified animals

(Altschiller, 2011; AAI, 2015b; Urichuk & Anderson, 2003)

## Guidelines for Ethical Treatment of Therapy Animals

1. Obtain education on species-specific behaviour and social needs of animals
2. Monitor animal's distress tolerance and stress signals and accommodate for breaks
3. Monitor the safety of the therapy animal (i.e., do not leave a therapy animal alone with a client/participant)
4. Due to their unique needs, wild and nondomestic animals are not appropriate for participation in AAI
5. If a therapy animal has special needs ensure they are adequately addressed
6. Utilize early training, behaviour modification, and socialization to prepare animals to become certified
7. Use force-free training methods (i.e., training without aversive stimuli)
8. Acquire continuing education on the welfare of therapy animals

(Serpell, Coppinger, & Fine, 2006)



# ANIMAL HANDLER TRAINING

## The Animal Handler

- Definition: The individual that has been trained to work with a certified therapy animal in AAI (AAII, 2016)
- Handlers can be:
  - Volunteers
    - Typically own the therapy animal
  - Professionals
    - Might or might not own the therapy animal

## Training

**\*\* Necessary for the safety of the participants and therapy animals \*\***

- Training should include:
  - Information about animal
    - Learning principles
    - Body language
    - Behaviour
    - Stress signals
    - Soothing techniques
    - Force-free behaviour modification
    - Transmission of diseases
  - Importance of ethics and advocacy for the therapy animal

(AAll, 2015a; Serpell et al., 2006)

FACILITATING AN AAI PROGRAM

## Establishing a Program

1. Determine if an AAI program is necessary and if it will readily integrate with pre-existing programming
2. Develop realistic goals and secure financial and personal backing
3. Establish an outline of the benefits an AAI program could offer based on AAI research
4. Decide what type of intervention and animal would be best suited to individual population
5. Ensure any necessary training and awareness for staff is provided
6. Examine the risks of AAI and how the organization will manage these risks

(AVMA, 2011a)

## Risks and Safety Precautions in AAI

### Transmission of Zoonoses

- ▣ Definition: Infectious diseases that can be transmitted from animals to humans
- ▣ Of particular concern for individuals who are immunocompromised

### Safety Precautions:

- ▣ Regular participant hand-washing
- ▣ Regular animal vaccinations and check-ups
- ▣ Disposal of feces in appropriate locations
- ▣ Regular checks for animal skin-problems
- ▣ Provision of nutritious food in clean bowls
- ▣ Ensure animals are unable to drink from a toilet
- ▣ Regulation of the therapy animal's environment
- ▣ Avoid participation in an AAI program if any health concerns arise for the therapy animal

(Urichuk & Anderson, 2003)

## Risks and Safety Precautions in AAI

### Human Allergies

- ▣ Mild to severe
- ▣ Triggered by petting an animal, coming in contact with their saliva, or by inhaling animal dander

### Safety Precautions:

- ▣ Limit the area where AAI takes place
- ▣ Ensure the space is well ventilated
- ▣ Reduce animal access to non-designated areas
- ▣ Use spaces without carpeting
- ▣ Regularly wash hands
- ▣ Ensure individuals with allergies are aware a therapy animal is present

(Urichuk & Anderson, 2003)

## Risks and Safety Precautions in AAI

### Injury

- ▣ There is always a risk when working with animals

### Safety Precautions:

- ▣ Ensure animals are trained, assessed, and certified
- ▣ Ensure handlers are also trained and certified
- ▣ Teach participants how to appropriately interact with the therapy animal
- ▣ Be aware of signs of animal stress

(Jalongo, 2008; Urichuk & Anderson, 2003)

## Risks and Safety Precautions in AAI

### **Fear and Cultural Considerations**

- ▣ Some individuals are afraid of animals
- ▣ Some might hold a different cultural view of human-animal interactions

### **Safety Precautions:**

- ▣ Ensure individuals are aware when a therapy animal is present
- ▣ Respect these individuals' choices to refrain from participating in AAI if they choose to do so

(Bert, Gualano, Camussi, Pieve, & Voglino 2016; Chur-Hansen, McArthur, Winefield, Hanieh, & Hazel, 2014; Mallon, Ross, Klee, & Ross, 2006)

## Additional Considerations

### **Cost**

- ▣ Largely dependent on individual AAI organizations
- ▣ AAT depends on the individual professional providing services

### **Liability and Insurance**

- ▣ Gain awareness of local regulations
- ▣ Policy must have specific coverage for AAI
- ▣ Some AAI organizations offer professional memberships

## Evaluating an AAI Program

### Performance indicators

- ▣ Client attendance
- ▣ % of clients making therapeutic gains
- ▣ % of clients satisfied

**Outcome measures** → direct observation, documentation of behaviours, surveys/questionnaires, case notes

- ▣ Pre and post
- ▣ Throughout program

(Anderson, 2006; Urichuk & Anderson, 2003)

## Conclusion

- ▣ **AAI**
  - ▣ Consists of AAT, AAA, and AAE
- ▣ **Big 5 Benefits:**
  - ▣ Increased MOTIVATION, SELF-CONFIDENCE, and ATTENDANCE
  - ▣ Decreased DEPRESSION and ANXIETY
- ▣ **Therapy animal and handler training/certification**
  - ▣ Ensures ethical treatment of therapy animals
- ▣ **When facilitating an AAI program consider:**
  - ▣ Risks and associated safety precautions
  - ▣ Benefits

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