

Addressing The Social Isolation & Loneliness Epidemic with The Power of Companion Animals



A Report by the Consortium on Social Isolation and Companion Animals

Foreword

Despite our increasingly-connected world, loneliness remains a severe public health problem – one that deserves as much attention as other major health issues, like obesity and smoking. Feeling disconnected or isolated from others is especially problematic for older adults, who may have retired or lost loved ones, and for people with mental health challenges, who often can experience difficulty establishing meaningful relationships.

As the family ambassador for Mars Petcare, I know how important connections with others are. The definition of “family” can take different forms, whether it’s a family business like Mars, a neighbor, a colleague or a beloved family pet.

Companion animals, in fact, play a unique role in our lives and can give people an immediate sense of belonging. I’ve met many people who have found greater connection to others through their pets, including one woman who suffers from an extreme form of ADHD and who is able to live a fulfilling, robust life thanks to her dog. Research shows non-pet-owners can also benefit from interacting with companion animals through equine therapy or interaction with certified therapy animals, among others.

Because the loneliness epidemic affects us all, we need to address it together, as a community. That’s why Mars Petcare partnered with the Human Animal Bond Research Institute (HABRI) to host the 2019 Summit on Social Isolation and Companion Animals, bringing together stakeholders in pet and human health, and human-animal interaction (HAI) to examine key questions about the role of animals in forging greater human connections.

The Summit and the surrounding conversation were both enlightening and extremely impactful. We’ve long known that animals can put a smile on people’s faces, but our work with the scientific research community continues to provide solid evidence on just how companion animals can help people feel more engaged with the world. Because of this promising research, we’re on the cusp of real change in society. Over the next few years, we’ll use these findings, as well as existing best practices, to usher in a wave of new opportunities to facilitate human-animal interactions and animal-assisted interventions for the people who need them most, such as older adults, those living with mental health challenges and anyone who can benefit from positive interaction with companion animals.

There’s great potential to revolutionize society’s approach to integrating companion animals into our everyday lives in new ways—and the role of ongoing research in this area is crucial. Let’s come together as scientists, practitioners and human beings to explore this new frontier and create a world where people and animals can better support each other. We’re all part of the same family.

Pamela Mars Wright

Abstract

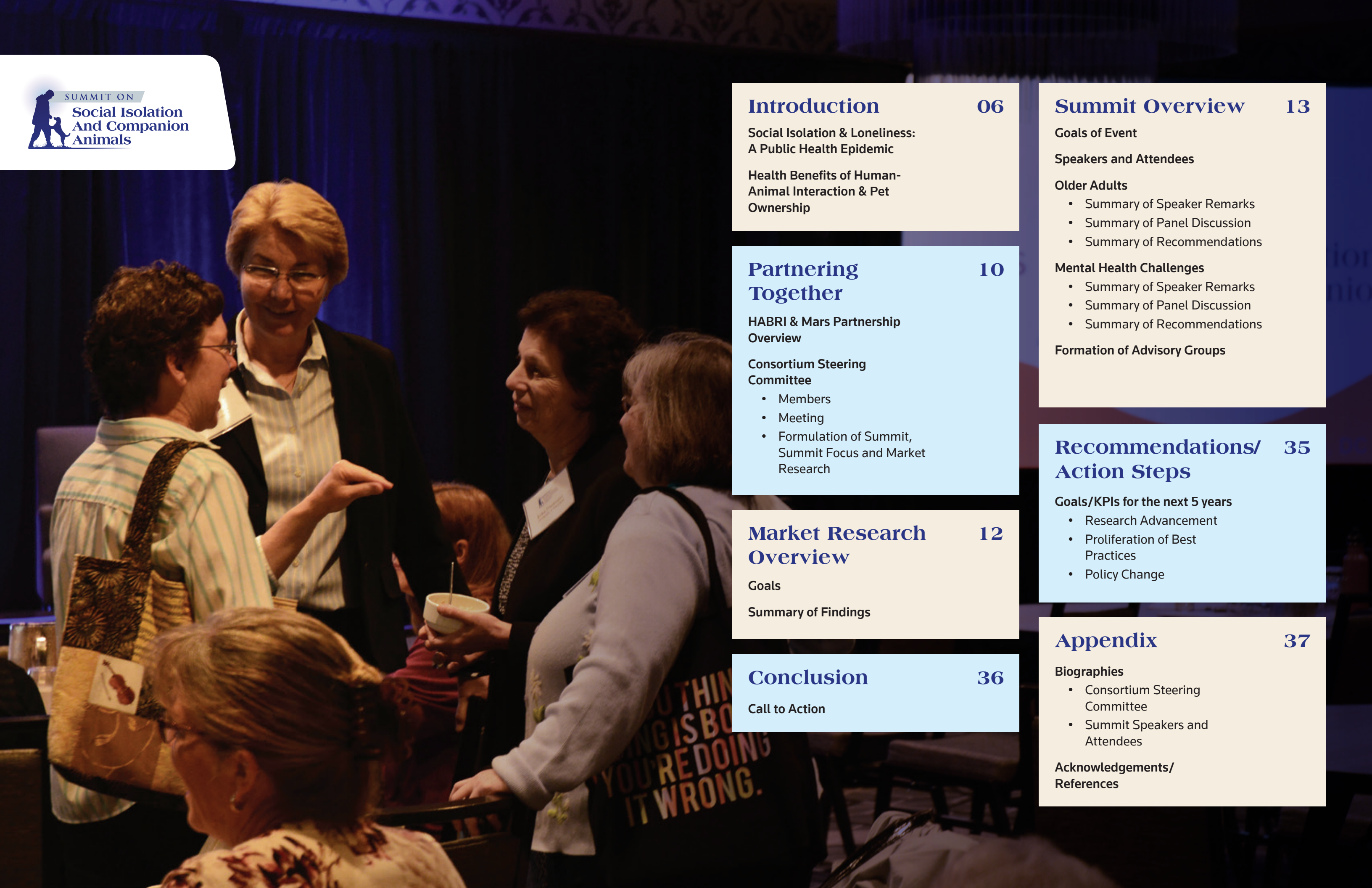
Background: Social isolation and loneliness are a growing public health epidemic, with a very real impact on physical health. In fact, loneliness has been shown to be as deadly as smoking 15 cigarettes per day, making it as much a health concern as obesity. Research increasingly reveals that companion animal ownership and human-animal interaction (HAI) can in some cases facilitate social interactions, decrease loneliness and reduce depression. Recognizing the potential of companion animals to make a difference on an important public health issue, HABRI and Mars Petcare convened experts in public health, research, psychology, gerontology, and veterinary medicine in Washington, D.C. for the first-ever Summit on Social Isolation and Companion Animals. This Summit explored the role that HAI and pet ownership may play in helping address loneliness and social isolation, with a focus on two distinct populations, older adults and people with mental health challenges.

Main Findings: Results from nationally representative market research commissioned by HABRI and Mars Petcare further reinforce the social bond between humans and pets. Specifically, 80% of pet owners say their pet makes them feel less lonely. When it comes to both pet owners and non-pet-owners, 85% of respondents believe interaction with a companion animal can help reduce loneliness and 76% agree human-animal interactions can help address social isolation. Further, pet owners with the closest bond to their pet see the highest positive impact on their feelings of loneliness and social isolation. Summit attendees discussed the challenges of social isolation, ways in which humans engage with animals and how that interaction may mitigate the experience of social isolation and loneliness, and potential hurdles to engagement with animals for this purpose. Existing research on the topic was also summarized as was the importance of research quality.

Future work: Over the coming years, HABRI and Mars Petcare will work to achieve a number of goals borne out of the discussion and recommendations from the May 7th Summit on Social Isolation and Companion Animals. These goals include:

- I. **Advance High-Quality, Human-Animal Interaction Research:** Advance research into human-animal interaction to help evaluate and quantify best practices, and glean better understanding for whom and under what circumstances interactions with companion animals may be effective for alleviating loneliness and social isolation.
- II. **Help to Address Barriers to Human-Animal Interaction and Provide Solutions:** Understanding that older adults and people with mental health challenges can face hurdles in realizing the benefits of pet ownership and/or HAI, identify solutions to remove barriers for pet ownership and/or animal-assisted interventions.
- III. **Share and Support the Proliferation of Best Practices:** Support and help advance best practices in HAI and for companion animal ownership that help prevent, reduce and mitigate social isolation and loneliness. Consider the best care and welfare for the animals involved, and ensure that animal-assisted interventions in hospitals, nursing homes and doctors’ offices are following the science and meeting the greatest need with the broadest possible impact.

Together, these three goals can help achieve real change in society. HABRI and Mars Petcare have established two working groups, one for each of the focus areas of the May 7th Summit. These working groups are comprised of the Consortium Steering Committee Members, Summit speakers and panelists, and various attendees of the Summit event. The working group members have been asked to provide input on this report, and they will be instrumental in helping to achieve the three main goals over the course of the next few years.



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Introduction

Social isolation and loneliness are a growing public health epidemic. Research increasingly reveals that companion animal ownership and human-animal interaction (HAI) can in some cases facilitate social interactions, decrease loneliness and reduce depression. Additionally, healthcare practitioners are continuing to incorporate companion animals as a complementary therapy for social isolation and related health conditions.

Recognizing the potential of companion animals to make a difference on an important public health issue, Mars Petcare and the Human Animal Bond Research Institute (HABRI) convened experts in public health, research, psychology, gerontology, and veterinary medicine in Washington, D.C. for the first-ever **Summit on Social Isolation and Companion Animals**. This Summit explored the role that HAI may play in helping address loneliness and social isolation, with a focus on two distinct populations, older adults and people with mental health challenges.

The goal of the Summit was to create a focal point for engaging experts and stakeholders in advancing scientific research, sharing best practices, and overcoming barriers to facilitate the properly managed and potentially vital role of HAI in addressing the crisis of social isolation and loneliness in society.

Social Isolation & Loneliness: A Public Health Epidemic

Social Isolation is defined as the absence of social interactions, contacts and relationships with family and friends, with neighbors on an individual level, and with “society at large” on a broader level. Social isolation denotes few social connections or interactions, whereas loneliness involves the subjective perception of isolation — the discrepancy between one’s desired and actual level of social connection.ⁱ Although objective social isolation can affect loneliness, perceived social isolation is more closely related to the quality rather than quantity of social interactions.ⁱⁱ

Most Americans are considered lonely



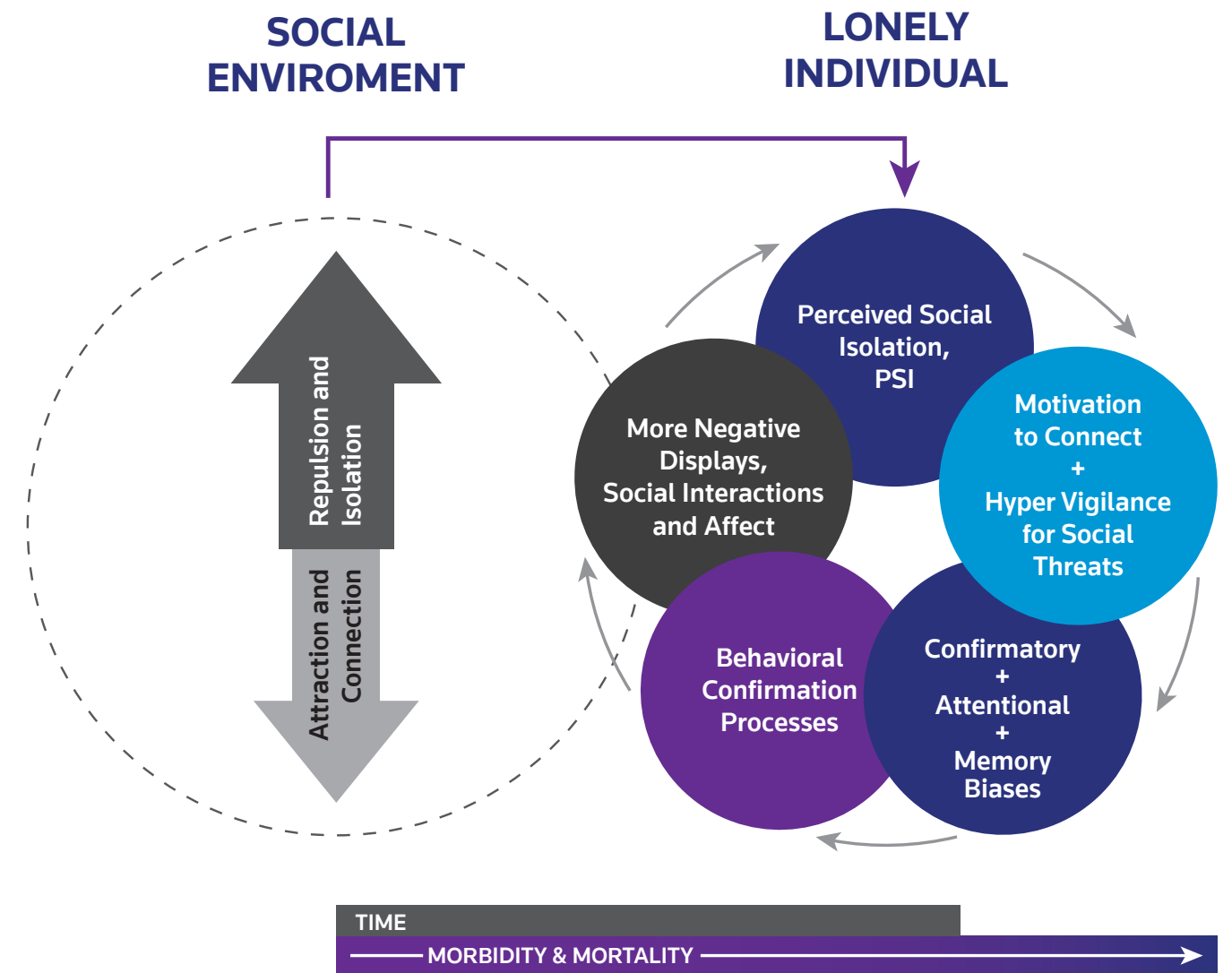
1 in 5 Americans rarely or never feel as though there are people that really understand them.

Loneliness measured by a score of 43 or higher on the UCLA Loneliness Scale

U.S. Loneliness Index Report, Cigna, 2014

Social Support, or “the resources provided by other persons”, includes emotional, social, physical, financial and other types of care. The absence or weakness of the social support network forms the basis for identifying individuals who are socially isolated.

Loneliness is a challenge across the age spectrum and is well-recognized as being prevalent among older adults. Research has shown that loneliness or social isolation can adversely impact physical health. Health risks associated with social isolation have been compared in magnitude to the dangers of smoking cigarettes and obesity.ⁱⁱⁱ Loneliness also is associated with depression, cardiovascular disease, cognitive decline, declines in mobility and daily function, and increased risk of early death.^{iv}



The effects of loneliness on social cognition. Modified from J.T. Cacioppo and Hawkey (2009)
 Feeling socially isolated can trigger implicit hypervigilance for social threats, which in turn produces attentional, confirmatory, and memorial biases.

The Adverse Health Impacts of Social Isolation and Loneliness

- ✓ According to the AARP Foundation, social isolation affects more than **8 million** age 50-plus adults and is growing as **10,000** Americans a day turn 65.
- ✓ **Approximately 1/3 of Americans older than 65 live alone, and half of those over 85 do.**^v
- ✓ According to a recent study by the National Council on Aging, an estimated **17%** of all Americans over the age of 65 are isolated because they live alone and face one or more barriers to social connection related to geographic location, language, or disability.
- ✓ People with poorer health – particularly those with mood disorders like anxiety and depression – are more likely to feel lonely.^{vi}
- ✓ **Loneliness is a major risk factor for depression,** which accelerates decline and increases mortality.^{vii}
The strength of social isolation as a predictor of mortality is similar to that of well-documented clinical risk factors, such as smoking and high blood pressure.^{viii}
- ✓ Loneliness can impair health by raising levels of stress hormones and inflammation, which in turn can **increase the risk of heart disease, arthritis, Type 2 diabetes, dementia and even suicide attempts.**^x
- ✓ Individuals who lack social connections or report frequent feelings of loneliness tend to suffer **higher rates of morbidity and mortality, as well as infection, depression, and cognitive decline.**
- ✓ One recent study found that isolation **increases the risk of heart disease by 29% and stroke by 32%.**^{xi}
- ✓ Social relationships – both quantity and quality – affect mental and physical health. Adults who are more socially connected are healthier and live longer than their more isolated peers.^{xii}

Research indicates that loneliness is a risk factor for, and may contribute to, **poorer overall cognitive performance, faster cognitive decline, poorer executive functioning, increased negativity and depressive cognition, heightened sensitivity to social threats,** a confirmatory bias in social cognition that is self-protective and paradoxically self-defeating.^{ix}

According to a 2018 Cigna survey^{xiii} of more than 20,000 U.S. adults aged 18 years and older:

- ✓ **Nearly half of Americans report sometimes or always feeling alone (46%) or left out (47%).**
- ✓ Two in five Americans sometimes or always feel that their relationships are not meaningful (43%) and that they are isolated from others (43%).
- ✓ **One in five people report they rarely or never feel close to people (20%) or feel like there are people they can talk to (18%).**
- ✓ Only around half of Americans (53%) have meaningful in-person social interactions on a daily basis.
- ✓ **Generation Z (adults ages 18-22) is the loneliest generation and claims to be in worse health than older generations.**

Health Benefits of Human-Animal Interaction & Pet Ownership

Science tells us that when people have a pet, they tend to get more exercise, report less loneliness and stress, and have stronger social ties. Research undertaken by many academic institutions and research organizations, including HABRI and Mars Petcare (including via the NIH and Mars Petcare public-private partnership), has made significant progress in explaining the ways that HAI can play a helpful role in human health and wellness.

For example, studies have shown that pet owners are less likely to be obese,^{xiv} more likely to meet physical activity guidelines,^{xv} have a reduced risk of heart disease,^{xvi} and are more likely to be socially connected than non-pet owners.^{xvii} A recent literature review of 17 studies found that pets may provide benefits for those with mental health problems, including providing a welcome distraction from stresses of managing a mental health condition.^{xviii} For children, pets can teach important life lessons, as one study found a strong association between pet attachment and caring behavior.^{xix}

A growing body of research has demonstrated the link between companion animals and increased social support, reduced loneliness, and decreased social isolation.

For example, research demonstrates:

- ✓ **People with low social support systems are likely to benefit from pets**^{xxvi}
- ✓ **Pets fulfill a need to confide in or talk with someone trusted**^{xxvii}
- ✓ **There is a significant link between interacting with companion animals and the development of social awareness, relationship skills and other skills that improve the ability to interact successfully with others**^{xxviii}
- ✓ **Pet owners report that they have gotten to know people in their neighborhood and made friends through their companion animals**^{xxix}

A detailed summary of the research findings is discussed in Dr. Nancy Gee’s presentation, summarized on page 18 of this report.

Although the growing body of HAI research indicates that pets can positively impact mental and physical health, there are some research findings that are inconclusive or that indicate that pet ownership may be associated with poorer health outcomes. As with any evolving scientific pursuit, there is still much to be established. We need to learn more about when, where, and how pets can be beneficial. To accomplish this we need to understand the core of the human-animal bond. Of paramount importance for all HAI and HAI research is a focus on animal care and welfare. The AVMA defines the human-animal bond as a “mutually-beneficial relationship” and therefore meeting the physical, social, and veterinary care needs of animals involved in HAI is essential. Both HABRI and Mars Petcare are strongly committed to this imperative in all research they fund and in general.



Partnering Together

Convening Experts and Stakeholders to Explore Social Isolation and Whether Companion Animals can Help

The Human Animal Bond Research Institute (HABRI) and Mars Petcare, with their mutual commitment to the study of HAI as an important factor in human health and wellness, partnered to:

1. **Examine the role of pets or companion animals in helping to prevent, mitigate and/or alleviate social isolation experienced across the age spectrum;**
2. **Identify actionable ways to facilitate this role for pets in society, including ensuring scientific rigor for HAI science and ensuring the welfare of any animals involved. Stakeholders include those who experience and treat social isolation as well as professionals who encounter it in their work (e.g. healthcare providers, teachers, those who work with older people); and**
3. **Demonstrate the commitment of both organizations to supporting pet owners and strengthening the human-animal bond.**



About The Human Animal Bond Research Institute (HABRI)

HABRI is a not-for-profit organization that maintains the world's largest online library of human-animal bond research and information; funds innovative research projects to scientifically document the health benefits of companion animals; and informs the public about human-animal bond research and the beneficial role of companion animals in society.



About Mars Petcare

Part of Mars, Incorporated, a family-owned business with more than a century of history making diverse products and offering services for people and the pets people love, the 85,000 Associates in Mars Petcare are dedicated to one purpose: A BETTER WORLD FOR PETS. To fulfill this purpose, we believe in and support high quality science that will help us understand the best ways to put pets and people together so that both can safely benefit from the relationship.

September 2018 Consortium Steering Committee Meeting

On September 5, 2018, HABRI and Mars Petcare co-hosted an initial steering committee meeting for a new consortium on social isolation and pets/companion animals. The consortium was intended to bring together practitioners from the fields of human and animal health and researchers to advance science that would inform practical solutions. Leaders from diverse fields made up the steering committee and convened to discuss how pets/companion animals can play a role in mitigating social isolation and loneliness.

The Consortium participants were asked to address **four elements** or **key questions**:

1

Identify the **potential** of HAI for addressing social isolation in people of any age;

2

Articulate key research **questions** in need of study;

3

Identify **hurdles** that people vulnerable to social isolation and society face in realizing potential benefits; and

4

Propose best practices and practical **solutions** to address the identified hurdles.

The group discussed the challenges of social isolation, ways in which humans engage with animals and how that interaction may mitigate the experience of social isolation and loneliness, and potential hurdles to engagement with animals for this purpose. Existing research on the topic was summarized as was the importance of research quality.

Steering committee members identified questions practitioners have that could be informed by scientific research and envisioned ideal studies that would address these questions. The group identified potential funding sources for research and discussed opportunities for further collaboration. There was support for hosting a forum for diverse stakeholders to examine the role HAI could play in helping address social isolation. That forum took the shape of the Summit on Social Isolation and Companion Animals.

Market Research Overview

In conducting U.S. market research, HABRI and Mars Petcare aimed to establish a common ground of understanding among key stakeholders and inform their views and perceptions of the role of HAI may play in alleviating social isolation. Specifically, the research was designed to help shed light on the role of pets in people's lives, how people perceive their companion animals, and, most importantly, whether pet owners believe their pets help alleviate loneliness and social isolation.

Results from this nationally representative market research are consistent with observations about the importance of the social bond between humans and pets. Of those surveyed, 80 percent of pet owners say their pet makes them feel less lonely. When it comes to both pet owners and non-pet-owners, 85 percent of respondents believe interaction with a companion animal can help reduce loneliness and 76 percent agree human-animal interactions can help address social isolation. Further, pet owners with the closest bond to their pet see the highest positive impact on their feelings of loneliness and social isolation. To summarize, key findings from the market research include:

Around one in four (**26 percent**) pet owners stated they got a pet because they know it is good for mental health – with respondents aged 55+ doing so more frequently (**55 percent**).

54 percent of respondents say their pet helps them connect with other people.

Half of respondents (**51 percent**) say their pet helps them feel less shy.

9 in 10 people aged 55+ believe pets can help older adults feel less lonely.

To maximize these benefits, many people feel society needs to encourage acceptance and expand access for pets/companion animals. The HABRI-Mars Petcare survey shows people believe government – both state (41 percent) and federal (38 percent) – have a degree of responsibility to foster human-animal interaction. Additionally, three-quarters (73 percent) of those surveyed believe nursing homes and assisted-living facilities have a degree of responsibility to foster pet interaction. Many experts feel this represents an opportunity for new, innovative partnerships that harness the power of pets to improve society.

About the Market Research

The market research, conducted by Edelman Intelligence on behalf of HABRI and Mars Petcare, was a nationally representative, 30-minute online questionnaire conducted in the US to explore the role pets and human-animal interaction can play in addressing social isolation and loneliness. The questionnaire was conducted among 2,036 respondents, including 1,469 pet owners (72 percent). The UCLA Loneliness Index and the Monash Dog Owner Relationship Scale (MDORS) were used within the analysis to explore key themes. Data was tested at a 95 percent confidence interval.

Summit Overview

The Consortium identified the main goals for the Summit, as follows:

- ✓ **Engage experts and stakeholders in establishing the role of pets and companion animals in helping to prevent, mitigate and/or alleviate social isolation experienced across the age spectrum;**
- ✓ **Articulate key questions that should be studied to further understand and validate the benefits of pets in this role;**
- ✓ **Identify hurdles that people vulnerable to social isolation and society in general face in realizing the benefits of HAI; and**
- ✓ **Propose best practices and practical solutions to address the identified hurdles.**



Dr. Vivek Murthy, 19th Surgeon General of the United States

Dr. Murthy sat down with Steven Feldman, Executive Director of HABRI, to discuss his experience with social isolation and loneliness among patients and the general public as both a medical doctor and during his post as the 19th Surgeon General of the U.S. Dr. Murthy recalled visiting India for the first time as a child, where tremendous poverty was pervasive among the general population, and where many animals were also struggling to survive. It was difficult to see both the humans and animals suffering. Dr. Murthy noted that the marker of a society that lives up to its values is how its animals are treated.

In his experience as a medical doctor, on the individual patient level, Dr. Murthy noted that one-fifth of American adults struggle with loneliness, a figure that surpasses the number of people that have diabetes or that smoke cigarettes. The need for a greater connection to other people is clear. Unfortunately, this lack of connection often leads to behaviors that exacerbate the problem of loneliness, creating a vicious cycle for people who are experiencing loneliness. Social values have contributed to the growing public health crisis of loneliness and social isolation over time. In Dr. Murthy's observation, today people prioritize their work, reputation and wealth over their personal relationships. Interpersonal relationships fit into the equation almost as an afterthought.

When asked about how loneliness became a public health priority, Dr. Murthy explained that he realized how common loneliness is and the consequences of loneliness for health factors that impact quality of life and longevity. Research has equated loneliness to smoking fifteen cigarettes a day. It also impacts productivity, creativity and memory. When kids struggle with loneliness, their academic performance and social behaviors worsen. Consequences of loneliness can be seen in the form of bullying, gun violence, gang activity, political rancor; the list goes on. Dr. Murthy put loneliness in the context of other major issues with which society is dealing and suggested that loneliness has the potential to be a core defining issue of our time.

From climate change to access to healthcare, to the education system, the way that humans think about or perceive these big issues is impacted by their emotional state. The individual reaction to loneliness is hypervigilance – turning inward and becoming more aware of the threats around you. Today, this hypervigilance translates to people interpreting outreach as vulnerability. This all effects our public dialogue, and how we talk about these big issues. For Dr. Murthy as Surgeon General of the U.S., loneliness became 'THE' issue for these reasons.

Most of Dr. Murthy's remarks focused on potential solutions to loneliness in society. He stated that the solution to loneliness lies in each of us, and also talked about some great programs and organizations he encountered as Surgeon General that he believes are helping to address the problem. The core of the solution is choice, what we choose to be centered around. If we work to create a more people-centered world, foster connections and enhance the role of personal connection and love in our lives, then we can create a society focused on connection instead of forgoing connection for things like work, reputation and money.

Dr. Murthy touched on his knowledge of the health benefits of pet ownership, including the associations between pet ownership and heart health, physical activity, and the sense of purpose that pets can provide. He also discussed the many ways in which interaction with companion animals is integrated into our society, including workplaces, schools, hospitals, prisons and more, and referenced these interactions as a meaningful way to spark connection that helps to combat loneliness and social isolation.

"As somebody who grew up with pets, I have experienced firsthand just how powerful a pet can be in someone's life. Pets can be an incredible source of emotional support, of unconditional love, and of healing. And at a time where we are struggling with issues like loneliness, but also when we see so many people in our country who are struggling with the emotional pain that often comes with hardship, with poverty, with so many other difficult experiences, I think it's important for us to ask, where does the healing come from? I think it's important not just to think about benefits of pet ownership, but also to ask, how can we make interaction with pets more broadly, even if I don't own pets, how can we make interaction with pets more feasible? I would love for my kids, for example, to be able to interact with pets in school, in their community at large, and I think that the more people interact with pets, I think it softens them. It lowers our stress levels, and it allows us to connect in a way that I think is complementary to our connections with people."

Dr. Vivek Murthy

19th Surgeon General of the United States

Further, pets can teach us important lessons about love. The opposite of love is fear. Most agree that there is too much fear in the world right now. Fear manifests as anger, jealousy and rage. Fear that we don't matter, that we are not safe, that we don't belong. Fear has gained momentum and pervades society. Pessimism is a result of being paralyzed by fear. Love enables us to reach out and take risks and help others and be compassionate and generous.

Addressing the public health crisis of loneliness isn't about transforming lonely people but returning us to who we are. It is about reprioritizing our roots. Animals help answer that question of 'do I matter?' They see us for who we really are and remind us we are loveable and worthy of compassion and affection. That support is essential. We need someone to lift us up. Sometimes that someone can be an animal.

Dr. Murthy concluded his remarks stating that he is hopeful that we can all build a more compassionate and connected society.



HAI Research Around Social Isolation & Loneliness

HAI Research and the NICHD-Mars/WALTHAM Public-Private Partnership

Layla Esposito, PhD

Dr. Layla Esposito, who serves as Program Director in the Child Development and Behavior (CDB) Branch at NICHD, provided an overview of the Public – Private Partnership (PPP) between the U.S. National Institutes of Health (NIH) Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) and the Mars Corporation’s WALTHAM Centre for Pet Nutrition.

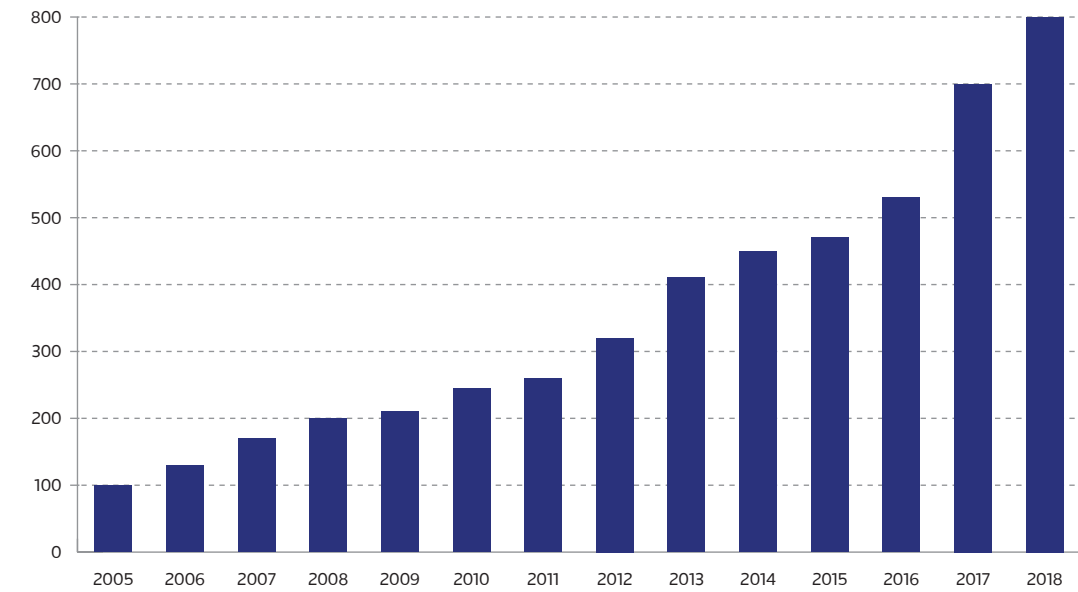
Beginning in 2008, the NICHD-Mars/WALTHAM Public-Private Partnership set out to explore the scientific evidence base and promote research in the field of HAI. Specific areas of interest include the impact of HAI on typical and atypical child development and health, the evaluation of animal-assisted interventions for children and adults with disabilities or in need of rehabilitative services, and the effects of animals on public health, including the cost effectiveness of involving animals in reducing and preventing disease.

Joint activities of the partnership include co-funding research grants, publishing books and journal special issues, hosting workshops, conference panels and consortium meetings for funded researchers, and developing HAI resources. Partnership workshops have focused on directions in HAI research, the role of pets in socio-emotional and bio-behavioral development of children, the social neuroscience of HAIs, and animal-assisted interventions in special populations.

Since 2008, the partnership has resulted in nearly 40 NIH grants in HAI research in the form of R03s, R21s and R01s. The partnership has helped support growth and progress in the field of HAI research, including significantly improved rigor in methodology and design in research studies and the expansion in the breadth of topics under investigation, moving beyond correlation to mechanisms. The partnership has also helped foster an increase in the quality of peer-reviewed publications in a diverse range of journals and new HAI journals including the Human-Animal Interaction Bulletin and the HAI focal area of the Journal of Applied Developmental Science.

Further testament to the growth and progress of the field of HAI research over the past decade, at least seven new centers of excellence at academic institutions have been established, including the Tufts Institute for Human-Animal Interaction, Human-Animal Interaction Research Initiative at The University of Arizona, and the Center for Animal and Human Relationships at Virginia Tech. The amount of research funding available has also increased, with the establishment of HABRI and additional streams of funding from NIH, Mars/WALTHAM, Horses & Humans Foundation, and more. The field of HAI has also seen a rise in recognition at scientific conferences including the American Psychological Association (APA) and the Society for Research in Child Development (SRCD).

“Human-Animal Interaction” Exact Phrase Search by Year on Google Scholar



Even the amount of Google Scholar searches for “Human-Animal Interaction” has seen a substantial increase in recent years.

Human-Animal Interaction (HAI) Research: A Decade of Progress



The Overview paper features a series of articles that highlights the 10-year Public – Private Partnership (PPP) between the U.S. National Institutes of Health (NIH) Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) and the Mars Corporation’s WALTHAM Centre for Pet Nutrition, and provides a broad overview of the research supported by the partnership over the past decade.

The workshops, research solicitations, and resulting research and publications over the past 10 years have moved the field toward the use of more rigorous designs and methods, raising the bar for research in HAI. The field has been more widely recognized, addressing not only interactions with pets and the social-emotional benefits generally, but also potential mechanisms for those quantifiable effects, as well as intervention studies including randomized controlled trials. There has been an increased focus on the health benefits of interaction with animals, and increased attention to the effects of HAI on not only the humans but also the animals involved, who also may suffer stress.

Loneliness – The Potential for Pets

Nancy R. Gee, PhD

Dr. Nancy Gee, WALTHAM Human-Animal Interaction Research Manager and Professor of Psychology at the State University of New York, Fredonia, provided an overview of HAI research with a focus on loneliness and social isolation.

Grounded in attachment theory, researchers have pointed out that pets can fulfill our human need to connect with attachment figures by fulfilling the four roles of an attachment figure;^{xxx} companion animals are 1) enjoyable, 2) comforting, 3) missed when absent and 4) sought in times of distress.^{xxxi} Research shows that people report turning to their pets for love and support, and that adolescents even derive more satisfaction from, and engage in less conflict with, their pets than their siblings.^{xxxii}

Pets also fulfill our need to confide in someone or talk with someone we can trust. With pets, unlike people, there is an additional benefit of not needing to worry about confidentiality, reprisals, judgments or meeting expectations.^{xxxiii} Furthermore, children on the autism spectrum show increased social interaction and skills such as more talking, smiling and laughing with others,^{xxxiv} less solitary play and more engagement with peers after interacting with animals.^{xxxv}

Science also supports a significant link between interacting with animals and the development of self-awareness, social awareness, self-management, relationship skills, and the ability to read non-verbal cues such as facial expressions and body language, skills that improve our ability to interact with others successfully.^{xxxvi}

Pets can play a role as social “icebreakers.” Several studies have found that people will “risk directly engaging” with unfamiliar people when there is a pet present.^{xxxvii} In neighborhoods and communities, pets also serve as valuable social capital, because they can precipitate the exchange of favors,^{xxxviii} and encourage civic engagement. Additionally, research shows that pet owners are more likely to agree that people can be trusted, that they have gotten to know people and made friends through their companion animals, and that their pets help them get out in the community, because for example, dogs motivate people to go on a walk.^{xxxix, xl}

Dr. Gee continued the presentation with a discussion of a systematic review and evaluation of existing research^{xli} on the topics of human-animal interaction and physical health and exercise, depression and anxiety, and loneliness and social functioning in older adults.

Of the studies included in the review, the less robust studies reported that pet attachment was associated with reduced loneliness in older adults, mediated the relationship between loneliness and health, and was viewed as a coping resource for loneliness.

Most of the higher quality studies reported mixed results indicating no positive effect of pet ownership. However, one study found that individuals over 60 who lived alone reported their pets as particularly effective in attenuating loneliness and another found that higher levels of pet attachment related to less loneliness.

“We know pets improve our lives in many ways – including providing companionship and bringing people together. It’s our hope that one day evidence-based methods (of AAI) can become common practice in schools, hospitals and other therapy settings. Driven by science, we hope to enable and encourage experts who work with people facing loneliness and social isolation to consider facilitating animal interaction as a way to help address the issue.”

Dr. Nancy Gee, PhD

Professor of Psychiatry & Director, Center for Human-Animal Interaction
School of Medicine, Virginia Commonwealth University, USA

Findings for animal-assisted interactions (AAI) provide solid evidence supporting the positive impacts of pets in reducing loneliness and social isolation. This portion of the review examined 32 studies, most of which reported positive effects of AAI on loneliness, social behaviors or social interactions.

Dr. Gee also discussed studies related to the impacts of pet ownership and HAI on mental health in older adults. Again, findings related to pet ownership showed mixed results. One study found that older bereaved adults who owned a pet experienced less depression following their loss. Other studies have found no relationship and one study found that pet owners were twice as likely to have suffered from depression at some point in their lives. Dr. Gee pointed out that it is possible that the association with depression may be due to people self-medicating for depression by acquiring a pet.

This review found the results for AAI to have a more consistent positive effect on mental health in older adults than those studies examining the impacts of pet ownership. In one gold standard study using standardized measures where participants were randomly assigned to treatment conditions, those in the AAI condition saw reductions in depression and improvement in measures of cognition.

The majority of the studies reviewed in Dr. Gee’s analysis link AAI to decreases in depression in older adults. Findings from a different randomized controlled trial demonstrated clear reductions in depression and improvement in measures of cognition for older adults who participated in an animal-assisted intervention.^{xlii, xliii, xliv}

A common theme found in the literature is that AAIs have promise as a complementary or adjunct treatment for many mental health issues. Although pet ownership is likely to positively impact mental health issues, the research results at this point are not as clear.

Future research on pet ownership should focus on pet interaction or involvement, rather than the blunt binary measure of pet ownership which isn’t sensitive to the quality of the relationship between the pet and the person. Pet ownership also subject to selection bias (people like to pick their own pets), and does not provide important and needed detail on the nature of the relationship. While many unanswered questions remain, the future of the field of HAI is bright, and we have an encouraging foundation of evidence on which to build.



Older Adults, Loneliness, Social Isolation and Companion Animals

The Impact of Social Isolation and Loneliness Among Older Adults: Implications and Promising Interventions

Chelsea Gilchrist, MGS, National Council on Aging

The Summit section on Older Adults, Loneliness, Social Isolation and Companion Animals began with an overview of the impact of social isolation and loneliness on older adults. Led by gerontologist and steering committee member Chelsea Gilchrist from the National Council on Aging (NCOA). Ms. Gilchrist provided a broad understanding of the pervasiveness of loneliness and social isolation within the population of adults aged 60 and over. She particularly focused on factors that increase the risk of social isolation and loneliness, as well as resulting health and financial implications. Ms. Gilchrist shared promising evidence-based practices and interventions.

The number of Americans age 65 and older is projected to nearly double from 49 million in 2016 to 95 million in 2060.^{xlviii} Loneliness, the perceived feeling of lacking companionship or being isolated, is a growing public health epidemic for older Americans.^{xlv} An estimated 43% of adults age 60 and older report feeling lonely some of the time. Of this population, 32% lack companionship, 25% feel left out [excluded from activities], and 18% feel socially isolated.¹ Older adults who report feeling lonely are more likely to be female (67%), live alone (27%), and have a chronic disease such as hypertension (56%) or diabetes (19%).^{xlv}

Loneliness and social isolation can significantly impair an older adult's health, independence, and overall quality of life. Adverse health outcomes include decreased mobility, increased risk for heart disease, cognitive decline, and depression. Research shows that poor social connections and isolation are also associated with increased risk for early mortality.¹

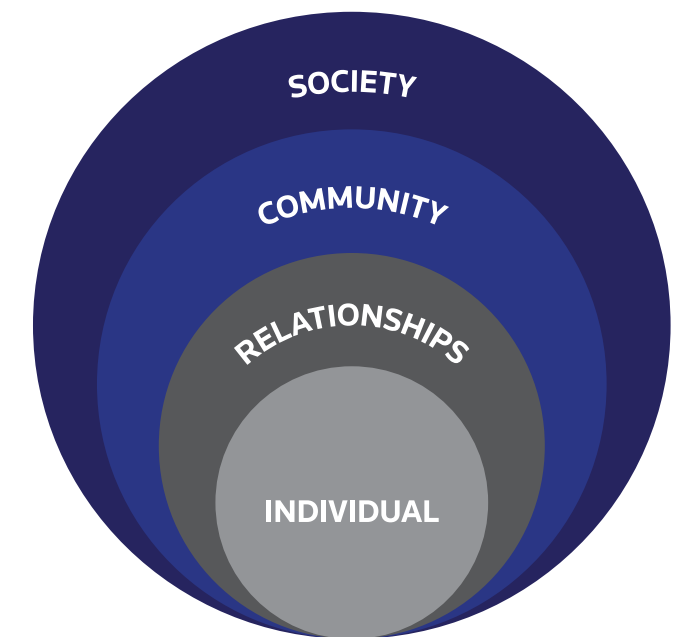
Lack of social connections among older adults has financial implications as well. According to a 2017 AARP study of Medicare beneficiaries, social isolation is associated with \$6.7 billion in additional Medicare spending annually. The cost of social isolation to Medicare is comparable to that of some chronic conditions, such as high blood pressure and arthritis.^{xlix}

An interplay of factors between the individual, their relationships, the community, and society can lead to social isolation or loneliness, as demonstrated by the Social Ecological Model of Health (see figure below). At the individual level, factors that increase an individual's chance of loneliness or isolation include living alone, limited financial resources, mobility impairment, and experiencing a major life transition such as losing a partner or peers. Relationship factors, such as the size and quality of social network and frequency of contact with friends, community factors, such as access to public transportation and accessible environments, and societal factors like ageism and discrimination can also impact social connectedness.

Effective interventions that address social isolation and loneliness are typically adaptable to individual needs and community structure, involve the participant in the planning and execution of activities, and focus on productive engagement as opposed to passive activities. A 2018 integrative review of interventions to reduce social isolation and loneliness identified six core categories of intervention, including:

- ✔ **Social facilitation interventions that support social interaction with peers;**
- ✔ **Psychological therapies that are delivered by trained therapists or health professionals;**
- ✔ **The provision of health and social care, which involve health and social care professionals and enrollment in a formal program of care;**
- ✔ **Animal interventions, including animal-assisted therapy;**
- ✔ **Befriending interventions, which help to formulate new friendships, typically involving volunteers;**
- ✔ **Leisure/skill development, where the participant(s) learn skills such as gardening, computer/internet use, volunteer work and sports.**

- (Gardiner et al., 2018)



Framework for Addressing Social Connectedness: Social-Ecological Model

"I am really passionate about finding ways to reach older adults that are home bound, that have limited mobility and access to engage in their communities, and how we can work through systems that are already in place in the field of aging...to incorporate human and animal interaction programs...to provide that kind of companionship and connection."

Chelsea Gilchrist
MGS, National Council on Aging

Research has explored a variety of ways to deliver interventions, more commonly implemented in community-based settings as opposed to institutionalized settings. Group-based interventions gather older adults around a common interest and can include social, educational, or physical activity components, or group discussions; interventions that involve active input from participants rather than them simply being recipients of a service are most effective. One on one individual interventions usually involve the pairing of an individual with a professional or volunteer who regularly contact each other, such as a friendly visitor with a trained therapeutic pet. Technology interventions, such as robotic cats and dogs, and neighborhood interventions, such as age-friendly communities, have showed promise as well.

While continuing to explore best practices for preventing and alleviating loneliness and isolation among older adults, researchers should consider initiatives that incorporate positive interactions with animals. Such efforts might include animal-assisted therapy, volunteer work at animal shelters, or support in caring for existing—or even new—pets. Future directions should focus on identifying and evaluating the impact of human-animal interventions on social isolation and loneliness, advancing evidence-based strategies and programs, and increasing public awareness about risk factors, assessments, and solutions.

The National Council on Aging (NCOA) is a respected national leader and trusted partner to help people aged 60+ navigate aging. It provides real-life solutions online and in the community that empower older adults to find benefits programs to pay for daily needs, make the most of their Medicare coverage, prevent falls, manage chronic conditions, and stay active and engaged in their communities. Formed in 1950, NCOA's goal is to improve the health and economic security of 10 million older adults by 2020. Learn more at ncoa.org and [@NCOAging](https://www.instagram.com/NCOAging).



Examples of Effective Animal Programming for Older Adults

Mary Margaret Callahan, Pet Partners

In her talk, *Mitigating Social Isolation through Therapy Animal Visits*, Mary Margaret Callahan of Pet Partners discussed the benefits of therapy animal interaction for older adults, and important considerations and best practices for therapy animal visitation for older adults. Pet Partners is the leading volunteer-based, therapy animal organization in the United States.

There are a variety of reported benefits when older adults are visited by therapy animal teams, regardless of whether those interactions are active or passive. Ms. Callahan referenced Dr. Murthy's comments about the value of walking to promote physical activity. Through the Walk With Me™ program, therapy animal teams go out with clients on walks to encourage walking for health as a community.

In addition to physical benefits, receiving a visit from a Pet Partners therapy animal team can help with social interaction. The clients get to interact with the handler-animal team and oftentimes the animals help spark conversation between residents and staff even after the Pet Partners teams have left. While petting animals is the most common form of interaction, engagement without touching the animals is possible. For example, the ability to decline an interaction with a therapy animal is powerful for those who do not have a lot of choice in their daily life.

Pet Partners prioritizes providing safe and effective visits through handler training and assessment, a focus on animal welfare, and emphasizing clear safety standards. Steps should be taken to ensure safe and effective interaction. Pet Partners is responsible for an average of 3 million visits and nine different species of therapy animals across the United States and internationally.

Handler training addresses their responsibilities, best practices for pet handling, professional conduct, infection prevention, best practices for working with clients, self-care, and continuing education. The handler is responsible for asking if clients want a visit from the therapy animal, as well as reading and responding to the body language of the animal. They are also expected to evaluate the setting to make sure that it is right for the animal. Handlers take a canine body language course and must be able to recognize the body language of the therapy animal to ensure safety and welfare of both human client and therapy animal.

Handlers are assessed on factual and applied knowledge best practices. Teams complete a practical assessment of skills and aptitude that demonstrates their ability to interact safely and effectively.

Animal welfare is of utmost priority for Pet Partners. Their philosophy is that animals should enjoy, not simply tolerate, therapy work, as we are asking animals to participate.

Pet Partners safety standards include handler and animal health requirements, rabies vaccinations, a prohibition on raw meat diets, hand hygiene, grooming, insurance coverage and incident management. Risk management and animal welfare are closely tied. When animal welfare is emphasized, pets are less likely to behave undesirably due to stress, fatigue, or fear. Pet Partners handlers are their animal's best advocate. An interaction should be modified or ended if it becomes no longer enjoyable for the animal. This is a primary tenant of Pet Partners.

Another key consideration is finding the right fit. Animals of any size who are calm and controlled in their interactions are best suited for animal-assisted interventions with older adults. Handlers who, for example, enjoy conversations with older adults will enhance the interactions and the benefits experienced by the older adult clients. Lastly, many Pet Partners handler volunteers are older adults, and enjoy and benefit from their work just as much as the recipients.



Pet Partners, formerly known as the Delta Society, is the national leader in demonstrating and promoting the health and wellness benefits of animal-assisted therapy, activities, and education. Since the organization's inception in 1977, the science proving these benefits has become indisputable. With more than 13,000 registered teams making more than 3 million visits annually, Pet Partners serves as the most prestigious nonprofit registering handlers of multiple species as volunteer teams. Pet Partners teams visit with patients in recovery, people with intellectual disabilities, seniors living with Alzheimer's, students, veterans with PTSD, and those approaching end of life, improving human health and well-being through the human-animal bond. With the recent release of its Standards of Practice for Animal-Assisted Interventions and international expansion, Pet Partners is globally recognized as the industry gold standard. For more information on Pet Partners, visit www.petpartners.org.

Summary of Panel Discussion

The **Older Adults, Social Isolation and the Role of Companion Animals** Panel consisted of Erika Friedman, Molly McAllister, Chelsea Gilchrist, Dawn Carr, and Mary Margaret Callahan. The Panel was moderated by Nancy Gee.

The panel discussed research regarding companion animals reducing social isolation and loneliness among older adults and identified topics in need of additional research-based evidence. Recognizing that not all older adults who might benefit from interactions with companion animals have that opportunity, the panel explored potential barriers older adults face that hinder or prevent them from interacting with companion animals and identified possible solutions to those barriers. Finally, the panel provided a robust set of suggested best practices that they believe should be included for all programming related to human-animal interaction for older adults. A summary of the recommendations are provided on the next page.

Summary of Recommendations

Advancing Research on Older Adults and Companion Animals

HIGH QUALITY RESEARCH

- Standardized measures that are well-validated
- Comparing research so that small efforts can create a rich resource for others
- Well-designed research with comparison groups and adequate sample sizes
- Research focused on specific outcomes
- Measure more than just presence of the companion animal – more specificity about the relationship or interaction
- Longitudinal studies are needed to understand the real value of pets to healthy aging

RESEARCH QUESTIONS

- Examination of ‘pet ownership’ as a yes/no question is too general to be of significant value and should be framed to examine different variables and interactions, such as extent and kind of regular interaction, length of relationship with pet, and contact with other people’s pets
- How HAI impacts major transitions or events in the lives of older adults
- How HAI can help shape the experience of retirement or the death of a spouse and the aftermath of that death.

AFTER THE RESEARCH

- Step-by-step instructions are important as a means of moving the research from the study into the community and improving lives.

Barriers to Companion Animal Interaction for Older Adults

IDENTIFYING BARRIERS

Common barriers related to pet ownership include:

- Finances
- Physical ability to meet the pet’s needs
- Restrictions imposed by the older adult’s living arrangement

ADDRESSING BARRIERS

- Educate older adults and caretakers about responsible pet ownership and welfare standards for animal assisted interventions
 - Advance understanding of measures of pet well-being and behavior (stress is no longer a good measure)
- Talk budget, future plans and health with older adults interested in getting a pet
- Help ensure the ‘right fit’
 - When is a pet the right choice?
 - What is appropriate for the person’s lifestyle, health, etc.
 - Have basic discussions with caregivers and/or older adults about exercise needs, financial resources needed to adequately care for the pet
- Create policies for older adults looking to own a pet
- Educate and provide resources on how to re-home a pet safely when one can no longer care for that pet
- Raise awareness of existing programs that enable older adults to interact with pets without having the responsibilities involved with owning a pet, i.e. fostering, therapy animal visits, volunteer opportunities, AAI can be a viable option in place of pet ownership etc.

Supporting Best Practices for Human-Animal Interactions with Older Adults

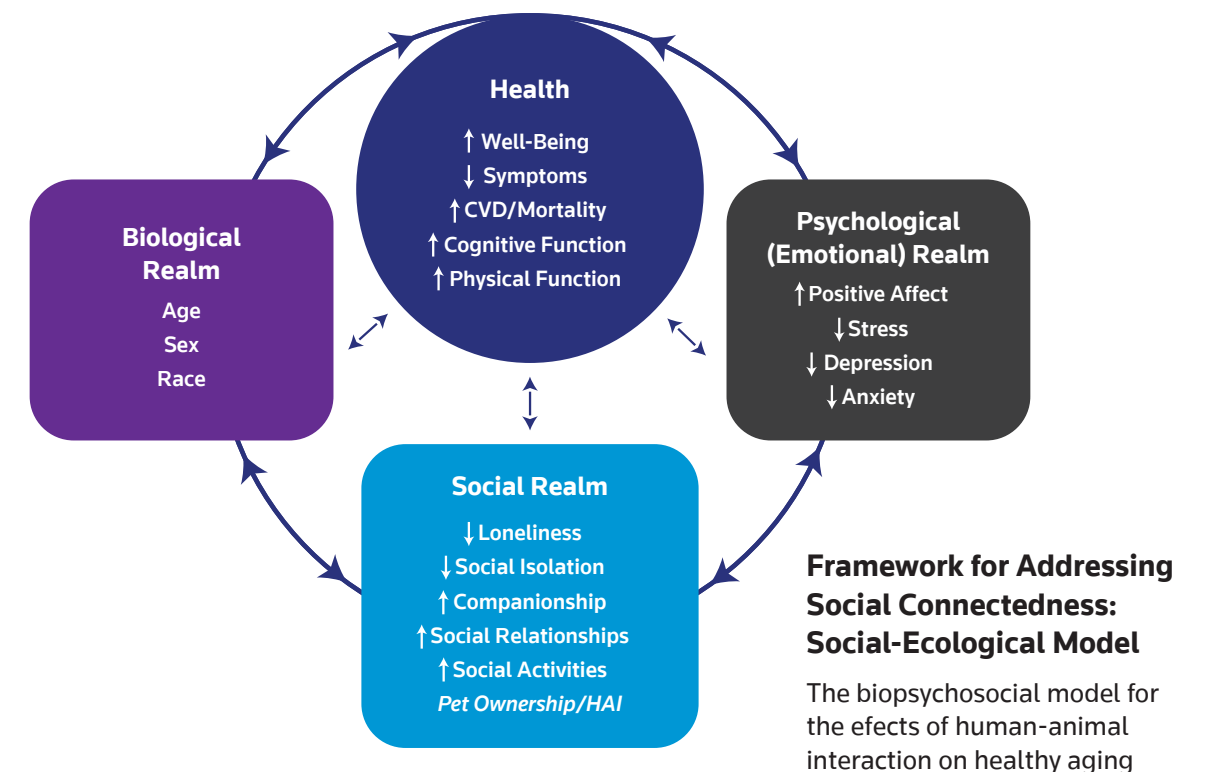
Recommendations for Supporting Pet Ownership

- Identify the professional (veterinarian, primary care physician, etc.) who can talk to older adults about pet ownership, and advise on what pet (or interaction) is the right fit
 - Encourage veterinarians to create better connections with the older adult community in order to help answer questions about appropriate pets, responsible pet ownership, and future plans for the pet

Recommendations for Supporting HAI Programs

- Practice and education of clear and appropriate standards for HAI programs and interventions are essential
- Programs need to help older adults connect with their larger community and feel a greater sense of belonging to help with social isolation and loneliness

- Programs that foster animals are great opportunities to enable older adults to interact with others and local organizations
- Education to increase awareness about the programs available to older adults is needed
- HAI programs should meet older adults where they already are
 - Meals on Wheels partnership with therapy animal programs
- HAI programs should connect with service providers for older adults
 - Local shelters should partner with area agencies on aging, clinicians and physicians
 - Involve healthcare providers in the conversation
 - Add training for health professionals to integrate questions about how their patients care for their pet – as this is part of their own health and well-being





People with Mental Health Challenges, Social Isolation, Loneliness and Companion Animals

The Impact of Social Isolation and Children with Disabilities: The Role of Animal Companionship

Aubrey Fine, EdD

Dr. Aubrey Fine presented on the impacts of social isolation and loneliness on the health and well-being of children and adolescents as well as the potential for companion animals to help play a positive role.

Research demonstrates that children who are isolated or experience loneliness are more likely to have difficulty adjusting to school and exhibit problematic behavior. Mental health problems that stem from loneliness and/or social isolation include depression, anxiety, an increase in externalized behavior problems, such as disobeying rules and physical aggression and an increase in internalized behaviors, such as fearfulness and social withdrawal.

Dr. Fine also discussed the correlation between loneliness and depression. Loneliness can be understood as either a symptom of, or a predisposing factor to depression. Depression-related mechanisms may lead to interpersonal problems and increased risk of loneliness. This relationship may cause suicidal ideations.

A 2010 study of 296 children over eight years by the Australian government investigated whether loneliness in childhood predicts depressive symptoms in adolescence. Results of the study found that enduring peer-related loneliness (peer rejection, low peer acceptance) during childhood constitutes an interpersonal stressor that plays a causal role in the development of later depressive symptoms.^{xiv}

The NIH Pathway Project, a 2013 study of 239 male and female children and families recruited prior to entry into kindergarten and followed through school years, found that chronic loneliness is associated with an increase in depression. Findings showed that initial levels of loneliness and depressive symptoms were moderately and positively correlated. Depressive symptomology across the adolescent age period rises and falls in conjunction with a youth's loneliness experiences.

The last study that Dr. Fine discussed was from the University of Michigan. The study examined social relationships and depression in a sample of 4,642 adults. The study suggests that social relationships may be an important area to target among adults at risk for clinical depression. The magnitude of effect of social relationship quality on risk for depression is comparable with the effect of well-established biological risk factors for cardiovascular disease.^{xvii}

After reviewing the existing literature linking social isolation and loneliness to depression, Dr. Fine focused the conversation on the potential role of pet companionship. Citing existing literature, Dr. Fine talked about how pets can act as social capital, helping to foster greater connections between a pet owner and their community, and in supporting more engagement with others, and improved physical activity outside the home, with dog walking being the greatest example. Pets can also help in emotional regulation. The motivational hypothesis explains that pets may facilitate motivation to become more involved or engaged with others.

Dr. Fine ended his talk proclaiming that everyone needs a champion that likes their company, that wants to be with them, and that champion can be a companion animal.





Dogs on Call: A Best-practices Hospital-based AAI Program

Sandra Barker, PhD, NCC, LPC

Dr. Sandra Barker’s presentation focused on the Dogs on Call Program, a clinical program of the Center for Human-Animal Interaction in The School of Medicine at Virginia Commonwealth University (VCU). Established in 2001, The Center’s mission is improved health and well-being through human-animal interaction. The Center pursues its mission through goal-oriented clinical, educational and research activities.

Dogs on Call is an example of a successful program that has consistently shown superior results based on research and experience. The Dogs on Call Program is constantly evaluating its sustainability and ongoing development.

Dr. Barker explained that the VCU Medical Center adopted a set of policies and procedures for the Dogs on Call Program that have been tested and recognized to maximize human and canine safety.

These include:

- Involving physician and nursing leadership, epidemiology, risk management, volunteer services, security, animal care and use advisory program, and the Center director in policy development
- Consulting existing CDC, veterinary and animal-assisted activity/therapy guidelines
- Using Pet Partners policies as a foundation and strengthen with specific policies and procedures for visiting in VCU Medical Center hospitals and clinics
- Routinely reviewing and revising policies and procedures to maximize safety for patients, staff, dogs, and volunteers
- Implementing a manualized program with continuous monitoring, evaluation, and continuing education for team members

The Dogs on Call Program is fully integrated into VCU Medical Center

- There are more than 80 active Dogs On Call teams
- Areas visited are determined based on consultation with infection control, medical directors, and nurse coordinators and include all areas except operating and isolation rooms and food preparation areas. Online scheduling and on-site check-in and check-out procedures are used to monitor visits.
- The program has a high safety profile and experiences high demand

The Dogs on Call Program also abides by a set of requirements that every animal-handler team must meet, including:

- Species limited to adult dogs
- Current registration with Pet Partner’s Program or Alliance of Therapy Dogs
- Completion of VCU Medical Center Volunteer training
- Completion of Dogs On Call Orientation
- Compliance with Medical Center/Dogs On Call policies and procedures
 - Includes annual veterinary wellness documentation
 - Includes criterion-based Dogs On Call renewal evaluation at least every other year

The Dogs on Call Program also collects feedback from the healthcare teams, students and patients it serves, and has seen demonstrated, positive benefits for all involved.

In a survey of 407 patients after a Dogs on Call visit, 99% reported the visit was helpful, citing that the dog helped make them more relaxed (83%), less lonely (57%), and improved mood (90%), among other benefits.

From a mental health perspective, research results support the efficacy of the Dogs on Call Program in reducing anxiety levels and fear among patients. One 15-minute Dogs on Call visit prior to Electroconvulsive Therapy (ECT) reduced patients’ fear by 37% and anxiety by 18%.

Another study showed that Dogs On Call presence in group psychotherapy significantly increased attendance by patients with mood and psychotic disorders. Research also showed benefits for healthcare professionals documenting decreased physiological stress following brief Dogs On Call interactions.

Dr. Barker added that, although not all research shows benefits, some studies have shown that AAI can help reduce symptoms of anxiety, depression, pain, fear and traumatic stress. Research also suggests AAI may increase positive affect, well-being, and quality of life.



Summary of Panel Discussion

The *People with Mental Health Challenges, Social Isolation and the Role of Companion Animals* Panel was comprised of Zenny Ng, Megan Mueller, Aubrey Fine, Sandy Barker and Dominique Apollon. The panel was moderated by James Griffin.

The panel discussed research regarding companion animals reducing social isolation and loneliness among people with mental health challenges and identified topics in need of additional research-based evidence. Recognizing that not all people with mental health challenges who might benefit from interactions with companion animals have that opportunity, the panel explored potential barriers that hinder or prevent them from interacting with companion animals and identified possible solutions to those barriers. Finally, the panel provided a robust set of suggested best practices that they believe should be included for all programming related to human-animal interaction for people with mental health challenges.

Summary of Recommendations

Advancing Research on People with Mental Health Challenges and Companion Animals

HIGH QUALITY RESEARCH

- Both rigorous quantitative and qualitative studies are needed to advance our knowledge in this area.
- Consistent use of targeted and standardized outcome measures
- Design studies for the specific population of interest – consider diversity in populations and access to programming
 - i.e. considerations needed when working in underserved communities
- Include descriptive methods so that studies can be replicated
- Evidence-based approaches for specific populations
- Qualitative piece is also important and should not be lost, as practitioners and healthcare administrators want to know about patient satisfaction

RESEARCH QUESTIONS

- Understanding for whom and under what circumstances interactions with animals may be effective and the relative efficacy for certain circumstances
 - Develop a more targeted approach to help determine what circumstances to recommend either pet ownership or animal-assisted activities
- Research that is more specific about the type of relationship or interaction
 - Most important to understand the relationship, as we may find that people with mental health challenges may interact differently with a pet than other populations
- Greater understanding of protocols to help determine how much of the impact is the handler or therapist and how much of the impact can be attributed to the AAI or technique
- Better underlying mechanisms contributing to documented benefits

AFTER THE RESEARCH

- Develop Careful messaging for different stakeholders and how best to inform them

Barriers to Companion Animal Interaction for People with Mental Health Challenges

IDENTIFYING BARRIERS

- Financial needs, access to veterinary care
- Concern about not being able to fully take care of the pet due to lifestyle factors

ADDRESSING BARRIERS

- Providing resources around the grieving process, and understanding how losing a pet can affect people with mental health challenges differently
- AAI may be a viable option in place of pet ownership

Supporting Best Practices

RECOMMENDATIONS FOR SUPPORTING PET OWNERSHIP

- Encourage closer contact between primary care providers and therapists
 - Discuss pets with patients
 - Consider home visits or allowing animals to come into the doctor's office
- Ensure support systems and resources are available to the pet owner
- Help potential pet owners find the right fit based on a pet's needs and the individual's lifestyle

RECOMMENDATIONS FOR SUPPORTING HAI PROGRAMS

- Considerations for animal programs visiting health care facilities
 - Promote sound health care policies and procedures to ensure safety for humans and animals.
 - Maintain standards for handlers, including education on animal welfare and safety as well as interacting with vulnerable populations
 - Internal monitoring and reporting of programs are critical
 - Where appropriate, such as in some psychiatric settings, consider including a member of the healthcare team in the therapy animal visitation process

Summit Recommendations/ Action Steps

✓ **Over the next five years, HABRI and Mars Petcare will work to achieve a number of goals borne out of the discussion and recommendations from the May 7th Summit on Social Isolation and Companion Animals.**

✓ **The goals are laid out below and organized into three distinct categories: research, best practices and addressing barriers and providing solutions.**

1 Advance High-Quality, Human-Animal Interaction Research

There is still a need for high-quality research in the field of HAI. Not all research is conclusive, particularly relating to pet ownership. An effort should be made to re-conceptualize the way pet ownership is measured. Instead of considering whether there

is a pet in the home, research should take into account the quality of interaction that people have with pets and the degree to which they are attached to those pets. Measuring pet ownership beyond the simple presence of a pet in the home may result in a deeper understanding of the human-animal bond.

Future research must implement solid methodological designs including standardized measures, randomization, large and diverse samples, and, whenever possible, longitudinal designs so we can understand the long-term effect of interacting with animals.

The practice of animal-assisted interventions must be evaluated for efficacy and treatment fidelity, leading to manualized evidence-based protocols that can be shared and replicated widely. Research teams should have diverse expertise, locations and participant populations.

Ultimately, advances in research will help provide a better understanding the human-animal bond in a way that will support pets and people together in situations that are beneficial to both. We believe that this approach will make a positive change in the real-world.

2 Share and Support the Proliferation of Best Practices

Best practices help to ensure the safety and success of every intervention. By supporting best practices, we can ensure that animal-assisted interventions in hospitals, nursing homes and doctors' offices are following the science and doing the best job they possibly can.

Pillars of this goal include:

- ✓ Understand and disseminate high welfare standards for all species involved
- ✓ Incorporate animal care and welfare by involving veterinarians and animal behaviorists
- ✓ Scale-up and share learnings from programs that work
- ✓ Monitor/maximize efficacy

"This is a really important event because we think there's a very unique role that human-animal interaction research can play in helping guide both researchers and practitioners in developing ways of maximizing the use of animals with addressing the issue of social isolation and loneliness."

James A. Griffin, PhD
NICHD



Help to Address Barriers and Provide Solutions

Identifying and overcoming barriers to pet ownership and companion animal interactions will help more people access any potential health benefits of the human-animal bond. Through science, and the advice of experts and professionals, companion animals can help tackle the problem of social isolation and loneliness.

Action items discussed to help address and and remove barriers include:

- ✓ Identifying research funding and focus
- ✓ Giving pet owners tools to responsibly select and care for pets
- ✓ Policies for pet/AAI access
- ✓ Educating the 'care team'
- ✓ Conducting outreach and communicating on the role of companion animals/AAI

Together, these three goals can help achieve real change in society. HABRI and Mars Petcare have established two working groups, one for each of the focus areas of the May 7th Summit. These working groups are comprised of the Consortium Steering Committee Members, Summit speakers and panelists, and various attendees of the Summit event. The working group members have been asked to provide input on this report, and they will be instrumental in helping to achieve the three main goals over the course of the next five years.

"For our health and our work, it is imperative we address the loneliness epidemic quickly and on many evidence-based fronts. I hope this Summit and its working groups will inspire more and different efforts to address loneliness and social isolation through pet interactions and ultimately help make a profound difference for the millions affected."

Dr. Vivek Murthy
19th Surgeon General of the United States

Conclusion

The stakes are high. Loneliness is a root cause of many serious health conditions. To help address such an immense problem, we need to be optimistic and think big. And similar to how we are looking to bring people and pets together to drive solutions, we cannot tackle this problem and make a real difference in the lives of people and animals alone. We must harness the collective science, reach and scale of both HABRI and Mars to work with the many people who made the Summit possible to make our ambition of solving this societal problem a reality. There is a very real and significant opportunity to bring pets and people together in a way that makes a real difference in the world.

Want to be a part of the solution? Contact Lindsey Melfi at lmelfi@habri.org

Consortium Steering Committee



Nancy Gee, PhD

Professor of Psychiatry & Director,
Center for Human-Animal Interaction
School of Medicine, Virginia Commonwealth University, USA

Dr. Nancy Gee is a Professor of Psychiatry and Director of the Center for Human-Animal Interaction in the School of Medicine at Virginia Commonwealth University. For five years, she managed an international portfolio of research collaborations as the Human-Animal Interaction Research Manager, for the WALTHAM Petcare Science Institute located in Leicestershire, England and served as a partner in the Public Private Partnership between WALTHAM and the Eunice Kennedy Schriver National Instituted of Child Health and Huma Development. Her own program of research has focused primarily on the impact of dogs on aspects of human cognition, including working memory, executive functioning, and physiological responses such as heart rate variability to the presence of, or contact with, dogs. Dr. Gee is an editor of two published volumes, and an author of more than 50 peer reviewed publications. She is a recipient of multiple grants and awards, and a member of multiple organizational boards and journal editorial advisory boards.



Layla E. Esposito, PhD

Program Officer, Child Development and Behavior Branch,
Eunice Kennedy Shriver National Institute of Child Health and Human Development,
National Institutes of Health

Layla Esposito, Ph.D., M.A., is a Program Director in the Child Development and Behavior (CDB) Branch at NICHD where her portfolio includes research on childhood obesity, social and emotional development in children and adolescents, child and family processes, and human-animal interaction. Dr. Esposito has a master's degree in clinical psychology and completed her Ph.D. in social psychology at Virginia Commonwealth University. Prior to her position at NICHD, Dr. Esposito was a science policy fellow with the Society for Research in Child Development and the American Association for the Advancement of Sciences. Her prior research and clinical work focused on peer victimization, aggression, psychosocial functioning and adjustment in children, and child psychopathology.



Chelsea Gilchrist, MGS

Senior Program Manager, Center for Healthy Aging
National Council on Aging (NCOA)

Chelsea Gilchrist is a social gerontologist with expertise in scaling community-based health promotion programs, conducting research analysis, and implementing national education and awareness campaigns. In her role as a Senior Program Manager at NCOA, she supports the dissemination of evidence-based health promotion programs, develops professional and consumer resources, and identifies opportunities for new partnerships. Previously, she worked at Generations United to improve the lives of older adults, children, and youth through intergenerational public policies and programs. Ms. Gilchrist holds a Master of Gerontological Studies degree from Miami University, Scripps Gerontology Center, as well as a Bachelor of Science degree in Psychology (summa cum laude) with a Business Leadership minor from Virginia Tech.



Mary Margaret Callahan

Chief Mission Officer, Pet Partners

Mary Margaret Callahan is the Chief Mission Officer at Pet Partners, where she oversees the Therapy Animal Program and grassroots advocacy initiatives. Responsible for supporting safe and effective animal-assisted interventions for the Pet Partners teams across all 50 states and internationally, Mary Margaret works to ensure highly trained and professional volunteers making a difference in their community while also promoting industry standards to ensure animal welfare. The daughter of a veterinarian, Mary Margaret grew up surrounded by pets and has a deep appreciation for the strength of the human-animal bond. She lives on a small farm outside the Seattle area with her husband, daughter and pets including dogs, cats, miniature goats, mini donkeys and an assortment of backyard poultry.



Aubrey H. Fine, EdD

Professor Emeritus, Department of Education
California State Polytechnic University
Practicing Psychologist

Dr. Fine received his graduate degree from University of Cincinnati in 1982 and has been on the faculty at California State Polytechnic University since 1981. His leadership among faculty and teaching excellence earned him the prestigious Wang Award in 2001, given to a distinguished professor within the California State University system (23 Universities), in this instance for exceptional commitment, dedication, and exemplary contributions within the areas of education and applied sciences. Dr. Fine is also a licensed psychologist who opened his practice in Southern California in 1987. His practice specializes in treating children with ADHD, learning disabilities, developmental disorders and parent child relations.



Sandra Barker, PhD, NCC, LPC

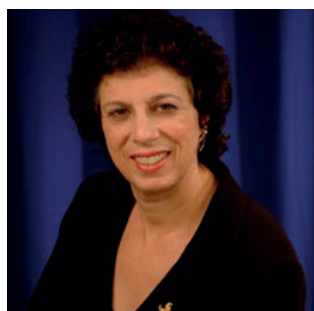
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Center for Human Animal Interaction
School of Medicine, Virginia Commonwealth University, USA

Dr. Sandra Barker is Professor Emeritus of Psychiatry and Founding Director of the School of Medicine Center for Human-Animal Interaction (CHAI). As the Founding Director of CHAI, Dr. Barker established the Dogs on Call evidence-based therapy dog program that is fully integrated into a major academic medical center and featured on Animal Planet and (Mission Critical Health) healthcare education videos, both aired globally. Dr. Barker has vast teaching and clinical experience in treating trauma survivors, providing and evaluating animal-assisted interventions, and directing a pet loss counseling program. She is internationally recognized for her research on the health benefits of interacting with companion animals, a research program that spans over 25 years. Dr. Barker also holds a joint appointment as Adjunct Professor of Small Animal Clinical Sciences at Virginia-Maryland College of Veterinary Medicine and serves on their Advisory Board for the Center for Animal-Human Relationships. Dr. Barker has published and presented extensively on the benefits of interacting with companion animals and is often interviewed for major media outlets including National Public Radio, Wall Street Journal, Washington Post, and The Guardian. She is a co-author of Animal-Assisted Interventions in Healthcare Facilities: A Best-Practices Manual for Establishing and Maintaining New Programs, published earlier this year by Purdue University Press. Dr. Barker is the recipient of numerous honors and awards, including election to Fellow of the International Society for Anthrozoology (ISAZ) and selection as a 2018 "Grads Made Good" (outstanding alumni award) from Florida State University. She is an honorary patron of Irish Therapy Dogs, serves on the Pet Partners Human-Animal Bond Advisory Board, and volunteers with a local rescue dog transit team.

**Dawn Carr, PhD**

Assistant Professor, Department of Sociology, College of Social Sciences and Public Policy, Florida State University

Dawn C. Carr is an assistant professor at Florida State University in the Department of Sociology and faculty associate at Pepper Institute for Aging and Public Policy. Carr’s expertise lies in understanding the factors that bolster older adults’ ability to remain healthy and active as long as possible. With Kathrin Komp, Carr published “Gerontology in the Era of the Third Age: Implications and Next Steps” in 2011, a text dedicated to exploring the relevance, purpose, and factors that contributed to the emergence of a new period of life following one’s career but prior to onset of frailty in later life. Her recent work focuses on understanding the complex pathways between health and active engagement during later life, including the impact of key transitions in health, productivity, and caregiving. Before joining Florida State University in 2016, she was a researcher at the Stanford Center on Longevity, a postdoctoral fellow in the Carolina Program for Health and Aging Research (CPHAR) at the Institute on Aging at The University of North Carolina at Chapel Hill, and a researcher at Scripps Gerontology Center. Carr received her Ph.D. in Social Gerontology and Master’s in Gerontological Studies at Miami University, and Bachelor of Arts in Music Performance at Arizona State University.

**Erika Friedmann, PhD**

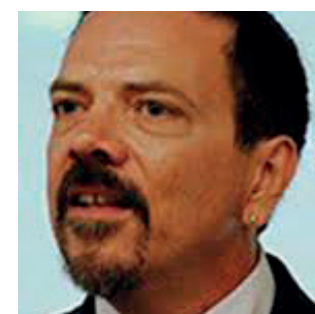
Associate Dean of Research Professor, School of Nursing University of Maryland, Baltimore

Dr. Friedmann is a Professor & Associate Dean for Research at the University of Maryland School of Nursing. She has been conducting research on the health benefits of the human-companion animal bond for people since the 1970s. Her seminal research showed that pet ownership is associated with improved one-year survival of heart disease patients. Since then she has conducted numerous studies exploring the moderating effects of pet ownership on stress and blood pressure. The findings of her original research were confirmed and advanced in a follow-up study that was published in 1995. Erika is a founding member and President of the International Society of Anthrozoology (ISAZ), a group of researchers and scholars who are advancing the study of the human-animal relationship. She is an active researcher, conducting NIH funded research and contributing over 60 papers to interdisciplinary refereed journals published internationally. Erika holds a Ph.D. in Biology from the University of Pennsylvania. For over two decades she was a faculty member at Brooklyn College of the City University of New York, serving as chair of the Department of Health and Nutrition Sciences from 1992 to 2003.

**Molly McAllister, DVM, MPH**

Vice President Veterinary Science Banfield Pet Hospital | Veterinary Affairs

Dr. Molly McAllister is a graduate of Oregon State University’s College of Veterinary Medicine and received her Masters in Public Health from University of Minnesota. With Banfield Pet Hospital since 2012, Dr. McAllister is the vice president of veterinary science, where she leads a team of veterinary researchers in the knowledge generation and data-based research that advances medical quality and outcomes at Banfield. She and her husband, Brandon, have two children and a houseful of pets and enjoy residing in Camas, WA.

**James A. Griffin, PhD**

Deputy Chief, Child Development & Behavior Branch Early Learning and School Readiness Research Program Eunice Kennedy Shriver National Institute of Child Health and Human Development National Institutes of Health

James A. Griffin, Ph.D., is the Deputy Chief of the Child Development and Behavior Branch (CDBB) at the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH), as well as the Director of the Early Learning and School Readiness Program. Prior to his position at NICHD, Dr. Griffin was a Senior Research Analyst in the Institute of Education Sciences (IES) at the U.S. Department of Education. He also served as the Assistant Director for the Social, Behavioral, and Education (SBE) Sciences in the White House Office of Science and Technology Policy (OSTP) and as a Research Analyst at the Administration on Children, Youth and Families (ACYF). Dr. Griffin holds a B.A. summa cum laude in Psychology from the University of Cincinnati and a Ph.D. with honors in Child Clinical Psychology from the University of Rochester. Dr. Griffin’s career has focused on research and evaluation efforts related to service systems and early intervention programs designed to enhance the development and school readiness of children from at-risk and disadvantaged backgrounds.

**Megan Kiely Mueller, PhD**

Elizabeth Arnold Stevens Junior Professor Assistant Professor, Cummings School of Veterinary Medicine at Tufts University Senior Fellow, Jonathan M. Tisch College of Civic Life

Dr. Megan Mueller is an assistant professor of human-animal interaction at the Cummings School of Veterinary Medicine at Tufts University, senior fellow at the Jonathan M. Tisch College of Civic Life, and Co-Director of the Tufts Institute for Human-Animal Interaction. Dr. Mueller is a developmental psychologist, and her research program focuses on how relationships with animals can promote healthy children, families and communities through pet ownership, animal-assisted interventions, and animal-based community programs.



Dominique Apollon, M.Ed., LPC, CCATP

Clinical Mental Health Therapist
Light on Anxiety CBT Treatment Center

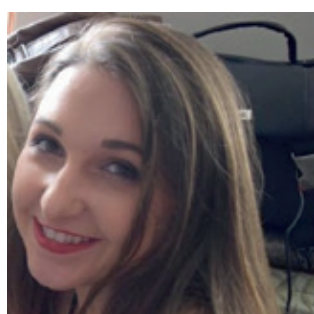
Dominique received her Master of Education in Clinical Mental Health Counseling from DePaul University and her Bachelor of Science in Psychology from Western Illinois University. Dominique’s treatment approach includes Cognitive Behavioral Therapy (CBT) with mindfulness-based techniques in order to assist in bringing awareness and acceptance to the present moment. Dominique has clinical experience providing therapy to youth, adolescence and adults struggling with anxiety and depression and those who have experienced trauma. She is also passionate about advocating and supporting those of the LGBTQ community who are struggling with anxiety related disorders. In addition, Dominique has obtained advanced training in the treatment of Obsessive Compulsive Disorder (OCD), Social Anxiety Disorder, Panic Disorder, Trichotillomania, skin picking and other Body Focused Repetitive Disorders (BFRB’s). Dominique also manages Light on Anxiety’s Collaborative Care model which enhances coordination of care for Light on Anxiety clients by building relationships with referring providers and by providing community outreach.



Zenithson (Zenny) Ng, DVM, MS, DABVP

Clinical Assistant Professor, Department of Small Animal Clinical Sciences
The University of Tennessee Institute of Agriculture, College of Veterinary Medicine

Zenithson Ng received his undergraduate degree in animal science from Rutgers University and veterinary degree from Cornell University. He then completed a rotating internship at the ASPCA followed by a combined ABVP residency and master’s degree program in human-animal bond studies at Virginia Tech. His clinical interests include dentistry, behavior, preventive medicine, shelter medicine, and management of chronic disease. His research interests include the effect of animal-assisted interventions on both humans and animals, enhancement of the veterinarian-client relationship, and assessment of stress and animal welfare.



Kerri E. Rodriguez

Purdue University College of Veterinary Medicine
Department of Comparative Pathobiology
Center for the Human-Animal Bond

Kerri Rodriguez is a 4th year Ph.D. student of Dr. Maggie O’Haire in the Center for the Human-Animal Bond at Purdue University. She earned her Masters of Research at University of St Andrews in Scotland and her Bachelor of Science in Evolutionary Anthropology and Biology at Duke University in North Carolina. Her dissertation research focuses on the psychosocial effects of service dogs for veterans with posttraumatic stress disorder (PTSD) as well as individuals with physical disabilities.

Consortium Steering Committee



Rena Crumplen

Global Vice President of Research and Development, Mars Petcare

Rena is a business leader with over 25 years of progressive experience in the food and beverage industry. Throughout her career, she has been providing strong leadership in the areas of Innovation, R&D, Marketing, General Management and Strategic/ Business Planning. With a passion for innovation, Rena uses her technical and marketing expertise to make sound business decisions that drive company growth and deliver bottom line results.



Pamela Mars

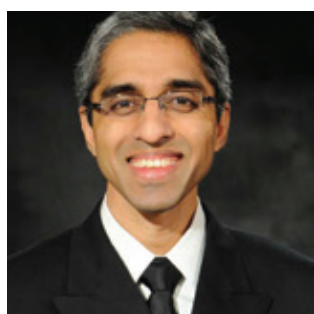
Family Member

Pamela Mars is a fourth-generation member of the Mars family working in the business, whose great-grandfather, Frank C. Mars, founded the corporation in 1911. Pamela Mars graduated from Vassar College and began her career with Ted Bates Advertising as an Account Executive. She started working for the family business as an Operations Supervisor at the corporation’s Hackettstown, New Jersey plant in 1986. Pamela Mars has held various positions in the corporation’s Confectionery and Petcare divisions, working her way up to managerial and director roles in the Supply and Commercial sectors of the corporation, including an overseas assignment as Operations and Manufacturing Director in Mars’ Confectionery business in Ballarat, Australia. Prior to her current role, she was Vice President of Manufacturing at Mars’ Petcare division in Vernon, California. Pamela Mars currently serves as family ambassador to the Petcare businesses of Royal Canin, Banfield, Blue Pearl, Pet Partners and VCA, and provides support to the Veterinary Services/Diagnostics Advisory Council. She is also a member of the Mars Technology Committee. She recently retired from the Board of Directors of Mars, Incorporated, having previously served four years as Chairman and 16 years as a Board Director. Outside of her Mars commitments, Pamela Mars has recently been appointed as a member of the Supervisory Board of Heineken N.V. Outside of her business commitments, she is a Member of the Honorary Senate for Foundation Lindau Nobel Prize winners. She is also on the Board of Johns Hopkins Medicine and Johns Hopkins International Medicine. In addition, she serves on the Supervisory Board of SHV, a Dutch family business, and a member of the International Council of Advisors for National Geographic. Pamela Mars served on the Board of Trustees of Potomac School in McLean, Virginia, and was on the Board of Foxcroft School for 12 years, chairing the committee on Trustees. Pamela graduated from Potomac School and Foxcroft School as well as Vassar College.



Collette Bunton
CEO, Whistle

Collette Bunton is CEO of Whistle, the San Francisco-based tech company born out of a love for pets and makers of the best-in-class pet tracker. Before joining Whistle Collette led consumer hardware teams focused on building new disruptive categories, like Roku, which makes media-streaming software and hardware. Collette has over 20 years of experience leading successful teams and growing consumer electronics brands including Logitech and Seagate. Collette’s specialty is her legacy of being focused on the consumer by bringing user delights to market through relevant new product acquisitions, product features and partnerships.



Dr. Vivek H. Murthy, MD, MBA
19th Surgeon General of the United States

Dr. Vivek Murthy served as the 19th Surgeon General of the United States (from December 2014 to April 2017). As The Nation’s Doctor, he brought both passion and innovation to the challenges of leading America’s national healthcare initiatives. During his tenure there he issued the first-ever Surgeon General’s Report on Alcohol, Drugs, and Health, calling the nation to action to address this deadly disease. He launched the national TurnTheTideRx campaign to address the opioid crisis, and he was the first Surgeon General to issue a letter to health professionals across America calling them to action to reduce opioid addiction and overdose deaths. Throughout his career, Dr. Murthy has led the way in medical education, social action, and healthcare dialogue, co-founding several healthcare community organizations and grassroots citizen movements. Prior to becoming Surgeon General, Dr. Murthy practiced and taught internal medicine at Brigham and Women’s Hospital and Harvard Medical School.



Steven Feldman
Executive Director
HABRI

Steven Feldman is the Executive Director of the Human-Animal Bond Research Institute (HABRI). His mission is to use scientific research, education and advocacy to establish the vital role of companion animals in the health and well-being of individuals, families and communities. As the leader of the only research organization focused solely on the human-animal bond, he has developed significant expertise in communicating the science of human-animal interaction and its practical application in healthcare and veterinary settings. He is frequently published and quoted on this topic in the popular media, healthcare, veterinary and other publications. Steven is an experienced public affairs practitioner and non-profit executive who has worked in the areas of wildlife conservation, animal welfare, healthcare and education. Prior to joining HABRI, Steve served as senior vice president for external affairs for the Association of Zoos and Aquariums. He also worked at Powell Tate, a leading public affairs firm, and as a staff member in the United States Senate. He holds a Bachelor’s Degree in International Affairs and a Master’s Degree in Political Management from the George Washington University

Attendees of the Summit included representatives from the three Summit sponsors, American Pet Products Association (APPA), the North American Veterinary Community (NAVC), and Petco Foundation, as well as a diverse group of experts and stakeholders from non-profit organizations and associations, including the AARP, the Gerontological Society of America (GSA), Mental Health America (MHA), and the Anxiety and Depression Association of America (ADAA). Members of the Consortium Steering Committee provided their recommendations for who to invite to the event.



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Social Isolation, Loneliness
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