

# Creating Pawsitive Outcomes in Acute Rehab with Animal- Assisted Interventions

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Fitzgerald III, Facility Dogtor

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## Introductions

**Michelle Standard, PT, DPT, MHA**

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**Fitzgerald III, Facility Dog Extraordinaire**

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## Objectives

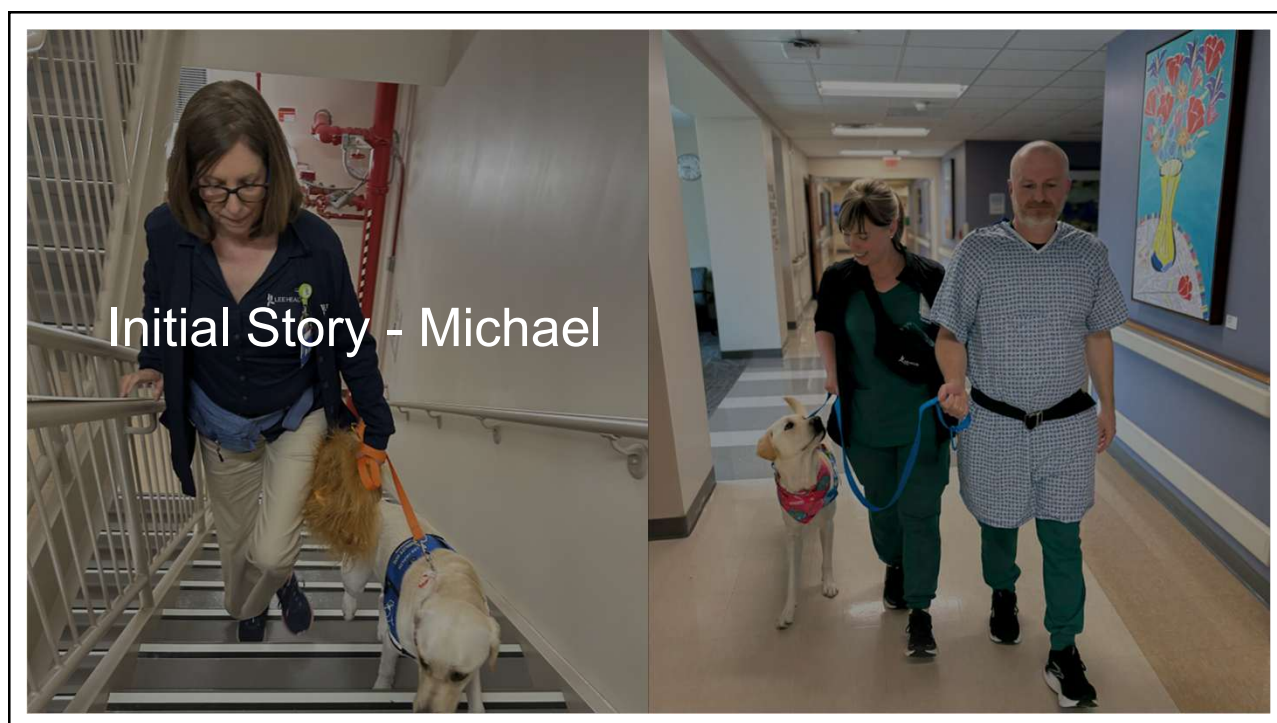
- Define and differentiate between terms used to describe Animal-assisted interventions (AAI)
- Understand the impact of an Animal-assisted Therapy (AAT) program on the patient, the rehab team, and the facility
- Identify appropriate patients who would benefit from AAT. List inclusion/exclusion criteria
- Evaluate the feasibility of and the process to implement an AAT program in the healthcare environment
- Identify the key components for a successful AAT program



## Brief Program Overview

Animal-Assisted Therapy Program at Gulf Coast Medical Center, Lee Health, Fort Myers, FL





Initial Story - Michael

## Nomenclature—Animal-Assisted Interventions

### Animal-Assisted Interventions (AAI)

- Incorporate animals into health and healing through goal-oriented and structured interventions with the purpose of therapeutic gains and improved health and wellness
- AAI is an umbrella term that can be further broken down into three distinct categories:
  - Animal-Assisted Activities (AAA)
  - Animal-Assisted Education (AAE)
  - Animal-Assisted Therapy (AAT)



## Nomenclature—Animal-Assisted Activities

Animal-Assisted Activities (AAA)—Brief meet and greet sessions that enhance general quality of life

- According to the IAHAIO definition, AAA is a “planned and goal-oriented informal interaction and visitation conducted by the human-animal team for motivational, educational and recreational purposes. Human-animal teams must have received at least introductory training, preparation and assessment to participate in informal visitations.”
  - Example: a volunteer brings a dog to visit residents at a long-term care facility
  - Example: College students take a study break by interacting with puppies from a pet therapy program



**\*\*\*IAHAIO—International Association of Human-Animal Interaction Organizations**

## Nomenclature—Animal-Assisted Education

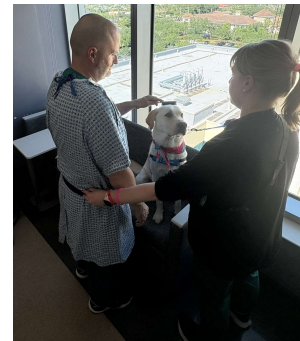
Animal-Assisted Education (AAE)—“An innovative approach that involves the participation of animals in educational settings to promote learning and development among students” (Verhoeven et al., 2023)

- Typically targeted for children and young adults
- Led by a professional with a trained dog aiming to develop academic, social-emotional, and cognitive functions
- Extends beyond typical play and learning components by facilitating reciprocal physical contact naturally between child and animal

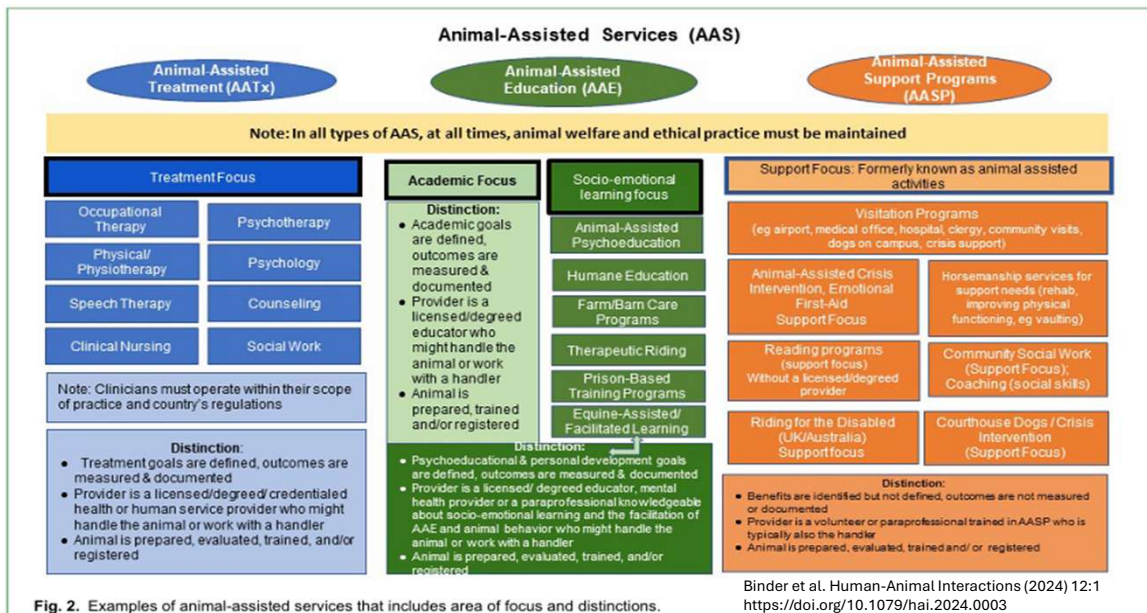


## Nomenclature—Animal Assisted Therapy

- Animal-Assisted Therapy (AAT)—Structured animal interactions deliberately intended to achieve **specific clinical outcomes**, including physical, cognitive, behavioral, and social capacities. Directed and delivered by **health professionals**. Intervention and measurable progress is documented in professional records
  - Example—patients with breast cancer riding horses to improve muscular strength and trunk control
  - Example—patient s/p CVA working with an OT and facility dog to facilitate fine motor tasks such as grooming, petting dog on involved side



# IAHAIO/AAIL Proposed Nomenclature Changes





# Facility Dog vs. Therapy Dog

- Facility dogs are trained as service dogs with unique abilities to work with many individuals vs one person with special needs.



Facility Dog	Therapy Dog
Partnered with professional facilitator who directly serves clients with special needs	Any pet dog that has permission to enter a public facility to provide comfort or joy to patients/clients
Trained in over 40 cues designed to motivate and rehabilitate patients	Often affiliated with therapy dog organizations that require dog pass a basic obedience test before entering facility
Used in hospital, rehab settings, PT/OT/SLP, and criminal justice settings	No national standards exist for training
Specially bred for this line of work	Therapy dog teams that pass evaluation by a therapy dog program are registered as a team
Must pass nationally standardized practical test administered by an Assistance Dogs international certified evaluator, with follow up assessments to ensure continued safety in facility settings	No follow up requirements after initial registration of team

Canine Companions (2022)

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## Not all dogs are suited to be facility or service dogs

I wanted a dog to help with my anxiety. The universe got confused and gave me a dog WITH anxiety.



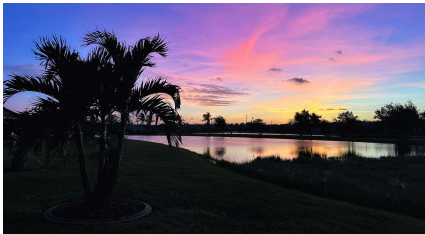
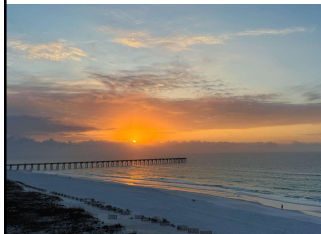
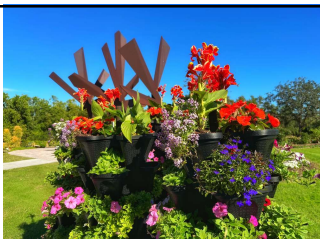
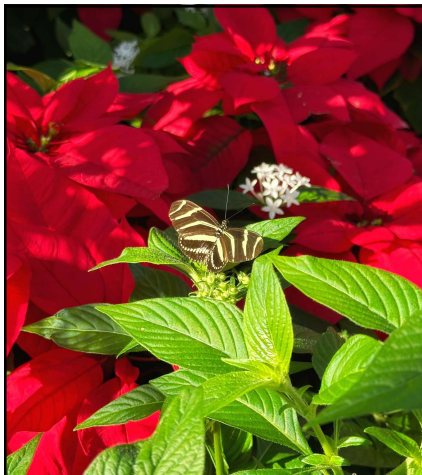


## Rooted in Science



### The Human Animal Bond

- The Center for the Human Animal Bond defines the human animal bond as “the dynamic relationship between people and animals such that each influences the psychological and physiological state of the other.” The resulting hypothesis is that as the bond between a human and an animal matures, both parties benefit. ~Holden et al., 2020b



## Rooted In Science

### The Biophilia Hypothesis

- Humans are biologically predisposed to have an affinity for all living things. Implies humans have a psychological and emotional connection to nature. This hypothesis is well supported in the literature, and positive correlations are found between human interaction with nature and other living things

(Gaekwayd et al., 2022)



## Mechanisms of Action

**Compatible Animal Personality Mechanism**—calm, relaxing animal, versus energetic and playful

**Distraction and Entertainment Mechanism**—breaks up monotony of hospitalization, provides stress relief/distraction from devastating diagnosis

**Movement Mechanism**—relies on physical exercise as patients actively move around with the animals, ie walking a dog

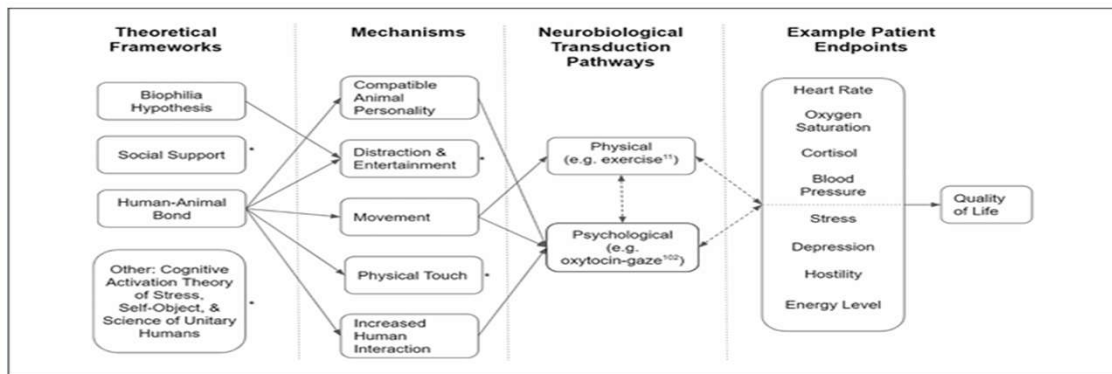
**Physical Touch Mechanism**—stroking an animal provides tactile comfort, decreased tension, increased feeling of safety. Studies show physical touch with animal can decrease heart rate and blood pressure, and have biochemical effects including increased oxytocin and beta-endorphins

**Increased Human Interaction Mechanism**—presence of therapy animal eases the interactions between humans

Holder et al. 2020b



# Linking It All Together



**Figure 1.** Diagram of multilayered benefit hypothesis example for animal-assisted interaction in oncology.  
<sup>\*</sup>Arrows for this concept removed for simplicity. Though not shown here, each framework could potentially extend to other mechanisms on further investigation by researchers.  
<sup>\*\*</sup>Solid, single arrows indicate potential directionality between concepts, while dashed, double arrows indicate interplay or feedback loops between





## Evidence Based Practice

Systematic Review of AAI for oncology and palliative care patients (Diniz Pinto et al., 2021)

- Significant benefits found towards **mood, depressive symptoms, somatic symptoms/pain, functional well-being, stress, and anxiety**
- Most positively affected were **mood, pain** and **quality of life**
- Mix of AAT and AAA included in this study





## Evidence Based Practice

### Systematic Review of AAI in Oncology Patients—Holder (2020)

- Reviewed 32 relevant publications
- Increased **oxygen saturation, quality of life**
- Overall **positive perception** of AAI by participants
- Decrease in **depression** and other negative **mood states**



## Evidence Based Practice



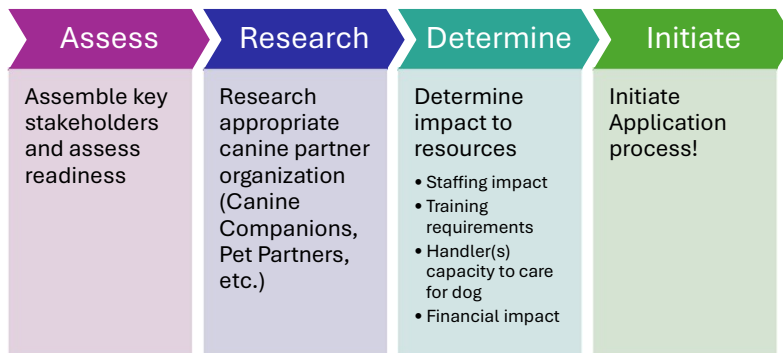
Author (Year) Country	Intervention	Study Aim	Outcome
Abate et al. (2011) USA	Walk with dog	Impact of dog-assisted ambulation to encourage patient ambulation	Decrease amb refusal rate, increased distance of amb
Bode et al. (2007) USA	Walk both with and without dog	Effect of dog-assisted therapy on patient amb	With dog: Improved distance, time and speed
Machova, Prochazkova, Eretova, et al. (2019) Czech Republic	Perform memory, speech, fine and gross motor skill exercises with dog	Impact of supplementing standard therapy with dog-assisted therapy	Improvement in ADL's in intervention group

## Evidence Based Practice



Author (Year) Country	Intervention	Study Aim	Outcome
Markovich (2011) USA	Walk dog on leash, attach leash, groom, pet, give verbal commands to dog	Impact of dog assisted therapy on mental health and functional therapy goals	Improved progress towards therapy goals, improved standing tolerance and walking distance in AAT sessions
Rondeau et al (2010) Canada	Gait retraining with dog, navigating obstacle course, dog involved in activities to practice transfers	Effectiveness of rehab dogs on walking of patients with hemiparesis	Increased walking speed and improvement in gait. Therapeutic environment found to be more realistic
Pruskowski et al. (2020) USA	Walk, brush, pet, feed, throw toy, dress dog.	Assess satisfaction with dog assisted therapy program in a Burns Center	Decreased pain and anxiety after AAT. Demonstrated feasibility, acceptability, and patient/staff satisfaction of AAT
O'Loughlin et al., 2024			

## Journey to Initiating an AAT Program



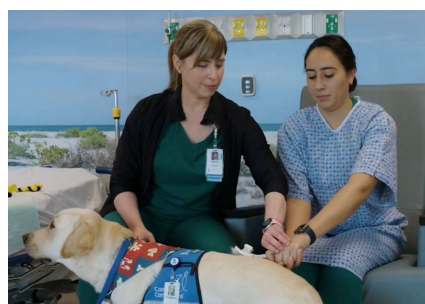
## Job Description—Essential Job Functions

### Fine Motor/Dexterity/Proprioception Challenges

- Don/doff collar, leash, bandana, etc
- Utilize brush/comb on dog—grooming to facilitate dynamic balance
- Overall tactile stimulation for any post-op or traumatic nerve injuries

### Gross Motor/Coordination Challenges

- Walk dog on loose leash, anticipate direction changes
- Play gentle tug of war with rope toy with patient sitting EOB or in chair to challenge dynamic sitting balance/core strengthening
- Use placement of dog at various levels and positions to facilitate patient leaning outside base of support to pet





## Job Description—Essential Functions

### Cognitive Training/Motivation Uses

- Patient gives dog verbal commands to work on sequencing, recall
- Patient engages with dog via commands, treats, etc to increase attention to task
- Assist with orienting to the environment, grounding patients suffering from hospital-acquired delirium
- Simulate tasks need to care for dog at home to assess patient's level of safety awareness, cognitive functioning, and visual perception

## The Prestigious Journey to Becoming a Facility Dog


Volunteer puppy raiser cares for the dog until they are about a year and half old—teaching house manners and basic obedience

At a year and a half of age, dog returns to regional training center and undergoes six to nine months of professional training—fine tuning basic commands, evaluating behavior and temperament, work next to equipment and learn advanced commands

If dog completes professional training successfully, will enter the matching phase to be matched with handler

Dogs that do not successfully complete professional training often end up being adopted by their puppy raiser







## Journey to Becoming a Handler

Interview via phone, then in person with Canine Companions

Commit to a two week training course onsite. During training will be matched with dog

Strong recommendation in the literature is to have clinicians who are going to practice AAT to complete additional training or credentialing course



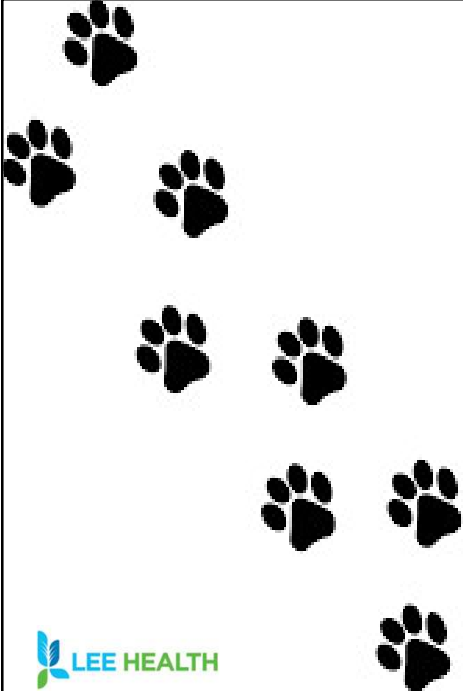
## Fitzgerald's Integration Into Our Facility

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- November 2022—Fitzgerald arrived and began slowly acclimating to new home and facility
- November/December—began training with Megan to build relationship and acquire new skills
- December/January—trained with various staff members acting as patients. Used empty hospital rooms, introduced different noises, equipment, chaotic simulations to desensitize reactions
- January/February—presented program to full rehab leadership team, hospital leadership team. Fully implemented AAT with acute inpatients




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## Operationalizing AAT in Acute

Created Standard Work around Process:

- Evaluating therapist identifies that patient would benefit from AAT
- Involves interdisciplinary team in candidacy selection
- AAT therapist is notified of patient, validates inclusion/exclusion criteria, and makes plan for AAT session
- AAT therapist obtains consent from patient/POA prior to entering room with dog
- Therapeutic intervention is delivered by therapist, engaging dog as indicated
- Hand hygiene offered to patient prior to and post physical interaction with dog
- Documentation identifies dog's involvement in intervention





## Inclusion Criteria

### Inclusion

- Verbal Consent
- Reciprocal benefit for patient and facility dog with continuous monitoring during session
- Interaction with facility dog enhances engagement, improves motivation, or provides bridge towards skilled plan of care
- Patients who are experiencing distress due to pain, anxiety, depression, grief, trauma, other psychosocial symptoms
- Patients with impaired initiation/participation due to decreased motivation or altered mental status





## Exclusion Criteria

Any isolation (droplet, contact, airborne)	Chemo within last 72 hours
Open wounds, new surgical airways	Neutropenia
Fear of or allergy to dogs	Impulsive behavior that may put facility dog at risk



## Examples of interventions

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### ADL's


- Dog removes patient's sock, patient is tasked with donning sock
- Dog stands on hind legs at sink while patient brushes teeth

### Fine Motor/dexterity

- Patient grooms dog with comb or brush
- Patient manipulates leash, collar, or clasps on dog's vest



## Examples of interventions




### Healthcare Management

- Dog removes patient's blood pressure cuff between serial BP readings
- Patient gently strokes dog during relaxation breathing

### Rest and Sleep

- Dog brings sleep enhancement packet to patient



The image shows a light-colored dog, possibly a Weimaraner, wearing a blue harness with colorful patterns. The dog is holding a white packet with green leaf patterns in its mouth. The packet is labeled "QuietPac" and features a quote: "A quiet mind cures all" by Robert Burton. The dog is standing on a light-colored floor, and a metal cart is partially visible in the background.



## Examples of interventions

### Education

- Dog brings patient adaptive equipment to initiate learning new ways of dressing s/p surgery
- Patient takes standing rest breaks and matches pace of dog to adhere to energy conservation strategies and device management.
- Dog puts front paws on 2ww to give real-time visual cue to push up from solid surface instead of pulling from walker



## Examples of interventions



### Sensation and Visual Perception/Attention

- Dog aligned with patient's neglected side to increase attention and sensory inputs to affected side
- Patient engages with dog while navigating hallway with 2ww engaging in visual scanning and dual tasking in dynamic environment.

### IADLs

- Patient engages in household tasks including pet care to simulate safety and observation of precautions for return home.



## Examples of Interventions



### Gross Motor/Balance

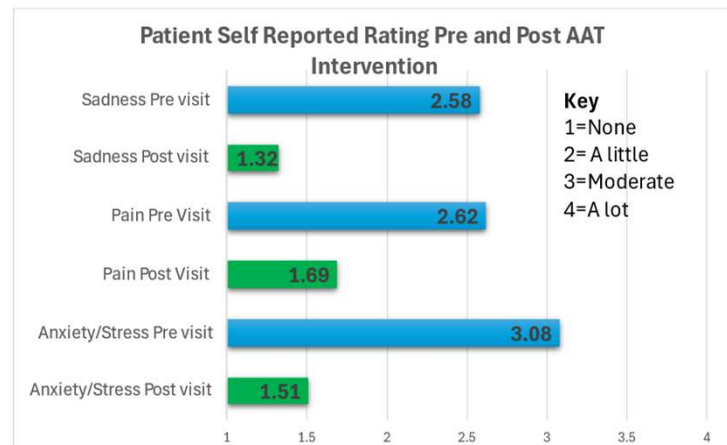
- Patient throws/kicks ball which dog retrieves
- Dog ambulates alongside patient, assists with pacing. Patient helps “train” dog by rewarding sit each time patient stops.
- Stair training with dog pacing alongside patient.

### Motivation/Engagement

- Visit cue—dog will lay head on patient’s lap
- Lap cue – dog will put front paws on patient’s lap for grooming and sitting balance engagement
- Give to Friend cue—dog will bring designated object, ie Kleenex box, ball, brush, socks to patient

## Preliminary Metrics— Patient Survey

- When asked to rate impact of AAT on **Motivation** to participate in therapy, average response was **3.72** on 4-point scale



## Survey Says...

His kisses are magical. There is no love like that of a dog

He motivated me to get out of bed and walk

He made me want to lean over and pet him

It was a joyful feeling when they came to my room. A big, loving hug

My spirits were lifted. Best program ever!

He was calming and relaxing to me

I instantly felt happier and less anxious/stressed. This program is a game changer and absolutely made a positive difference in my hospital stay

Fitz brought me joy and peace

He brought a bright spot to our day

He made me forget about my problems for awhile

His gentle eyes took the pain and sadness away

Working with Fitz makes my heart happy

He encouraged /motivated me to walk longer distances

Fitz uplifted my attitude



## Barriers/Learnings



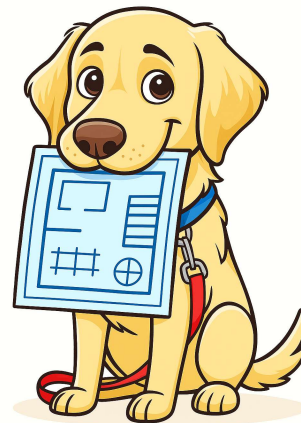
Lack of blueprint or framework initially—led to us building the plane as we were flying it! Incorporated EBP in innovative ways as program developed



Difficult to capture objective measures of success. Data is mostly qualitative in nature—ample anecdotal evidence



Theoretically can link increased motivation and engagement to better therapeutic outcomes—can we connect to bigger picture such as LOS?





## Barriers/Learnings

Maximizing limited resources to advance program— one dog for a 700 bed hospital

Opportunity to better incorporate dog as a resource for staff, however limited time in dog's working day with priority going to patients

Many requests for dog to "visit" patients when they see him on the units. Enhanced our existing pet therapy program and had cards made up that handler could give to patient/family member requesting a visit so facility dog could focus on therapy interventions



## Occupational Therapy

### Definition of Occupational Therapy (OTPF-4)

Occupational therapy is defined as *“the therapeutic use of everyday life occupations with persons, groups, or populations (i.e., the client) for the purpose of enhancing or enabling participation”*.

Guided by the OTPF-4, OT practitioners address **all nine categories of occupation**—activities of daily living, instrumental activities, health management, rest and sleep, education, work, play, leisure, and social participation. By integrating the client’s **mind, body, and spirit** within their unique context, OT provides a truly holistic approach that supports motivation, agency, and the therapeutic relationship—helping people do what matters most and live with meaning across the lifespan.



## Occupational Therapy – What are Occupations?

- 1. Activities of Daily Living (ADLs)** – basic self-care (eating, dressing, bathing, toileting).
- 2. Instrumental Activities of Daily Living (IADLs)** – more complex daily activities (shopping, cooking, money management, caregiving).
- 3. Health Management** – managing one's health conditions, nutrition, physical activity, and medication.
- 4. Rest and Sleep** – routines for preparing, sustaining, and participating in rest and restorative sleep.
- 5. Education** – formal and informal learning, participating in educational environments.
- 6. Work** – employment interests, job seeking, job performance, volunteer work.
- 7. Play** – spontaneous or organized activity for enjoyment, exploration, creativity.
- 8. Leisure** – non-obligatory activities done for enjoyment in free time.
- 9. Social Participation** – engagement in relationships, community, family, peer, and intimate partner roles.



## Fitzgerald's Cues – An Adaptive Journey

Cues Fitz came with were modified/adapted and added to tailored to unique or canine needs / goals / barriers / benefits

**Acute Setting:** Many new people working on similar things

Allows us to be very occupation-based, functionally focused, and flexible to shifting needs needs + medical picture of patient

**Outpatient, Inpatient, Skilled:** Same people working on new things

Allows you to initiate or progress in similar or very different ways



## Positional Cues

• *Positional Cues* → the  
“*Unsung Heroes*”:

- Side
- Heel
- Up
- Down
- Sit
- Visit
- Lap
- Cover



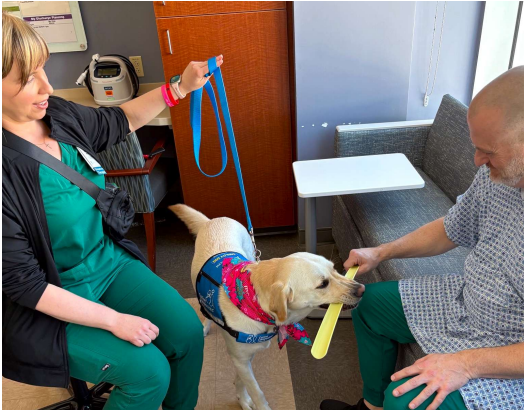


## Tug Cues Really Pull You In...

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- Socks
- Walker
- Door/Drawers
- Extremities w/ support





# Get, Hold, Give







# Friend

- • Visit → friend
- • Lap → friend
- • Cover → friend





## Say Hi

- Say Hi - waving at patients whose room he cannot enter
- Also a good anchor to signal end of session (Say Bye)

# Hit It Push

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## Applied Positive Psychology

Barbara Fredrickson's **Broaden-and-Build Theory** explains that positive emotions—such as joy, comfort, and connection—momentarily **broaden attention and thinking**, helping people notice more options, think creatively, and remain open to learning. Over time, these broadened states **build lasting personal resources**, like resilience, trust, and coping skills.

In hospital settings, patients often feel fear, stress, or pain, which **narrow focus** and limit engagement.



## Broaden & Build via AAT

- **AAT** introduces moments of positive emotion (e.g., joy when petting a dog, calmness from companionship). These emotions help:
- **Broaden awareness** → patients become more open to therapeutic exercises, education, and coping strategies.
- **Build resources** → patients gain confidence, social connection, and emotional regulation skills that last beyond the session.
- **Undo stress** → positive emotions reduce lingering physiological arousal from anxiety or pain.
- **Fuel engagement** → small positive moments create upward spirals that enhance motivation and participation in therapy.
- **Takeaway:** By sparking genuine positive emotions, AAT is not just comforting—it is a clinically powerful way to enhance patient learning, engagement, and recovery in the hospital environment.



## Positivity Resonance

**Love as micro-moments:** Brief, shared connections built on positive emotion, eye contact, touch, and mutual care.

**Positivity resonance:** When two beings sync emotionally and physiologically, releasing oxytocin, lowering stress, and boosting resilience.

**Health impact:** These moments broaden awareness and build long-term resources (trust, coping, motivation, healing).



## Positivity Resonance via AAT

**Shared positive emotions:** Petting, eye contact, and play with a dog create instant calm and joy.

**Physiological synchrony:** Patients and dogs can align heart rates and stress hormones, mirroring positivity resonance.

**Therapeutic benefits:**

- Reduces anxiety and pain
- Increases motivation to engage in therapy
- Enhances resilience and recovery in hospital settings

**Bridge to care:** Dogs foster connection, making patients more open to staff, treatment, and difficult tasks.



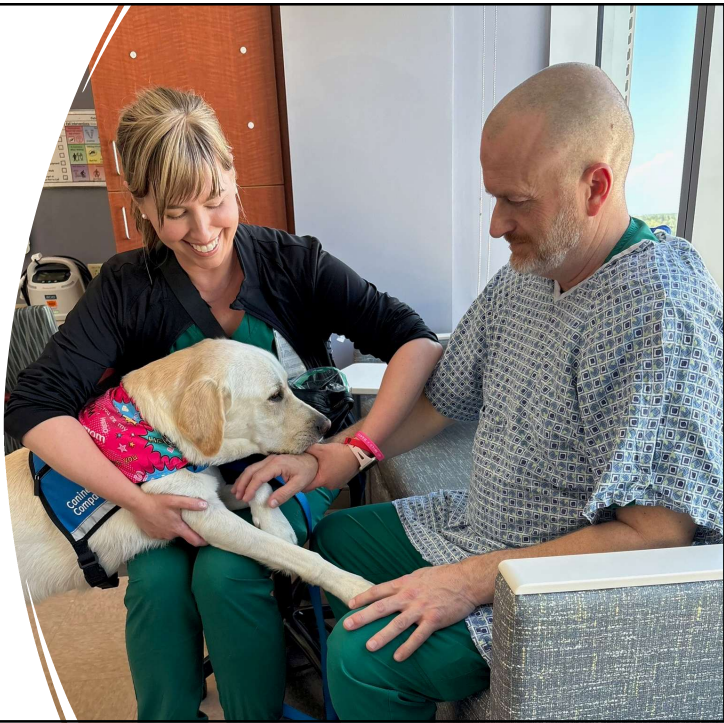


Juan's Story



# Anthony's Story

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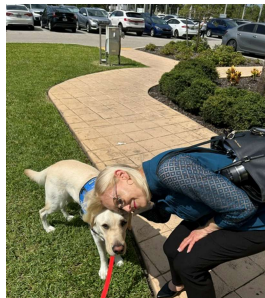
## Kirk's Story



## From the Patient's Perspective...

- "I just want to be a slug. But you won't let me will you? You are so calm and patient. And you give me strength. Let's go!!"
- "The way he brings the calm. When you're in the hospital, you're feeling so many things and having him here just makes all of that fade away. He takes your focus off of that. He brings joy helps you feel calm."





## From The Patient's Perspective...

- "You can't measure it. You can't check a box. It's immeasurable. Thank you for your care."~Noelle



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