

President's Message

Francisco Maia, PT, DPT, CCRT

As you were all made aware earlier this year, I stepped into the role of President for the Animal PT SIG and will be finishing the term 2019-2022. I am also excited to announce that Jenny Moe has agreed to step into the Vice President's role that became vacant, but we will be holding an official election for the Vice President/Education Chair position this November. With that in mind, I wanted to take the time to officially introduce myself and discuss my vision for the future of the Animal PT SIG.

I was born and raised in Sao Paulo, Brazil, and moved to the United States in 2005. I graduated with a Kinesiology degree from Indiana University in 2009 and with my Doctor of Physical Therapy degree from the University of Pittsburgh in 2012. However, working with animals was never on my radar until 2014. Ever since my teen years, I have known that I wanted to be a physical therapist. Being an athlete myself, my interest in this field developed after realizing that I was always curious about the rehab process when I became injured. Once I graduated, I started to work in an outpatient setting, and although I did enjoy what I was doing I did not feel passionate enough to see myself doing that for the rest of my career. I was looking for something else and that was when I heard about canine rehabilitation. Right away I knew that was what I was meant to do: combine my skills and knowledge as a physical therapist with my passion for dogs.

Throughout 2014 I went through the coursework with the Canine Rehabilitation Institute to become a Certified Canine Rehabilitation Therapist, and after completing my certification in early 2015 my wife and I moved to Chicago where I started to work as an animal physical therapist at a well-established veterinary clinic. While working there I was able to hone my skills and make a successful transition from humans to canines; however, things did not go as planned.

Unfortunately, there are 2 main issues that physical therapists encounter when making that transition: we either cannot find a job at a veterinary clinic or if we do, they often tend to underpay us compared to what we earn as human physical therapists. I found myself in the second scenario and agreed to take a nearly 50% pay cut to what I used to earn so I could work within my passion. During that time, I was able to supplement my income by working as a contractor in home health and that was fine for a year or so until I did my taxes and realized that I wasn't even breaking even with my household expenses between both jobs.

When I took that job at the veterinary clinic, I thought that if I worked there for a year, and showed them my value as a physical therapist, I could get a raise that would make up for the lower salary from that first year. But that was not what happened. Around that time, I also started noticing a shift in their business model: whereas the clinic was built with the premise of veterinarians and physical therapists working together, they were hiring veterinary assistants to carry out the majority of the treatments as the business grew. It was a gradual change in their business model, but it got to the point where I had to confront them and was told that they saw no difference between a veterinary assistant and a physical therapist.

It was hard to hear that. Were they telling me that all the struggles and pain I went through during 7 years of school to get my DPT was not worth it? That the skills and knowledge I had acquired through that journey were matched by those of an assistant with a certification as a canine rehabilitation assistant? The feeling of not been valued, along with other personal issues, led me into a downward spiral. My lack of confidence and low self-esteem started affecting my relationships. I was working within my passion for canine rehabilitation, yet I still dreaded every... single...day.

It all came to a crash in the summer of 2017. I knew I wanted to continue working with canines, but that situation was not feasible. I also could not just go find a new job in this field because, as previously mentioned, they are unfortunately not as easy to come by. Going back to treating humans full-time was not what I wanted to do, but I also did not want to stay at that job any longer than I had to. But an idea, which for me seemed crazy at that time, kept coming back: What if I combined my passion for canine rehab with my experience as a home health contractor? Meaning, what if I started a mobile canine rehabilitation business? I knew there was a need for such services in a city like Chicago, but there was one huge problem: I knew nothing about business. I had focused so hard on becoming the best canine physical therapist I could be and now lacked all the other skills necessary to get a business even started, let alone growing one.

At that point, I was ready to move forward, but I had to learn how to do so. Failure was not an option, because that meant going back into human physical therapy full-time, so I decided to take the jump and learn this business stuff. Over the last few years, I have invested a lot of my time, money, and energy into learning how to operate and grow a successful and profitable canine rehabilitation business. I do not doubt that the skills I have learned as a business owner will help me lead the Animal PT SIG as well. Although it was not easy, growing my own business is one of my life accomplishments that makes me most proud. We now operate a 1,300 square foot facility on Chicago's north side and employ 2 physical therapists and 2 administrative staff.

So how does my journey tie-up with my mission for the Animal PT SIG? At one point I realized that if I, who knew nothing about business up until 3 years ago, could start and grow a successful canine rehabilitation business then I see no reason why others in similar scenarios wouldn't be able to do the same. Of course, they would need some guidance and support as well, and that is where I want to lead the Animal PT SIG towards. Those who work in the field of animal rehabilitation know that we face an array of obstacles, most prominently including legislative issues and lack of a job market. But strength will come in numbers, and my goal is to help guide a new generation of physical therapists to continue the work established by the leaders in our profession over the last 20 years.

We have started our work to establish 4 standing committees that will help move our mission forward: Practice/Legislation, Communications, Membership, and Research. Each committee will be focusing on a different category that is vital for the growth of our profession as outlined by the Strategic Planning published in 2018. We intend to develop a structure that would allow more

members to be involved, thus helping bridge the gap between our membership and the leadership team while helping develop and mentor the new generation of physical therapists that will continue with our mission for decades to come. We could always use more help, so if you are interested in joining these committees email me at francisco@thek9pt.com. You do not have to be working in animal rehabilitation to be a member of these committees, but you will need to be an Animal PT SIG member and have a passion to help us continue growing this field so we can help more animals and their owners by paving the way for more physical therapists who wish to successfully make the transition from 2-legged to 4-legged animals!

A New Leash On Life: Assistive Mobility Aids for Dogs – What to Consider and Why

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There are numerous options for assistive mobility devices available for people, such as crutches, canes, and walkers. Physical therapists will often prescribe these aids for patients with impairments with balance, fatigue, pain, weakness, joint instability, peripheral nerve impairment, spinal cord injuries, and degenerative diseases, among other clinical indications. Generally, the primary goal in prescribing these devices is to minimize weight-bearing, either partially or fully, and to enable a person to ambulate with greater ease.

There is also a myriad of offerings for braces and joint supports on the market for humans. Physical therapists will recommend the use of a support or brace to help stabilize a joint following injury to a ligament or tendon or to provide compression around a joint to help minimize swelling, increase proprioception and reduce pain. Joint supports vary in level of stiffness and the amount of support they provide. Generally, if there is a complete ligament rupture or a considerable amount of laxity and instability in a joint, orthotic type support (a support with hard plastic or metal components and hinges) is recommended. First and second-degree sprains and strains often can be supported while healing with a softer, less bulky support.

Similar clinical reasoning can be used in the prescription of assistive mobility aids for a canine population. Veterinary rehabilitation professionals and pet owners are becoming increasingly aware of the benefits assistive mobility aids can provide in improving the quality of life for pets. Indeed, there is a growing market of options for aids such as carts, wheelchairs, harnesses, and braces/supports available for canine patients. Of course, there are also options for cats, horses, chickens, and likely any animal out there that one would be brave enough to prescribe an orthotic device; however, for this article, canine assistive aids will be the primary focus. Also of note, examples given below of companies offering assistive aids are not exhaustive.

Whenever one is considering an assistive mobility aid for a canine client, certain considerations should be made. Medical concerns are the most obvious consideration. This includes the diagnosis or functional impairment and why the dog needs an assistive aid. One must know if the condition is acute or chronic, neurological or orthopedic, or a degenerative condition that will worsen over time. For example, a dog with a degenerative neurological condition may require a rear-wheel cart to start, with the option

of modifying the cart to a 4-wheelchair in the future as his weakness progresses. It is also important to consider other medical concerns and co-morbidities, such as circulation issues, skin conditions, endocrine issues, and other orthopedic concerns.

Along with medical concerns, one of the most important questions to answer is, *What is the goal of the assistive mobility aid, and will the chosen aid accomplish the goal?* Clinical reasoning must go beyond a goal of ‘increasing mobility’ and instead (1) define what the mobility impairment(s) is and (2) define what needs to be done to address the impairment(s). For example, a dog with advanced osteoarthritis in the hips, the goal would not be ‘to help him ascend stairs with more ease.’ Instead, (1) impairment: weakness and pain in the hind end, and (2) goal: to reduce the weight-bearing demand on the hindlegs. A clearly defined goal will support the clinician in choosing the most appropriate assistive aid for his or her canine patient.

After considering medical needs, clearly defining a goal, and narrowing down aids that would accomplish the goal, it is important to consider other things such as the dog’s breed, age, and temperament; environment; ease of use of the device; owner compliance; and cost.

- **Environment:** Consider the dog’s walking surfaces inside and outside the house. Ask owners about stairs going into the house and within the house, whether there is carpet, throw rugs or smooth surfaces to navigate, and whether the dog will be using the device outdoors, indoors, or both. Ask about the layout of an owner’s home, including the width of hallways and doorways. Also, consider factors such as the type of vehicle the owner drives.
- **Ease of use:** Consider the comfort of handles on harnesses and if the straps are appropriate for the owner’s stature. Some harnesses can be put on with the pet laying down and some require the dog to be standing. Some wheelchairs are adjustable with the pet in them, others are not. Consider the owner’s physical health in terms of his or her ability to lift a large dog into a wheelchair or pull straps of a brace tight enough. The mobility aid chosen must fit well and be comfortable for the pet; however, the mobility aid must also be easy for the owner to don and doff.
- **Temperament, breed, and age:** Active dogs will require more rugged equipment or more supportive bracing. A dog that runs at the park frequently would do better with angled wheels on a wheelchair for quick turns, whereas a less active dog would do well with straight wheels that are easier to maneuver around a home. Older dogs with weakness will likely need a mobility device for a more long-term period, whereas a young dog with an acute injury would need a



short-term solution. If choosing an aid for a puppy, one would have to account for growth.

- **Owner compliance:** This is where careful consideration of ease of use of a device becomes important. If an aid is easy to use, the owner is more likely to use it with the dog.

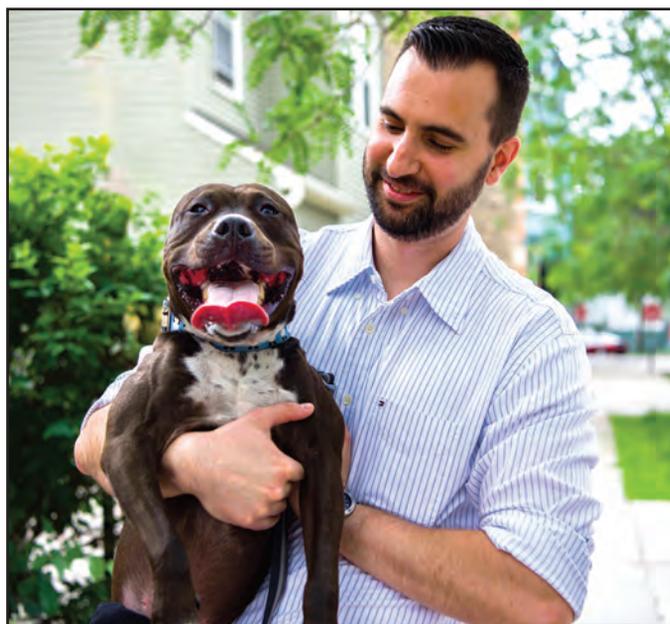
There are numerous options available to assist dogs with mobility such as wheelchairs, harnesses and slings, braces and supports, and others. Choosing the best aid for a dog will depend on thorough clinical reasoning, as described above, and knowledge of all available options. A good rule of thumb when selecting aids is to first try finding something ‘off-the-shelf’ that will accomplish the goal. If there are no suitable ready-made options available, look to companies that offer custom designs. Should there still be nothing available, be creative and figure out how to modify something to achieve the goal, or find a company that will design a novel product to meet the dog’s needs.

Wheelchairs are typically chosen for dogs experiencing considerable difficulty walking due to illness, injury, degenerative disease, neurological diseases or balance problems, or for paralytic dogs who benefit from being in an upright position. Where a significant gait impairment is not expected to improve, wheelchairs should be considered. They may also be an option for short-term use to help mobilize a neurological dog and retrain walking. Some dogs can regain mobility quicker if the dog can use a cart for practicing and strengthening gait patterns after spinal cord injuries. These aids can be costly; however, some companies rent dog wheelchairs.

There are 3 main categories of a dog wheelchair: Rear-wheel, front-wheel, and 4-wheeled. Rear-wheel carts provide support for hind end weakness, front-wheel for foreleg weakness, and 4-wheeled for weakness in 2 ipsilateral limbs, 3, or 4 limbs. When choosing one of these wheelchairs for a dog, one must consider sizing, adjustability, wheel size and material, the weight of the cart, owner’s ability to load the dog into the cart, ease of transport, and if a 2-wheeled chair can be modified to a 4-wheeled chair later if needed. Companies designing wheelchairs for dogs include K9 Carts, Doggon’ Wheels, Walkin’ Pets, Eddie’s Wheels, Best Friend Mobility, and New Life Mobility.



Lt. Dan as a 12-week old puppy using a cart for assistance due to neurological issues.



Lt. Dan and Francisco Maia

Harnesses and slings are for dogs that require minimal to moderate assistance with walking, stairs, and rising from recumbent positions to sitting and standing but do not require the full support a wheelchair offers. Both harnesses and slings may be used immediately postsurgically to safely help pets outside to void, and later postsurgically or after acute injuries, to strengthen and retrain gait. Slings are best suited for short-term use. Harnesses are more appropriate for weakness or balance issues secondary to age, injury, or disease and to assist with activities of daily living and fall prevention. Three types of harnesses include the front-end harness, rear-end harness and combined front and rear end harness. When choosing one, it is important to consider where the handle on the harness is in relation to where the dog needs support. For example, if the dog is weak in the front and hind end, a handle at his center of gravity will work best; however, if the dog suffers from hind end weakness a handle placed more caudally would be best. One may also consider if there is an opening for voiding, how the harness is put on the animal (ie, does the dog need to be standing, or can it be put on lying down), and the owner’s strength, age, and build. For example, ergonomically a 5-foot tall owner may have a very hard time providing the lift a Great Dane will need to help take him down the stairs to the front door safely. Harness options include Walkin’ Pets, Help ‘Em Up Harness, Walkabout Harness, Ruffwear Web Master, and Ginger Lead.

Similar to humans, the options available for orthotics and supportive joint braces for dogs is extensive. Generally, the goal of any brace is to help stabilize a joint, reduce swelling, reduce pain, provide compression, enhance proprioception, and/or enhance mobility. There are many off-the-shelf braces available, as well as, custom soft supports and hard orthotic braces. Companies offering off-the-shelf and custom products include DogLeggs, TheraPaw, Balto, Hero, OrthoPets, OrthoDog, Walkin’ Pets, and Orthovet. One can find tarsal supports, carpal supports, stifle braces, hip supports, back braces, shoulder hobbles, elbow supports, neck supports, specialized boots, and dorsi-flex assist boots.

Other mobility aid options include halos to assist blind dogs in navigating their surroundings more safely. Drag bags provide a slippery surface to help paralytic dogs drag their hind legs without causing abrasions. Strollers and wagons offer ways for dogs who

cannot use wheelchairs an option to move around in the outside environment and provide mental stimulation.

There are so many assistive mobility aids available for dogs with mobility impairments. Using sound clinical reasoning, including a well-defined goal and consideration of various other factors is paramount in selecting the most successful aid for one's canine patient.

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