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Four Leg News

Hey folks! So, this is a very different newsletter. This one is all about things such as veterinary perceptions about the practice of animal rehab or complementary healthcare practices. It looks at education in complementary therapies, as well as interprofessional practice and the public's use of allied health care practitioners. Lots of interesting stuff and different things to think about when it comes to all of us working together! Enjoy the read!

Cheers, Laurie



STARTING WITH EDUCATION...

What are veterinary students learning about complementary or alternative therapies?

Schoen et al (2000) published results of a survey on education and research programs in complementary and alternative veterinary medicine in veterinary medical schools in the USA. The AVMA updated their Guidelines for Alternative and Complementary Veterinary Medicine in 1996 to indicate that the use of these modalities is considered to constitute the practice of veterinary medicine and that it is incumbent on veterinarians to pursue education in the proper use of these modalities.(1)

Questionnaires were sent to 120 faculty members at each of the 27 US veterinary schools, including deans and members of curriculum committees, and specifically identified faculty members who were believed to have an interest in CAVM. Forty-one (33%) questionnaires were completed and returned from 23 of the 27 US veterinary schools. None of the 23 responding US veterinary schools had a required course focusing on CAVM. Nine veterinary schools offered elective courses; of these schools, two also included lectures on CAVM during required courses. These elective courses were typically a general introduction to CAVM or an introduction to veterinary acupuncture. Instruction in CAVM was primarily in teaching courses but also was included in clinical situations. Respondents stated that topics included acupuncture (12 schools), nutritional supplements (9), physical therapy (9), homeopathy (7), botanical medicine (3), and chiropractic (4). 87% of the respondents indicated that veterinary acupuncture should be included in the veterinary medicine curriculum, and a similar number believed that nutraceuticals, nutritional supplements, and physical therapy should be included as well. 61% believed that botanical (herbal) medicine should be included, but 11% disagreed. 61% indicated that veterinary chiropractic should be included, but 19% disagreed. Only 41% believed that homeopathy should be included, whereas 22% disagreed. Most respondents believed that all CAVM should be offered as elective courses in veterinary schools and the majority also believed that an elective clinical rotation would be beneficial and believed that training in CAVM should be offered as a postgraduate course. Although many respondents indicated a lack of time in the curriculum for full training in these modalities, they did believe that introductory-level elective courses would be appropriate.(1)

An update to this survey was conducted by Memon & Sprunger (2011). They stated that complementary and alternative veterinary medicine (CAVM) include veterinary acupuncture, veterinary chiropractic, nutritional therapy, herbal medicine, homeopathy, Ayurvedic medicine, and Reiki. An unpublished 2005 survey was conducted that involved veterinarians who graduated from Washington State University from 2000 through 2004. 60% indicated that they encountered situations that required skills or knowledge in CAVM on a weekly or monthly basis, whereas 7% indicated they encountered such situations daily; with the remaining only encountering such situations once each year or never. In addition, the majority of respondents indicated that their veterinary training prepared them poorly or very poorly for handling situations that involved the use of CAVM.(2)

These researchers sent surveys to 41 schools. Responses were received from 34 of 41 (83%) veterinary medical schools. Of these 34, 26 were in the United States, 2 were in Canada, 3 were in Australia and New Zealand, and 3 were in Europe. Of the topics specifically mentioned in the survey, nutritional therapy, veterinary acupuncture, and rehabilitation or physical therapy were most

commonly covered in the curricula. Sixteen respondents indicated that their veterinary medical schools offered a course in CAVM. For those 16 veterinary medical schools, only 4 had positions devoted to teaching CAVM. Only 1 veterinary medical school (Murdoch University) offered a required course in CAVM (a half day course on acupuncture); all other training in CAVM was via elective courses. Eighteen veterinary medical schools had no course offerings in CAVM.(2)

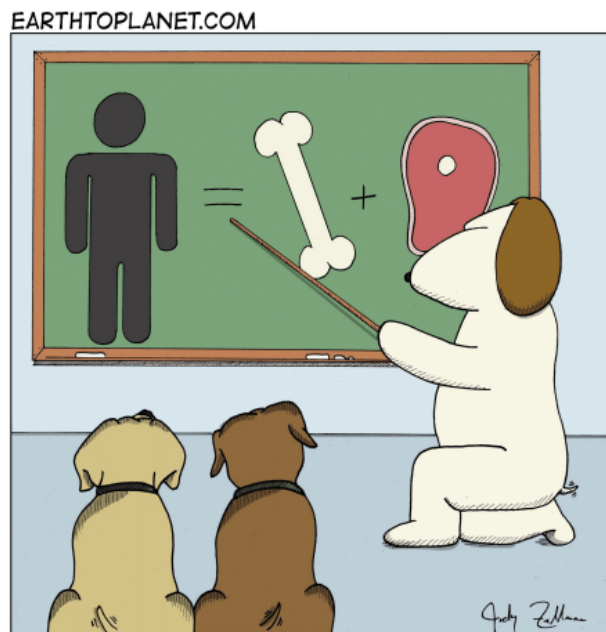
The most common comments of respondents reflected strong opinions that the inclusion of CAVM in the professional curriculum must be via evidence-based medicine. The consensus appeared to be that students should be aware of CAVM modalities because there is a strong public interest in them and practitioners should be able to address client questions from a position of knowledge. Thus, the purpose of including these topics in the professional curriculum would be to teach veterinary medical students about them, rather than to confer some degree of practical ability in their use.(2)

References:

1. Schoen, A. Results of a survey on educational and research programs in complementary and alternative veterinary medicine at veterinary medical schools in the United States. Vet Med Today: Special Reports JAVMA, Vol 216, No. 4, February 15, 2000
2. Memon, M, Sprunger, L. Survey of colleges and schools of veterinary medicine regarding education in complementary and alternative veterinary medicine. Vet Med Today: Special Report, JAVMA, Vol 239, No. 5, September 1, 2011.

Laurie's thoughts:

Really, what we have to take from this, is that most veterinarians coming out of school have limited or no exposure to information about canine rehab or any other complementary / alternative healthcare practices. Keep this in mind when it comes to your marketing efforts. Education will be key. Don't assume. This will be an uphill battle for all of us! Hang in there! It'll be worth it!



PROFESSOR BARKOWITZ'S
SCHOOL FOR CANINE RE-EDUCATION

INTERPROFESSIONAL EDUCATION...

Physical therapy (PT) relies on manipulation, therapeutic exercises, and the use of physical modalities to improve function; and has been used for animal rehabilitation for more than 30 years. Many reports of experimental models have documented the efficacy of animal physical rehabilitation (APR) in multiple species. The purpose of this study (Boyel & Marcellin-Little, 2002) is to describe an elective course for MPT and DVM students on animal rehabilitation and report the results of a post-course student survey aimed at assessing the impact of the course.

A week-long elective course given at North Carolina State University (NCSU) College of Veterinary Medicine in conjunction with Elon College was provided to 12 MPT and 12 DVM students. Students were given 30 lectures, two case discussion laboratories and six practical laboratories with live dogs. MPT and DVM students were paired for the laboratory sessions. At the end of the course, students were surveyed.

Eighty-six percent of DVM and MPT students who responded to the survey changed their perceptions of the field as a result of the course with increased appreciation for the importance of rehabilitation for animals. DVM students were surprised that animals other than horses are receiving rehabilitation and that individuals are currently pursuing the field. MPT students feel that the field will grow slowly as a result of poor reimbursement and of limited public knowledge, DVM/PT collaboration, and DVM awareness of benefits of rehabilitation. All DVM students who responded to the survey reported that they were more likely to prescribe rehabilitation for their animal patients as a result of the course. They reported that they plan to educate clients about the need/benefit of rehabilitation for animals and that they would like to hire physical therapist to work in their practice. 84% of the MPT students who responded to the survey reported that they were more likely to go into animal rehabilitation as a result of the course. They were more comfortable

treating animals as a result of the course; they would like to gain more experience with humans first, and they would want equivalent pay for practicing veterinary physical therapy as for practicing physical therapy for humans.

All DVM students who responded to the survey reported they would be more likely to consider physical therapy for themselves or others as a result of the course. They commented that they had gained a new appreciation and respect for the knowledge base of physical therapists. They were surprised that physical therapists provide intervention for more than just “symptoms” and that physical therapy intervention was more than just modalities. They were also surprised how many PT outcome studies have been done and surprised to learn how many specialty areas exist within PT. They reported that they were impressed with the holistic approach to patient/client intervention.

This course appeared to positively influence students’ attitude and perception of the field itself and of each other’s disciplines. Interdisciplinary courses are rarely offered in the veterinary or PT curriculum. They appear, however, to have a strong positive influence on their participants. They may also help to promote the future interdisciplinary collaboration that would be required to ensure growth in the field of animal physical rehabilitation and in other emerging medical fields.

Reference:

Boyle , K. Marcellin-Little, D. Levine, D. An Interdisciplinary Animal Physical Rehabilitation Course for Physical Therapy and Veterinary Students. JVME 29(3) 2002.

Laurie’s Thoughts:

Wow! I think we’d have a much more congenial field to practice in, if this course were offered at all applicable universities!

Veterinary Perceptions and Use of Physiotherapists / Physiotherapy / Complementary Practices

The British Veterinary Rehabilitation and Sports Medicine Association (BVRSM) has been lobbying for regulation and training in **hydrotherapy** as an increasing number of veterinary specialists are doubting the benefit of hydrotherapy after seeing minimal or no direct improvement in their patients. Rehabilitation practitioners in the medical field are leaders in pain management and treatment of neuromuscular disorders. If a client is referred for rehabilitation they should be confident in clinicians capable of imaging, diagnosis and treatment planning; however, currently very few centres in the UK can provide this level of service. The importance of the role of veterinarians to establish, promote and regulate practice in the emerging field of rehabilitation should not be underestimated for the safety of the animals in our care.(1)

Meredith et al (2011) performed a survey of equine riders and trainers in New Zealand and found that the main reason for use of **allied health therapy** is the perceived effectiveness of the treatments rather than formal qualifications. Somewhat surprisingly, most respondents indicated that they did not discuss allied health therapy with their veterinarian or have their veterinarian and allied health therapist work together. This highlights a lost opportunity for the rider or trainer to maximise the horse's performance and welfare. Further education of riders or trainers as well as veterinarians and therapists should be undertaken to ensure each type of therapy are understood and used to their full potential. Research on the efficacy of allied health therapies and improved training standards of therapists will ensure that the service provided by such therapists benefit the equine athlete.(2)



*“Those who
have learned
to collaborate
and improvise
most effectively
have prevailed.”*

- Charles Darwin

Doyle et al (2006) looked at the **perceptions, knowledge and use of animal physiotherapy** by veterinary surgeons in Ireland by sending a questionnaire to various veterinary practices. The data revealed that while the majority were aware of animal physiotherapists, only 20 (out of 69 respondents) had referred a case and only two veterinarians were aware of the physiotherapist's qualifications. The referring veterinary surgeons had a significantly greater level of knowledge of the discipline. Perhaps this understanding of the role of the animal physiotherapist was involved in their decision to refer, or they may have learned more about physiotherapy through the referral process. The majority of respondents had graduated before 2000. There was no significant association between the year of qualification and level of awareness of animal physiotherapy. Their sources of information were primarily veterinary colleagues, animal owners, professional journals and physiotherapists, and only four respondents cited lectures at college, while eight

Veterinarian Perceptions & Use of Physiotherapy etc. CONTINUED...

reported television and the Internet as sources. There appeared to be greatest awareness of physiotherapy related to back and neck issues followed by tendon and ligament damage, joint restriction, and post-fracture rehabilitation. Fewer veterinary surgeons were aware of physiotherapists' involvement with respiratory conditions, haematoma and skin issues. Techniques such as massage, ice therapy and hydrotherapy were well known, and there was a reasonable knowledge of manipulation / mobilisation. Electrotherapy treatments such as ultraviolet, shortwave diathermy and interferential were not known, while 62% had never heard of taping. The results highlighted the need for more information on the less familiar conditions that may benefit from physiotherapy, as well as the various modalities used. Analysis of the subset of veterinary surgeons aware of animal physiotherapy indicated that they believed that the appropriate career path was through qualification as a chartered physiotherapist, followed by post-graduate qualification as an animal physiotherapist, and 92% agreed that a register of chartered animal physiotherapists should be set up in the Republic of Ireland. A majority stated that more research needs to be published on the effect of animal physiotherapy and they were interested in learning more about animal physiotherapy. While 91% of the respondents indicated they would be willing to allow animal physiotherapists to choose their own treatments, under veterinary control, only 43% believed that animal physiotherapists possess the ability to assess and evaluate musculoskeletal and neurological disorders. Generally, respondents felt that veterinary surgeons and the public should be given more information explaining the role of animal physiotherapy and its efficacy. Clearly, animal physiotherapists also need to promote their own practices with local veterinary colleagues. Many were concerned that there was a large number of unqualified practitioners calling themselves animal physiotherapists treating animals. Currently, in Ireland and the UK, the law decrees that an animal physiotherapist may only treat an animal if it has been referred by a veterinary surgeon. The Association of Physiotherapists in Animal Therapy is a Clinical Interest Group of the Chartered Society of Physiotherapy and has 178 members; Category A members are allowed to perform unsupervised physiotherapy on animals while Category B members are not necessarily physiotherapists and must be supervised by a category A member or a veterinary surgeon. There is no Irish equivalent of ACPAT (Association of Chartered Physiotherapist in Animal Therapy – in the UK) and there are only five or six chartered physiotherapists practicing animal

HIGHLIGHTS:

- The British Veterinary Rehabilitation and Sports Medicine Association (BVRSM) is concerned about the lack of regulation and training in hydrotherapy / hydrotherapy centres.
- New Zealand equestrians choose allied health therapies based on perceived effectiveness as compared to formal qualifications. Furthermore, they typically do not discuss allied health therapy with their veterinarian.
- Irish veterinarians are most aware of physiotherapy related to back and neck issues followed by tendon and ligament damage, joint restriction, and post-fracture rehabilitation.
- British veterinarians rank physiotherapy for osteoarthritis as least important & least prescribed as compared to exercise modulation, medications, nutraceuticals, weight loss.

Veterinarian Perceptions & Use of Physiotherapy etc. CONTINUED...

physiotherapy in Ireland. Interestingly, a majority of the veterinary surgeons supported the concept of veterinary surgeons and animal physiotherapists working out of the same practice. Veterinary surgeons and animal physiotherapists could explore the economic and practical aspects of this arrangement. (3)

In the British Isles, the approaches of veterinarians towards the **management of canine osteoarthritis** (OA) was assessed for the clinical utility of various modalities, including exercise modulation, medications, nutraceuticals, weight loss, and physiotherapy. 228 practitioners responded to the questionnaire, 70% were males and 86% of the 220 respondents who answered this question had graduated from veterinary schools in the UK or Ireland. In regards to the question asking what governed the choice of treatment method; 96% of veterinarians indicated that the severity of the disease was the major factor; other factors were the age of the animal (77%), client wishes (72%), cost (70%), activity levels of the dog (66%) and client compliance (63%). Of the practitioners that commented on the details of the physiotherapy that they recommended to their clients; 53% recommended passive range of motion manipulation, 38% recommended massage, 17% recommended specific exercises and 12% recommended hot packs. Veterinarians who had graduated less recently used exercise modulation less frequently and ranked exercise modulation as less important; this was also seen in veterinarians who had graduated outside the UK or Ireland. Practitioners who had graduated less recently used physiotherapy less frequently, and male veterinary surgeons ranked physiotherapy as less important than female veterinary surgeons. Physiotherapy was the least frequently used therapeutic modality, also being ranked as the least important. The Association of Chartered Physiotherapists in Animal Therapy (ACPAT 2010) states that physiotherapy is supported by the best available evidence, and so it is disappointing that more practitioners do not utilize physiotherapy. Previous research has found that physiotherapy in osteoarthritic dogs has a positive effect on both range of motion and overall improvement in mobility and ground reaction forces in combination with weight loss. Physiotherapy for dogs with OA generally requires a combination of techniques. Hot packs may be applied before other modalities to reduce muscle spasm and cause vasodilation and therefore increase local metabolism and nutrient delivery. In addition, the use of crushed ice can reduce the signs of OA. Of the physiotherapy techniques, passive range of motion manipulation and massage were most commonly used by practitioners in the present study. This study highlights the lack of homogeneity between veterinarians with some current management practices that are not in agreement with the most current literature recommendations. (4)

References:

1. Davies, L. Provision of canine hydrotherapy in the UK. *Veterinary Record* 168, 465-466. (2011)
2. Meredith K et al. The use of allied health therapies on competition horses in the North Island of New Zealand. *New Zealand Veterinary Journal* 59(3), 123–127, 2011.
3. Doyle, A. and Horgan, F. Perceptions of animal physiotherapy amongst Irish veterinary surgeons. *Irish Veterinary Journal*, Volume 59 (2) : February 2006
4. Bound, NJ., Upjohn, MJ., Jackson, S., Baines, SJ. Assessment of veterinary practitioners in the British Isles' approaches towards the management of canine osteoarthritis. *Veterinary Record* 168, 563. (2011)

Interprofessional Practice and The Veterinary Team

Kinnison et al (2014) published a conceptual article on the rise of interprofessional practice in veterinary medicine. In mixed veterinary practice, you will see multiple occupations working towards the same goal: providing excellent care. Terms such as multidisciplinary simply suggest several disciplines and do not allude to their working styles. This article uses the term inter-professional to describe active working relationships across disciplines and professions to achieve a common goal.

In the Journal of Veterinary Medical Education, there was a series of historical articles on veterinary education and the veterinary profession in North America that documented the initial mutual respect between physicians and veterinarians. This mutual respect ultimately disappeared, resulting in a distance between the professions, largely due to what the authors identify as the “geographical imbalance of veterinary colleges”. He now calls for a return of the collaboration with medicine from education to practice. This article suggests that the evolution of the veterinarian’s role should be explored alongside the evolution of closely related occupations or professions. Prominent authors in the sociological field of professionalism explain how professional collaboration is not limited to occurring within a single profession (intra-professional collaboration) but also involves other professions (inter-professional collaboration), and that battles, jurisdictional arguments, and the resulting division of labor are central features of professionalism.

Within the UK, frequent inter-professional interactions occur between veterinarians and veterinary nurses, who hold similar roles to veterinary technicians in North America. Nursing came into its own with the increasing treatment of dogs and cats, allowing veterinarians to focus on a curative role while training their own veterinary



Interprofessional Practice & The Veterinary Team CONTINUED...

nurses to undertake a caring role. During the early period of the development of formal qualifications in veterinary nursing, the working relationship between veterinarians and veterinary nurses was still one of hierarchical dominance by the veterinary profession, with veterinarians writing the nurses' textbooks and controlling their examinations. However, in 2007, a non-statutory register was implemented which allowed listed veterinary nurses to choose to just remain on the list or to also join the register; all nurses qualifying after 2003 automatically joined the register. Registered Veterinary Nurses (RVNs) are required to keep up-to-date with continuing professional development and to comply with the Royal College of Veterinary Surgeons' (RCVS) Codes of Professional Conduct for Veterinary Nurses. A disciplinary system was introduced in 2011 to deal with cases of misconduct of RVNs.

It is not only veterinarians and veterinary nurses that must work together, and this new inter-professional situation is global. More and more individuals in occupations or aspiring professions such as receptionist, practice manager, accountant, animal behaviorist, and physiotherapist are employed or contracted by veterinary centers, along with hoof trimmers and farriers. The public's demand for cost-effective services and changing attitudes may have contributed to the rise in these members of the extended team. While a limited range of quantitative data exists to describe the level of inter-professional relations, there has been no attempt or few attempts to qualitatively investigate inter-professional practice and the consequences on veterinarians now working within veterinary teams. Some consequences of professions changing their roles may potentially have negative aspects; such as practitioners losing contact with patients as nurses evolve to undertake minor-illness consultations and initial assessments.

Good inter-professional practice is difficult to define but this article's authors suggest that it alludes to an ideal situation of effective communication, knowledge of each other's roles and responsibilities, horizontal transfer of information, respect between professions, appropriate team structure, and set team processes between professions with complementary knowledge and skills. It can be theorized that good veterinary inter-professional practice may have benefits for the practice, the individual team members, the client, and the patient.

Interprofessional collaboration holds promise for reducing medical errors, improving the quality of care and meeting the needs of diverse populations.

We can increase interprofessional collaboration by educating doctors, nurses and other health professionals together, and by retraining providers to work together.

<https://www.rwif.org/en/library/research/2011/09/what-can-be-done-to-encourage-more-interprofessional-collaborati.html>

Interprofessional Practice & The Veterinary Team CONTINUED...

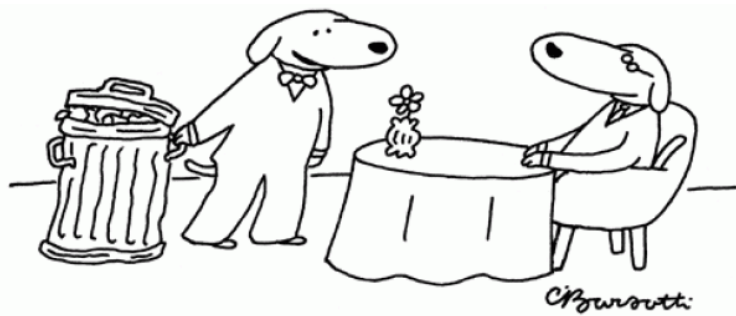
Challenges of inter-professional practice may ultimately stem from the fact that although professions and occupations evolve with reference to one another, they can be fundamentally different in terms of their training, regulation, and philosophical approaches, which can lead to ingrained boundaries. The first challenge of inter-professional practice are the differences in power and historical status of the professions, which produce hierarchical structures. It is likely that veterinarians would be resistant to other professions that appear to encroach on their area of expertise. Any changing of roles not only demands mutual respect for each other's abilities, but may also cause insecurity if roles are then blurred. Therefore, it should be clear that respect as well as knowledge, understanding, and acceptance of the roles of each profession/occupation are paramount during interactions. The hierarchical structure and perceptions of power can also repress individuals in traditionally lower-status occupations from challenging decisions made by their higher-status colleagues. Reasons for this behavior include individuals' concern about the accuracy of their knowledge, concern about affecting the relationship with their superior, or perhaps fear of repercussions.

The World Health Organization (WHO) has defined inter-professional education (IPE) as occurring “when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes” The WHO states that “After almost 50 years of inquiry, there is now sufficient evidence to indicate that IPE enables effective collaborative practice which in turn optimizes health-services, strengthens health systems and improves health outcomes”.

Within the veterinary field, as well as looking outwards to One Health, we must remember the importance of our own veterinary team and recognize the benefits of looking inwards and understanding veterinary inter-professional working. This knowledge, it is anticipated, could be used, potentially through IPE, to reduce hierarchical barriers, increase understanding of different roles, and improve communication, thereby improving team performance and outcomes.

Reference:

Kinnison T, May S, Guile D. Inter-Professional Practice: From Veterinarian to the Veterinary Team. *JVME* 41(2) 2014.



"The special, sir. Shall I spread it out or will you knock it over yourself?"

PRACTICE & TREATMENT APPROACHES...

HYDROTHERAPY – What’s going on out there...

In canine rehabilitation, hydrotherapy is becoming more popular as it improves endurance, range of motion (ROM), balance, joint mobility and function; while decreasing pain, muscular spasm, swelling and joint effusion.(1) Water resistance and buoyancy allows for equal energy expenditures at lower speeds as well as decreasing weight bearing which minimizes pain and soft tissue damage.(1) However, hydrotherapy does not equate to physiotherapy or rehabilitation.(2) Successful rehabilitation depends on teamwork that ideally includes an orthopaedic surgeon, a veterinary surgeon experienced in rehabilitation and a registered veterinary physiotherapist, all of whom contribute to diagnosis and treatment plans in order to achieve the best outcome for the patient.(2) Pools and underwater treadmills (UWTM) are the two main types of equipment commonly seen in hydrotherapy facilities(3), and may include jets which increases resistance and the level of work.(1) UWTMs are generally more expensive and requires more maintenance, although it allows for better control of speed, water level, incline and temperature.(1)

In a study by Wainig et al(1), the canine hydrotherapy industry in the UK was evaluated to quantify the distribution of equipment, qualifications of staff, and types of conditions that required therapy. Most of the respondents to their questionnaire were located near cities and had facilities within boarding kennels (25%), rehabilitation centres (25%), stand-alone hydrotherapy facilities (21%), or linked to veterinary practices (18%). All respondents indicated that they insisted on a veterinary referral before commencing treatment which shows that good



practice was being followed despite no formal regulation, and that veterinary surgeons are referring dogs for hydrotherapy. The centres that saw the highest number of animals per week were linked with training businesses, and centres linked with veterinary practices had the lowest average of clients per week. Rehabilitation centres reported the highest proportion of clients and the second highest average of clients per week. Centres that only had a pool received most (44%) of the industry’s business, although they only saw an average of 34 clients per week. Centres with both a pool and UWTM saw the highest average of clients per week; however, those with UWTMs alone saw the lowest number of clients per week. The proportion of business created by non-therapeutic ‘fun swims’ was low in all centres, but accounted for a higher percentage of business in those

HYDROTHERAPY continued...

with hydrotherapy pools and in those connected with boarding kennels, pet shops and training centres. The number of clients a centre sees per week could be seen as an indication of how successful and well run the business is, but this may also be affected by a variety of issues such as session length as well as pre- and post-session activities. The majority of dogs fell in nine breed categories; with labrador retrievers and retriever types being the most common. This may reflect the breed's susceptibility to certain musculoskeletal conditions, or its characteristic



as a good swimmer. The most common conditions referred for rehabilitation were rupture of the cranial cruciate ligament (RCCL) and hip dysplasia, accounting for nearly half of all cases. Osteoarthritis was also highly represented, which may be because of the perceived benefit of hydrotherapy for maintaining function and mobility in older animals. Weight loss cases accounted for a small proportion of referrals for hydrotherapy. Hydrotherapy facilities linked with veterinary surgeries had the highest percentage of staff with professional-level qualifications. 51% of staff in the hydrotherapy facilities surveyed had some form of training, however, 49% of the staff had no nationally recognised qualification. It would be beneficial for there to be some guidelines or regulation for the training and qualifications necessary to work in the field. Since the facilities available and training of staff vary considerably, owners and referring veterinarians should spend time researching centres to find out which would best suit their needs.(1)

McCormick et al (3) explored features of the equipment currently in use within UK hydrotherapy centres to see any variations and identify the potential need for guidelines for hydrotherapy facilities. Despite a 15.1% response rate, they were able to show wide variation in types and operation of facilities. Of the 22 centres that responded, 11 had only a pool, three only a treadmill and eight centres had both devices. Equipment varied greatly in size but was generally rectangular in shape. The number of therapists ranged from one to six per centre. Thirteen hydrotherapy pools were located above ground, three below ground and three were unknown. The temperature of the pool varied between 24°C and 31°C, with the majority being kept between 28°C and 30°C. This was consistent with previously published literature that states water is normally maintained at a temperature of 30°C for dogs. However, in human hydrotherapy temperature is kept between 32°C–36°C and in horses the temperature is kept between 10°C and 15°C. Temperature can have direct effects on muscle relaxation and comfort levels of the dog, but how this can support training, exercise and rehabilitation in canine patients has not been fully explored. All centres had therapists in the pool with the dogs during hydrotherapy sessions. 19 pools had a ramp entry, 12 use manual handling by the therapist(s) and one by the owner, eight use hoists and one used steps into the pool. To encourage a dog to enter the hydrotherapy pool at the start of sessions, 10 centres found toys important, seven used treats, and seven felt the presence of the owner/therapist and the use of verbal encouragement

HYDROTHERAPY continued...

were important. The depth of water in the treadmill ranged from 56 cm to 83.8 cm. The mean top speed of a treadmill was 151.40 m/minute. During hydrotherapy sessions, multiple restraint methods were used according to individual dog requirements; these included 18 that used life jackets, 12 used 'Ruffwear' style harnesses, five used collars, three used long leads, two used buoyancy collars/head floats and one used no restraint in some settings. All except one centre had jets in the pool to create water current and the majority had different settings available. Another highly under-researched area is the use of jets to increase resistance and work, and how this impacts the dog's recovery. (3)

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2. Davies L. Provision of canine hydrotherapy in the UK. *Veterinary Record* 168, 465-466. (2011)
3. McCormick W, Oxley J, Spencer N. Details of canine hydrotherapy pools and treadmills in 22 hydrotherapy centres in the United Kingdom. *Vet Rec.* 2018 Jul 28;183(4):128.



REHABILITATION & Horses – What’s up in this arena?

Wilson et al (2018) performed an international survey of veterinary equine practitioners. 90% of respondents utilized rehabilitation modalities that included controlled hand walking, therapeutic shoeing, and ice. Compression bandaging, PRP, specific therapeutic exercises, interleukin-1 receptor antagonist protein therapy (IRAP), stretching, and cold water hydrotherapy were used by more than 80% of respondents. The remaining modalities were utilized by between 6 and 78% of respondents; with hyperbaric oxygen chamber, cytowave, and radiofrequency being the least commonly used modality.

In regard to soft tissue modalities, chiropractic was most often applied to horses for maintenance of performance or addressing poor performance, followed by injuries of the neck or back and generalized muscle strain. Acupuncture, massage, and stretching were similarly most commonly applied to these same four conditions, though stretching was more commonly applied for tendon and ligament injuries than for poor performance. Range of motion therapy was equivalently applied most often for tendon and ligament injuries and injuries of the neck or back, and also for generalized muscle strain. Compression bandaging was typically applied to tendon and ligament injuries and after arthroscopy. The electrophysical modalities, including laser, therapeutic ultrasound, and focused shockwave; were predominantly applied to tendon and ligament injuries, though injuries of the neck and back, and generalized muscle strain were also commonly treated. Radial shockwave was most often applied to neck and back injuries and tendon or ligament injuries, while NMES, TENS, and PEMF were applied most often to neck and back injuries and for generalized muscle strain. Biologic modalities, including stem cells, PRP, and IRAP were overwhelmingly directed at the treatment of tendon and ligament injury, though they were also frequently used following arthroscopic surgery. Mesotherapy was largely applied to injuries of the back and neck, and to generalized muscle strain. Therapeutic shoeing was used by 210 respondents primarily for the purpose of addressing tendon and ligament injury but also for maintenance of performance. Vibration therapy was also used for these two



REHABILITATION & Horses – continued...

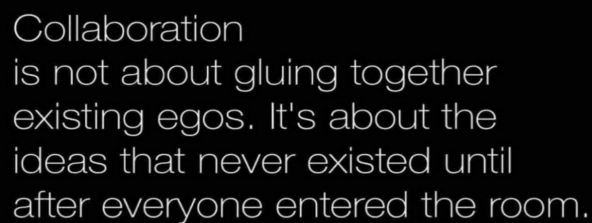
conditions as well as for generalized muscle strain. Kinesiotaping was applied equivalently for both neck and back injury and generalized muscle strain, and less often for all other specified conditions. 16 respondents utilized hyperbaric oxygen chambers, half applied it for tendon and ligament injury, and one quarter used it after colic surgery. Cold thermal modalities were commonly applied to tendon and ligament injury, generalized muscle strain and to maintain performance, whereas heat was most often applied to generalized muscle strain, followed by neck or back injury and tendon and ligament injury. Exercise based modalities were variably applied in all medical scenarios, particularly in tendon and ligament injury, and neck or back injury.

Responding veterinarians indicated that they were the personnel providing injection based modalities in most cases, and the most frequent administrators of acupuncture and chiropractic treatments, as well as the most common personnel to apply shockwave therapy, and therapeutic ultrasound, followed by licensed veterinary technicians. Veterinarians were also the main providers of class 4 laser, followed by veterinary technicians or veterinary assistants. Class 3 or less laser was provided by veterinary technicians, owners or trainers, and veterinary assistants. Veterinarians less often, but as the most frequent personnel, administered NMES, kinesiotaping, and hyperbaric oxygen, as well as compression bandaging and PEMF. Farriers were the personnel most likely to provide therapeutic shoeing followed by veterinarians, and farriers rarely administered any other modality. Licensed physical therapists were common providers of massage, chiropractic, kinesiotaping, and TENS. Veterinary students were common providers of thermal modalities and walking; while lay people were common providers of walking, massage, swimming, treadmill, vibration therapy, cold water modalities, and PEMF. Trainers and owners similarly administered most of these modalities, and were also reported to administer or use Equiband™, heat, ice, stretching, cold water hydrotherapy, compression bandaging, and therapeutic ultrasound.

33% of responding veterinarians indicated that they consult with physical therapists certified in veterinary rehabilitation, supporting the concept that this is a growing collaborative relationship within the practice of equine sports medicine.

Reference:

- Wilson J, McKenzie E, Duesterdieck-Zellmer, K. International Survey Regarding the Use of Rehabilitation Modalities in Horses. *Frontiers in Veterinary Science*, 1 June 2018, Volume 5, Article 120.



Collaboration
is not about gluing together
existing egos. It's about the
ideas that never existed until
after everyone entered the room.
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MORE ON HORSES & The Use of Allied Health Practitioners

Meredith et al (2011) surveyed a number of equine sport discipline trainers or owners to better understand the use of allied health practitioners. In any equestrian sport, the major reason for removal of horses from training and competition is from musculoskeletal injury and lameness. Training needs a balance of the workload during the competitive season with the physiological capacity of the horse. The role of the allied health professional in maintaining and developing the horse's potential is being recognized in veterinary medicine. The primary issue of an integrative approach including a veterinarian and allied health therapist relates to quantification of the efficacy of many treatments.

In total, 110 surveys were included in the analysis. 82% of show jumpers and 95% of dressage riders were female and between 45–54 years old, whereas racehorse trainers were predominantly male and aged 55 years old. 78% of the respondents had been riding or training for over 15 years, and only 5% had been riding or training for less than 5 years. 72% in the show jumping discipline, 66% in the dressage field, and 43% of the racehorse trainers used allied health therapists to treat their horses. Six respondents reported that they performed allied health treatment on their own horses. In the final analysis, use of an allied health therapist varied with the discipline of the respondents and the number of horses trained per season. Show jumping and dressage riders were more likely to use allied health therapists than racehorse trainers. Respondents with three to five, four to 12 and more than 13 horses per season were more likely to use allied health therapists compared with those with only one or two horses per season. Chiropractic (37%) and physiotherapy (24%) were the most common types of therapy used. Of the respondents that used allied health therapies, 69% of the racehorse trainers preferred chiropractic treatment, 36% of the show jumping riders used physiotherapists, and dressage riders used chiropractic treatment and equine muscle-release therapy or Bowen massage equally (26% each). The main reasons for using allied health therapists were for treating back problems (32%), followed by lameness (25%). Only 7% of the respondents chose a type of allied health therapy based on veterinary advice, and 72% stated that their veterinarian and allied health therapist did not work together. Also, 63% of the respondents did not discuss



Use of Allied Health Practitioners continued...

allied health therapies with their veterinarian, and 10% reported that their veterinarian did not endorse the use of allied health therapies. 94% of the respondents chose to use an allied health therapist based on their own personal experience with underperforming horses. The main reasons for choosing an allied health therapist were “word of mouth”(35%) and “personal contact or past experience”(24%). Many respondents (72%) did not select their allied health therapist based on their training/qualifications, but (62%) said they would be concerned if their allied health therapist was not trained. However, 22% did not know if their therapist was trained, and 49% were unsure if they had a formal training certificate. In addition, 93% of the respondents did not know if their therapist was insured. 97% of the respondents stated they would continue to use allied health therapists to treat their horses. Information on new allied health therapies was obtained primarily through magazines (47%), with only 1% gaining new information from their current allied health therapist.

This paper also cited another paper (Hesse et al 2010), a case-control study indicating that physiotherapy could be used to detect and recognise signs of impending fractures in racing Thoroughbreds. A factor that could be used to highlight the safety and skill set of this practitioner group.

An additional paper cited in the Meredith et al study looked at a New Zealand survey that analyzed the use of alternative therapists in the racing industry. Coleman et al identified that physiotherapy and sports massage were the most common therapies used. However, only 44% of equine alternative therapists had formal qualifications and many trainers were not aware of the level of training of the alternative therapists.



Overall Thoughts...

I hope you found this newsletter as interesting to read as I did to research. Yes, some of the articles are a bit older, but I think there are quite a few fundamental thoughts and happenings that persist today. One thing I kept thinking as going through these articles was ‘There is still plenty of room for education!’

- Educating animal owners
- Educating referring veterinarians
- Educating each other (interprofessional collaboration)

I welcome your thoughts on this topic! How are you finding the market out there? Do owners fully understand what you do? Do they know what education you have? Are you successfully collaborating with other practitioners? Do you take the time to methodically continue to educate your referral sources? If you’ve been practicing for a while, what have you found in regards to these areas?

All in all, I wish everyone happy, collaborative, & successful practicing!

~ Laurie Edge-Hughes, BScPT, MAnimSt (Animal Physio.), CAFCI, CCRT



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