EQUEST

Project result 3: Module 1 of 6

Module 1: Equine Ethology & “One Welfare” Standards

Practical Guidelines & Exercises for Welfare Monitoring, Ethological Observation, and Transnational Standards

Exercises in this module:

- 1.1 The 15-Minute Ethological Scan [STAFF + HORSE]
- 1.2 The Pain & Burnout Micro-Expression Audit [STAFF + HORSE]
- 1.3 Pre-Session Lunge Behaviour & Mindset Check [STAFF + HORSE]
- 1.4 Stable Management & Welfare Log [STAFF ONLY]
- 1.5 Lunge Stretching & Pain Detection Sequence [STAFF + HORSE]

Exercise settings:

- [STAFF ONLY] no participants or horse
- [STAFF + HORSE] no participants
- [OBSERVING A LIVE SESSION]
- [WITH PARTICIPANTS]

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1. Theoretical & Scientific Baseline

1.1 Equine Ethology, Behaviour & Biomechanics

Defining the Equine Partner: Within equine-assisted activities, the horse is recognised as an active, sentient co-actor and emotional mirror rather than a passive piece of exercise equipment or a therapeutic tool.

Behavioural & Ethological Fundamentals: Effective therapeutic practice requires a deep, scientific understanding of natural horse behaviour, herd ethology, and sensory processing differences. Practitioners working with persons with disabilities and the horse (facilitators of the process) must move away from one-size-fits-all assumptions and evaluate each horse as an individual with a unique personality, history, training background, and behavioural threshold (known as the horse's neurotype or sensitivity profile).

The "One Welfare" Paradigm: Research suggests that human rehabilitation outcomes and horse welfare are biologically and emotionally linked. A horse in a state of physical and emotional relaxation makes possible a dynamic neurobiological synchronisation (including heart-rate reduction and muscle-tension release) between the animal and the rider, enhancing both the safety and clinical effectiveness of the intervention.

1.2 Transnational Regulatory Standards

A key objective of the EQUEST framework is reconciling and complying with the distinct animal welfare regulations of our partner countries:

- **Spain:** While Spanish legislation recognises animals as sentient beings[1], specific national regulations governing Equine-Assisted Interventions (EAI) remain largely absent, allowing uncertified practices to operate in a legal vacuum. In practice, professional standards are effectively enforced only through the strict requirements of liability insurers, who refuse coverage for accidents involving unqualified personnel[2]. This framework proposes rigorous standards and mandates ethical animal management and the strict application of non-submissive, evidence-based training methods that respect the horse's cognitive and psychological boundaries.
- **Poland:** Standardises horse management according to the Canons of Polish Hippotherapy developed by the Polish Hippotherapeutic Society (PTHip). To safeguard the horse's physical and mental health and prevent burnout, the Polish code enforces a strict, non-negotiable therapeutic workload limit of maximum 4 hours per day of any kind of work[3].
- **Italy:** Governed by Criminal Code Articles 544-bis and 544-ter (prohibiting cruelty and unnecessary harm), introduced by Law 189/2004 against animal abuse[4], and by Legislative Decree 36/2021, which gives registered sport horses the status of equine athletes[5]. In animal-assisted interventions (AAI), the National Guidelines of the Italian Ministry of Health list the horse among the five species that may be involved[6]. Every horse must be identified with a microchip and registered in the National Database (BDN), and FISE/Masaf anti-doping standards apply to horses in competition[7].

2. Behavioural Monitoring: Pain & Burnout Indicators

Long-term exposure of the horse to therapeutic stimuli without proper downtime leads to physical and psychological burnout. Qualified equine-assisted intervention professionals must systematically evaluate complex, non-verbal indicators of equine distress.

To safeguard the equine partner and maintain evidence-based professional standards, practitioners must continuously assess the following dynamic states:

- **Optimal Neurobiological Synchronisation (Parasympathetic Baseline):** Characterised by high parasympathetic activation, indicating the horse is relaxed and engaged. The equine partner will display low head carriage, rhythmic breathing, a loose muzzle, licking and chewing, and soft ear play.
- **Sympathetic Nervous System Activation (Distress and Discomfort):** Indicated by an elevated head carriage, shallow breathing, pinned ears, or muscular tension around the muzzle, including nose wrinkling or revealing the whites of the eyes. Qualified personnel must immediately contextualise these signs and adjust the therapeutic workload to prevent escalation.
- **Critical Risk States (Active Pain, Burnout, or Learned Helplessness):** Indicators such as persistent tail swishing, teeth grinding, head tossing, skin twitching, facial grimacing, biting, turning away, or profound lethargy and dullness represent a high risk of physical injury or defensive aggression. The session must be paused immediately. Recognising these indicators cannot substitute for comprehensive biomechanical and veterinary oversight.

3. Practical Exercises for the Stable & Arena

Exercise 1.1 The 15-Minute Ethological Scan

[STAFF + HORSE] | **Who:** Horse handlers, instructors; ideally with an experienced mentor | **Time:** 15 minutes | **You need:** A notebook

Objective: Develop the practical skill of objective, non-interpretive behavioural observation of the therapy horse in its natural state.

Instructions:

1. Observe the horse in its paddock or stall for 15 minutes prior to any grooming or handling.
2. Using a notebook, record every specific behaviour, posture, and action without using emotional language (e.g. write “horse has weight on left hind leg, head lowered below the wither”, “horse is box walking / wood chewing” instead of “the horse is lazy”).
3. **Categorise observed behaviours into a simple ethogram:** Feeding/Resting, Social Play/Grooming, Comfort Behaviours, or Stress-Related Actions.

Reflect

- Read your notes back. Did any entry interpret rather than describe (for example “bored” or “lazy”)? Rewrite it as an observation.
- Which category of your ethogram has the most entries? Discuss what this might mean with an experienced colleague.

Builds on Professional Profile (R1) competency 1.1

Exercise 1.2 The Pain & Burnout Micro-Expression Audit

[STAFF + HORSE] | **Who:** Horse handlers and stable personnel | **Time:** During grooming and tacking

Objective: Train stable personnel to detect subtle micro-expressions of pain, muscle fatigue, or psychological burnout during session preparation.

The three Red Flags below are a starting point, not a complete method for interpreting animal communication.

Instructions:

1. Stand securely near the horse's head during the grooming and tacking process.
2. Carefully examine the horse's face and body against three specific Red Flags:
    a. **The Orbital Zone:** Look for tension above the eye or an 'anxious triangle' wrinkle in the brow.
    b. **The Muzzle:** Check for tight, pursed lips, flared nostrils, or a rigid chin.
    c. **The Body:** Standing at the horse's shoulder, lightly press along the horse's back (where the saddle rests) and monitor for skin twitching, ear pinning, or tail swishing.
3. If two or more of the three Red Flags are present, the horse must be scheduled for a veterinary biomechanical evaluation and its workload reduced. If you see any of the critical risk states described in section 2, the session must not start.

Reflect

- Which of the three zones was the hardest to assess, and why?
- Compare your findings with a colleague who observed the same horse. Where did you agree or disagree?

Builds on Professional Profile (R1) competency 1.2

Exercise 1.3 Pre-Session Lunge Behaviour & Mindset Check

[STAFF + HORSE] | **Who:** Instructors, horse handlers | **Time:** About 5 minutes on each side | **You need:** A lunge line

Objective: Evaluate the horse's psychological readiness, energy level, and physical willingness on the lunge line before mounting or introducing a participant.

Instructions:

1. Work the therapy horse on a lunge line for 5 minutes at a walk and light trot on each side prior to the session.
2. Observe the horse's ear focus, head carriage, willingness to move forward, and response to vocal cues.
3. Verify whether the horse displays curiosity and relaxation or signs of excess tension and stiffness before bringing a participant into the arena.

Reflect

- Was the horse equally ready on both reins?
- Based on what you saw, would you change today's session plan? Who on the team needs to know?

Builds on Professional Profile (R1) competency 1.1, 2.4

Exercise 1.4 Stable Management & Welfare Log

[STAFF ONLY] | **Who:** Horse handlers, centre managers | **Time:** Daily | **You need:** A stable diary

Objective: Establish a systematic tracking system to document feed, work hours, exercise type, and physical health markers.

Instructions:

Maintain a daily stable diary logging:

1. feed types and suppliers,
2. exact work hours per day,
3. type of session delivered (mounted, ground, vaulting, session intensity adjusted to the participant's profile and skill level, supplementary warm-up and cool-down protocols),
4. stretching exercises performed,
5. down-time and recovery activities for the horse post-session,
6. and broader indicators for monitoring both physical health and psychological balance (such as manure condition and gastrointestinal health indicators).

Reflect

- Look at one week of entries: did the horse's work with participants stay within the limit your centre follows?
- Do you see a link between workload and the health indicators you recorded?

Builds on Professional Profile (R1) competency 1.2

Exercise 1.5 Lunge Stretching & Pain Detection Sequence

[STAFF + HORSE] | **Who:** Instructors, horse handlers | **You need:** A lunge line

Objective: Incorporate structured stretching routines on the lunge line to check for musculoskeletal discomfort.

Instructions:

1. On the lunge line, ask the horse to gently bend its neck to the right and left, towards the shoulder and hinds.
2. Ask the horse to extend its neck forward and downward towards the ground at a quiet walk.
3. Monitor for resistance, tail swishing, skin twitching, or uneven stride length that indicates muscle tightness or spinal discomfort.

Reflect

- Was the stretch equally easy on both sides?
- If you see resistance or an uneven stride, who will you report it to, and how will you record it in the welfare log (Exercise 1.4)?

Builds on Professional Profile (R1) competency 1.2

Notes

1. Spanish Civil Code, Article 333 bis, introduced by Law 17/2021 of 15 December 2021, recognises animals as living beings endowed with sentience.
2. This reflects the professional experience of the Spanish partner, AEDEQ. We found no official source to cite.
3. Source: Polish Hippotherapeutic Society (PTHip), Canons of Polish Hippotherapy (Kanony polskiej hipoterapii), section on the horses' working conditions; confirmed as working practice by the EQUEST partners.
4. Articles 544-bis (killing of animals) and 544-ter (mistreatment of animals) were added to the Italian Criminal Code by Law 189 of 20 July 2004.
5. Legislative Decree 36/2021, Article 22, as amended by Legislative Decree 163/2022: the status of “athlete horse” applies to registered horses declared not intended for food production and listed in the register of FISE or another recognised sports body. It does not apply to therapy horses as such.
6. National Guidelines for Animal-Assisted Interventions (agreement between the State and the Regions of 25 March 2015). The species allowed are the dog, cat, rabbit, donkey and horse.
7. Equine identification and registration: Commission Implementing Regulation (EU) 2021/963 and Italian Legislative Decree 134/2022. Anti-doping rules apply to horses in sport (FISE) and in racing (Masaf).