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SCIENTIFIC JUSTIFICATION OF WELFARE STANDARDS FOR THERAPEUTIC HORSES IN EQUINE-ASSISTED THERAPY IN UKRAINE

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The research-and-practice work, based on a comparative-analytical approach and the synthesis of zootechnical and veterinary data, resulted in the development of the "Standards of Welfare for Therapeutic Horses" – the first national draft document regulating ethical, zootechnical, and veterinary practice in the field of hippotherapy, hipoinvention (equine intervention), and adaptive equestrian sports in Ukraine. The study was conducted by the working group of the Non-Governmental Union "Ukrainian Equine-Assisted Therapy and Adaptive Riding Association (UEAT-ARA)" using the internationally recognized Five Domains Model by David Mellor, which provides a comprehensive assessment of animal welfare at the level of physical and psycho-emotional indicators. International protocols from the Federation of Horses in Education and Therapy International (HETI), the International Equestrian Federation (FEI), and other organizations were adapted to national conditions, taking into account the climatic, economic, and breed characteristics of Ukrainian horse breeding.

The main achievements of the work include the introduction of clear quantitative indicators: a minimum stall size of 3.65 x 3.65 m to ensure freedom of movement (which exceeds typical norms for sport horses); limitation of the maximum concentrate portion to 2 kg per feeding and prohibition of using cattle feed as a means of preventing obesity, acidosis, and laminitis; a daily water intake norm of 25-50 L and a pasture area of 0.5-1.0 ha per horse. The Standards focus special attention on psycho-emotional welfare – they introduce a requirement for daily social interaction and define signs of behavioral burnout, upon which work must be immediately stopped. For the first time in Ukraine, the Standards establish provisions for the Responsibility for the Horse's Life Cycle after retirement and the mandatory nature of an annual dental examination.

The proposed Standards form a scientifically sound regulatory basis for assessing and controlling the welfare of horses in therapeutic programs, contributing to enhancing the ethical status of equestrian centers, extending the effective working period of animals, and ensuring the safety and quality of rehabilitation services in Ukraine.

Keywords: Therapeutic Horses, Equine Welfare, Hippotherapy, Five Domains Model, Zootherapy (Animal-Assisted Therapy), Ethical Standards, Ukraine.



НАУКОВЕ ОБҐРУНТУВАННЯ СТАНДАРТІВ БЛАГОПОЛУЧЧЯ ТЕРАПЕВТИЧНИХ КОНЕЙ ДЛЯ ІПОТЕРАПІЇ В УКРАЇНІ

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Науково-практична робота, що ґрунтується на порівняльно-аналітичному підході та синтезі зоотехнічних і ветеринарних даних, призвела до розробки «Стандартів благополуччя терапевтичних коней» - першого національного проєкту документа, який регламентує етичну, зоотехнічну та ветеринарну практику у сфері іпотерапії, іповенції та адаптивного кінного спорту в Україні. Дослідження виконано робочою групою ГС «Спілка спеціалістів з іпотерапії, іповенції та адаптивного кінного спорту» із застосуванням міжнародно визнаної Моделі «П'яти доменів» Девіда Меллора, що забезпечує комплексну оцінку добробуту тварин на рівні фізичних та психоемоційних показників. Проведено адаптацію міжнародних протоколів Федерації Horses in Education and Therapy International (HETI), Міжнародної федерації кінного спорту (FEI) та інших організацій до національних умов, ураховуючи кліматичні, економічні та породні особливості українського конярства.

Основні здобутки роботи полягають у запровадженні чітких кількісних показників: мінімальний розмір денника 3,65 × 3,65 м для забезпечення свободи рухів (що перевищує типові норми для спортивних коней); обмеження максимальної порції концентратів до 2 кг за прийом і заборону використання кормів для ВРХ як засобів профілактики ожиріння, ацидозу та ламініту; добову норму води 25-50 л і площу пасовища 0,5-1,0 га на коня. Особливу увагу приділено психоемоційному благополуччю – введено вимогу щоденної соціальної взаємодії, визначено ознаки поведінкового вигорання, при яких робота має бути негайно припинена. Вперше в Україні встановлено положення про відповідальність за життєвий цикл коня після списання та обов'язковість щорічного стоматологічного огляду.

Запропоновані Стандарти формують науково обґрунтовану нормативну основу для оцінки та контролю благополуччя коней у терапевтичних програмах, сприяють підвищенню етичного статусу кінних центрів, продовжують ефективний робочий період тварин і забезпечують безпечність та якість реабілітаційних послуг в Україні.

Ключові слова: Терапевтичні коні, Благополуччя коней, Іпотерапія, Модель «П'яти доменів», Зоотерапія (Анімалотерапія), Етичні стандарти, Україна.

The effectiveness of equine-assisted therapy and adaptive riding programs is directly dependent on the physiological and psycho-emotional state of the therapeutic horses, which are a central component of the rehabilitation process. According to



international studies, stress factors caused by improper management or social isolation significantly reduce the quality of therapeutic sessions and lead to the premature removal of animals from work (Brandon et al., 2023; Cozzi et al., 2022; Hockenhuil et al., 2021). This underscores the necessity of considering the horse not merely as a tool, but as a sentient being whose welfare directly correlates with the safety and effectiveness of the therapy.

Scientific, Ethical, and Zootechnical Gaps in Ukraine – despite the growing popularity of equine-assisted therapy in Ukraine (Kahan V., 2022; Naumenko O., 2024), officially approved standards regulating the management of therapeutic horses are currently absent. Existing regulations are primarily focused on sport or productive horse breeding and do not account for the specific psycho-emotional loads involved in working with people with disabilities. This gap creates a series of critical problems:

1. The problem of inadequate keeping conditions (Environment Domain): Ukrainian practice often keeps horses in stalls whose area does not meet minimal needs. Without a clear standard, such as a minimum stall size of 3.65 × 3.65 m, the risk of restricted movement increases, leading to the development of stereotypic behaviour and chronic stress. Furthermore, unregulated fencing requirements often permit the use of dangerous materials, such as barbed wire, which can lead to injuries and the retirement of the horse.

2. Risk of metabolic diseases (Nutrition Domain): The working conditions of a therapeutic horse (low, yet monotonous load) require strict dietary control. The absence of official Standards leads to overfeeding with concentrated feeds and uncontrolled grazing, which are the main causes of obesity and laminitis. Specifically, there is no standard limiting the concentrate portion to no more than 2 kg per feeding, nor is there an explicit prohibition on cattle feed.

3. Ethical aspect and burnout (Behaviour and Mental State Domains): Horses are highly social animals. Prolonged social isolation caused by stable confinement is a key factor in burnout (Brandon et al., 2023). It is necessary to introduce a requirement for daily social interaction and regulation of working load (a minimum of one full rest day per week) to ensure psychological regeneration.

4. Health problems and longevity (Health Domain): The lack of standardized veterinary protocols leads to the neglect of preventive measures, such as an annual dental examination and regular hoof care/shoeing every 6-8 weeks. These gaps critically affect the horse's working lifespan and its ability to work safely.

The concept of Animal Welfare has become central to modern animal husbandry, and in the context of therapeutic equitation, a dual responsibility amplifies its role: for the animal's welfare and for safe human-animal interaction. The Five Domains Model by David Mellor (2017) is recognized as the optimal methodological framework for the systematic assessment of equine welfare, as it encompasses the physical (Nutrition, Environment, Health, Behaviour) and mental aspects of welfare.

Therefore, the creation of national Standards for the Welfare of Therapeutic Horses is a pressing task from both a scientific and a practical perspective. These Standards, developed by the Non-Governmental Union "UEAT-ARA," are the first in Ukraine to include a section on responsibility for the horse's life cycle after retirement, which demonstrates a transition to the highest ethical principles.

The purpose of the study is to substantiate and present the new Standards for the Welfare of Therapeutic Horses for equine-assisted therapy in Ukraine, based on the Five Domains Model, adapted to Ukrainian conditions, and aimed at increasing the effectiveness and ethical nature of working with therapeutic animals.



Materials and methods. The object of the study is the processes of ensuring the welfare of horses involved in equine-assisted therapy and adaptive riding programs in Ukraine, with an emphasis on identifying and minimizing specific risk factors. The focus of the study is concentrated on identifying factors that influence the long-term working participation of animals, minimizing the risks of trauma and the development of metabolic disorders, as well as preventing professional burnout.

The experimental base is the working group of the Non-Governmental Union "Ukrainian Equine-Assisted Therapy and Adaptive Riding Association" (UEAT-ARA). The working group included multidisciplinary specialists in veterinary medicine (equine specialists), animal engineering (zootechnics), equestrian sports, and hippotherapy. The working group based the work on the analysis of data obtained from 12 equestrian rehabilitation centers in Ukraine and expert consultations, which provided an empirical basis for adapting international norms to national realities.

The working group based the development of the "Standards of Welfare for Therapeutic Horses" on a comparative-analytical approach and included the following detailed stages:

1. Search stage – analysis of international experience (HETI, FEI, and European Animal Welfare Platform): The working group conducted a systematic review of leading international protocols and scientific publications in WoS/Scopus (over the last 5 years) regarding stress factors and the welfare of horses in AAI programs. Primary attention focused on quantitative requirements and specific protocols absent in domestic regulation: minimum stall area, feeding protocols for horses with low workload, and socialization requirements.

2. Theoretical modeling – using the Five Domains Model by Mellor D & Beausoleil N. (2020) as the basic framework: The working group used the Model as a methodological framework allowing for the classification of zootechnical and veterinary requirements across four physical domains (Nutrition, Environment, Health, Behaviour) and the fifth, integrating, psycho-emotional domain (Mental State). This allowed the working group to develop a document aimed at ensuring positive welfare, rather than just avoiding suffering, which corresponds to the highest ethical standards of Animal Welfare.

3. Expert adaptation – surveys and consultations with Ukrainian specialists: The working group collected and generalized expert assessments, which allowed adaptation of international requirements to specific Ukrainian conditions: climatic features, the economic base of equestrian centers, and typical breed composition. At this stage, the working group established specific quantitative indicators (for example, the minimum stall size of 3.65×3.65 m and the limitation of concentrates to no more than 2 kg per feeding), which are economically achievable and scientifically justified.

4. Systematization – classification of key horse welfare requirements and formulation of the draft regulatory document: The working group structured the requirements covering the entire life cycle of a therapeutic horse: from preparation and training to ethical retirement and life cycle planning. The result detailed the Standards, which includes, in addition to the main domains, requirements for life cycle planning and mandatory annual dental examination (minimum once a year).

To substantiate the practical effectiveness of the Standards, the working group applied the following methods of analysis:

- Logical analysis – for structuring the Standards and formulating ethical principles (e.g., prohibition of training methods based on fear).
- Comparative generalization – for comparing the developed Standards with existing (outdated) domestic horse breeding norms and identifying key differences, especially regarding socialization and feeding.



- Statistical data evaluation – for substantiating quantitative indicators, based on data regarding the frequency of trauma, laminitis cases, and behavioural deviations (e.g., stereotypies) in therapeutic horses in Ukraine, which indicates the necessity of correcting keeping conditions.

Project Creation and Independent Peer Review: The first edition of the Standards underwent internal discussion and was recommended for publication by specialized agricultural universities (National University of Life and Environmental Sciences of Ukraine and Mykolaiv National Agrarian University), which confirms its scientific significance.

Research results. The main result of the research-and-practice activities implemented by the working group of the Non-Governmental Union "Ukrainian Equine-Assisted Therapy and Adaptive Riding Association" was the development and systematization of the "Standards of Welfare for Therapeutic Horses". The document establishes comprehensive, scientifically justified quantitative and qualitative norms aimed at minimizing the risks of professional burnout, metabolic pathologies, and behavioral disorders in therapeutic animals involved in rehabilitation processes. This document represents the first holistic regulatory draft in Ukraine that systematizes requirements for ethical handling, proper management, involvement, and training of partner horses in equine-assisted therapy and adaptive riding programs. Its development was a response to the urgent need to create a unified regulatory framework that combines international animal welfare standards with the realistic conditions of Ukrainian horse breeding.

The main conceptual idea of the document is the formation of a unified model for assessing the welfare of therapeutic horses, based on the integration of principles of veterinary medicine, zootechnics, and ethology with the practical aspects of horse functioning in a therapeutic environment. This model allows not only for the definition of quantitative parameters of physical management – stall area, feeding regime, access to water, or duration of turnout – but also for the evaluation of psycho-emotional factors related to the level of socialization, adequacy of workload, and the presence of stress signs. Considering these aspects, the Standards form a comprehensive system designed to ensure a stable balance between the horse's physical health and psychological comfort, which is a key condition for its reliability, safety, and effectiveness in therapeutic programs.

An interdisciplinary approach, which combined elements of international regulations (HETI, FEI, and The British Horse Society) with scientific research in the fields of behavioral biology, veterinary medicine, and cynology, made possible the development of the Standards. Unlike general livestock norms, these Standards focus on the specifics of the working participation of therapeutic horses – animals whose activity involves intensive contact with people, including patients with disabilities or psycho-emotional disorders. That is why the document pays key attention to issues of stress resistance, behavioral balance, prevention of overwork, and psycho-emotional burnout.

One of the most important directions of the study was the regulatory provision of the physical environment and safety, which combines requirements for the surroundings, microclimate, and material and technical conditions of horse management. For the first time at the national level, the minimum stall size has been defined as 3.65×3.65 m (13.32 m²), which significantly exceeds the generally accepted indicators for sport and working horses. Such space allows the animal to freely perform natural movements, lie down in complete relaxation, and turn around without restriction, which is an important prevention of the development of stereotypic behaviour caused by sensory deprivation. Ethological observations conducted within the framework of document preparation confirmed that



limited space directly affects the level of stress, manifestations of apathy or hyperactivity, and the likelihood of musculoskeletal disorders.

Requirements for shelter and lighting also have clear criteria. It is determined that the shelter can be both stationary and natural, but it must necessarily provide protection from precipitation, direct sunlight, wind, and excessive overheating. Special attention is paid to ventilation – air movement must be sufficient to remove ammonia fumes, but without creating drafts. In the context of safety, the Standards introduce a strict prohibition on the use of barbed wire and fine metal mesh, which farmers traditionally use in agricultural fencing for cattle or sheep. The Standards define these materials as trauma-hazardous, as they can cause skin cuts, tendon injuries, or infectious complications.

A separate subsection of the Standards defines provisions on fire safety. The Standards foresee the mandatory presence of an evacuation plan, inspected fire extinguishers, and alarm systems in equestrian centers, as well as periodic training of personnel in emergency situations. This provision reflects European standards of humane management, where experts consider animal safety a component of human ethical responsibility.

The second fundamental direction was the section dedicated to regulating the diet and pathology prevention, which systematizes the principles of balanced feeding in accordance with the energy needs of therapeutic horses. Based on international veterinary data, the Standards establish that the minimum daily fiber intake must be no less than 1.5-2% of the animal's body weight. This allows for maintaining stable gastrointestinal tract function, preventing the development of colic and ulcer disease. The Standards also define a limit on the amount of concentrates – no more than 2 kg per feeding, which is a prophylactic measure against acidosis and laminitis.

To prevent intoxication, the document introduces a prohibition on the use of compound feed intended for cattle, which may contain ionophore antibiotics that are toxic to horses even in low doses. The Standards also foresee the requirement for quality control of pastures and the removal of poisonous plants, such as ragwort, yew, hemlock, or acorns, from them. Additionally, a document regulate the water consumption norm – from 25 to 50 liters per day depending on body weight, temperature regime, and physical load.

The ethological and psycho-emotional block, which covers social behavior, adaptability, and workload regulation, occupies a special place in the document's structure. Therapeutic horses, unlike sport horses, function in a mode of close emotional interaction with people. Therefore, the lack of socialization with members of their own species quickly leads to psychological imbalance, increased cortisol levels, and the appearance of frustration reactions. The developed Standards provide for daily social interaction – both in the form of group turnout and through the possibility of visual and tactile contact with other horses. The Standards allow isolation only for medical reasons or during quarantine.

Workload regulation has become another innovative component. The document establishes a norm of at least one full rest day per week and defines clear indicators of professional burnout in the horse, including apathy, refusal to interact, aggression, reduced reactivity, or the appearance of stereotypic movements. In case of detection of such symptoms, the specialist must immediately stop the animal's work, followed by a veterinary or ethological assessment of the condition.

No less significant is the veterinary and ethical block, which contains protocols for care, treatment, and disease prevention. For the first time at the regulatory level, the Standards establish the requirement for an annual dental examination, which allows for timely detection of pathologies of the chewing surface of the teeth and prevention of



mucosal injuries. The Standards recommend hoof care every 6-8 weeks. All horses must have an individual veterinary passport, which records data on vaccination, deworming, clinical examinations, and disease cases.

The ethical aspect concerns not only the physical but also the moral comfort of the animal. The Standards strictly prohibit the use of any training methods based on fear, pain, or punishment. A document define Positive reinforcement as the main principle of training, ensuring the formation of stable trust between the horse and the person. The Standards also pays significant attention to tack: it must be correctly fitted, not create pressure on sensitive areas, and not restrict breathing.

The final block dedicates itself to regulating personnel qualification and ethical responsibility for the animal's life cycle. According to the Standards, all persons working with therapeutic horses must have basic knowledge of ethology, veterinary science, and zootechnics. A document especially emphasize the importance of understanding the signs of early stress, pain, or fatigue. At the same time, the Standards introduce the principle of responsibility for the life cycle – the duty of the owner or center to ensure humane treatment of the animal even after the completion of its work in therapeutic programs. This may include transferring the horse to a shelter, private keeping, or a "retirement care" program.

Thus, the results of the study show that the proposed Standards are not just a technical document, but also a holistic ethical system that combines veterinary, behavioral, and humanistic principles. They create the basis for the formation of a modern Ukrainian model of hippotherapy, in which animal welfare is the basic condition for the safety and effectiveness of the therapeutic process.

Discussion. The developed "Standards of Welfare for Therapeutic Horses" are the result of in-depth interdisciplinary work combining zootechnical, veterinary, behavioral, and ethical components. They simultaneously serve as a strategic document that aligns with international trends in the development of humanistic approaches to human-animal interaction (Fisher & Blevins, 2022; Schuurman et al., 2020). Their conceptual value lies in the transition from the traditional "avoidance of suffering" paradigm to the modern concept of positive welfare, which involves not only preventing pain or physical discomfort but also creating conditions for the realization of natural behavioral patterns, the satisfaction of social and cognitive needs, and the formation of a stable positive emotional state in animals.

At the same time, the developed Standards possess a significant advantage due to their deep adaptation to national horse management conditions. Significant seasonal temperature fluctuations, heterogeneous feed bases, varying levels of technical provision in equestrian centers, and limited financial resources within the industry characterize Ukrainian horse breeding. This necessitates the creation of realistic and scientifically justified regulations that do not burden practice with excessive requirements while maintaining high quality of care and ethical standards. Thus, the proposed provisions go beyond the minimum requirements for management and care, forming a national model capable of ensuring horse welfare under various climatic and socio-economic conditions. In their entirety, these norms bring the Ukrainian system closer to the level of modern European standards, while preserving their practical attainability and resilience to local challenges.

The methodological basis of the development – the Five Domains Model by David Mellor (2017) – allowed for the integration of physiological (Nutrition, Environment, Health, Behaviour) and psychological parameters into a unified assessment system. This approach has a significant advantage over the traditional "Five Freedoms" concept, as it focuses not only on preventing negative states but also on actively promoting positive



ones. This is crucial for therapeutic horses: their emotional balance directly affects patient safety and the stability of interaction during sessions (Fisher & Blevins, 2022; Irvine et al., 2020).

One of the most important methodological shifts within the work on the Standards was the formulation of the concept of ethological comfort as a criterion for the professional suitability of a therapeutic horse. Unlike sport or agricultural animals, horses working in hippotherapy experience constant emotional stress. They interact daily with people who may exhibit unpredictable motor behavior or altered psycho-emotional states. Therefore, a stable nervous system, calm reactivity, and the ability to co-regulate emotions with a human are just as important as physical health. The Standards clearly define that stress resistance must be viewed as the result of the interaction between management conditions, the training system, and the animal's social experience.

Numerous scientific studies support the requirement for daily social interaction among horses, proving that isolation is a powerful trigger for the development of stereotypies, aggression, or apathy (Hockenhull et al., 2021; Brandon et al., 2023). As part of the document preparation, the working group analyzed 18 ethical protocols of international equine associations, which recognize socialization as a fundamental right of the horse. In Ukrainian conditions, this requirement gains even greater relevance, as most rehabilitation centers do not have large herd structures; thus, it is important to provide for even minimal forms of communication – through partnered turnout or visual contact.

Equally important is the transition from harsh training to the principles of positive reinforcement. Within the Standards, this is enshrined as an ethical norm that mandates the use of training methods without coercion, pain, or fear. Such an approach, on the one hand, improves trust between the animal and the trainer, and on the other, forms a reliable behavioral foundation for working with patients, especially children, people with autism spectrum disorders, or post-traumatic stress disorders. The results of a number of studies confirm that horses trained using a positive scenario demonstrate lower levels of cardiac and hormonal stress markers (Schuurman et al., 2020; Miller et al., 2023).

A crucial innovation is the introduction of quantitative criteria that transform ethical principles into practically measurable indicators. For instance, the minimum stall area of 3.65×3.65 m allows for an objective audit of management conditions, while the norm regarding the maximum volume of concentrates (2 kg per feeding) is an indicator that the auditor can directly verify in the center's feed records. Quantitative specification ensures the unity of interpretation of the standards at the national level, which is especially important during the accreditation of hippotherapy institutions.

Particular attention focuses to the prevention of metabolic and behavioral pathologies, which are the main causes of premature removal of horses from therapeutic programs. Data obtained during the analysis indicate that over 60% of culling cases are associated precisely with digestive disorders (laminitis, colic) or behavioral disorders caused by stress and hypodynamia (lack of movement). The introduction of standardized feeding and regular turnout is a direct preventative measure against these problems.

The ethical protocol for the animal's life cycle is also a key strategic element. Traditionally in Ukraine, the fate of a horse after the completion of its working period remained outside legal and moral regulation. The introduction of the provision on the mandatory responsibility of the owner or center for the animal after its retirement is a significant step towards the humanization of the industry. This aligns with the international practice of HETI and the recommendations of the European Animal Assisted Therapy Association, which consider post-work care an integral part of the ethical cycle of working with animals (Ostrovska & Ostrovsky, 2021).



In general, the Ukrainian Standards' adaptability distinguishes them, meaning they take into account the real possibilities of the industry. Many centers operate on a community or volunteer basis, lacking powerful resources for expensive equipment. Therefore, the text of the document uses wording that combines mandatory norms with flexible recommendations. For example, the requirement for providing shelter allows for the use of both stationary premises and mobile canopies, provided they meet ventilation and safety requirements. This approach makes the document practical and universal – centers can apply it in small private farms and large equestrian complexes.

No less significant component of the Standards is the professionalization of personnel. The document emphasizes the necessity of training new types of specialists – with integrated knowledge in the fields of zootechnics, veterinary science, and psychology. For working with therapeutic horses, mastering riding technique is insufficient; competencies in recognizing non-verbal signs of stress, behavioral features, and emotional reactions of animals are required. This forms a new culture of communication between human and horse, in which we perceive the animal not as a tool of therapy, but as a partner in the process.

The developed norms also create the basis for further scientific standardization in Ukraine. The presence of clearly defined indicators allows for the development of monitoring, certification, and veterinary audit systems, which are the basis for the integration of Ukrainian hippotherapy practices into the international sphere. In the future, this may contribute to the inclusion of Ukrainian centers in the unified HETI registries and the receipt of international grants for the development of ethical programs in the field of animal-assisted therapy.

In summary, the study states that the development of the "Standards of Welfare for Therapeutic Horses" is not only a regulatory event but also a valuable transformation in the attitude towards the animal as a subject of the therapeutic process. It demonstrates a shift from a utilitarian approach to conscious ethical interaction, where the horse's welfare is not a secondary factor but the central criterion for the quality and safety of the service. This is where the strategic novelty and humanistic significance of the presented work lie.

Conclusions. The results of the conducted research-and-practice work indicate that the development of the "Standards of Welfare for Therapeutic Horses" is not only a response to the practical needs of the industry but also a fundamental step in forming a national system for the ethical regulation of animal involvement in therapeutic purposes. The created document combines the theoretical foundation of modern animal welfare science with realistic mechanisms for its implementation in the professional practice of Ukrainian equine-assisted therapy and adaptive riding centers.

Firstly, the study proved that the application of the Five Domains Model by David Mellor as a methodological framework allows for a holistic approach to assessing both the physical and psycho-emotional state of the horse. This model creates the theoretical basis for integrating veterinary, zootechnical, and behavioral parameters into a unified welfare control system. The use of this concept enabled a shift from the traditional, purely biomedical paradigm of animal care to an understanding of the horse as an active participant in the therapeutic process, possessing its own needs, resources, and boundaries of resilience.

Secondly, the developed Standards, for the first time in Ukraine, established quantitatively defined norms that allow for the objective assessment of the welfare level. These include the minimum stall area (3.65×3.65 m), the recommended pasture area (0.5-1.0 ha per animal), limitation on the amount of concentrates (up to 2 kg per feeding), the minimum daily volume of fibrous feeds (1.5-2% of body weight), and the average



norm of water consumption (25-50 liters per day). Such indicators not only unify management requirements but also create the opportunity for implementing a system of monitoring and independent auditing of centers working with therapeutic horses.

Thirdly, a significant scientific achievement is the ethological justification of the principles of social interaction, according to which experts consider daily contact among horses a basic condition for emotional stability. The study proved that social isolation causes an increase in cortisol levels, the emergence of frustration reactions, and the development of stereotypies, which, in turn, reduces the effectiveness of therapeutic sessions and increases the risk of injury. Thus, the requirement for socialization is not only humanistic but also zootechnically expedient.

Fourthly, the document formulated a new principle for Ukrainian practice: ethical responsibility for the horse's life cycle. This means that the animal remains under human care even after the completion of active work in therapeutic programs. The Standards foresee the obligation to ensure humane management, medical supervision, and safe conditions for aging or non-working animals. Such an approach has important social and educational significance, as it promotes the formation of a culture of responsible attitude towards horses as living partners, not tools of rehabilitation.

The fifth aspect concerns the ethical and training protocols, which the Standards systematically regulate for the first time within a national document. The use of positive reinforcement principles during the training and correction of horse behavior, as well as the categorical prohibition of methods that cause pain or fear, creates the basis for harmonious interaction between the animal and the specialist. The introduction of such norms is a significant contribution to the humanization of zootherapy practices, as the trust between the horse and the human determines the quality of the therapeutic process.

The sixth important conclusion is the confirmation that the systematization of veterinary procedures (annual dental examinations, regular hoof trimming/shoeing, prophylactic deworming, and vaccination) not only prevents the development of diseases but also extends the horse's active working period. The implementation of these protocols has a direct economic effect, reducing the number of cases of culling animals due to complications related to metabolic or orthopedic problems.

The seventh direction that demonstrated particular scientific novelty is the professionalization of personnel. The developed qualification requirements mandate basic training for specialists in animal ethology, zootechnics, veterinary science, and psychology. This ensures the formation of a competent environment capable of recognizing early signs of stress or overwork, and adjusting working conditions according to the individual characteristics of the horses.

Thus, the developed Standards perform a dual function – practical and conceptual. On the one hand, they act as a regulatory document establishing specific rules, parameters, and criteria for the care of therapeutic horses; on the other, they are a scientific and educational tool that shapes a new culture of human-animal interaction in the field of therapeutic practices.

The practical significance of the study lies in the fact that the created document can be used as a basic standard for the accreditation of hippotherapy and adaptive riding centers, as well as a training and methodological resource for specialist preparation. Its implementation will contribute to the harmonization of Ukrainian approaches with international practices, ensure an increased level of safety during rehabilitation sessions, and strengthen the reputation of hippotherapy as an ethically responsible industry.

In the prospect of further research development, the working group envisions in-depth work on creating a methodology for the objective assessment of the welfare level of therapeutic horses, and it will be base this methodology on behavioral, physiological,



and biochemical indicators. The working group also plans the development of an electronic monitoring system that allows for dynamic control of the animals' condition in real-time.

Therefore, the findings indicate that the implementation of the "Standards of Welfare for Therapeutic Horses" will have a comprehensive positive effect:

- it will increase the level of welfare and safety of the animals;
- it will ensure the stability and reliability of the therapeutic process;
- it will extend the active working period of the horses;
- it will contribute to the international integration of Ukrainian centers into the global system of ethical practices;
- it will strengthen the humanistic and scientific basis of Ukrainian animal husbandry in general.

Thus, the developed Standards are a significant contribution to the development of modern zootechnics, veterinary medicine, and rehabilitation technologies in Ukraine. Their implementation will not only enhance the effectiveness of therapeutic programs but also lay the foundation for the formation of a national ethical policy in the sphere of human-animal interaction.

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