

### Racehorse welfare: A life well lived?

There are approximately 850,000 horses in the United Kingdom (UK) and, in 2019, 23,537 were registered with the British Horseracing Authority (BHA) as training for flat racing, jump racing, or both. The BHA regulates and sets minimum welfare standards for racehorses during training and on the race-track. However, there is limited oversight of racehorses at other times, such as breeding, during data and traceability processes, pre-training, and post-racing (including: re-training and re-homing of horses, sales, auctions, import/export and slaughter).

The Horse Welfare Board (HWB) was set up in April 2019 by the industry's Members' Committee "in recognition of the need for greater cross-industry alignment and focus on welfare", and consists of eight members (two each of: independent members, BHA members, horsemen, and those involved with racecourses). The HWB was specifically asked to consider the use of the whip in horseracing, and to provide a position statement, and this is included within the final document: 'A life well lived: A new strategic plan for the welfare of horses bred for racing, 2020-2024.'

As noted by the authors, animal welfare is a sensitive and challenging issue, however, it is unfortunate that the HWB do not define welfare: "The term 'welfare' is problematic and means different things to different people, so we have deliberately not provided a precise definition." The HWB instead focus on "an outcomes-based approach, to provide clarity on our welfare-related priorities." This sets the theme for how welfare is described throughout the document.

The HWB have a noble vision: "Respect for the horse is at the heart of everything we do: Every horse bred for racing will enjoy a life well lived." The HWB hopes to achieve this through four main routes:

- Best possible quality of life;
- Collective long-term responsibility;
- Best possible safety; and
- Growth and maintenance of trust.

To facilitate the HWB in achieving the four desired outcomes, two 'enablers' are considered key: Data and evidence; and Communication of welfare.

Throughout the strategy there is a focus on how the racing industry is perceived by the general public and politicians and 'reputational risk.' For example, a large part of the strategy considers 'Best possible safety' and discusses ways of reducing and minimising avoidable injuries and fatalities. It is noted that there is "urgency around this issue. Fatalities are routinely cited by politicians and policymakers as the issue that must remain at the top of racing's agenda." The industry has already made concerted efforts to reduce injuries and fatalities through improvements in data gathering, track factors, race factors, jockey training, veterinary care and licensing and the number of racehorse deaths per 1,000 runners has fallen by one-third over the past two decades (in 2019 there were 173 fatalities per 91,937 runners). The industry is committed to continuing to reduce fatalities, although the HWB acknowledge that "risk can

never be eliminated entirely." Additionally, there are arguably more pressing welfare concerns which are not mentioned within the strategy and, although not a recognised priority by the public or politicians, could potentially have more impact on improving individual horse welfare (such as routine performance of Caslick procedures on brood mares, 'shuttling' of breeding stallions by air from one hemisphere to another, incorrect training of young horses, stereotypies, or lack of turnout).

Twenty recommendations are put forward to the industry under the following headings: (A) Standards and Benchmarking (Welfare benchmarking; Euthanasia code of practice; Code of ethics; Ground and going improvement and benchmarking; Continued consideration of breeding methods); (B) Safety improvements (Obstacle improvement); (C) Reviews of current policies and practices (Use of the whip consultation in 2020; Stalls and starting assurance review; Lower place prize money review; Improved accountability in non-regulatory sectors; Welfare financing review); (D) Data and risk analysis (Establishment of cross-industry data unit and programme; Traceability; Predictive risk monitoring; Medication data); (E) Training and education (Training and CPD); and (F) Communication, engagement and reputation management (Promotion of welfare and the horse; Issues management; Industry engagement; External stakeholder engagement).

These recommendations are supported by 26 key proposed projects. The projects, as yet, have not been fully costed or scoped — it is expected that progress will be made in these areas once the strategy has been approved at which point "the industry will be asked to develop, resource and take forward."

The three main pieces of work that the HWB hopes will improve equine quality of life are the Thoroughbred Welfare Study, targeted training and CPD, and greater education of/support for those re-homing racehorses. The 'Thoroughbred Welfare Study' would be used to generate a common baseline and standard for all horses by considering a range of welfare and well-being criteria. With regards to whip use, the HWB propose to undertake a consultation on whip use in 2020 and their current position is that: "Racing must signal a proactive, positive direction of travel in relation to the whip, taking steps to eliminate misuse and leading any discussions around the future removal of the whip for encouragement."

The strategy is very positive in its desire for the whole industry to come together in a more cohesive way: "Racing's discussions around welfare must be characterised by greater collaboration, confidence and unity. Care and concern for the horse is the thing that most obviously unites us, and which therefore presents an enormous positive opportunity." The HWB recognise how divisive discussion on welfare can become and encourages the industry to: "recognise positive intent in others. While we may differ in our views on how to get there, we share the same goals. Making progress requires a cultural change and a different tone of engagement." Noting that the goal is "progress, not perfection" and that "Inaction, or endless debate leading to inaction is not an option."

The HWB intends to review and report on the progress of the strategy on an annual basis. It is acknowledged that the entire strategy may need to be reviewed in the light of new information and may look very different in 2025. The HWB also state: “We are also conscious of the inevitable limitations in the Board’s own expertise”, and therefore suggest that they will be seeking greater collaboration both inside and outside the sport.

**A Life Well Lived: A New Strategic Plan for the Welfare of Horses Bred for Racing, 2020-2024** (2020). A4, 130 pages. Report available at: [http://media.britishhorseracing.com/bha/Welfare/HWB/WELFARE\\_STRATEGY.pdf](http://media.britishhorseracing.com/bha/Welfare/HWB/WELFARE_STRATEGY.pdf).

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### **ARRIVE 2.0: Updated guidelines to improve the reporting of animal research**

The aim of the original ‘Animal research: Reporting *in vivo* experiments (ARRIVE) guidelines’, published in 2010, was to highlight the minimum information required when describing *in vivo* experiments. Produced with the support of the National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs), the guidelines consisted of “a checklist of information to include in publications describing *in vivo* experiments to enable others to scrutinise the work adequately, evaluate its methodological rigour, and reproduce the methods and results” (Percie du Sert *et al* 2020a). When a scientific experiment is reproduced and another researcher draws a similar conclusion, then it is more likely that the conclusion is correct — this is important when basing decisions on scientific findings. However, despite widespread endorsement by the scientific community (over 1,000 journals, funders and research institutes support the ARRIVE guidelines), the impact of the 2010 guidelines on the quality of scientific reporting in animal research publications has been limited and the majority of manuscripts continue to lack key information required for reproducibility.

In an effort to facilitate a greater uptake, the guidelines were reviewed and updated through an extensive and collaborative effort of an international working group (composed of funders, journal editors, statisticians and researchers from the UK, mainland Europe, North America and Australia (Percie du Sert *et al* 2018; Hair *et al* 2019) and ARRIVE 2.0 was published in July 2020. ARRIVE 2.0 builds upon the original guidelines and is complemented by an ‘Explanation and elaboration’ document which provides: “background and rationale for each of the 21 items of ARRIVE 2.0” (Percie du Sert *et al* 2020b). To ensure that the guidelines were relevant and accessible, the explanation and elaboration document was road-tested alongside the revised guidelines with researchers preparing manuscripts describing *in vivo* research.

The checklist for the updated guidelines is organised into two sets: The Essential 10 (which are considered the bare minimum required and without which reviewers and readers cannot completely assess the reliability of the findings), and an additional 11 Recommended Set (which provide context for the study described).

Within the elaboration and explanation document each item listed in the Essential 10 and the Recommended set is described in its own stand-alone section to allow users to access further information quickly and independently. The Item is simply defined, followed by a more extensive explanation, for example, Item 2 considers sample size, and Sub-item 2(b) specifically looks at how a sample size was decided. The explanation describes the pitfalls of both under- and over-powered studies and explains how if a sample size is too small (leading to an under-powered study) then there are three possible consequences: “first, within the experiment, real effects are more likely to be missed; second, when an effect is detected, this will often be an overestimation of the true effect size; and, finally, when low power is combined with publication bias, there is an increase in the false positive rate. In turn, low powered studies can contribute to poor internal validity of research and risk wasting animals used in inconclusive research” (Percie du Sert *et al* 2020b). It is hoped that by facilitating a greater appreciation of why each item is relevant, then scientists are more likely to report on it.

Additionally, extra, useful material is included in information boxes throughout the document, such as a glossary of common statistical terms in the Introduction, or information on randomisation within Item 4, including simple and block randomisation, other randomisation strategies, nuisance variables, and implications for analysis, reminding the reader that: “blocking uses up degrees of freedom and thus reduces the power if the nuisance variable does not have a substantial impact on variability.”

Where appropriate, the guidelines also draw the readers’ attention to practical resources, such as The Experimental Design Assistant (EDA) in Item 1. Study design (EDA is an online platform that assists researchers when designing *in vivo* experiments), or a list of online nomenclature resources within Subitem 8(b) of Item 8, Experimental animals, which give detail on how to correctly report nomenclature of commonly used animal species. Again, reminding the reader why such detail is important: “Reporting the correct nomenclature is crucial to understanding the data and ensuring that the research is discoverable and replicable” (Percie du Sert *et al* 2020b).

Two new items which have been added to ARRIVE 2.0 are Item 19, Protocol registration, and Item 20, Data Access. Protocol registration has become an increasingly important means of improving both transparency of