



Implementation of the *CCAC guidelines: animal welfare assessment*

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The *CCAC guidelines: Animal welfare assessment* (CCAC, 2021) is a new guidance document developed by an ad hoc subcommittee on animal welfare assessment. Comments received from two external reviews of this guidelines document contributed substantially to the development of a comprehensive set of guidelines with supporting context to facilitate the implementation of best practices.

This document was developed based on the recognition that animals used for scientific purposes should have good welfare, and that this requires more than ensuring they are physically healthy. Good welfare is characterized by maximizing animals' positive experiences, while minimizing their negative ones. Ensuring good welfare is already at the core of many existing practices such as health monitoring, humane intervention point implementation, post-approval monitoring, and the assignment of categories of invasiveness. Welfare assessments incorporate this and should also capture additional information about the experiences of animals that is not necessarily a part of these other ongoing processes. For example, welfare assessments can help quantify: the performance of abnormal behaviour; the display of aversion (or affiliation) to human handling; the value of different enrichment items; the cumulative impact of multiple procedures; etc.

The animal care committee is responsible for overseeing welfare assessments because it is in the best position to create a system that works at their institution, especially regarding team composition, reporting structure, etc. Note that the animal care committee does not need to conduct the welfare assessments, but rather to ensure that the measures in place are appropriate.

These guidelines apply to all animals kept or used by institutions for scientific purposes. They broadly aim to provide information for investigators, teachers, animal care committees, facility managers, veterinarians, and animal care staff that will assist in establishing and reviewing processes for welfare assessment of animals under their responsibility. The refinement of animal care and use is a continuous process. In this respect, the guidelines provide a framework for the implementation of best practices. Specific information regarding animal welfare assessment can be found in each animal-type guidelines document.

While the focus of welfare assessments should be on evaluating individual animals, the subcommittee recognized that this can be challenging in some contexts, for example, when fish are being kept in a stock tank. Group-level welfare assessments are an acceptable place to start in these instances. If a welfare problem is identified, affected animals should then be monitored individually if possible (if affected animals are not individually identifiable, consideration could be given to moving them to another enclosure). If the animals cannot be individually monitored, the entire enclosure should be subjected to increased monitoring and any necessary welfare interventions.

Many welfare assessment-related activities can happen outside the immediate purview of the animal care committee. This is acceptable, and can be organized by researchers, animal health technicians, veterinarians, facility staff, etc. In most institutions, there is already a team of people working with the animals (both research and animal care staff), and collecting information pertinent to welfare. Welfare assessments should be a collation of information from activities already occurring (though some are currently done with no documentation), with a few additional activities (e.g., formal behavioural assessments) added as applicable.

Protocol review/approval and renewal are existing mechanisms that can help support animal care committees to oversee welfare assessments, with welfare assessment information being reviewed alongside the Three Rs and humane intervention point information. The animal care committee should also feel free to ask for additional information as necessary from protocol authors. Thus, the animal care committee could approve the welfare assessment plan as part of the protocol review process, and then review the welfare outcomes at the time of annual renewal. The written protocols could be used to identify teams of personnel who will work together to carry out welfare assessments. Institutions could also create welfare assessment standard operating procedures (SOPs) to facilitate the development of protocol-specific plans.

The intention is not for every piece of paperwork to be sent to the animal care committee whenever a welfare assessment is completed. Instead, each institution should formalize the reporting process (including the frequency of reporting) based on their own situation. As noted above, annual renewals may provide a good reporting method, and welfare updates could also be included in the veterinary report during animal care committee meetings. In general, the paperwork is likely to be kept alongside the animals, and in many cases the welfare of those animals will be acceptable and thus require no follow-ups.

To help in the process of formalizing welfare assessments, protocol authors and animal care committees should consider the following points (example answers provided in italics):

- Identify the team of people performing welfare assessments (list roles of everyone involved)
Research team members (e.g., principal investigator, graduate students, postdoctoral researchers, research technicians), facility personnel (e.g., facility manager, post-approval monitoring personnel), and animal care personnel (e.g., animal health technicians, veterinarians).
- What will be the frequency of welfare assessments?
Welfare assessments will be conducted on a weekly basis during the period of active research. Welfare assessments will be conducted every other week when no research is actively ongoing.
- How (and by whom) will this information be recorded, and where will it be kept?
Husbandry personnel and graduate students could score a few indicators of the overall state of each animal individually (adults) or by group (young) on a simple paper form or checklist, kept near the animals. If a specific issue arises, further specific indicators can be scored individually. Information could be compiled weekly along with other information (health checks, body weight, etc.) and reviewed every other week by the facility manager or by a senior member of the scientific team.

- How (and by whom) will information from other animal records (e.g., health checks, surgical or other experimental records) be integrated into the welfare assessment?

All project-related correspondence is located in the project binder that is kept at the facility where the animals are housed. This project binder includes all health check information, logged correspondence between research and husbandry personnel, emergency contact list, animal care protocol information, etc. This project binder is checked daily by husbandry personnel and 1-2x/week by research personnel. If any problems are noted at daily health checks, husbandry personnel are required to notify research personnel and/or the veterinarian immediately by phone.

- Who will perform any mitigation, and then who will check to ensure that any actions taken to correct welfare issues were completed and were effective?

Mitigation would be provided by husbandry or research personnel, with oversight by the facility manager, principal investigator and veterinarian. The animal care committee would be engaged if needed based on welfare outcomes.

- How (and by whom) should the information be compiled so that it can be reviewed by the animal care committee annually?

Veterinarian provides monthly reports to the animal care committee. Post-approval monitoring self-assessments can include welfare assessment information, and annual animal care committee project reports or protocol renewals can also include a summary of animal welfare assessments (when completed, by whom, and outcomes, along with any mitigation needed). Unit managers where animals are kept should also keep a record for annual animal care committee tours of animal facilities.

The answers provided above are only examples and are not indicative of how welfare assessments must be implemented.

The CCAC acknowledges that implementation of welfare assessments will be similar in many regards to the implementation of the post-approval monitoring program. Like post-approval monitoring, welfare assessments should use a risk-management approach. For example, animals on protocols with higher Categories of Invasiveness should have more frequent and in-depth welfare assessments. Institutions are in the best position to judge risk for their animals, and to adapt welfare assessments based on their needs. It is expected that there will be a transition period, and that CCAC assessment visits will provide an opportunity for sharing best practices for the implementation of the [CCAC guidelines: Animal welfare assessment](#) (CCAC, 2021).

The [CCAC guidelines: Animal welfare assessment](#) (CCAC, 2021) will begin to be fully implemented by the CCAC Assessment and Certification Program in April 2022, after an introductory period of one year. In the meantime, any questions concerning further clarification of the guidelines should be directed to the CCAC Standards Program.