

Reports and Comments

RVC pet epilepsy tracker app

Epilepsy is the most common long-term neurological disorder seen in dogs, affecting around 50,000 canines in the UK. In partnership with the Epilepsy Society and Boehringer Ingelheim Animal Health, the Royal Veterinary College has developed an app for use on Android or Apple electronic devices that allows owners of dogs with epilepsy (or other pets) to monitor and record their seizure events. In addition, owners of affected animals can enter their medication requirements and the app will then issue reminders as to when medication needs to be given. As the treatment regime for dogs affected with severe epilepsy can be very specific, with different drugs needing to be given at precise intervals and at different times if they are to be effective, this app is designed to aid better compliance with the regimes and to therefore reduce the chances of seizures due to missed medication.

The entry screen for the app is configured into ten sections. These variously give background information about epilepsy and what to do when an animal has a seizure, eg 'About epilepsy', 'Managing your pet's epilepsy', 'About medication', 'When a seizure strikes'.

The heart of the app are the three sections where information on the individual animal and the nature of its epilepsy can be entered. In the 'My pet' section owners enter general information on the age, weight, sex and breed of the animal. The 'Medication log' allows information on the type of drug, dosage and frequency of medication to be recorded. It will also store verbal notes and photographs of the medication. Once this information has been added, the app can be configured to send reminders to take medication at the appropriate time. The 'Seizure log' section allows owners to record the type of seizure their pet had, when it occurred and its duration and severity and any action taken. Through a series of questions, the nature of the seizure can also be recorded both during and after. This information can be converted into a pdf file that can then be shared with the animal's veterinary surgeon. It is hoped that this will enable the vet to better manage the medication regime by allowing more effective monitoring.

The app also allows the owner to agree to anonymised data from these logs to be shared with researchers at the RVC for use in long-term studies on seizure activity.

The researchers behind this app, Professor Holger Volk and Dr Rowena Packer of the RVC, note that it is a work in progress and that over time it will be updated and amended as further information is gathered and owners give feedback on its use.

RVC Pet Epilepsy Tracker, App for Android and Apple devices (May 2015). Free to download and available from Google Play at https://play.google.com/store/apps/details?id=com.rvc.phone-gap&hl=en_GB and the Apple iTunes App store at <https://itunes.apple.com/gb/app/id992917809?mt=8>.

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UK Home Office Animals in Science Regulation Unit (ASRU) advice notes on re-use and re-homing of animals used in research

The UK Home Office's Animals in Science Regulation Unit, which is responsible for overseeing the use of animals used in scientific research and testing in the UK, has recently published two Advice notes concerning the fate of animals used in scientific procedures regulated under the UK's Animals (Scientific Procedures) Act. At the end of studies a decision must be made about the fate of the animals which have been used. Animals are most commonly humanely killed; but it is also possible to re-use animals in further scientific studies or to release or re-home them. These Advice notes provide detailed guidance on both release and re-homing as well as use in further scientific studies.

Advice note 02/2015: Animals (Scientific Procedures) Act 1986: Use, keeping alive and re-use

Once an animal has been used for a given scientific procedure, it is possible under UK legislation for the animal to be used for another scientific procedure provided a number of criteria are fulfilled. The potential benefit of this re-use is that it may prevent the use of additional naive animals to achieve the same scientific aims, reducing the total number of animals used. This benefit must be balanced against potential consequences for the welfare of the re-used animals.

Before any consideration of re-use at the end of a procedure the decision must be made to keep the animal alive. UK legislation mandates that any animal which is suffering at the end of a procedure must be killed. The advice note guides the user through the process for deciding to keep an animal alive which involves assessments by those responsible for the care of the animal regarding its suitability for re-use. This guidance also applies to the decision to keep an animal alive prior to releasing it or re-homing it (see below: *Advice note 02/2015: Re-homing and setting free of animals*).

The Advice note also carefully defines the distinction between continued use of an animal and re-use, which rests on the question of whether a different animal could be used (in which case the procedure constitutes re-use) or whether the procedures could not be performed on a different animal (because they form part of a series of inextricably linked procedures) in which case this constitutes continued use.

Finally, the Advice note guides the reader through the procedure for deciding whether an animal should be re-used using a number of worked examples. A detailed flow-chart guides the user through the decision process, allowing an animal to be precluded from re-use either by legislation or practicality at a number of stages.

As well as providing detailed guidance on the legal aspects of re-use within the UK, the document provides useful ethical and practical guidance for those not working in the

UK (or even the EU, under the jurisdiction of which the UK's system operates) and especially those working in regions where there are not detailed guidelines on the use of animals in research.

Advice Note 02/2015: Animals (Scientific Procedures) Act 1986: Use, Keeping Alive and Re-use (October 2015). A4, 21 pages. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470008/Use_Keeping_Alive_and_Re-use_Advice_Note.pdf.

Advice note 02/2015: Re-homing and setting free of animals

Alongside the Advice note on re-use of animals (see above) a guidance note on the re-homing and setting free of animals after they have been used for licenced procedures in scientific research has also been produced.

It is often thought to be highly desirable that animals which have been used for scientific research and testing should be released into the wild or re-homed (as companion animals) at the end of their use for scientific purposes rather than being humanely killed, which is the fate of most animals currently. Some livestock animals used in research can also be released to commercial slaughter for meat at the end of their use.

Whilst, in many cases, it may be beneficial for animals to be re-homed or released, careful consideration must be given to whether animals are suitable for re-homing and to whether they will benefit from being released or re-homed. In some cases the welfare of the animal may be best served by being humanely killed at the end of a scientific procedure. In other cases it may be possible to re-use the animal in further scientific procedures, preventing another animal being used for those procedures.

The guidance note aims to guide users of animals in scientific procedures in the UK through the legal and ethical framework which allows animals to be re-homed or set free. It also outlines the measures which should be taken to ensure the welfare of re-homed or released animals.

A useful flow-chart guides users through the questions which must be answered before an animal can be re-homed or released including considerations of whether the animal is suffering as a

result of scientific procedures; whether it poses a danger to the public or other wildlife; and whether animals to be re-homed as companions have been appropriately socialised.

The Advice note is divided into four sections covering: UK-specific legal criteria for re-homing or release; advice on re-homing to ethical review bodies and project licence holders; species- and fate-specific guidance; and a final section providing practical guidance on setting free of wild animals.

Throughout the document specific examples of real situations are given which puts the legislative and ethical considerations into a practical context which should greatly aid those involved in the decision-making process.

The document also provides a great deal of practical information on measures which can be taken to ensure that animals thrive when they are released or re-homed, such as rehabilitation programmes for animals caught from the wild and destined for release back to the wild or socialisation schemes for companion animals raised in the laboratory and destined to be re-homed as companion animals.

Much like the Advice note on re-using animals the note on re-homing and setting free has applicability beyond the UK in providing a framework for those using animals in research to make systematic, informed judgements about when re-homing or setting free might be an appropriate use for animals at the end of their use in research and testing. The document is to be commended for its balanced approach which avoids the pitfall of assuming that re-homing or release is always the best fate for animals at the end of their scientific use whilst at the same time encouraging the thoughtful consideration of the possibility for giving ex-research animals a future outside the laboratory where appropriate.

Advice Note 02/2015: Re-homing and Setting Free of Animals. Animals in Science Regulation Unit (October 2015). A4, 49 pages. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470146/Advice_Note_Rehoming_setting_free.pdf.

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