EDITORIAL

BestBETs for Vets: a way to improve the odds of delivering high-quality care

Rachel Dean, Kevin Mackway-Jones, Kathryn Wareham, Douglas Grindlay, Marnie Brennan

THE Centre for Evidence-based Veterinary Medicine (CEVM) at Nottingham university defines evidence-based veterinary medicine (EVM) as: ‘The use of the best relevant evidence, in conjunction with clinical expertise, to make the best possible decision about a veterinary patient. The circumstances of each patient, and the circumstances and values of the owner/carer must also be considered when making an evidence-based decision.’

To integrate EVM into everyday practice, veterinary surgeons need relevant, high-quality, unbiased evidence at their fingertips to aid decision making.

Taking a gamble

Every day veterinary surgeons are making difficult decisions about their patients, such as:

- What treatment is best?
- Which diagnostic test should I use?

Where possible, these decisions should be based on the best evidence that is available but this can sometimes be hard to find. In response to this need, an online resource, BestBETS for Vets (www.bestbetsforvets.org), has been developed by the CEVM to help veterinary surgeons make better evidence-based decisions. This has been done in collaboration with BestBETS (www.bestbets.org), based at Manchester Royal Infirmary.

What is evidence?

In veterinary medicine there are many sources of evidence to inform clinical decisions, including peer-reviewed primary research studies (such as those published
in Veterinary Record), narrative reviews (such as those published in In Practice), didactic information given in textbooks, and expert opinion sought and shared. These different types of evidence vary in quality, quantity and accessibility, and some are more reliable than others.

**Evidence synthesis**

Systematic reviews are the most reliable form of evidence for clinical decision-making (e.g. Cochrane Collaboration, www.cochrane.org). A systematic review aims to find all the evidence (published or unpublished) on a particular question using a comprehensive search strategy. The evidence is then assessed in an explicit, repeatable and unbiased way (critically appraised), and the findings combined to reach an answer to the question. This process is termed evidence synthesis.

Evidence syntheses are different from the narrative reviews that are found, for example, in textbooks, CPD notes and in the introduction of most research papers. Evidence syntheses have a clear methods section (including search terms and databases used) describing how the papers included in the review were identified; this does not occur in narrative reviews. All the papers included in an evidence synthesis are searched for and appraised in the same standardised fashion. This means that their conclusions are less prone to bias and personal opinion than those given in narrative reviews.

Systematic reviews are not now more frequently being undertaken and published in veterinary medicine (e.g. VetSRev Database of Veterinary Systematic Reviews, www.nottingham.ac.uk/cevm/vetsrev). However, because they are resource intensive and time consuming, it is unlikely that there will ever be a time when there is a formal systematic review to answer every question in practice. Furthermore, in veterinary medicine (as in many branches of human medicine) there are many questions that do not have enough high-quality evidence to enable a successful systematic review to be conducted. Therefore alternative types of evidence synthesis are needed.

**BestBETs**

Medical BestBETs (www.bestbets.org) were established by emergency physicians in the Manchester Royal Infirmary in the late 1990s (Mackaway-Jones and others 1998). These doctors found themselves in a similar situation to the one that veterinary practitioners find themselves in now—they had started to try to answer some simple questions in practice, but when they looked for evidence they found that the evidence was too scarce or of too low quality to be used in traditional evidence synthesis. Thus, a new framework for evidence synthesis designed to systematically find, present and draw conclusions from the best evidence available (the BestBET) was developed. A Best Evidence Topic (BET) report summarises the best evidence available relating to a very specific clinical question. BETs do not claim to be systematic reviews, but rather contain the best (highest level) evidence that can be practically obtained in a time-efficient way. In the 15 years since they began, over 2500 BestBETs have been developed by practitioners of human medicine, nursing and paramedicine in specialties as diverse as paediatrics and cardiothoracic surgery, answering questions that only they know to ask.

**Summary**

- BET stands for best evidence topic, which is a simple, structured review of the current best evidence that answers a specific clinical question.
- BestBETs for Vets is a freely available, online resource giving access to the database of BETs: www.bestbetsforvets.org
- BestBETs for Vets can help practitioners incorporate up-to-date evidence in their clinical decision making, enhancing the quality of care patients receive.
- Vets can subscribe to alerts, suggest BET questions and get involved in writing BETs by contacting us via the website.

**Step one:** Every BET starts with a clinical scenario and describes a situation which may have occurred on a farm, in the consulting room or when there has been a difference of opinion between practitioners about the best care of a patient. All scenarios finish with the conundrum ‘you wonder if . . .’

**Step two:** The scenario is followed by a three-part question, which is based on the PICO framework (Heneghan and Badenoch 2006). Structuring research and clinical questions in this way means you can be very clear about the clinical conundrum you are interested in. The first part of the three-part question (P) is the patient group, problem (eg, disease) or population of interest. The second part of the question is made up of I, the intervention or factor of interest being considered (eg, treatment, diagnostic test, risk factor), and C, what it is being compared to. The third and final part of the question, O, is the clinical outcome of interest. As an example, if the subject of interest is the role of renal diets in the therapy of feline chronic kidney disease, the three-part question should specify the species of interest (in this case cats), which is of course not necessary in medical BestBETs, and must consider what outcome of the intervention (renal diet) is of interest (eg, life expectancy). Therefore the three-part question could be structured like this: In [cats with chronic renal failure] does [the use of a renal diet versus a normal diet] [increase life expectancy]?

**Step three:** For each BET, CAB Abstracts and MEDLINE literature databases are searched. CAB Abstracts has been shown to cover 90 per cent of the clinical journals that are relevant for veterinary medicine (Grindlay and others 2012). MEDLINE is searched as it often contains more recent articles than CAB Abstracts. Our aim is not to try and cover all possible databases, as this would be very time-consuming and limit the number of BETs that could be produced. This means BETs might not contain all evidence on a topic, and readers need to be aware that some relevant papers on the subject may be missing from the BET. Within the limitations of a BET, we try to do the most sensitive search possible.

Will giving this cat with chronic kidney disease a renal diet extend its life? A BestBET for Vets could help with the decision on whether to prescribe a number of topics about a range of species. The website was launched in September 2013 and has a growing number of BETs, which will now also be regularly published in Veterinary Record.

**The BETs**

There are six steps to each BET.

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The search terms are clearly displayed, so if people want to reproduce the BET they can do so quite easily. More details on how to search for veterinary literature can be found on the CEVM website (www.nottingham.ac.uk/cevm). The outcome of each search is then displayed and the reason for including or excluding papers in the BET is made clear. Only papers that can answer the three-part question are in original scientific papers and not narrative reviews, are primary research papers (ie, original scientific papers and not narrative review articles), are clinically applicable and are in English are included.

**Step four:** All the studies that are included in the BET are assessed for quality (known as critical appraisal) by two authors using a standard set of questions for each type of study. Any potential biases that may have affected each study’s conclusions are identified. A summary of the evidence is presented in a table outlining the outcomes that were measured, the key results of the study and any study weaknesses that might affect the validity or applicability of the results. For more information about study types and the critical appraisal tools used, visit the CEVM website.

**Step five:** A comments section follows the summary of evidence and may be used by the authors of the BET to give more details about why certain studies were included in, or excluded from, the BET. The comments section may also be used to highlight some of the difficulties encountered when appraising the evidence and possible limitations in applying it to the clinical scenario. Other useful references that were found during the searching process may also be referenced in this section.

**Step six:** The clinical bottom line aims to answer the original three-part question directly and succinctly. The authors try hard not to ‘sit on the fence’, but sometimes there is just not enough evidence, or the evidence found is of such poor quality, that it is difficult to reach a definite conclusion.

reach a different conclusion and ‘place their BET in a totally different way.

**Authors of BETs**

BestBETS for Vets is produced, monitored and administered by the CEVM. Every member of the CEVM who undertakes a BET is trained to use a standard framework to ensure consistency, transparency and quality. There are always two authors to each BET, who both independently appraise the relevant evidence. For some of our BETs, we have coauthors from outside the CEVM who work at other institutions or are vets in practice. The names of the authors and their affiliations are displayed clearly at the bottom of each BET.

**Updating BETs**

Each BET has a publication date and shows the most recent date the search was undertaken. This enables readers to know how up to date a BET is, and decide if they might need to repeat the search to see if new papers have been published since the BET was published. All of our BETs will be reviewed and updated as necessary by the BestBETs team within two to three years of publication.

**Using BETs in practice**

BestBETS can be used to keep up to date with current evidence on particular subjects. The BETs and the papers within them could also be used as the focus of journal clubs within practices, by encouraging people to critically read the papers in the same way. BETs may also be useful when developing or updating practice guidelines.

**Getting involved**

It is possible to sign up to receive notifications about new BETs when they are published on the BestBETs for Vets website. You can choose which species you want notifications about. To sign up visit http://bestbetsforvets.org/contact. Vets in practice are well placed to generate the most appropriate questions for new BETs, and you can make suggestions as to which BET questions you would like us to address via the website. We are also currently looking for more authors for BestBETS. Anyone can do one and the CEVM will support you, provide any training you need and coauthor them with you, the more BETs the better, so take a gamble and get involved!

**Clinical decision making**

Selected BestBETS for Vets will now be published regularly in Veterinary Record’s new clinical decision making section. This week BETs – ‘Renal diets in cats with chronic kidney disease’ and ‘Carprofen and local anaesthesia in calves undergoing disbudding’ – are published on pp. 360-361.

**References**

GRINDLAY, D. J. C., BRENNAN, M. L. & DEAN, R. S. (2012) Searching the veterinary literature: a comparison of the coverage of the veterinary journals by nine bibliographic databases Journal of Veterinary Medical Education 39, 401-412.


**Further reading**


**Useful resources**

BANFIELD Critically Appraised Topics website www.banfield.com/veterinary-professionals/resources/research/cats

EVIDENCE-BASED VETERINARY MEDICINE ASSOCIATION website www.ebvm.org

RCVS KNOWLEDGE website http://knowledge.rcvs.org.uk/home

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