Check for updates

Review of the centre for evidence-based veterinary medicine's "using an evidence-based approach in your practice" course

Louise A. Buckley BSc (Hons), BA (Hons), PG Cert (TLHEP), PGDip, PhD, RVN

Emily J. Hall MA, VetMB, AFHEA, MRSB, MRCVS

School of Animal, Rural and Environmental Science, Nottingham Trent University, Brackenhurst, Southwell, Nottinghamshire NG25 0QF, UK

Louise A. Buckley BSc (Hons), BA (Hons), PG Cert (TLHEP), PGDip, PhD, RVN

Louise is an experienced RVN with research interests in animal behaviour and welfare and raw food feeding. She has a PhD in poultry behaviour and divides her time between veterinary nursing and lecturing. She is passionate about nurses engaging more with research.
Email: louisebuckleydyson@msn.com

Emily J. Hall MA, VetMB, AFHEA, MRSB, MRCVS

Emily qualified as a veterinary surgeon in 2007, and has worked in small animal first-opinion practice ever since. Emily now teaches veterinary nursing students on the Foundation degree at Nottingham Trent University, and continues to work in practice at weekends.

ABSTRACT: The practice of evidence-based veterinary nursing is a day one skill expected of veterinary nurses, and veterinary nursing educators are required to prepare student veterinary nurses to meet this competency. This article reviewed the Centre for Evidence-based Veterinary Medicine's course "Using an evidence-based approach in your practice" from the perspective of two Veterinary nursing educators. This four-month blended learning course covered the importance of evidence-based veterinary medicine (EBVM) to veterinary professionals, how to ask answerable questions, search and review the evidence, and how to utilise EBVM in a practical way through goal-setting, evidence reviews and clinical audits. The authors found this course rewarding and beneficial to their role as educators and reflective practitioners.

Keywords: Evidence-based veterinary nursing; continued professional development; EBVM; clinical governance; BestBETs

Introduction

Competency 10 of the Day One Competencies for Veterinary Nurses states that a registered veterinary nurse (RVN) should "Understand and apply the principles of clinical governance, and practise evidence-based veterinary nursing" (RCVS, 2014). Two veterinary nurse (VN) educators attended the first "Using an evidence-based approach in your practice" course run by the CEVM team in early 2017. We wanted to see if we are truly preparing our students for evidence-based veterinary practice, or whether we need to rethink our approach to education and clinical practice. This article is a review of this course, our experiences, and its relevance to the veterinary nurse in both clinical and non-clinical roles.

This blended learning course is run by the University of Nottingham's Centre for Evidence-based Veterinary Medicine (CEVM), and aims to comprehensively introduce veterinary professionals to the practice of evidence-based veterinary medicine (EBVM). The course lasted for four months (January–April) and was split into three modules, with each subsequent module building upon what we had learnt in the previous module. We had to complete each module (including the homework) in order to obtain our CPD certificate, so it represented a significant time investment. The course is delivered largely through an online learning platform supported by discussion forums, online tutorials and two days attending a workshop at the University of Nottingham. Throughout the course all participants have full access to the University's library resources, including online journal databases such as CAB abstracts and Medline. The tutors (both experienced academics at CEVM) were also available throughout to stimulate

DOI: 10.1080/17415349.2017.1357885

© 2017 British Veterinary Nursing Association (BVNA)

online discussion and respond to any queries or issues that we had.

Module one – What is evidence-based veterinary medicine and why is it important?

This introductory module defined EBVM as "The use of the best relevant evidence in conjunction with clinical expertise to make the best possible decision about a veterinary patient" (adapted from Strauss, Richardson, Glasziou, & Haynes, 2005). This definition alone clarified that EBVM must include not just conventional scientific evidence but also experiential knowledge and recognition of patient (and owner!) wants, needs and desires. We really liked this definition because it put the patient, rather than the disease process, at the heart of EBVM and *this* ultimately is what veterinary nurses are all about: treating patients holistically, with patient well-being at the heart of our endeavours.

We were guided through the history of evidence-based practice in both medical and veterinary professions and introduced to some of the challenges facing practitioners wishing to make evidence-based decisions for their patients. This module used the EBVM Network's Learning tutorial (2015) to explain the five steps of framing a clinical question: Ask, Acquire, Appraise, Apply and Assess (see **Figure 1**). This tutorial is available for free, so VNs might wonder if the course is value for money as it initially appears to be built around a free resource that is biased towards vets rather than RVNs. For example, we would have liked to have seen examples that addressed common nursing concerns (e.g. risk factors for thrombophlebitis, or how long we should starve our patients pre-operatively). However, we soon learnt that the course offered us much more than that, and using this free resource allowed the course

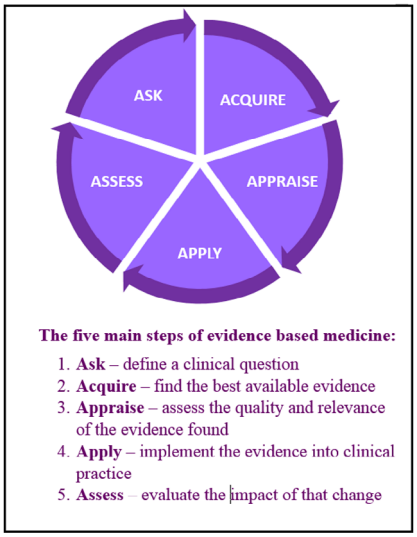

Figure 1. The five steps of evidence-based veterinary medicine (EBVM Network, 2015)

organisers to divert valuable funds into supporting us more in other areas.

During this module we were introduced to the rest of the cohort (see **Figure 3**) through an online discussion forum, and then through an online tutorial. This was reassuringly supportive, and required only a computer or tablet to access and a microphone (no webcam!) to communicate with fellow peers and tutors. Through the tutorial, we shared our ideas for writing our own BestBET (see CEVM, 2017), and frustrations with our attempts to practice EBVM in our own clinics. It was a great bonding session as we realised that the issues we faced were common – we were all in this together! We each posted our two attempts at clinical questions framed as PICOs on an online noticeboard (see **Table 1** for our PICOs).

Module two – How do I find and appraise evidence?

Module two included a two-day workshop at the University of Nottingham's

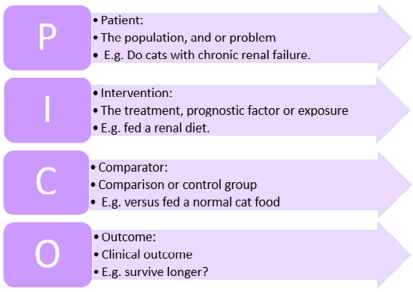

Figure 2. Structuring a PICO question

Veterinary School. The focus of this workshop was refining our clinical questions, using the PICO format (see **Figure 2**), systematically searching for evidence and then comprehensively evaluating it. Having direct access to the resources and tutors to guide us through the process of assessing and appraising the evidence (or lack of evidence!) allowed us to begin structuring our own BestBETs (see **Table 1**), which will hopefully appear on the website soon!

After a long day of constructing search terms (see **Figure 4**), mastering Boolean operators and discovering just how many different ways there are to write "cat" in a scientific article (see **Table 2**), the group descended on an excellent local curry house to continue EBVM discussions.

By the end of the two-day workshop, we felt confident and enthusiastic about embarking on the task for module two, writing a BestBET. Crucially, we felt confident in teaching these searching skills to our own VN students, a task that is often left to the institution's librarian but should be embedded within any VN course aiming to teach evidence-based nursing. If you only search for "cat" or "cats", you will miss a significant portion of the published literature referring to "feline", "felines" or "felis". It also made it easier to comprehensively search for (yet screen out unhelpful, random material) answers to clinical questions and this also helps

Table 1. The author's PICO questions from Module 1

Whose PICO?	The PICO	Written up as a BestBET?
Emily	In [dogs and cats with abnormal body temperature] do [non-contact infrared thermometers, compared to rectal thermometers] provide [accurate measurements of body temperature]?	Yes – under review
Emily	In [dogs with abnormal body temperature] do [veterinary aural thermometers, compared to rectal thermometers] provide [accurate measurements of body temperature]?	Almost, one of Emily's Module 3 goals is to finalise this
Louise	In [chickens with red mite] does [does topical application of diatomaceous earth compared with no treatment] [reduce red mite infestation]?	Yes – under review
Louise	In [anxious dogs] does [pet remedy compared with no treatment] [reduce signs of anxiety]?	No – but one of Louise's Module 3 goals to complete!

© 2017 British Veterinary Nursing Association (BVNA)

Figure 3. Keen but exhausted, delegates pose for a quick photograph

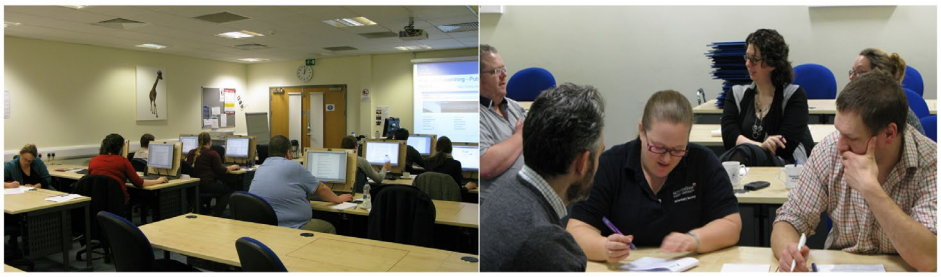

Figure 4. Cohort one hard at work constructing our PICO question search terms

to efficiently prepare lecture notes for training veterinary nurses. Answering clinical questions quickly is not just a skill needed by veterinary nurses in practice, the time-pressured veterinary nursing educator will benefit too!

However, getting to write a BestBET was one of the highlights of the course for us both. How many courses give veterinary nurses the opportunity to actually produce an open-access resource that might then actually help to change the way that clinical nursing practice is undertaken? This could be in terms of inpatient care, nutritional advice given to clients, or another aspect of nursing. This was also one of the frustrating parts of the course because having written our BestBets, we were desperate for these to be reviewed and published ASAP – preferably the day we finished them ...

Module three – How do I apply the evidence-based veterinary medicine approach to my practice?

Module three was a more relaxed, informal guide to embracing and informing evidence-based change. This module clarified the difference between clinical research and clinical audit, an important difference given the need for more EBVM generation from first-opinion practice. We had some useful discussions about how veterinary nurses could ethically use data obtained from clinically auditing practice records. We learnt how clinical audit skills allow veterinary nurses to be instrumental in raising clinical standards. Through identifying thresholds or benchmarks for performance, nurses could then audit the practice records (e.g. hospital records) to evaluate how the practice was performing in relation to these, and crucially then reflect on where change could be implemented. Unfortunately, we also learnt that, in many cases (i.e. unless prior consent has been obtained from clients), the data cannot be used publicly, for example to present a clinical abstract at BVNA Congress. Under the Data Protection Act 1998, the client must consent prior to their information being used in this way. Veterinary nurses considering using data in this way could consider submitting a research proposal to the RCVS ethics committee to gain ethical approval and advice.

Using inspiring examples from a variety of professions and cultures, this module challenged us to set an action plan for change that we could realistically achieve within our own practice. This was quite a difficult task because, on the one hand, the final module fired you up and made you want to change the world (or, at least, the veterinary nursing world!). On the other hand, these changes needed to be realistically changeable for YOU. The tutors were keen to encourage us to think how small steps in the right direction might allow us to eventually make much bigger changes, rather than trying to do everything in one go and then giving up because it was too daunting. For example, one of Louise's goals was to look at evidence-based protocols for shift/ward handovers because she felt that this was an area that she was not particularly skilled at achieving in a structured, patient-centric way.

Reflections

In November 2016, the RCVS Council approved a pilot of a new approach to measuring and recording continuing professional development (CPD) activity within the veterinary profession using an outcomes-based approach. During the consultation stage of this proposed

Table 2. An example PICO question development to investigate In [cats with naturally occurring chronic kidney disease] does [a renal prescription diet compared to normal diet] increase the [survival time] of affected cats? (Dean and Downes, 2016).

PICO	Example scenario	Synonyms and other relevant keywords for database search	
Patient or **P**opulation	Cats with naturally occurring chronic kidney disease	Cat, OR Cats, OR Feline, OR Felines, OR Felis	Chronic renal failure, OR Chronic renal disease, OR Chronic renal insufficiency, OR Chronic kidney failure OR, Chronic kidney disease OR, Chronic kidney insufficiency OR, Kidney failure
Intervention	A renal prescription diet	Renal diet, OR Kidney diet, OR Prescription diet, OR Therapeutic diet, OR Diet therapy	
Comparison/ **C**ontrol	A normal diet	Cat food, OR Feline diet	
Outcome	Survival time	Survival, OR Survival time, OR Life expectancy	

© 2017 British Veterinary Nursing Association (BVNA)

change to CPD recording, the biggest concern raised by VNs and veterinary surgeons alike was the proposed inclusion of a "reflective component" to recording CPD activities (RCVS, 2016). Perhaps the prescriptive and assessed reflective activities forced upon student VNs through activities such as the NPL has contributed to this dislike of the term "reflection". As educators preparing students for a profession that now demands reflection from all practitioners, we need to reconsider how we encourage this activity within our students. Reflection should not be a negative experience, although for many overly self-critical veterinary professionals it most often is, but instead should be a catalyst for change and improvement in practice.

Reflecting on the CEVM's course as a veterinary nurse, a veterinary surgeon and two veterinary nursing educators and researchers, we feel inspired to change. Our own teaching practice will be changed by our participation on this course. The first step to practising EBVM is identifying appropriate evidence, and part of this process should involve a critical evaluation of the evidence available. This is a skill any VN can and should master (Buckley, 2017) and is a topic often neglected in VN curricula.

There is a serious lack of published evidence to support many VN practices. One reason for this may be a lack of support for practicing VNs wanting to undertake practice-based research. This can be as simple as writing your own BestBET or RCVS Knowledge summary to identify a lack of evidence, or locate the current body of evidence. If your practice is part of the RCVS Practice Standards Scheme, clinical audit may be an activity you need to start including in your day-to-day practice. If, like many VNs, you feel your skills and knowledge are being under-used in your current role, why not conduct a practice-based research project to generate some much-needed VN evidence? The CEVM's Using an Evidence-based Approach in Your Practice course can support you in any or all of those activities, and could be the catalyst you need to change your own professional practice.

The details for this course can be found at: www.nottingham.ac.uk/cevm/training-opportunities/training-opportunities.aspx

ORCID

Emily J. Hall http://orcid.org/0000-0002-9978-8736

References

Buckley, L. (2017). Critiquing research papers? Neigh bother, any RVN can do it! *Veterinary Nursing Journal, 32*, 115–117. doi:10.1080/17415349.2017.1290194

CEVM. (2017). *BestBETS for Vets*. Retrieved from https://bestbetsforvets.org/

Dean, R., & Downes, M. (2016). Renal diets in cats with chronic kidney disease. *BestBETS for Vets*. Retrieved from https://bestbetsforvets.org/bet/146

EBVM Network. (2015). *EBVM learning*. Retrieved from www.ebvmlearning.org/

Royal College of Veterinary Surgeons (RCVS). (2014). *RCVS VN day one competences*. Retrieved from www.rcvs.org.uk/document-library/day-one-competences/

RCVS. (2016). *College to pilot an outcomes-based approach to CPD*. Retrieved from www.rcvs.org.uk/news-and-events/news/college-to-pilot-an-outcomes-based-approach-to-cpd/

Strauss, S.E., Richardson, W.S., Glasziou, P., & Haynes, R.B. (2005). *Evidence-based medicine: How to practice and teach EVM* (3rd ed.). London: Churchill Linvingstone.