

Editorial

Finally, the opportunity to publish systematic review protocols, systemic reviews and guidelines in animal health, animal welfare, and food safety

A. M. O'Connor^{1*} and J. M. Sargeant^{2,3}

¹Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University College of Veterinary Medicine, Ames, IA, USA

²Centre for Public Health and Zoonoses, University of Guelph, CA, USA

³Department of Population Medicine, Ontario Veterinary College, University of Guelph, CA, USA

Received 9 February 2014; Accepted 5 May 2014

As readers would be aware, *Animal Health Research Reviews* (AHRR) has always focused on two general types of manuscript: reviews and opinions. In this edition of AHRR, we introduce readers to a new style of review and opinion that will be added to the journal: systematic reviews and systematically developed guidelines or recommendations (Guyatt *et al.*, 2008; Brozek *et al.*, 2009a, b, 2011). Systematic reviews are an approach to research synthesis used to answer a very specific question that relates to a clinical or policy question (E.F.S.A., 2010). Systematic reviews follow a series of explicit steps, which are used to minimize subjectivity in the process. In human healthcare, systematic reviews often are preceded by a formal published protocol, which outlines the process that will be followed for the review, providing an additional level of rigor. Although not always the case, because of the focus on a policy or clinical question, systematic reviews are increasingly used to inform guidelines and recommendations. How scientific evidence is incorporated into policy is often difficult to understand, and recommendations or guidelines can be viewed as an opinion piece/article (Oxman *et al.*, 2006, 2007). The example provided here is a very specific type of opinion, constructed using an approach developed by the GRADE working group. The GRADE approach seeks to explicitly describe to end-users how scientific evidence, values and preferences, the balance of benefits and harms, and resource availability are considered in developing a recommendation. Increasingly, transparent

approaches to synthesizing research and developing recommendations are used in human health. Questions of animal health, animal welfare, and food safety also deserve such transparency.

This edition contains three publications that introduce and illustrate these topics. The first publication by O'Connor and Sargeant is 'An introduction to systematic reviews in animal health, animal welfare, and food safety.' This brief introduction describes how systematic reviews differ from other literature reviews and how systematic reviews are executed. Also included in this edition are two articles that illustrate what a systematic review is and how a systematic review can be used. The second publication is a systematic review by Dzikaminhenga *et al.*, 'Pain management in the neonatal piglet during routine management procedures. Part 1: A systematic review of randomized and non-randomized intervention studies.' In this publication the authors list all the steps of the review process applied to an animal welfare topic. The third publication is an example of an opinion piece. However, the authors use a formal approach to develop their opinion. The article by O'Connor *et al.*, 'Pain management in the neonatal piglet during routine management procedures. Part 2: Grading the quality of evidence and the strength of recommendations', provides recommendations for pain mitigation use in piglets and, notably, it also provides a transparent account of the factors considered in developing that recommendation.

AHRR is dedicated to serving the community of readers and expanding the scope to include systematic reviews in a natural progression. As part of that process, three initiatives have begun that we are pleased to introduce.

*Corresponding author. E-mail: oconnor@iastate.edu

First, in this June issue of AHRR, we provide three articles about systematic reviews as an introduction. As a follow up to this introduction, the journal is planning a special edition in 2015 which will focus on systematic reviews and guideline development. The journal invites review teams that are preparing reviews to contact us and nominate a topic. Finally, as an added service, the journal will now facilitate the process of obtaining peer review and registration of systematic review protocols. Currently, there is no journal that formally facilitates the protocol registration and peer review process for animal health, animal welfare, and food safety topics, and AHRR is pleased to fill that void. The *a priori* protocol will be published as an appendix with the final systematic review. We look forward to seeing more systematic review protocols, systematic reviews, and guidelines developed using systematic reviews published here in AHRR.

References

- Brozek JL, Akl EA, Alonso-Coello P, Lang D, Jaeschke R, Williams JW, Phillips B, Lelgemann M, Lethaby A, Bousquet J, Guyatt GH, Schunemann HJ and Group GW (2009a). Grading quality of evidence and strength of recommendations in clinical practice guidelines. Part 1 of 3. An overview of the GRADE approach and grading quality of evidence about interventions. *Allergy* **64**: 669–677.
- Brozek JL, Akl EA, Alonso-Coello P, Lang DM, Bossuyt P, Glasziou P, Helfand M, Ueffing E, Meerpohl J, Phillips B, Horvath AR, Bousquet J, Guyatt GH, Schunemann HJ and Group GW (2009b). Grading quality of evidence and strength of recommendations in clinical practice guidelines: Part 2 of 3. The GRADE approach to grading quality of evidence about diagnostic tests and strategies. *Allergy* **64**: 1109–1116.
- Brozek JL, Akl EA, Compalati E, Kreis J, Terracciano L, Fiocchi A, Ueffing E, Andrews J, Alonso-Coello P, Meerpohl JJ, Lang DM, Jaeschke R, Williams JW Jr., Phillips B, Lethaby A, Bossuyt P, Glasziou P, Helfand M, Watine J, Afilalo M, Welch V, Montedori A, Abrahama I, Horvath AR, Bousquet J, Guyatt GH, Schunemann HJ and Group GW (2011). Grading quality of evidence and strength of recommendations in clinical practice guidelines part 3 of 3. The GRADE approach to developing recommendations. *Allergy* **66**: 588–595.
- E.F.S.A. (2010). Application of systematic review methodology to food and feed safety assessments to support decision making. *EFSA Journal* **8**: 1–90.
- Guyatt GH, Oxman AD, Kunz R, Falck-Ytter Y, Vist GE, Liberati A, Schünemann HJ and Grade Working Group (2008). Going from evidence to recommendations. *British Medical Journal* **336**: 1049–1051.
- Oxman AD, Fretheim A, Schunemann HJ and SURE (2006). Improving the use of research evidence in guideline development: introduction. *Health Research Policy and Systems* **4**: 12.
- Oxman AD, Lavis JN and Fretheim A (2007). Use of evidence in WHO recommendations. *Lancet* **369**: 1883–1889.