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## Veterinarian awareness of farmer goals and attitudes to herd health management in The Netherlands



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### ABSTRACT

In providing advice on herd health, veterinarians need to be aware of farmers' goals and priorities. To determine the level of awareness, 29 veterinarians from 15 practices completed questionnaires during visits to dairy farms within the scope of veterinary herd health management (VHHM) programmes. The farmers ( $n = 30$ ) were asked to complete a questionnaire and their discussions with the veterinarian were recorded using a voice recorder.

Herd performance goals were set by the farmer and veterinarian in 24% of cases. Veterinarians who did not set goals indicated that they and the farmer 'intuitively knew' what each wanted to achieve, and that the setting of performance goals was considered 'too formal'. Veterinarians often could not identify a farmer's main goal, and typically found milk production and nutrition significantly more important ( $P < 0.01$ , and  $P < 0.02$ , respectively), and fertility significantly less important ( $P < 0.01$ ) than the farmers. During on-farm conversations, veterinarians did not actively seek to identify farmers' goals or problems, suggest a co-operative strategy or summarise any advice given.

The findings of this survey suggest that veterinarians need to focus more on goal setting, since awareness of goals and priorities is important for both communication and compliance with advice given. The needs of farmers with respect to herd health should also be more actively sought by veterinarians as the findings indicate that most farmers do not readily volunteer such information.

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### Introduction

Veterinarians support the dairy industry globally by providing advice on herd health management (VHHM) (Brand et al., 1996; Noordhuizen and Metz, 2005; LeBlanc et al., 2006). However, such advice is only effective if implemented by the farmers, a process only likely to happen if they appreciate its relevance, and if the advice clearly dovetails with their goals. Derks et al. (2012) reported that advice considered impractical by farmers was not implemented, and in a study of Johne's disease control programmes in Canada it was found that farmer misunderstanding of the advice led to non-compliance (Sorge et al., 2010). Other studies have indicated that failure to tailor veterinary advice to farmer goals had a negative effect on subsequent on-farm implementation (Kristensen and Enevoldsen, 2008; Ellis-Iversen et al., 2010).

To be successful, advice provided by veterinarians should meet three major criteria: (1) it needs to be evidence-based following

clear identification of the issues involved; (2) it should be communicated properly indicating why the problems are important, and what needs to be done when and by whom; (3) it should address the goals and priorities of farmers as far as possible in order to build on their intrinsic motivation to implement any changes (Kleen, 2008). These three criteria are often correlated in practice as was seen in a study on udder health, where communication strategies to change farmer behaviour were improved when they were in line with farmers' aims and motivations (Jansen, 2010).

Previous research has indicated that veterinarians experience difficulties in advising farmers, especially in influencing their subsequent behaviour. In taped conversations, veterinarians pay little attention to conversational structure and balance between participants, and are poor at active listening (Jansen et al., 2010). Farmers have indicated that veterinarians often make too many recommendations at once and fail to emphasise the added value of the advice (Sorge et al., 2010) or to set clear goals (Vollebregt et al., 2001; Jansen et al., 2010). Moreover, veterinarians tend to focus on financial parameters, which are not always the main priority of the farmer (Kristensen and Enevoldsen, 2008). Even though such problems have been identified, there are few published data on the

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awareness of veterinarians of farmer goals and priorities in VHHM (Hall and Wapenaar, 2012).

The aim of the present study was to address this information deficit, and to compare how the veterinarian perceives communication with a client with how the advice is actually presented to the farmer.

## Materials and methods

In September 2011, 29 veterinarians (all based in The Netherlands) associated with 15 practices were accompanied during one or, in one case, two VHHM visits to dairy farms. Practice details were entered into a spreadsheet (Excel software for Office, version 2003, Microsoft), and following randomisation, practices with a minimum of two veterinarians providing herd health advice to dairy farmers were approached via their practice websites. At least one practice was selected from each of the country's 12 Provinces, and the farmers were selected by the veterinarians.

Each veterinarian was requested to complete a questionnaire. The questionnaire focussed on three topics, namely, goal setting, the prioritisation of topics for discussion, and communication with the farmer. Problem areas were identified following a literature review. A list of general and more focussed questions was established, and this list was then optimised following discussions among the authors. The questionnaire was then piloted with 10 farmers and 10 veterinarians. The questions had a similar answering structure to make the questionnaire easy to complete, and most questions were 'closed', with added space given for any extra information (Table 1). Both questionnaires are available as Supplementary data (Appendix 1).

The veterinarian was accompanied by a member of the research team to the farm, whereupon the farmer and veterinarian were each asked to consent to the audio recording of their conversation. All farm visits were pre-scheduled, regular VHHM meetings to ensure they were representative. Conversations were recorded by the researcher, who did not interfere at any point, and the recorder was switched off when the conversation stopped. At this point the farmers ( $n = 30$ ) were given a questionnaire similar to the one given to the veterinarians, together with a stamped envelope to return the questionnaire.

Both farmer and veterinarian were asked to indicate the farmers' main goal with respect to VHHM, and to assign importance to seven relevant topics: milk production, fertility, udder health, claw health, young stock rearing, housing, and nutrition in two ways. Firstly, the topics were placed in order of importance, graded 1–7 (1, most important; 7, least important). Respondents were also asked to grade the importance of the themes from 1 to 5, (1, not important; 5, extremely important).

**Table 1**

Items discussed in the questionnaires, subdivided into those used for both questionnaires and those used for the 'veterinarian' questionnaire, respectively, including two sample questions.

Item	Questionnaire	Sample question
Descriptive data	Both	What was the average 305 day production on your farm in 2010? How many milking cows are present on your farm?
Goals and priorities	Both	What is the main goal for this farm? Can you rank the following seven topics (milk production, fertility, udder health, claw health, young stock rearing, housing, and nutrition) in order of importance?
Communication	Both	The farmer will actively approach you when there are specific topics he/she wishes to discuss (veterinarian) (never, seldom, sometimes, often, always) When there are specific topics you wish to discuss, you actively approach your veterinarian (farmer) (never, seldom, sometimes, often, always)
Communication	Veterinarian	Which of the following six communication strategies do you use during dairy herd health visits (informal opening, formal opening, determination of farmer needs, presentation knowledge and skills, cooperation, summary and follow-up) How important do you believe these items are? (grade from 1 to 5)

The veterinarians were asked how often they perceived that farmers articulated their expectations as regards VHHM to them, and the farmers were asked how often they actually articulated their wishes to the veterinarian.

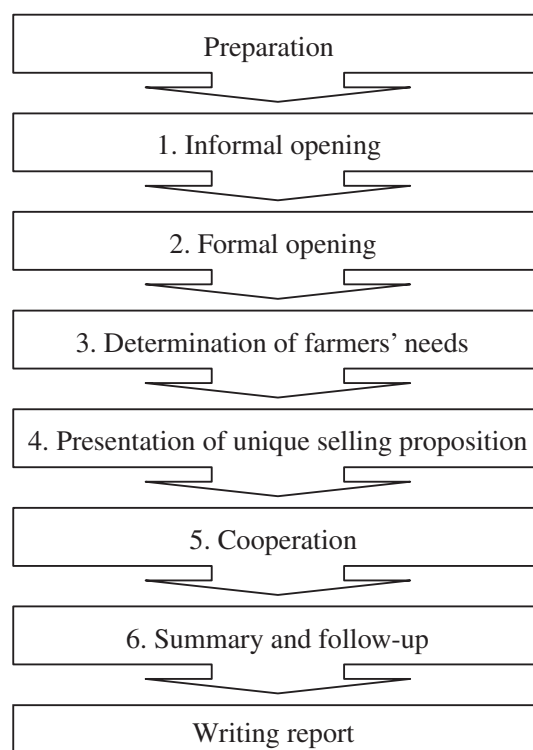
The veterinarians' communication with the farmer was evaluated using the audio recordings. A model that describes elements of successful advisory practice, established by Dutch veterinarian/communication consultant Roeland Wessels and used to teach advisory skills, was utilised (R. Wessels, personal communication). The model was established following review of the communication and advisory literature (Silverman et al., 1998; Heymann, 1999; Kurtz et al., 2005; Nathans, 2005; Noordhuizen and Boersema, 2008). Veterinarians graded the importance of the different components of veterinary advisory discussions (informal/formal opening to discussion, determining a farmer's needs, presentation of unique selling proposition, cooperation, summary, and follow-up) (Fig. 1), and were asked to indicate if they touched on each of these in actual on-farm conversations. The answers were compared with tape-recorded evidence of how the discussions actually took place on-farm. Only those farm visits with a clearly identifiable advisory conversation were used in the analysis; advice given during other on-farm veterinary work such as fertility checks or de-horning calves was excluded.

## Data analysis

Data was compiled in Excel and analysed using SAS (version 9.2 for Windows, SAS Institute). Statistical procedures were mostly descriptive. The number of cows and average milk production on the farms were compared to the national average in 2010 using a one-sample Student's *t* test. The variable 'number of cows' was log-transformed to establish normality. Grades for the seven VHHM topics were compared between farmers and veterinarians using the Wilcoxon Signed Rank test. A comparison between veterinarian expectation of how often farmers set their own agenda and farmer responses was carried out using a Fisher's exact test. A veterinarian's prediction of their use of the various component parts of an advisory conversation was compared to actual usage using McNemar's test, with each component assessed separately.

## Results

Of the 25 veterinary practices approached to participate in the study, 15 agreed. The mean experience of the sampled veterinarians in this form of work was 15 years (range, 3–36 years). The practices had between two and six veterinarians carrying out herd



**Fig. 1.** 'Flow diagram' outlining a communication approach for the provision of veterinary advice (R. Wessels, personal communication).

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