Preventive Veterinary Medicine 109 (2013) 83–91

Contents lists available at SciVerse ScienceDirect

Preventive Veterinary Medicine

journal homepage: www.elsevier.com/locate/prevetmed

Monitoring of equine health in Denmark: A survey of the attitudes and concerns of potential database participants

Wendy Hartig*, Hans Houe, Pia Haubro Andersen

University of Copenhagen, Faculty of Life Sciences, Large Animal Sciences, Hoejbakkegaard Allé 5, 2630 Taastrup, Denmark

ARTICLE INFO

Article history:
Received 20 March 2012
Received in revised form 6 June 2012
Accepted 7 June 2012

Keywords:
Database
Horse health monitoring
Attitudes
Concerns
Stakeholder analysis
Questionnaire

ABSTRACT

At present Denmark has no central database holding records of equine health and disease. Nor have attitudes to the establishment of a national database, and the concerns it raises, been investigated in a systematic way. The objective of the present study was to assess the attitudes and concerns of potential database stakeholders.

Attitudes to participation, and the location, financing and management of the proposed database, together with any concerns it raises, were investigated in a questionnaire study of 13 potential stakeholder groups in Denmark (in total, 1581 questionnaire recipients and 717 respondents): equine veterinarians, researchers, veterinary students, animal welfare organization representatives, horse owners, trainers, farriers, representatives from authorities, ordinary citizens, and representatives of laboratories, and insurance, medical equipment and pharmaceutical companies. Proportions were calculated for pre-categorised responses, and supplementary attitudes were extracted from qualitative responses.

Eighty-six percent of respondents stated a positive interest in providing data for the database; the percentage for veterinarians was 90%. Data contribution was regarded as feasible by many of the stakeholder groups; this willingness to provide data, however, depended on the implementation of a very user-friendly system. Requirements included an electronic, simple, and time-efficient data reporting system. Most respondents felt the database should be financed via horse owners through mandatory contributions linked to each horse. Disagreement appeared to arise over data ownership, accessibility, and location. These and other issues need further elaboration in order to find a solution that is acceptable for all stakeholders. It may be advisable to collect and store data in more than one database.

1. Introduction

Denmark has an equine population of approximately 180 000 (personal communication, Jørgen Kold, the Danish Agricultural Advisory Service, 2012), although the number of equine premises is currently unknown. Large quantities of informative data exist on these horses. Both health data and data of other types, e.g. demographic and competition data are collected. However, the data are only partially organized, and are presently stored in several databases (Hartig et al., submitted for publication).

It is widely agreed that research on the Danish horse population—e.g. the investigation of risk factors for disease, and of causal relationships between uses of horses and their health and longevity (Hartig et al., submitted for publication)—is desirable, and will continue to be so in the future. However, at present such studies are difficult, and sometimes tedious, to perform, because the data are stored in various ways, in various locations. If epidemiological research into the equine population is to be performed efficiently in future, a central database will be needed. The design and establishment of a suitable database will require

* Corresponding author. Tel.: +45 35 33 29 38; fax: +45 35 33 29 44.
E-mail address: hartig@life.ku.dk (W. Hartig).

0167-5877/$ – see front matter © 2012 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.prevetmed.2012.06.004

decisions to be made about the database's purpose and the professional content such as information on horse management, diseases and treatment results. Data management will ideally be planned in advance (Sestoft, 2011); exact database documentation will have to be provided (Houe et al., 2006).

Attitudes to the importance, purpose, research areas and content of a potential health database for the Danish horse population have previously been identified (Hartig et al., submitted for publication). The present paper examines responses to survey questions focusing on stakeholder attitudes to own-data contribution, and to the location and financing of the database, as well as stakeholder concerns about the management of a database.

2. Materials and methods

Responses to a combined paper- and web questionnaire survey of 13 stakeholder groups were gathered. The groups were: equine veterinarians (number of questionnaire recipients: 300), researchers (57), veterinary students (48), animal welfare organization representatives (56), horse owners (300), horse trainers (346), farriers (153), general (300) and representatives from relevant authorities (3), laboratories (5), horse insurance companies (10), medical equipment companies (6) and pharmaceutical companies (9). Details of the study populations, sampling, exclusion criteria (number excluded: 12), questionnaire design and data collection are presented elsewhere (Hartig et al., submitted for publication). However, the 14 questions presented in the questionnaire that relate to the objectives of the present study are shown in Table 1. Responses to individual questions were used as long as response rules were followed; these were specified in the question instruction before the response options. For example, if a question with the response rule 'mark one of the response options' received multiple markings, it was coded as '9999', while if it received no marking, it was coded as '7777', and neither a '9999' nor '7777' coded response would be used in the analyses. Consequently, the denominator in the descriptive statistics for the various questions/sub questions may vary. Descriptive statistics (proportions) were calculated for categorical variables. For the sake of simplicity, responses to two questions ('What do you see as the biggest disadvantages of a national database?' and 'How would you prefer to provide data for the future database?') were dichotomized; for the question 'What do you see as the biggest disadvantages of a national database?' the response categories 'Very big disadvantage' and 'Disadvantage' were collapsed (Fig. 1), and for the question 'How would you prefer to provide data for the future database?' the response categories 'It would be okay to report data this way' and 'I would prefer to report data this way' were collapsed (Table 2). Results were presented under suitable headings, in order to clarify their relationship to the objectives. Open-ended responses were manually compiled at stakeholder group level, condensed and then grouped according to the objectives on the basis of judgments and weightings imposed by the authors using elements from Grounded Theory (Kvale and Brinkmann, 2009). This free text evaluation was performed across questions in order to identify supplementary attitudes, irrespective of their placement in the questionnaire. For clarity, they were presented under the relevant headings, together with the quantitative results.

3. Results

As published in a separate article (Hartig et al., submitted for publication), the overall response rate for all stakeholder groups was 45% (717/1581). Among the stakeholder groups, the response rate ranged from 27 to 80%.

3.1. Willingness to supply data to the database, and aspects perceived as important in encouraging own-participation

It was found that 86% (521/608) of respondents were willing to supply data to the database (Table 2). Most preferred to report to the future database once monthly (30%; 183/607) or once weekly (29%; 179/607). Among veterinarians, researchers, veterinary students, and the representatives of equine authorities, laboratories, insurance companies, medical equipment companies and pharmaceutical companies, regular automatic reporting was ranked highest (67%; 186/277). The other asked groups ranked 'Electronically' highest (82%; 271/329) (Table 2). Just under half of the respondents (48%; 287/601) had an opinion about what would be important to them in their daily data registration. Examples of these opinions are presented in Fig. 2.

A majority of veterinarians (68%; 123/180) were willing to spend a maximum of 5 min acquiring background information on a patient, and 24% (44/180) were only prepared to spend a maximum of 2 min. Only 2% (3/180) accepted spending more than 20 min. The veterinarians' willingness to devote time to entering patient data into a database was less than that. Thus 49% (87/178) were only prepared to spend 0–2 min per patient, and 35% (63/178) were only willing to spend up to 5 min. None (0%; 0/178) were prepared to spend more than 20 min.

3.2. The location, management and ownership of the database

When they were asked to rank suggested database locations, respondents ranked the Danish Agricultural Advisory Service and the University of Copenhagen highest (Table 3). Within stakeholder groups, the ratings differed. For example, veterinarians, farriers, citizens, representatives of insurance companies and medical equipment companies, and one representative of the authorities, generally preferred the University of Copenhagen, while researchers, welfare organization respondents, owners, trainers and pharmaceutical company representatives generally preferred the Danish Agricultural Advisory Service.

Free text analysis revealed a certain amount of controversy over the geographical location of the database. Some veterinarians were reluctant to "give away" veterinary data, with the risk that they would be obliged to "buy [their] own data back" later. Generally, however, most stakeholder groups agreed on a neutral location that would